



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 10, 2023 – 12:27 AM EDT

PDB ID : 4V7X
Title : Structure of the *Thermus thermophilus* ribosome complexed with erythromycin.
Authors : Bulkley, D.P.; Innis, C.A.; Blaha, G.; Steitz, T.A.
Deposited on : 2010-08-17
Resolution : 3.00 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35.1
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35.1

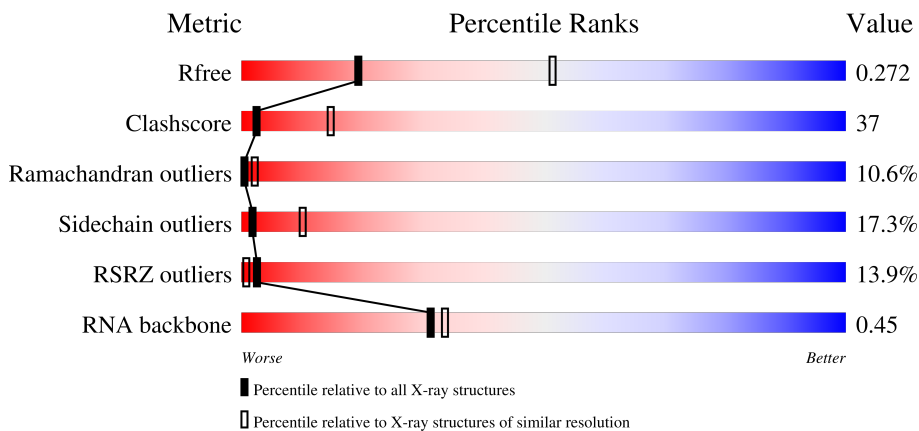
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2092 (3.00-3.00)
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)
RSRZ outliers	127900	1990 (3.00-3.00)
RNA backbone	3102	1173 (3.30-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	<div style="display: flex; justify-content: space-between;"> 20% 25% 59% 15% </div>
1	CA	1522	<div style="display: flex; justify-content: space-between;"> 20% 25% 58% 15% </div>
2	AB	256	<div style="display: flex; justify-content: space-between;"> 25% 34% 46% 11% 8% </div>
2	CB	256	<div style="display: flex; justify-content: space-between;"> 30% 34% 46% 11% 8% </div>

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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	160	
5	CE	160	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	135	
12	CL	135	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

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Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	B0	85	
22	D0	85	
23	B1	98	
23	D1	98	
24	B2	72	
24	D2	72	
25	B3	60	
25	D3	60	
26	B4	71	
26	D4	71	
27	B5	60	
27	D5	60	




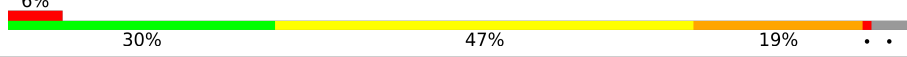
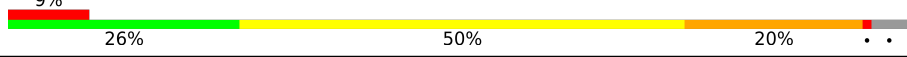
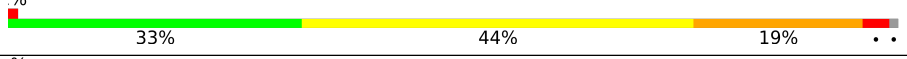
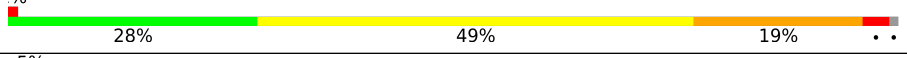
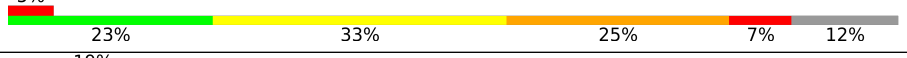
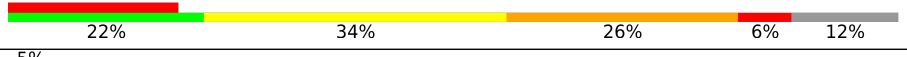
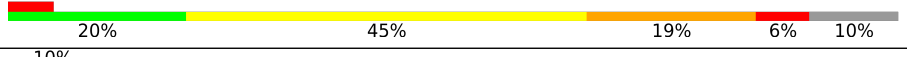
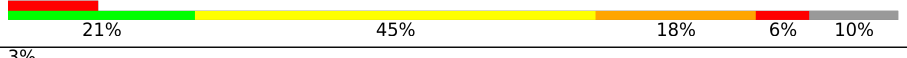
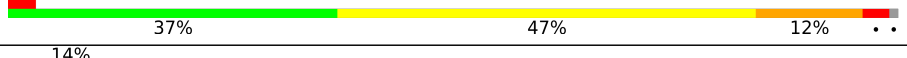
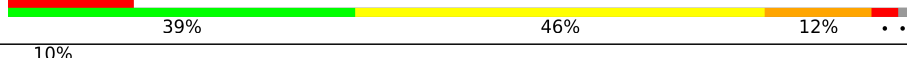
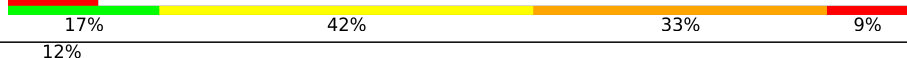
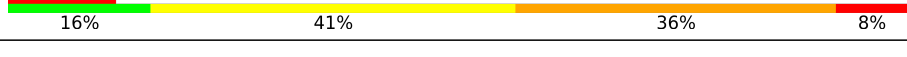
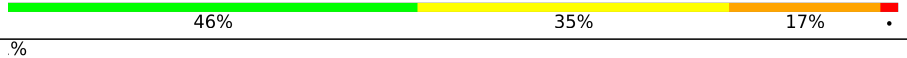
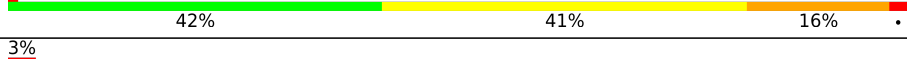
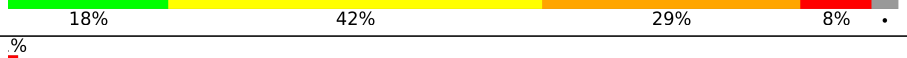



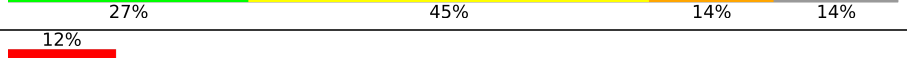
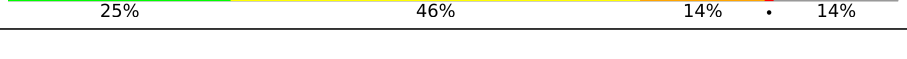
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Mol	Chain	Length	Quality of chain
28	B6	54	
28	D6	54	
29	B7	49	
29	D7	49	
30	B8	65	
30	D8	65	
31	BA	2787	
31	DA	2787	
32	BB	122	
32	DB	122	
33	BD	276	
33	DD	276	
34	BE	206	
34	DE	206	
35	BF	210	
35	DF	210	
36	BG	182	
36	DG	182	
37	BH	180	
37	DH	180	
38	BI	148	
38	DI	148	
39	BN	140	
39	DN	140	
40	BO	122	

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Mol	Chain	Length	Quality of chain
40	DO	122	
41	BP	150	
41	DP	150	
42	BQ	141	
42	DQ	141	
43	BR	118	
43	DR	118	
44	BS	112	
44	DS	112	
45	BT	146	
45	DT	146	
46	BU	118	
46	DU	118	
47	BV	101	
47	DV	101	
48	BW	113	
48	DW	113	
49	BX	96	
49	DX	96	
50	BY	110	
50	DY	110	
51	BZ	206	
51	DZ	206	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	AA	1634	-	-	-	X
52	MG	AA	1642	-	-	-	X
52	MG	AA	1645	-	-	-	X
52	MG	BA	3074	-	-	-	X
52	MG	BA	3151	-	-	-	X
52	MG	BA	3206	-	-	-	X
52	MG	BA	3245	-	-	-	X
52	MG	BA	3304	-	-	-	X
52	MG	BA	3319	-	-	-	X
52	MG	BA	3327	-	-	-	X
52	MG	BA	3358	-	-	-	X
52	MG	CA	1613	-	-	-	X
52	MG	CA	1628	-	-	-	X
52	MG	CA	1630	-	-	-	X
52	MG	CA	1635	-	-	-	X
52	MG	DA	3191	-	-	-	X
52	MG	DA	3205	-	-	-	X
52	MG	DA	3231	-	-	-	X
52	MG	DA	3247	-	-	-	X
52	MG	DA	3264	-	-	-	X
52	MG	DA	3276	-	-	-	X
52	MG	DA	3278	-	-	-	X
52	MG	DA	3280	-	-	-	X
52	MG	DA	3291	-	-	-	X
52	MG	DA	3309	-	-	-	X
52	MG	DA	3316	-	-	-	X
52	MG	DA	3324	-	-	-	X

2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 278034 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	AA	1504	Total 32329	C 14390	N 5992	O 10444	P 1503	0	0	0
1	CA	1504	Total 32329	C 14390	N 5992	O 10444	P 1503	0	0	0

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	AB	235	Total 1901	C 1213	N 342	O 341	S 5	0	0	1
2	CB	235	Total 1901	C 1213	N 342	O 341	S 5	0	0	1

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	AC	207	Total 1613	C 1016	N 315	O 281	S 1	0	0	1
3	CC	207	Total 1613	C 1016	N 315	O 281	S 1	0	0	1

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	AD	208	Total 1703	C 1066	N 339	O 291	S 7	0	0	0
4	CD	208	Total 1703	C 1066	N 339	O 291	S 7	0	0	0

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			
5	CE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	CF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	0	0	0
			1011	639	198	174			
9	CI	127	Total	C	N	O	0	0	0
			1011	639	198	174			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AI	58	ARG	HIS	CONFLICT	UNP P80374
CI	58	ARG	HIS	CONFLICT	UNP P80374

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	AJ	99	Total 795	C 499	N 157	O 138	S 1	0	0	1
10	CJ	99	Total 795	C 499	N 157	O 138	S 1	0	0	1

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	AK	119	Total 885	C 549	N 168	O 165	S 3	0	0	0
11	CK	119	Total 885	C 549	N 168	O 165	S 3	0	0	0

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	AL	125	Total 971	C 611	N 196	O 163	S 1	0	0	1
12	CL	125	Total 971	C 611	N 196	O 163	S 1	0	0	1

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AL	2	VAL	-	INSERTION	UNP Q5SHN3
AL	3	ALA	-	INSERTION	UNP Q5SHN3
AL	4	LEU	-	INSERTION	UNP Q5SHN3
CL	2	VAL	-	INSERTION	UNP Q5SHN3
CL	3	ALA	-	INSERTION	UNP Q5SHN3
CL	4	LEU	-	INSERTION	UNP Q5SHN3

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	AM	115	Total 921	C 569	N 190	O 160	S 2	0	0	0
13	CM	115	Total 921	C 569	N 190	O 160	S 2	0	0	0

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
14	CN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			
16	CP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			
17	CQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
19	CS	79	630	403	115	110	2	0	0	1

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
20	AT	99	763	470	162	129	2	0	0	0
20	CT	99	763	470	162	129	2	0	0	0

- Molecule 21 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
21	AU	25	209	128	51	30	0	0	1
21	CU	25	209	128	51	30	0	0	1

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
22	B0	85	650	401	137	111	1	0	0	0
22	D0	85	650	401	137	111	1	0	0	0

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
23	B1	89	693	435	140	118	0	0	1
23	D1	89	693	435	140	118	0	0	1

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
24	B2	51	421	263	85	72	1	0	0	1
24	D2	51	421	263	85	72	1	0	0	1

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	B3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			
25	D3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	B4	32	Total	C	N	O	0	0	0
			157	93	32	32			
26	D4	32	Total	C	N	O	0	0	0
			157	93	32	32			

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	B5	59	Total	C	N	O	S	9	0	0
			459	288	90	76	5			
27	D5	59	Total	C	N	O	S	9	0	0
			459	288	90	76	5			

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	B6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			
28	D6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			
29	D7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			
30	D8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			

- Molecule 31 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BA	2725	Total	C	N	O	P	0	0	0
			58698	26124	10986	18864	2724			
31	DA	2725	Total	C	N	O	P	0	0	0
			58698	26124	10986	18864	2724			

- Molecule 32 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
32	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 33 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			
33	DD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			

- Molecule 34 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			
34	DE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

- Molecule 35 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	DF	208	1624	1035	304	282	3	0	0	1

- Molecule 36 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
36	BG	181	1474	942	268	260	4	0	0	0
36	DG	181	1474	942	268	260	4	0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
37	BH	160	1223	773	229	220	1	0	0	1
37	DH	160	1223	773	229	220	1	0	0	1

- Molecule 38 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
38	BI	146	1132	723	201	207	1	0	0	1
38	DI	146	1132	723	201	207	1	0	0	1

- Molecule 39 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
39	BN	139	1105	712	207	182	4	0	0	1
39	DN	139	1105	712	207	182	4	0	0	1

- Molecule 40 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
40	BO	122	933	588	171	170	4	0	0	0
40	DO	122	933	588	171	170	4	0	0	0

- Molecule 41 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
41	DP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 42 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BQ	136	Total	C	N	O	S	0	0	0
			1080	688	204	183	5			
42	DQ	136	Total	C	N	O	S	0	0	0
			1080	688	204	183	5			

- Molecule 43 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BR	117	Total	C	N	O	0	0	0
			960	599	202	159			
43	DR	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 44 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BS	99	Total	C	N	O	0	0	1
			771	486	155	130			
44	DS	99	Total	C	N	O	0	0	1
			771	486	155	130			

- Molecule 45 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BT	132	Total	C	N	O	S	0	0	0
			1100	686	227	186	1			
45	DT	132	Total	C	N	O	S	0	0	0
			1100	686	227	186	1			

- Molecule 46 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			
46	DU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 47 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
47	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 48 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			
48	DW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 49 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	BX	93	Total	C	N	O	0	0	1
			726	471	132	123			
49	DX	93	Total	C	N	O	0	0	1
			726	471	132	123			

- Molecule 50 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			
50	DY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			

- Molecule 51 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BZ	177	Total	C	N	O	S	0	0	1
			1404	897	253	252	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
51	DZ	177	1404	897	253	252	2	0	0	1

- Molecule 52 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	AA	54	Total	Mg	0	0
			54	54		
52	B0	1	Total	Mg	0	0
			1	1		
52	B1	1	Total	Mg	0	0
			1	1		
52	B5	2	Total	Mg	0	0
			2	2		
52	BA	362	Total	Mg	0	0
			362	362		
52	BB	7	Total	Mg	0	0
			7	7		
52	BD	1	Total	Mg	0	0
			1	1		
52	BE	1	Total	Mg	0	0
			1	1		
52	BF	1	Total	Mg	0	0
			1	1		
52	BP	3	Total	Mg	0	0
			3	3		
52	BQ	2	Total	Mg	0	0
			2	2		
52	BR	1	Total	Mg	0	0
			1	1		
52	BU	1	Total	Mg	0	0
			1	1		
52	BX	1	Total	Mg	0	0
			1	1		
52	CA	50	Total	Mg	0	0
			50	50		
52	D0	1	Total	Mg	0	0
			1	1		
52	D3	1	Total	Mg	0	0
			1	1		
52	D5	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
52	D7	1	Total Mg 1 1	0	0
52	DA	328	Total Mg 328 328	0	0
52	DB	3	Total Mg 3 3	0	0
52	DE	1	Total Mg 1 1	0	0
52	DF	1	Total Mg 1 1	0	0
52	DP	1	Total Mg 1 1	0	0
52	DQ	1	Total Mg 1 1	0	0
52	DR	1	Total Mg 1 1	0	0
52	DU	1	Total Mg 1 1	0	0
52	DX	1	Total Mg 1 1	0	0

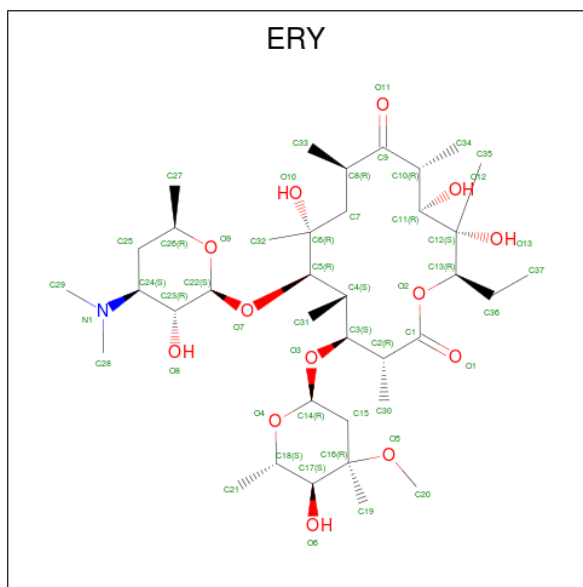
- Molecule 53 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
53	AD	1	Total Zn 1 1	0	0
53	AN	1	Total Zn 1 1	0	0
53	CD	1	Total Zn 1 1	0	0
53	CN	1	Total Zn 1 1	0	0

- Molecule 54 is POTASSIUM ION (three-letter code: K) (formula: K).

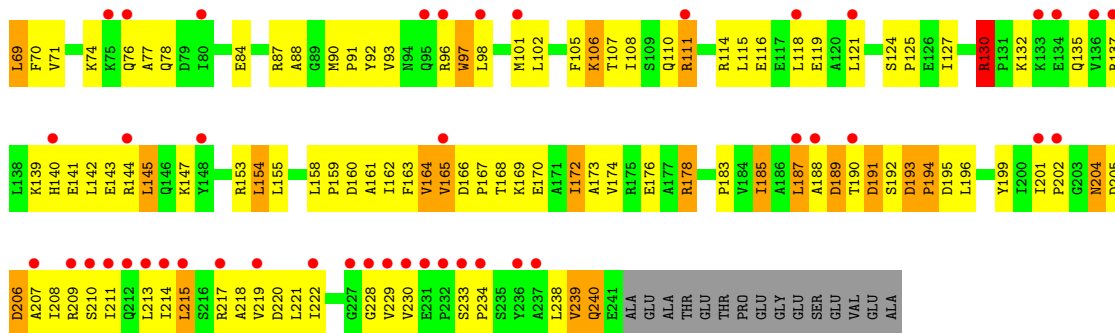
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	BA	1	Total K 1 1	0	0
54	DA	1	Total K 1 1	0	0

- Molecule 55 is ERYTHROMYCIN A (three-letter code: ERY) (formula: C₃₇H₆₇NO₁₃).

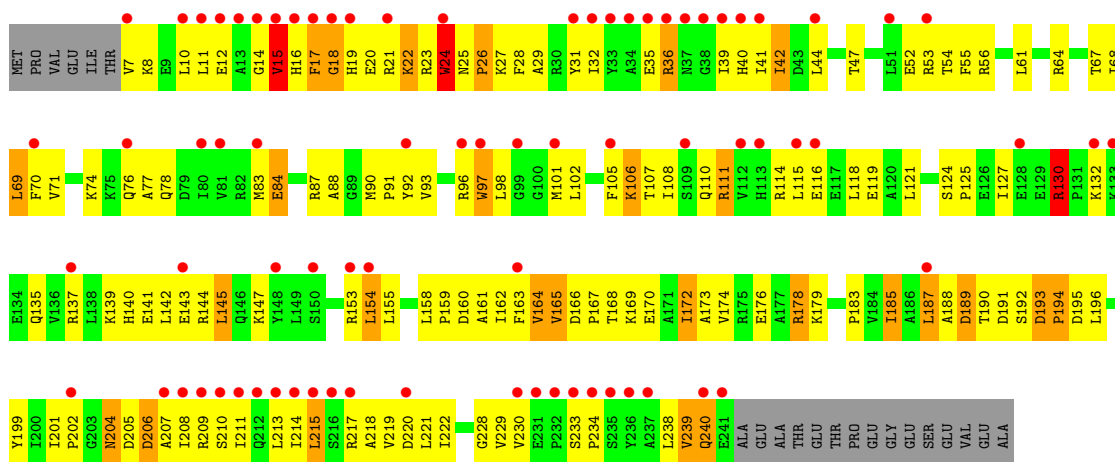


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
55	BA	1	51	37	1	13	0	0
55	DA	1	51	37	1	13	0	0

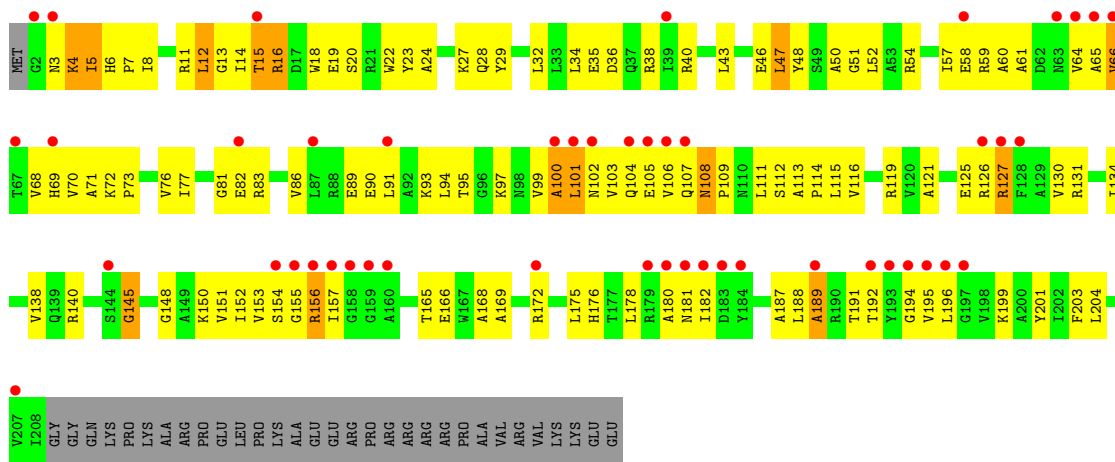
G1507	C1429	G1381	G1300	A1239	C1112	C1051	A996	C936	U863	U786	G713	G650
G1508	C1430	C1362	U1301	U1240	C1113	U1052	U997	A937	A863	U789	G714	C651
C1509	C1431	A1363	U1302	G1241	C1114	C1053	G998	A938	A864	U790	A715	U652
U1510	G1432	A1363A	C1303	C1242	C1115	C1054	C999	G939	A865	A791	G719	A653
G1511	A1433	U1364	G1304	G1243	C1116	U1055	A1000	C940	C866	G792	C719	G654
A1434	A1434	U1365	G1305	C1244	C1117	U1056	A1001	G941	C867	A792	C719	A655
G1435	A1435	A1366	A1306	A1245	C1118	G1057	G1001A	G942	C868	U793	C720	C656
U1436	U1436	C1367	U1307	A1246	C1119	G1058	G1002	G943	C869	A794	G721	C657
G1441	G1441	G1368	U1308	U1247	C1120	U1059	G1003	G944	G889	U794	G722	G658
G1442	G1442	C1369	G1309	C1248	U1121	C1060	A1004	G945	C890	C797	A722	G659
A1518	G1442A	G1370	G1310	A1249	U1122	G1061	A1005	G946	A872	G798	G724	G660
A1442B	A1442B	G1371	G1311	A1250	U1123	U1062	A1006	G947	G874	G799	G725	G661
G1443	G1443	U1372	G1312	A1251	A1123	U1063	C1007	G948	G874	U801	G726	G662
G1444	G1444	G1373	U1313	A1252	U1125	G1064	C1008	A949	C875	A802	G727	A663
U1446	U1446	A1374	C1314	A1253	U1126	U1065	G1009	U950	G876	G803	G730	G664
U1447	U1447	A1375	U1315	C1254	G1127	C1066	G1010	U951	G877	U804	G731	A665
C1452	C1452	G1378	G1316	G1255	U1128	A1067	G1011	G878	C879	U804	G732	G666
G1456	G1456	U1379	U1317	U1257	C1129	G1068	U1012	G879	C880	U813	G733	G667
G1457	G1457	G1380	A1318	U1258	A1130	A1069	G1013	C881	C881	U814	A733	G668
U1458	U1458	U1380	A1319	G1258	G1131	U1070	A1014	U955	G881	C812	A734	G669
C1459	C1459	G1385	C1320	C1259	C1132	C1071	A1015	U956	C896	C812	C735	G670
G1463	G1463	U1391	C1321	G1260	G1133	U1072	A1016	U957	C896	U813	C736	G671
G1464	G1464	G1386	C1322	A1261	G1134	U1073	G1017	A958	A901	U814	A737	U672
U1466	U1466	G1387	G1323	C1262	U1135	G1081	C1018	A959	C910	A815	C738	G673
U1467	U1467	C1388	A1324	C1263	U1136	U1082	U1019	U960	C910	A816	C739	G674
C1468	C1468	G1388	C1325	C1264	C1137	G1077	U1020	U961	C906	C817	U740	A675
C1469	C1469	U1390	C1326	G1265	G1138	U1078	G1021	U962	C906	C818	G741	A676
C1470	C1470	U1391	C1327	G1266	G1139	G1079	C1028	U963	C906	C818	G742	A677
C1471	C1471	G1392	G1328	G1267	U1140	U1080	C1029	C970	A909	U827	C743	U678
U1472	U1472	U1393	A1329	A1268	C1141	G1081	C1030	G971	C910	A828	C744	U686
C1477	C1477	A1394	U1330	A1269	G1142	U1082	G1030A	G972	C910	G829	G745	A687
U1478	U1478	G1395	G1331	C1270	G1143	U1083	C1030B	G973	A913	G830	G756	G688
C1480	C1480	A1396	A1332	G1271	U1144	G1084	C1030C	U974	A914	U831	U757	C689
U1483	U1483	C1403	G1333	C1272	A1146	U1085	A1030D	A975	A915	C832	G758	C690
G1486	G1486	U1405	A1334	G1273	U1147	U1086	G1031	G976	A916	U833	A759	G691
G1487	G1487	G1406	C1342	A1274	U1148	U1087	G1032	A977	G917	C834	G760	G692
G1488	G1488	U1407	G1343	U1281	U1149	G1088	G1033	A978	A918	U835	G761	G693
G1489	G1489	A1408	C1344	C1282	G1155	U1089	G1034	C979	A919	G836	C762	A694
C1490	C1490	C1409	U1345	G1283	A1157	C1096	A1035	C980	U920	U839	G763	A695
G1491	G1491	G1410	A1346	C1284	U1158	C1097	C1037	U921	U921	C840	G764	A696
A1492	A1492	U1411	G1347	A1285	U1159	C1098	C1038	A922	A922	U841	G765	U697
A1493	A1493	C1412	U1348	A1286	G1160	U1099	C1039	A923	A923	C924	A766	G698
G1494	G1494	A1413	A1349	A1287	C1161	C1100	U1040	C984	C924	C848	G775	C699
G1495	G1495	G1413	U1350	A1288	C1162	A1101	A1041	C985	G925	G851	G776	A702
C1496	C1496	U1351	A1351	A1289	C1163	A1102	A1042	A966	G926	G852	A777	G703
G1497	G1497	C1352	G1290	G1289	U1164	C1103	G1043	G987	G927	G853	G778	A704
A1498	A1498	G1353	U1291	U1291	A1168	G1104	A1044	G988	G928	C854	G779	U705
A1500	A1500	C1354	U1292	U1292	A1169	G1105	A1045	G989	G929	C855	C799	A706
C1501	C1501	G1355	G1293	G1293	G1170	C1106	A1046	C990	C930	C856	A780	C707
A1502	A1502	U1294	G1294	U1294	G1171	G1107	A1047	U991	C931	C857	A781	C708
A1503	A1503	G1295	G1295	U1295	C1172	G1108	G1048	U992	C932	C858	A782	C709
G1504	G1504	A1236	A1236	A1236	G1173	G1109	U1049	G993	C933	G859	G785	G710
G1505	G1505	C1237	C1237	C1237	A1110	G1110	A1050	A994	C934	G860	G786	G711
U1506	U1506	A1238	A1238	A1238	G1175	A1111		C995	A935	A860		



• Molecule 2: 30S ribosomal protein S2

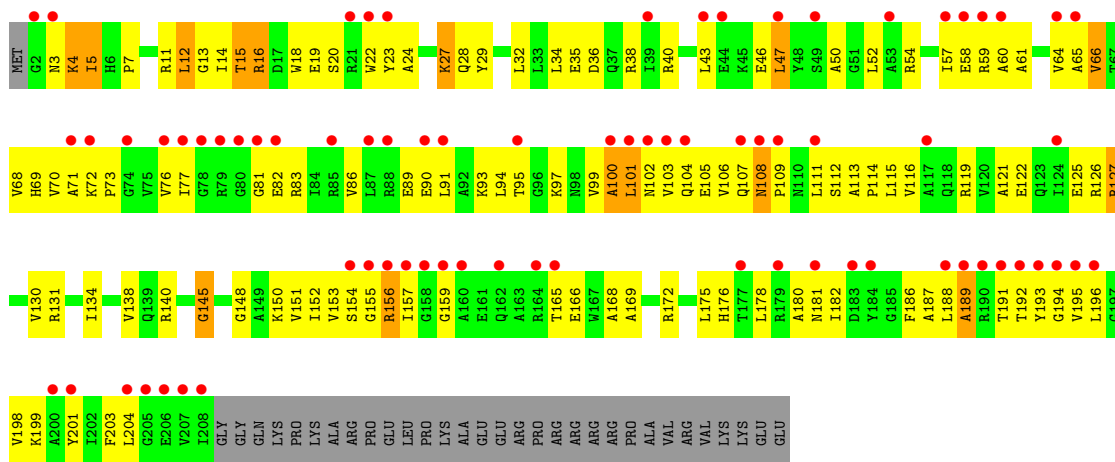


• Molecule 3: 30S ribosomal protein S3

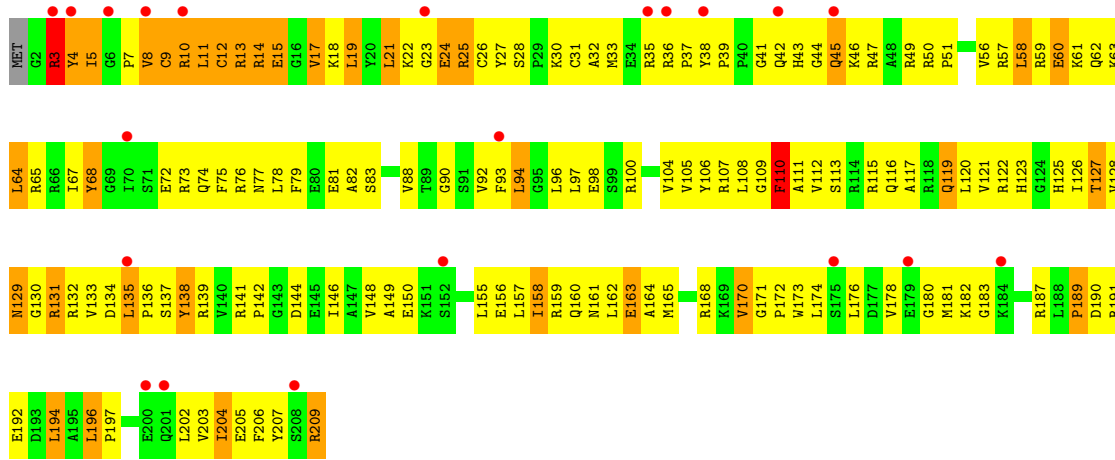


• Molecule 3: 30S ribosomal protein S3

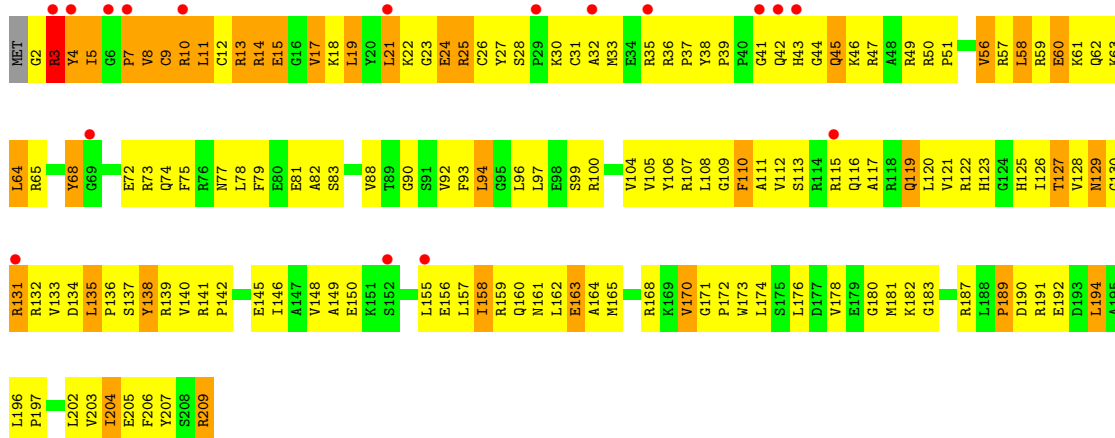




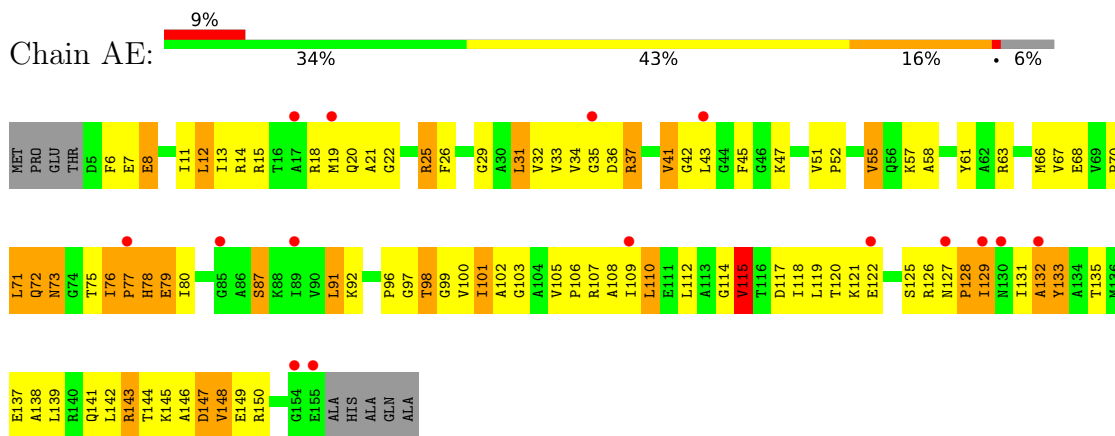
• Molecule 4: 30S ribosomal protein S4



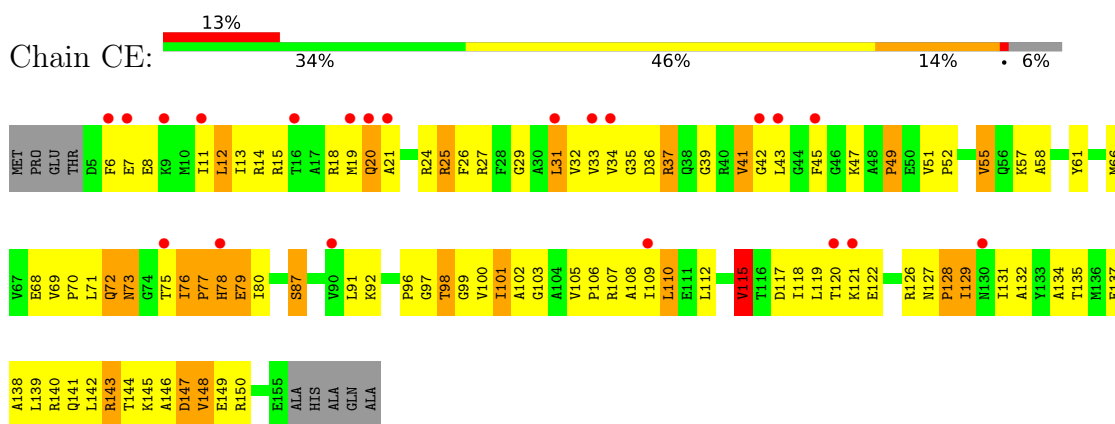
• Molecule 4: 30S ribosomal protein S4



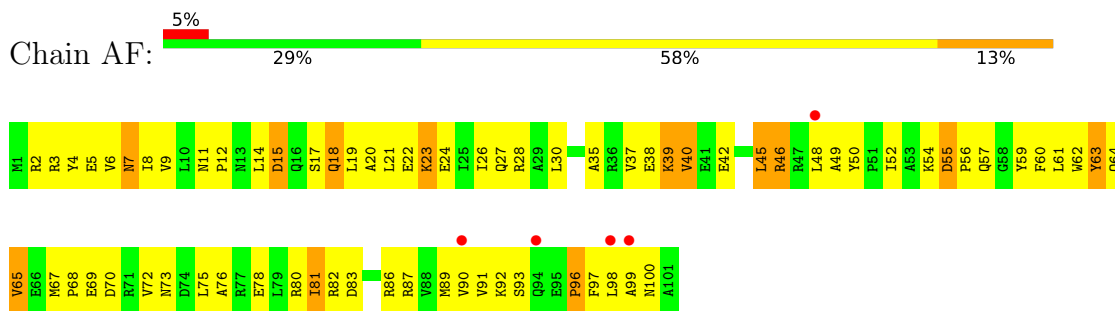
• Molecule 5: 30S ribosomal protein S5



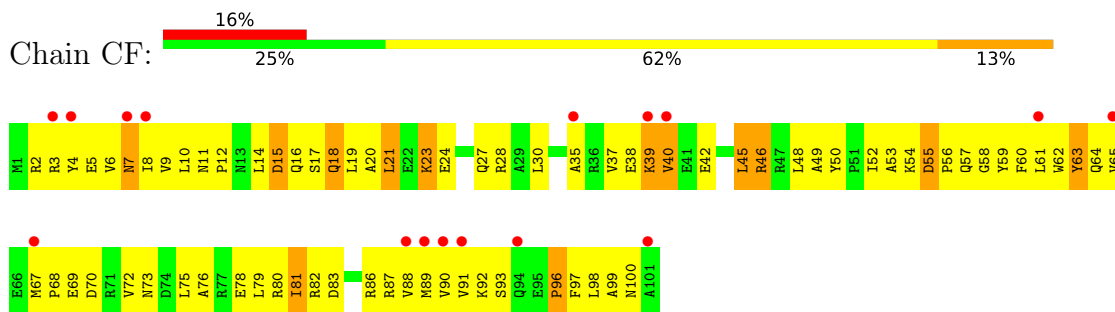
• Molecule 5: 30S ribosomal protein S5



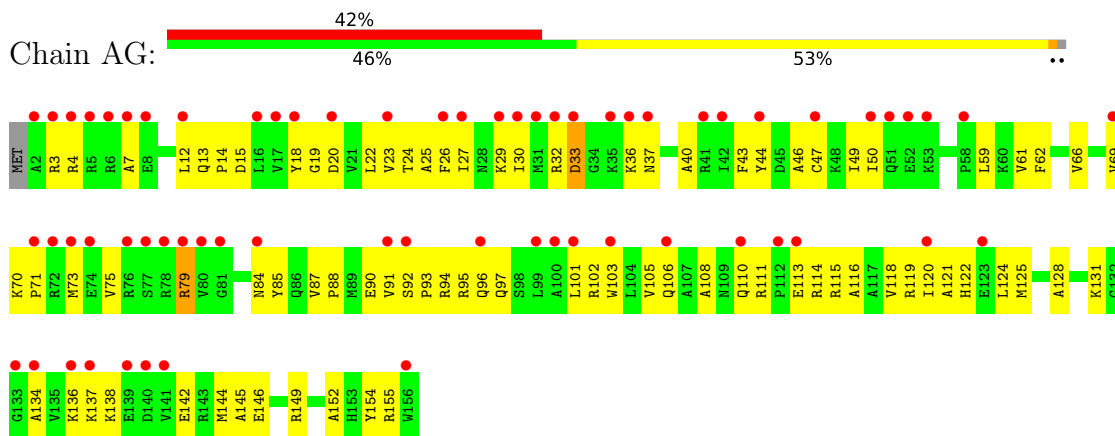
• Molecule 6: 30S ribosomal protein S6



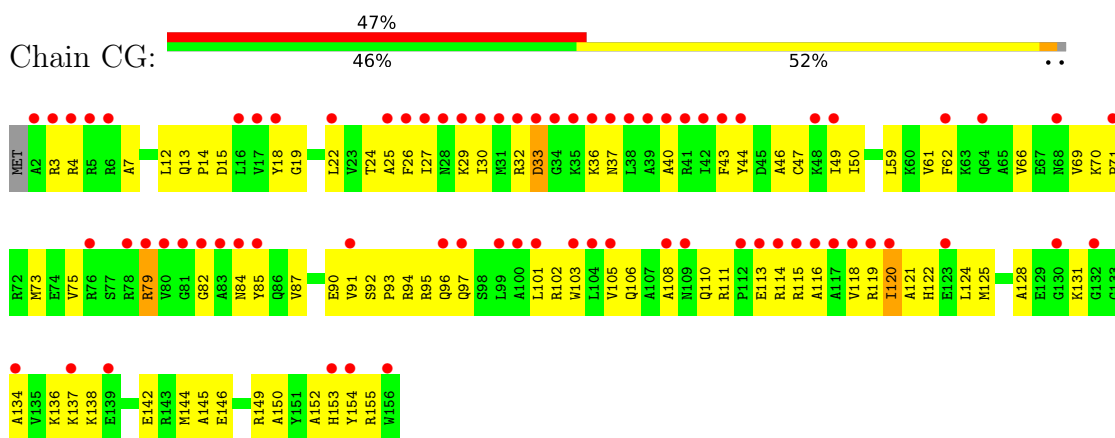
• Molecule 6: 30S ribosomal protein S6



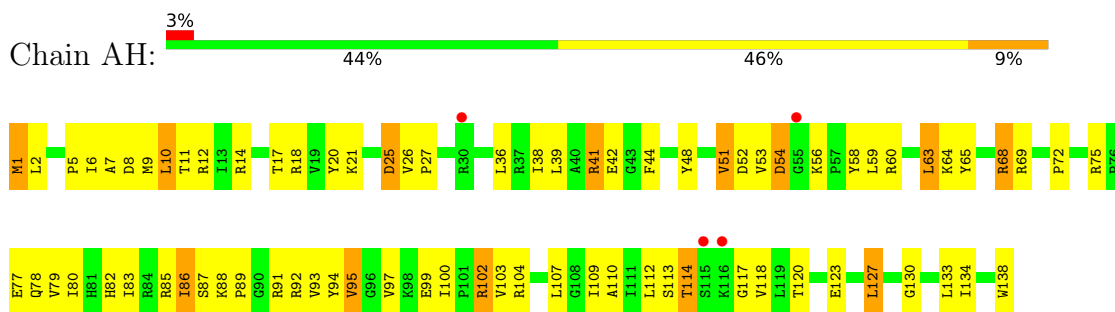
• Molecule 7: 30S ribosomal protein S7



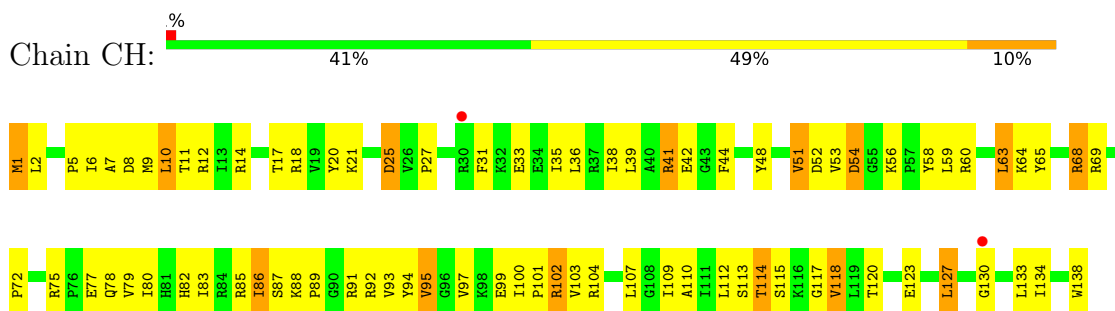
• Molecule 7: 30S ribosomal protein S7



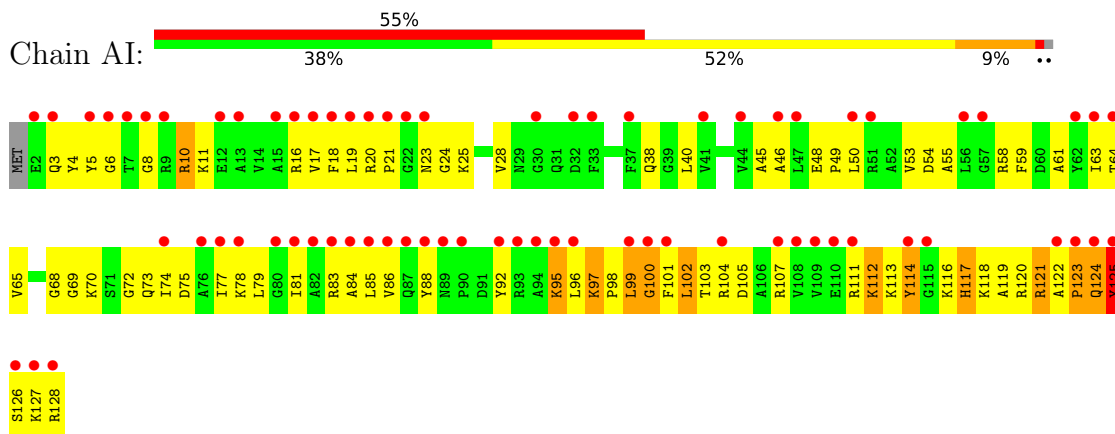
• Molecule 8: 30S ribosomal protein S8



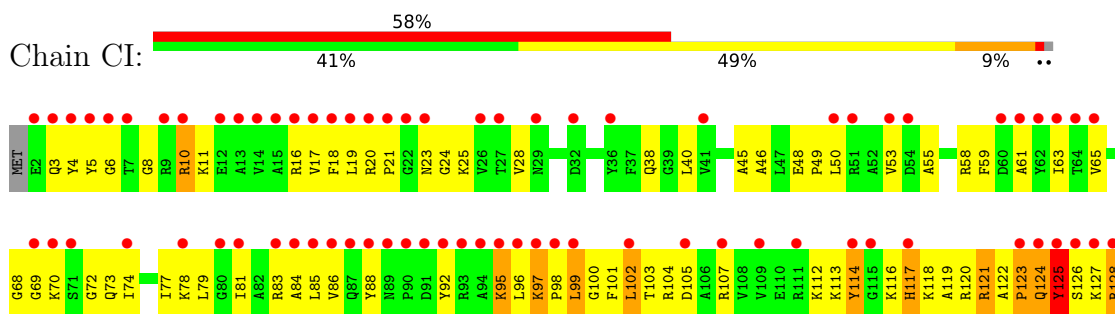
• Molecule 8: 30S ribosomal protein S8



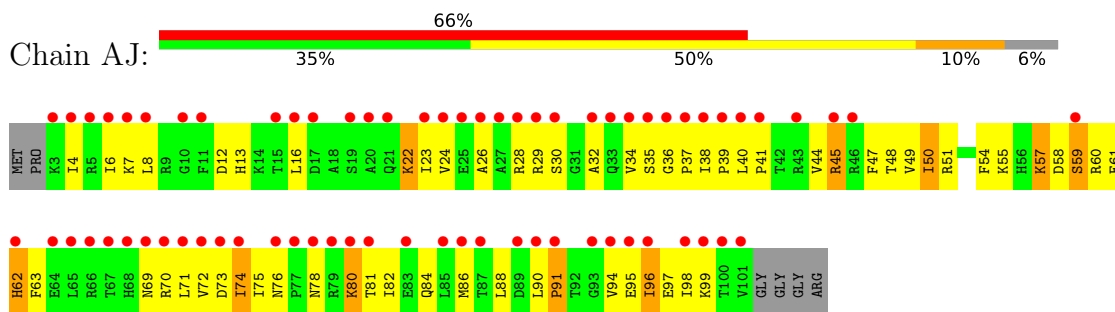
• Molecule 9: 30S ribosomal protein S9



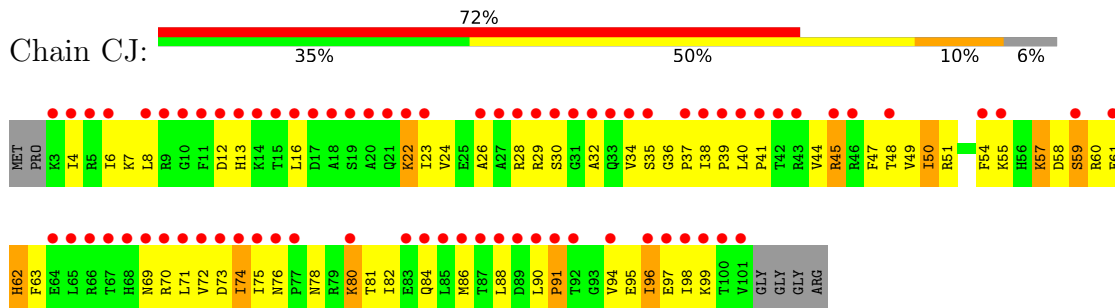
• Molecule 9: 30S ribosomal protein S9



• Molecule 10: 30S ribosomal protein S10

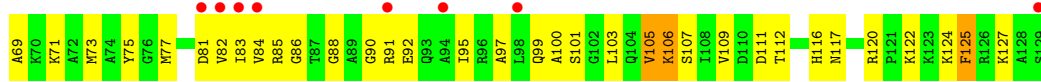
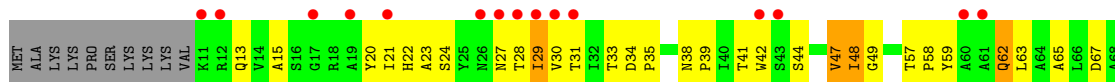


• Molecule 10: 30S ribosomal protein S10



• Molecule 11: 30S ribosomal protein S11

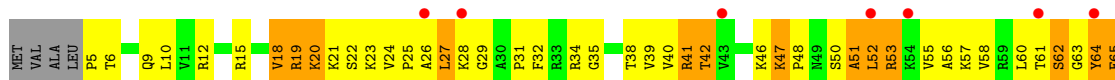




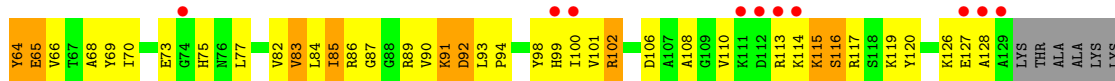
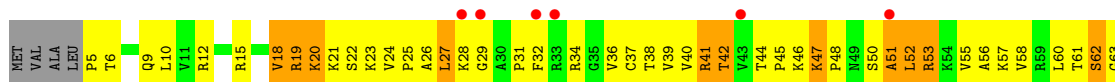
• Molecule 11: 30S ribosomal protein S11



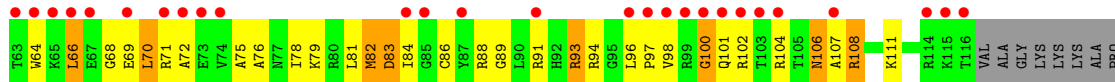
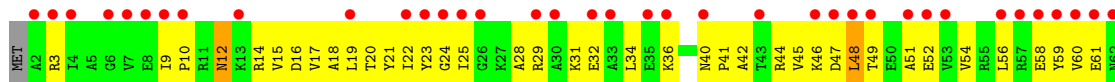
• Molecule 12: 30S ribosomal protein S12



• Molecule 12: 30S ribosomal protein S12

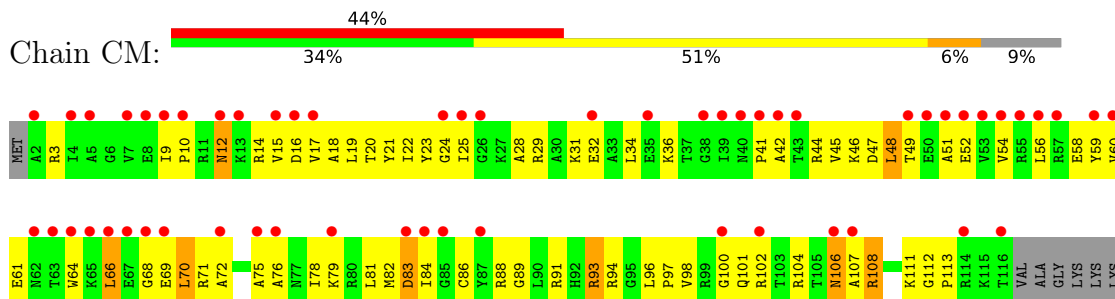


• Molecule 13: 30S ribosomal protein S13

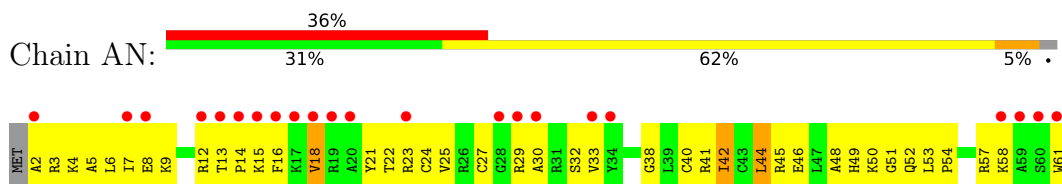


ARG
LYS

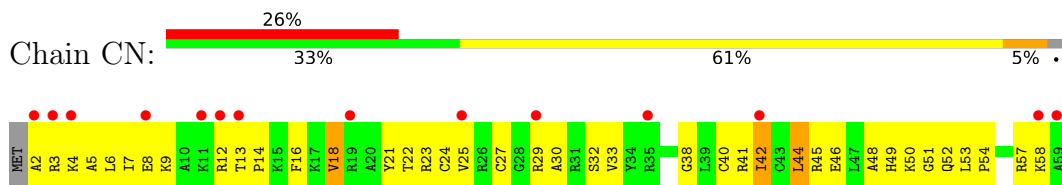
- Molecule 13: 30S ribosomal protein S13

ALA
PRO
ARG
LYS

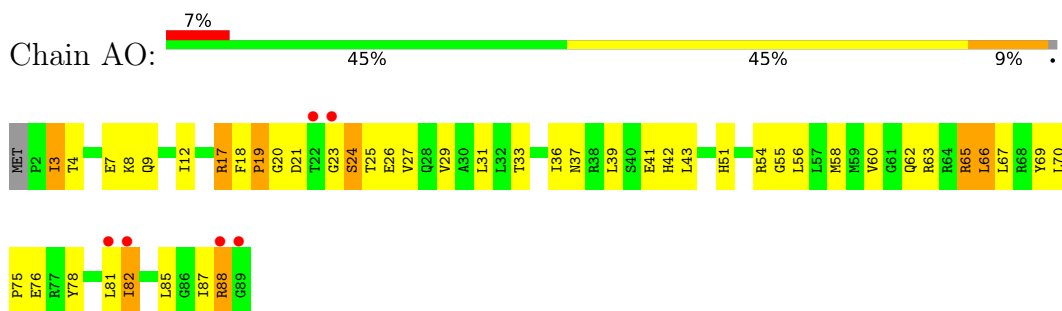
- Molecule 14: 30S ribosomal protein S14



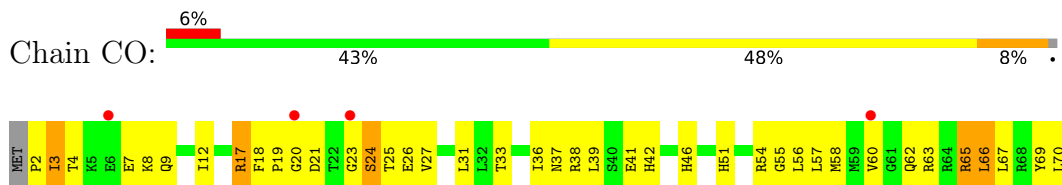
- Molecule 14: 30S ribosomal protein S14



- Molecule 15: 30S ribosomal protein S15



- Molecule 15: 30S ribosomal protein S15

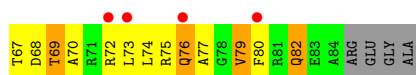
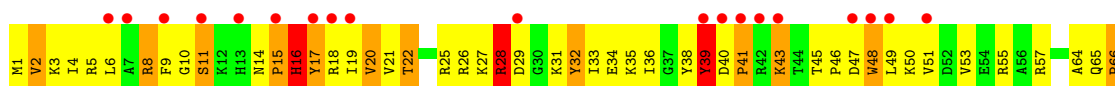




- Molecule 16: 30S ribosomal protein S16



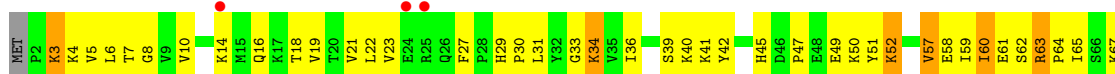
- Molecule 16: 30S ribosomal protein S16



- Molecule 17: 30S ribosomal protein S17

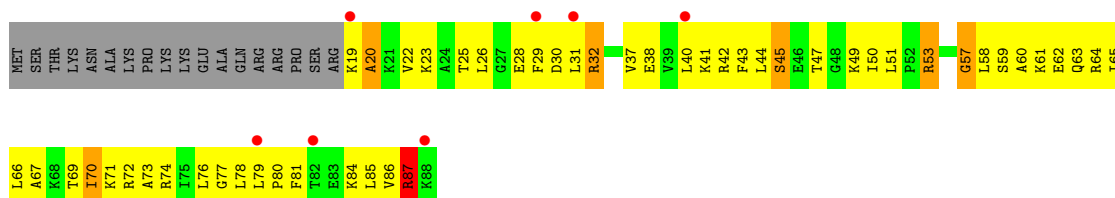


- Molecule 17: 30S ribosomal protein S17

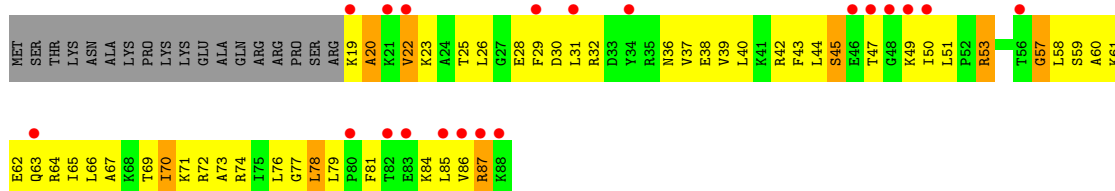


- Molecule 18: 30S ribosomal protein S18

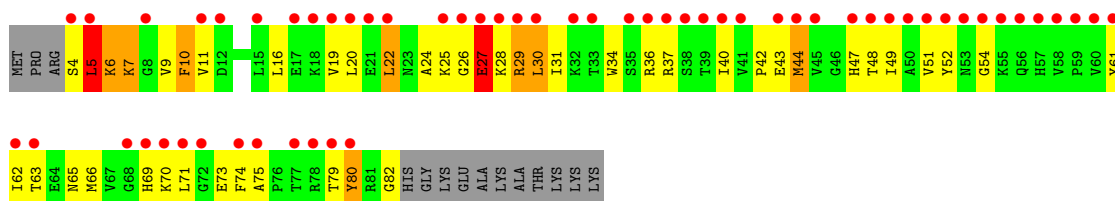




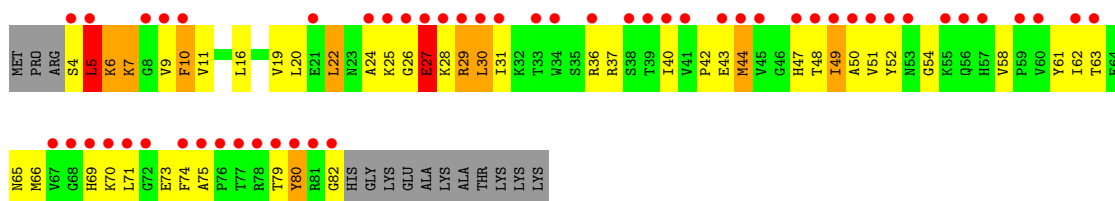
• Molecule 18: 30S ribosomal protein S18



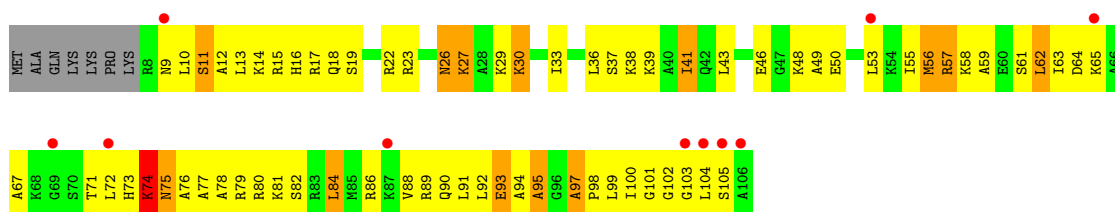
• Molecule 19: 30S ribosomal protein S19



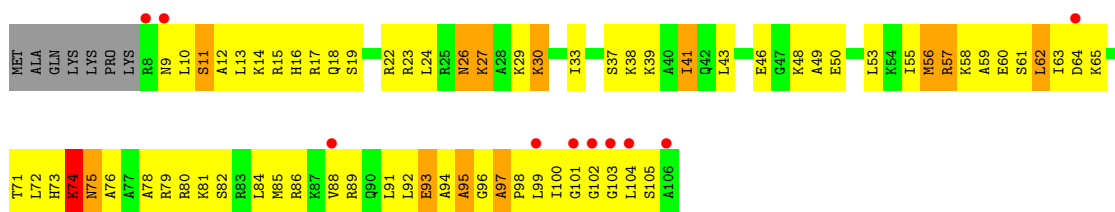
• Molecule 19: 30S ribosomal protein S19



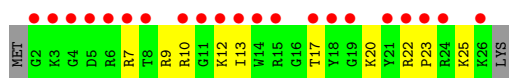
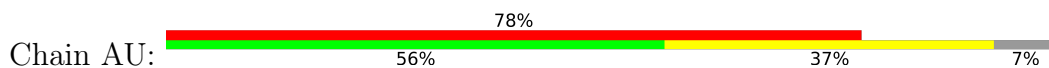
• Molecule 20: 30S ribosomal protein S20



- Molecule 20: 30S ribosomal protein S20



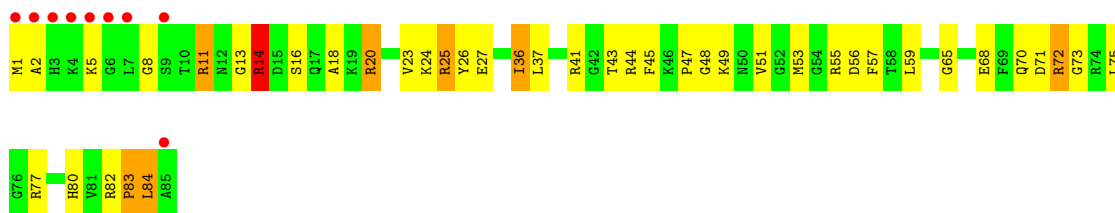
- Molecule 21: 30S ribosomal protein Thx



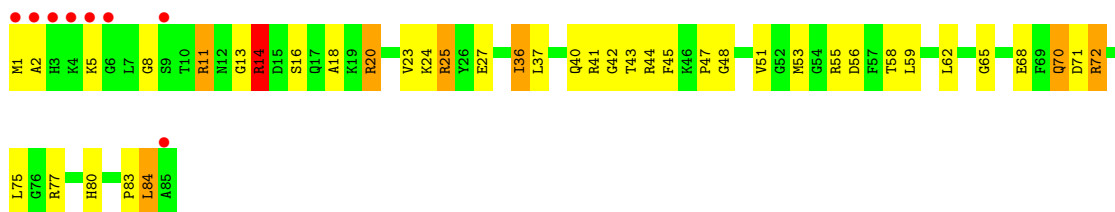
- Molecule 21: 30S ribosomal protein Thx



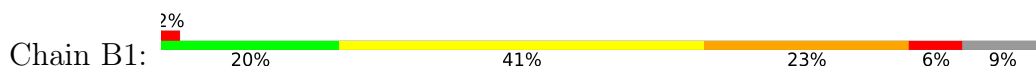
- Molecule 22: 50S ribosomal protein L27

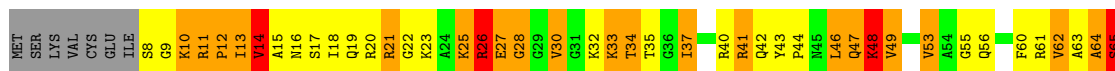


- Molecule 22: 50S ribosomal protein L27

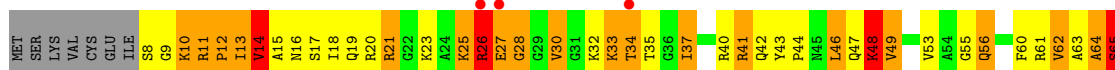
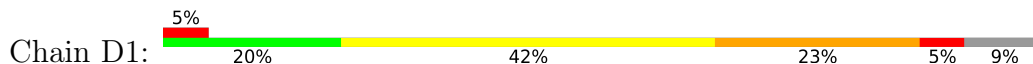


- Molecule 23: 50S ribosomal protein L28

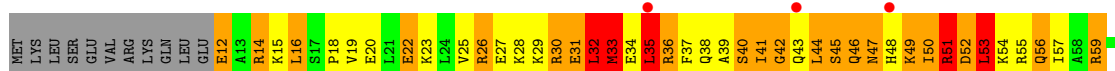




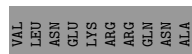
• Molecule 23: 50S ribosomal protein L28



• Molecule 24: 50S ribosomal protein L29



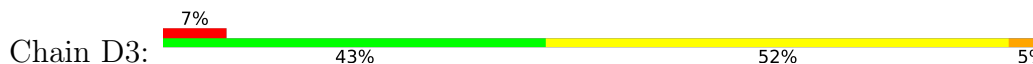
• Molecule 24: 50S ribosomal protein L29



• Molecule 25: 50S ribosomal protein L30

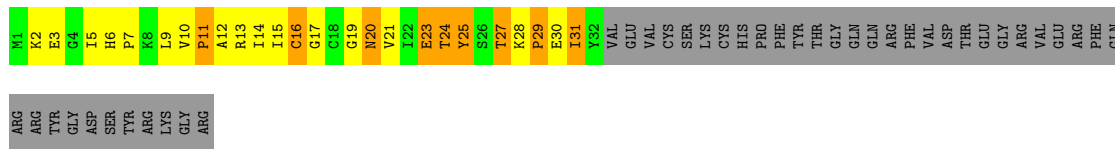
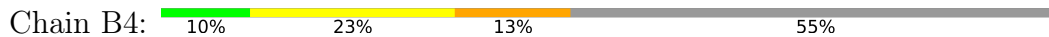


• Molecule 25: 50S ribosomal protein L30

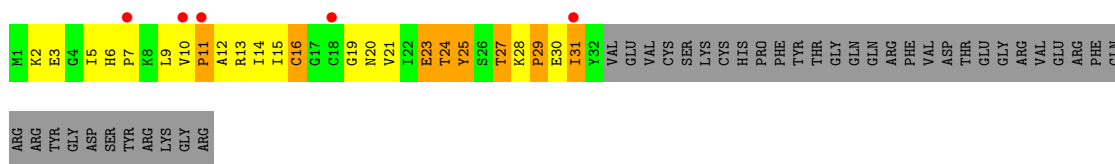
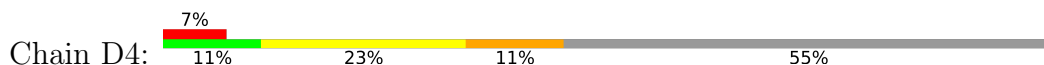




• Molecule 26: 50S ribosomal protein L31



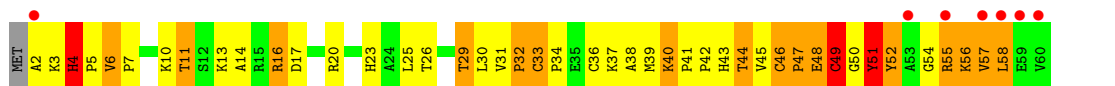
• Molecule 26: 50S ribosomal protein L31



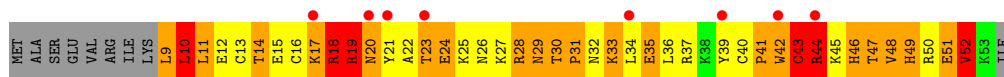
• Molecule 27: 50S ribosomal protein L32



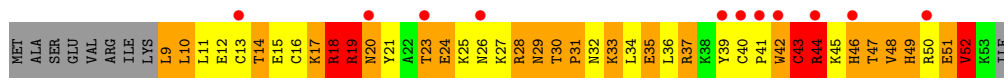
• Molecule 27: 50S ribosomal protein L32



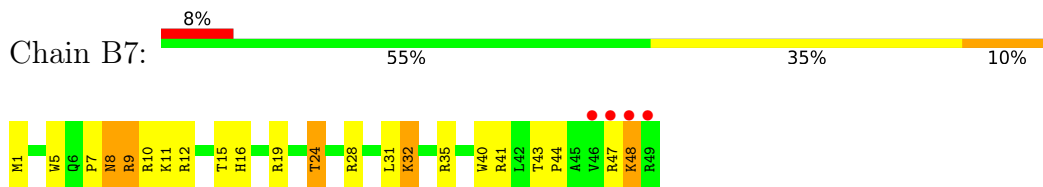
• Molecule 28: 50S ribosomal protein L33



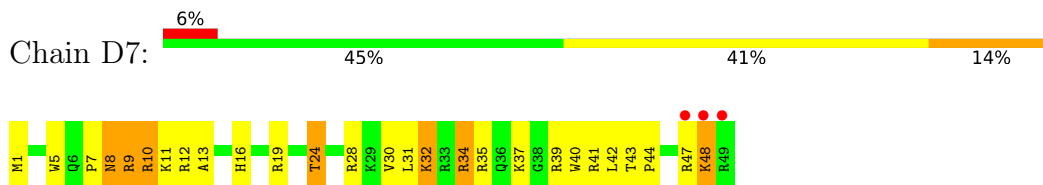
• Molecule 28: 50S ribosomal protein L33



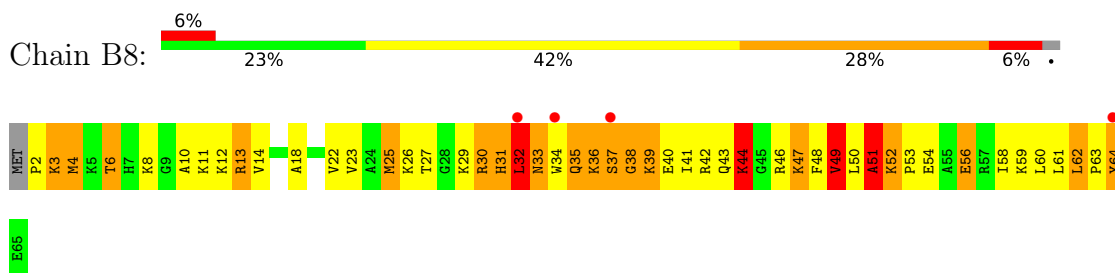
• Molecule 29: 50S ribosomal protein L34



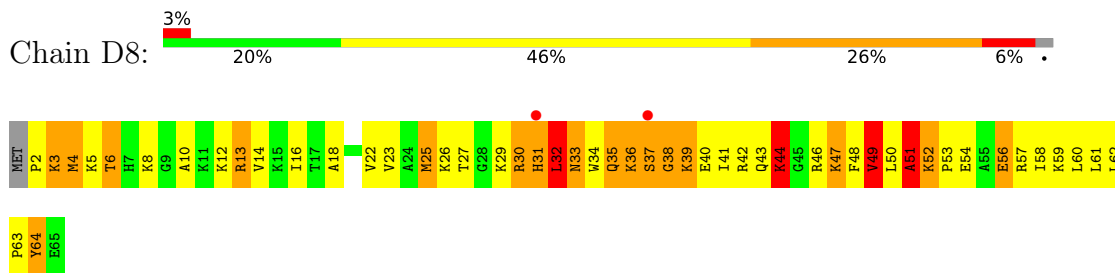
• Molecule 29: 50S ribosomal protein L34



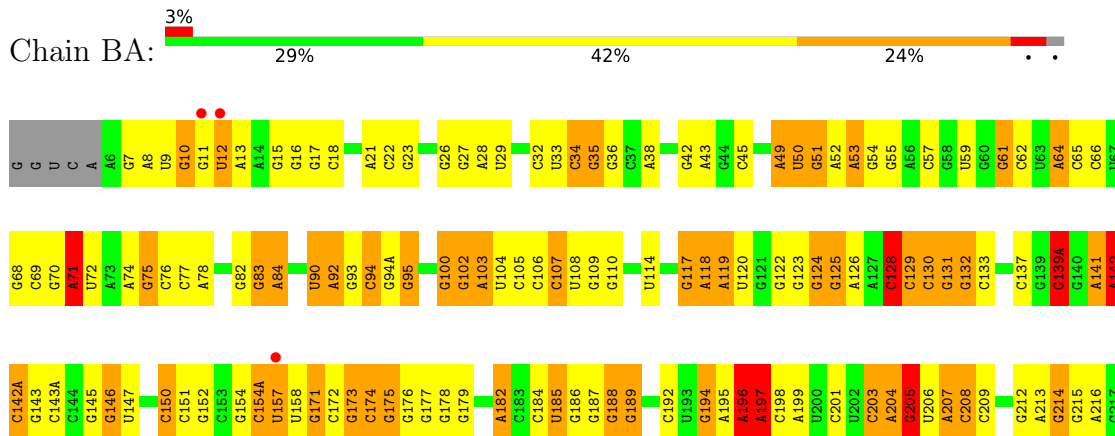
• Molecule 30: 50S ribosomal protein L35

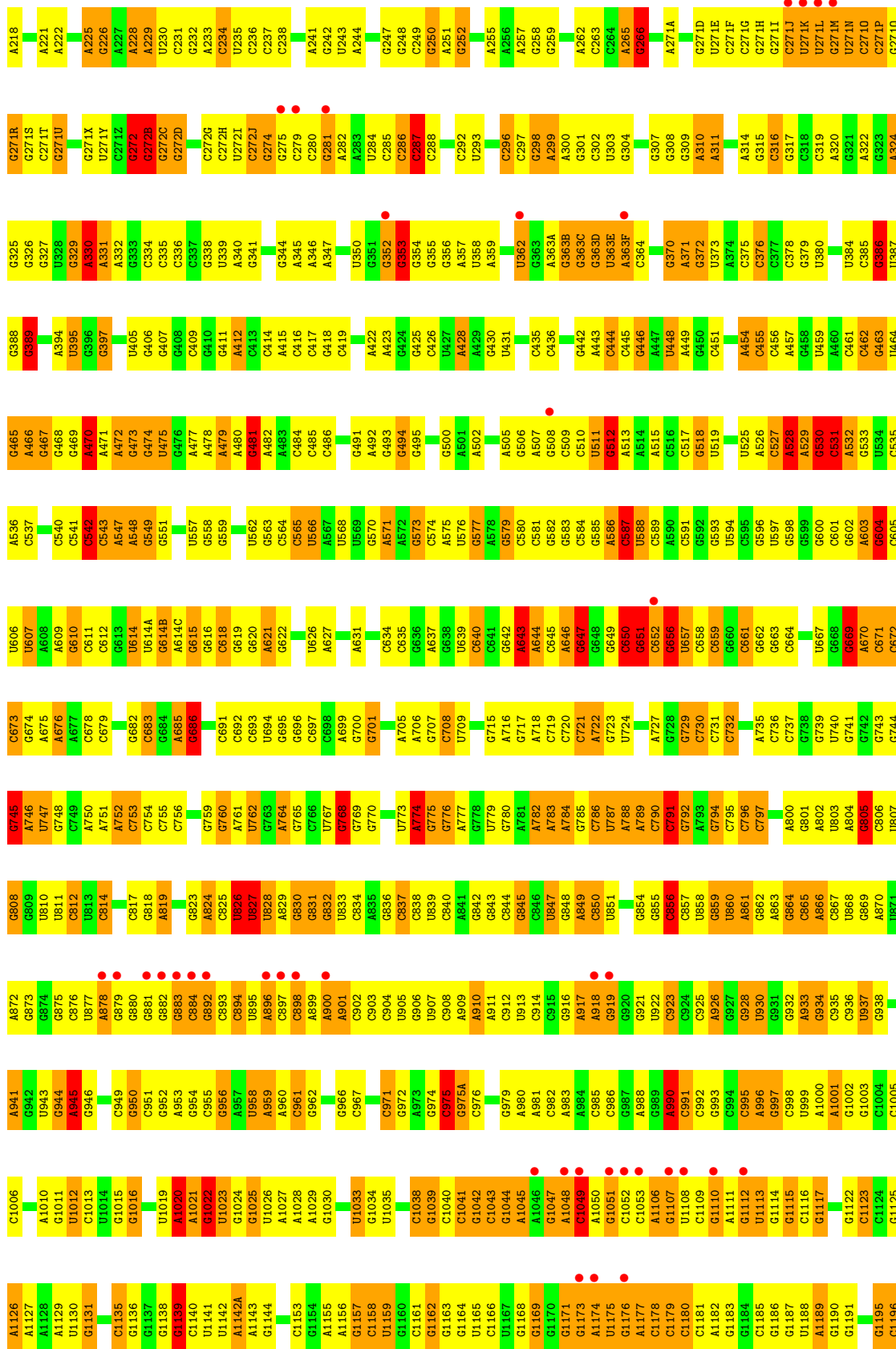


• Molecule 30: 50S ribosomal protein L35

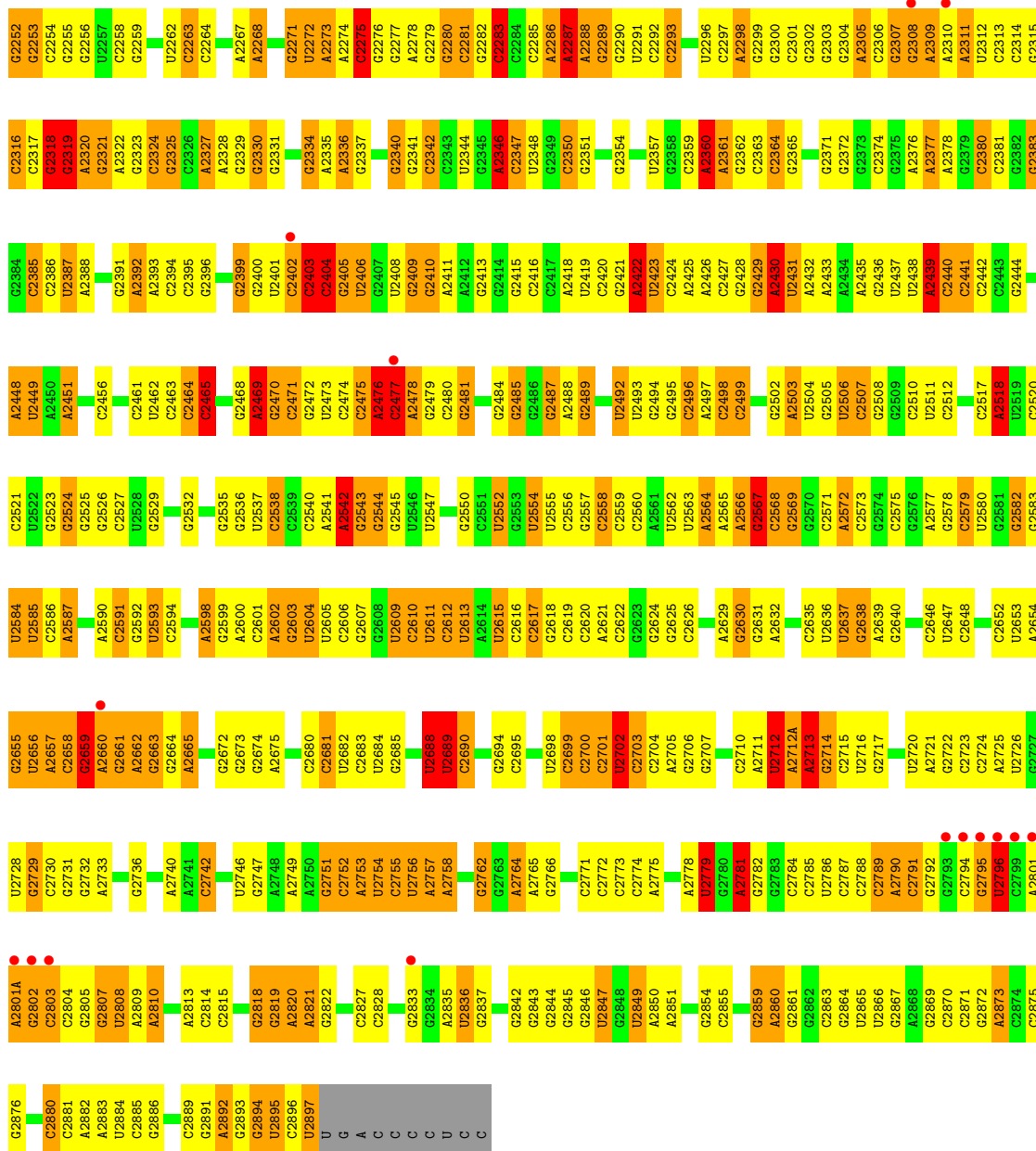


• Molecule 31: 23S ribosomal RNA

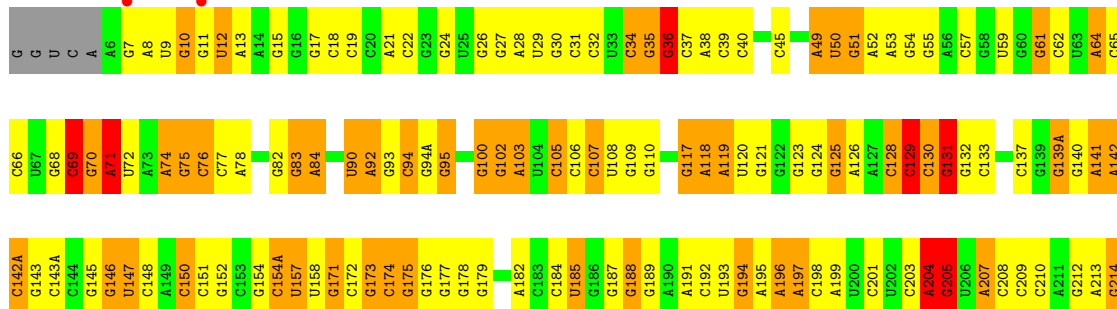




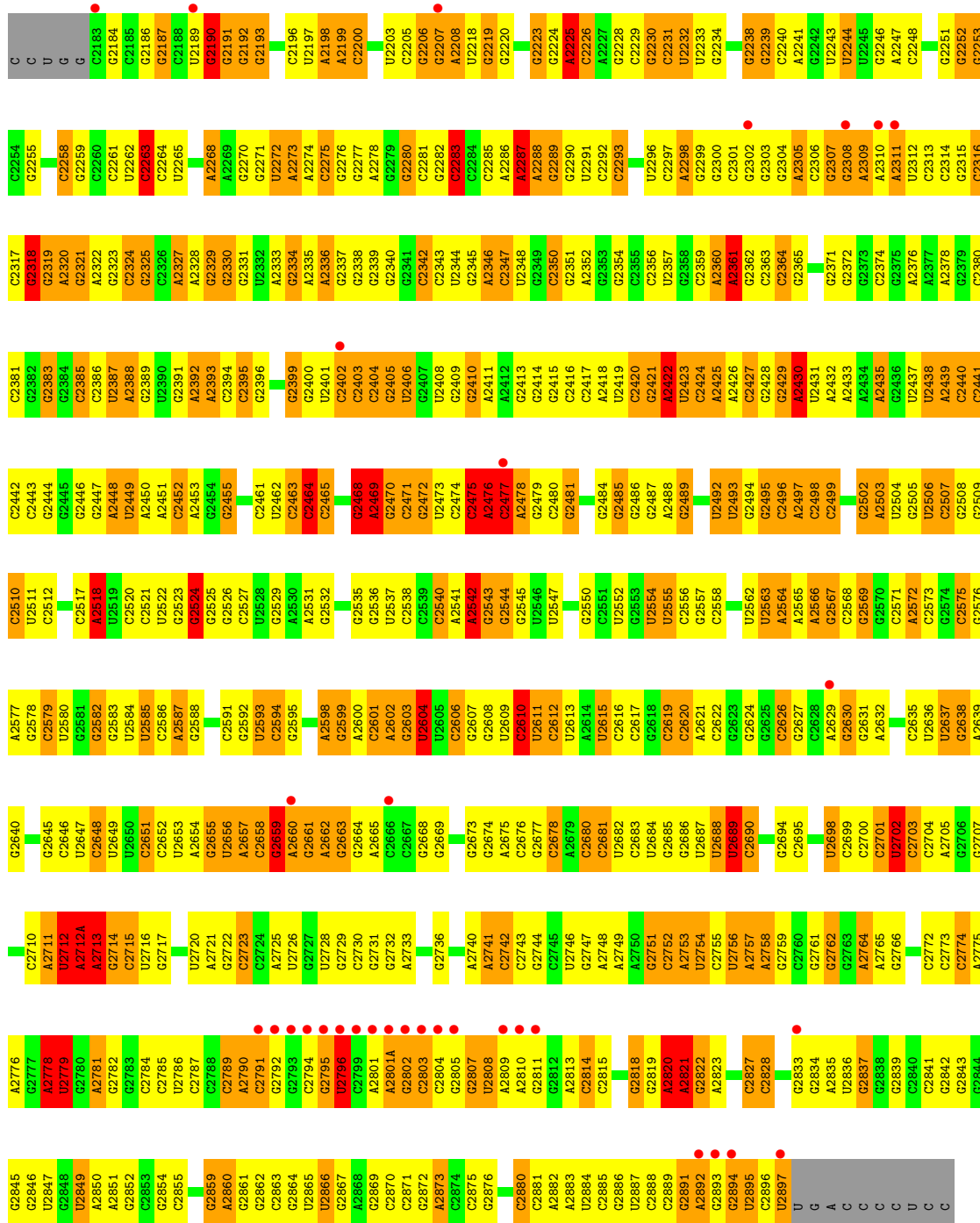
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C	G2087	G2087	A2019	C1947	A1698	A1629	C1557	G1485	A1342	U1273	C1201
C	A2020	A2020	C1880	C1948	A1790	U1629	A1558	A1486	G1343	A1274	A1204
U	C2021	C2021	C1881	G1949	A1791	A1632	G1559	A1487	A1275	A1275	U1205
G	G2023	G2023	C1882	G1950	A1700	A1633	A1568	A1488	A1276	A1276	G1206
G	G2024	G2024	G1883	U1951	G1702	G1634	U1489	U1489	G1277	G1277	U1207
C	C2025	C2025	A1884	A1952	G1703	G1635	A1490	A1490	G1348	A1278	G1207
C	G2026	G2026	A1885	A1953	G1704	C1636	A1491	A1491	A1349	G1279	C1208
C	C2027	C2027	C1886	G1954	G1705	A1637	G1492	G1492	C1350	G1280	G1209
C	G2028	G2028	C1887	U1955	U1706	C1638	A1493	A1493	U1282	U1282	A1210
C	U2029	U2029	G1888	U1956	U1707	U1639	A1494	A1494	G1283	G1283	A1211
C	G2030	G2030	A1889	C1957	U1709	C1640	A1495	A1495	A1284	A1284	G1212
C	A2031	A2031	A1890	G1958	U1710	A1641	A1496	A1496	A1354	A1354	A1213
C	G2032	G2032	A1891	U1959	U1711	G1642	U1497	U1497	G1356	U1287	A1216
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C	G2034	G2034	C1893	C1962	G1715	C1644	A1499	A1499	C1289	C1289	G1216
C	C2035	C2035	A1894	G1964	G1717	G1645	G1500	G1500	A1359	A1359	A1220
C	G2036	G2036	C1895	U1967	U1719	G1647	C1501	C1501	A1360	A1360	A1221
C	A2037	A2037	A1896	A1967	U1720	G1648	C1502	C1502	U1292	U1292	C1221A
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C	U2041	U2041	A1899	G1968	A1722	A1652	C1504	C1504	C1298	C1298	G1225
C	C2042	C2042	A1900	A1969	U1723	A1653	A1505	A1505	G1299	G1299	G1226
C	G2043	G2043	A1901	U1970	G1740	G1654	A1506	A1506	U1300	U1300	G1227
C	C2044	C2044	C1902	A1971	A1741	A1655	A1507	A1507	A1301	A1301	U1234
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C	C2048	C2048	G1906	C1975	C1745	C1658	A1509B	A1509B	C1370	C1370	G1236
C	G2049	G2049	A1907	U1976	G1746	A1659	G1510	G1510	U1306	U1306	G1238
C	A2053	A2053	G1910	A1977	C1747	C1660	A1511	A1511	A1378	A1378	G1239
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C	G2056	G2056	A1913	C1980	G1748	C1663	U1514	U1514	G1311	G1311	A1242
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C	C2065	C2065	U1920	C1987	G1756	G1674	G1525	G1525	C1388	C1388	G1251
C	G2066	G2066	A1925	C1988	A1762	C1675	U1602	U1602	C1320	C1320	G1252
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C	A2071	A2071	G1930	U1993	G1772	G1682	A1528B	A1528B	U1325	U1325	G1266
C	G2072	G2072	U1931	C1994	A1773	U1681	C1530	C1530	C1326	C1326	C1261
C	C2073	C2073	A1932	U1995	C1774	G1682	C1531	C1531	C1404	C1404	U1262
C	U2074	U2074	G1933	U1996	C1774	C1685	C1532	C1532	U1405	U1405	U1263
C	G2075	G2075	A1934	C1997	U1777	C1686	G1533	G1533	U1406	U1406	G1264
C	C2006	C2006	G1935	U1998	U1778	G1687	C1543	C1543	C1407	C1407	U1265
C	G2009	G2009	A1936	C1999	U1779	U1688	A1544	A1544	C1408	C1408	U1266
C	U2010	U2010	U1937	U1999	U1780	A1689	A1545	A1545	C1409	C1409	G1267
C	A2013	A2013	A1938	U1999	C1781	A1690	A1546	A1546	C1410	C1410	A1265
C	A2014	A2014	U1939	U1999	C1782	U1692	C1547	C1547	C1411	C1411	G1266
C	A2015	A2015	G1965	U1999	C1783	U1693	C1548	C1548	A1412	A1412	U1267
C	U2016	U2016	A1876	U1999	A1784	C1694	C1549	C1549	G1413	G1413	A1268
C			A1876	U1999	A1785	G1695	C1550	C1550	G1339	G1339	C1270



• Molecule 31: 23S ribosomal RNA



G2087	U2091	G2022	A1952	A1885	G1799	G1714	C1640	U1576	C1504	G1440	G1369	A1242	U1174
G2096	U2092	G2023	A1953	C1886	C1800	G1717	A1641	C1577	C1505	G1441	C1370	G1243	U1175
C2097	G2024	G1954	G1954	C1887	G1801	G1718	G1642	U1578	C1506	G1442	C1371	G1244	G1176
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G2099	G2026	U1956	U1956	A1803	C1648	U1720	C1643	G1580	A1508	G1444	A1373	G1246	C1178
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G2104	U1966	G1899	G1899	G1816	C1746	C1746	C1658	A1591	C1516	G1455	C1384	C1257	U1188
C2105	G1966	A1900	A1900	G1816	G1746	G1746	U1659	C1592	G1517	G1455	G1385	C1258	A1189
G2106	A1969	A1901	A1901	A1819	G1747	G1747	C1660	G1593	U1518	G1458	G1386	G1259	G1190
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A	U1913	A1913	A1913	U1833	G1758	G1758	C1671	C1604	C1531	G1468	A1270	C1201	G1201
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A	U1915	U1915	U1915	C1674	C1675	C1675	G1673	G1606	G1532	A1472	C1337	G1272	U1205
C	U1916	U1916	U1916	G1835	A1676	A1676	C1543	C1607	C1543	G1473	C1408	U1273	U1206
A	U1917	U1917	U1917	A1836	A1677	A1677	A1544	A1608	A1544	G1474	C1409	A1274	U1207
G	A1918	C1837	C1837	G1837	G1764	G1764	A1545	A1609	A1546	G1475	U1340	A1275	G1207
U	G1921	C1838	C1838	A1838	C1771	C1771	G1681	A1610	A1546	C1476	A1411	A1276	G1208
G	G1922	G1840	G1840	G1840	G1772	G1772	G1682	C1612	C1547	A1477	A1412	A1277	A1210
C	C1844	C1844	C1844	C1844	A1773	A1773	G1683	G1613	C1548	G1478	G1413	A1278	U1211
C	U1926	U1926	U1926	U1844	C1774	C1774	C1685	A1614	C1549	G1479	G1414	G1279	U1212
C	A1847	A1847	A1847	A1847	U1775	U1775	C1686	C1615	C1550	G1480	U1415	G1280	A1213
U	G1850	G1850	G1850	G1850	G1776	G1776	G1687	A1616	G1552	U1481	G1346	G1281	G1214
C	U1851	U1851	U1851	U1851	U1777	U1777	U1688	A1617	A1553	G1482	C1417	U1282	A1214
C	U1851	U1851	U1851	U1851	U1778	U1778	U1689	A1618	A1554	G1484	G1418	G1283	G1215
C	G1856	G1856	G1856	G1856	U1779	U1779	A1689	A1618	A1554	G1485	A1419	A1284	G1216
C	A1876	A1876	A1876	A1876	A1780	A1780	U1692	U1619	G1555	A1486	U1420	G1285	A1220
C	G1857	G1857	G1857	G1857	C1781	C1781	U1693	G1622	A1658	G1487	G1422	A1286	A1221
C	G1858	G1858	G1858	G1858	A1782	A1782	C1694	G1623	G1559	A1488	G1422	A1287	C1221A
C	A1859	A1859	A1859	A1859	A1783	A1783	G1695	G1624	G1559	U1489	A1353	U1288	C1221A
C	G1865	G1865	G1865	G1865	A1784	A1784	G1696	C1625	G1563	A1490	C1289	C1289	C1221A
C	C1866	C1866	C1866	C1866	A1785	A1785	G1697	G1626	G1564	G1426	G1290	G1290	C1224
C	A1866	A1866	A1866	A1866	A1786	A1786	A1698	G1627	C1565	A1427	G1291	G1291	G1225
C	A1876	A1876	A1876	A1876	U1786	U1786	G1699	G1628	A1566	C1483	C1428	U1292	A1226
C	G1877	G1877	G1877	G1877	C1790	C1790	A1700	U1628	A1567	A1494	G1429	G1293	G1227
C	A1878	A1878	A1878	A1878	A1700	A1700	A1567	U1629	A1495	A1495	C1430	G1228	G1228
C	G1880	G1880	G1880	G1880	A1701	A1701	G1568	G1630	A1496	U1496	U1431	C1297	G1229
C	C1881	C1881	C1881	C1881	G1702	G1702	A1569	U1497	A1497	A1497	C1298	C1298	G1230
C	G1882	G1882	G1882	G1882	G1703	G1703	A1570	C1498	A1498	C1498	G1363	C1299	U1234
C	A1884	A1884	A1884	A1884	A1570	A1570	A1570	G1635	A1570	C1498	A1434	U1300	U1234
C	G1884	G1884	G1884	G1884	A1571	A1571	A1571	G1636	A1572	C1499	G1435	U1301	G1235
C	G1948	G1948	G1948	G1948	A1572	A1572	A1572	G1637	A1573	G1500	G1436	A1302	G1235
C	G1949	G1949	G1949	G1949	U1709	U1709	A1573	A1638	A1574	C1501	C1437	A1302	U1240
C	A1884	A1884	A1884	A1884	U1713	U1713	A1575	U1639	A1575	U1503	A1439	A1304	A1241

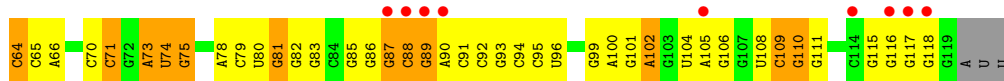
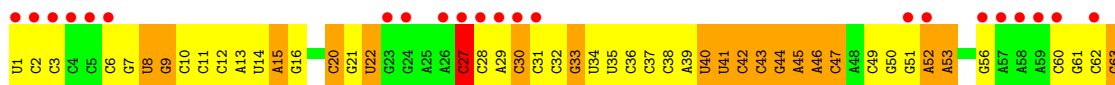


● Molecule 32: 5S ribosomal RNA

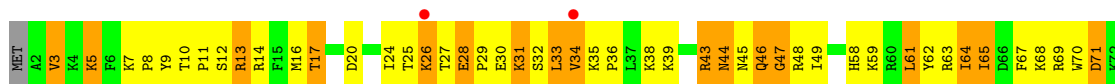




- Molecule 32: 5S ribosomal RNA



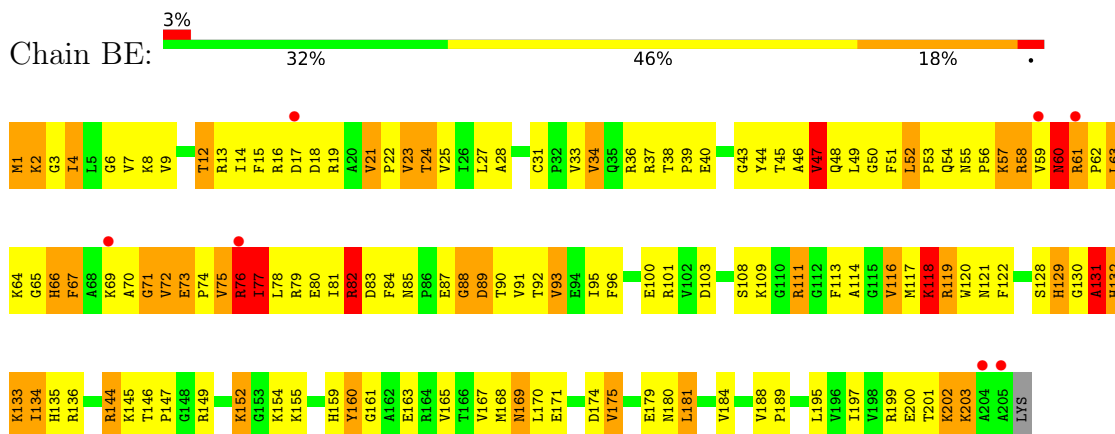
- Molecule 33: 50S ribosomal protein L2



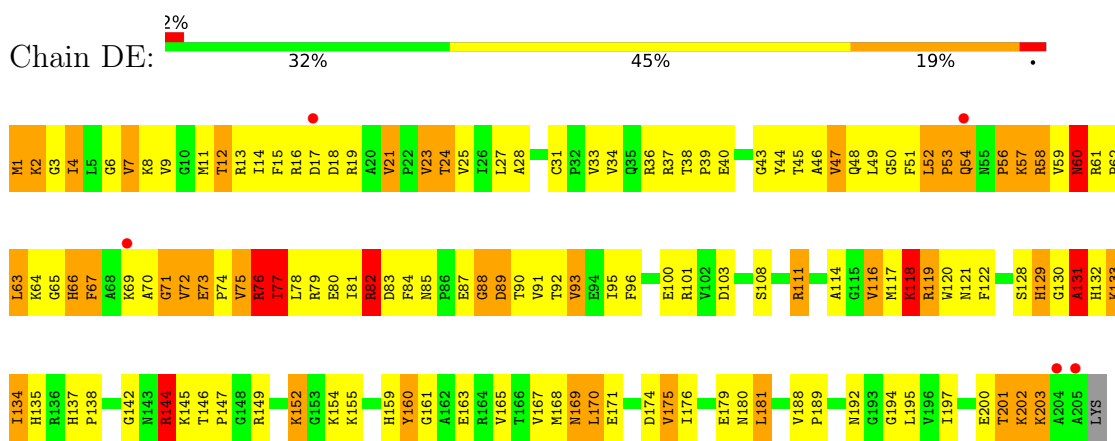
- Molecule 33: 50S ribosomal protein L2



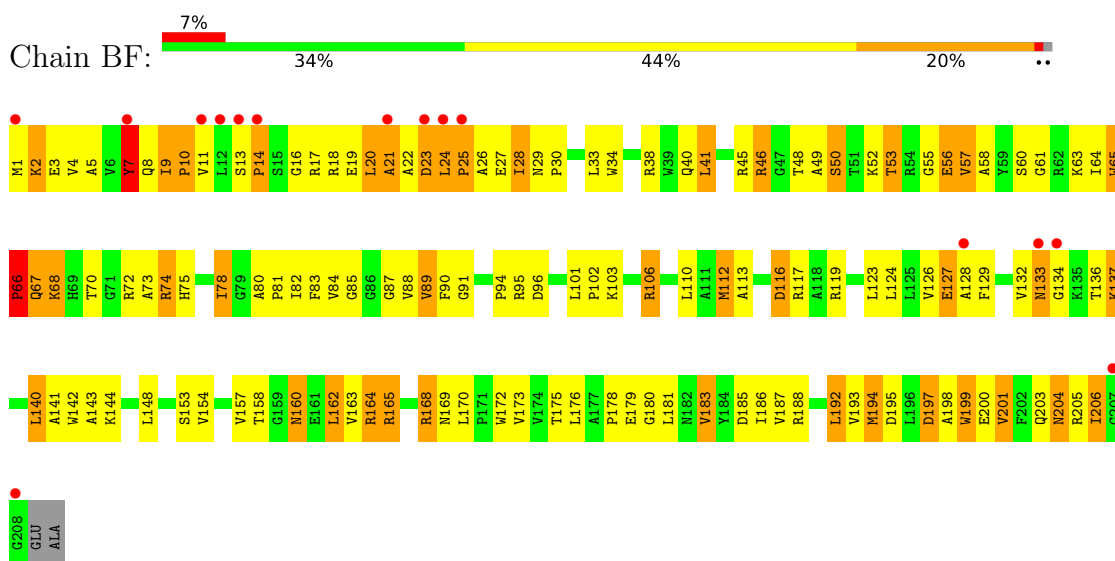
- Molecule 34: 50S ribosomal protein L3



• Molecule 34: 50S ribosomal protein L3

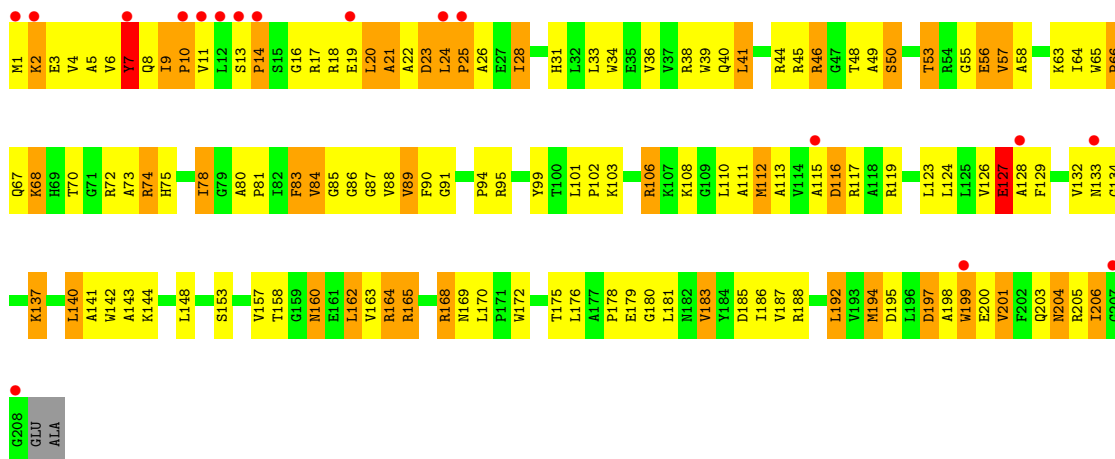


• Molecule 35: 50S ribosomal protein L4

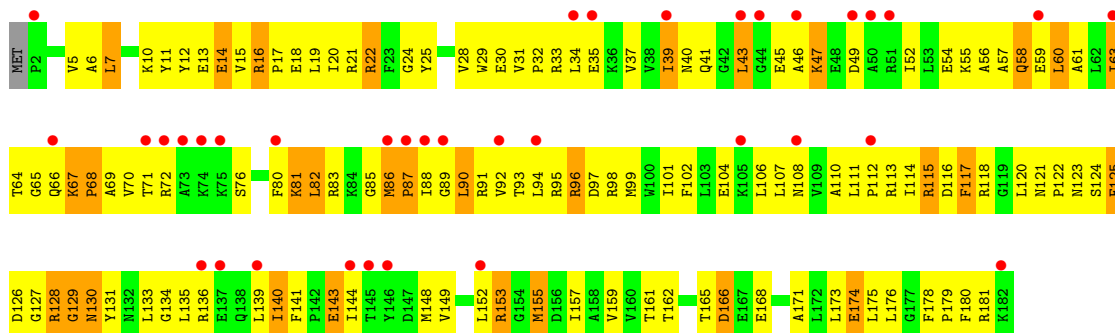


• Molecule 35: 50S ribosomal protein L4

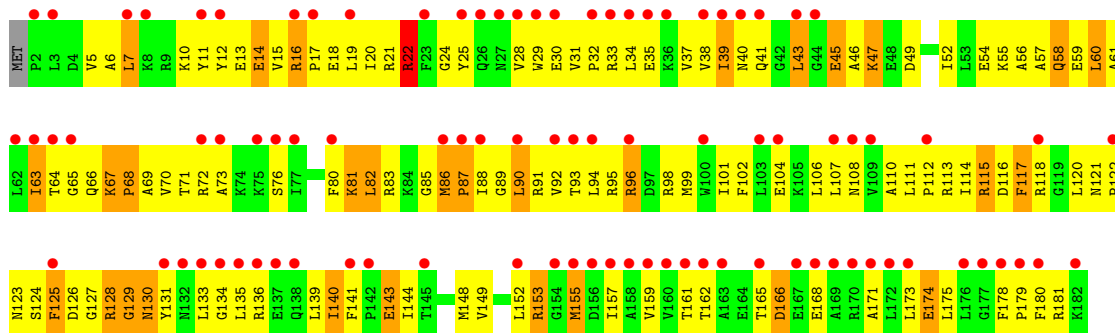




• Molecule 36: 50S ribosomal protein L5

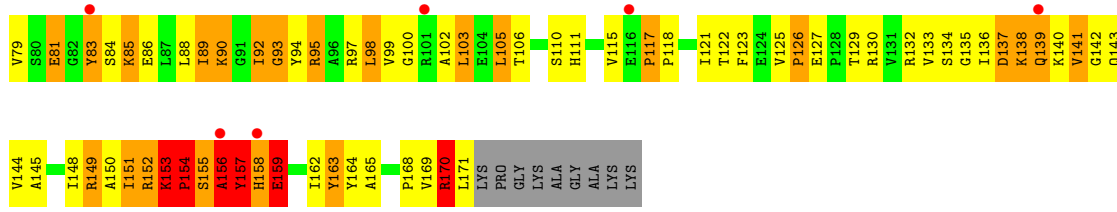


• Molecule 36: 50S ribosomal protein L5

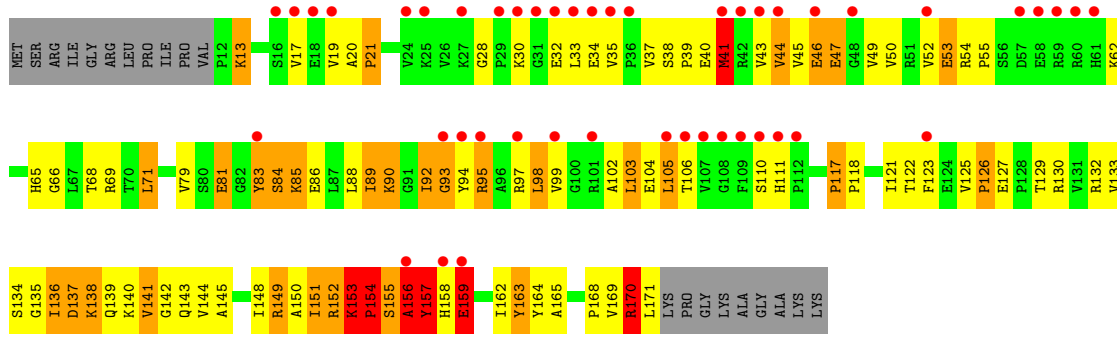


• Molecule 37: 50S ribosomal protein L6

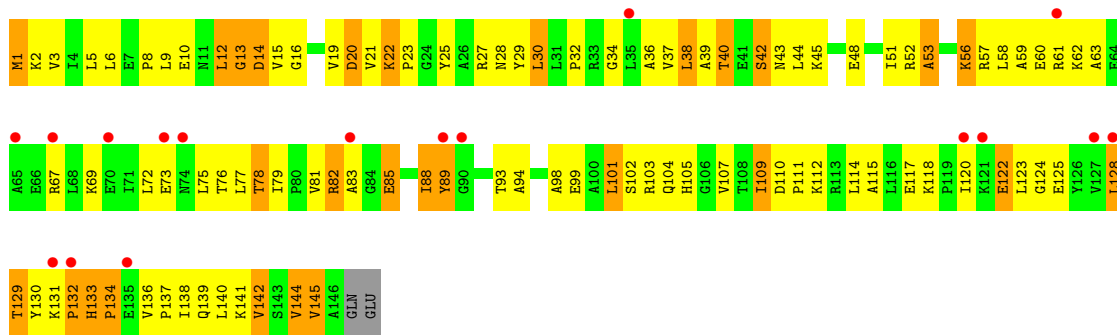




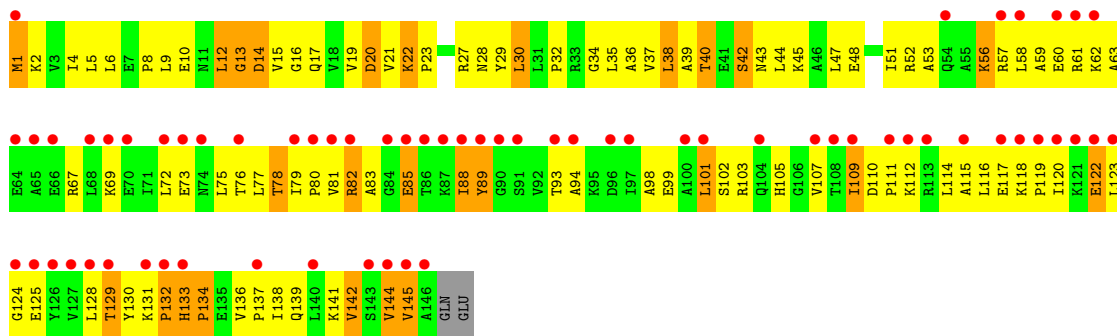
• Molecule 37: 50S ribosomal protein L6



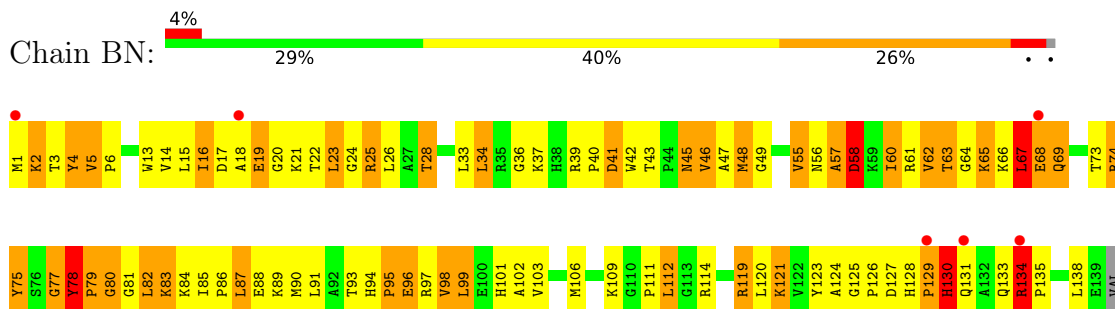
• Molecule 38: 50S ribosomal protein L9



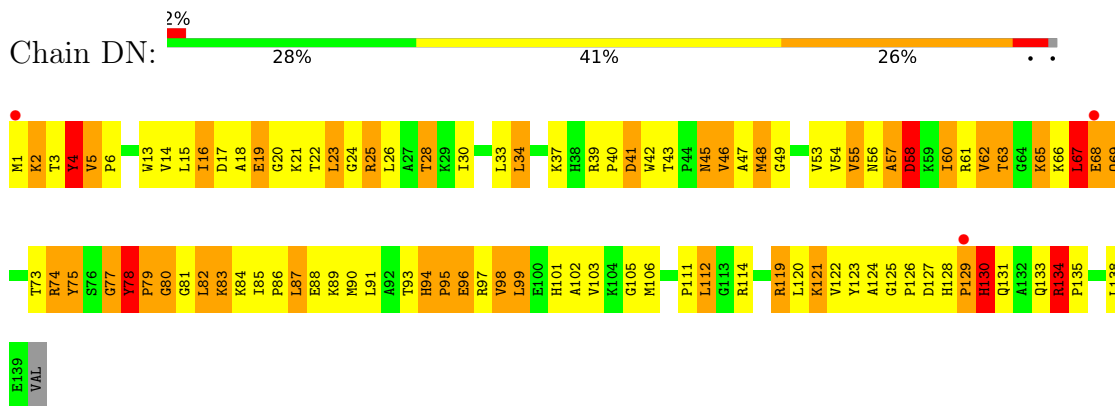
• Molecule 38: 50S ribosomal protein L9



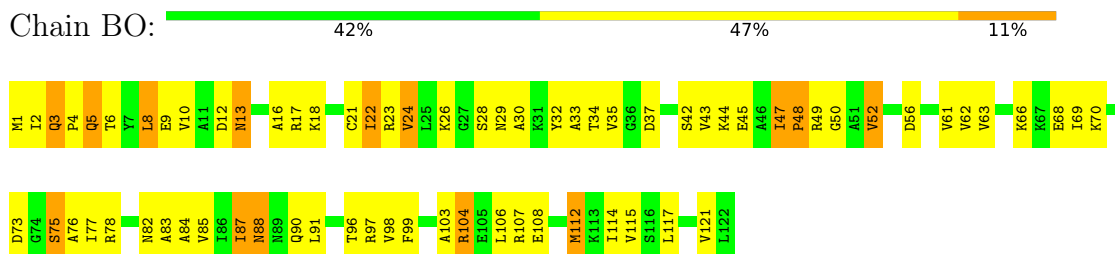
- Molecule 39: 50S ribosomal protein L13



- Molecule 39: 50S ribosomal protein L13



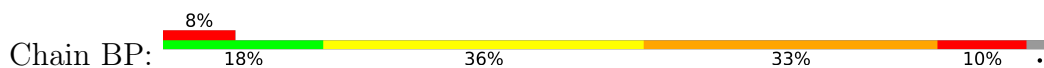
- Molecule 40: 50S ribosomal protein L14

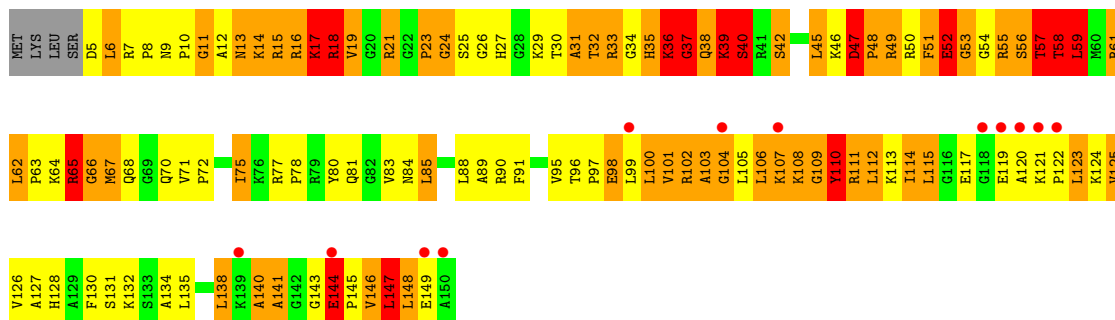


- Molecule 40: 50S ribosomal protein L14

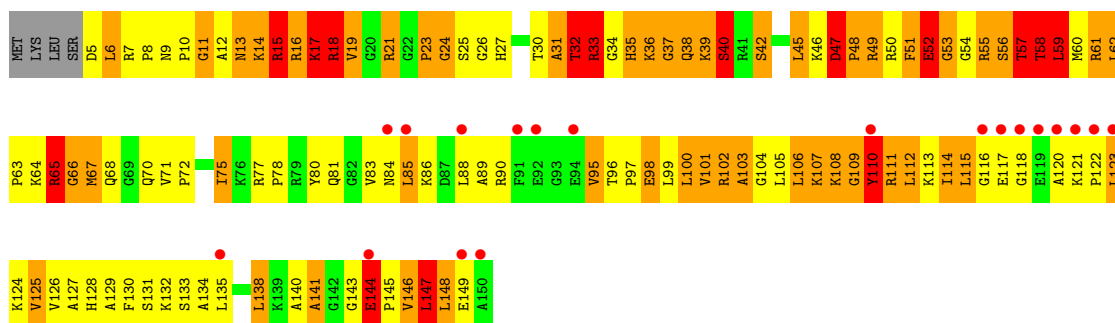
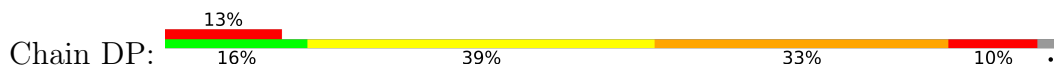


- Molecule 41: 50S ribosomal protein L15

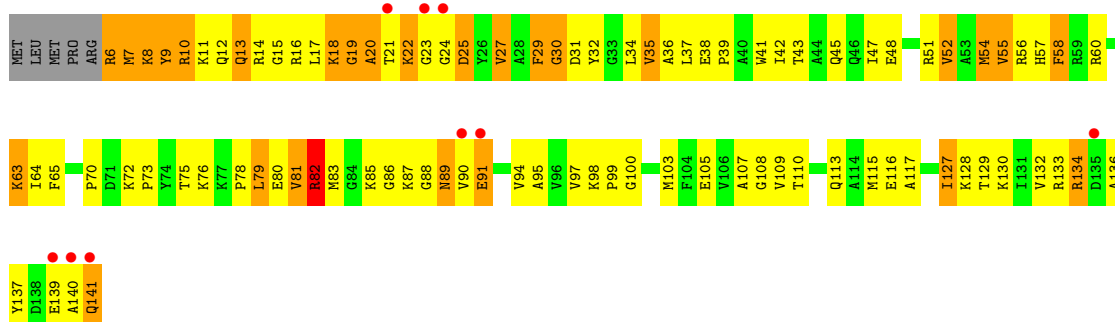
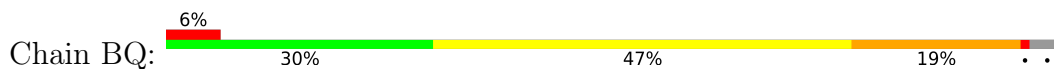




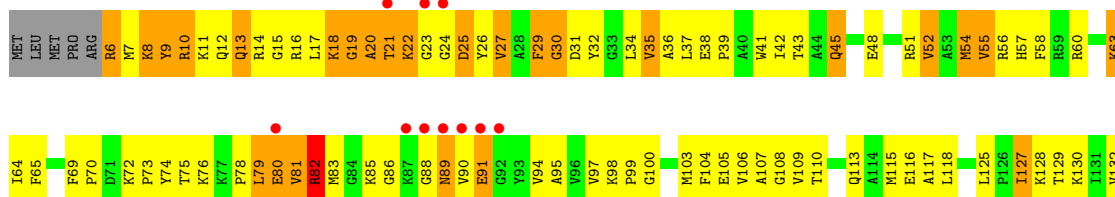
● Molecule 41: 50S ribosomal protein L15



● Molecule 42: 50S ribosomal protein L16



● Molecule 42: 50S ribosomal protein L16

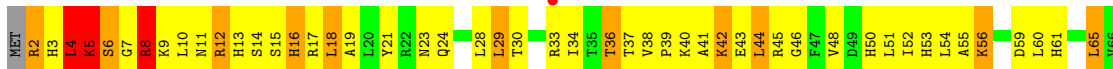




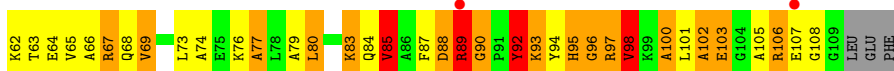
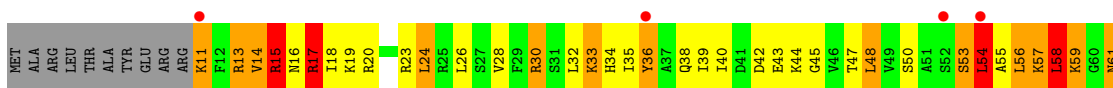
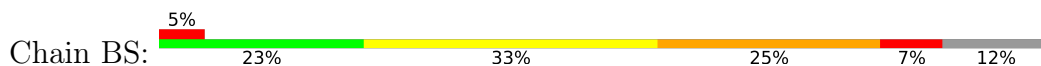
- Molecule 43: 50S ribosomal protein L17



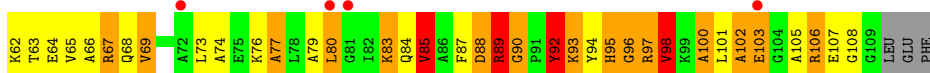
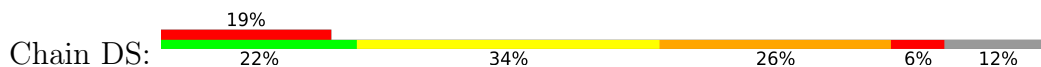
- Molecule 43: 50S ribosomal protein L17



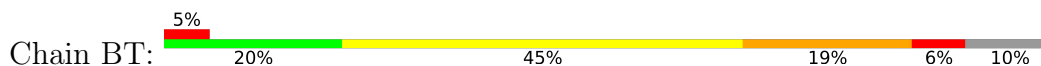
- Molecule 44: 50S ribosomal protein L18

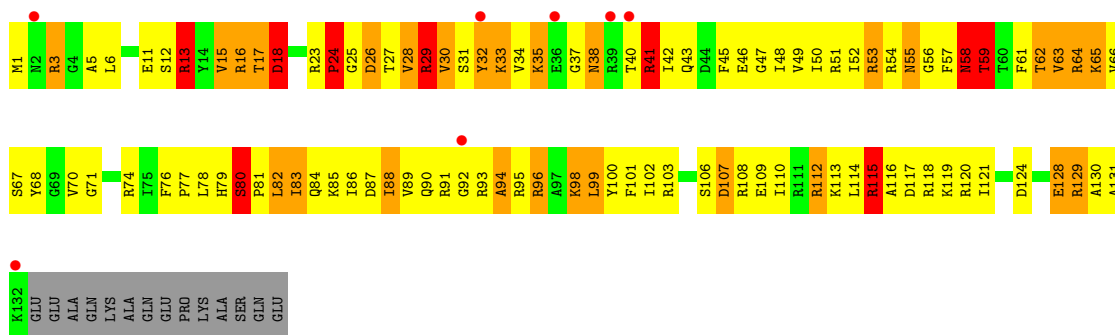


- Molecule 44: 50S ribosomal protein L18

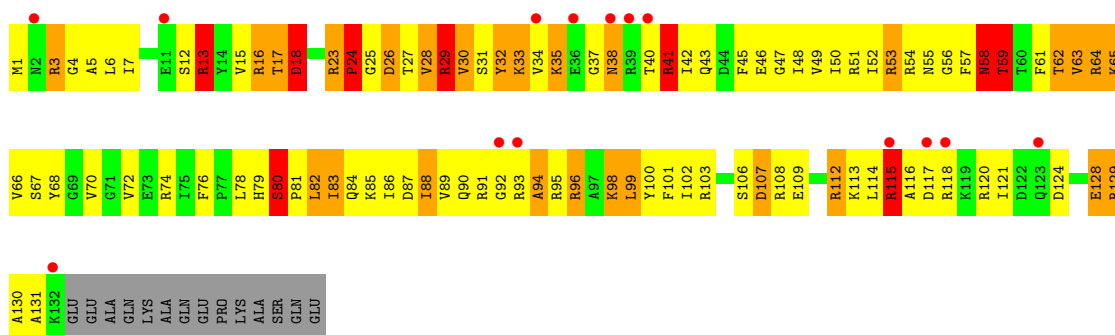
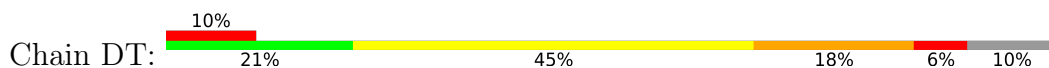


- Molecule 45: 50S ribosomal protein L19

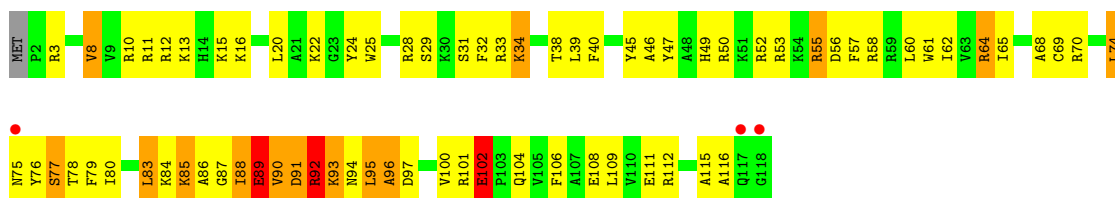




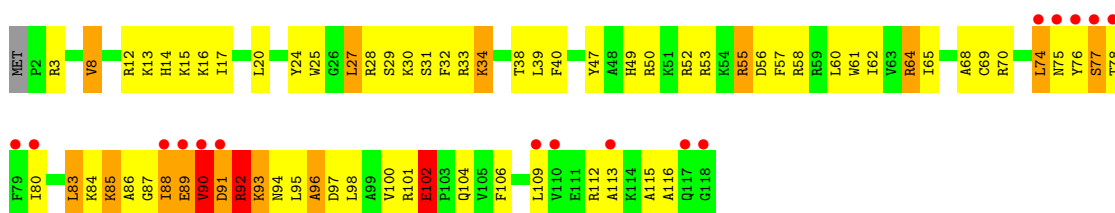
• Molecule 45: 50S ribosomal protein L19



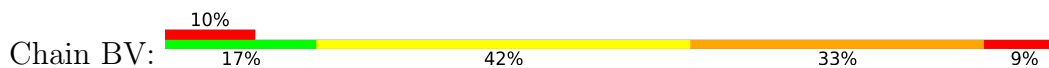
• Molecule 46: 50S ribosomal protein L20

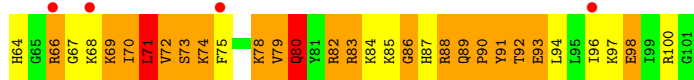
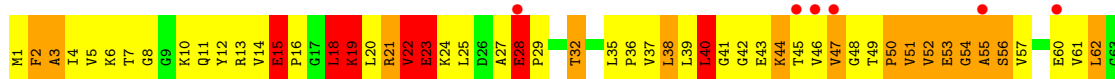


• Molecule 46: 50S ribosomal protein L20

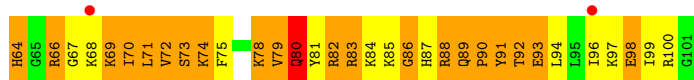
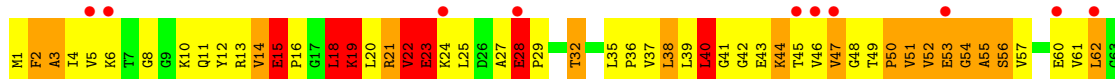
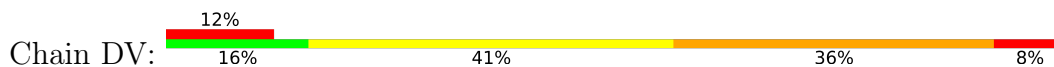


• Molecule 47: 50S ribosomal protein L21

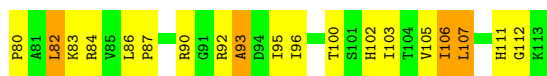




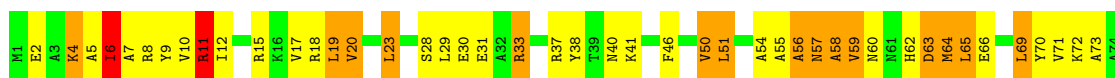
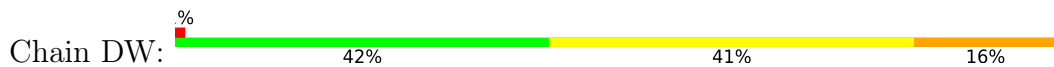
• Molecule 47: 50S ribosomal protein L21



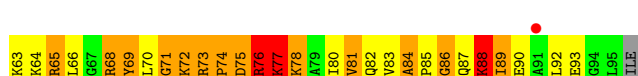
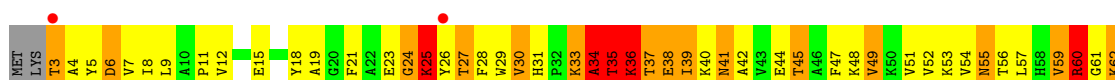
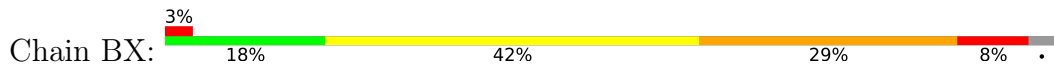
• Molecule 48: 50S ribosomal protein L22



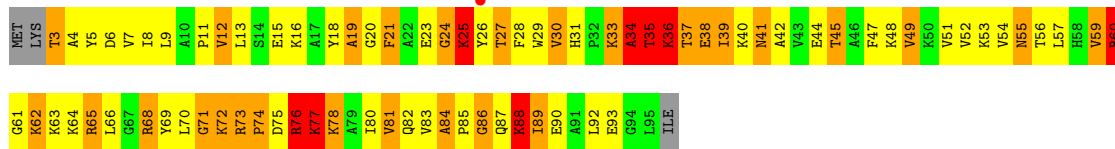
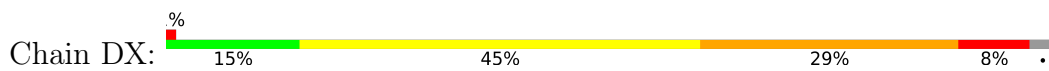
• Molecule 48: 50S ribosomal protein L22



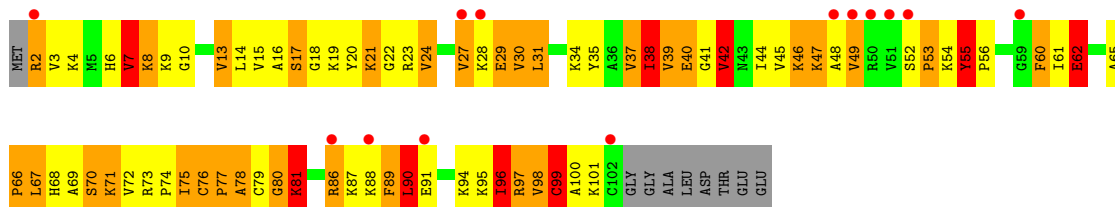
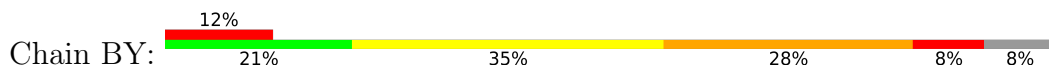
• Molecule 49: 50S ribosomal protein L23



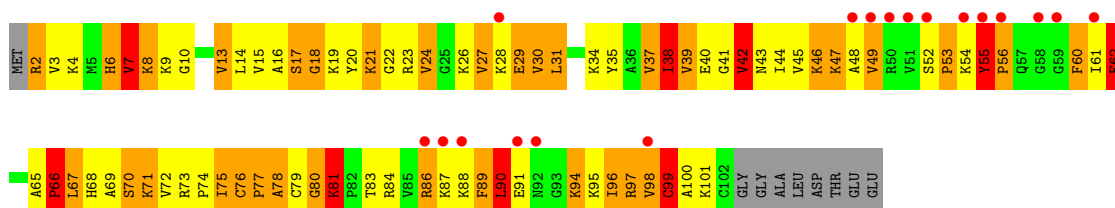
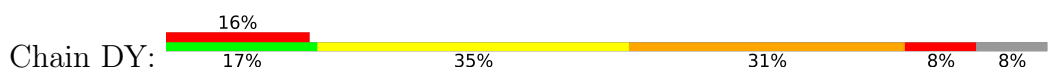
• Molecule 49: 50S ribosomal protein L23



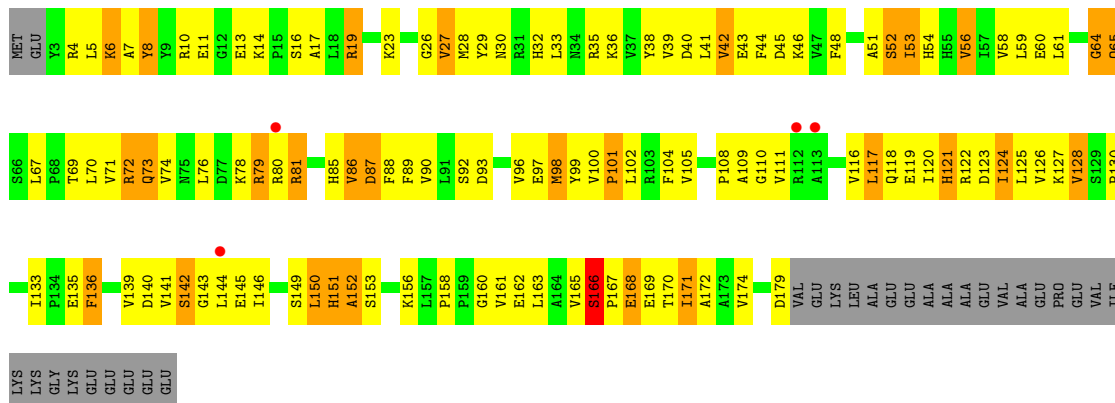
• Molecule 50: 50S ribosomal protein L24



• Molecule 50: 50S ribosomal protein L24

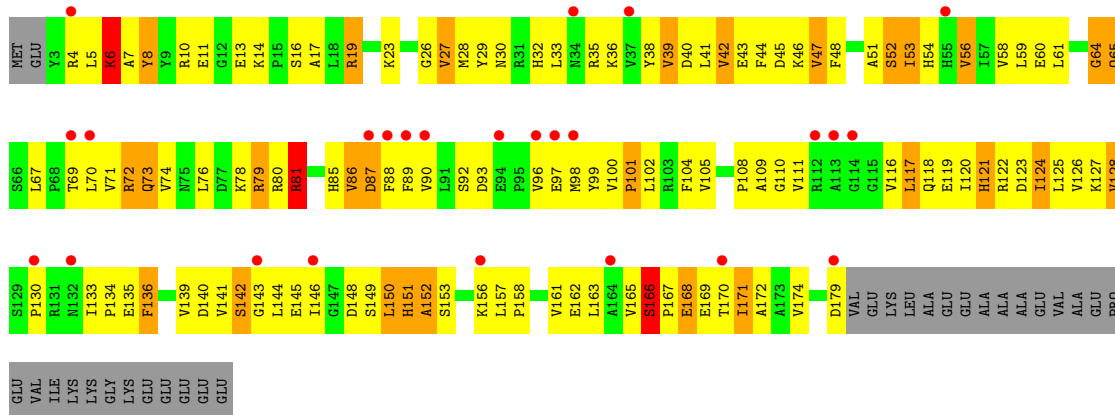


• Molecule 51: 50S ribosomal protein L25



• Molecule 51: 50S ribosomal protein L25





4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.47Å 447.96Å 620.17Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.61 – 3.00 49.88 – 3.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (49.61-3.00) 99.8 (49.88-3.00)	Depositor EDS
R_{merge}	0.27	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.22 (at 3.01Å)	Xtrriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.243 , 0.278 0.239 , 0.272	Depositor DCC
R_{free} test set	57768 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å ²)	66.5	Xtrriage
Anisotropy	0.273	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 86.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.88	EDS
Total number of atoms	278034	wwPDB-VP
Average B, all atoms (Å ²)	93.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.59% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ERY, ZN, K

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	AA	0.49	0/36190	0.86	24/56486 (0.0%)
1	CA	0.49	0/36190	0.87	35/56486 (0.1%)
2	AB	0.28	0/1936	0.49	0/2611
2	CB	0.28	0/1936	0.49	0/2611
3	AC	0.26	0/1637	0.46	0/2207
3	CC	0.26	0/1637	0.45	0/2207
4	AD	0.34	0/1733	0.52	0/2318
4	CD	0.35	0/1733	0.53	0/2318
5	AE	0.32	0/1163	0.52	0/1566
5	CE	0.33	0/1163	0.54	0/1566
6	AF	0.33	0/856	0.53	0/1154
6	CF	0.33	0/856	0.53	0/1154
7	AG	0.24	0/1276	0.43	0/1709
7	CG	0.24	0/1276	0.43	0/1709
8	AH	0.33	0/1136	0.54	0/1527
8	CH	0.31	0/1136	0.53	0/1527
9	AI	0.26	0/1028	0.42	0/1375
9	CI	0.26	0/1028	0.42	0/1375
10	AJ	0.27	0/808	0.46	0/1087
10	CJ	0.27	0/808	0.47	0/1087
11	AK	0.31	0/900	0.52	0/1213
11	CK	0.32	0/900	0.53	0/1213
12	AL	0.39	0/987	0.61	0/1322
12	CL	0.41	0/987	0.61	0/1322
13	AM	0.24	0/928	0.45	0/1238
13	CM	0.25	0/928	0.45	0/1238
14	AN	0.28	0/501	0.43	0/664
14	CN	0.27	0/501	0.43	0/664
15	AO	0.34	0/745	0.53	0/992
15	CO	0.33	0/745	0.52	0/992
16	AP	0.32	0/717	0.54	0/965
16	CP	0.31	0/717	0.55	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.34	0/837	0.53	0/1119
17	CQ	0.33	0/837	0.53	0/1119
18	AR	0.33	0/579	0.57	0/768
18	CR	0.32	0/579	0.56	0/768
19	AS	0.25	0/643	0.42	0/867
19	CS	0.25	0/643	0.42	0/867
20	AT	0.35	0/765	0.55	0/1007
20	CT	0.34	0/765	0.55	0/1007
21	AU	0.26	0/213	0.42	0/279
21	CU	0.26	0/213	0.42	0/279
22	B0	0.52	0/658	0.70	0/878
22	D0	0.52	0/658	0.70	0/878
23	B1	0.76	0/700	1.02	2/931 (0.2%)
23	D1	0.73	0/700	0.99	2/931 (0.2%)
24	B2	0.65	0/423	0.99	1/560 (0.2%)
24	D2	0.57	0/423	0.92	1/560 (0.2%)
25	B3	0.61	0/473	0.71	0/636
25	D3	0.48	0/473	0.68	0/636
26	B4	0.28	0/156	0.57	0/215
26	D4	0.27	0/156	0.55	0/215
27	B5	0.85	0/473	1.06	3/639 (0.5%)
27	D5	0.78	0/473	1.01	3/639 (0.5%)
28	B6	0.80	0/387	1.04	2/517 (0.4%)
28	D6	0.67	0/387	0.94	0/517
29	B7	0.63	0/427	0.84	0/563
29	D7	0.64	0/427	0.83	1/563 (0.2%)
30	B8	0.73	0/516	1.07	3/681 (0.4%)
30	D8	0.65	0/516	1.03	3/681 (0.4%)
31	BA	1.06	67/65745 (0.1%)	1.40	967/102639 (0.9%)
31	DA	0.87	39/65745 (0.1%)	1.40	970/102639 (0.9%)
32	BB	0.80	0/2853	1.13	12/4451 (0.3%)
32	DB	0.69	0/2853	1.13	20/4451 (0.4%)
33	BD	0.63	0/2155	0.84	1/2907 (0.0%)
33	DD	0.60	0/2155	0.83	0/2907
34	BE	0.62	0/1597	0.83	2/2155 (0.1%)
34	DE	0.55	0/1597	0.81	0/2155
35	BF	0.61	1/1659 (0.1%)	0.76	1/2246 (0.0%)
35	DF	0.52	0/1659	0.76	2/2246 (0.1%)
36	BG	0.31	0/1498	0.53	0/2013
36	DG	0.29	0/1498	0.52	0/2013
37	BH	0.60	0/1246	0.73	0/1684
37	DH	0.42	0/1246	0.68	0/1684
38	BI	0.35	0/1147	0.59	0/1553

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DI	0.38	0/1147	0.59	0/1553
39	BN	0.72	0/1132	0.90	1/1527 (0.1%)
39	DN	0.57	0/1132	0.86	1/1527 (0.1%)
40	BO	0.59	1/943 (0.1%)	0.70	0/1269
40	DO	0.51	0/943	0.69	0/1269
41	BP	0.73	0/1131	1.07	9/1504 (0.6%)
41	DP	0.64	0/1131	1.00	5/1504 (0.3%)
42	BQ	0.69	0/1100	0.85	2/1470 (0.1%)
42	DQ	0.61	0/1100	0.85	2/1470 (0.1%)
43	BR	0.63	0/974	0.85	2/1302 (0.2%)
43	DR	0.57	0/974	0.84	2/1302 (0.2%)
44	BS	0.51	0/779	0.79	0/1038
44	DS	0.45	0/779	0.76	0/1038
45	BT	0.58	0/1114	0.86	1/1488 (0.1%)
45	DT	0.55	0/1114	0.85	2/1488 (0.1%)
46	BU	0.69	0/975	0.79	0/1297
46	DU	0.55	0/975	0.79	0/1297
47	BV	0.75	0/790	0.97	1/1057 (0.1%)
47	DV	0.60	0/790	0.92	1/1057 (0.1%)
48	BW	0.69	0/907	0.85	2/1216 (0.2%)
48	DW	0.60	0/907	0.82	2/1216 (0.2%)
49	BX	0.74	0/740	0.97	2/995 (0.2%)
49	DX	0.65	0/740	0.96	1/995 (0.1%)
50	BY	0.67	0/789	0.86	0/1053
50	DY	0.56	0/789	0.81	0/1053
51	BZ	0.45	0/1436	0.64	1/1951 (0.1%)
51	DZ	0.40	0/1436	0.63	1/1951 (0.1%)
All	All	0.74	108/301002 (0.0%)	1.11	2093/449818 (0.5%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
23	B1	0	1
23	D1	0	1
27	B5	0	1
27	D5	0	1
30	B8	0	1
30	D8	0	1
31	BA	21	0

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Mol	Chain	#Chirality outliers	#Planarity outliers
31	DA	21	0
33	BD	0	2
33	DD	0	2
34	BE	0	2
34	DE	0	2
37	BH	0	2
37	DH	0	2
41	BP	0	5
41	DP	0	3
42	BQ	0	1
42	DQ	0	1
43	BR	0	2
43	DR	0	2
44	BS	0	1
44	DS	0	1
45	BT	0	1
45	DT	0	1
46	BU	0	1
46	DU	0	1
47	BV	0	1
47	DV	0	1
49	BX	0	5
49	DX	0	5
All	All	42	50

All (108) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	783	A	N9-C4	-14.89	1.28	1.37
31	BA	783	A	N3-C4	-11.41	1.28	1.34
31	BA	669	G	C4'-C3'	-11.35	1.40	1.53
31	BA	1300	U	C4'-C3'	-10.54	1.41	1.53
31	DA	783	A	N9-C4	-10.54	1.31	1.37
31	BA	2346	A	N3-C4	-10.28	1.28	1.34
31	DA	669	G	C4'-C3'	-10.22	1.42	1.53
31	DA	1300	U	C4'-C3'	-9.59	1.42	1.53
31	BA	1142(A)	A	N9-C4	-9.49	1.32	1.37
31	BA	1332	G	N9-C4	-9.28	1.30	1.38
31	BA	1694	C	C4'-C3'	-9.14	1.43	1.53
31	BA	1021	A	N9-C4	-8.87	1.32	1.37
31	DA	1694	C	C4'-C3'	-8.81	1.43	1.53
31	BA	2346	A	N9-C4	-8.70	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	DA	1142(A)	A	N9-C4	-8.70	1.32	1.37
31	BA	774	A	N9-C4	-8.33	1.32	1.37
31	BA	330	A	N9-C4	-8.19	1.32	1.37
31	DA	2346	A	N3-C4	-7.91	1.30	1.34
31	DA	2346	A	N9-C4	-7.85	1.33	1.37
31	DA	1332	G	N9-C4	-7.82	1.31	1.38
31	BA	676	A	N9-C4	-7.75	1.33	1.37
31	BA	1786	A	N9-C4	-7.68	1.33	1.37
31	BA	933	A	N9-C4	-7.66	1.33	1.37
31	DA	2430	A	N9-C4	-7.58	1.33	1.37
31	DA	1021	A	N9-C4	-7.37	1.33	1.37
31	BA	2430	A	N9-C4	-7.34	1.33	1.37
31	BA	2713	A	N9-C4	-7.31	1.33	1.37
31	BA	1674	G	N7-C5	-7.28	1.34	1.39
31	BA	783	A	N7-C5	-7.26	1.34	1.39
31	BA	2518	A	N9-C4	-7.05	1.33	1.37
31	DA	528	A	N9-C4	-6.91	1.33	1.37
31	DA	774	A	N9-C4	-6.85	1.33	1.37
31	BA	652	C	O3'-P	6.61	1.69	1.61
31	BA	945	A	N9-C4	-6.56	1.33	1.37
31	BA	1332	G	N9-C8	6.53	1.42	1.37
31	BA	528	A	N9-C4	-6.49	1.33	1.37
31	DA	652	C	O3'-P	6.41	1.68	1.61
31	DA	2518	A	N9-C4	-6.39	1.34	1.37
31	BA	1829	A	N9-C4	-6.39	1.34	1.37
31	DA	1786	A	C5-C6	-6.33	1.35	1.41
31	BA	945	A	N3-C4	-6.30	1.31	1.34
31	DA	2287	A	N9-C4	-6.27	1.34	1.37
31	BA	2392	A	N9-C4	-6.26	1.34	1.37
31	BA	1204	A	C5-C6	-6.26	1.35	1.41
31	BA	1616	A	N9-C4	-6.19	1.34	1.37
31	DA	2587	A	N7-C5	-6.16	1.35	1.39
31	BA	1762	A	N9-C4	6.09	1.41	1.37
31	DA	1786	A	N9-C4	-6.07	1.34	1.37
31	DA	783	A	N3-C4	-6.07	1.31	1.34
31	BA	1021	A	N7-C5	-6.05	1.35	1.39
31	BA	2287	A	N9-C4	-6.01	1.34	1.37
31	DA	2821	A	N9-C4	-5.93	1.34	1.37
31	DA	1021	A	N7-C5	-5.92	1.35	1.39
31	BA	652	C	C3'-O3'	5.92	1.50	1.42
31	BA	933	A	N3-C4	-5.87	1.31	1.34
31	DA	1899	G	N9-C4	-5.84	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	2430	A	C5-C6	-5.75	1.35	1.41
31	BA	1332	G	N3-C4	-5.74	1.31	1.35
31	BA	783	A	C5-C6	-5.74	1.35	1.41
31	BA	2346	A	N7-C5	-5.73	1.35	1.39
31	DA	2014	A	N9-C4	-5.63	1.34	1.37
31	DA	652	C	C3'-O3'	5.61	1.50	1.42
31	BA	527	C	N3-C4	-5.53	1.30	1.33
31	BA	585	G	N7-C5	-5.52	1.35	1.39
31	DA	652	C	P-O5'	5.50	1.65	1.59
31	BA	652	C	P-O5'	5.49	1.65	1.59
31	BA	2061	G	N1-C2	-5.42	1.33	1.37
31	BA	330	A	N3-C4	-5.41	1.31	1.34
31	BA	579	G	C2-N3	-5.41	1.28	1.32
31	BA	1802	A	N7-C5	-5.39	1.36	1.39
31	BA	1142(A)	A	N3-C4	-5.37	1.31	1.34
40	BO	21	CYS	CB-SG	-5.36	1.73	1.81
31	DA	2252	G	N3-C4	-5.34	1.31	1.35
31	DA	1681	G	N9-C4	-5.33	1.33	1.38
31	DA	1786	A	N7-C5	-5.30	1.36	1.39
31	DA	272	G	N9-C4	5.30	1.42	1.38
31	DA	1829	A	N9-C4	-5.30	1.34	1.37
31	BA	2542	A	C5-C6	-5.29	1.36	1.41
31	BA	71	A	N9-C4	-5.28	1.34	1.37
31	BA	1332	G	C5-C6	-5.27	1.37	1.42
31	BA	788	A	N7-C5	-5.26	1.36	1.39
31	BA	1139	G	N7-C5	-5.25	1.36	1.39
31	BA	2432	A	C5-C6	-5.23	1.36	1.41
31	BA	2711	A	N9-C4	-5.22	1.34	1.37
31	DA	1269	A	N9-C4	-5.20	1.34	1.37
31	BA	2430	A	N7-C5	-5.20	1.36	1.39
31	DA	656	G	P-O5'	5.19	1.65	1.59
31	DA	2476	A	N9-C4	5.18	1.41	1.37
31	DA	783	A	C5-C6	-5.17	1.36	1.41
31	BA	470	A	N9-C4	-5.16	1.34	1.37
35	BF	65	TRP	CB-CG	-5.16	1.41	1.50
31	BA	197	A	N9-C4	-5.14	1.34	1.37
31	BA	950	G	C6-N1	-5.13	1.35	1.39
31	BA	2014	A	C5-C6	-5.13	1.36	1.41
31	BA	1899	G	N9-C4	-5.11	1.33	1.38
31	BA	774	A	N3-C4	-5.11	1.31	1.34
31	DA	1762	A	N9-C4	5.11	1.41	1.37
31	BA	971	C	N1-C6	-5.07	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	651	G	N9-C4	5.07	1.42	1.38
31	DA	330	A	N9-C4	-5.06	1.34	1.37
31	BA	71	A	C5-C6	-5.06	1.36	1.41
31	BA	2436	G	N3-C4	-5.06	1.31	1.35
31	BA	1624	G	C5-C4	-5.04	1.34	1.38
31	BA	1162	G	N9-C8	-5.04	1.34	1.37
31	DA	528	A	N3-C4	-5.03	1.31	1.34
31	DA	945	A	C5-C6	-5.03	1.36	1.41
31	BA	1786	A	N3-C4	-5.01	1.31	1.34
31	DA	945	A	N7-C5	-5.01	1.36	1.39

All (2093) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1332	G	N3-C4-C5	21.05	139.12	128.60
31	BA	1332	G	N3-C4-N9	-19.19	114.49	126.00
31	DA	1779	U	C5-C6-N1	-16.63	114.39	122.70
31	BA	1332	G	C2-N3-C4	-16.06	103.87	111.90
31	BA	1779	U	C5-C6-N1	-15.89	114.75	122.70
31	DA	1332	G	N3-C4-C5	15.36	136.28	128.60
31	DA	1332	G	N3-C4-N9	-15.10	116.94	126.00
31	DA	1899	G	N3-C4-N9	-14.36	117.38	126.00
31	BA	2346	A	C2-N3-C4	-14.16	103.52	110.60
31	BA	1142(A)	A	C2-N3-C4	-13.17	104.02	110.60
31	BA	1678	G	C4-C5-N7	13.17	116.07	110.80
31	BA	1899	G	N3-C4-N9	-13.15	118.11	126.00
31	BA	945	A	N1-C6-N6	13.15	126.49	118.60
31	BA	2518	A	C5-N7-C8	-12.98	97.41	103.90
31	BA	1204	A	C2-N3-C4	-12.66	104.27	110.60
31	BA	783	A	C2-N3-C4	-12.47	104.36	110.60
31	BA	1616	A	C5-N7-C8	-12.43	97.69	103.90
32	BB	81	G	C4-C5-N7	12.31	115.72	110.80
31	BA	676	A	C2-N3-C4	-12.21	104.49	110.60
31	BA	1678	G	C5-N7-C8	-12.19	98.20	104.30
31	DA	1786	A	C5-N7-C8	-12.15	97.82	103.90
31	DA	2430	A	C2-N3-C4	-12.11	104.54	110.60
31	DA	2346	A	C2-N3-C4	-12.10	104.55	110.60
31	BA	1022	G	C8-N9-C4	-12.03	101.59	106.40
31	DA	2828	C	C6-N1-C2	11.88	125.05	120.30
31	DA	1899	G	C8-N9-C1'	11.61	142.09	127.00
31	BA	1899	G	C8-N9-C1'	11.59	142.07	127.00
31	BA	1616	A	N7-C8-N9	11.53	119.57	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	783	A	C5-N7-C8	-11.53	98.14	103.90
31	BA	1678	G	C6-C5-N7	-11.48	123.51	130.40
32	BB	81	G	C6-C5-N7	-11.46	123.52	130.40
31	DA	1678	G	C6-C5-N7	-11.46	123.52	130.40
31	BA	2346	A	N1-C2-N3	11.39	135.00	129.30
31	DA	1786	A	N1-C6-N6	11.35	125.41	118.60
31	DA	1207	C	C6-N1-C2	11.28	124.81	120.30
31	BA	141	A	N1-C6-N6	11.26	125.36	118.60
31	DA	945	A	N1-C6-N6	11.15	125.29	118.60
31	BA	2713	A	C5-N7-C8	-11.12	98.34	103.90
31	BA	2287	A	C2-N3-C4	-11.11	105.04	110.60
31	DA	783	A	C2-N3-C4	-11.11	105.04	110.60
31	BA	330	A	C2-N3-C4	-11.10	105.05	110.60
31	BA	1332	G	C5-N7-C8	-11.09	98.76	104.30
31	BA	1022	G	N9-C4-C5	11.06	109.83	105.40
32	DB	81	G	C4-N9-C1'	10.96	140.75	126.50
31	DA	1678	G	C5-N7-C8	-10.94	98.83	104.30
31	BA	409	C	C6-N1-C2	10.93	124.67	120.30
31	BA	1899	G	C4-N9-C1'	-10.92	112.30	126.50
31	BA	1786	A	C2-N3-C4	-10.88	105.16	110.60
32	DB	81	G	C6-C5-N7	-10.87	123.88	130.40
31	DA	1899	G	C4-N9-C1'	-10.79	112.48	126.50
32	BB	81	G	C4-N9-C1'	10.78	140.51	126.50
31	DA	1779	U	C2-N1-C1'	-10.74	104.81	117.70
31	DA	1021	A	C2-N3-C4	-10.69	105.25	110.60
31	BA	1779	U	C2-N1-C1'	-10.69	104.88	117.70
31	DA	1786	A	C4-C5-N7	10.68	116.04	110.70
31	DA	1678	G	C4-C5-N7	10.64	115.06	110.80
31	BA	1204	A	C6-C5-N7	-10.56	124.91	132.30
31	BA	530	G	N3-C4-N9	-10.54	119.68	126.00
31	DA	1022	G	C8-N9-C4	-10.51	102.20	106.40
31	BA	2346	A	C5-C6-N1	-10.48	112.46	117.70
31	BA	783	A	N1-C6-N6	10.44	124.87	118.60
31	BA	2430	A	N1-C6-N6	10.44	124.86	118.60
31	BA	1021	A	C2-N3-C4	-10.40	105.40	110.60
31	BA	945	A	C2-N3-C4	-10.35	105.43	110.60
31	BA	1786	A	C5-N7-C8	-10.32	98.74	103.90
31	BA	2518	A	C4-C5-N7	10.27	115.83	110.70
31	DA	2542	A	N1-C6-N6	10.22	124.73	118.60
31	DA	130	C	C6-N1-C2	10.21	124.39	120.30
31	BA	2544	G	N1-C6-O6	10.19	126.01	119.90
32	DB	81	G	C4-C5-N7	10.18	114.87	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	528	A	C2-N3-C4	-10.17	105.51	110.60
31	DA	1142(A)	A	C2-N3-C4	-10.14	105.53	110.60
31	BA	783	A	C5-N7-C8	-10.09	98.86	103.90
31	BA	1678	G	C2-N3-C4	-10.08	106.86	111.90
31	BA	1241	A	C2-N3-C4	-10.07	105.57	110.60
31	BA	2430	A	C2-N3-C4	-10.06	105.57	110.60
31	DA	676	A	C5-N7-C8	-10.05	98.87	103.90
31	DA	2742	C	C6-N1-C2	10.01	124.31	120.30
31	BA	1678	G	N7-C8-N9	10.01	118.10	113.10
31	DA	1899	G	N3-C4-C5	10.00	133.60	128.60
31	DA	783	A	N1-C6-N6	9.99	124.59	118.60
32	DB	81	G	C8-N9-C1'	-9.96	114.05	127.00
31	DA	566	U	C5-C6-N1	-9.89	117.75	122.70
31	BA	272	G	N3-C4-C5	-9.88	123.66	128.60
31	DA	2231	C	C5-C6-N1	-9.81	116.10	121.00
31	BA	1397	U	N3-C2-O2	-9.79	115.35	122.20
31	BA	1779	U	C5-C4-O4	9.78	131.77	125.90
31	BA	2392	A	C2-N3-C4	-9.75	105.73	110.60
31	DA	1332	G	C2-N3-C4	-9.73	107.03	111.90
31	BA	1543	C	C5-C6-N1	9.72	125.86	121.00
31	BA	676	A	C5-N7-C8	-9.69	99.06	103.90
31	DA	1698	A	N1-C6-N6	9.68	124.41	118.60
31	BA	933	A	C5-N7-C8	-9.66	99.07	103.90
32	BB	81	G	C8-N9-C1'	-9.65	114.45	127.00
31	DA	678	C	C6-N1-C2	9.65	124.16	120.30
31	DA	1678	G	N7-C8-N9	9.64	117.92	113.10
31	DA	1698	A	C2-N3-C4	-9.63	105.79	110.60
31	BA	130	C	C6-N1-C2	9.62	124.15	120.30
31	DA	2346	A	C5-C6-N1	-9.58	112.91	117.70
31	DA	1962	C	O4'-C1'-N1	9.56	115.85	108.20
31	BA	621	A	C5-N7-C8	-9.50	99.15	103.90
31	DA	783	A	C4-C5-N7	9.47	115.44	110.70
31	DA	1204	A	C2-N3-C4	-9.47	105.87	110.60
31	BA	2713	A	C2-N3-C4	-9.45	105.87	110.60
31	DA	2518	A	N1-C6-N6	9.44	124.27	118.60
31	DA	1204	A	C6-C5-N7	-9.40	125.72	132.30
31	DA	774	A	C5-N7-C8	-9.39	99.21	103.90
31	DA	2287	A	C2-N3-C4	-9.37	105.92	110.60
31	BA	446	G	C5-C6-O6	-9.36	122.98	128.60
31	BA	201	C	N3-C4-C5	9.36	125.64	121.90
31	DA	1786	A	C6-C5-N7	-9.35	125.75	132.30
31	BA	1698	A	C2-N3-C4	-9.30	105.95	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	71	A	C5-N7-C8	-9.29	99.25	103.90
31	BA	1616	A	C8-N9-C4	-9.26	102.10	105.80
31	DA	2231	C	C6-N1-C2	9.24	124.00	120.30
31	BA	1899	G	N3-C4-C5	9.19	133.20	128.60
31	BA	678	C	C6-N1-C2	9.16	123.97	120.30
31	DA	2518	A	C5-N7-C8	-9.15	99.32	103.90
31	BA	2346	A	C6-C5-N7	-9.15	125.89	132.30
31	DA	141	A	N1-C6-N6	9.15	124.09	118.60
31	BA	2713	A	N1-C6-N6	9.13	124.08	118.60
31	BA	1142(A)	A	C5-C6-N1	-9.12	113.14	117.70
31	DA	1786	A	N7-C8-N9	9.11	118.36	113.80
32	BB	81	G	C5-N7-C8	-9.11	99.75	104.30
31	DA	1204	A	N1-C6-N6	9.11	124.06	118.60
31	DA	1332	G	C5-N7-C8	-9.11	99.75	104.30
31	BA	945	A	N1-C2-N3	9.10	133.85	129.30
31	BA	774	A	C5-N7-C8	-9.07	99.36	103.90
31	DA	2512	C	C6-N1-C2	9.06	123.92	120.30
31	DA	1698	A	C4-C5-N7	9.05	115.22	110.70
31	DA	1899	G	N9-C4-C5	9.04	109.01	105.40
31	BA	1204	A	N1-C6-N6	9.02	124.01	118.60
31	DA	330	A	N9-C4-C5	-9.00	102.20	105.80
31	BA	528	A	C5-N7-C8	-8.97	99.42	103.90
31	DA	179	G	C8-N9-C4	8.95	109.98	106.40
31	DA	1829	A	C8-N9-C4	8.92	109.37	105.80
31	DA	451	C	C6-N1-C2	8.89	123.86	120.30
31	BA	1207	C	C6-N1-C2	8.89	123.86	120.30
1	CA	117	G	N1-C6-O6	8.87	125.22	119.90
31	BA	2392	A	C5-N7-C8	-8.85	99.47	103.90
31	DA	409	C	C6-N1-C2	8.84	123.83	120.30
31	DA	2544	G	N1-C6-O6	8.82	125.19	119.90
31	BA	1021	A	C5-N7-C8	-8.81	99.50	103.90
31	DA	1241	A	C2-N3-C4	-8.79	106.21	110.60
31	DA	1022	G	N9-C4-C5	8.78	108.91	105.40
31	BA	856	C	C6-N1-C2	-8.76	116.80	120.30
31	BA	1962	C	O4'-C1'-N1	8.75	115.20	108.20
31	DA	133	C	C5-C6-N1	-8.75	116.62	121.00
31	DA	330	A	C4-C5-N7	8.75	115.08	110.70
31	DA	530	G	N3-C4-N9	-8.73	120.76	126.00
31	BA	446	G	N1-C6-O6	8.73	125.14	119.90
31	BA	2346	A	C5-N7-C8	-8.70	99.55	103.90
31	BA	2422	A	C8-N9-C4	-8.68	102.33	105.80
31	DA	1786	A	C2-N3-C4	-8.68	106.26	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1204	A	C5-N7-C8	-8.66	99.57	103.90
31	BA	141	A	C6-C5-N7	-8.66	126.24	132.30
31	BA	856	C	C2-N1-C1'	8.65	128.31	118.80
31	DA	1373	A	C8-N9-C4	8.64	109.26	105.80
31	BA	786	C	C5-C6-N1	-8.64	116.68	121.00
31	DA	71	A	C5-N7-C8	-8.63	99.59	103.90
31	BA	1786	A	C6-C5-N7	-8.60	126.28	132.30
31	DA	1698	A	C5-N7-C8	-8.60	99.60	103.90
31	DA	1663	C	C2-N3-C4	-8.58	115.61	119.90
31	BA	1332	G	C4-C5-N7	8.58	114.23	110.80
31	DA	676	A	N1-C6-N6	8.57	123.74	118.60
31	DA	1123	C	C6-N1-C2	8.57	123.73	120.30
31	BA	845	G	N7-C8-N9	8.56	117.38	113.10
31	DA	1698	A	C6-C5-N7	-8.54	126.32	132.30
31	BA	1332	G	C5-C6-N1	-8.54	107.23	111.50
31	DA	928	G	N1-C6-O6	8.54	125.02	119.90
31	BA	2230	G	N1-C6-O6	8.52	125.01	119.90
31	DA	2346	A	N1-C2-N3	8.51	133.56	129.30
31	BA	1204	A	C5-N7-C8	-8.51	99.65	103.90
31	DA	376	C	C6-N1-C2	8.51	123.70	120.30
31	DA	2463	C	C6-N1-C2	8.50	123.70	120.30
31	BA	1022	G	N3-C4-C5	-8.50	124.35	128.60
31	DA	566	U	C6-N1-C2	8.50	126.10	121.00
31	DA	1779	U	C2-N3-C4	-8.48	121.91	127.00
31	DA	2330	G	C8-N9-C4	8.47	109.79	106.40
31	BA	2518	A	N7-C8-N9	8.46	118.03	113.80
31	BA	2287	A	N1-C2-N3	8.46	133.53	129.30
31	BA	828	U	C5-C4-O4	8.46	130.98	125.90
31	DA	933	A	C5-N7-C8	-8.43	99.69	103.90
31	BA	2542	A	N1-C6-N6	8.42	123.65	118.60
31	BA	142	A	N1-C6-N6	8.42	123.65	118.60
31	BA	1779	U	N3-C4-O4	-8.42	113.51	119.40
31	DA	528	A	C2-N3-C4	-8.41	106.39	110.60
31	DA	2742	C	C5-C6-N1	-8.41	116.80	121.00
31	BA	1332	G	C6-N1-C2	8.39	130.14	125.10
31	BA	100	G	O4'-C1'-N9	8.38	114.91	108.20
31	BA	1694	C	C2-N1-C1'	8.38	128.02	118.80
31	DA	1616	A	C5-N7-C8	-8.38	99.71	103.90
31	DA	676	A	C2-N3-C4	-8.37	106.42	110.60
31	DA	933	A	C2-N3-C4	-8.37	106.41	110.60
31	BA	945	A	C6-C5-N7	-8.37	126.44	132.30
31	BA	1786	A	N1-C6-N6	8.37	123.62	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	621	A	N7-C8-N9	8.36	117.98	113.80
31	BA	2392	A	N1-C6-N6	8.35	123.61	118.60
31	DA	1543	C	C5-C6-N1	8.34	125.17	121.00
31	DA	577	G	C8-N9-C4	8.32	109.73	106.40
31	DA	100	G	O4'-C1'-N9	8.31	114.85	108.20
31	DA	2346	A	N7-C8-N9	8.30	117.95	113.80
31	BA	2518	A	N1-C6-N6	8.30	123.58	118.60
32	DB	115	G	C8-N9-C4	8.27	109.71	106.40
31	BA	1616	A	C4-C5-N7	8.27	114.83	110.70
31	DA	71	A	N1-C6-N6	8.27	123.56	118.60
31	DA	1261	C	N3-C4-C5	8.27	125.21	121.90
31	DA	2544	G	C5-C6-O6	-8.27	123.64	128.60
31	BA	62	C	C6-N1-C2	8.26	123.61	120.30
31	BA	564	C	N1-C2-O2	-8.26	113.94	118.90
31	DA	1333	C	N3-C4-C5	8.25	125.20	121.90
31	BA	1899	G	N9-C4-C5	8.24	108.70	105.40
31	BA	774	A	N7-C8-N9	8.23	117.92	113.80
31	DA	133	C	C2-N3-C4	-8.23	115.78	119.90
31	DA	945	A	C2-N3-C4	-8.23	106.49	110.60
31	DA	272	G	N3-C4-C5	-8.22	124.49	128.60
31	BA	1204	A	N1-C2-N3	8.21	133.41	129.30
31	DA	1694	C	C2-N1-C1'	8.21	127.83	118.80
31	BA	1786	A	N7-C8-N9	8.21	117.90	113.80
31	DA	1123	C	C2-N3-C4	-8.19	115.80	119.90
31	DA	1204	A	N7-C8-N9	8.18	117.89	113.80
31	DA	272(B)	G	N1-C6-O6	-8.17	115.00	119.90
31	BA	2084	C	C5-C6-N1	-8.16	116.92	121.00
31	DA	1678	G	C4-N9-C1'	8.16	137.11	126.50
32	BB	81	G	N7-C8-N9	8.16	117.18	113.10
31	BA	1694	C	C5-C6-N1	8.15	125.08	121.00
31	BA	945	A	C4-C5-C6	8.15	121.07	117.00
31	DA	2522	U	C5-C6-N1	-8.14	118.63	122.70
31	BA	1142(A)	A	N3-C4-C5	8.13	132.49	126.80
31	BA	330	A	C5-N7-C8	-8.12	99.84	103.90
31	DA	465	G	C8-N9-C4	-8.11	103.16	106.40
31	DA	2713	A	C5-N7-C8	-8.11	99.85	103.90
31	DA	133	C	C6-N1-C2	8.10	123.54	120.30
31	BA	1495	A	N7-C8-N9	8.10	117.85	113.80
31	BA	2404	C	C6-N1-C2	8.09	123.54	120.30
31	BA	1653	G	N3-C4-C5	-8.08	124.56	128.60
31	BA	2542	A	C2-N3-C4	-8.08	106.56	110.60
31	BA	814	C	C6-N1-C2	8.07	123.53	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	BP	37	GLY	N-CA-C	8.07	133.28	113.10
31	DA	2512	C	C5-C6-N1	-8.07	116.97	121.00
31	DA	330	A	N1-C6-N6	8.06	123.44	118.60
31	BA	845	G	C5-N7-C8	-8.06	100.27	104.30
31	BA	1495	A	C8-N9-C4	-8.05	102.58	105.80
31	DA	330	A	C2-N3-C4	-8.05	106.58	110.60
31	BA	226	G	N1-C6-O6	8.04	124.72	119.90
31	BA	2346	A	N7-C8-N9	8.02	117.81	113.80
31	DA	933	A	N1-C6-N6	8.01	123.41	118.60
31	BA	676	A	C4-C5-N7	8.01	114.70	110.70
31	BA	933	A	C2-N3-C4	-8.00	106.60	110.60
31	BA	141	A	C5-N7-C8	-7.99	99.90	103.90
31	DA	2346	A	C5-N7-C8	-7.98	99.91	103.90
31	DA	1616	A	N7-C8-N9	7.98	117.79	113.80
31	DA	783	A	N3-C4-C5	7.96	132.38	126.80
31	DA	2713	A	N1-C6-N6	7.96	123.38	118.60
31	BA	676	A	N3-C4-C5	7.96	132.37	126.80
31	DA	2622	C	C6-N1-C2	7.95	123.48	120.30
31	DA	529	A	N1-C6-N6	7.95	123.37	118.60
31	DA	2364	C	C6-N1-C2	7.93	123.47	120.30
31	BA	1698	A	N1-C6-N6	7.93	123.36	118.60
31	BA	1698	A	C6-C5-N7	-7.92	126.75	132.30
31	BA	2346	A	C4-C5-C6	7.92	120.96	117.00
31	DA	201	C	C6-N1-C2	7.91	123.46	120.30
31	BA	1762	A	C8-N9-C4	-7.90	102.64	105.80
31	BA	208	C	C6-N1-C2	7.90	123.46	120.30
31	DA	856	C	C2-N1-C1'	7.89	127.48	118.80
31	BA	2476	A	C2-N3-C4	7.89	114.55	110.60
31	BA	71	A	C2-N3-C4	-7.86	106.67	110.60
32	DB	81	G	N3-C4-N9	7.86	130.71	126.00
31	DA	2542	A	C5-N7-C8	-7.84	99.98	103.90
31	BA	1204	A	C4-C5-N7	7.84	114.62	110.70
31	BA	201	C	C2-N3-C4	-7.84	115.98	119.90
31	DA	945	A	C6-C5-N7	-7.83	126.82	132.30
31	DA	1653	G	N3-C4-C5	-7.83	124.69	128.60
31	DA	2518	A	C4-C5-N7	7.82	114.61	110.70
31	BA	1829	A	C8-N9-C4	7.81	108.92	105.80
31	DA	2392	A	C2-N3-C4	-7.81	106.69	110.60
31	DA	774	A	C2-N3-C4	-7.81	106.70	110.60
31	BA	2430	A	C5-N7-C8	-7.80	100.00	103.90
31	BA	71	A	N1-C6-N6	7.80	123.28	118.60
31	BA	774	A	C8-N9-C4	-7.79	102.68	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	71	A	C4-C5-N7	7.79	114.59	110.70
1	AA	322	C	C6-N1-C2	7.78	123.41	120.30
31	BA	2713	A	C4-C5-N7	7.78	114.59	110.70
31	BA	1409	C	C6-N1-C2	7.77	123.41	120.30
31	DA	1614	A	N7-C8-N9	7.77	117.68	113.80
31	BA	2713	A	N7-C8-N9	7.75	117.68	113.80
31	BA	783	A	N3-C4-C5	7.72	132.21	126.80
31	DA	2741	A	C8-N9-C4	7.72	108.89	105.80
31	BA	2711	A	C8-N9-C4	7.71	108.89	105.80
31	BA	1774	C	N1-C2-O2	-7.71	114.27	118.90
31	BA	2552	U	N1-C2-O2	-7.71	117.41	122.80
31	DA	2042	A	C8-N9-C4	7.68	108.87	105.80
31	DA	1558	A	C2-N3-C4	-7.67	106.77	110.60
31	DA	837	C	C6-N1-C2	-7.66	117.23	120.30
31	BA	1784	A	C8-N9-C4	7.66	108.86	105.80
31	DA	676	A	N7-C8-N9	7.66	117.63	113.80
31	BA	130	C	C5-C6-N1	-7.65	117.18	121.00
31	BA	2512	C	C6-N1-C2	7.62	123.35	120.30
31	DA	2827	C	C6-N1-C2	7.62	123.35	120.30
31	BA	528	A	N3-C4-C5	7.62	132.13	126.80
31	BA	451	C	C6-N1-C2	7.60	123.34	120.30
31	BA	1786	A	C4-C5-N7	7.59	114.50	110.70
31	BA	847	U	C2-N1-C1'	-7.58	108.61	117.70
31	DA	330	A	C5-N7-C8	-7.57	100.12	103.90
31	DA	1123	C	C5-C6-N1	-7.56	117.22	121.00
31	DA	2346	A	C6-C5-N7	-7.56	127.01	132.30
31	DA	1820	U	C6-N1-C2	7.55	125.53	121.00
31	DA	1261	C	C6-N1-C2	7.55	123.32	120.30
31	DA	207	A	C8-N9-C4	7.55	108.82	105.80
31	BA	265	A	C5-N7-C8	-7.55	100.13	103.90
31	DA	1962	C	N1-C1'-C2'	7.55	123.81	114.00
31	BA	330	A	N3-C4-C5	7.54	132.08	126.80
31	BA	1543	C	N3-C2-O2	7.54	127.18	121.90
31	BA	1614	A	C5-N7-C8	-7.54	100.13	103.90
31	DA	1820	U	C5-C6-N1	-7.54	118.93	122.70
31	BA	1698	A	C4-C5-N7	7.53	114.47	110.70
31	DA	2253	G	C5-C6-O6	-7.53	124.08	128.60
31	DA	2258	C	C5-C4-N4	-7.52	114.93	120.20
31	DA	2016	U	C5-C6-N1	-7.52	118.94	122.70
31	DA	141	A	C6-C5-N7	-7.51	127.04	132.30
31	DA	2006	C	C6-N1-C2	7.50	123.30	120.30
32	BB	81	G	N9-C4-C5	-7.49	102.40	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1359	A	C8-N9-C4	7.49	108.80	105.80
31	BA	1543	C	C2-N3-C4	7.49	123.64	119.90
31	DA	2463	C	C2-N3-C4	-7.49	116.16	119.90
31	BA	659	C	C6-N1-C2	7.48	123.29	120.30
31	DA	330	A	N3-C4-C5	7.47	132.03	126.80
31	DA	2441	C	C2-N3-C4	-7.47	116.16	119.90
32	DB	64	C	C6-N1-C2	7.47	123.29	120.30
31	BA	1543	C	N3-C4-C5	-7.46	118.92	121.90
31	BA	1204	A	C5-C6-N1	-7.45	113.97	117.70
31	DA	193	U	N3-C4-O4	7.45	124.61	119.40
31	DA	1126	A	C8-N9-C4	7.45	108.78	105.80
31	BA	141	A	C5-C6-N6	-7.44	117.75	123.70
31	DA	1258	C	C6-N1-C2	7.44	123.28	120.30
31	DA	1678	G	C2-N3-C4	-7.44	108.18	111.90
31	BA	2432	A	N1-C6-N6	7.43	123.06	118.60
31	DA	2828	C	C5-C6-N1	-7.42	117.29	121.00
31	DA	2463	C	C5-C6-N1	-7.42	117.29	121.00
31	BA	272	G	N3-C4-N9	7.42	130.45	126.00
31	DA	1762	A	C8-N9-C4	-7.42	102.83	105.80
31	BA	1616	A	C6-C5-N7	-7.41	127.11	132.30
31	DA	774	A	N7-C8-N9	7.41	117.50	113.80
42	DQ	82	ARG	NE-CZ-NH2	-7.40	116.60	120.30
31	DA	484	C	C2-N3-C4	-7.40	116.20	119.90
31	DA	621	A	C2-N3-C4	-7.39	106.90	110.60
31	DA	1269	A	C8-N9-C4	7.39	108.76	105.80
31	BA	2688	U	C5-C4-O4	7.39	130.33	125.90
31	DA	2287	A	N1-C2-N3	7.38	132.99	129.30
31	BA	62	C	C5-C6-N1	-7.38	117.31	121.00
31	BA	1658	C	N1-C2-O2	-7.37	114.48	118.90
31	DA	621	A	C5-N7-C8	-7.37	100.22	103.90
31	DA	1350	C	N1-C2-O2	-7.37	114.48	118.90
31	BA	1698	A	C5-N7-C8	-7.37	100.22	103.90
31	DA	2293	C	C6-N1-C2	7.36	123.24	120.30
31	DA	2346	A	C8-N9-C4	-7.36	102.86	105.80
31	DA	560	C	C6-N1-C2	7.35	123.24	120.30
31	BA	265	A	N7-C8-N9	7.34	117.47	113.80
31	BA	272(D)	G	C8-N9-C4	7.34	109.34	106.40
31	BA	774	A	C2-N3-C4	-7.34	106.93	110.60
31	BA	1779	U	C4-C5-C6	7.34	124.10	119.70
32	BB	81	G	N3-C4-N9	7.33	130.40	126.00
31	DA	847	U	C5-C4-O4	7.33	130.30	125.90
31	BA	2616	C	N1-C2-O2	-7.31	114.51	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2392	A	C5-C6-N1	-7.31	114.04	117.70
31	DA	1826	G	N1-C6-O6	-7.31	115.51	119.90
31	BA	676	A	N1-C6-N6	7.30	122.98	118.60
31	BA	950	G	C5-C6-O6	7.30	132.98	128.60
31	BA	139(A)	G	N7-C8-N9	7.30	116.75	113.10
31	BA	2779	U	N3-C4-O4	-7.30	114.29	119.40
31	BA	1326	U	C6-N1-C2	7.30	125.38	121.00
31	BA	205	G	C8-N9-C4	7.29	109.32	106.40
1	CA	117	G	C5-C6-O6	-7.29	124.22	128.60
31	BA	530	G	N3-C4-C5	7.29	132.24	128.60
31	DA	1349	A	C5-N7-C8	-7.29	100.25	103.90
39	BN	67	LEU	CA-CB-CG	7.28	132.04	115.30
31	DA	528	A	C5-N7-C8	-7.28	100.26	103.90
31	BA	949	C	C6-N1-C2	7.27	123.21	120.30
31	BA	1021	A	C5-C6-N1	-7.27	114.07	117.70
31	DA	2084	C	C5-C6-N1	-7.26	117.37	121.00
31	BA	845	G	C8-N9-C4	-7.25	103.50	106.40
31	BA	1962	C	C5-C6-N1	7.25	124.63	121.00
31	DA	1544	A	O4'-C1'-N9	7.25	114.00	108.20
31	DA	1204	A	C4-C5-N7	7.24	114.32	110.70
31	BA	2073	C	N1-C2-O2	-7.24	114.56	118.90
31	BA	1332	G	C8-N9-C1'	7.23	136.40	127.00
31	DA	584	C	C6-N1-C2	7.21	123.19	120.30
31	DA	1204	A	N1-C2-N3	7.21	132.91	129.30
31	DA	2253	G	N1-C6-O6	7.21	124.23	119.90
31	BA	1962	C	N1-C1'-C2'	7.20	123.36	114.00
1	CA	1524	C	C6-N1-C2	7.20	123.18	120.30
31	BA	783	A	C6-C5-N7	-7.20	127.26	132.30
31	DA	796	C	C6-N1-C2	7.18	123.17	120.30
31	BA	2518	A	C2-N3-C4	-7.18	107.01	110.60
31	DA	1313	U	C5-C4-O4	-7.18	121.59	125.90
31	DA	1779	U	N3-C4-O4	-7.18	114.38	119.40
31	BA	1558	A	C2-N3-C4	-7.17	107.01	110.60
31	BA	1544	A	O4'-C1'-N9	7.16	113.93	108.20
31	BA	1617	C	C5-C6-N1	-7.16	117.42	121.00
31	DA	678	C	N3-C4-C5	7.15	124.76	121.90
31	DA	2579	C	C6-N1-C2	7.15	123.16	120.30
31	DA	1899	G	C6-C5-N7	7.13	134.68	130.40
31	BA	845	G	C4-C5-N7	7.13	113.65	110.80
31	BA	1349	A	C5-N7-C8	-7.12	100.34	103.90
31	BA	828	U	N3-C4-O4	-7.12	114.42	119.40
31	DA	1126	A	N7-C8-N9	-7.12	110.24	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1493	C	C2-N1-C1'	7.11	126.62	118.80
31	DA	1328	G	N3-C4-N9	7.11	130.27	126.00
31	DA	1207	C	C5-C6-N1	-7.11	117.44	121.00
31	DA	1313	U	N3-C4-O4	7.11	124.38	119.40
32	DB	81	G	N7-C8-N9	7.10	116.65	113.10
31	BA	1021	A	N7-C8-N9	7.10	117.35	113.80
31	BA	142	A	C5-N7-C8	-7.10	100.35	103.90
31	DA	1829	A	N7-C8-N9	-7.10	110.25	113.80
31	DA	1021	A	C5-C6-N1	-7.10	114.15	117.70
31	BA	1300	U	O4'-C1'-N1	7.09	113.88	108.20
31	DA	1397	U	C5-C4-O4	7.09	130.16	125.90
31	BA	2430	A	C4-C5-N7	7.09	114.25	110.70
31	BA	686	G	C5-C6-O6	-7.09	124.34	128.60
31	BA	783	A	N3-C4-N9	-7.09	121.73	127.40
31	BA	1373	A	C8-N9-C4	7.09	108.64	105.80
31	DA	1830	C	C6-N1-C2	7.08	123.13	120.30
31	BA	759	G	C8-N9-C4	7.08	109.23	106.40
31	DA	2346	A	C4-C5-C6	7.07	120.54	117.00
31	BA	1820	U	C5-C6-N1	-7.07	119.16	122.70
31	DA	1779	U	C4-C5-C6	7.07	123.94	119.70
31	DA	2891	G	C8-N9-C4	7.07	109.23	106.40
31	DA	652	C	C6-N1-C2	-7.06	117.47	120.30
31	BA	139(A)	G	C8-N9-C4	-7.06	103.58	106.40
31	BA	679	C	C6-N1-C2	7.05	123.12	120.30
31	DA	1959	G	N1-C6-O6	-7.05	115.67	119.90
31	BA	1241	A	N1-C2-N3	7.04	132.82	129.30
31	DA	1315	C	N1-C2-O2	-7.04	114.67	118.90
43	DR	4	LEU	CB-CG-CD1	7.04	122.97	111.00
31	BA	2230	G	C5-C6-O6	-7.04	124.38	128.60
31	BA	1678	G	N1-C2-N2	-7.03	109.87	116.20
31	DA	484	C	C5-C6-N1	-7.03	117.48	121.00
32	DB	81	G	C5-N7-C8	-7.03	100.78	104.30
31	DA	272	G	N3-C4-N9	7.03	130.22	126.00
31	DA	585	G	C5-C6-O6	-7.02	124.39	128.60
31	DA	2542	A	C2-N3-C4	-7.02	107.09	110.60
31	BA	652	C	C6-N1-C2	-7.01	117.50	120.30
31	DA	1328	G	C5-C6-N1	7.01	115.01	111.50
31	BA	2392	A	C4-C5-N7	7.01	114.21	110.70
31	BA	528	A	N3-C4-N9	-7.00	121.80	127.40
31	BA	856	C	C5-C6-N1	7.00	124.50	121.00
31	BA	2346	A	C8-N9-C4	-6.99	103.00	105.80
31	DA	1332	G	C8-N9-C1'	6.99	136.09	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2508	G	N3-C2-N2	-6.99	115.01	119.90
31	DA	2258	C	N3-C4-N4	6.99	122.89	118.00
31	BA	2318	G	N7-C8-N9	6.97	116.58	113.10
31	BA	1158	C	C6-N1-C1'	-6.97	112.44	120.80
31	DA	1930	G	C8-N9-C4	6.97	109.19	106.40
31	BA	2319	G	N3-C4-C5	-6.96	125.12	128.60
31	DA	244	A	N1-C6-N6	6.96	122.77	118.60
31	BA	2014	A	N1-C6-N6	6.95	122.77	118.60
31	DA	847	U	C2-N1-C1'	-6.95	109.36	117.70
31	DA	2430	A	N1-C2-N3	6.95	132.78	129.30
39	DN	67	LEU	CA-CB-CG	6.95	131.29	115.30
31	BA	2512	C	C2-N3-C4	-6.95	116.43	119.90
31	BA	1204	A	C4-C5-C6	6.95	120.47	117.00
31	DA	1698	A	N9-C4-C5	-6.94	103.02	105.80
31	DA	2828	C	N3-C4-C5	6.94	124.67	121.90
31	BA	1830	C	N1-C2-O2	-6.93	114.74	118.90
31	BA	2433	A	N1-C6-N6	6.93	122.76	118.60
31	BA	1899	G	C2-N3-C4	-6.93	108.44	111.90
31	DA	1158	C	C6-N1-C1'	-6.93	112.49	120.80
31	DA	2575	C	C6-N1-C2	6.92	123.07	120.30
31	DA	2435	A	C8-N9-C4	-6.91	103.03	105.80
31	BA	2713	A	C6-C5-N7	-6.91	127.46	132.30
1	CA	893	C	C6-N1-C2	6.90	123.06	120.30
31	BA	1204	A	N7-C8-N9	6.90	117.25	113.80
31	BA	141	A	N7-C8-N9	6.89	117.25	113.80
31	BA	1899	G	C6-C5-N7	6.89	134.53	130.40
31	BA	57	C	C6-N1-C2	6.88	123.05	120.30
31	BA	201	C	C6-N1-C2	6.88	123.05	120.30
31	BA	330	A	C4-C5-N7	6.88	114.14	110.70
31	BA	1142(A)	A	N3-C4-N9	-6.87	121.90	127.40
31	DA	1529	G	C4-N9-C1'	6.87	135.43	126.50
31	DA	1326	U	C5-C6-N1	-6.87	119.27	122.70
1	AA	896	C	C6-N1-C2	6.86	123.05	120.30
31	BA	2430	A	N3-C4-C5	6.86	131.60	126.80
31	BA	1497	U	N1-C2-N3	-6.86	110.78	114.90
31	DA	2232	U	C5-C6-N1	-6.86	119.27	122.70
32	DB	81	G	N9-C4-C5	-6.86	102.66	105.40
31	BA	1142(A)	A	C5-N7-C8	-6.85	100.47	103.90
31	DA	69	C	C6-N1-C2	6.85	123.04	120.30
31	DA	621	A	N7-C8-N9	6.85	117.23	113.80
31	BA	847	U	C5-C6-N1	-6.85	119.28	122.70
31	DA	584	C	C5-C6-N1	-6.84	117.58	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2681	C	N3-C4-N4	-6.84	113.21	118.00
31	BA	2689	U	N3-C4-O4	-6.84	114.61	119.40
31	DA	141	A	C4-C5-N7	6.84	114.12	110.70
31	DA	528	A	N3-C4-N9	-6.84	121.93	127.40
31	DA	265	A	N7-C8-N9	6.84	117.22	113.80
31	DA	2504	U	C6-N1-C2	6.83	125.10	121.00
31	DA	837	C	N3-C2-O2	-6.83	117.12	121.90
31	BA	847	U	C5-C4-O4	6.83	130.00	125.90
31	DA	1614	A	C5-N7-C8	-6.83	100.49	103.90
31	BA	621	A	C8-N9-C4	-6.83	103.07	105.80
31	BA	788	A	N1-C6-N6	6.82	122.69	118.60
31	DA	1962	C	C5-C6-N1	6.82	124.41	121.00
31	DA	2651	C	C6-N1-C2	6.81	123.03	120.30
31	DA	586	A	N1-C2-N3	-6.81	125.89	129.30
31	DA	185	U	C5-C6-N1	-6.81	119.30	122.70
31	DA	484	C	N3-C4-C5	6.81	124.62	121.90
31	DA	1397	U	N3-C2-O2	-6.81	117.43	122.20
31	BA	945	A	C5-C6-N6	-6.81	118.25	123.70
31	DA	2606	C	C6-N1-C2	6.81	123.02	120.30
31	DA	1493	C	C2-N1-C1'	6.80	126.28	118.80
31	BA	933	A	C4-C5-N7	6.79	114.10	110.70
31	BA	2201	C	C6-N1-C2	6.79	123.02	120.30
31	DA	2017	U	N1-C2-N3	6.79	118.97	114.90
31	BA	1373	A	N7-C8-N9	-6.79	110.41	113.80
31	DA	62	C	C5-C6-N1	-6.79	117.61	121.00
31	DA	1657	C	C5-C6-N1	-6.79	117.61	121.00
24	B2	53	LEU	CA-CB-CG	6.78	130.90	115.30
31	BA	2061	G	N3-C2-N2	6.78	124.65	119.90
31	BA	2318	G	C8-N9-C4	-6.78	103.69	106.40
31	BA	735	A	C8-N9-C4	6.78	108.51	105.80
31	BA	2024	G	C8-N9-C4	6.78	109.11	106.40
31	DA	1497	U	N1-C2-N3	-6.78	110.83	114.90
41	DP	37	GLY	N-CA-C	6.78	130.05	113.10
31	DA	71	A	C4-C5-N7	6.78	114.09	110.70
31	BA	1049	C	C6-N1-C2	-6.78	117.59	120.30
31	DA	207	A	N7-C8-N9	-6.78	110.41	113.80
31	DA	1617	C	N1-C2-O2	-6.78	114.83	118.90
31	BA	2451	A	N9-C4-C5	6.77	108.51	105.80
31	DA	679	C	C6-N1-C2	6.77	123.01	120.30
31	BA	995	C	N1-C2-O2	-6.77	114.84	118.90
31	BA	1495	A	C5-N7-C8	-6.77	100.51	103.90
31	DA	676	A	C4-C5-N7	6.77	114.08	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1459	C	C6-N1-C2	6.77	123.01	120.30
31	BA	2689	U	C5-C4-O4	6.76	129.96	125.90
31	DA	577	G	N7-C8-N9	-6.76	109.72	113.10
31	BA	1779	U	C6-N1-C2	6.76	125.06	121.00
31	DA	1962	C	C2-N1-C1'	6.76	126.23	118.80
1	CA	810	C	C6-N1-C2	6.75	123.00	120.30
31	DA	1573	G	C8-N9-C4	6.75	109.10	106.40
31	DA	2681	C	C5-C4-N4	6.75	124.93	120.20
31	BA	2053	G	N1-C6-O6	6.75	123.95	119.90
31	DA	1349	A	N7-C8-N9	6.74	117.17	113.80
31	DA	1142(A)	A	C5-C6-N1	-6.74	114.33	117.70
31	DA	1653	G	C4-N9-C1'	6.74	135.26	126.50
31	BA	1158	C	C2-N1-C1'	6.74	126.21	118.80
31	DA	591	C	C5-C6-N1	-6.74	117.63	121.00
31	DA	828	U	C5-C4-O4	6.74	129.94	125.90
31	DA	1799	G	C8-N9-C4	6.73	109.09	106.40
31	BA	2796	U	O4'-C1'-N1	6.73	113.58	108.20
31	BA	446	G	N9-C4-C5	-6.72	102.71	105.40
31	DA	2044	C	C6-N1-C2	6.72	122.99	120.30
31	DA	2364	C	C5-C6-N1	-6.72	117.64	121.00
31	DA	2014	A	N1-C6-N6	6.72	122.63	118.60
31	DA	783	A	C6-C5-N7	-6.72	127.59	132.30
31	DA	1300	U	O4'-C1'-N1	6.72	113.57	108.20
31	BA	1382	G	N3-C4-C5	6.71	131.96	128.60
31	DA	1304	C	N3-C4-C5	6.71	124.58	121.90
31	BA	194	G	N1-C6-O6	6.71	123.92	119.90
31	BA	2688	U	C5-C6-N1	-6.71	119.35	122.70
31	DA	2594	C	N1-C2-O2	-6.71	114.88	118.90
31	DA	567	A	C5-N7-C8	-6.70	100.55	103.90
31	DA	2432	A	N1-C6-N6	6.70	122.62	118.60
31	BA	1674	G	C6-C5-N7	-6.70	126.38	130.40
31	BA	786	C	C6-N1-C2	6.69	122.98	120.30
31	BA	1617	C	N1-C2-O2	-6.69	114.89	118.90
31	BA	141	A	C4-C5-N7	6.69	114.05	110.70
31	BA	676	A	N7-C8-N9	6.69	117.14	113.80
31	DA	1021	A	N1-C6-N6	6.69	122.61	118.60
31	DA	1609	A	C3'-C2'-C1'	6.68	106.85	101.50
31	BA	530	G	N9-C4-C5	6.68	108.07	105.40
31	BA	2043	C	N1-C2-O2	-6.68	114.89	118.90
31	DA	2017	U	C5-C6-N1	-6.68	119.36	122.70
31	BA	2084	C	C4-C5-C6	6.68	120.74	117.40
31	BA	1326	U	C5-C6-N1	-6.67	119.36	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2427	C	N1-C2-O2	-6.67	114.89	118.90
31	BA	1653	G	C4-N9-C1'	6.67	135.17	126.50
31	BA	2591	C	C2-N3-C4	-6.67	116.57	119.90
31	BA	2512	C	C5-C6-N1	-6.67	117.67	121.00
31	BA	2363	C	C5-C6-N1	-6.66	117.67	121.00
31	DA	1999	C	C6-N1-C2	6.66	122.97	120.30
31	DA	2796	U	O4'-C1'-N1	6.66	113.53	108.20
31	BA	837	C	C6-N1-C2	-6.66	117.64	120.30
31	DA	2433	A	N1-C6-N6	6.66	122.59	118.60
31	DA	265	A	C5-N7-C8	-6.65	100.57	103.90
31	DA	659	C	C6-N1-C2	6.65	122.96	120.30
31	DA	486	C	N1-C2-O2	-6.65	114.91	118.90
1	AA	1524	C	N1-C2-O2	-6.65	114.91	118.90
31	DA	2464	C	C6-N1-C2	6.65	122.96	120.30
31	BA	142	A	C6-C5-N7	-6.65	127.65	132.30
31	BA	2498	C	C6-N1-C2	6.64	122.96	120.30
31	BA	1198	U	C5-C6-N1	-6.64	119.38	122.70
31	BA	142	A	N7-C8-N9	6.64	117.12	113.80
31	DA	1930	G	N7-C8-N9	-6.64	109.78	113.10
32	BB	81	G	C5-C6-O6	-6.63	124.62	128.60
31	BA	736	C	N1-C2-O2	-6.63	114.92	118.90
31	BA	768	G	N1-C6-O6	6.63	123.88	119.90
31	DA	945	A	C5-C6-N6	-6.63	118.40	123.70
31	DA	2475	C	C6-N1-C1'	-6.63	112.84	120.80
31	DA	2774	C	C6-N1-C2	6.63	122.95	120.30
31	DA	968	G	C8-N9-C4	6.62	109.05	106.40
31	DA	1678	G	N1-C2-N2	-6.62	110.24	116.20
42	DQ	82	ARG	NE-CZ-NH1	6.62	123.61	120.30
31	BA	206	U	C5-C6-N1	-6.61	119.39	122.70
31	BA	1614	A	N7-C8-N9	6.61	117.11	113.80
31	BA	2672	G	C5-C6-O6	-6.61	124.63	128.60
31	DA	201	C	C5-C6-N1	-6.61	117.70	121.00
31	BA	107	C	N1-C2-O2	-6.61	114.94	118.90
31	BA	933	A	N7-C8-N9	6.61	117.10	113.80
31	DA	2253	G	N9-C4-C5	-6.61	102.76	105.40
31	DA	2680	C	C6-N1-C2	6.61	122.94	120.30
31	DA	2475	C	C2-N1-C1'	6.60	126.06	118.80
31	DA	1021	A	C5-N7-C8	-6.60	100.60	103.90
31	BA	737	C	C5-C6-N1	-6.60	117.70	121.00
31	BA	2701	C	C6-N1-C2	-6.60	117.66	120.30
31	DA	179	G	N3-C4-C5	6.60	131.90	128.60
31	DA	1779	U	N1-C2-N3	6.60	118.86	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2084	C	C6-N1-C2	6.59	122.94	120.30
1	AA	117	G	N1-C6-O6	6.59	123.85	119.90
31	DA	2441	C	N3-C4-C5	6.58	124.53	121.90
31	BA	1653	G	C4-C5-C6	6.58	122.75	118.80
31	BA	2363	C	C2-N3-C4	-6.58	116.61	119.90
31	BA	1543	C	N1-C2-O2	-6.58	114.95	118.90
31	DA	444	C	N1-C2-O2	-6.57	114.96	118.90
31	BA	604	G	C8-N9-C4	6.57	109.03	106.40
31	DA	2361	A	N1-C6-N6	6.57	122.54	118.60
31	BA	735	A	N7-C8-N9	-6.57	110.52	113.80
31	DA	774	A	C4-C5-N7	6.57	113.98	110.70
31	BA	1021	A	N1-C6-N6	6.57	122.54	118.60
42	BQ	82	ARG	NE-CZ-NH1	6.57	123.58	120.30
31	BA	124	G	C5-C6-O6	-6.56	124.66	128.60
31	BA	584	C	N1-C2-O2	-6.56	114.96	118.90
31	DA	2598	A	C8-N9-C4	6.56	108.42	105.80
31	BA	1663	C	C2-N3-C4	-6.56	116.62	119.90
31	BA	2392	A	N3-C4-C5	6.56	131.39	126.80
31	BA	2781	A	N1-C6-N6	-6.55	114.67	118.60
31	DA	205	G	C8-N9-C4	6.55	109.02	106.40
31	DA	226	G	N1-C6-O6	6.54	123.83	119.90
31	BA	1529	G	C4-N9-C1'	6.54	135.00	126.50
31	BA	1962	C	C2-N1-C1'	6.54	125.99	118.80
31	DA	1022	G	N7-C8-N9	6.54	116.37	113.10
31	DA	1543	C	N3-C4-C5	-6.53	119.29	121.90
31	DA	210	C	C5-C6-N1	-6.53	117.73	121.00
31	DA	2030	A	C5-C6-N6	-6.53	118.47	123.70
31	BA	2648	C	C6-N1-C2	6.53	122.91	120.30
31	BA	179	G	C8-N9-C4	6.52	109.01	106.40
31	DA	1659	U	C5-C6-N1	-6.52	119.44	122.70
31	BA	1799	G	C8-N9-C4	6.51	109.01	106.40
31	BA	2481	G	N9-C4-C5	-6.51	102.80	105.40
31	DA	1779	U	C6-N1-C2	6.51	124.91	121.00
31	BA	201	C	C5-C6-N1	-6.51	117.75	121.00
31	DA	2711	A	C8-N9-C4	6.50	108.40	105.80
31	DA	945	A	C4-C5-N7	6.50	113.95	110.70
31	DA	2346	A	C4-N9-C1'	6.50	137.99	126.30
31	DA	2715	C	C5-C6-N1	-6.50	117.75	121.00
31	BA	16	G	C2-N3-C4	-6.49	108.65	111.90
31	BA	1158	C	C5-C6-N1	6.49	124.25	121.00
31	BA	975	C	C5-C4-N4	6.49	124.74	120.20
51	BZ	110	GLY	N-CA-C	-6.49	96.88	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1261	C	N3-C2-O2	6.49	126.44	121.90
31	BA	2571	C	N3-C2-O2	-6.48	117.36	121.90
31	DA	774	A	N3-C4-C5	6.48	131.34	126.80
31	DA	847	U	N3-C4-O4	-6.48	114.87	119.40
31	DA	560	C	C5-C6-N1	-6.47	117.76	121.00
31	DA	621	A	C8-N9-C4	-6.47	103.21	105.80
31	BA	2779	U	C5-C4-O4	6.46	129.78	125.90
31	DA	2498	C	N1-C2-O2	-6.46	115.02	118.90
31	BA	207	A	C2-N3-C4	-6.46	107.37	110.60
31	BA	1811	G	N3-C2-N2	-6.46	115.38	119.90
31	DA	1496	A	N7-C8-N9	6.46	117.03	113.80
31	BA	2346	A	C4-N9-C1'	6.45	137.91	126.30
43	BR	8	ARG	N-CA-C	6.45	128.42	111.00
31	DA	573	G	N1-C6-O6	-6.45	116.03	119.90
31	BA	1350	C	N1-C2-O2	-6.45	115.03	118.90
31	BA	1241	A	C5-C6-N1	-6.45	114.48	117.70
31	BA	2622	C	C6-N1-C2	6.45	122.88	120.30
31	BA	2081	C	N1-C2-O2	-6.44	115.03	118.90
31	DA	2014	A	C5-C6-N6	-6.44	118.55	123.70
31	DA	2422	A	C8-N9-C4	-6.44	103.22	105.80
31	BA	1786	A	C5-C6-N1	-6.44	114.48	117.70
31	BA	2518	A	C5-C6-N6	-6.44	118.55	123.70
31	DA	569	U	C5-C6-N1	-6.44	119.48	122.70
31	DA	2363	C	C2-N1-C1'	-6.44	111.72	118.80
31	BA	527	C	N3-C4-N4	-6.44	113.49	118.00
31	DA	1678	G	C8-N9-C4	-6.44	103.82	106.40
31	BA	1210	A	C6-C5-N7	-6.44	127.79	132.30
31	BA	1678	G	C4-N9-C1'	6.44	134.87	126.50
31	BA	2681	C	C5-C4-N4	6.43	124.70	120.20
32	DB	81	G	C5-C6-O6	-6.43	124.74	128.60
31	BA	783	A	C4-C5-N7	6.42	113.91	110.70
31	BA	71	A	C6-C5-N7	-6.42	127.81	132.30
31	DA	2542	A	C6-C5-N7	-6.42	127.81	132.30
31	BA	1258	C	C6-N1-C2	6.42	122.87	120.30
31	DA	1614	A	C6-C5-N7	-6.42	127.81	132.30
31	DA	2050	C	C2-N3-C4	-6.42	116.69	119.90
31	BA	1543	C	C6-N1-C2	-6.41	117.73	120.30
31	BA	465	G	C8-N9-C4	-6.41	103.84	106.40
31	BA	1609	A	C3'-C2'-C1'	6.41	106.62	101.50
31	DA	287	C	C6-N1-C2	6.41	122.86	120.30
31	BA	1543	C	N3-C4-N4	6.40	122.48	118.00
31	BA	621	A	C4-C5-N7	6.40	113.90	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1779	U	C5-C4-O4	6.40	129.74	125.90
31	BA	797	C	C2-N3-C4	-6.39	116.70	119.90
31	DA	2814	C	C6-N1-C2	6.39	122.86	120.30
31	BA	265	A	C8-N9-C4	-6.39	103.24	105.80
31	DA	798	G	N1-C6-O6	-6.39	116.06	119.90
31	BA	1328	G	N3-C4-N9	6.39	129.83	126.00
31	DA	580	C	N1-C2-O2	-6.39	115.07	118.90
31	DA	130	C	C5-C6-N1	-6.38	117.81	121.00
31	DA	791	C	C5-C6-N1	-6.38	117.81	121.00
31	BA	2648	C	N3-C4-C5	6.38	124.45	121.90
31	BA	446	G	C4-C5-N7	6.38	113.35	110.80
31	DA	397	G	N1-C6-O6	6.38	123.72	119.90
31	BA	2587	A	N1-C2-N3	6.37	132.49	129.30
31	DA	62	C	C6-N1-C2	6.37	122.85	120.30
31	DA	1142(A)	A	N3-C4-N9	-6.36	122.31	127.40
31	BA	1624	G	C8-N9-C4	6.36	108.94	106.40
31	BA	2413	G	C8-N9-C4	6.36	108.94	106.40
31	BA	2477	C	N3-C4-C5	-6.36	119.36	121.90
31	DA	530	G	N9-C4-C5	6.36	107.94	105.40
31	DA	796	C	C5-C6-N1	-6.36	117.82	121.00
31	DA	1528	A	N1-C6-N6	6.36	122.41	118.60
31	DA	1367	A	N1-C6-N6	-6.35	114.79	118.60
31	DA	529	A	C4-C5-N7	6.35	113.87	110.70
1	CA	34	C	C6-N1-C2	6.34	122.84	120.30
31	DA	2362	G	C8-N9-C4	6.34	108.94	106.40
31	BA	1991	U	N1-C2-O2	-6.34	118.36	122.80
31	DA	516	C	C6-N1-C2	6.34	122.84	120.30
31	BA	1021	A	C6-C5-N7	-6.34	127.86	132.30
31	DA	409	C	N3-C4-C5	6.34	124.43	121.90
31	DA	528	A	N3-C4-C5	6.34	131.24	126.80
31	BA	1784	A	N7-C8-N9	-6.33	110.63	113.80
31	BA	2552	U	N3-C2-O2	6.33	126.63	122.20
31	BA	529	A	C5-N7-C8	-6.33	100.73	103.90
31	BA	1977	A	C8-N9-C4	6.33	108.33	105.80
24	D2	53	LEU	CA-CB-CG	6.33	129.86	115.30
31	DA	2079	U	C4-C5-C6	6.32	123.49	119.70
31	DA	933	A	C4-C5-N7	6.32	113.86	110.70
31	DA	1543	C	C2-N3-C4	6.32	123.06	119.90
31	BA	130	C	N3-C4-C5	6.32	124.43	121.90
31	DA	1899	G	C2-N3-C4	-6.32	108.74	111.90
31	DA	2392	A	N1-C6-N6	6.32	122.39	118.60
31	DA	2420	C	C6-N1-C2	6.32	122.83	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1397	U	C6-N1-C2	-6.31	117.21	121.00
31	DA	934	G	C8-N9-C4	6.31	108.92	106.40
31	DA	2241	A	C8-N9-C4	6.31	108.33	105.80
31	BA	2485	G	C6-C5-N7	-6.31	126.61	130.40
31	DA	1496	A	N1-C6-N6	6.31	122.39	118.60
31	DA	2361	A	C2-N3-C4	-6.31	107.45	110.60
31	BA	1349	A	N1-C6-N6	6.30	122.38	118.60
31	DA	1006	C	C6-N1-C2	6.30	122.82	120.30
31	DA	2680	C	N3-C4-C5	6.30	124.42	121.90
32	DB	104	U	C6-N1-C2	6.30	124.78	121.00
31	BA	205	G	N3-C2-N2	6.30	124.31	119.90
31	DA	1614	A	C8-N9-C4	-6.30	103.28	105.80
31	BA	669	G	N1-C6-O6	-6.30	116.12	119.90
31	DA	2481	G	N9-C4-C5	-6.30	102.88	105.40
31	BA	1207	C	C5-C6-N1	-6.30	117.85	121.00
31	BA	1343	G	C4-N9-C1'	6.30	134.69	126.50
31	DA	1694	C	C6-N1-C1'	-6.30	113.25	120.80
31	DA	2713	A	C2-N3-C4	-6.30	107.45	110.60
31	BA	2258	C	C5-C4-N4	-6.29	115.79	120.20
31	DA	2017	U	C4-C5-C6	6.29	123.48	119.70
31	BA	133	C	C6-N1-C2	6.29	122.81	120.30
31	BA	783	A	N1-C2-N3	6.28	132.44	129.30
31	BA	2593	U	N3-C4-C5	-6.28	110.83	114.60
1	CA	1509	C	C6-N1-C2	6.28	122.81	120.30
31	BA	179	G	N1-C6-O6	6.28	123.67	119.90
31	BA	1049	C	C2-N1-C1'	6.28	125.71	118.80
31	DA	2476	A	C2-N3-C4	6.28	113.74	110.60
31	DA	856	C	C5-C6-N1	6.28	124.14	121.00
31	DA	1328	G	N3-C4-C5	-6.27	125.47	128.60
31	BA	847	U	N3-C4-O4	-6.26	115.02	119.40
31	BA	2498	C	N1-C2-O2	-6.26	115.14	118.90
31	BA	2547	U	C5-C6-N1	-6.26	119.57	122.70
31	DA	1049	C	C2-N1-C1'	6.26	125.69	118.80
31	DA	2542	A	N7-C8-N9	6.25	116.93	113.80
31	DA	986	C	C2-N3-C4	-6.25	116.78	119.90
31	DA	805	G	N3-C4-N9	6.25	129.75	126.00
31	BA	463	G	N1-C6-O6	-6.25	116.15	119.90
31	BA	956	G	C5-C6-N1	-6.25	108.38	111.50
31	DA	2438	U	C5-C6-N1	-6.25	119.58	122.70
31	DA	141	A	C5-N7-C8	-6.25	100.78	103.90
31	DA	2624	G	C5-C6-O6	-6.24	124.85	128.60
31	BA	1675	C	C2-N1-C1'	-6.24	111.94	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	731	C	N1-C2-O2	-6.24	115.16	118.90
31	BA	1279	G	N1-C6-O6	-6.24	116.16	119.90
31	BA	1328	G	C6-N1-C2	-6.24	121.36	125.10
31	BA	2073	C	N3-C2-O2	6.24	126.26	121.90
31	BA	71	A	N7-C8-N9	6.23	116.92	113.80
31	BA	189	G	C2-N3-C4	-6.23	108.78	111.90
31	DA	1496	A	C4-N9-C1'	6.23	137.51	126.30
31	BA	205	G	N9-C4-C5	-6.22	102.91	105.40
31	DA	1622	G	N1-C6-O6	-6.22	116.17	119.90
31	DA	2542	A	C5-C6-N1	-6.22	114.59	117.70
31	BA	1261	C	N1-C2-O2	-6.22	115.17	118.90
43	DR	8	ARG	N-CA-C	6.22	127.78	111.00
31	BA	2084	C	C6-N1-C2	6.21	122.78	120.30
31	DA	2441	C	N3-C4-N4	-6.21	113.65	118.00
31	DA	1123	C	N3-C4-C5	6.21	124.38	121.90
31	DA	2362	G	C2-N3-C4	-6.21	108.79	111.90
31	DA	71	A	N7-C8-N9	6.21	116.91	113.80
31	DA	847	U	C5-C6-N1	-6.21	119.59	122.70
31	DA	1543	C	N3-C2-O2	6.21	126.25	121.90
31	BA	2579	C	C6-N1-C2	6.21	122.78	120.30
31	BA	647	G	C4-N9-C1'	6.20	134.56	126.50
31	DA	2079	U	C5-C6-N1	-6.20	119.60	122.70
31	BA	847	U	C6-N1-C1'	6.20	129.88	121.20
31	BA	1279	G	C5-C6-O6	6.20	132.32	128.60
31	DA	1021	A	C6-C5-N7	-6.20	127.96	132.30
31	DA	2659	G	C4-N9-C1'	6.20	134.56	126.50
31	BA	2659	G	C4-N9-C1'	6.20	134.55	126.50
31	DA	1142(A)	A	N3-C4-C5	6.20	131.14	126.80
31	BA	528	A	C4-C5-N7	6.19	113.80	110.70
31	DA	481	G	C8-N9-C4	-6.19	103.92	106.40
31	BA	1349	A	C4-C5-N7	6.19	113.79	110.70
31	BA	805	G	C5-C6-O6	-6.18	124.89	128.60
31	DA	2363	C	N1-C2-O2	-6.18	115.19	118.90
31	BA	774	A	N3-C4-N9	-6.18	122.45	127.40
31	DA	1634	A	N9-C4-C5	6.18	108.27	105.80
31	BA	2475	C	C2-N1-C1'	6.18	125.59	118.80
31	DA	1681	G	N3-C4-C5	6.18	131.69	128.60
31	DA	1694	C	C5-C6-N1	6.17	124.09	121.00
31	BA	1678	G	N9-C4-C5	-6.17	102.93	105.40
31	BA	1990	C	N3-C2-O2	-6.17	117.58	121.90
31	DA	1349	A	N1-C6-N6	6.17	122.30	118.60
31	DA	2421	G	N1-C6-O6	6.16	123.60	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	669	G	N7-C8-N9	-6.16	110.02	113.10
31	BA	1609	A	C6-N1-C2	-6.16	114.91	118.60
31	DA	105	C	C6-N1-C2	6.16	122.76	120.30
31	DA	378	C	N3-C4-C5	6.16	124.36	121.90
31	BA	2544	G	C5-C6-O6	-6.15	124.91	128.60
31	DA	1326	U	C6-N1-C2	6.15	124.69	121.00
31	DA	1902	C	N1-C2-O2	6.15	122.59	118.90
31	DA	2253	G	C4-C5-N7	6.15	113.26	110.80
31	DA	2593	U	N3-C4-C5	-6.15	110.91	114.60
31	DA	141	A	C5-C6-N6	-6.15	118.78	123.70
31	DA	1784	A	C2-N3-C4	-6.14	107.53	110.60
31	BA	1624	G	N7-C8-N9	-6.14	110.03	113.10
31	BA	1397	U	N1-C2-N3	6.14	118.58	114.90
31	DA	1204	A	C4-N9-C1'	6.14	137.35	126.30
31	DA	1678	G	C8-N9-C1'	-6.14	119.02	127.00
31	BA	2362	G	C8-N9-C4	6.14	108.86	106.40
31	DA	933	A	N7-C8-N9	6.14	116.87	113.80
31	BA	1332	G	C4-N9-C1'	-6.14	118.52	126.50
31	DA	941	A	C8-N9-C4	-6.14	103.34	105.80
31	DA	378	C	C6-N1-C2	6.14	122.75	120.30
31	DA	529	A	C5-C6-N6	-6.14	118.79	123.70
1	CA	1519	A	N1-C6-N6	-6.13	114.92	118.60
31	DA	24	G	N1-C6-O6	6.13	123.58	119.90
31	DA	192	C	C6-N1-C2	6.13	122.75	120.30
31	BA	2711	A	C2-N3-C4	-6.13	107.53	110.60
31	DA	207	A	C2-N3-C4	-6.13	107.53	110.60
31	DA	2011	U	N3-C2-O2	6.13	126.49	122.20
31	DA	2033	A	N1-C6-N6	-6.12	114.92	118.60
31	BA	2027	G	C8-N9-C4	-6.12	103.95	106.40
31	DA	2626	C	C4-C5-C6	6.12	120.46	117.40
31	BA	1204	A	C4-N9-C1'	6.12	137.31	126.30
31	DA	1829	A	C2-N3-C4	-6.12	107.54	110.60
31	BA	1210	A	C5-N7-C8	-6.12	100.84	103.90
31	BA	2827	C	C5-C4-N4	-6.12	115.92	120.20
31	DA	664	C	C6-N1-C2	6.11	122.75	120.30
27	B5	51	TYR	CA-CB-CG	6.11	125.01	113.40
31	BA	150	C	C6-N1-C2	6.11	122.74	120.30
31	BA	2014	A	C5-C6-N6	-6.11	118.81	123.70
31	DA	1269	A	C2-N3-C4	-6.11	107.55	110.60
31	DA	1496	A	C6-C5-N7	-6.11	128.02	132.30
31	DA	558	G	N7-C8-N9	-6.11	110.05	113.10
31	DA	612	C	C6-N1-C2	6.11	122.74	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1279	G	C8-N9-C4	-6.11	103.96	106.40
31	BA	2499	C	C2-N1-C1'	6.11	125.52	118.80
31	DA	2648	C	C6-N1-C2	6.11	122.74	120.30
31	BA	2385	C	N1-C2-O2	-6.10	115.24	118.90
31	DA	827	U	N3-C2-O2	6.10	126.47	122.20
41	BP	59	LEU	N-CA-C	-6.10	94.53	111.00
31	DA	1382	G	N3-C4-C5	6.10	131.65	128.60
31	DA	2010	G	C8-N9-C4	-6.10	103.96	106.40
31	BA	2477	C	C6-N1-C2	-6.10	117.86	120.30
31	DA	850	C	C6-N1-C2	6.09	122.74	120.30
31	DA	2441	C	C5-C6-N1	-6.09	117.95	121.00
31	BA	2544	G	C6-C5-N7	-6.09	126.75	130.40
41	DP	59	LEU	N-CA-C	-6.09	94.56	111.00
48	BW	12	ILE	N-CA-C	-6.09	94.57	111.00
31	BA	805	G	N3-C4-N9	6.08	129.65	126.00
31	DA	2432	A	C5-C6-N6	-6.08	118.84	123.70
31	BA	2080	G	N1-C6-O6	6.08	123.55	119.90
31	DA	934	G	N7-C8-N9	-6.08	110.06	113.10
31	DA	2531	A	C8-N9-C4	6.08	108.23	105.80
31	BA	2258	C	N1-C2-O2	-6.07	115.26	118.90
31	BA	529	A	N1-C6-N6	6.07	122.24	118.60
31	DA	690	G	C8-N9-C4	6.07	108.83	106.40
31	BA	1022	G	C6-N1-C2	-6.07	121.46	125.10
31	BA	2485	G	N1-C6-O6	6.07	123.54	119.90
31	BA	995	C	C6-N1-C1'	6.07	128.08	120.80
31	DA	928	G	C6-C5-N7	-6.07	126.76	130.40
31	BA	139(A)	G	C5-N7-C8	-6.06	101.27	104.30
31	DA	2013	A	C8-N9-C4	6.06	108.22	105.80
31	BA	463	G	C5-C6-O6	6.06	132.23	128.60
1	AA	123	C	C6-N1-C2	6.05	122.72	120.30
31	BA	1670	C	N1-C2-O2	-6.05	115.27	118.90
1	AA	917	G	C8-N9-C4	-6.05	103.98	106.40
31	DA	148	C	C6-N1-C2	6.05	122.72	120.30
31	DA	389	G	C8-N9-C4	6.05	108.82	106.40
31	BA	2002	G	C5-C6-O6	-6.05	124.97	128.60
31	BA	2568	C	C6-N1-C2	6.05	122.72	120.30
31	DA	672	C	C5-C6-N1	-6.05	117.97	121.00
31	DA	2421	G	C5-C6-O6	-6.05	124.97	128.60
1	CA	699	C	N1-C2-O2	-6.05	115.27	118.90
31	DA	2681	C	C5-C6-N1	-6.05	117.98	121.00
31	DA	2742	C	C2-N1-C1'	-6.05	112.15	118.80
31	DA	450	G	C8-N9-C4	-6.04	103.98	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	265	A	C6-C5-N7	-6.04	128.07	132.30
31	BA	1049	C	C5-C6-N1	6.04	124.02	121.00
31	BA	139(A)	G	C5-C6-O6	-6.04	124.98	128.60
31	DA	205	G	N9-C4-C5	-6.04	102.98	105.40
31	DA	1997	G	C6-N1-C2	-6.04	121.48	125.10
31	DA	1779	U	C6-N1-C1'	6.04	129.65	121.20
31	DA	1343	G	N3-C4-C5	-6.04	125.58	128.60
31	DA	2399	G	C4-N9-C1'	6.04	134.35	126.50
31	DA	995	C	C6-N1-C1'	6.03	128.04	120.80
31	BA	1559	G	C4-C5-N7	6.03	113.21	110.80
31	DA	2542	A	C4-C5-N7	6.03	113.72	110.70
31	DA	728	G	C8-N9-C4	6.03	108.81	106.40
31	DA	671	C	N1-C2-O2	-6.03	115.28	118.90
31	DA	2571	C	N3-C2-O2	-6.03	117.68	121.90
31	DA	2698	U	N1-C2-O2	-6.03	118.58	122.80
31	DA	445	C	C5-C6-N1	-6.02	117.99	121.00
31	BA	2399	G	C4-N9-C1'	6.02	134.33	126.50
31	BA	827	U	C6-N1-C2	6.02	124.61	121.00
31	BA	656	G	N3-C4-C5	-6.02	125.59	128.60
31	BA	2439	A	N7-C8-N9	6.02	116.81	113.80
31	DA	586	A	C8-N9-C4	6.02	108.21	105.80
31	DA	2263	C	N1-C2-O2	-6.02	115.29	118.90
31	DA	647	G	C4-N9-C1'	6.02	134.32	126.50
31	BA	1977	A	C2-N3-C4	-6.01	107.59	110.60
31	DA	71	A	C6-C5-N7	-6.01	128.09	132.30
31	DA	530	G	C8-N9-C1'	6.01	134.82	127.00
31	DA	794	G	C4-C5-N7	-6.01	108.39	110.80
31	BA	928	G	C6-C5-N7	-6.01	126.79	130.40
31	DA	1332	G	C4-N9-C1'	-6.01	118.69	126.50
31	BA	139(A)	G	C5-C6-N1	6.00	114.50	111.50
31	DA	669	G	C4-C5-N7	-6.00	108.40	110.80
31	DA	2713	A	C4-C5-N7	6.00	113.70	110.70
31	BA	2275	C	C6-N1-C2	-6.00	117.90	120.30
31	DA	1351	C	C6-N1-C2	5.99	122.70	120.30
31	BA	1830	C	N3-C2-O2	5.99	126.09	121.90
31	BA	2465	C	C2-N3-C4	-5.99	116.91	119.90
31	DA	1948	G	C8-N9-C4	-5.99	104.01	106.40
31	DA	2680	C	C2-N3-C4	-5.99	116.91	119.90
31	BA	128	C	C6-N1-C2	-5.98	117.91	120.30
31	BA	2033	A	N1-C6-N6	-5.98	115.01	118.60
31	BA	673	C	C5-C4-N4	-5.98	116.01	120.20
31	BA	928	G	N1-C6-O6	5.98	123.49	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	BR	4	LEU	CB-CG-CD1	5.98	121.16	111.00
31	BA	474	G	C8-N9-C4	-5.97	104.01	106.40
31	DA	2503	A	C5-C6-N1	5.97	120.69	117.70
31	DA	2070	G	C6-N1-C2	-5.97	121.52	125.10
31	DA	774	A	C8-N9-C4	-5.96	103.41	105.80
31	DA	1268	A	C2-N3-C4	-5.96	107.62	110.60
31	DA	2604	U	C5-C6-N1	-5.96	119.72	122.70
31	DA	1617	C	C6-N1-C2	5.96	122.69	120.30
31	DA	2283	C	N1-C2-O2	-5.96	115.32	118.90
31	DA	59	U	C5-C4-O4	5.96	129.48	125.90
31	BA	2422	A	N7-C8-N9	5.96	116.78	113.80
31	BA	2017	U	N1-C2-N3	5.96	118.47	114.90
31	BA	2293	C	N1-C2-O2	-5.96	115.33	118.90
31	DA	2435	A	N7-C8-N9	5.96	116.78	113.80
31	BA	768	G	C5-C6-O6	-5.95	125.03	128.60
31	DA	2713	A	N7-C8-N9	5.95	116.78	113.80
31	BA	1573	G	C8-N9-C4	5.95	108.78	106.40
27	D5	4	HIS	C-N-CD	5.95	140.90	128.40
31	DA	1558	A	N1-C2-N3	5.95	132.28	129.30
31	DA	272(B)	G	C4-C5-N7	-5.95	108.42	110.80
31	DA	1252	G	C8-N9-C4	5.95	108.78	106.40
31	BA	1694	C	C4-C5-C6	-5.95	114.43	117.40
31	BA	800	A	N1-C6-N6	-5.95	115.03	118.60
31	BA	530	G	C8-N9-C1'	5.94	134.73	127.00
31	BA	1162	G	C4-C5-N7	-5.94	108.42	110.80
31	BA	686	G	C4-C5-N7	5.94	113.18	110.80
31	DA	995	C	C2-N1-C1'	-5.94	112.27	118.80
31	DA	1373	A	N7-C8-N9	-5.94	110.83	113.80
31	BA	2518	A	N3-C4-C5	5.94	130.96	126.80
31	BA	2518	A	C6-C5-N7	-5.94	128.14	132.30
1	CA	904	C	C6-N1-C2	5.94	122.67	120.30
1	CA	117	G	N9-C4-C5	-5.93	103.03	105.40
31	BA	614	U	C5-C4-O4	5.93	129.46	125.90
31	BA	676	A	C6-C5-N7	-5.93	128.15	132.30
31	BA	1261	C	C6-N1-C2	5.93	122.67	120.30
31	BA	2053	G	C5-C6-O6	-5.93	125.04	128.60
31	BA	2681	C	N3-C4-N4	-5.93	113.85	118.00
28	B6	11	LEU	CA-CB-CG	5.93	128.94	115.30
31	BA	1607	C	N3-C4-N4	5.93	122.15	118.00
31	DA	2079	U	N1-C2-N3	5.92	118.45	114.90
31	DA	2043	C	C2-N3-C4	-5.92	116.94	119.90
31	BA	178	G	N1-C6-O6	-5.92	116.35	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1821	A	N7-C8-N9	-5.92	110.84	113.80
31	BA	139(A)	G	C4-N9-C1'	5.92	134.20	126.50
31	DA	754	C	C5-C6-N1	-5.92	118.04	121.00
31	BA	1324	G	N1-C6-O6	5.91	123.45	119.90
31	BA	1992	G	N3-C4-C5	-5.91	125.64	128.60
31	DA	1204	A	C4-C5-C6	5.91	119.96	117.00
31	BA	2041	U	N1-C2-O2	-5.91	118.66	122.80
41	BP	53	GLY	N-CA-C	-5.91	98.33	113.10
31	DA	1558	A	C5-C6-N1	-5.91	114.74	117.70
31	DA	1616	A	C4-C5-N7	5.91	113.66	110.70
31	BA	1310	G	N3-C4-C5	-5.91	125.65	128.60
1	CA	1429	C	C5-C6-N1	-5.91	118.05	121.00
31	DA	847	U	C6-N1-C1'	5.91	129.47	121.20
31	BA	1653	G	P-O3'-C3'	5.91	126.79	119.70
31	BA	686	G	N1-C6-O6	5.91	123.44	119.90
31	DA	1049	C	C6-N1-C2	-5.90	117.94	120.30
31	DA	2648	C	C5-C6-N1	-5.90	118.05	121.00
31	BA	142	A	C4-C5-N7	5.90	113.65	110.70
31	DA	131	G	C8-N9-C4	5.90	108.76	106.40
31	DA	1708	C	C6-N1-C2	5.90	122.66	120.30
31	BA	412	A	C2-N3-C4	-5.90	107.65	110.60
31	BA	1496	A	C4-N9-C1'	5.90	136.91	126.30
31	DA	272(B)	G	C5-C6-O6	5.90	132.14	128.60
31	DA	2866	U	C4-C5-C6	5.89	123.24	119.70
31	BA	1782	C	C4-C5-C6	5.89	120.35	117.40
31	BA	1994	C	C5-C6-N1	-5.89	118.05	121.00
1	CA	322	C	C6-N1-C2	5.89	122.66	120.30
31	BA	976	C	N1-C2-O2	5.89	122.43	118.90
31	BA	2779	U	C5-C6-N1	-5.89	119.76	122.70
31	DA	1771	C	N1-C2-O2	-5.89	115.37	118.90
31	DA	121	G	C8-N9-C4	5.89	108.75	106.40
31	DA	253	C	N1-C2-O2	-5.89	115.37	118.90
31	DA	1800	C	C2-N1-C1'	-5.89	112.32	118.80
31	BA	1332	G	N1-C6-O6	5.88	123.43	119.90
31	BA	1333	C	N3-C4-C5	5.88	124.25	121.90
31	DA	584	C	C2-N1-C1'	-5.88	112.33	118.80
31	DA	2493	U	C5-C6-N1	-5.88	119.76	122.70
31	BA	579	G	N1-C6-O6	5.88	123.43	119.90
31	DA	178	G	N1-C6-O6	-5.88	116.37	119.90
1	CA	108	G	C4-C5-N7	5.88	113.15	110.80
31	BA	194	G	C5-C6-O6	-5.87	125.08	128.60
31	BA	209	C	C6-N1-C2	5.87	122.65	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	594	U	C5-C6-N1	-5.87	119.76	122.70
31	BA	762	U	C2-N1-C1'	5.87	124.74	117.70
31	BA	1256	G	C8-N9-C1'	-5.87	119.37	127.00
31	BA	2681	C	C5-C6-N1	-5.87	118.07	121.00
31	DA	2779	U	N3-C2-O2	-5.87	118.09	122.20
31	BA	2475	C	C6-N1-C1'	-5.86	113.77	120.80
31	BA	2598	A	C8-N9-C4	5.86	108.14	105.80
31	DA	1031	G	C6-N1-C2	-5.86	121.58	125.10
31	DA	2778	A	C2-N3-C4	-5.86	107.67	110.60
31	BA	982	C	C6-N1-C2	-5.86	117.96	120.30
31	BA	1268	A	C5-C6-N1	-5.86	114.77	117.70
31	BA	2032	G	C5-C6-O6	-5.86	125.09	128.60
31	DA	1207	C	N3-C2-O2	5.86	126.00	121.90
31	DA	814	C	C5-C6-N1	-5.85	118.07	121.00
31	DA	2651	C	C5-C6-N1	-5.85	118.07	121.00
31	DA	194	G	N1-C6-O6	5.85	123.41	119.90
31	BA	1802	A	N1-C6-N6	5.85	122.11	118.60
31	BA	2626	C	C2-N3-C4	-5.85	116.98	119.90
31	DA	1678	G	N3-C2-N2	5.85	123.99	119.90
31	DA	2496	C	C6-N1-C2	5.85	122.64	120.30
31	DA	2011	U	N1-C2-O2	-5.84	118.71	122.80
31	BA	208	C	C5-C4-N4	-5.84	116.11	120.20
31	BA	2363	C	N1-C2-O2	-5.84	115.39	118.90
31	DA	1012	U	N3-C4-O4	-5.84	115.31	119.40
31	BA	2430	A	C5-C6-N1	-5.84	114.78	117.70
31	DA	737	C	C6-N1-C2	5.84	122.64	120.30
31	BA	1800	C	C2-N1-C1'	-5.84	112.38	118.80
32	DB	115	G	N7-C8-N9	-5.84	110.18	113.10
31	BA	1559	G	N1-C6-O6	5.83	123.40	119.90
31	BA	1779	U	C6-N1-C1'	5.83	129.37	121.20
31	DA	803	U	C5-C6-N1	-5.83	119.78	122.70
31	BA	1959	G	N1-C6-O6	-5.83	116.40	119.90
31	BA	1972	A	N1-C6-N6	5.83	122.10	118.60
31	DA	2610	C	N1-C2-O2	5.83	122.40	118.90
31	BA	122	G	C8-N9-C4	5.83	108.73	106.40
31	DA	185	U	C2-N3-C4	-5.83	123.50	127.00
31	BA	2403	C	N1-C2-O2	-5.83	115.40	118.90
31	DA	2044	C	N3-C2-O2	5.83	125.98	121.90
31	BA	774	A	C5-C6-N1	-5.83	114.79	117.70
31	DA	933	A	C6-C5-N7	-5.83	128.22	132.30
23	D1	43	TYR	N-CA-C	-5.82	95.28	111.00
32	DB	104	U	C5-C6-N1	-5.82	119.79	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1256	G	C4-N9-C1'	5.82	134.07	126.50
31	BA	1029	A	N1-C6-N6	5.82	122.09	118.60
31	DA	74	A	N1-C6-N6	-5.82	115.11	118.60
31	DA	1648	C	N3-C4-C5	5.82	124.23	121.90
31	DA	2712(A)	A	C8-N9-C4	-5.82	103.47	105.80
31	BA	472	A	C4'-C3'-C2'	5.82	108.42	102.60
31	BA	739	G	C8-N9-C4	5.82	108.73	106.40
31	BA	1694	C	C6-N1-C1'	-5.82	113.82	120.80
31	DA	733	G	C4-C5-N7	5.81	113.12	110.80
31	DA	2689	U	C5-C6-N1	-5.81	119.79	122.70
31	BA	805	G	C4-C5-N7	5.81	113.12	110.80
31	BA	936	C	N1-C2-O2	-5.81	115.41	118.90
31	BA	481	G	C8-N9-C4	-5.81	104.08	106.40
31	BA	2190	G	C4-N9-C1'	5.81	134.05	126.50
1	CA	906	G	N9-C4-C5	-5.81	103.08	105.40
31	BA	528	A	N7-C8-N9	5.81	116.70	113.80
31	BA	760	G	N1-C6-O6	5.80	123.38	119.90
31	DA	444	C	C5-C6-N1	-5.80	118.10	121.00
31	DA	2430	A	N1-C6-N6	5.80	122.08	118.60
31	BA	783	A	N7-C8-N9	5.80	116.70	113.80
31	BA	2430	A	C6-C5-N7	-5.80	128.24	132.30
31	BA	2485	G	C5-C6-O6	-5.80	125.12	128.60
31	DA	558	G	C8-N9-C4	5.80	108.72	106.40
31	DA	1790	C	C2-N3-C4	-5.80	117.00	119.90
31	DA	591	C	C2-N3-C4	-5.79	117.00	119.90
31	DA	2827	C	C2-N3-C4	-5.79	117.00	119.90
31	BA	950	G	N1-C6-O6	-5.79	116.42	119.90
31	DA	1544	A	N9-C1'-C2'	5.79	121.53	114.00
31	DA	1641	A	N1-C2-N3	5.79	132.19	129.30
31	DA	2588	G	C8-N9-C4	5.79	108.72	106.40
31	DA	584	C	C4-C5-C6	5.79	120.30	117.40
31	DA	2190	G	C4-N9-C1'	5.79	134.03	126.50
31	DA	2837	G	C5-C6-O6	-5.79	125.13	128.60
48	BW	6	ILE	CB-CA-C	-5.79	100.03	111.60
31	BA	59	U	N3-C2-O2	-5.79	118.15	122.20
31	BA	2584	U	C5-C4-O4	5.78	129.37	125.90
31	DA	566	U	C2-N1-C1'	-5.78	110.76	117.70
31	DA	774	A	N3-C4-N9	-5.78	122.77	127.40
31	DA	1012	U	C5-C4-O4	5.78	129.37	125.90
31	DA	2626	C	C5-C6-N1	-5.78	118.11	121.00
31	BA	621	A	N1-C6-N6	5.78	122.07	118.60
31	BA	1291	C	C5-C6-N1	-5.78	118.11	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	600	G	C2-N3-C4	-5.78	109.01	111.90
31	DA	669	G	C5-N7-C8	5.78	107.19	104.30
31	DA	150	C	C6-N1-C2	5.78	122.61	120.30
31	DA	541	C	N3-C4-C5	5.78	124.21	121.90
31	DA	671	C	N3-C4-C5	-5.78	119.59	121.90
32	BB	101	G	C8-N9-C4	5.77	108.71	106.40
31	BA	419	C	C6-N1-C2	5.77	122.61	120.30
31	DA	1502	C	C2-N1-C1'	5.77	125.15	118.80
31	BA	2243	U	N1-C2-O2	-5.77	118.76	122.80
27	D5	51	TYR	CA-CB-CG	5.77	124.36	113.40
31	BA	1022	G	C4-C5-N7	-5.77	108.49	110.80
31	BA	265	A	C2-N3-C4	-5.77	107.72	110.60
31	BA	2771	C	N3-C4-C5	5.77	124.21	121.90
31	DA	141	A	C2-N3-C4	-5.77	107.72	110.60
31	BA	207	A	C8-N9-C4	5.77	108.11	105.80
31	BA	826	U	N3-C2-O2	5.77	126.24	122.20
31	DA	1665	A	N1-C6-N6	-5.76	115.14	118.60
30	B8	33	ASN	N-CA-C	-5.76	95.44	111.00
31	BA	1157	G	C4-N9-C1'	5.76	133.99	126.50
31	DA	1409	C	C5-C6-N1	-5.76	118.12	121.00
31	DA	2555	U	N1-C2-O2	-5.76	118.77	122.80
31	BA	672	C	C5-C6-N1	-5.76	118.12	121.00
31	DA	1312	U	C5-C6-N1	-5.76	119.82	122.70
31	DA	472	A	C4'-C3'-C2'	5.76	108.36	102.60
31	DA	2518	A	C6-C5-N7	-5.76	128.27	132.30
31	BA	730	C	N3-C4-C5	5.76	124.20	121.90
31	BA	1496	A	C6-C5-N7	-5.76	128.27	132.30
49	DX	62	LYS	N-CA-C	5.75	126.54	111.00
31	BA	2689	U	C5-C6-N1	-5.75	119.82	122.70
31	DA	2231	C	C2-N3-C4	-5.75	117.02	119.90
31	DA	2318	G	N7-C8-N9	5.75	115.97	113.10
31	DA	2814	C	N1-C2-O2	-5.75	115.45	118.90
31	BA	2613	U	N3-C4-C5	5.75	118.05	114.60
31	BA	130	C	C2-N3-C4	-5.75	117.03	119.90
31	BA	397	G	C8-N9-C4	5.75	108.70	106.40
1	CA	572	A	C8-N9-C4	5.75	108.10	105.80
31	BA	1370	C	C2-N1-C1'	-5.75	112.48	118.80
31	DA	187	G	C4-C5-N7	5.75	113.10	110.80
31	DA	794	G	C5-N7-C8	5.75	107.17	104.30
31	DA	1210	A	N1-C6-N6	5.75	122.05	118.60
31	DA	1758	G	N3-C4-N9	-5.75	122.55	126.00
31	DA	1948	G	N9-C4-C5	5.75	107.70	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2022	U	C5-C4-O4	-5.74	122.45	125.90
31	BA	2318	G	C6-C5-N7	-5.74	126.96	130.40
31	BA	1565	C	C6-N1-C2	5.74	122.59	120.30
31	DA	2477	C	C6-N1-C2	-5.73	118.01	120.30
31	BA	139(A)	G	C2-N3-C4	5.73	114.77	111.90
31	BA	647	G	N3-C4-C5	-5.73	125.73	128.60
31	DA	179	G	C2-N3-C4	-5.73	109.03	111.90
31	DA	1210	A	C5-N7-C8	-5.73	101.03	103.90
31	BA	2364	C	C6-N1-C2	5.73	122.59	120.30
31	DA	928	G	C5-C6-O6	-5.73	125.16	128.60
1	CA	1524	C	N3-C2-O2	5.73	125.91	121.90
31	DA	1652	A	C4'-C3'-C2'	5.73	108.33	102.60
31	BA	1021	A	N3-C4-C5	5.73	130.81	126.80
31	DA	2247	A	C2-N3-C4	-5.73	107.74	110.60
31	BA	1698	A	N1-C2-N3	5.72	132.16	129.30
31	BA	1800	C	N1-C2-O2	-5.72	115.47	118.90
31	DA	594	U	C5-C6-N1	-5.72	119.84	122.70
31	BA	530	G	C5-C6-O6	5.72	132.03	128.60
31	DA	660	G	C5-C6-N1	-5.72	108.64	111.50
31	DA	2464	C	N3-C4-C5	5.72	124.19	121.90
31	DA	2711	A	C2-N3-C4	-5.72	107.74	110.60
31	DA	2688	U	C5-C6-N1	-5.72	119.84	122.70
31	DA	1278	A	N1-C2-N3	5.71	132.16	129.30
31	BA	2243	U	N3-C2-O2	5.71	126.20	122.20
31	BA	2441	C	N3-C4-C5	5.71	124.18	121.90
31	DA	57	C	C6-N1-C2	5.71	122.58	120.30
31	BA	2828	C	N3-C4-C5	5.71	124.18	121.90
31	DA	2430	A	C5-C6-N1	-5.71	114.84	117.70
31	BA	107	C	N3-C2-O2	5.71	125.89	121.90
31	BA	683	C	N3-C4-C5	5.71	124.18	121.90
31	DA	1343	G	N3-C4-N9	5.71	129.42	126.00
31	BA	1742	G	C5-C6-O6	-5.71	125.18	128.60
31	DA	1972	A	N1-C6-N6	5.71	122.02	118.60
31	BA	272	G	N3-C2-N2	5.70	123.89	119.90
31	BA	1033	U	C2-N1-C1'	5.70	124.55	117.70
1	CA	1484	C	C6-N1-C2	5.70	122.58	120.30
31	DA	2569	G	C5-C6-O6	-5.70	125.18	128.60
31	BA	1359	A	C8-N9-C4	5.70	108.08	105.80
31	BA	1381	G	C8-N9-C4	-5.70	104.12	106.40
31	DA	805	G	C5-C6-O6	-5.70	125.18	128.60
31	BA	265	A	C4-C5-N7	5.70	113.55	110.70
31	DA	2524	G	C5-C6-O6	-5.70	125.18	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2723	C	C6-N1-C2	5.70	122.58	120.30
1	AA	1524	C	C6-N1-C2	5.69	122.58	120.30
23	B1	43	TYR	N-CA-C	-5.69	95.63	111.00
31	BA	2538	C	C6-N1-C2	5.69	122.58	120.30
41	BP	36	LYS	CD-CE-NZ	5.69	124.79	111.70
31	DA	1287	A	N1-C6-N6	-5.69	115.19	118.60
31	DA	2427	C	N3-C2-O2	5.69	125.88	121.90
31	DA	2522	U	C4-C5-C6	5.69	123.11	119.70
31	DA	2702	U	C5-C4-O4	5.69	129.31	125.90
31	DA	2702	U	N3-C2-O2	-5.69	118.22	122.20
31	BA	1336	A	C5-C6-N1	5.69	120.54	117.70
31	DA	129	C	C5-C6-N1	-5.69	118.16	121.00
31	DA	1142(A)	A	C5-N7-C8	-5.69	101.06	103.90
32	DB	101	G	C8-N9-C4	5.69	108.67	106.40
31	BA	272	G	N1-C2-N2	-5.68	111.08	116.20
31	DA	1948	G	N3-C2-N2	-5.68	115.92	119.90
31	BA	849	A	C8-N9-C4	5.68	108.07	105.80
31	BA	2672	G	C6-C5-N7	-5.68	126.99	130.40
31	DA	656	G	N3-C4-C5	-5.68	125.76	128.60
31	DA	2778	A	N1-C2-N3	5.68	132.14	129.30
31	BA	796	C	C6-N1-C2	5.68	122.57	120.30
31	BA	53	A	N1-C2-N3	5.68	132.14	129.30
31	BA	1652	A	C4'-C3'-C2'	5.68	108.28	102.60
31	DA	129	C	C6-N1-C2	5.68	122.57	120.30
31	DA	1332	G	C4-C5-N7	5.68	113.07	110.80
31	DA	2822	G	C8-N9-C4	5.67	108.67	106.40
1	AA	810	C	C6-N1-C2	5.67	122.57	120.30
31	BA	2256	G	C4-C5-N7	5.67	113.07	110.80
31	DA	242	G	C4-N9-C1'	-5.67	119.13	126.50
31	DA	494	G	C2-N3-C4	-5.67	109.07	111.90
31	DA	690	G	N7-C8-N9	-5.67	110.27	113.10
31	DA	1256	G	C4-N9-C1'	5.67	133.87	126.50
31	DA	1991	U	C5-C6-N1	-5.67	119.87	122.70
31	DA	463	G	C5-C6-O6	5.67	132.00	128.60
31	DA	2253	G	C6-C5-N7	-5.66	127.00	130.40
32	DB	30	C	C6-N1-C2	-5.66	118.03	120.30
31	DA	1299	G	N1-C6-O6	5.66	123.30	119.90
27	B5	4	HIS	C-N-CD	5.66	140.29	128.40
31	BA	2247	A	C2-N3-C4	-5.66	107.77	110.60
31	DA	193	U	C5-C4-O4	-5.66	122.50	125.90
31	DA	2485	G	N9-C4-C5	-5.66	103.14	105.40
31	BA	945	A	C5-N7-C8	-5.66	101.07	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1241	A	N1-C2-N3	5.66	132.13	129.30
31	DA	2712	U	N1-C2-N3	5.66	118.30	114.90
31	BA	1213	A	C8-N9-C4	-5.66	103.54	105.80
31	DA	353	G	N3-C4-N9	5.66	129.39	126.00
31	BA	803	U	C5-C6-N1	-5.65	119.87	122.70
31	DA	739	G	C8-N9-C4	5.65	108.66	106.40
31	DA	912	C	C6-N1-C2	-5.65	118.04	120.30
31	BA	132	G	C5-C6-N1	-5.65	108.67	111.50
31	BA	265	A	N1-C6-N6	5.65	121.99	118.60
31	DA	2823	A	N1-C6-N6	5.65	121.99	118.60
31	BA	1314	C	C6-N1-C1'	-5.64	114.03	120.80
31	DA	2230	G	N1-C6-O6	5.64	123.29	119.90
31	DA	465	G	N7-C8-N9	5.64	115.92	113.10
31	BA	378	C	N3-C4-C5	5.64	124.16	121.90
31	DA	2441	C	C2-N1-C1'	-5.64	112.60	118.80
31	BA	1544	A	N9-C1'-C2'	5.63	121.32	114.00
31	DA	71	A	C2-N3-C4	-5.63	107.78	110.60
31	DA	1409	C	C6-N1-C2	5.63	122.55	120.30
31	BA	2230	G	N3-C2-N2	-5.63	115.96	119.90
31	BA	2346	A	C1'-O4'-C4'	-5.63	105.40	109.90
31	BA	673	C	N3-C4-N4	5.63	121.94	118.00
41	BP	58	THR	N-CA-C	-5.63	95.81	111.00
31	DA	1327	C	N1-C2-O2	-5.63	115.52	118.90
31	DA	2620	C	N3-C4-C5	5.63	124.15	121.90
31	DA	762	U	N3-C4-O4	5.62	123.34	119.40
31	DA	2009	G	N9-C4-C5	5.62	107.65	105.40
31	DA	2009	G	C8-N9-C4	-5.62	104.15	106.40
31	DA	1775	U	C5-C6-N1	-5.62	119.89	122.70
31	DA	2430	A	N3-C4-C5	5.62	130.73	126.80
31	BA	1574	C	C6-N1-C2	5.62	122.55	120.30
31	DA	1653	G	C8-N9-C1'	-5.62	119.70	127.00
31	DA	2414	G	N1-C6-O6	5.62	123.27	119.90
31	DA	945	A	O4'-C1'-N9	5.61	112.69	108.20
31	DA	784	A	C2-N3-C4	-5.61	107.79	110.60
31	BA	783	A	C5-C6-N1	-5.61	114.89	117.70
31	BA	1605	C	N3-C2-O2	-5.61	117.97	121.90
31	DA	1247	A	N1-C6-N6	5.61	121.97	118.60
31	DA	2497	A	C8-N9-C4	5.61	108.04	105.80
31	DA	2678	C	C5-C6-N1	-5.61	118.19	121.00
31	BA	330	A	N1-C6-N6	5.61	121.96	118.60
31	DA	1201	C	C6-N1-C2	5.61	122.54	120.30
30	B8	44	LYS	CD-CE-NZ	5.61	124.59	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1204	A	C3'-C2'-C1'	-5.61	97.02	101.50
31	BA	1675	C	N1-C2-O2	-5.60	115.54	118.90
31	DA	2814	C	C2-N3-C4	-5.60	117.10	119.90
31	DA	669	G	C4-N9-C1'	-5.60	119.22	126.50
31	BA	2579	C	C5-C6-N1	-5.60	118.20	121.00
31	DA	83	G	N3-C2-N2	-5.60	115.98	119.90
47	DV	40	LEU	CA-CB-CG	5.60	128.18	115.30
48	DW	12	ILE	N-CA-C	-5.60	95.88	111.00
31	BA	1314	C	C2-N1-C1'	5.60	124.96	118.80
31	BA	1607	C	N3-C4-C5	-5.60	119.66	121.90
31	BA	139(A)	G	C4-C5-N7	5.60	113.04	110.80
31	BA	1333	C	C2-N3-C4	-5.59	117.10	119.90
31	DA	209	C	C6-N1-C2	5.59	122.54	120.30
31	BA	794	G	C5-C6-O6	5.59	131.96	128.60
31	BA	1991	U	N3-C2-O2	5.59	126.11	122.20
31	DA	1158	C	C2-N1-C1'	5.59	124.95	118.80
31	DA	509	C	C2-N3-C4	-5.59	117.11	119.90
31	DA	1614	A	C5-C6-N1	-5.59	114.91	117.70
31	BA	2702	U	C5-C4-O4	5.59	129.25	125.90
31	BA	1782	C	C5-C6-N1	-5.58	118.21	121.00
31	BA	2699	C	C6-N1-C2	5.58	122.53	120.30
31	BA	2073	C	C6-N1-C2	5.58	122.53	120.30
31	DA	2468	G	C8-N9-C1'	5.58	134.26	127.00
31	DA	2599	G	N1-C6-O6	-5.58	116.55	119.90
31	BA	1742	G	N1-C6-O6	5.58	123.25	119.90
31	DA	2518	A	C2-N3-C4	-5.58	107.81	110.60
31	BA	378	C	C6-N1-C2	5.58	122.53	120.30
31	BA	2036	C	N1-C2-O2	-5.58	115.56	118.90
31	BA	2607	G	N3-C4-N9	5.58	129.35	126.00
31	BA	353	G	N3-C4-N9	5.57	129.34	126.00
31	BA	2702	U	N3-C4-O4	-5.57	115.50	119.40
31	DA	870	A	C8-N9-C4	5.57	108.03	105.80
31	DA	945	A	C5-N7-C8	-5.57	101.11	103.90
31	DA	1304	C	N3-C4-N4	-5.57	114.10	118.00
31	DA	1784	A	N1-C2-N3	5.57	132.09	129.30
31	DA	2502	G	N3-C2-N2	5.57	123.80	119.90
31	DA	2413	G	C2-N3-C4	-5.57	109.11	111.90
31	BA	133	C	C5-C6-N1	-5.57	118.22	121.00
31	BA	1502	C	C2-N1-C1'	5.57	124.93	118.80
31	DA	2036	C	N1-C2-O2	-5.57	115.56	118.90
31	BA	196	A	N9-C4-C5	-5.57	103.57	105.80
31	BA	812	C	N1-C2-O2	-5.57	115.56	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1997	G	N1-C2-N2	-5.57	111.19	116.20
31	BA	2542	A	C4-C5-N7	5.57	113.48	110.70
31	BA	2590	A	C2-N3-C4	-5.57	107.82	110.60
31	DA	756	C	C5-C6-N1	-5.57	118.22	121.00
31	DA	2499	C	C6-N1-C1'	-5.56	114.12	120.80
1	AA	108	G	N9-C4-C5	-5.56	103.18	105.40
1	AA	117	G	C5-C6-O6	-5.56	125.26	128.60
31	DA	1314	C	C5-C4-N4	-5.56	116.31	120.20
31	DA	2084	C	C4-C5-C6	5.56	120.18	117.40
31	DA	1675	C	C2-N1-C1'	-5.56	112.69	118.80
31	BA	1021	A	C4-C5-N7	5.56	113.48	110.70
31	BA	2711	A	N3-C4-C5	5.55	130.69	126.80
31	BA	1333	C	C6-N1-C2	5.55	122.52	120.30
31	DA	1529	G	C8-N9-C1'	-5.55	119.79	127.00
31	BA	2014	A	N9-C4-C5	-5.54	103.58	105.80
31	DA	1674	G	N3-C4-C5	-5.54	125.83	128.60
31	BA	124	G	N1-C6-O6	5.54	123.22	119.90
47	BV	40	LEU	CA-CB-CG	5.54	128.05	115.30
31	DA	535	C	C5-C6-N1	-5.54	118.23	121.00
31	DA	2447	G	N7-C8-N9	-5.54	110.33	113.10
31	DA	389	G	N9-C4-C5	-5.54	103.18	105.40
31	BA	2024	G	N7-C8-N9	-5.53	110.33	113.10
31	BA	2283	C	N1-C2-O2	-5.53	115.58	118.90
31	DA	2607	G	N1-C2-N2	-5.53	111.22	116.20
31	BA	179	G	C2-N3-C4	-5.53	109.14	111.90
31	BA	1790	C	N1-C2-O2	-5.53	115.58	118.90
31	DA	2231	C	C2-N1-C1'	-5.53	112.72	118.80
31	DA	2318	G	C8-N9-C4	-5.53	104.19	106.40
31	BA	1496	A	C4-C5-N7	5.53	113.47	110.70
31	DA	1918	A	C8-N9-C4	5.53	108.01	105.80
31	BA	2779	U	N3-C2-O2	-5.53	118.33	122.20
31	DA	1281	G	N1-C6-O6	5.53	123.22	119.90
31	DA	2239	G	N1-C2-N2	-5.52	111.23	116.20
31	BA	676	A	C5-C6-N1	-5.52	114.94	117.70
31	DA	1565	C	C6-N1-C2	5.52	122.51	120.30
31	DA	2481	G	N1-C6-O6	5.52	123.21	119.90
31	BA	296	C	C6-N1-C2	5.52	122.51	120.30
31	BA	566	U	C2-N1-C1'	-5.52	111.08	117.70
31	BA	1397	U	P-O3'-C3'	5.52	126.32	119.70
31	BA	1496	A	N1-C6-N6	5.52	121.91	118.60
31	BA	150	C	C5-C6-N1	-5.51	118.24	121.00
31	DA	1614	A	N1-C6-N6	5.51	121.91	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2468	G	C4-N9-C1'	-5.51	119.33	126.50
31	BA	1267	U	N1-C2-O2	5.51	126.66	122.80
31	BA	2392	A	N7-C8-N9	5.51	116.56	113.80
31	DA	1336	A	C5-C6-N1	5.51	120.46	117.70
31	BA	1162	G	N1-C6-O6	-5.51	116.59	119.90
31	BA	2432	A	C5-C6-N6	-5.51	119.29	123.70
31	DA	1786	A	C5-C6-N1	-5.51	114.94	117.70
31	BA	234	C	N1-C2-O2	5.51	122.20	118.90
31	DA	930	U	C5-C6-N1	-5.51	119.95	122.70
31	DA	1012	U	N3-C2-O2	-5.51	118.35	122.20
31	BA	788	A	N9-C4-C5	-5.50	103.60	105.80
31	DA	2741	A	N7-C8-N9	-5.50	111.05	113.80
31	BA	621	A	C2-N3-C4	-5.50	107.85	110.60
31	BA	1343	G	C8-N9-C1'	-5.50	119.85	127.00
31	BA	2426	A	N1-C6-N6	5.50	121.90	118.60
31	BA	2429	G	C8-N9-C4	-5.50	104.20	106.40
31	BA	2572	A	C8-N9-C4	5.50	108.00	105.80
31	DA	2040	C	C6-N1-C2	5.50	122.50	120.30
31	BA	287	C	C6-N1-C2	5.50	122.50	120.30
31	BA	2432	A	C4-C5-N7	5.50	113.45	110.70
31	BA	1934	C	C4'-C3'-C2'	5.49	108.09	102.60
31	DA	2385	C	N1-C2-O2	-5.49	115.60	118.90
31	DA	2563	U	C5-C6-N1	-5.49	119.95	122.70
31	BA	189	G	N1-C6-O6	5.49	123.19	119.90
31	BA	455	C	N3-C4-C5	5.49	124.10	121.90
31	BA	527	C	C2-N3-C4	-5.49	117.16	119.90
42	BQ	82	ARG	NE-CZ-NH2	-5.49	117.55	120.30
31	DA	2027	G	C8-N9-C4	-5.49	104.20	106.40
31	BA	1201	C	C5-C4-N4	-5.49	116.36	120.20
31	BA	1340	U	C2-N3-C4	-5.49	123.71	127.00
31	BA	2080	G	C5-C6-O6	-5.49	125.31	128.60
35	BF	68	LYS	N-CA-C	5.49	125.82	111.00
31	BA	2392	A	C6-C5-N7	-5.49	128.46	132.30
31	BA	467	G	C8-N9-C4	5.49	108.59	106.40
31	BA	1609	A	N1-C2-N3	5.49	132.04	129.30
31	BA	2281	C	N1-C2-O2	-5.49	115.61	118.90
31	BA	2665	A	C6-C5-N7	-5.49	128.46	132.30
31	DA	783	A	N7-C8-N9	5.49	116.54	113.80
31	BA	226	G	C5-C6-O6	-5.48	125.31	128.60
31	DA	933	A	C5-C6-N1	-5.48	114.96	117.70
31	BA	395	U	N3-C2-O2	-5.48	118.36	122.20
31	BA	748	G	N7-C8-N9	-5.48	110.36	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2433	A	C2-N3-C4	-5.48	107.86	110.60
31	DA	651	G	C4-N9-C1'	5.48	133.62	126.50
31	BA	1774	C	N3-C2-O2	5.48	125.73	121.90
31	DA	774	A	C3'-C2'-C1'	5.48	105.88	101.50
31	DA	2587	A	C4-C5-C6	5.47	119.74	117.00
1	AA	1442	G	C4-N9-C1'	5.47	133.62	126.50
31	DA	1833	U	N1-C2-O2	-5.47	118.97	122.80
31	DA	2820	A	C2-N3-C4	-5.47	107.86	110.60
41	DP	53	GLY	N-CA-C	-5.47	99.42	113.10
31	BA	1846	G	N1-C6-O6	5.47	123.18	119.90
31	DA	2522	U	C6-N1-C2	5.47	124.28	121.00
31	BA	16	G	N1-C6-O6	5.47	123.18	119.90
31	BA	1291	C	C6-N1-C2	5.47	122.49	120.30
31	BA	1904	G	C8-N9-C4	5.47	108.59	106.40
31	BA	2061	G	N1-C6-O6	-5.47	116.62	119.90
31	BA	2715	C	C5-C6-N1	-5.47	118.27	121.00
31	BA	2441	C	C2-N3-C4	-5.46	117.17	119.90
31	BA	451	C	N3-C2-O2	5.46	125.72	121.90
31	DA	801	G	C5-C6-O6	5.46	131.88	128.60
31	BA	128	C	C5-C4-N4	-5.46	116.38	120.20
31	BA	1189	A	N1-C6-N6	5.46	121.88	118.60
31	BA	1653	G	C8-N9-C1'	-5.46	119.90	127.00
31	DA	1616	A	C8-N9-C4	-5.46	103.62	105.80
31	DA	2678	C	C6-N1-C2	5.46	122.48	120.30
31	BA	114	U	C2-N1-C1'	5.45	124.24	117.70
31	BA	805	G	C6-C5-N7	-5.45	127.13	130.40
31	BA	976	C	N3-C2-O2	-5.45	118.08	121.90
31	DA	594	U	C2-N3-C4	-5.45	123.73	127.00
31	DA	2318	G	C4-N9-C1'	5.45	133.59	126.50
31	DA	2544	G	C6-C5-N7	-5.45	127.13	130.40
31	DA	2030	A	N1-C6-N6	5.45	121.87	118.60
31	BA	2422	A	N9-C4-C5	5.45	107.98	105.80
31	DA	600	G	C2-N3-C4	-5.45	109.18	111.90
51	DZ	110	GLY	N-CA-C	-5.45	99.48	113.10
31	BA	1020	A	C8-N9-C4	-5.45	103.62	105.80
31	DA	2619	C	C5-C6-N1	-5.45	118.28	121.00
31	DA	2244	U	C5-C6-N1	-5.44	119.98	122.70
31	DA	2595	G	C8-N9-C4	5.44	108.58	106.40
31	BA	512	G	O4'-C1'-N9	5.44	112.55	108.20
31	BA	669	G	C6-C5-N7	5.44	133.66	130.40
31	BA	1204	A	C1'-O4'-C4'	-5.44	105.55	109.90
31	BA	1970	A	N1-C6-N6	5.44	121.86	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	330	A	C8-N9-C4	5.44	107.98	105.80
31	DA	1371	G	N1-C6-O6	5.44	123.16	119.90
31	DA	1682	G	C8-N9-C4	5.44	108.58	106.40
31	DA	2352	A	C2-N3-C4	-5.44	107.88	110.60
31	DA	2607	G	C6-C5-N7	-5.44	127.14	130.40
32	DB	81	G	N1-C6-O6	5.44	123.16	119.90
31	BA	789	A	N1-C6-N6	-5.44	115.34	118.60
31	BA	1207	C	N3-C2-O2	5.44	125.70	121.90
31	DA	133	C	N3-C4-C5	5.44	124.07	121.90
31	DA	762	U	C2-N1-C1'	5.43	124.22	117.70
31	BA	141	A	C4-C5-C6	5.43	119.72	117.00
31	DA	461	C	N1-C2-O2	-5.43	115.64	118.90
31	DA	2346	A	C1'-O4'-C4'	-5.43	105.55	109.90
31	BA	1336	A	C6-N1-C2	-5.43	115.34	118.60
31	BA	1755	A	N1-C6-N6	-5.43	115.34	118.60
31	DA	2463	C	N3-C4-C5	5.43	124.07	121.90
31	BA	2085	C	C5-C6-N1	-5.43	118.29	121.00
31	BA	2715	C	C2-N3-C4	-5.43	117.19	119.90
31	DA	1797	C	C5-C6-N1	-5.42	118.29	121.00
31	DA	2814	C	C5-C6-N1	-5.42	118.29	121.00
31	BA	2201	C	C5-C6-N1	-5.42	118.29	121.00
31	BA	2374	C	C5-C6-N1	-5.42	118.29	121.00
31	BA	2736	G	C4-N9-C1'	-5.42	119.45	126.50
31	BA	531	C	C5-C6-N1	-5.42	118.29	121.00
31	BA	2232	U	C5-C6-N1	-5.42	119.99	122.70
31	DA	856	C	C6-N1-C2	-5.42	118.13	120.30
31	DA	1833	U	N3-C2-O2	5.42	125.99	122.20
31	DA	1270	C	N1-C2-O2	-5.41	115.65	118.90
31	BA	527	C	N1-C2-N3	5.41	122.99	119.20
32	BB	27	C	C2-N1-C1'	5.41	124.75	118.80
31	DA	445	C	C2-N3-C4	-5.41	117.19	119.90
31	DA	2774	C	N3-C4-C5	5.41	124.06	121.90
31	BA	1614	A	C4-C5-N7	5.41	113.41	110.70
31	BA	2518	A	C8-N9-C4	-5.41	103.64	105.80
31	BA	542	C	C6-N1-C2	-5.41	118.14	120.30
31	DA	2579	C	N3-C2-O2	5.41	125.69	121.90
31	BA	2346	A	N1-C6-N6	5.41	121.84	118.60
31	DA	1674	G	C4-N9-C1'	5.41	133.53	126.50
31	BA	1674	G	N3-C4-N9	5.40	129.24	126.00
31	BA	2319	G	C8-N9-C4	-5.40	104.24	106.40
31	BA	2399	G	C6-C5-N7	-5.40	127.16	130.40
31	DA	2399	G	N3-C4-C5	-5.40	125.90	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	192	C	N1-C2-O2	-5.40	115.66	118.90
31	BA	386	G	C5-C6-O6	-5.40	125.36	128.60
34	BE	136	ARG	NE-CZ-NH1	-5.40	117.60	120.30
1	CA	1519	A	C5-C6-N6	5.40	128.02	123.70
30	B8	49	VAL	N-CA-C	-5.40	96.42	111.00
31	BA	475	U	C2-N1-C1'	5.40	124.18	117.70
31	BA	1349	A	N7-C8-N9	5.40	116.50	113.80
31	BA	2253	G	N9-C4-C5	-5.40	103.24	105.40
31	BA	529	A	C4-C5-N7	5.40	113.40	110.70
1	AA	108	G	C4-C5-N7	5.39	112.96	110.80
31	BA	577	G	C8-N9-C4	5.39	108.56	106.40
31	BA	1681	G	N3-C4-C5	5.39	131.30	128.60
31	DA	2055	C	N3-C4-C5	5.39	124.06	121.90
31	DA	2293	C	N3-C4-C5	5.39	124.06	121.90
31	BA	640	C	N3-C4-C5	-5.39	119.74	121.90
31	BA	2399	G	N3-C4-C5	-5.39	125.90	128.60
31	DA	1786	A	C8-N9-C4	-5.39	103.64	105.80
32	DB	27	C	N1-C2-O2	5.39	122.14	118.90
31	BA	2196	C	C6-N1-C2	5.39	122.46	120.30
31	DA	530	G	N3-C4-C5	5.39	131.29	128.60
31	BA	1694	C	C5-C4-N4	-5.39	116.43	120.20
31	BA	2240	C	C5-C4-N4	-5.39	116.43	120.20
31	DA	1210	A	N7-C8-N9	5.39	116.50	113.80
31	BA	1674	G	C8-N9-C4	-5.39	104.25	106.40
31	BA	2600	A	C5-N7-C8	5.39	106.59	103.90
49	BX	62	LYS	N-CA-C	5.39	125.55	111.00
31	DA	446	G	C8-N9-C4	5.38	108.55	106.40
31	DA	1340	U	C2-N3-C4	-5.38	123.77	127.00
31	BA	682	G	N3-C2-N2	5.38	123.67	119.90
31	BA	930	U	C5-C4-O4	5.38	129.13	125.90
31	DA	265	A	C6-C5-N7	-5.38	128.53	132.30
31	BA	1918	A	C8-N9-C4	5.38	107.95	105.80
31	DA	859	G	C4-N9-C1'	-5.38	119.51	126.50
31	DA	948	G	N3-C4-C5	5.38	131.29	128.60
31	DA	2455	G	N1-C6-O6	5.38	123.12	119.90
31	BA	527	C	C5-C4-N4	5.37	123.96	120.20
31	DA	584	C	N1-C2-O2	-5.37	115.67	118.90
31	DA	2485	G	N3-C4-N9	5.37	129.22	126.00
1	AA	1502	A	N1-C6-N6	5.37	121.82	118.60
31	BA	1617	C	C4-C5-C6	5.37	120.09	117.40
31	BA	2363	C	C2-N1-C1'	-5.37	112.89	118.80
31	DA	2330	G	N7-C8-N9	-5.37	110.42	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	783	A	N3-C4-N9	-5.37	123.10	127.40
31	BA	791	C	C6-N1-C2	5.37	122.45	120.30
31	BA	1694	C	C6-N1-C2	-5.37	118.15	120.30
35	DF	68	LYS	N-CA-C	5.37	125.49	111.00
31	DA	1559	G	N1-C6-O6	5.37	123.12	119.90
31	DA	2495	G	C8-N9-C4	5.37	108.55	106.40
31	BA	481	G	N3-C4-C5	-5.37	125.92	128.60
31	BA	1558	A	N1-C2-N3	5.37	131.98	129.30
31	BA	1653	G	C5-N7-C8	5.37	106.98	104.30
31	DA	444	C	C2-N3-C4	-5.37	117.22	119.90
45	DT	23	ARG	NE-CZ-NH2	-5.37	117.62	120.30
31	BA	2433	A	N1-C2-N3	5.36	131.98	129.30
31	BA	2538	C	C5-C6-N1	-5.36	118.32	121.00
31	DA	773	U	C5-C6-N1	-5.36	120.02	122.70
31	DA	1256	G	N3-C4-C5	-5.36	125.92	128.60
31	DA	1349	A	C6-C5-N7	-5.36	128.55	132.30
31	DA	1340	U	C5-C6-N1	-5.36	120.02	122.70
31	BA	1529	G	C8-N9-C1'	-5.36	120.03	127.00
48	DW	6	ILE	CB-CA-C	-5.36	100.88	111.60
31	BA	2014	A	C8-N9-C4	5.36	107.94	105.80
31	BA	2724	C	N1-C2-O2	-5.36	115.68	118.90
31	DA	1934	C	C4'-C3'-C2'	5.36	107.96	102.60
31	DA	2037	G	C6-N1-C2	-5.36	121.89	125.10
31	BA	1674	G	C4-N9-C1'	5.36	133.47	126.50
31	BA	843	G	C8-N9-C4	5.36	108.54	106.40
31	BA	2688	U	C4-C5-C6	5.36	122.91	119.70
31	DA	2686	G	C8-N9-C4	-5.36	104.26	106.40
23	D1	55	GLY	N-CA-C	-5.35	99.72	113.10
31	DA	1397	U	P-O3'-C3'	5.35	126.12	119.70
31	DA	1771	C	C2-N3-C4	-5.35	117.22	119.90
31	BA	272(C)	G	C8-N9-C4	5.35	108.54	106.40
31	BA	729	G	C5-C6-O6	-5.35	125.39	128.60
31	BA	2439	A	C5-N7-C8	-5.35	101.22	103.90
31	DA	791	C	C6-N1-C2	5.35	122.44	120.30
1	AA	43	C	C6-N1-C2	5.35	122.44	120.30
31	BA	104	U	N1-C2-O2	-5.35	119.06	122.80
31	BA	2751	G	C4-N9-C1'	5.35	133.46	126.50
29	D7	34	ARG	NE-CZ-NH1	-5.35	117.63	120.30
31	DA	856	C	C6-N1-C1'	-5.35	114.38	120.80
31	DA	1328	G	C5-C6-O6	-5.35	125.39	128.60
23	B1	55	GLY	N-CA-C	-5.35	99.73	113.10
31	BA	612	C	C6-N1-C2	5.35	122.44	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1616	A	C4-N9-C1'	5.35	135.92	126.30
31	BA	2318	G	C5-N7-C8	-5.35	101.63	104.30
31	DA	1962	C	C6-N1-C1'	-5.35	114.38	120.80
31	DA	2383	G	N1-C6-O6	-5.35	116.69	119.90
31	BA	686	G	C6-C5-N7	-5.35	127.19	130.40
31	DA	676	A	N3-C4-C5	5.35	130.54	126.80
31	DA	755	C	C6-N1-C2	5.35	122.44	120.30
31	BA	1310	G	C4-C5-N7	-5.34	108.66	110.80
31	BA	1349	A	C6-C5-N7	-5.34	128.56	132.30
31	BA	2059	A	C8-N9-C4	5.34	107.94	105.80
31	DA	2225	A	C8-N9-C4	-5.34	103.66	105.80
31	BA	2618	G	C8-N9-C4	-5.34	104.26	106.40
31	DA	452	G	C5-C6-O6	-5.34	125.39	128.60
31	DA	2736	G	C4-N9-C1'	-5.34	119.56	126.50
31	DA	1397	U	N1-C2-N3	5.34	118.10	114.90
30	D8	49	VAL	N-CA-C	-5.34	96.59	111.00
31	BA	128	C	C2-N3-C4	-5.34	117.23	119.90
32	DB	99	G	C8-N9-C4	5.34	108.53	106.40
1	CA	1442	G	C4-N9-C1'	5.33	133.44	126.50
31	DA	591	C	C4-C5-C6	5.33	120.07	117.40
31	BA	2431	U	C5-C6-N1	-5.33	120.03	122.70
31	DA	1244	G	N3-C4-C5	5.33	131.27	128.60
31	DA	2779	U	C5-C6-N1	-5.33	120.03	122.70
31	BA	2542	A	C6-C5-N7	-5.33	128.57	132.30
31	DA	2827	C	C5-C6-N1	-5.33	118.33	121.00
31	BA	1279	G	N9-C4-C5	5.33	107.53	105.40
31	BA	2031	A	C8-N9-C4	-5.33	103.67	105.80
31	DA	2607	G	C8-N9-C1'	-5.33	120.08	127.00
31	DA	580	C	N3-C2-O2	5.32	125.63	121.90
31	DA	1985	G	N1-C2-N3	5.32	127.09	123.90
31	DA	2447	G	C6-N1-C2	-5.32	121.91	125.10
31	BA	585	G	N1-C6-O6	5.32	123.09	119.90
31	BA	2048	G	N9-C4-C5	5.32	107.53	105.40
27	B5	46	CYS	N-CA-C	5.32	125.37	111.00
31	BA	272(B)	G	N1-C6-O6	-5.32	116.71	119.90
31	BA	676	A	N3-C4-N9	-5.32	123.14	127.40
45	BT	80	SER	N-CA-C	5.32	125.37	111.00
31	DA	1611	C	C5-C4-N4	-5.32	116.48	120.20
31	DA	1653	G	N3-C4-N9	5.32	129.19	126.00
31	BA	83	G	N3-C2-N2	-5.32	116.18	119.90
27	D5	46	CYS	N-CA-C	5.32	125.36	111.00
31	DA	523	C	N1-C2-O2	-5.32	115.71	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	587	C	N3-C2-O2	-5.31	118.18	121.90
31	BA	1602	U	C4-C5-C6	5.31	122.89	119.70
31	DA	1332	G	C4-C5-C6	-5.31	115.61	118.80
31	DA	1485	G	N3-C4-N9	5.31	129.19	126.00
31	DA	1762	A	N7-C8-N9	5.31	116.46	113.80
31	BA	1328	G	C5-C6-O6	-5.31	125.41	128.60
31	DA	2050	C	C5-C6-N1	-5.31	118.34	121.00
31	BA	669	G	C4-N9-C1'	-5.31	119.60	126.50
31	BA	945	A	O4'-C1'-N9	5.31	112.45	108.20
31	BA	2436	G	N9-C4-C5	5.31	107.52	105.40
31	BA	2571	C	C2-N1-C1'	5.31	124.64	118.80
31	DA	24	G	C5-C6-N1	-5.31	108.84	111.50
31	BA	389	G	C8-N9-C4	5.31	108.52	106.40
31	BA	2713	A	N3-C4-C5	5.31	130.51	126.80
41	BP	47	ASP	CB-CG-OD1	5.31	123.08	118.30
31	DA	1681	G	N1-C6-O6	5.31	123.08	119.90
31	DA	2424	C	C5-C6-N1	-5.31	118.35	121.00
31	DA	2547	U	C5-C6-N1	-5.31	120.05	122.70
31	BA	495	G	C4-C5-N7	-5.30	108.68	110.80
31	BA	1213	A	N7-C8-N9	5.30	116.45	113.80
31	BA	2700	C	C6-N1-C2	5.30	122.42	120.30
31	DA	1328	G	C6-N1-C2	-5.30	121.92	125.10
31	DA	2043	C	N3-C4-C5	5.30	124.02	121.90
31	BA	1939	U	N3-C4-C5	5.30	117.78	114.60
31	BA	2729	G	N1-C6-O6	5.30	123.08	119.90
31	DA	2841	C	N3-C4-C5	5.30	124.02	121.90
41	DP	52	GLU	N-CA-C	5.30	125.31	111.00
31	BA	949	C	C5-C6-N1	-5.30	118.35	121.00
31	BA	860	U	N3-C2-O2	-5.30	118.49	122.20
31	DA	1378	A	N1-C6-N6	-5.29	115.42	118.60
31	BA	962	G	N1-C6-O6	5.29	123.08	119.90
1	CA	495	A	N1-C6-N6	-5.29	115.42	118.60
31	BA	1674	G	C5-C6-O6	-5.29	125.42	128.60
31	BA	2383	G	C4-N9-C1'	5.29	133.38	126.50
31	DA	736	C	N1-C2-O2	-5.29	115.73	118.90
31	DA	272	G	C8-N9-C4	-5.29	104.28	106.40
31	DA	1033	U	C2-N1-C1'	5.29	124.05	117.70
31	DA	2363	C	C6-N1-C2	5.29	122.42	120.30
31	BA	1495	A	C4-C5-N7	5.29	113.34	110.70
31	DA	673	C	C6-N1-C2	5.29	122.41	120.30
31	DA	1962	C	N1-C2-O2	5.29	122.07	118.90
31	DA	2452	C	C5-C4-N4	-5.29	116.50	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2429	G	C8-N9-C4	-5.28	104.29	106.40
31	DA	2607	G	N3-C4-N9	5.28	129.17	126.00
1	AA	139	G	N1-C6-O6	5.28	123.07	119.90
31	BA	330	A	N3-C4-N9	-5.28	123.17	127.40
31	DA	791	C	C2-N3-C4	-5.28	117.26	119.90
31	BA	864	G	C2-N3-C4	5.28	114.54	111.90
31	BA	2688	U	N1-C2-N3	5.28	118.07	114.90
31	DA	864	G	C2-N3-C4	5.28	114.54	111.90
31	DA	1301	A	N1-C6-N6	5.28	121.77	118.60
1	CA	1429	C	C6-N1-C2	5.28	122.41	120.30
31	BA	2059	A	C2-N3-C4	-5.28	107.96	110.60
31	DA	2440	C	C2-N1-C1'	-5.28	112.99	118.80
31	DA	2518	A	C5-C6-N6	-5.28	119.48	123.70
41	DP	58	THR	N-CA-C	-5.28	96.75	111.00
31	BA	2475	C	C5-C6-N1	5.28	123.64	121.00
31	BA	1559	G	N3-C4-C5	5.27	131.24	128.60
31	DA	985	C	C5-C6-N1	-5.27	118.36	121.00
31	DA	1363	C	C2-N1-C1'	-5.27	113.00	118.80
31	DA	1653	G	C4-C5-C6	5.27	121.97	118.80
31	BA	1989	G	N1-C6-O6	5.27	123.06	119.90
31	BA	673	C	C6-N1-C2	5.27	122.41	120.30
31	BA	2433	A	C2-N3-C4	-5.27	107.97	110.60
31	BA	2819	G	C5-C6-O6	-5.27	125.44	128.60
31	DA	1674	G	C8-N9-C1'	-5.27	120.15	127.00
31	BA	827	U	N3-C2-O2	5.26	125.89	122.20
31	DA	1543	C	N3-C4-N4	5.26	121.69	118.00
31	DA	2477	C	N3-C4-C5	-5.26	119.79	121.90
31	DA	814	C	C6-N1-C2	5.26	122.41	120.30
31	BA	1829	A	C2-N3-C4	-5.26	107.97	110.60
31	BA	1833	U	N1-C2-O2	-5.26	119.12	122.80
31	DA	843	G	C8-N9-C4	5.26	108.50	106.40
31	BA	678	C	C2-N3-C4	-5.26	117.27	119.90
31	BA	1142(A)	A	N1-C2-N3	5.26	131.93	129.30
31	BA	2231	C	C6-N1-C2	5.26	122.40	120.30
31	BA	2612	C	C6-N1-C2	5.26	122.40	120.30
31	BA	2278	A	N9-C4-C5	5.26	107.90	105.80
31	DA	1827	C	C2-N3-C4	-5.25	117.27	119.90
31	DA	2779	U	N1-C2-N3	5.25	118.05	114.90
31	BA	587	C	N3-C2-O2	-5.25	118.22	121.90
31	BA	1496	A	C8-N9-C1'	-5.25	118.25	127.70
31	BA	2346	A	O4'-C1'-N9	5.25	112.40	108.20
31	DA	1286	A	N9-C4-C5	5.25	107.90	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1698	A	N7-C8-N9	5.25	116.43	113.80
31	DA	2329	G	C8-N9-C4	5.25	108.50	106.40
31	DA	2443	C	N3-C4-N4	5.25	121.68	118.00
31	BA	1942	C	N1-C2-O2	-5.25	115.75	118.90
31	BA	933	A	N1-C6-N6	5.25	121.75	118.60
31	DA	1797	C	C6-N1-C2	5.25	122.40	120.30
31	DA	2037	G	N1-C2-N3	5.25	127.05	123.90
31	DA	2711	A	N3-C4-C5	5.25	130.47	126.80
31	BA	518	G	N3-C4-C5	-5.25	125.98	128.60
31	BA	1678	G	N1-C6-O6	5.25	123.05	119.90
31	DA	1332	G	C6-N1-C2	5.25	128.25	125.10
31	DA	2395	C	C6-N1-C2	5.25	122.40	120.30
31	BA	1238	G	C8-N9-C4	-5.25	104.30	106.40
31	DA	843	G	N7-C8-N9	-5.24	110.48	113.10
31	DA	1343	G	C4-N9-C1'	5.24	133.31	126.50
31	DA	1662	C	N3-C4-C5	5.24	124.00	121.90
31	DA	1193	G	N1-C6-O6	5.24	123.05	119.90
31	DA	1349	A	C2-N3-C4	-5.24	107.98	110.60
1	AA	34	C	C6-N1-C2	5.24	122.39	120.30
31	BA	1698	A	C3'-C2'-C1'	-5.24	97.31	101.50
1	CA	909	A	C8-N9-C4	5.24	107.89	105.80
31	DA	192	C	N1-C2-O2	-5.24	115.76	118.90
31	BA	2085	C	C4-C5-C6	5.24	120.02	117.40
31	BA	565	C	N3-C4-C5	5.23	123.99	121.90
31	BA	2070	G	C5-C6-O6	-5.23	125.46	128.60
31	BA	2201	C	N3-C4-N4	-5.23	114.34	118.00
31	DA	1674	G	N3-C4-N9	5.23	129.14	126.00
31	DA	1682	G	N9-C4-C5	-5.23	103.31	105.40
31	BA	1338	G	C5-C6-O6	-5.23	125.46	128.60
31	BA	774	A	C3'-C2'-C1'	5.23	105.68	101.50
31	BA	2685	G	N1-C6-O6	5.23	123.04	119.90
31	BA	2258	C	N3-C2-O2	5.23	125.56	121.90
31	DA	1163	G	C8-N9-C4	5.23	108.49	106.40
31	BA	209	C	C5-C6-N1	-5.23	118.39	121.00
31	BA	2512	C	N3-C4-C5	5.23	123.99	121.90
31	DA	2065	C	C6-N1-C2	5.23	122.39	120.30
31	DA	2599	G	C5-C6-O6	5.23	131.74	128.60
31	BA	643	A	C4-C5-C6	5.23	119.61	117.00
31	BA	661	C	N3-C4-C5	5.23	123.99	121.90
31	BA	1658	C	N3-C4-C5	-5.23	119.81	121.90
31	DA	1281	G	C5-C6-O6	-5.23	125.46	128.60
31	BA	990	A	C2-N3-C4	-5.22	107.99	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2558	C	N3-C4-C5	5.22	123.99	121.90
1	CA	117	G	C6-C5-N7	-5.22	127.27	130.40
31	BA	933	A	C6-C5-N7	-5.22	128.64	132.30
31	DA	2383	G	N3-C4-C5	-5.22	125.99	128.60
31	BA	196	A	C4-C5-N7	5.22	113.31	110.70
31	BA	2318	G	C4-N9-C1'	5.22	133.29	126.50
31	BA	2607	G	C6-C5-N7	-5.22	127.27	130.40
31	DA	527	C	N3-C4-N4	-5.22	114.34	118.00
1	AA	906	G	N9-C4-C5	-5.22	103.31	105.40
31	BA	748	G	C4-C5-N7	-5.22	108.71	110.80
31	BA	1251	C	C6-N1-C2	-5.22	118.21	120.30
34	BE	47	VAL	CB-CA-C	-5.22	101.48	111.40
31	DA	2469	A	C4-C5-C6	5.22	119.61	117.00
31	BA	2252	G	C2-N3-C4	-5.22	109.29	111.90
31	DA	376	C	C2-N1-C1'	-5.22	113.06	118.80
31	DA	948	G	N3-C4-N9	-5.21	122.87	126.00
31	DA	797	C	C4-C5-C6	5.21	120.01	117.40
31	DA	2430	A	C5-N7-C8	-5.21	101.29	103.90
31	BA	1201	C	N3-C4-C5	5.21	123.98	121.90
31	BA	272	G	C8-N9-C4	-5.21	104.32	106.40
31	DA	1698	A	C3'-C2'-C1'	-5.21	97.33	101.50
31	DA	1819	A	N1-C2-N3	5.21	131.90	129.30
31	DA	2676	C	C5-C6-N1	-5.21	118.40	121.00
31	DA	397	G	C2-N3-C4	-5.21	109.30	111.90
31	DA	529	A	N9-C4-C5	-5.21	103.72	105.80
31	DA	2572	A	C8-N9-C4	5.21	107.88	105.80
31	BA	530	G	C2-N3-C4	-5.20	109.30	111.90
31	DA	2383	G	C4-N9-C1'	5.20	133.26	126.50
31	BA	2024	G	C5-N7-C8	5.20	106.90	104.30
31	BA	2070	G	N9-C4-C5	-5.20	103.32	105.40
31	BA	2254	C	N1-C2-O2	-5.20	115.78	118.90
31	DA	205	G	N3-C2-N2	5.20	123.54	119.90
31	DA	2399	G	C8-N9-C1'	-5.20	120.24	127.00
31	BA	2712	U	N3-C4-O4	-5.20	115.76	119.40
31	BA	2828	C	C6-N1-C2	5.20	122.38	120.30
41	BP	29	LYS	CD-CE-NZ	5.20	123.66	111.70
31	BA	185	U	C2-N3-C4	-5.20	123.88	127.00
31	BA	1660	C	N3-C4-C5	5.20	123.98	121.90
31	BA	2258	C	N3-C4-N4	5.20	121.64	118.00
31	DA	1349	A	C4-C5-N7	5.20	113.30	110.70
31	BA	678	C	N3-C4-C5	5.20	123.98	121.90
49	BX	75	ASP	N-CA-C	-5.20	96.97	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	786	C	C5-C6-N1	-5.20	118.40	121.00
35	DF	83	PHE	N-CA-C	5.19	125.02	111.00
31	BA	23	G	C8-N9-C4	5.19	108.48	106.40
31	BA	651	G	C4-N9-C1'	5.19	133.25	126.50
1	CA	1524	C	N1-C2-O2	-5.19	115.78	118.90
31	DA	179	G	N7-C8-N9	-5.19	110.50	113.10
31	DA	2612	C	C6-N1-C2	5.19	122.38	120.30
31	BA	1762	A	N7-C8-N9	5.19	116.39	113.80
31	DA	292	C	N3-C4-C5	5.19	123.97	121.90
31	DA	1317	A	C6-N1-C2	-5.19	115.49	118.60
31	DA	1960	A	C8-N9-C4	5.19	107.88	105.80
31	BA	1131	G	N3-C2-N2	5.19	123.53	119.90
31	BA	2672	G	N1-C6-O6	5.19	123.01	119.90
31	BA	650	C	C6-N1-C2	-5.18	118.23	120.30
31	BA	1204	A	O4'-C1'-N9	5.18	112.35	108.20
31	BA	1614	A	C6-C5-N7	-5.18	128.67	132.30
41	BP	39	LYS	CD-CE-NZ	-5.18	99.78	111.70
31	DA	621	A	C5-C6-N1	-5.18	115.11	117.70
31	DA	2512	C	C2-N3-C4	-5.18	117.31	119.90
31	DA	1573	G	N7-C8-N9	-5.18	110.51	113.10
31	DA	1983	C	N1-C2-O2	-5.18	115.79	118.90
1	CA	1432	G	C8-N9-C4	-5.18	104.33	106.40
31	DA	564	C	N1-C2-O2	-5.18	115.79	118.90
31	DA	730	C	C6-N1-C2	5.18	122.37	120.30
31	DA	1794	U	N1-C2-O2	5.18	126.42	122.80
31	DA	754	C	C2-N3-C4	-5.18	117.31	119.90
31	DA	1574	C	C6-N1-C2	5.18	122.37	120.30
31	DA	2469	A	N1-C2-N3	5.18	131.89	129.30
31	BA	1678	G	C8-N9-C1'	-5.17	120.27	127.00
31	BA	2607	G	C4-N9-C1'	5.17	133.23	126.50
31	DA	1658	C	N1-C2-O2	-5.17	115.80	118.90
1	CA	894	G	C5-C6-O6	-5.17	125.50	128.60
31	DA	192	C	N3-C2-O2	5.17	125.52	121.90
31	DA	2045	C	C6-N1-C2	5.17	122.37	120.30
31	DA	2087	G	N1-C6-O6	5.17	123.00	119.90
31	BA	38	A	C8-N9-C4	-5.17	103.73	105.80
31	BA	2771	C	N3-C4-N4	-5.17	114.38	118.00
31	DA	1790	C	C2-N1-C1'	-5.17	113.11	118.80
31	BA	774	A	N3-C4-C5	5.17	130.42	126.80
31	BA	669	G	C5-C6-O6	5.17	131.70	128.60
31	DA	2685	G	C5-C6-N1	-5.17	108.92	111.50
31	BA	316	C	C6-N1-C2	5.16	122.36	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2469	A	C8-N9-C4	-5.16	103.73	105.80
31	DA	1617	C	N3-C2-O2	5.16	125.51	121.90
31	DA	2443	C	C5-C4-N4	-5.16	116.59	120.20
31	BA	1204	A	C8-N9-C1'	-5.16	118.41	127.70
31	BA	1210	A	N7-C8-N9	5.16	116.38	113.80
31	DA	2475	C	C5-C4-N4	-5.16	116.59	120.20
31	BA	814	C	C5-C6-N1	-5.16	118.42	121.00
31	BA	2503	A	C2-N3-C4	5.16	113.18	110.60
31	BA	1782	C	C2-N3-C4	-5.16	117.32	119.90
31	BA	2027	G	N7-C8-N9	5.16	115.68	113.10
31	DA	555	U	C2-N1-C1'	-5.16	111.51	117.70
31	DA	1204	A	C8-N9-C1'	-5.16	118.42	127.70
1	AA	569	C	N3-C2-O2	-5.15	118.29	121.90
31	DA	569	U	C6-N1-C2	5.15	124.09	121.00
31	DA	671	C	C4-C5-C6	5.15	119.98	117.40
31	BA	2409	G	N3-C4-N9	5.15	129.09	126.00
31	DA	1821	A	C8-N9-C4	5.15	107.86	105.80
31	DA	2713	A	C6-C5-N7	-5.15	128.69	132.30
1	AA	123	C	C5-C6-N1	-5.15	118.42	121.00
31	DA	486	C	N3-C2-O2	5.15	125.50	121.90
31	BA	1238	G	N9-C4-C5	5.15	107.46	105.40
31	DA	1333	C	C6-N1-C2	5.15	122.36	120.30
1	AA	1432	G	C5-C6-N1	-5.15	108.93	111.50
31	BA	737	C	C2-N3-C4	-5.14	117.33	119.90
31	BA	1241	A	C6-C5-N7	-5.14	128.70	132.30
31	BA	1659	U	N1-C2-O2	-5.14	119.20	122.80
31	BA	266	G	N1-C6-O6	5.14	122.99	119.90
1	CA	897	C	C5-C6-N1	-5.14	118.43	121.00
31	DA	484	C	C6-N1-C2	5.14	122.36	120.30
31	BA	2499	C	N3-C4-N4	5.14	121.60	118.00
31	BA	683	C	C2-N3-C4	-5.14	117.33	119.90
31	DA	107	C	C5-C6-N1	-5.14	118.43	121.00
31	DA	1780	A	C5-C6-N1	-5.14	115.13	117.70
31	BA	1253	A	C2-N3-C4	5.14	113.17	110.60
31	DA	1992	G	N1-C6-O6	-5.14	116.82	119.90
31	BA	2672	G	N3-C4-N9	5.14	129.08	126.00
31	DA	847	U	N1-C2-N3	5.13	117.98	114.90
31	BA	272(B)	G	C4-C5-N7	-5.13	108.75	110.80
31	BA	587	C	C3'-C2'-C1'	5.13	105.61	101.50
31	DA	1792	G	C8-N9-C4	5.13	108.45	106.40
31	DA	2503	A	C2-N3-C4	5.13	113.17	110.60
30	D8	44	LYS	CD-CE-NZ	5.13	123.50	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	474	G	P-O3'-C3'	5.13	125.86	119.70
31	DA	1543	C	C6-N1-C2	-5.13	118.25	120.30
1	AA	1524	C	N3-C2-O2	5.13	125.49	121.90
31	BA	2286	A	C8-N9-C4	-5.13	103.75	105.80
31	BA	2481	G	C8-N9-C4	5.13	108.45	106.40
31	DA	179	G	N1-C6-O6	5.13	122.98	119.90
31	DA	2048	G	C8-N9-C4	-5.13	104.35	106.40
1	AA	888	G	C8-N9-C4	5.13	108.45	106.40
31	BA	1674	G	N3-C4-C5	-5.13	126.04	128.60
31	BA	2451	A	C8-N9-C4	-5.13	103.75	105.80
31	DA	1694	C	C1'-O4'-C4'	-5.13	105.80	109.90
31	BA	1022	G	N1-C2-N3	5.12	126.97	123.90
31	BA	2030	A	N1-C6-N6	5.12	121.67	118.60
31	BA	2240	C	C6-N1-C2	5.12	122.35	120.30
31	BA	2567	G	N1-C6-O6	5.12	122.97	119.90
31	DA	2293	C	C5-C6-N1	-5.12	118.44	121.00
31	BA	133	C	C2-N3-C4	-5.12	117.34	119.90
31	BA	847	U	N1-C2-N3	5.12	117.97	114.90
31	BA	1123	C	C2-N3-C4	-5.12	117.34	119.90
1	CA	1502	A	N1-C6-N6	5.12	121.67	118.60
31	DA	1777	U	C5-C6-N1	-5.12	120.14	122.70
31	BA	737	C	C6-N1-C2	5.12	122.35	120.30
31	DA	811	U	C5-C4-O4	5.12	128.97	125.90
1	CA	1502	A	C2-N3-C4	-5.12	108.04	110.60
31	DA	739	G	N7-C8-N9	-5.12	110.54	113.10
31	DA	2067	G	C5-C6-N1	5.12	114.06	111.50
1	CA	697	U	C5-C6-N1	-5.12	120.14	122.70
31	BA	697	C	N1-C2-O2	-5.12	115.83	118.90
31	BA	1196	C	C6-N1-C2	5.12	122.35	120.30
41	BP	59	LEU	CB-CG-CD1	5.12	119.69	111.00
31	DA	1333	C	C2-N3-C4	-5.12	117.34	119.90
31	DA	1828	G	N1-C6-O6	5.12	122.97	119.90
31	DA	463	G	N1-C6-O6	-5.11	116.83	119.90
31	DA	1397	U	N3-C4-O4	-5.11	115.82	119.40
31	BA	1573	G	N1-C6-O6	5.11	122.97	119.90
31	BA	1210	A	N1-C6-N6	5.11	121.67	118.60
31	BA	186	G	C5-C6-N1	-5.11	108.95	111.50
31	BA	2267	A	C2-N3-C4	-5.11	108.05	110.60
31	BA	2609	U	C2-N1-C1'	-5.11	111.57	117.70
31	DA	679	C	N1-C2-O2	-5.11	115.84	118.90
31	DA	753	C	C6-N1-C2	5.11	122.34	120.30
31	DA	234	C	N1-C2-O2	5.11	121.96	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	800	A	N9-C4-C5	5.10	107.84	105.80
31	BA	1786	A	N1-C2-N3	5.10	131.85	129.30
31	BA	2380	C	C2-N3-C4	-5.10	117.35	119.90
31	DA	204	A	C8-N9-C4	-5.10	103.76	105.80
31	DA	1021	A	C4-C5-N7	5.10	113.25	110.70
31	DA	2518	A	N7-C8-N9	5.10	116.35	113.80
31	BA	651	G	C2-N3-C4	5.10	114.45	111.90
31	BA	1644	C	C6-N1-C2	5.10	122.34	120.30
31	DA	242	G	C8-N9-C4	5.10	108.44	106.40
31	DA	482	A	C8-N9-C4	5.10	107.84	105.80
31	DA	1314	C	C2-N1-C1'	5.10	124.41	118.80
31	DA	1819	A	C5-C6-N6	5.10	127.78	123.70
31	BA	1820	U	C6-N1-C2	5.10	124.06	121.00
31	BA	2253	G	C5-C6-O6	-5.10	125.54	128.60
31	DA	453	C	C5-C6-N1	-5.10	118.45	121.00
31	BA	187	G	C4-C5-N7	5.10	112.84	110.80
31	BA	586	A	N1-C6-N6	5.10	121.66	118.60
31	BA	2827	C	N1-C2-O2	-5.10	115.84	118.90
1	CA	1499	A	C8-N9-C4	5.10	107.84	105.80
31	DA	1204	A	C3'-C2'-C1'	-5.10	97.42	101.50
31	DA	1600	C	C2-N3-C4	-5.10	117.35	119.90
31	DA	2240	C	C6-N1-C2	5.10	122.34	120.30
31	DA	2547	U	C6-N1-C2	5.10	124.06	121.00
31	DA	1021	A	N3-C4-C5	5.10	130.37	126.80
31	DA	2563	U	C5-C4-O4	5.10	128.96	125.90
31	BA	1616	A	C2-N3-C4	-5.09	108.05	110.60
31	DA	2540	C	C6-N1-C2	5.09	122.34	120.30
31	BA	859	G	N3-C4-N9	-5.09	122.94	126.00
31	BA	745	G	C6-N1-C2	-5.09	122.05	125.10
31	DA	1308	A	C2-N3-C4	-5.09	108.05	110.60
31	DA	2085	C	C5-C6-N1	-5.09	118.45	121.00
31	DA	2680	C	C5-C6-N1	-5.09	118.45	121.00
31	DA	253	C	N3-C2-O2	5.09	125.46	121.90
31	DA	1496	A	C8-N9-C4	-5.09	103.76	105.80
31	DA	2607	G	C4-C5-C6	5.09	121.85	118.80
31	DA	808	G	N1-C6-O6	-5.09	116.85	119.90
31	BA	1656	C	C6-N1-C2	5.09	122.33	120.30
31	BA	2758	A	C8-N9-C4	5.09	107.83	105.80
31	DA	2472	G	N1-C6-O6	-5.09	116.85	119.90
31	BA	2456	C	C6-N1-C2	5.08	122.33	120.30
31	DA	2823	A	C2-N3-C4	-5.08	108.06	110.60
31	BA	1210	A	C2-N3-C4	-5.08	108.06	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1493	C	C6-N1-C1'	-5.08	114.70	120.80
31	BA	2810	A	N1-C6-N6	5.08	121.65	118.60
32	BB	81	G	N3-C2-N2	5.08	123.46	119.90
31	DA	32	C	C6-N1-C2	-5.08	118.27	120.30
31	DA	1663	C	C5-C6-N1	-5.08	118.46	121.00
31	DA	1827	C	N3-C4-C5	5.08	123.93	121.90
31	BA	2487	G	N1-C6-O6	5.08	122.95	119.90
31	BA	2569	G	N1-C6-O6	5.08	122.95	119.90
31	BA	2618	G	N9-C4-C5	5.08	107.43	105.40
31	BA	409	C	N3-C2-O2	5.08	125.46	121.90
31	BA	995	C	C6-N1-C2	-5.08	118.27	120.30
31	BA	2330	G	C5-C6-O6	-5.08	125.55	128.60
31	DA	141	A	N7-C8-N9	5.08	116.34	113.80
31	DA	995	C	N1-C2-O2	-5.08	115.85	118.90
31	BA	409	C	N3-C4-C5	5.08	123.93	121.90
31	DA	1786	A	N3-C4-C5	5.08	130.35	126.80
31	BA	1250	G	N3-C4-C5	-5.08	126.06	128.60
31	BA	2243	U	C5-C4-O4	-5.08	122.86	125.90
31	DA	36	G	N9-C4-C5	5.08	107.43	105.40
31	DA	2070	G	N1-C2-N3	5.08	126.95	123.90
31	BA	2497	A	N1-C6-N6	5.07	121.64	118.60
31	BA	2681	C	N1-C2-O2	-5.07	115.86	118.90
45	DT	80	SER	N-CA-C	5.07	124.69	111.00
31	BA	527	C	N1-C2-O2	-5.07	115.86	118.90
31	BA	843	G	N3-C4-C5	5.07	131.13	128.60
31	DA	1786	A	C5-C6-N6	-5.07	119.64	123.70
31	DA	2741	A	N9-C4-C5	-5.07	103.77	105.80
31	BA	1001	A	C8-N9-C4	5.07	107.83	105.80
30	D8	33	ASN	N-CA-C	-5.07	97.31	111.00
31	BA	859	G	C4-N9-C1'	-5.07	119.91	126.50
31	BA	2503	A	N1-C2-N3	-5.07	126.77	129.30
31	DA	2346	A	N1-C6-N6	5.07	121.64	118.60
31	BA	2360	A	C8-N9-C1'	-5.07	118.58	127.70
31	DA	1370	C	C2-N1-C1'	-5.07	113.23	118.80
31	BA	2383	G	N3-C4-C5	-5.06	126.07	128.60
31	DA	339	U	C6-N1-C2	5.06	124.04	121.00
31	BA	1158	C	C4-C5-C6	-5.06	114.87	117.40
31	BA	678	C	N3-C2-O2	5.06	125.44	121.90
31	DA	1948	G	N1-C2-N2	5.06	120.75	116.20
31	DA	2524	G	N1-C6-O6	5.06	122.94	119.90
31	BA	584	C	C6-N1-C2	5.06	122.32	120.30
31	BA	2377	A	C2-N3-C4	-5.06	108.07	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	676	A	C6-C5-N7	-5.06	128.76	132.30
31	BA	850	C	C5-C6-N1	-5.06	118.47	121.00
31	DA	2822	G	C5-C6-O6	-5.06	125.56	128.60
31	BA	732	C	N1-C2-O2	-5.05	115.87	118.90
31	DA	148	C	C5-C6-N1	-5.05	118.47	121.00
31	DA	1191	G	C5-C6-N1	5.05	114.03	111.50
31	DA	2751	G	C4-N9-C1'	5.05	133.07	126.50
31	BA	678	C	N1-C2-O2	-5.05	115.87	118.90
31	BA	2496	C	C6-N1-C2	5.05	122.32	120.30
31	DA	2422	A	N1-C6-N6	-5.05	115.57	118.60
31	BA	203	C	N1-C2-O2	-5.05	115.87	118.90
31	BA	2517	C	N3-C4-C5	5.05	123.92	121.90
31	BA	2542	A	C5-N7-C8	-5.05	101.37	103.90
1	CA	1432	G	N7-C8-N9	5.05	115.62	113.10
31	BA	2469	A	C4-C5-C6	5.05	119.53	117.00
31	BA	2542	A	C5-C6-N1	-5.05	115.17	117.70
31	DA	516	C	N3-C4-C5	5.05	123.92	121.90
31	DA	621	A	C6-C5-N7	-5.05	128.76	132.30
31	DA	1801	G	N1-C6-O6	5.05	122.93	119.90
31	DA	2058	A	N1-C2-N3	5.05	131.82	129.30
31	BA	1972	A	C5-C6-N6	-5.05	119.66	123.70
31	BA	2013	A	N1-C6-N6	5.05	121.63	118.60
33	BD	237	GLU	N-CA-C	5.05	124.63	111.00
31	DA	1654	A	C4-C5-C6	-5.05	114.48	117.00
31	DA	210	C	C4-C5-C6	5.04	119.92	117.40
31	DA	805	G	C6-C5-N7	-5.04	127.37	130.40
32	DB	71	C	C6-N1-C2	5.04	122.32	120.30
1	CA	895	G	C5-C6-O6	-5.04	125.58	128.60
31	BA	371	A	N1-C6-N6	5.04	121.62	118.60
31	BA	451	C	N1-C2-O2	-5.04	115.88	118.90
1	CA	896	C	C6-N1-C2	5.04	122.31	120.30
31	DA	1313	U	C5-C6-N1	5.04	125.22	122.70
31	BA	1332	G	N7-C8-N9	5.03	115.62	113.10
31	BA	1955	U	N1-C2-O2	-5.03	119.28	122.80
31	DA	939	G	C5-C6-O6	-5.03	125.58	128.60
31	DA	1006	C	C5-C6-N1	-5.03	118.48	121.00
31	DA	671	C	C6-N1-C2	-5.03	118.29	120.30
31	DA	2502	G	C4-C5-N7	5.03	112.81	110.80
31	BA	2617	C	C6-N1-C2	5.03	122.31	120.30
31	BA	2059	A	N9-C4-C5	-5.03	103.79	105.80
31	BA	937	U	C5-C6-N1	-5.03	120.19	122.70
31	DA	772	C	N3-C4-C5	-5.03	119.89	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2440	C	C6-N1-C2	5.03	122.31	120.30
31	BA	2508	G	N1-C6-O6	5.03	122.92	119.90
31	DA	1157	G	C8-N9-C4	-5.03	104.39	106.40
31	BA	1332	G	C4-C5-C6	-5.02	115.78	118.80
31	BA	182	A	N1-C6-N6	5.02	121.61	118.60
31	BA	1021	A	N3-C4-N9	-5.02	123.38	127.40
31	DA	630	G	C8-N9-C4	5.02	108.41	106.40
31	DA	2612	C	N3-C2-O2	5.02	125.42	121.90
31	DA	1496	A	C8-N9-C1'	-5.02	118.66	127.70
31	BA	1682	G	N9-C4-C5	-5.02	103.39	105.40
31	BA	2040	C	N3-C4-C5	5.02	123.91	121.90
31	DA	860	U	N3-C2-O2	-5.02	118.69	122.20
31	DA	1992	G	C2-N3-C4	5.02	114.41	111.90
31	BA	2399	G	C4-C5-C6	5.02	121.81	118.80
31	DA	76	C	C2-N3-C4	-5.02	117.39	119.90
31	BA	944	G	N7-C8-N9	5.02	115.61	113.10
31	DA	552	G	C5-C6-N1	5.02	114.01	111.50
31	DA	1543	C	N1-C2-O2	-5.02	115.89	118.90
31	BA	1306	C	N3-C4-C5	5.01	123.91	121.90
31	BA	1632	A	N1-C6-N6	5.01	121.61	118.60
31	BA	2271	G	C4-N9-C1'	5.01	133.02	126.50
31	DA	672	C	C6-N1-C2	5.01	122.31	120.30
31	DA	2712(A)	A	N7-C8-N9	5.01	116.31	113.80
31	BA	672	C	N1-C2-O2	-5.01	115.89	118.90
31	BA	1350	C	N3-C2-O2	5.01	125.41	121.90
31	BA	1485	G	N3-C4-N9	5.01	129.00	126.00
31	BA	1681	G	N1-C6-O6	5.01	122.91	119.90
31	BA	1951	U	N3-C4-C5	-5.01	111.59	114.60
31	BA	2374	C	C6-N1-C2	5.01	122.30	120.30
31	BA	2742	C	C2-N1-C1'	-5.01	113.29	118.80
31	DA	451	C	C5-C6-N1	-5.01	118.50	121.00
31	DA	928	G	N9-C4-C5	-5.01	103.40	105.40
31	DA	1029	A	N1-C6-N6	5.01	121.61	118.60
28	B6	10	LEU	CA-CB-CG	5.01	126.81	115.30
31	BA	376	C	N1-C2-O2	-5.01	115.90	118.90
31	DA	107	C	C6-N1-C2	5.01	122.30	120.30
31	DA	191	A	C5-N7-C8	5.01	106.40	103.90
31	DA	512	G	O4'-C1'-N9	5.01	112.20	108.20
31	DA	1250	G	N3-C4-C5	-5.00	126.10	128.60
31	DA	2027	G	N3-C4-C5	-5.00	126.10	128.60
31	DA	2569	G	C8-N9-C4	5.00	108.40	106.40
1	AA	569	C	N1-C2-O2	5.00	121.90	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1157	G	C8-N9-C1'	-5.00	120.50	127.00
31	BA	1675	C	N3-C4-C5	5.00	123.90	121.90
31	DA	1605	C	C6-N1-C2	-5.00	118.30	120.30
31	DA	2223	G	C8-N9-C4	5.00	108.40	106.40
31	DA	1261	C	C2-N1-C1'	-5.00	113.30	118.80
31	DA	1771	C	C4-C5-C6	5.00	119.90	117.40
31	DA	2010	G	C6-C5-N7	-5.00	127.40	130.40

All (42) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
31	BA	100	G	C1'
31	BA	472	A	C3'
31	BA	669	G	C1',C4',C3'
31	BA	945	A	C1'
31	BA	1300	U	C1',C4',C3'
31	BA	1379	A	C1'
31	BA	1544	A	C1'
31	BA	1609	A	C2'
31	BA	1652	A	C3'
31	BA	1694	C	C4',C3'
31	BA	1934	C	C3'
31	BA	1962	C	C1',C4'
31	BA	2286	A	C1'
31	BA	2662	A	C1'
31	BA	2796	U	C1'
31	DA	100	G	C1'
31	DA	472	A	C3'
31	DA	669	G	C1',C4',C3'
31	DA	945	A	C1'
31	DA	1300	U	C1',C4',C3'
31	DA	1379	A	C1'
31	DA	1544	A	C1'
31	DA	1609	A	C2'
31	DA	1652	A	C3'
31	DA	1694	C	C4',C3'
31	DA	1934	C	C3'
31	DA	1962	C	C1',C4'
31	DA	2286	A	C1'
31	DA	2662	A	C1'
31	DA	2796	U	C1'

All (50) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
23	B1	30	VAL	Peptide
27	B5	51	TYR	Peptide
30	B8	51	ALA	Peptide
33	BD	197	GLY	Peptide
33	BD	47	GLY	Peptide
34	BE	131	ALA	Peptide
34	BE	76	ARG	Peptide
37	BH	154	PRO	Peptide
37	BH	156	ALA	Peptide
41	BP	37	GLY	Peptide
41	BP	39	LYS	Peptide
41	BP	51	PHE	Peptide
41	BP	57	THR	Peptide
41	BP	9	ASN	Peptide
42	BQ	10	ARG	Peptide
43	BR	117	VAL	Peptide
43	BR	7	GLY	Peptide
44	BS	88	ASP	Peptide
45	BT	29	ARG	Peptide
46	BU	96	ALA	Peptide
47	BV	18	LEU	Peptide
49	BX	34	ALA	Peptide
49	BX	61	GLY	Peptide
49	BX	64	LYS	Peptide
49	BX	76	ARG	Peptide
49	BX	77	LYS	Peptide
23	D1	30	VAL	Peptide
27	D5	51	TYR	Peptide
30	D8	51	ALA	Peptide
33	DD	197	GLY	Peptide
33	DD	47	GLY	Peptide
34	DE	131	ALA	Peptide
34	DE	76	ARG	Peptide
37	DH	154	PRO	Peptide
37	DH	156	ALA	Peptide
41	DP	51	PHE	Peptide
41	DP	57	THR	Peptide
41	DP	9	ASN	Peptide
42	DQ	10	ARG	Peptide
43	DR	117	VAL	Peptide
43	DR	7	GLY	Peptide
44	DS	88	ASP	Peptide

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Mol	Chain	Res	Type	Group
45	DT	29	ARG	Peptide
46	DU	96	ALA	Peptide
47	DV	18	LEU	Peptide
49	DX	34	ALA	Peptide
49	DX	61	GLY	Peptide
49	DX	64	LYS	Peptide
49	DX	76	ARG	Peptide
49	DX	77	LYS	Peptide

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	1467	0
1	CA	32329	0	16318	1441	0
2	AB	1901	0	1951	186	0
2	CB	1901	0	1951	185	0
3	AC	1613	0	1677	120	0
3	CC	1613	0	1677	126	0
4	AD	1703	0	1763	184	0
4	CD	1703	0	1764	184	0
5	AE	1147	0	1207	99	0
5	CE	1147	0	1207	103	0
6	AF	843	0	857	92	0
6	CF	843	0	857	92	0
7	AG	1257	0	1296	72	0
7	CG	1257	0	1296	77	0
8	AH	1116	0	1177	91	0
8	CH	1116	0	1177	95	0
9	AI	1011	0	1042	99	0
9	CI	1011	0	1042	96	0
10	AJ	795	0	840	88	0
10	CJ	795	0	840	85	0
11	AK	885	0	904	59	0
11	CK	885	0	904	65	0
12	AL	971	0	1057	102	0
12	CL	971	0	1057	103	0
13	AM	921	0	976	81	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	CM	921	0	976	81	0
14	AN	492	0	530	44	0
14	CN	492	0	530	43	0
15	AO	734	0	771	49	0
15	CO	734	0	771	47	0
16	AP	701	0	720	78	0
16	CP	701	0	720	81	0
17	AQ	824	0	891	60	0
17	CQ	824	0	891	55	0
18	AR	574	0	644	61	0
18	CR	574	0	644	60	0
19	AS	630	0	652	38	0
19	CS	630	0	652	39	0
20	AT	763	0	861	84	0
20	CT	763	0	861	87	0
21	AU	209	0	221	9	0
21	CU	209	0	221	10	0
22	B0	650	0	654	55	0
22	D0	650	0	654	57	0
23	B1	693	0	764	139	0
23	D1	693	0	764	140	0
24	B2	421	0	461	118	0
24	D2	421	0	461	123	0
25	B3	468	0	523	30	0
25	D3	468	0	523	51	0
26	B4	157	0	69	17	0
26	D4	157	0	69	14	0
27	B5	459	0	480	83	0
27	D5	459	0	480	82	0
28	B6	381	0	390	85	0
28	D6	381	0	390	87	0
29	B7	419	0	467	28	0
29	D7	419	0	467	31	0
30	B8	508	0	576	137	0
30	D8	508	0	576	134	0
31	BA	58698	0	29591	2319	0
31	DA	58698	0	29590	2541	0
32	BB	2551	0	1295	128	0
32	DB	2551	0	1295	142	0
33	BD	2105	0	2182	298	0
33	DD	2105	0	2182	308	0
34	BE	1564	0	1629	206	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	DE	1564	0	1629	213	0
35	BF	1624	0	1677	165	0
35	DF	1624	0	1677	173	0
36	BG	1474	0	1534	150	0
36	DG	1474	0	1534	149	0
37	BH	1223	0	1282	149	0
37	DH	1223	0	1282	141	0
38	BI	1132	0	1218	121	0
38	DI	1132	0	1218	118	0
39	BN	1105	0	1180	181	0
39	DN	1105	0	1180	188	0
40	BO	933	0	996	74	0
40	DO	933	0	996	69	0
41	BP	1114	0	1187	259	0
41	DP	1114	0	1187	245	0
42	BQ	1080	0	1127	142	0
42	DQ	1080	0	1127	151	0
43	BR	960	0	1021	106	0
43	DR	960	0	1021	116	0
44	BS	771	0	832	138	0
44	DS	771	0	832	143	0
45	BT	1100	0	1164	188	0
45	DT	1100	0	1164	182	0
46	BU	958	0	1015	128	0
46	DU	958	0	1015	123	0
47	BV	779	0	852	219	0
47	DV	779	0	852	215	0
48	BW	896	0	953	60	0
48	DW	896	0	953	69	0
49	BX	726	0	778	173	0
49	DX	726	0	778	176	0
50	BY	776	0	870	195	0
50	DY	776	0	870	194	0
51	BZ	1404	0	1432	152	0
51	DZ	1404	0	1432	154	0
52	AA	54	0	0	0	0
52	B0	1	0	0	0	0
52	B1	1	0	0	0	0
52	B5	2	0	0	0	0
52	BA	362	0	0	0	0
52	BB	7	0	0	0	0
52	BD	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	BE	1	0	0	0	0
52	BF	1	0	0	0	0
52	BP	3	0	0	0	0
52	BQ	2	0	0	0	0
52	BR	1	0	0	0	0
52	BU	1	0	0	0	0
52	BX	1	0	0	0	0
52	CA	50	0	0	0	0
52	D0	1	0	0	0	0
52	D3	1	0	0	0	0
52	D5	1	0	0	0	0
52	D7	1	0	0	0	0
52	DA	328	0	0	0	0
52	DB	3	0	0	0	0
52	DE	1	0	0	0	0
52	DF	1	0	0	0	0
52	DP	1	0	0	0	0
52	DQ	1	0	0	0	0
52	DR	1	0	0	0	0
52	DU	1	0	0	0	0
52	DX	1	0	0	0	0
53	AD	1	0	0	0	0
53	AN	1	0	0	0	0
53	CD	1	0	0	0	0
53	CN	1	0	0	0	0
54	BA	1	0	0	0	0
54	DA	1	0	0	0	0
55	BA	51	0	67	1	0
55	DA	51	0	67	2	0
All	All	278034	0	189242	17303	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 37.

All (17303) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:81:VAL:O	42:BQ:82:ARG:HD2	1.36	1.26
42:DQ:81:VAL:O	42:DQ:82:ARG:HD2	1.37	1.22
33:BD:35:LYS:HD2	33:BD:104:TYR:CD1	1.78	1.19
50:BY:95:LYS:HD3	50:BY:100:ALA:HB1	1.21	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:28:ARG:HH11	16:AP:28:ARG:HG2	1.06	1.18
31:DA:285:C:H2'	31:DA:286:C:H5''	1.26	1.17
31:DA:102:G:H5''	31:DA:102:G:C8	1.79	1.17
51:DZ:53:ILE:HG22	51:DZ:71:VAL:HB	1.27	1.17
33:DD:35:LYS:HD2	33:DD:104:TYR:CD1	1.80	1.17
39:BN:28:THR:HG22	39:BN:106:MET:HE1	1.22	1.16
34:DE:119:ARG:HH11	34:DE:119:ARG:HG3	1.07	1.16
31:BA:102:G:C8	31:BA:102:G:H5''	1.77	1.16
34:BE:119:ARG:HG3	34:BE:119:ARG:HH11	1.06	1.16
31:DA:2206:G:H21	31:DA:2207:G:H5'	1.00	1.15
33:BD:65:ILE:HD11	33:BD:67:PHE:CE1	1.80	1.15
50:DY:95:LYS:HD3	50:DY:100:ALA:HB1	1.19	1.15
39:DN:28:THR:HG22	39:DN:106:MET:HE1	1.24	1.14
44:BS:34:HIS:HB3	44:BS:53:SER:HB3	1.29	1.14
31:DA:2206:G:N2	31:DA:2207:G:H5'	1.63	1.14
23:B1:15:ALA:HA	23:B1:46:LEU:HD21	1.26	1.14
39:BN:18:ALA:HB1	39:BN:21:LYS:HB2	1.28	1.13
50:DY:10:GLY:HA2	50:DY:27:VAL:HG13	1.31	1.13
31:BA:2317:C:C2'	31:BA:2318:G:H5'	1.78	1.13
51:BZ:53:ILE:HG22	51:BZ:71:VAL:HB	1.26	1.12
33:DD:65:ILE:HD11	33:DD:67:PHE:CE1	1.84	1.12
44:DS:34:HIS:HB3	44:DS:53:SER:HB3	1.28	1.12
31:DA:2317:C:C2'	31:DA:2318:G:H5'	1.80	1.12
39:DN:18:ALA:HB1	39:DN:21:LYS:HB2	1.32	1.12
2:AB:111:ARG:HH11	2:AB:111:ARG:HG2	0.99	1.12
46:BU:64:ARG:CZ	46:BU:64:ARG:HA	1.80	1.12
39:DN:18:ALA:HB3	39:DN:26:LEU:HD22	1.32	1.12
39:DN:42:TRP:HB3	46:DU:64:ARG:HH11	1.11	1.12
31:BA:2206:G:N2	31:BA:2207:G:H5'	1.63	1.11
50:BY:28:LYS:HB2	50:BY:37:VAL:HB	1.29	1.11
45:DT:65:LYS:HE3	45:DT:66:VAL:H	1.07	1.11
39:BN:42:TRP:HB3	46:BU:64:ARG:HH11	1.11	1.11
23:D1:47:GLN:HG2	31:DA:2230:G:H1'	1.31	1.11
35:BF:22:ALA:O	35:BF:26:ALA:HB2	1.51	1.11
27:D5:55:ARG:HD3	27:D5:56:LYS:H	1.13	1.11
31:DA:2317:C:H2'	31:DA:2318:G:H5'	1.13	1.11
23:B1:41:ARG:HG3	23:B1:41:ARG:HH11	0.94	1.10
28:D6:46:HIS:HB2	28:D6:47:THR:N	1.63	1.10
35:DF:53:THR:HG22	35:DF:55:GLY:H	1.15	1.10
31:BA:285:C:H2'	31:BA:286:C:H5''	1.27	1.10
35:DF:101:LEU:HD12	35:DF:102:PRO:HD2	1.32	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:18:GLN:HA	6:AF:21:LEU:HD23	1.33	1.10
41:DP:59:LEU:HA	41:DP:61:ARG:NH1	1.67	1.10
28:B6:46:HIS:HB2	28:B6:47:THR:N	1.65	1.10
37:BH:85:LYS:HD2	37:BH:141:VAL:HG13	1.30	1.10
23:D1:15:ALA:HA	23:D1:46:LEU:HD21	1.27	1.10
31:BA:2317:C:H2'	31:BA:2318:G:H5'	1.11	1.09
47:DV:82:ARG:HG3	47:DV:82:ARG:HH11	1.06	1.09
41:BP:16:ARG:HD3	41:BP:18:ARG:HB2	1.12	1.09
47:BV:82:ARG:HH11	47:BV:82:ARG:HG3	1.08	1.09
50:BY:10:GLY:HA2	50:BY:27:VAL:HG13	1.21	1.09
24:D2:49:LYS:HD2	24:D2:53:LEU:HD13	1.11	1.09
34:BE:73:GLU:HG3	34:BE:74:PRO:HD2	1.27	1.09
45:BT:65:LYS:HE3	45:BT:66:VAL:H	1.03	1.09
31:BA:2206:G:H21	31:BA:2207:G:H5'	1.00	1.09
2:CB:111:ARG:HH11	2:CB:111:ARG:HG2	1.00	1.09
41:DP:16:ARG:HD3	41:DP:18:ARG:HB2	1.13	1.09
46:DU:64:ARG:CZ	46:DU:64:ARG:HA	1.82	1.09
49:BX:25:LYS:HG3	49:BX:26:TYR:H	1.08	1.09
31:BA:1798:U:H5'	33:BD:259:THR:HG22	1.10	1.08
41:BP:59:LEU:HA	41:BP:61:ARG:NH1	1.67	1.08
22:D0:13:GLY:O	22:D0:14:ARG:HB2	1.51	1.08
47:DV:19:LYS:HG3	47:DV:20:LEU:H	1.15	1.08
25:D3:8:LEU:HD13	25:D3:31:LEU:HD23	1.36	1.08
37:DH:85:LYS:HD2	37:DH:141:VAL:HG13	1.35	1.08
27:B5:2:ALA:HA	31:BA:2015:A:H1'	1.35	1.07
44:BS:85:VAL:HG23	44:BS:106:ARG:HB2	1.34	1.07
50:DY:28:LYS:HB2	50:DY:37:VAL:HB	1.31	1.07
31:DA:870:A:H5''	42:DQ:7:MET:HB2	1.34	1.07
31:DA:1798:U:H5'	33:DD:259:THR:HG22	1.09	1.07
47:BV:19:LYS:HG3	47:BV:20:LEU:H	1.07	1.07
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.36	1.07
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.34	1.06
33:BD:32:SER:O	33:BD:33:LEU:HB2	1.53	1.06
47:DV:90:PRO:HG2	47:DV:91:TYR:H	1.17	1.06
49:DX:25:LYS:HG3	49:DX:26:TYR:H	1.05	1.06
4:AD:128:VAL:HG13	4:AD:129:ASN:HD22	1.20	1.06
31:BA:1696:G:H2'	31:BA:1697:G:H5''	1.38	1.06
31:DA:1654:A:OP1	43:DR:3:HIS:HB2	1.53	1.06
31:DA:1899:G:H22	31:DA:1902:C:N4	1.51	1.06
23:D1:41:ARG:HH11	23:D1:41:ARG:HG3	0.91	1.06
31:DA:1696:G:H2'	31:DA:1697:G:H5''	1.36	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:17:SER:O	23:B1:44:PRO:HD2	1.54	1.06
47:BV:19:LYS:CG	47:BV:20:LEU:H	1.68	1.06
43:DR:33:ARG:HG2	43:DR:115:GLU:HG3	1.38	1.06
6:CF:18:GLN:HA	6:CF:21:LEU:HD23	1.33	1.05
33:DD:17:THR:HG22	33:DD:205:VAL:H	0.95	1.05
34:DE:73:GLU:HG3	34:DE:74:PRO:HD2	1.31	1.05
24:B2:49:LYS:HD2	24:B2:53:LEU:HD13	1.07	1.05
31:BA:1654:A:OP1	43:BR:3:HIS:HB2	1.56	1.05
44:DS:85:VAL:HG23	44:DS:106:ARG:HB2	1.39	1.05
48:DW:4:LYS:HB2	48:DW:106:ILE:HG22	1.38	1.05
24:B2:46:GLN:HE21	24:B2:47:ASN:N	1.51	1.05
35:BF:101:LEU:HD12	35:BF:102:PRO:HD2	1.38	1.05
39:DN:3:THR:HA	39:DN:4:TYR:CE1	1.90	1.05
31:BA:102:G:H5''	31:BA:102:G:H8	0.88	1.05
47:BV:90:PRO:HG2	47:BV:91:TYR:H	1.18	1.05
39:BN:3:THR:HA	39:BN:4:TYR:CE1	1.92	1.05
49:BX:82:GLN:O	49:BX:85:PRO:HD2	1.57	1.05
31:BA:1899:G:H22	31:BA:1902:C:N4	1.55	1.04
15:CO:17:ARG:HH11	15:CO:17:ARG:HG3	1.19	1.04
31:DA:145:G:H2'	31:DA:146:G:H5''	1.39	1.04
31:BA:2287:A:N6	31:BA:2344:U:H3	1.54	1.04
33:BD:17:THR:HG22	33:BD:205:VAL:N	1.72	1.04
43:BR:33:ARG:HG2	43:BR:115:GLU:HG3	1.38	1.04
47:BV:82:ARG:HH11	47:BV:82:ARG:CG	1.71	1.04
27:D5:2:ALA:HA	31:DA:2015:A:H1'	1.38	1.04
31:DA:102:G:H5''	31:DA:102:G:H8	0.90	1.04
31:BA:870:A:H5''	42:BQ:7:MET:HB2	1.39	1.04
32:BB:74:U:H2'	32:BB:75:G:H5''	1.40	1.04
39:BN:1:MET:HB3	47:BV:20:LEU:HD22	1.39	1.04
39:BN:18:ALA:HB3	39:BN:26:LEU:HD22	1.37	1.04
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.35	1.04
35:DF:22:ALA:O	35:DF:26:ALA:HB2	1.56	1.04
33:BD:25:THR:HG21	33:BD:81:ALA:HB1	1.39	1.04
39:DN:65:LYS:HA	39:DN:65:LYS:HE2	1.40	1.04
22:B0:13:GLY:O	22:B0:14:ARG:HB2	1.53	1.03
31:BA:1592:C:C2'	31:BA:1593:G:H5''	1.86	1.03
35:BF:24:LEU:HB3	35:BF:25:PRO:HD2	1.40	1.03
39:BN:65:LYS:HE2	39:BN:65:LYS:HA	1.40	1.03
41:BP:140:ALA:HB1	25:D3:38:GLU:HG2	1.38	1.03
4:CD:128:VAL:HG13	4:CD:129:ASN:HD22	1.16	1.03
24:D2:46:GLN:HE21	24:D2:47:ASN:N	1.56	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.39	1.03
39:BN:119:ARG:HH11	39:BN:119:ARG:HG3	1.23	1.03
43:BR:4:LEU:HD13	43:BR:4:LEU:O	1.57	1.03
33:DD:17:THR:HG22	33:DD:205:VAL:N	1.72	1.03
33:DD:32:SER:O	33:DD:33:LEU:HB2	1.56	1.03
23:B1:46:LEU:H	23:B1:46:LEU:HD12	1.23	1.03
27:B5:16:ARG:HH11	27:B5:16:ARG:HG2	1.23	1.03
31:BA:2068:U:H3	31:BA:2430:A:H2	1.06	1.03
33:BD:35:LYS:NZ	33:BD:104:TYR:HB2	1.73	1.03
47:BV:85:LYS:O	47:BV:87:HIS:N	1.90	1.03
31:DA:330:A:H2	31:DA:1210:A:H2'	1.24	1.03
35:BF:46:ARG:HH11	35:BF:46:ARG:HG2	1.17	1.03
13:CM:3:ARG:HH22	36:DG:139:LEU:HD13	1.22	1.03
41:DP:85:LEU:HD23	41:DP:85:LEU:H	1.20	1.03
15:AO:17:ARG:HG3	15:AO:17:ARG:HH11	1.22	1.02
38:BI:130:TYR:HB3	38:BI:136:VAL:HG13	1.41	1.02
41:BP:141:ALA:HB3	25:D3:1:MET:SD	1.99	1.02
32:DB:74:U:H2'	32:DB:75:G:H5''	1.38	1.02
28:B6:15:GLU:HG2	28:B6:18:ARG:HE	1.20	1.02
49:BX:77:LYS:HG2	49:BX:78:LYS:HG3	1.40	1.02
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.41	1.02
47:DV:62:LEU:HD22	47:DV:98:GLU:HB2	1.40	1.02
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.41	1.02
41:BP:47:ASP:HB3	41:BP:48:PRO:O	1.60	1.02
46:BU:83:LEU:HG	46:BU:88:ILE:HG12	1.38	1.02
1:CA:626:U:H2'	1:CA:627:G:H8	1.23	1.02
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.35	1.02
33:DD:27:THR:HG21	33:DD:83:GLU:HG2	1.40	1.02
31:BA:1592:C:H2'	31:BA:1593:G:H5''	1.38	1.02
31:DA:1210:A:H8	31:DA:1210:A:H5'	1.20	1.02
35:BF:53:THR:HG22	35:BF:55:GLY:H	1.18	1.02
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.14	1.02
31:BA:145:G:H2'	31:BA:146:G:H5''	1.40	1.01
33:BD:17:THR:HG22	33:BD:205:VAL:H	0.91	1.01
31:BA:1019:U:H3	31:BA:1142(A):A:H62	1.03	1.01
28:D6:15:GLU:HG2	28:D6:18:ARG:HE	1.24	1.01
31:DA:1798:U:H5'	33:DD:259:THR:CG2	1.91	1.01
31:DA:2334:G:H21	44:DS:18:ILE:HD11	1.20	1.01
39:DN:119:ARG:HG3	39:DN:119:ARG:HH11	1.25	1.01
27:B5:55:ARG:HD3	27:B5:56:LYS:H	1.19	1.01
47:BV:19:LYS:HG3	47:BV:20:LEU:N	1.73	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:36:LYS:NZ	49:BX:38:GLU:O	1.94	1.01
50:BY:28:LYS:HE2	50:BY:30:VAL:HG22	1.43	1.01
47:DV:2:PHE:HB2	47:DV:42:GLY:HA2	1.42	1.01
1:CA:1442:G:O2'	1:CA:1442(A):G:H5''	1.61	1.01
33:DD:25:THR:HG21	33:DD:81:ALA:HB1	1.41	1.01
25:B3:8:LEU:HD13	25:B3:31:LEU:HD23	1.39	1.00
41:BP:30:THR:HG22	41:BP:31:ALA:H	1.26	1.00
29:D7:8:ASN:ND2	29:D7:11:LYS:H	1.59	1.00
35:DF:46:ARG:HH11	35:DF:46:ARG:HG2	1.19	1.00
49:DX:82:GLN:O	49:DX:85:PRO:HD2	1.61	1.00
1:AA:626:U:H2'	1:AA:627:G:H8	1.26	1.00
31:BA:676:A:H8	31:BA:2069:G:H21	1.02	1.00
31:BA:2334:G:H21	44:BS:18:ILE:HD11	1.22	1.00
34:BE:38:THR:HG22	34:BE:40:GLU:H	1.27	1.00
27:D5:16:ARG:HH11	27:D5:16:ARG:HG2	1.19	1.00
42:DQ:9:TYR:O	42:DQ:9:TYR:HD2	1.45	1.00
46:DU:83:LEU:HG	46:DU:88:ILE:HG12	1.40	1.00
42:BQ:22:LYS:HE2	42:BQ:22:LYS:HA	1.42	1.00
38:DI:130:TYR:HB3	38:DI:136:VAL:HG13	1.41	1.00
39:DN:1:MET:HB3	47:DV:20:LEU:HD22	1.39	1.00
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	1.41	1.00
23:B1:47:GLN:HG2	31:BA:2230:G:H1'	1.41	1.00
23:D1:46:LEU:H	23:D1:46:LEU:HD12	1.23	1.00
30:B8:32:LEU:O	30:B8:33:ASN:HB3	1.60	0.99
30:B8:32:LEU:HB3	30:B8:34:TRP:HB3	1.42	0.99
35:BF:18:ARG:HG2	35:BF:19:GLU:H	1.27	0.99
30:D8:32:LEU:O	30:D8:33:ASN:HB3	1.62	0.99
49:DX:76:ARG:HG2	49:DX:76:ARG:HH11	1.19	0.99
31:DA:1592:C:C2'	31:DA:1593:G:H5''	1.92	0.99
31:DA:2287:A:N6	31:DA:2344:U:H3	1.58	0.99
40:DO:10:VAL:HG21	40:DO:16:ALA:O	1.61	0.99
50:DY:28:LYS:HE2	50:DY:30:VAL:HG22	1.43	0.99
23:D1:17:SER:O	23:D1:44:PRO:HD2	1.63	0.99
23:B1:10:LYS:HD3	23:B1:14:VAL:HA	1.44	0.99
30:B8:46:ARG:HH22	41:BP:65:ARG:NH2	1.60	0.99
31:BA:1798:U:H5'	33:BD:259:THR:CG2	1.92	0.99
39:BN:47:ALA:HB2	39:BN:112:LEU:HD11	1.45	0.99
35:DF:24:LEU:HB3	35:DF:25:PRO:HD2	1.41	0.99
50:BY:96:ILE:HD12	50:BY:99:CYS:SG	2.03	0.99
30:D8:32:LEU:HB3	30:D8:34:TRP:HB3	1.45	0.98
47:DV:75:PHE:CE1	47:DV:89:GLN:HB3	1.97	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:41:ARG:HG3	23:D1:41:ARG:NH1	1.70	0.98
31:DA:1494:A:H4'	31:DA:1495:A:OP1	1.62	0.98
34:BE:36:ARG:NH2	34:BE:88:GLY:HA2	1.78	0.98
48:BW:64:MET:O	48:BW:65:LEU:HB2	1.61	0.98
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.43	0.98
50:DY:96:ILE:HD12	50:DY:99:CYS:SG	2.04	0.98
47:BV:75:PHE:CE1	47:BV:89:GLN:HB3	1.98	0.98
31:BA:1494:A:H4'	31:BA:1495:A:OP1	1.62	0.98
43:BR:118:GLU:HA	43:BR:118:GLU:OE1	1.61	0.98
33:DD:35:LYS:HB3	33:DD:63:ARG:HA	1.43	0.98
31:DA:71:A:C2	49:DX:31:HIS:HE1	1.82	0.98
34:DE:152:LYS:HG2	39:DN:78:TYR:CD2	1.99	0.98
43:BR:67:LEU:HD13	43:BR:76:VAL:HG21	1.46	0.97
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.28	0.97
35:DF:18:ARG:HG2	35:DF:19:GLU:H	1.27	0.97
45:DT:53:ARG:HH11	45:DT:53:ARG:HG3	1.26	0.97
31:BA:2681:C:H5	31:BA:2725:A:H62	0.99	0.97
43:DR:118:GLU:HA	43:DR:118:GLU:OE1	1.63	0.97
47:DV:19:LYS:CG	47:DV:20:LEU:H	1.75	0.97
31:BA:102:G:O2'	31:BA:103:A:OP2	1.81	0.97
33:BD:35:LYS:HB3	33:BD:63:ARG:HA	1.43	0.97
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.40	0.97
1:AA:1442:G:O2'	1:AA:1442(A):G:H5''	1.65	0.97
31:BA:71:A:H2	49:BX:31:HIS:HE1	1.12	0.97
31:BA:2359:C:H2'	31:BA:2360:A:H5'	1.45	0.97
31:DA:2787:C:H1'	34:DE:61:ARG:HB2	1.45	0.97
33:DD:186:HIS:CD2	33:DD:188:GLU:H	1.82	0.97
42:BQ:8:LYS:HG3	42:BQ:9:TYR:H	1.28	0.97
30:B8:46:ARG:HH22	41:BP:65:ARG:HH22	1.10	0.97
43:DR:67:LEU:HD13	43:DR:76:VAL:HG21	1.47	0.97
31:BA:154:G:H1	31:BA:172:C:N4	1.62	0.97
33:BD:235:GLY:O	33:BD:237:GLU:HG2	1.64	0.97
47:BV:15:GLU:HB3	47:BV:16:PRO:HD2	1.45	0.97
16:CP:4:ILE:HG13	16:CP:21:VAL:HG12	1.46	0.97
49:DX:77:LYS:HG2	49:DX:78:LYS:HG3	1.44	0.97
23:B1:19:GLN:HE21	31:BA:379:G:H21	1.02	0.97
23:B1:41:ARG:HG3	23:B1:41:ARG:NH1	1.74	0.97
30:B8:32:LEU:HD13	30:B8:32:LEU:H	1.27	0.97
31:BA:1210:A:H5'	31:BA:1210:A:H8	1.24	0.97
44:BS:30:ARG:HH22	44:BS:62:LYS:HD2	1.26	0.97
31:DA:2359:C:H2'	31:DA:2360:A:H5'	1.45	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:140:ALA:HB3	51:DZ:53:ILE:HG13	1.47	0.97
41:BP:64:LYS:C	41:BP:66:GLY:H	1.69	0.96
31:DA:676:A:H8	31:DA:2069:G:H21	0.98	0.96
31:DA:2475:C:H5'	31:DA:2476:A:OP2	1.65	0.96
31:BA:2523:G:H2'	31:BA:2524:G:H5''	1.44	0.96
42:BQ:140:ALA:HB3	51:BZ:53:ILE:HG13	1.47	0.96
31:DA:102:G:O2'	31:DA:103:A:OP2	1.82	0.96
33:DD:35:LYS:NZ	33:DD:104:TYR:HB2	1.78	0.96
49:DX:36:LYS:O	49:DX:36:LYS:HD2	1.65	0.96
31:BA:2475:C:H5'	31:BA:2476:A:OP2	1.65	0.96
47:BV:2:PHE:HB2	47:BV:42:GLY:HA2	1.47	0.96
31:DA:1019:U:H3	31:DA:1142(A):A:H62	1.02	0.96
36:DG:82:LEU:HB3	36:DG:87:PRO:HG3	1.47	0.96
44:DS:30:ARG:HH22	44:DS:62:LYS:HD2	1.26	0.96
41:BP:85:LEU:HD23	41:BP:85:LEU:H	1.28	0.96
31:DA:1021:A:H62	31:DA:1141:U:H3	1.13	0.96
31:DA:1592:C:H2'	31:DA:1593:G:H5''	1.48	0.96
41:DP:47:ASP:HB3	41:DP:48:PRO:O	1.65	0.96
33:BD:108:PRO:HB3	33:BD:143:HIS:HE1	1.29	0.96
31:DA:607:U:H3	31:DA:621:A:H2	1.11	0.96
45:DT:83:ILE:HG13	45:DT:84:GLN:H	1.30	0.96
23:B1:34:THR:HG23	31:BA:388:G:OP1	1.66	0.96
36:BG:82:LEU:HB3	36:BG:87:PRO:HG3	1.46	0.96
30:D8:62:LEU:HD13	31:DA:242:G:H5''	1.47	0.96
34:DE:38:THR:HG22	34:DE:40:GLU:H	1.27	0.96
31:DA:911:A:H2'	42:DQ:9:TYR:OH	1.64	0.96
31:DA:2523:G:H2'	31:DA:2524:G:H5''	1.43	0.96
35:DF:178:PRO:HB2	35:DF:201:VAL:HG11	1.47	0.96
39:BN:17:ASP:OD2	39:BN:19:GLU:HB3	1.65	0.96
30:B8:31:HIS:CG	31:BA:2419:U:O4	2.19	0.96
23:D1:34:THR:HG23	31:DA:388:G:OP1	1.66	0.96
31:DA:171:G:H2'	31:DA:172:C:O4'	1.66	0.96
34:DE:36:ARG:NH2	34:DE:88:GLY:HA2	1.80	0.95
41:BP:59:LEU:HA	41:BP:61:ARG:HH11	1.21	0.95
45:BT:17:THR:O	45:BT:18:ASP:HB3	1.66	0.95
30:D8:32:LEU:H	30:D8:32:LEU:HD13	1.27	0.95
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.28	0.95
30:D8:46:ARG:HH22	41:DP:65:ARG:NH2	1.61	0.95
16:AP:4:ILE:HG13	16:AP:21:VAL:HG12	1.46	0.95
39:DN:17:ASP:OD2	39:DN:19:GLU:HB3	1.66	0.95
31:BA:607:U:H3	31:BA:621:A:H2	1.12	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:55:ARG:HD3	27:D5:56:LYS:N	1.81	0.95
31:DA:2469:A:H2	31:DA:2481:G:H21	1.09	0.95
50:DY:27:VAL:HG12	50:DY:29:GLU:H	1.28	0.95
46:DU:87:GLY:HA3	47:DV:52:VAL:HG13	1.47	0.95
1:AA:386:C:C2'	1:AA:387:U:H5'	1.97	0.95
47:DV:15:GLU:HB3	47:DV:16:PRO:HD2	1.46	0.95
39:BN:42:TRP:HA	39:BN:48:MET:HE1	1.47	0.95
41:DP:97:PRO:O	41:DP:98:GLU:HB3	1.63	0.95
49:BX:76:ARG:HH11	49:BX:76:ARG:HG2	1.29	0.95
47:DV:69:LYS:HG3	47:DV:70:ILE:H	1.31	0.95
30:B8:32:LEU:CB	30:B8:35:GLN:H	1.80	0.94
31:DA:154:G:H1	31:DA:172:C:N4	1.63	0.94
31:DA:2681:C:H5	31:DA:2725:A:N6	1.63	0.94
49:DX:25:LYS:HG3	49:DX:26:TYR:N	1.81	0.94
41:BP:62:LEU:HD22	41:BP:62:LEU:H	1.29	0.94
44:BS:92:TYR:HD1	44:BS:93:LYS:H	0.99	0.94
47:DV:75:PHE:HE1	47:DV:89:GLN:HB3	1.31	0.94
31:DA:1300:U:H3'	31:DA:1301:A:H5''	1.49	0.94
47:DV:19:LYS:HG3	47:DV:20:LEU:N	1.81	0.94
49:DX:36:LYS:NZ	49:DX:38:GLU:O	2.00	0.94
31:BA:330:A:H2	31:BA:1210:A:H2'	1.30	0.94
31:BA:620:G:H4'	31:BA:621:A:H5''	1.48	0.94
31:BA:1822:G:H8	31:BA:1822:G:H5'	1.29	0.94
30:D8:32:LEU:HB2	30:D8:35:GLN:H	1.31	0.94
31:DA:145:G:C2'	31:DA:146:G:H5''	1.96	0.94
47:DV:72:VAL:HG13	47:DV:88:ARG:HH22	1.32	0.94
50:BY:27:VAL:HG12	50:BY:29:GLU:H	1.31	0.94
31:BA:2787:C:H1'	34:BE:61:ARG:HB2	1.47	0.94
45:BT:29:ARG:HG3	45:BT:30:VAL:HG13	1.50	0.94
48:BW:4:LYS:HB2	48:BW:106:ILE:HG22	1.49	0.94
31:DA:1822:G:H5'	31:DA:1822:G:H8	1.32	0.94
1:AA:445:G:H2'	1:AA:446:G:H8	1.30	0.94
27:B5:55:ARG:HD3	27:B5:56:LYS:N	1.81	0.94
31:BA:1300:U:H3'	31:BA:1301:A:H5''	1.50	0.94
47:BV:62:LEU:HD22	47:BV:98:GLU:HB2	1.47	0.94
36:DG:63:ILE:HA	36:DG:143:GLU:HG3	1.50	0.94
31:BA:171:G:H2'	31:BA:172:C:O4'	1.66	0.94
31:DA:2415:G:H4'	41:DP:67:MET:N	1.83	0.94
24:B2:49:LYS:HD2	24:B2:53:LEU:CD1	1.98	0.94
29:B7:8:ASN:ND2	29:B7:11:LYS:H	1.64	0.94
30:B8:62:LEU:HD13	31:BA:242:G:H5''	1.48	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:542:C:N4	31:BA:543:C:N4	2.16	0.94
47:BV:90:PRO:CG	47:BV:91:TYR:H	1.80	0.94
31:DA:587:C:H4'	31:DA:588:U:OP2	1.67	0.94
35:BF:178:PRO:HB2	35:BF:201:VAL:HG11	1.50	0.93
42:BQ:9:TYR:O	42:BQ:9:TYR:HD2	1.50	0.93
49:DX:25:LYS:CG	49:DX:26:TYR:H	1.80	0.93
30:D8:32:LEU:CB	30:D8:35:GLN:H	1.81	0.93
31:DA:1024:G:H3'	31:DA:1025:G:H5''	1.50	0.93
31:DA:1779:U:H5	31:DA:1784:A:N7	1.64	0.93
31:BA:911:A:H2'	42:BQ:9:TYR:OH	1.68	0.93
1:CA:626:U:H2'	1:CA:627:G:C8	2.03	0.93
45:BT:83:ILE:HG13	45:BT:84:GLN:H	1.31	0.93
4:AD:12:CYS:HA	4:AD:19:LEU:HD12	1.49	0.93
31:BA:1779:U:H5	31:BA:1784:A:N7	1.67	0.93
41:DP:59:LEU:HA	41:DP:61:ARG:HH11	1.23	0.93
41:DP:75:ILE:HD13	41:DP:75:ILE:H	1.31	0.93
47:DV:82:ARG:HH11	47:DV:82:ARG:CG	1.79	0.93
34:DE:111:ARG:NH1	43:DR:2:ARG:HH21	1.66	0.93
23:B1:49:VAL:HG11	31:BA:2091:U:O2'	1.68	0.93
31:BA:571:A:H5'	31:BA:2030:A:H62	1.31	0.93
39:BN:3:THR:HG22	39:BN:4:TYR:H	1.33	0.93
41:BP:115:LEU:HA	41:BP:134:ALA:HB2	1.51	0.93
1:CA:386:C:C2'	1:CA:387:U:H5'	1.98	0.93
31:BA:993:G:H5''	47:BV:75:PHE:CE2	2.03	0.93
33:BD:35:LYS:CD	33:BD:104:TYR:CD1	2.52	0.93
8:CH:102:ARG:HE	8:CH:102:ARG:H	1.16	0.93
41:DP:24:GLY:HA3	41:DP:33:ARG:HH21	1.34	0.93
41:DP:30:THR:HG22	41:DP:31:ALA:H	1.34	0.93
4:AD:8:VAL:HB	4:AD:21:LEU:HD12	1.51	0.93
23:D1:10:LYS:HD3	23:D1:14:VAL:HA	1.48	0.93
1:CA:445:G:H2'	1:CA:446:G:H8	1.31	0.93
10:CJ:29:ARG:HH22	10:CJ:84:GLN:HG2	1.31	0.93
28:D6:10:LEU:HD12	30:D8:35:GLN:HE22	1.33	0.93
30:D8:46:ARG:HH22	41:DP:65:ARG:HH22	1.12	0.93
1:AA:626:U:H2'	1:AA:627:G:C8	2.05	0.92
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.48	0.92
10:AJ:29:ARG:HH22	10:AJ:84:GLN:HG2	1.32	0.92
28:B6:15:GLU:OE2	28:B6:43:CYS:SG	2.27	0.92
41:BP:97:PRO:O	41:BP:98:GLU:HB3	1.66	0.92
42:DQ:22:LYS:HE2	42:DQ:22:LYS:HA	1.50	0.92
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.47	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:41:ILE:O	24:B2:42:GLY:C	2.06	0.92
33:BD:186:HIS:CD2	33:BD:188:GLU:H	1.87	0.92
36:BG:63:ILE:HA	36:BG:143:GLU:HG3	1.50	0.92
4:CD:12:CYS:HA	4:CD:19:LEU:HD12	1.50	0.92
24:D2:56:GLN:H	24:D2:56:GLN:NE2	1.68	0.92
31:DA:2068:U:H3	31:DA:2430:A:H2	1.08	0.92
33:DD:235:GLY:O	33:DD:237:GLU:HG2	1.68	0.92
31:BA:71:A:C2	49:BX:31:HIS:HE1	1.86	0.92
35:BF:66:PRO:O	35:BF:67:GLN:HB3	1.69	0.92
49:BX:25:LYS:CG	49:BX:26:TYR:H	1.82	0.92
49:BX:36:LYS:O	49:BX:36:LYS:HD2	1.69	0.92
31:DA:997:G:OP1	46:DU:93:LYS:HD3	1.70	0.92
31:DA:1899:G:N2	31:DA:1902:C:H41	1.65	0.92
43:DR:4:LEU:O	43:DR:4:LEU:HD13	1.69	0.92
31:BA:145:G:C2'	31:BA:146:G:H5''	2.00	0.92
39:DN:47:ALA:HB2	39:DN:112:LEU:HD11	1.52	0.92
41:DP:115:LEU:HA	41:DP:134:ALA:HB2	1.51	0.92
47:DV:72:VAL:HA	47:DV:88:ARG:HH12	1.34	0.92
44:BS:92:TYR:CD1	44:BS:93:LYS:N	2.38	0.92
49:BX:60:ARG:HE	49:BX:74:PRO:HG2	1.33	0.92
42:DQ:35:VAL:HG13	42:DQ:130:LYS:HB3	1.52	0.92
31:BA:84:A:H61	31:BA:102:G:H1'	1.34	0.92
33:BD:35:LYS:CD	33:BD:104:TYR:HD1	1.81	0.92
42:BQ:24:GLY:HA3	51:BZ:78:LYS:HB3	1.50	0.92
31:DA:71:A:H2	49:DX:31:HIS:HE1	1.07	0.92
31:BA:1169:G:H1	31:BA:1180:C:H42	1.12	0.92
31:BA:2317:C:H2'	31:BA:2318:G:C5'	1.99	0.92
41:BP:62:LEU:HD22	41:BP:62:LEU:N	1.83	0.92
50:BY:76:CYS:SG	50:BY:77:PRO:HD2	2.09	0.92
23:D1:19:GLN:HE21	31:DA:379:G:H21	1.11	0.92
31:DA:993:G:H5''	47:DV:75:PHE:CE2	2.04	0.92
35:DF:66:PRO:O	35:DF:67:GLN:HB3	1.67	0.92
47:DV:85:LYS:O	47:DV:87:HIS:N	2.01	0.92
31:BA:2020:A:O2'	31:BA:2021:C:H5'	1.70	0.92
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.09	0.92
33:DD:35:LYS:CD	33:DD:104:TYR:HD1	1.83	0.92
41:DP:64:LYS:C	41:DP:66:GLY:H	1.71	0.92
44:DS:92:TYR:CD1	44:DS:93:LYS:N	2.37	0.92
36:DG:47:LYS:HD3	36:DG:81:LYS:HD2	1.50	0.92
31:BA:286:C:C2'	31:BA:287:C:H5'	2.01	0.91
49:BX:25:LYS:HG3	49:BX:26:TYR:N	1.83	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:42:TRP:HB3	46:DU:64:ARG:NH1	1.85	0.91
47:DV:15:GLU:HB3	47:DV:16:PRO:CD	2.00	0.91
34:DE:132:HIS:CD2	34:DE:135:HIS:NE2	2.39	0.91
39:DN:24:GLY:O	39:DN:28:THR:HG23	1.69	0.91
40:BO:10:VAL:HG21	40:BO:16:ALA:O	1.71	0.91
35:DF:53:THR:HG22	35:DF:55:GLY:N	1.84	0.91
37:DH:41:MET:CE	37:DH:41:MET:HA	2.00	0.91
38:DI:72:LEU:HD12	38:DI:138:ILE:HG23	1.51	0.91
41:DP:112:LEU:HD22	41:DP:113:LYS:H	1.36	0.91
45:DT:17:THR:O	45:DT:18:ASP:HB3	1.68	0.91
47:DV:90:PRO:CG	47:DV:91:TYR:H	1.79	0.91
47:BV:72:VAL:HG13	47:BV:88:ARG:HH22	1.34	0.91
1:CA:266:G:H5''	1:CA:268:C:H41	1.35	0.91
31:DA:811:U:O2	31:DA:1250:G:H3'	1.70	0.91
34:BE:152:LYS:HG2	39:BN:78:TYR:CD2	2.05	0.91
1:CA:1030(A):G:H1'	1:CA:1031:G:H22	1.35	0.91
1:AA:250:A:H4'	1:AA:251:G:O5'	1.68	0.91
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.52	0.91
36:BG:47:LYS:HD3	36:BG:81:LYS:HD2	1.49	0.91
41:BP:24:GLY:HA3	41:BP:33:ARG:HH21	1.32	0.91
31:DA:2206:G:H21	31:DA:2207:G:C5'	1.84	0.91
46:BU:87:GLY:HA3	47:BV:52:VAL:HG13	1.50	0.91
45:DT:53:ARG:HG3	45:DT:53:ARG:NH1	1.83	0.91
1:AA:353:A:H5'	1:AA:353:A:H8	1.34	0.91
24:B2:56:GLN:H	24:B2:56:GLN:NE2	1.68	0.91
30:D8:32:LEU:C	30:D8:34:TRP:H	1.73	0.91
31:DA:2020:A:O2'	31:DA:2021:C:H5'	1.71	0.91
44:DS:92:TYR:HD1	44:DS:93:LYS:H	0.99	0.91
31:BA:529:A:H62	31:BA:2041:U:H3	1.14	0.91
41:BP:64:LYS:O	41:BP:66:GLY:N	2.03	0.91
47:BV:19:LYS:HB3	47:BV:96:ILE:O	1.71	0.91
47:BV:72:VAL:HA	47:BV:88:ARG:HH12	1.33	0.91
31:DA:2463:C:C2'	31:DA:2464:C:H5'	2.02	0.91
2:AB:87:ARG:HE	2:AB:233:SER:HB3	1.36	0.90
24:B2:26:ARG:CZ	24:B2:29:LYS:HE2	2.01	0.90
46:BU:64:ARG:HA	46:BU:64:ARG:NH2	1.86	0.90
22:D0:72:ARG:HB2	22:D0:75:LEU:HB2	1.52	0.90
48:DW:9:TYR:H	48:DW:102:HIS:HD2	1.19	0.90
31:BA:1899:G:N2	31:BA:1902:C:H41	1.69	0.90
31:BA:2394:C:OP1	41:BP:63:PRO:HD2	1.70	0.90
4:CD:8:VAL:HB	4:CD:21:LEU:HD12	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:93:ALA:HB3	33:DD:105:ILE:HG22	1.53	0.90
28:B6:43:CYS:SG	28:B6:43:CYS:O	2.29	0.90
38:BI:38:LEU:H	38:BI:38:LEU:HD12	1.36	0.90
42:BQ:23:GLY:O	42:BQ:100:GLY:HA3	1.71	0.90
47:BV:22:VAL:O	47:BV:23:GLU:HB2	1.69	0.90
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.53	0.90
31:DA:542:C:N4	31:DA:543:C:N4	2.19	0.90
31:DA:2463:C:H2'	31:DA:2464:C:H5'	1.53	0.90
47:DV:22:VAL:O	47:DV:23:GLU:HB2	1.70	0.90
28:B6:15:GLU:CD	28:B6:43:CYS:SG	2.50	0.90
23:D1:41:ARG:HH11	23:D1:41:ARG:CG	1.84	0.90
31:DA:71:A:H2	49:DX:31:HIS:CE1	1.88	0.90
41:DP:62:LEU:H	41:DP:62:LEU:HD22	1.36	0.90
8:AH:102:ARG:H	8:AH:102:ARG:HE	1.19	0.90
31:DA:286:C:C2'	31:DA:287:C:H5'	2.00	0.90
41:BP:75:ILE:H	41:BP:75:ILE:HD13	1.35	0.90
33:DD:35:LYS:CD	33:DD:104:TYR:CD1	2.54	0.90
1:AA:1030(A):G:H1'	1:AA:1031:G:H22	1.35	0.90
30:B8:32:LEU:C	30:B8:34:TRP:H	1.70	0.90
31:BA:1024:G:H3'	31:BA:1025:G:H5''	1.54	0.90
31:BA:2712:U:H5''	31:BA:2712:U:O2	1.72	0.90
41:BP:16:ARG:HD3	41:BP:18:ARG:CB	2.00	0.90
50:BY:10:GLY:HA2	50:BY:27:VAL:CG1	2.01	0.90
50:BY:17:SER:HB2	50:BY:71:LYS:HD2	1.53	0.90
31:DA:2524:G:H8	31:DA:2524:G:H5'	1.35	0.90
42:DQ:8:LYS:HG3	42:DQ:9:TYR:H	1.35	0.90
42:DQ:24:GLY:HA3	51:DZ:78:LYS:HB3	1.50	0.90
41:BP:16:ARG:CD	41:BP:18:ARG:HB2	2.01	0.90
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.07	0.90
30:D8:31:HIS:CG	31:DA:2419:U:O4	2.25	0.90
28:B6:10:LEU:HD12	30:B8:35:GLN:HE22	1.35	0.90
31:BA:1697:G:H5'	31:BA:1697:G:H8	1.36	0.90
33:BD:35:LYS:CE	33:BD:104:TYR:HB2	2.02	0.90
37:BH:41:MET:HA	37:BH:41:MET:CE	1.99	0.90
31:DA:1652:A:H2'	31:DA:1653:G:H5'	1.53	0.90
32:BB:20:C:H2'	32:BB:21:G:H5'	1.54	0.89
2:CB:87:ARG:HE	2:CB:233:SER:HB3	1.37	0.89
23:D1:10:LYS:HB2	23:D1:14:VAL:H	1.34	0.89
2:AB:111:ARG:HG2	2:AB:111:ARG:NH1	1.79	0.89
31:BA:1658:C:OP1	34:BE:132:HIS:CE1	2.24	0.89
33:BD:27:THR:HG21	33:BD:83:GLU:HG2	1.50	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1430:C:H2'	31:DA:1431:U:C6	2.08	0.89
31:DA:1771:C:HO2'	31:DA:1786:A:H8	0.97	0.89
31:DA:1821:A:H2'	31:DA:1822:G:H5''	1.55	0.89
46:DU:64:ARG:HA	46:DU:64:ARG:NH2	1.87	0.89
49:DX:60:ARG:HE	49:DX:74:PRO:HG2	1.36	0.89
27:B5:40:LYS:HD3	27:B5:46:CYS:HB3	1.53	0.89
31:BA:875:G:H4'	51:BZ:170:THR:HG21	1.54	0.89
41:DP:64:LYS:O	41:DP:66:GLY:N	2.05	0.89
44:DS:34:HIS:HB3	44:DS:53:SER:CB	2.02	0.89
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.54	0.89
34:BE:132:HIS:CD2	34:BE:135:HIS:NE2	2.40	0.89
31:DA:875:G:H4'	51:DZ:170:THR:HG21	1.52	0.89
33:DD:186:HIS:HD2	33:DD:188:GLU:H	1.15	0.89
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.73	0.89
31:BA:1379:A:O2'	31:BA:1380:G:OP1	1.90	0.89
31:BA:2307:G:N2	31:BA:2308:G:H5'	1.87	0.89
31:BA:2415:G:H4'	41:BP:67:MET:N	1.87	0.89
45:BT:65:LYS:HE3	45:BT:66:VAL:N	1.87	0.89
49:BX:72:LYS:HG3	49:BX:73:ARG:H	1.38	0.89
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.73	0.89
31:DA:620:G:H4'	31:DA:621:A:H5''	1.52	0.89
31:DA:786:C:C2'	31:DA:787:U:H5'	2.02	0.89
23:B1:10:LYS:HB2	23:B1:14:VAL:H	1.34	0.89
31:BA:1652:A:H2'	31:BA:1653:G:H5'	1.52	0.89
35:BF:53:THR:HG22	35:BF:55:GLY:N	1.87	0.89
41:DP:16:ARG:HD3	41:DP:18:ARG:CB	2.02	0.89
34:BE:119:ARG:HG3	34:BE:119:ARG:NH1	1.86	0.89
31:DA:1169:G:H1	31:DA:1180:C:H42	1.11	0.89
31:DA:2688:U:H5	31:DA:2720:U:OP2	1.56	0.89
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.54	0.89
41:BP:120:ALA:HB1	41:BP:138:LEU:HB3	1.55	0.89
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.36	0.89
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.55	0.89
31:DA:529:A:H62	31:DA:2041:U:H3	1.13	0.89
34:DE:116:VAL:O	34:DE:117:MET:HB3	1.71	0.89
1:AA:266:G:H5''	1:AA:268:C:H41	1.35	0.89
31:BA:1464:C:HO2'	31:BA:1528:A:H8	0.90	0.89
31:BA:2206:G:H21	31:BA:2207:G:C5'	1.83	0.89
41:BP:21:ARG:HG2	41:BP:21:ARG:O	1.71	0.89
47:BV:69:LYS:HG3	47:BV:70:ILE:H	1.36	0.89
31:DA:796:C:H2'	31:DA:797:C:C6	2.08	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:44:G:H5''	32:DB:45:A:OP1	1.73	0.89
43:DR:10:LEU:HB3	43:DR:17:ARG:NE	1.87	0.89
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.55	0.88
23:B1:13:ILE:HG12	23:B1:14:VAL:N	1.88	0.88
30:B8:32:LEU:HB2	30:B8:35:GLN:H	1.35	0.88
31:BA:811:U:O2	31:BA:1250:G:H3'	1.71	0.88
31:BA:1430:C:H2'	31:BA:1431:U:C6	2.08	0.88
39:BN:42:TRP:HB3	46:BU:64:ARG:NH1	1.86	0.88
50:BY:96:ILE:HG13	50:BY:99:CYS:O	1.72	0.88
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.37	0.88
28:D6:43:CYS:O	28:D6:43:CYS:SG	2.30	0.88
31:BA:786:C:C2'	31:BA:787:U:H5'	2.03	0.88
23:D1:13:ILE:HG12	23:D1:14:VAL:N	1.87	0.88
23:D1:47:GLN:HB2	31:DA:397:G:H5''	1.55	0.88
39:DN:16:ILE:HD11	39:DN:26:LEU:HD11	1.54	0.88
1:AA:1432:G:OP1	45:BT:107:ASP:HB2	1.73	0.88
24:D2:26:ARG:CZ	24:D2:29:LYS:HE2	2.02	0.88
31:DA:669:G:H4'	31:DA:670:A:OP2	1.71	0.88
50:DY:76:CYS:SG	50:DY:77:PRO:HD2	2.13	0.88
31:BA:2524:G:H8	31:BA:2524:G:H5'	1.34	0.88
33:BD:108:PRO:HB3	33:BD:143:HIS:CE1	2.07	0.88
1:CA:386:C:H2'	1:CA:387:U:H5'	1.55	0.88
29:D7:8:ASN:HD22	29:D7:8:ASN:C	1.76	0.88
33:DD:35:LYS:HD3	33:DD:63:ARG:HB3	1.55	0.88
45:DT:3:ARG:HB2	45:DT:6:LEU:HB3	1.56	0.88
51:DZ:7:ALA:HB3	51:DZ:61:LEU:HD23	1.55	0.88
37:BH:41:MET:HA	37:BH:41:MET:HE2	1.53	0.88
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.55	0.88
31:DA:84:A:H61	31:DA:102:G:H1'	1.36	0.88
31:BA:1697:G:H5'	31:BA:1697:G:C8	2.09	0.88
38:BI:1:MET:HG3	38:BI:23:PRO:HA	1.56	0.88
49:BX:72:LYS:HG3	49:BX:74:PRO:HD3	1.54	0.88
50:BY:8:LYS:HZ1	50:BY:73:ARG:HA	1.38	0.88
31:DA:751:A:H5'	48:DW:90:ARG:HA	1.54	0.88
32:DB:20:C:H2'	32:DB:21:G:H5'	1.53	0.88
38:DI:38:LEU:HD12	38:DI:38:LEU:H	1.38	0.88
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.54	0.88
28:B6:9:LEU:HD22	28:B6:10:LEU:H	1.38	0.88
31:BA:1882:C:H5'	31:BA:1883:G:OP2	1.73	0.88
45:BT:53:ARG:HG3	45:BT:53:ARG:HH11	1.38	0.88
47:BV:15:GLU:HB3	47:BV:16:PRO:CD	2.01	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:75:ILE:HD11	50:BY:79:CYS:CA	2.04	0.88
31:DA:271(L):U:H4'	31:DA:271(M):G:C5	2.08	0.88
31:DA:285:C:C2'	31:DA:286:C:H5''	2.04	0.88
31:DA:2523:G:C2'	31:DA:2524:G:H5''	2.02	0.88
38:DI:1:MET:HG3	38:DI:23:PRO:HA	1.56	0.88
40:DO:115:VAL:HG13	40:DO:121:VAL:HG21	1.56	0.88
31:BA:2036:C:H5'	31:BA:2036:C:H6	1.38	0.88
47:BV:75:PHE:HE1	47:BV:89:GLN:HB3	1.35	0.88
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.55	0.88
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.53	0.88
31:DA:1821:A:C2'	31:DA:1822:G:H5''	2.03	0.88
38:DI:133:HIS:ND1	38:DI:134:PRO:HD2	1.87	0.88
1:AA:200:G:H1	1:AA:217:C:H42	1.20	0.88
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.55	0.88
31:BA:271(L):U:H4'	31:BA:271(M):G:C5	2.09	0.88
19:CS:40:ILE:HD13	19:CS:62:ILE:HD11	1.54	0.88
31:DA:1022:G:H22	31:DA:1142(A):A:H2	1.21	0.88
33:BD:63:ARG:HH11	33:BD:63:ARG:HG3	1.39	0.88
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.74	0.88
31:DA:1006:C:H1'	39:DN:106:MET:HE3	1.53	0.88
31:DA:1278:A:OP1	43:DR:36:THR:HG22	1.74	0.88
34:DE:119:ARG:HG3	34:DE:119:ARG:NH1	1.87	0.88
50:DY:75:ILE:HD11	50:DY:79:CYS:C	1.93	0.88
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.74	0.87
31:BA:2523:G:C2'	31:BA:2524:G:H5''	2.04	0.87
31:BA:2850:A:OP2	31:BA:2866:U:H5	1.57	0.87
1:CA:954:G:H21	1:CA:1227:A:H62	1.22	0.87
24:D2:41:ILE:O	24:D2:42:GLY:C	2.12	0.87
31:DA:542:C:C4	31:DA:543:C:N4	2.42	0.87
31:DA:2850:A:OP2	31:DA:2866:U:H5	1.55	0.87
46:DU:55:ARG:HA	46:DU:58:ARG:HD2	1.55	0.87
50:DY:96:ILE:HG21	50:DY:99:CYS:SG	2.14	0.87
51:DZ:101:PRO:O	51:DZ:102:LEU:HD23	1.74	0.87
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.37	0.87
42:BQ:8:LYS:CG	42:BQ:9:TYR:H	1.87	0.87
1:CA:735:C:H2'	1:CA:736:C:H6	1.40	0.87
31:DA:1697:G:C8	31:DA:1697:G:H5'	2.08	0.87
31:DA:1697:G:H5'	31:DA:1697:G:H8	1.36	0.87
41:DP:21:ARG:HG2	41:DP:21:ARG:O	1.73	0.87
1:AA:1256:A:H61	1:AA:1278:U:H1'	1.38	0.87
43:BR:10:LEU:HB3	43:BR:17:ARG:NE	1.90	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:34:HIS:HB3	44:BS:53:SER:CB	2.03	0.87
28:D6:15:GLU:OE2	28:D6:41:PRO:HG3	1.74	0.87
30:D8:25:MET:HB2	41:DP:62:LEU:HD23	1.55	0.87
41:DP:120:ALA:HB1	41:DP:138:LEU:HB3	1.55	0.87
28:B6:46:HIS:CB	28:B6:47:THR:N	2.36	0.87
39:BN:18:ALA:HB1	39:BN:21:LYS:CB	2.05	0.87
39:DN:42:TRP:HA	39:DN:48:MET:HE1	1.55	0.87
45:DT:29:ARG:HG3	45:DT:30:VAL:HG13	1.55	0.87
28:B6:28:ARG:HA	28:B6:32:ASN:HD22	1.37	0.87
31:BA:1021:A:H62	31:BA:1141:U:H3	1.14	0.87
39:BN:24:GLY:O	39:BN:28:THR:HG23	1.74	0.87
45:BT:3:ARG:HB2	45:BT:6:LEU:HB3	1.56	0.87
31:DA:1379:A:O2'	31:DA:1380:G:OP1	1.92	0.87
31:BA:542:C:C4	31:BA:543:C:N4	2.42	0.87
31:BA:1821:A:H2'	31:BA:1822:G:H5''	1.57	0.87
1:CA:624:C:H4'	16:CP:10:GLY:HA2	1.55	0.87
31:DA:2476:A:N3	31:DA:2477:C:H5''	1.90	0.87
33:DD:35:LYS:CE	33:DD:104:TYR:HB2	2.04	0.87
50:DY:45:VAL:HG13	50:DY:62:GLU:HB2	1.55	0.87
10:AJ:51:ARG:HE	10:AJ:61:GLU:HB2	1.40	0.87
31:BA:146:G:H5'	31:BA:146:G:H8	1.39	0.87
30:B8:6:THR:HG22	30:B8:63:PRO:HD3	1.55	0.87
31:BA:1899:G:H22	31:BA:1902:C:H41	0.91	0.87
38:BI:72:LEU:HD12	38:BI:138:ILE:HG23	1.54	0.87
43:BR:11:ASN:OD1	43:BR:12:ARG:N	2.08	0.87
31:DA:146:G:H8	31:DA:146:G:H5'	1.37	0.87
1:AA:445:G:H2'	1:AA:446:G:C8	2.10	0.87
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.39	0.87
33:BD:35:LYS:HE3	33:BD:64:ILE:C	1.96	0.87
49:DX:63:LYS:HE3	49:DX:70:LEU:HD22	1.57	0.87
28:B6:15:GLU:OE2	28:B6:41:PRO:HG3	1.74	0.86
31:BA:2688:U:H5	31:BA:2720:U:OP2	1.58	0.86
1:CA:200:G:H1	1:CA:217:C:H42	1.22	0.86
27:D5:40:LYS:HD3	27:D5:46:CYS:HB3	1.57	0.86
29:D7:16:HIS:HB2	29:D7:44:PRO:HG2	1.54	0.86
1:AA:386:C:H2'	1:AA:387:U:H5'	1.55	0.86
29:B7:8:ASN:C	29:B7:8:ASN:HD22	1.77	0.86
31:BA:2068:U:N3	31:BA:2430:A:H2	1.72	0.86
39:BN:45:ASN:HD22	39:BN:45:ASN:H	1.22	0.86
50:BY:96:ILE:HG21	50:BY:99:CYS:SG	2.14	0.86
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:82:VAL:HG12	12:CL:83:VAL:H	1.39	0.86
48:DW:64:MET:O	48:DW:65:LEU:HB2	1.74	0.86
31:BA:587:C:C5	41:BP:33:ARG:HG2	2.09	0.86
31:BA:1821:A:C2'	31:BA:1822:G:H5''	2.05	0.86
47:BV:47:VAL:HG13	47:BV:48:GLY:H	1.39	0.86
1:CA:250:A:H4'	1:CA:251:G:O5'	1.72	0.86
1:CA:353:A:H8	1:CA:353:A:H5'	1.36	0.86
1:CA:532:A:H61	3:CC:193:TYR:HB3	1.40	0.86
50:DY:71:LYS:HB2	50:DY:71:LYS:NZ	1.88	0.86
50:DY:75:ILE:HD11	50:DY:79:CYS:CA	2.05	0.86
50:DY:96:ILE:HG13	50:DY:99:CYS:O	1.76	0.86
51:DZ:53:ILE:CG2	51:DZ:71:VAL:HB	2.05	0.86
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.75	0.86
31:BA:71:A:H2	49:BX:31:HIS:CE1	1.91	0.86
31:BA:2577:A:H5''	31:BA:2578:G:H5'	1.57	0.86
24:D2:33:MET:HG2	49:DX:11:PRO:HD2	1.57	0.86
31:DA:1882:C:H5'	31:DA:1883:G:OP2	1.76	0.86
50:DY:28:LYS:O	50:DY:38:ILE:HB	1.75	0.86
2:CB:111:ARG:HG2	2:CB:111:ARG:NH1	1.80	0.86
31:DA:2394:C:OP1	41:DP:63:PRO:HD2	1.74	0.86
33:DD:30:GLU:HG3	33:DD:63:ARG:CZ	2.05	0.86
29:B7:8:ASN:HD21	29:B7:11:LYS:H	1.24	0.86
31:BA:2463:C:C2'	31:BA:2464:C:H5'	2.06	0.86
51:BZ:101:PRO:O	51:BZ:102:LEU:HD23	1.76	0.86
31:DA:571:A:H5'	31:DA:2030:A:H62	1.39	0.86
50:DY:8:LYS:HZ1	50:DY:73:ARG:HA	1.39	0.86
51:BZ:53:ILE:CG2	51:BZ:71:VAL:HB	2.06	0.86
1:CA:975:A:H4'	1:CA:976:G:H5''	1.57	0.86
10:CJ:51:ARG:HE	10:CJ:61:GLU:HB2	1.41	0.86
31:BA:285:C:C2'	31:BA:286:C:H5''	2.05	0.86
34:BE:116:VAL:O	34:BE:117:MET:HB3	1.73	0.86
38:BI:133:HIS:ND1	38:BI:134:PRO:HD2	1.90	0.86
11:CK:22:HIS:HB3	11:CK:29:ILE:HG23	1.54	0.86
33:DD:228:PRO:HD3	33:DD:235:GLY:HA3	1.55	0.86
39:DN:40:PRO:HA	46:DU:64:ARG:HH22	1.41	0.86
45:DT:25:GLY:O	45:DT:26:ASP:HB2	1.74	0.86
49:DX:72:LYS:HG3	49:DX:73:ARG:H	1.41	0.86
49:DX:72:LYS:HG3	49:DX:74:PRO:HD3	1.56	0.86
12:AL:82:VAL:HG12	12:AL:83:VAL:H	1.41	0.86
24:B2:25:VAL:HG13	24:B2:26:ARG:HD2	1.58	0.86
31:BA:1970:A:H5'	31:BA:1972:A:H1'	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:8:PRO:HB3	33:BD:14:ARG:HB2	1.57	0.86
41:BP:47:ASP:HB3	41:BP:48:PRO:C	1.95	0.86
31:DA:2317:C:H2'	31:DA:2318:G:C5'	2.02	0.86
39:DN:45:ASN:H	39:DN:45:ASN:HD22	1.24	0.86
1:AA:975:A:H4'	1:AA:976:G:H5''	1.57	0.86
36:DG:85:GLY:O	36:DG:87:PRO:HD2	1.76	0.86
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.40	0.85
31:BA:1697:G:H8	31:BA:1697:G:C5'	1.89	0.85
39:DN:3:THR:HG22	39:DN:4:TYR:H	1.39	0.85
42:DQ:23:GLY:O	42:DQ:100:GLY:HA3	1.76	0.85
45:DT:29:ARG:HD3	45:DT:86:ILE:HG22	1.58	0.85
1:AA:954:G:H21	1:AA:1227:A:H62	1.24	0.85
33:BD:186:HIS:HD2	33:BD:188:GLU:H	1.21	0.85
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.39	0.85
31:DA:286:C:H42	31:DA:355:G:H1	1.22	0.85
31:DA:1116:C:H2'	31:DA:1117:G:H5'	1.58	0.85
31:DA:2712:U:O2	31:DA:2712:U:H5''	1.75	0.85
11:AK:22:HIS:HB3	11:AK:29:ILE:HG23	1.56	0.85
30:B8:32:LEU:HD23	30:B8:35:GLN:HA	1.58	0.85
31:BA:587:C:H4'	31:BA:588:U:OP2	1.75	0.85
23:D1:40:ARG:HD3	23:D1:41:ARG:H	1.42	0.85
31:DA:1464:C:HO2'	31:DA:1528:A:H8	0.86	0.85
31:BA:2469:A:H2	31:BA:2481:G:H21	1.18	0.85
1:CA:1065:U:H1'	1:CA:1066:C:OP2	1.75	0.85
31:DA:1448:G:H1'	31:DA:1528:A:N6	1.91	0.85
35:DF:53:THR:CG2	35:DF:55:GLY:H	1.88	0.85
36:DG:41:GLN:HG2	36:DG:155:MET:HB3	1.57	0.85
41:DP:47:ASP:HB3	41:DP:48:PRO:C	1.96	0.85
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.76	0.85
31:BA:1497:U:H5'	31:BA:1498:C:H5	1.41	0.85
31:BA:2463:C:H2'	31:BA:2464:C:H5'	1.56	0.85
41:BP:64:LYS:C	41:BP:66:GLY:N	2.28	0.85
20:CT:50:GLU:HB3	20:CT:100:ILE:HG12	1.58	0.85
24:D2:49:LYS:HD2	24:D2:53:LEU:CD1	2.03	0.85
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.76	0.85
30:B8:25:MET:HB2	41:BP:62:LEU:HD23	1.58	0.85
31:BA:1494:A:C4'	31:BA:1495:A:OP1	2.24	0.85
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.76	0.85
28:D6:46:HIS:CB	28:D6:47:THR:N	2.39	0.85
31:DA:2068:U:N3	31:DA:2430:A:H2	1.74	0.85
47:DV:47:VAL:HG13	47:DV:48:GLY:H	1.38	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:35:LYS:HD3	33:BD:63:ARG:C	1.96	0.85
37:BH:89:ILE:O	37:BH:90:LYS:HG2	1.76	0.85
31:DA:1696:G:C2'	31:DA:1697:G:H5''	2.07	0.85
44:DS:17:ARG:HA	44:DS:20:ARG:HG2	1.57	0.85
45:DT:53:ARG:HH11	45:DT:53:ARG:CG	1.90	0.85
24:B2:49:LYS:CD	24:B2:53:LEU:HD13	2.01	0.85
31:DA:2307:G:N2	31:DA:2308:G:H5'	1.91	0.85
34:DE:59:VAL:HG22	34:DE:63:LEU:HA	1.58	0.85
45:DT:65:LYS:HE3	45:DT:66:VAL:N	1.90	0.85
27:B5:4:HIS:HB3	27:B5:5:PRO:HD3	1.59	0.85
31:BA:2030:A:H5''	31:BA:2031:A:OP1	1.76	0.85
43:BR:71:GLN:HE21	43:BR:71:GLN:HA	1.42	0.85
1:CA:240:C:H2'	1:CA:241:C:H6	1.42	0.85
31:DA:102:G:H8	31:DA:102:G:C5'	1.84	0.85
31:DA:2287:A:C2	31:DA:2346:A:H2	1.95	0.85
32:DB:82:G:C2'	32:DB:83:G:H5'	2.07	0.85
50:DY:17:SER:HB2	50:DY:71:LYS:HD2	1.55	0.85
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.11	0.84
31:BA:1006:C:H1'	39:BN:106:MET:HE3	1.58	0.84
39:BN:16:ILE:HD11	39:BN:26:LEU:HD11	1.57	0.84
37:DH:44:VAL:HG12	37:DH:45:VAL:H	1.42	0.84
41:DP:62:LEU:HD22	41:DP:62:LEU:N	1.92	0.84
47:DV:18:LEU:HD22	47:DV:19:LYS:HA	1.57	0.84
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.17	0.84
41:BP:143:GLY:C	41:BP:145:PRO:HD3	1.97	0.84
30:D8:6:THR:HG22	30:D8:63:PRO:HD3	1.59	0.84
31:DA:141:A:C8	31:DA:1408:C:O2'	2.30	0.84
51:DZ:126:VAL:HG12	51:DZ:163:LEU:HA	1.59	0.84
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.41	0.84
34:BE:59:VAL:HG22	34:BE:63:LEU:HA	1.59	0.84
36:BG:41:GLN:HG2	36:BG:155:MET:HB3	1.57	0.84
50:BY:75:ILE:HD11	50:BY:79:CYS:HA	1.59	0.84
31:DA:1019:U:HO2'	31:DA:1021:A:H2	0.85	0.84
31:DA:1678:G:N2	31:DA:1989:G:H22	1.75	0.84
44:DS:34:HIS:CE1	44:DS:54:LEU:HB3	2.12	0.84
1:AA:627:G:H2'	1:AA:628:G:H8	1.41	0.84
29:B7:16:HIS:HB2	29:B7:44:PRO:HG2	1.59	0.84
31:BA:286:C:H42	31:BA:355:G:H1	1.23	0.84
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.39	0.84
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.60	0.84
23:D1:49:VAL:HG11	31:DA:2091:U:O2'	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1970:A:H5'	31:DA:1972:A:H1'	1.58	0.84
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	1.88	0.84
31:BA:2476:A:N3	31:BA:2477:C:H5''	1.93	0.84
1:CA:1502:A:H2	1:CA:1505:G:N1	1.75	0.84
43:DR:55:ALA:HB2	43:DR:79:LEU:HD13	1.57	0.84
1:CA:627:G:H2'	1:CA:628:G:H8	1.42	0.84
31:DA:65:C:H2'	31:DA:66:C:H6	1.40	0.84
31:DA:1884:A:C2'	31:DA:1885:A:H5''	2.07	0.84
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.13	0.84
20:AT:50:GLU:HB3	20:AT:100:ILE:HG12	1.59	0.84
24:B2:46:GLN:NE2	24:B2:47:ASN:N	2.25	0.84
31:BA:2681:C:H5	31:BA:2725:A:N6	1.75	0.84
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.59	0.84
31:DA:2287:A:H2	31:DA:2346:A:C2	1.94	0.84
46:DU:102:GLU:HG3	47:DV:2:PHE:CZ	2.12	0.84
49:DX:62:LYS:HB2	49:DX:69:TYR:H	1.39	0.84
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.43	0.84
24:B2:45:SER:O	24:B2:48:HIS:HB3	1.78	0.84
31:BA:154:G:H1	31:BA:172:C:H42	0.88	0.84
31:BA:671:C:H5'	31:BA:671:C:H6	1.40	0.84
31:BA:1116:C:H2'	31:BA:1117:G:H5'	1.58	0.84
44:BS:34:HIS:CE1	44:BS:54:LEU:HB3	2.13	0.84
50:BY:45:VAL:HG13	50:BY:62:GLU:HB2	1.57	0.84
24:D2:45:SER:O	24:D2:48:HIS:HB3	1.76	0.84
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.60	0.84
44:BS:17:ARG:HA	44:BS:20:ARG:HG2	1.56	0.84
31:DA:1497:U:H5'	31:DA:1498:C:H5	1.42	0.84
31:DA:1899:G:H22	31:DA:1902:C:H41	0.86	0.84
33:DD:35:LYS:HE3	33:DD:64:ILE:C	1.97	0.84
50:DY:10:GLY:HA2	50:DY:27:VAL:CG1	2.07	0.84
31:BA:1019:U:HO2'	31:BA:1021:A:H2	0.86	0.84
39:BN:40:PRO:HA	46:BU:64:ARG:HH22	1.43	0.83
24:D2:46:GLN:NE2	24:D2:47:ASN:N	2.26	0.83
41:DP:16:ARG:CD	41:DP:18:ARG:HB2	2.04	0.83
48:DW:9:TYR:H	48:DW:102:HIS:CD2	1.96	0.83
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.08	0.83
28:B6:9:LEU:HD22	28:B6:10:LEU:N	1.92	0.83
33:BD:93:ALA:HB3	33:BD:105:ILE:HG22	1.58	0.83
51:BZ:126:VAL:HG12	51:BZ:163:LEU:HA	1.59	0.83
29:D7:19:ARG:HD3	31:DA:125:G:H5''	1.61	0.83
31:DA:142:A:H8	31:DA:1595:G:H21	1.23	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1210:A:H5'	31:DA:1210:A:C8	2.11	0.83
31:DA:2393:A:H5'	41:DP:62:LEU:HB3	1.60	0.83
47:DV:19:LYS:HB3	47:DV:96:ILE:O	1.78	0.83
1:AA:748:C:H4'	1:AA:749:C:O5'	1.77	0.83
24:B2:33:MET:HG2	49:BX:11:PRO:HD2	1.59	0.83
31:BA:2393:A:H5'	41:BP:62:LEU:HB3	1.58	0.83
41:BP:58:THR:O	41:BP:61:ARG:CZ	2.27	0.83
31:DA:154:G:H1	31:DA:172:C:H42	0.89	0.83
31:BA:997:G:OP1	46:BU:93:LYS:HD3	1.77	0.83
49:BX:62:LYS:HB2	49:BX:69:TYR:H	1.42	0.83
50:BY:75:ILE:HD11	50:BY:79:CYS:C	1.97	0.83
31:DA:2334:G:N2	44:DS:18:ILE:HD11	1.94	0.83
35:DF:20:LEU:HD22	35:DF:203:GLN:HE22	1.42	0.83
47:DV:82:ARG:HG3	47:DV:82:ARG:NH1	1.88	0.83
50:DY:8:LYS:HZ1	50:DY:74:PRO:HD3	1.42	0.83
31:BA:669:G:H4'	31:BA:670:A:OP2	1.78	0.83
31:BA:1158:C:O2'	31:BA:1159:U:P	2.36	0.83
31:DA:719:C:H2'	31:DA:720:C:H6	1.43	0.83
41:DP:58:THR:O	41:DP:61:ARG:CZ	2.26	0.83
41:DP:64:LYS:C	41:DP:66:GLY:N	2.30	0.83
1:AA:735:C:H2'	1:AA:736:C:H6	1.42	0.83
1:AA:992:U:H1'	1:AA:993:G:OP2	1.78	0.83
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.61	0.83
1:CA:445:G:H2'	1:CA:446:G:C8	2.12	0.83
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.61	0.83
8:CH:58:TYR:O	8:CH:59:LEU:HD23	1.77	0.83
28:D6:16:CYS:O	28:D6:17:LYS:HB2	1.76	0.83
28:D6:28:ARG:HA	28:D6:32:ASN:HD22	1.41	0.83
31:BA:1771:C:HO2'	31:BA:1786:A:H8	0.84	0.83
35:BF:78:ILE:HD13	35:BF:78:ILE:H	1.43	0.83
37:BH:30:LYS:NZ	37:BH:81:GLU:HA	1.94	0.83
45:BT:50:ILE:HD11	45:BT:102:ILE:HD11	1.59	0.83
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.44	0.83
31:DA:84:A:N6	31:DA:102:G:H1'	1.94	0.83
31:DA:1902:C:H1'	33:DD:244:ARG:HD3	1.60	0.83
31:DA:2580:U:H5'	34:DE:131:ALA:CB	2.08	0.83
31:BA:141:A:C8	31:BA:1408:C:O2'	2.31	0.83
33:BD:222:ARG:O	33:BD:225:ALA:HB3	1.79	0.83
48:BW:9:TYR:H	48:BW:102:HIS:HD2	1.23	0.83
51:BZ:7:ALA:HB3	51:BZ:61:LEU:HD23	1.60	0.83
28:D6:15:GLU:OE2	28:D6:43:CYS:SG	2.37	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:993:G:H5''	47:DV:75:PHE:CZ	2.14	0.83
31:DA:2287:A:H62	31:DA:2344:U:H3	1.26	0.83
33:DD:8:PRO:HB3	33:DD:14:ARG:HB2	1.61	0.83
42:DQ:75:THR:HA	42:DQ:88:GLY:HA2	1.60	0.83
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.43	0.83
31:BA:1947:C:H2'	31:BA:1948:G:H5'	1.61	0.83
24:D2:30:ARG:HH11	24:D2:30:ARG:HG3	1.43	0.83
23:B1:19:GLN:NE2	31:BA:379:G:H21	1.76	0.83
33:BD:34:VAL:HG21	33:BD:103:ARG:HA	1.60	0.83
34:BE:111:ARG:NH1	43:BR:2:ARG:HH21	1.77	0.83
42:BQ:110:THR:OG1	42:BQ:113:GLN:HG3	1.79	0.83
46:DU:31:SER:O	46:DU:33:ARG:N	2.10	0.83
49:DX:76:ARG:HG2	49:DX:76:ARG:NH1	1.88	0.83
50:DY:7:VAL:HB	50:DY:8:LYS:HZ2	1.44	0.83
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.60	0.82
31:BA:1448:G:H1'	31:BA:1528:A:N6	1.94	0.82
31:BA:2287:A:H62	31:BA:2344:U:H3	1.22	0.82
33:BD:35:LYS:HD3	33:BD:63:ARG:HB3	1.59	0.82
31:DA:587:C:C5	41:DP:33:ARG:HG2	2.14	0.82
35:DF:158:THR:HG23	35:DF:160:ASN:H	1.44	0.82
37:DH:30:LYS:NZ	37:DH:81:GLU:HA	1.94	0.82
39:DN:82:LEU:H	39:DN:82:LEU:HD12	1.42	0.82
35:BF:53:THR:CG2	35:BF:55:GLY:H	1.91	0.82
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.61	0.82
23:D1:85:LEU:C	23:D1:87:PRO:HD3	1.98	0.82
31:DA:954:G:H5''	42:DQ:13:GLN:HG2	1.59	0.82
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.60	0.82
37:BH:137:ASP:O	37:BH:138:LYS:HB2	1.77	0.82
45:BT:25:GLY:O	45:BT:26:ASP:HB2	1.77	0.82
27:D5:46:CYS:SG	27:D5:47:PRO:HD2	2.18	0.82
30:D8:52:LYS:H	30:D8:54:GLU:HG2	1.43	0.82
31:DA:1403:C:H5''	31:DA:1471:A:H1'	1.59	0.82
31:DA:1494:A:C4'	31:DA:1495:A:OP1	2.26	0.82
38:DI:81:VAL:HG11	38:DI:88:ILE:HG23	1.60	0.82
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.59	0.82
30:B8:30:ARG:O	30:B8:31:HIS:C	2.18	0.82
31:BA:1678:G:N2	31:BA:1989:G:H22	1.76	0.82
39:BN:73:THR:O	39:BN:75:TYR:N	2.12	0.82
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.42	0.82
22:D0:41:ARG:H	22:D0:41:ARG:HD2	1.44	0.82
31:DA:1158:C:O2'	31:DA:1159:U:O5'	1.98	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:153:LYS:HD3	37:DH:153:LYS:H	1.42	0.82
46:DU:92:ARG:HD3	46:DU:94:ASN:HB3	1.60	0.82
31:BA:786:C:H2'	31:BA:787:U:H5'	1.62	0.82
45:BT:29:ARG:HD3	45:BT:86:ILE:HG22	1.59	0.82
1:CA:1502:A:H2	1:CA:1505:G:H1	1.26	0.82
33:DD:186:HIS:HD2	33:DD:188:GLU:N	1.77	0.82
35:DF:78:ILE:H	35:DF:78:ILE:HD13	1.43	0.82
35:BF:20:LEU:HD23	35:BF:23:ASP:OD2	1.80	0.82
42:BQ:35:VAL:HG13	42:BQ:130:LYS:HB3	1.60	0.82
43:BR:55:ALA:HB2	43:BR:79:LEU:HD13	1.59	0.82
44:BS:33:LYS:HB3	44:BS:34:HIS:CD2	2.15	0.82
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.79	0.82
33:DD:108:PRO:HB3	33:DD:143:HIS:HE1	1.42	0.82
35:DF:101:LEU:HD12	35:DF:102:PRO:CD	2.08	0.82
40:BO:115:VAL:HG13	40:BO:121:VAL:HG21	1.62	0.82
49:BX:33:LYS:O	49:BX:35:THR:N	2.13	0.82
31:DA:309:G:O3'	50:DY:18:GLY:HA2	1.80	0.82
41:DP:105:LEU:O	41:DP:106:LEU:HB2	1.79	0.82
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HD2	1.61	0.82
47:DV:66:ARG:HG2	47:DV:94:LEU:HG	1.60	0.82
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.61	0.82
31:BA:287:C:H42	31:BA:354:G:H1	1.28	0.82
31:BA:2580:U:H5'	34:BE:131:ALA:CB	2.09	0.82
31:BA:2845:G:O2'	31:BA:2846:G:H5'	1.80	0.82
46:BU:55:ARG:HA	46:BU:58:ARG:HD2	1.61	0.82
1:CA:748:C:H4'	1:CA:749:C:O5'	1.78	0.82
1:CA:992:U:H1'	1:CA:993:G:OP2	1.79	0.82
23:B1:85:LEU:C	23:B1:87:PRO:HD3	2.00	0.82
49:BX:76:ARG:HG2	49:BX:76:ARG:NH1	1.94	0.82
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.09	0.82
15:CO:17:ARG:HH11	15:CO:17:ARG:CG	1.93	0.82
25:D3:19:GLN:NE2	25:D3:52:HIS:HE1	1.78	0.82
31:DA:1697:G:H8	31:DA:1697:G:C5'	1.91	0.82
31:DA:2562:U:H1'	40:DO:23:ARG:HH11	1.45	0.82
33:DD:34:VAL:HG21	33:DD:103:ARG:HA	1.60	0.82
39:DN:18:ALA:HB1	39:DN:21:LYS:CB	2.10	0.82
1:AA:1106:G:H5''	3:AC:172:ARG:HG2	1.62	0.82
31:BA:84:A:N6	31:BA:102:G:H1'	1.95	0.82
31:BA:1696:G:C2'	31:BA:1697:G:H5''	2.10	0.82
37:BH:20:ALA:HB1	37:BH:21:PRO:HD2	1.62	0.82
50:BY:71:LYS:HB2	50:BY:71:LYS:NZ	1.93	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.15	0.82
1:CA:1201:A:H1'	1:CA:1202:G:OP2	1.80	0.82
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.42	0.82
31:DA:287:C:H42	31:DA:354:G:H1	1.28	0.82
31:DA:330:A:C2	31:DA:1210:A:H2'	2.14	0.82
31:DA:2036:C:H5'	31:DA:2036:C:H6	1.44	0.82
31:DA:2287:A:C2	31:DA:2346:A:C2	2.67	0.82
32:DB:52:A:N7	44:DS:33:LYS:HE3	1.94	0.82
1:AA:240:C:H2'	1:AA:241:C:H6	1.45	0.81
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.79	0.81
41:BP:112:LEU:HD22	41:BP:113:LYS:H	1.41	0.81
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.80	0.81
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.10	0.81
31:DA:1884:A:H2'	31:DA:1885:A:C5'	2.10	0.81
31:DA:2030:A:H5''	31:DA:2031:A:OP1	1.80	0.81
31:DA:2262:U:C2'	31:DA:2263:C:H5''	2.10	0.81
31:BA:2562:U:H1'	40:BO:23:ARG:HH11	1.43	0.81
32:BB:52:A:N7	44:BS:33:LYS:HE3	1.95	0.81
27:D5:57:VAL:HG23	27:D5:58:LEU:H	1.44	0.81
31:DA:2327:A:H2'	31:DA:2328:A:C8	2.15	0.81
47:DV:5:VAL:HG23	47:DV:36:PRO:HB2	1.59	0.81
1:AA:685:G:O2'	1:AA:686:U:H5'	1.80	0.81
31:BA:674:G:O2'	35:BF:74:ARG:HG3	1.81	0.81
31:BA:814:C:C5	41:BP:27:HIS:NE2	2.48	0.81
31:BA:1884:A:C2'	31:BA:1885:A:H5''	2.10	0.81
31:BA:2287:A:H2	31:BA:2346:A:C2	1.97	0.81
31:BA:2469:A:O2'	42:BQ:56:ARG:HG2	1.80	0.81
35:BF:46:ARG:HH11	35:BF:46:ARG:CG	1.94	0.81
36:BG:76:SER:HB2	36:BG:83:ARG:HB3	1.61	0.81
1:CA:450:G:H5''	16:CP:41:PRO:O	1.80	0.81
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.15	0.81
31:DA:1778:U:H2'	31:DA:1784:A:N6	1.95	0.81
31:DA:2688:U:C5	31:DA:2720:U:OP2	2.33	0.81
42:DQ:9:TYR:O	42:DQ:9:TYR:CD2	2.31	0.81
44:DS:33:LYS:HB3	44:DS:34:HIS:CD2	2.15	0.81
1:AA:955:U:H1'	1:AA:1227:A:H61	1.44	0.81
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.16	0.81
31:BA:2660:A:H5''	31:BA:2661:G:N3	1.95	0.81
42:BQ:75:THR:HA	42:BQ:88:GLY:HA2	1.61	0.81
50:DY:75:ILE:HD11	50:DY:79:CYS:HA	1.62	0.81
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:90:U:H2'	31:BA:90:U:O2	1.78	0.81
1:CA:1106:G:H5''	3:CC:172:ARG:HG2	1.62	0.81
31:DA:2469:A:O2'	42:DQ:56:ARG:HG2	1.79	0.81
33:DD:71:ASP:HB3	33:DD:103:ARG:HH22	1.46	0.81
35:DF:183:VAL:O	35:DF:187:VAL:HG23	1.81	0.81
39:DN:130:HIS:O	39:DN:130:HIS:CG	2.33	0.81
42:DQ:8:LYS:CG	42:DQ:9:TYR:H	1.93	0.81
47:DV:2:PHE:CB	47:DV:42:GLY:HA2	2.10	0.81
31:BA:780:G:H21	31:BA:783:A:H62	1.28	0.81
39:BN:82:LEU:HD12	39:BN:82:LEU:H	1.44	0.81
40:BO:2:ILE:HG13	40:BO:8:LEU:HD11	1.62	0.81
31:DA:2199:A:H3'	31:DA:2200:C:H6	1.45	0.81
32:DB:66:A:H61	32:DB:108:U:H2'	1.44	0.81
37:DH:148:ILE:O	37:DH:151:ILE:HG12	1.79	0.81
22:B0:72:ARG:HB2	22:B0:75:LEU:HB2	1.62	0.81
33:BD:30:GLU:HG3	33:BD:63:ARG:CZ	2.10	0.81
33:BD:228:PRO:HD3	33:BD:235:GLY:HA3	1.62	0.81
37:BH:157:TYR:CE1	37:BH:171:LEU:N	2.49	0.81
45:BT:29:ARG:CB	45:BT:85:LYS:HA	2.11	0.81
47:BV:18:LEU:HD22	47:BV:19:LYS:HA	1.61	0.81
50:BY:8:LYS:CE	50:BY:72:VAL:HG23	2.11	0.81
24:D2:25:VAL:HG13	24:D2:26:ARG:HD2	1.62	0.81
30:D8:25:MET:HB2	41:DP:62:LEU:CD2	2.11	0.81
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.81	0.81
35:BF:101:LEU:HD12	35:BF:102:PRO:CD	2.10	0.81
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.15	0.81
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.60	0.81
31:DA:1658:C:OP1	34:DE:132:HIS:CE1	2.34	0.81
31:DA:1779:U:C5	31:DA:1784:A:N7	2.47	0.81
33:DD:35:LYS:HD3	33:DD:63:ARG:C	2.00	0.81
33:DD:222:ARG:O	33:DD:225:ALA:HB3	1.80	0.81
36:DG:76:SER:HB2	36:DG:83:ARG:HB3	1.61	0.81
24:B2:15:LYS:O	24:B2:16:LEU:HB3	1.81	0.81
27:B5:46:CYS:SG	27:B5:47:PRO:HD2	2.21	0.81
31:BA:142:A:H8	31:BA:1595:G:H21	1.27	0.81
37:BH:43:VAL:HG23	37:BH:43:VAL:O	1.81	0.81
48:BW:9:TYR:H	48:BW:102:HIS:CD2	1.97	0.81
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.61	0.81
31:BA:1022:G:O2'	31:BA:1023:U:OP2	1.99	0.81
31:DA:2577:A:H5''	31:DA:2578:G:H5'	1.62	0.81
32:DB:15:A:H5'	32:DB:16:G:C8	2.17	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:62:LEU:HB3	47:DV:98:GLU:HA	1.62	0.81
1:AA:1423:G:C5'	40:BO:49:ARG:HH22	1.93	0.80
1:AA:1423:G:H5'	40:BO:49:ARG:HH22	1.44	0.80
31:BA:993:G:H5''	47:BV:75:PHE:CZ	2.15	0.80
31:BA:1278:A:OP1	43:BR:36:THR:HG22	1.81	0.80
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.64	0.80
15:CO:39:LEU:HD12	15:CO:56:LEU:HB2	1.63	0.80
31:DA:90:U:O2	31:DA:90:U:H2'	1.79	0.80
31:DA:2660:A:H5''	31:DA:2661:G:N3	1.95	0.80
33:DD:44:ASN:HB3	33:DD:49:ILE:HA	1.61	0.80
1:AA:662:G:H2'	1:AA:663:A:C8	2.16	0.80
31:BA:7:G:H2'	31:BA:8:A:O4'	1.80	0.80
33:BD:71:ASP:HB3	33:BD:103:ARG:HH22	1.44	0.80
49:BX:63:LYS:HE3	49:BX:70:LEU:HD22	1.61	0.80
31:DA:863:A:O2'	31:DA:864:G:H5'	1.81	0.80
31:DA:1798:U:C5'	33:DD:259:THR:HG22	2.04	0.80
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.61	0.80
32:BB:82:G:C2'	32:BB:83:G:H5'	2.11	0.80
37:BH:153:LYS:HD3	37:BH:153:LYS:H	1.44	0.80
47:BV:82:ARG:HG3	47:BV:82:ARG:NH1	1.90	0.80
31:DA:2681:C:H5	31:DA:2725:A:H62	0.86	0.80
31:DA:2712:U:H1'	31:DA:2712(A):A:C8	2.16	0.80
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.62	0.80
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.10	0.80
31:BA:2307:G:H21	31:BA:2308:G:H5'	1.47	0.80
33:BD:44:ASN:HB3	33:BD:49:ILE:HA	1.63	0.80
46:BU:31:SER:O	46:BU:33:ARG:N	2.14	0.80
31:DA:1464:C:O2'	31:DA:1528:A:H8	1.64	0.80
37:DH:89:ILE:O	37:DH:90:LYS:HG2	1.82	0.80
41:DP:38:GLN:HG3	41:DP:39:LYS:H	1.45	0.80
49:DX:35:THR:HB	49:DX:75:ASP:OD2	1.81	0.80
50:DY:8:LYS:CE	50:DY:72:VAL:HG23	2.11	0.80
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.63	0.80
31:BA:1884:A:H2'	31:BA:1885:A:C5'	2.12	0.80
31:BA:2287:A:C2	31:BA:2346:A:H2	1.98	0.80
34:BE:203:LYS:O	34:BE:203:LYS:HD2	1.81	0.80
1:CA:973:G:H3'	1:CA:974:A:H5''	1.64	0.80
12:CL:90:VAL:O	12:CL:92:ASP:N	2.14	0.80
31:DA:1341:U:C2	49:DX:77:LYS:HE2	2.16	0.80
41:DP:85:LEU:HD12	41:DP:120:ALA:HB2	1.64	0.80
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.17	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.46	0.80
32:BB:44:G:H5''	32:BB:45:A:OP1	1.82	0.80
41:BP:51:PHE:HB3	41:BP:52:GLU:OE2	1.82	0.80
45:BT:53:ARG:HG3	45:BT:53:ARG:NH1	1.94	0.80
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.62	0.80
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	1.82	0.80
25:D3:6:VAL:CG1	25:D3:54:VAL:HG11	2.11	0.80
37:DH:149:ARG:HA	37:DH:162:ILE:HG13	1.63	0.80
1:AA:1201:A:H1'	1:AA:1202:G:OP2	1.80	0.80
47:BV:5:VAL:HG23	47:BV:36:PRO:HB2	1.63	0.80
31:DA:1434:A:O2'	31:DA:1435:G:H5'	1.80	0.80
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	1.80	0.80
23:B1:47:GLN:HB2	31:BA:397:G:H5''	1.64	0.80
31:BA:2287:A:C2	31:BA:2346:A:C2	2.70	0.80
31:BA:2334:G:N2	44:BS:18:ILE:HD11	1.96	0.80
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.63	0.80
27:D5:4:HIS:HB3	27:D5:5:PRO:HD3	1.61	0.80
31:DA:7:G:H2'	31:DA:8:A:O4'	1.82	0.80
31:DA:145:G:H2'	31:DA:146:G:C5'	2.11	0.80
31:DA:1430:C:H2'	31:DA:1431:U:H6	1.44	0.80
31:DA:2656:U:H3	31:DA:2665:A:H2	1.28	0.80
38:DI:2:LYS:HB2	38:DI:39:ALA:HB3	1.64	0.80
41:DP:143:GLY:C	41:DP:145:PRO:HD3	2.01	0.80
31:BA:2199:A:H3'	31:BA:2200:C:H6	1.47	0.80
33:BD:35:LYS:HE2	33:BD:104:TYR:HB2	1.62	0.80
36:BG:85:GLY:O	36:BG:87:PRO:HD2	1.81	0.80
28:D6:9:LEU:HD22	28:D6:10:LEU:H	1.45	0.80
28:D6:15:GLU:CD	28:D6:43:CYS:SG	2.61	0.80
31:DA:806:C:OP2	41:DP:39:LYS:CD	2.30	0.80
31:DA:2845:G:O2'	31:DA:2846:G:H5'	1.82	0.80
31:DA:1396:U:O2	31:DA:1396:U:H2'	1.82	0.80
31:DA:2415:G:H4'	41:DP:67:MET:H	1.44	0.80
1:AA:450:G:H5''	16:AP:41:PRO:O	1.82	0.79
31:BA:863:A:O2'	31:BA:864:G:H5'	1.82	0.79
33:BD:137:PRO:HB2	33:BD:140:THR:HG23	1.61	0.79
33:BD:137:PRO:HB2	33:BD:140:THR:CG2	2.13	0.79
39:BN:47:ALA:HB2	39:BN:112:LEU:CD1	2.12	0.79
46:BU:102:GLU:HG3	47:BV:2:PHE:CZ	2.18	0.79
49:DX:33:LYS:C	49:DX:35:THR:H	1.86	0.79
31:BA:1902:C:H1'	33:BD:244:ARG:HD3	1.61	0.79
37:BH:44:VAL:HG12	37:BH:45:VAL:H	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:172:TYR:CE1	33:DD:186:HIS:HB2	2.18	0.79
40:DO:13:ASN:HD21	40:DO:96:THR:H	1.28	0.79
42:DQ:89:ASN:O	42:DQ:91:GLU:N	2.14	0.79
31:BA:1210:A:H8	31:BA:1210:A:C5'	1.94	0.79
35:BF:20:LEU:HD22	35:BF:203:GLN:HE22	1.46	0.79
35:BF:53:THR:HB	35:BF:56:GLU:OE1	1.83	0.79
50:BY:8:LYS:HZ1	50:BY:74:PRO:HD3	1.47	0.79
24:D2:49:LYS:CD	24:D2:53:LEU:HD13	2.04	0.79
30:D8:32:LEU:HD23	30:D8:35:GLN:HA	1.63	0.79
31:DA:588:U:OP2	31:DA:588:U:H6	1.64	0.79
31:DA:925:C:H2'	31:DA:926:A:H5''	1.64	0.79
31:DA:1022:G:N2	31:DA:1142(A):A:C2	2.50	0.79
31:DA:1300:U:H3'	31:DA:1301:A:C5'	2.12	0.79
32:DB:74:U:C2'	32:DB:75:G:H5''	2.11	0.79
37:DH:41:MET:SD	37:DH:55:PRO:HD3	2.22	0.79
41:DP:84:ASN:OD1	41:DP:117:GLU:HB2	1.82	0.79
8:AH:58:TYR:O	8:AH:59:LEU:HD23	1.82	0.79
41:BP:105:LEU:O	41:BP:106:LEU:HB2	1.83	0.79
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	1.95	0.79
31:DA:142:A:C8	31:DA:1408:C:H1'	2.17	0.79
31:DA:1158:C:O2'	31:DA:1159:U:P	2.40	0.79
1:AA:1502:A:H2	1:AA:1505:G:N1	1.79	0.79
41:BP:16:ARG:HG3	41:BP:17:LYS:N	1.95	0.79
42:BQ:9:TYR:O	42:BQ:9:TYR:CD2	2.33	0.79
50:BY:7:VAL:HB	50:BY:8:LYS:HZ2	1.47	0.79
1:CA:322:C:H5	1:CA:328:C:H5	1.30	0.79
1:CA:1279:A:H5''	1:CA:1280:A:OP1	1.81	0.79
31:DA:2808:U:H5'	31:DA:2891:G:O6	1.83	0.79
35:DF:89:VAL:HG12	35:DF:90:PHE:N	1.96	0.79
12:AL:90:VAL:O	12:AL:92:ASP:N	2.15	0.79
31:BA:1779:U:C5	31:BA:1784:A:N7	2.51	0.79
50:BY:60:PHE:HA	50:BY:62:GLU:OE2	1.83	0.79
1:CA:685:G:O2'	1:CA:686:U:H5'	1.82	0.79
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.83	0.79
33:DD:108:PRO:HB3	33:DD:143:HIS:CE1	2.16	0.79
35:DF:46:ARG:HH11	35:DF:46:ARG:CG	1.95	0.79
36:DG:33:ARG:H	36:DG:162:THR:HB	1.48	0.79
37:DH:137:ASP:O	37:DH:138:LYS:HB2	1.82	0.79
44:DS:87:PHE:HE2	44:DS:97:ARG:HH21	1.29	0.79
49:DX:33:LYS:O	49:DX:35:THR:N	2.16	0.79
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HE2	33:DD:104:TYR:HB2	1.62	0.79
51:DZ:109:ALA:HB1	51:DZ:145:GLU:OE2	1.83	0.79
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.65	0.79
31:BA:615:G:OP1	35:BF:40:GLN:NE2	2.16	0.79
31:BA:2808:U:H5'	31:BA:2891:G:O6	1.83	0.79
38:BI:1:MET:HB2	38:BI:21:VAL:O	1.81	0.79
42:BQ:89:ASN:O	42:BQ:91:GLU:N	2.15	0.79
23:D1:12:PRO:HD2	23:D1:62:VAL:HG23	1.65	0.79
42:DQ:110:THR:OG1	42:DQ:113:GLN:HG3	1.83	0.79
1:AA:382:A:H2'	1:AA:383:A:H8	1.47	0.79
30:B8:4:MET:SD	30:B8:61:LEU:HD12	2.22	0.79
30:B8:52:LYS:N	30:B8:53:PRO:HD2	1.98	0.79
31:BA:139(A):G:N2	49:BX:44:GLU:OE1	2.15	0.79
33:BD:186:HIS:HD2	33:BD:188:GLU:N	1.80	0.79
44:BS:36:TYR:N	44:BS:36:TYR:HD1	1.80	0.79
49:BX:33:LYS:C	49:BX:35:THR:H	1.86	0.79
50:BY:28:LYS:CB	50:BY:37:VAL:HB	2.12	0.79
31:DA:786:C:H2'	31:DA:787:U:H5'	1.64	0.79
31:DA:1210:A:H8	31:DA:1210:A:C5'	1.94	0.79
33:DD:172:TYR:CD1	33:DD:186:HIS:HA	2.18	0.79
37:DH:157:TYR:CE1	37:DH:171:LEU:N	2.50	0.79
50:DY:60:PHE:HA	50:DY:62:GLU:OE2	1.82	0.79
16:AP:76:GLN:O	16:AP:76:GLN:HG2	1.83	0.79
31:BA:142:A:C8	31:BA:1408:C:H1'	2.18	0.79
31:BA:751:A:H5'	48:BW:90:ARG:HA	1.63	0.79
31:BA:1798:U:C5'	33:BD:259:THR:HG22	2.04	0.79
31:DA:1163:G:H5'	47:DV:92:THR:HG21	1.64	0.79
15:AO:17:ARG:HH11	15:AO:17:ARG:CG	1.95	0.78
24:B2:14:ARG:O	24:B2:18:PRO:HD3	1.83	0.78
41:BP:84:ASN:OD1	41:BP:117:GLU:HB2	1.83	0.78
49:BX:35:THR:HB	49:BX:75:ASP:OD2	1.81	0.78
31:DA:662:G:OP1	41:DP:18:ARG:HD2	1.83	0.78
39:DN:3:THR:C	39:DN:4:TYR:CD1	2.57	0.78
41:DP:30:THR:HG22	41:DP:31:ALA:N	1.97	0.78
43:DR:11:ASN:OD1	43:DR:12:ARG:N	2.14	0.78
28:B6:44:ARG:O	28:B6:45:LYS:HG2	1.82	0.78
31:BA:1592:C:H2'	31:BA:1593:G:C5'	2.13	0.78
44:BS:87:PHE:HE2	44:BS:97:ARG:HH21	1.29	0.78
44:BS:101:LEU:HD13	44:BS:102:ALA:O	1.83	0.78
1:CA:929:G:H1	1:CA:1388:C:H42	1.29	0.78
4:CD:128:VAL:HG13	4:CD:129:ASN:ND2	1.97	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:9:LEU:HD22	28:D6:10:LEU:N	1.98	0.78
31:DA:128:C:H6	31:DA:128:C:H5''	1.45	0.78
31:DA:1019:U:O2'	31:DA:1021:A:H2	1.66	0.78
38:DI:82:ARG:HG2	38:DI:89:TYR:CD2	2.18	0.78
41:DP:71:VAL:HG12	41:DP:72:PRO:HD3	1.65	0.78
1:AA:194:C:H2'	1:AA:195:A:H5''	1.65	0.78
1:AA:322:C:H5	1:AA:328:C:H5	1.31	0.78
23:B1:16:ASN:HB3	23:B1:46:LEU:CD1	2.13	0.78
30:B8:52:LYS:H	30:B8:54:GLU:HG2	1.47	0.78
31:BA:1204:A:H2	31:BA:1241:A:N1	1.80	0.78
40:BO:66:LYS:H	40:BO:82:ASN:ND2	1.81	0.78
47:BV:83:ARG:CG	47:BV:83:ARG:HH11	1.96	0.78
8:CH:102:ARG:HE	8:CH:102:ARG:N	1.80	0.78
31:DA:1654:A:OP1	43:DR:3:HIS:CB	2.30	0.78
31:DA:1899:G:N2	31:DA:1902:C:C5	2.52	0.78
34:DE:203:LYS:O	34:DE:203:LYS:HD2	1.83	0.78
36:DG:127:GLY:HA2	36:DG:166:ASP:HB3	1.66	0.78
1:AA:1063:C:H3'	1:AA:1064:G:H2'	1.64	0.78
31:BA:1341:U:C2	49:BX:77:LYS:HE2	2.19	0.78
31:BA:1899:G:N2	31:BA:1902:C:C5	2.51	0.78
31:BA:2688:U:C5	31:BA:2720:U:OP2	2.37	0.78
33:BD:267:SER:C	33:BD:269:PHE:H	1.83	0.78
39:BN:3:THR:C	39:BN:4:TYR:CD1	2.57	0.78
31:DA:615:G:OP1	35:DF:40:GLN:NE2	2.16	0.78
39:DN:73:THR:O	39:DN:75:TYR:N	2.16	0.78
45:DT:29:ARG:CB	45:DT:85:LYS:HA	2.12	0.78
49:DX:23:GLU:HG3	49:DX:24:GLY:H	1.48	0.78
6:AF:99:ALA:HB1	18:AR:23:LYS:HZ2	1.47	0.78
22:B0:41:ARG:HD2	22:B0:41:ARG:H	1.48	0.78
31:BA:796:C:H2'	31:BA:797:C:C6	2.18	0.78
41:BP:17:LYS:O	41:BP:19:VAL:N	2.16	0.78
45:BT:23:ARG:HB2	45:BT:24:PRO:HD2	1.66	0.78
50:BY:28:LYS:HB2	50:BY:37:VAL:CB	2.12	0.78
31:DA:1973:G:H2'	31:DA:1974:C:H6	1.49	0.78
31:DA:2781:A:H5''	31:DA:2782:G:H5'	1.64	0.78
37:DH:20:ALA:HB1	37:DH:21:PRO:HD2	1.65	0.78
23:B1:15:ALA:CA	23:B1:46:LEU:HD21	2.13	0.78
51:BZ:151:HIS:N	51:BZ:151:HIS:CD2	2.50	0.78
1:CA:1285:A:H1'	1:CA:1286:A:OP2	1.84	0.78
24:D2:15:LYS:O	24:D2:16:LEU:HB3	1.81	0.78
1:CA:102:G:H2'	1:CA:103:C:H6	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:955:U:H1'	1:CA:1227:A:H61	1.45	0.78
16:CP:39:TYR:HA	16:CP:48:TRP:O	1.84	0.78
17:CQ:45:HIS:CD2	17:CQ:47:PRO:HD3	2.18	0.78
24:D2:41:ILE:HG21	31:DA:95:G:H21	1.49	0.78
31:DA:308:G:O2'	50:DY:19:LYS:HE3	1.84	0.78
33:DD:137:PRO:HB2	33:DD:140:THR:HG23	1.65	0.78
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.63	0.78
31:BA:1300:U:H3'	31:BA:1301:A:C5'	2.13	0.78
31:BA:1744:C:H2'	31:BA:1745:C:H5'	1.64	0.78
32:BB:66:A:H61	32:BB:108:U:H2'	1.49	0.78
1:CA:382:A:H2'	1:CA:383:A:H8	1.49	0.78
23:D1:37:ILE:HD11	31:DA:2079:U:H4'	1.66	0.78
31:DA:661:C:H4'	41:DP:16:ARG:NH1	1.99	0.78
31:DA:676:A:H8	31:DA:2069:G:N2	1.81	0.78
35:DF:164:ARG:HH11	35:DF:164:ARG:HG2	1.49	0.78
41:DP:112:LEU:HD22	41:DP:113:LYS:N	1.99	0.78
50:DY:42:VAL:HB	50:DY:65:ALA:HB3	1.63	0.78
1:CA:1392:G:N2	1:CA:1502:A:H8	1.82	0.78
31:DA:1744:C:H2'	31:DA:1745:C:H5'	1.66	0.78
31:DA:2631:G:N2	34:DE:61:ARG:HH12	1.80	0.78
32:DB:88:C:H2'	32:DB:89:G:C8	2.19	0.78
33:DD:71:ASP:CB	33:DD:103:ARG:HH22	1.97	0.78
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HD3	1.65	0.78
44:DS:36:TYR:N	44:DS:36:TYR:HD1	1.81	0.78
46:DU:83:LEU:HB3	46:DU:88:ILE:HD11	1.66	0.78
47:DV:69:LYS:HG3	47:DV:70:ILE:N	1.99	0.78
51:DZ:151:HIS:CD2	51:DZ:151:HIS:N	2.52	0.78
27:B5:57:VAL:HG23	27:B5:58:LEU:H	1.49	0.78
31:BA:719:C:H2'	31:BA:720:C:H6	1.48	0.78
38:BI:81:VAL:HG11	38:BI:88:ILE:HG23	1.66	0.78
1:CA:38:G:C2	1:CA:397:A:C2	2.72	0.78
22:D0:43:THR:H	31:DA:2331:G:H4'	1.48	0.78
50:DY:37:VAL:HG13	50:DY:69:ALA:HA	1.66	0.78
23:B1:40:ARG:HD3	23:B1:41:ARG:H	1.46	0.77
49:BX:23:GLU:HG3	49:BX:24:GLY:H	1.47	0.77
46:DU:93:LYS:HD3	46:DU:93:LYS:H	1.47	0.77
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.20	0.77
31:BA:1108:U:H2'	31:BA:1109:C:H5'	1.66	0.77
31:BA:1778:U:H2'	31:BA:1784:A:N6	1.99	0.77
31:BA:2305:A:H5''	36:BG:134:GLY:HA3	1.66	0.77
33:BD:25:THR:HG23	33:BD:27:THR:HB	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:43:LEU:HD12	36:BG:153:ARG:HD2	1.67	0.77
39:BN:78:TYR:HD1	39:BN:79:PRO:CD	1.98	0.77
31:DA:2850:A:OP2	31:DA:2866:U:C5	2.36	0.77
45:DT:50:ILE:HD11	45:DT:102:ILE:HD11	1.65	0.77
49:DX:26:TYR:OH	49:DX:89:ILE:HG21	1.85	0.77
50:DY:8:LYS:HE2	50:DY:72:VAL:HG23	1.65	0.77
50:DY:28:LYS:HB2	50:DY:37:VAL:CB	2.14	0.77
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.66	0.77
31:BA:1332:G:C8	31:BA:1332:G:H5'	2.18	0.77
39:BN:130:HIS:O	39:BN:130:HIS:CG	2.35	0.77
4:CD:49:ARG:HA	4:CD:49:ARG:HE	1.49	0.77
23:D1:19:GLN:OE1	23:D1:44:PRO:HB3	1.84	0.77
28:D6:13:CYS:HB3	28:D6:49:HIS:HB3	1.66	0.77
31:DA:2580:U:C5'	34:DE:131:ALA:H	1.97	0.77
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.83	0.77
4:CD:18:LYS:HD2	4:CD:33:MET:HG2	1.66	0.77
20:CT:16:HIS:O	20:CT:19:SER:HB3	1.84	0.77
33:DD:131:LEU:HB2	33:DD:136:ILE:HD11	1.64	0.77
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.24	0.77
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HD3	1.65	0.77
50:BY:17:SER:OG	50:BY:18:GLY:N	2.18	0.77
31:DA:510:C:C2'	31:DA:511:U:H5'	2.15	0.77
31:DA:588:U:H2'	31:DA:589:C:C6	2.20	0.77
31:DA:1204:A:N1	31:DA:1241:A:H2	1.82	0.77
31:DA:1884:A:H2'	31:DA:1885:A:H5''	1.64	0.77
1:AA:353:A:H5'	1:AA:353:A:C8	2.19	0.77
31:BA:1047:G:H21	31:BA:1111:A:H62	1.30	0.77
31:BA:1163:G:H5'	47:BV:92:THR:HG21	1.67	0.77
32:BB:88:C:H2'	32:BB:89:G:C8	2.20	0.77
33:BD:131:LEU:HB2	33:BD:136:ILE:HD11	1.67	0.77
1:CA:17:U:H2'	1:CA:18:C:C6	2.20	0.77
31:DA:2810:A:H2'	34:DE:61:ARG:NH2	2.00	0.77
35:DF:20:LEU:HD23	35:DF:23:ASP:OD2	1.82	0.77
4:AD:49:ARG:HA	4:AD:49:ARG:HE	1.47	0.77
8:AH:102:ARG:HE	8:AH:102:ARG:N	1.83	0.77
31:BA:71:A:H3'	31:BA:71:A:OP2	1.84	0.77
31:BA:954:G:H5''	42:BQ:13:GLN:HG2	1.67	0.77
50:BY:28:LYS:O	50:BY:38:ILE:HB	1.82	0.77
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.20	0.77
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.48	0.77
31:DA:806:C:OP2	41:DP:39:LYS:HD2	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1108:U:H2'	31:DA:1109:C:H5'	1.66	0.77
31:DA:1405:U:H2'	31:DA:1406:U:C6	2.20	0.77
33:DD:255:LYS:HZ1	33:DD:255:LYS:H	1.33	0.77
1:AA:353:A:H8	1:AA:353:A:C5'	1.98	0.77
1:AA:973:G:H3'	1:AA:974:A:H5''	1.66	0.77
32:BB:74:U:C2'	32:BB:75:G:H5''	2.14	0.77
35:BF:158:THR:HG23	35:BF:160:ASN:H	1.50	0.77
38:BI:133:HIS:HB2	38:BI:134:PRO:CD	2.14	0.77
49:BX:59:VAL:HG23	49:BX:60:ARG:H	1.48	0.77
49:BX:60:ARG:NE	49:BX:74:PRO:HG2	1.99	0.77
50:BY:7:VAL:HB	50:BY:8:LYS:NZ	1.99	0.77
31:DA:2287:A:H2	31:DA:2346:A:H2	1.30	0.77
31:DA:2359:C:C2'	31:DA:2360:A:H5'	2.13	0.77
31:DA:2567:G:H2'	31:DA:2568:C:C6	2.19	0.77
41:DP:58:THR:O	41:DP:61:ARG:NE	2.17	0.77
1:AA:38:G:C2	1:AA:397:A:C2	2.72	0.77
1:AA:339:C:OP2	40:BO:97:ARG:NH1	2.17	0.77
2:AB:17:PHE:HD1	2:AB:44:LEU:HD11	1.50	0.77
2:AB:44:LEU:H	2:AB:44:LEU:HD12	1.48	0.77
31:BA:94:C:H5'	31:BA:94(A):G:OP2	1.85	0.77
50:BY:8:LYS:HE2	50:BY:72:VAL:HG23	1.65	0.77
1:CA:472:A:H4'	16:CP:82:GLN:HE22	1.50	0.77
20:CT:89:ARG:HB2	20:CT:104:LEU:HD11	1.67	0.77
23:D1:16:ASN:HB3	23:D1:46:LEU:CD1	2.14	0.77
31:DA:674:G:O2'	35:DF:74:ARG:HG3	1.84	0.77
31:DA:847:U:H5	31:DA:933:A:H62	1.33	0.77
31:DA:1495:A:N3	31:DA:1496:A:C2	2.53	0.77
35:DF:65:TRP:CZ3	35:DF:75:HIS:HD2	2.03	0.77
43:DR:71:GLN:HA	43:DR:71:GLN:HE21	1.49	0.77
1:AA:1502:A:H2	1:AA:1505:G:H1	1.30	0.77
2:AB:111:ARG:HH11	2:AB:111:ARG:CG	1.91	0.77
31:BA:1396:U:H2'	31:BA:1396:U:O2	1.84	0.77
31:DA:1607:C:H4'	31:DA:1608:A:O5'	1.85	0.77
33:DD:35:LYS:HZ1	33:DD:104:TYR:HB2	1.48	0.77
34:DE:34:VAL:HG22	34:DE:48:GLN:HE21	1.50	0.77
31:BA:1590:U:H2'	31:BA:1591:G:H5''	1.67	0.76
31:BA:2287:A:H2	31:BA:2346:A:H2	1.33	0.76
31:BA:2712:U:H1'	31:BA:2712(A):A:C8	2.19	0.76
34:BE:61:ARG:H	34:BE:62:PRO:HD2	1.50	0.76
36:BG:33:ARG:H	36:BG:162:THR:HB	1.51	0.76
39:BN:3:THR:C	39:BN:4:TYR:CG	2.59	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:85:LEU:HD12	41:BP:120:ALA:HB2	1.67	0.76
42:BQ:81:VAL:O	42:BQ:82:ARG:CD	2.29	0.76
47:BV:2:PHE:CB	47:BV:42:GLY:HA2	2.14	0.76
1:CA:662:G:H2'	1:CA:663:A:C8	2.20	0.76
4:CD:31:CYS:C	4:CD:33:MET:H	1.87	0.76
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.66	0.76
16:CP:28:ARG:HG2	16:CP:28:ARG:NH1	1.94	0.76
28:D6:10:LEU:HD12	30:D8:35:GLN:NE2	2.00	0.76
50:DY:7:VAL:HB	50:DY:8:LYS:NZ	2.00	0.76
48:BW:18:ARG:HG2	48:BW:18:ARG:HH11	1.49	0.76
1:CA:194:C:H2'	1:CA:195:A:H5''	1.65	0.76
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.49	0.76
23:D1:15:ALA:CA	23:D1:46:LEU:HD21	2.12	0.76
28:D6:10:LEU:CD1	30:D8:35:GLN:HE22	1.98	0.76
31:DA:1022:G:O2'	31:DA:1023:U:OP2	2.02	0.76
47:DV:72:VAL:HG13	47:DV:88:ARG:NH2	1.99	0.76
4:AD:18:LYS:HD2	4:AD:33:MET:HG2	1.67	0.76
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.20	0.76
31:BA:102:G:H8	31:BA:102:G:C5'	1.83	0.76
31:BA:1899:G:N2	31:BA:1902:C:H5	1.82	0.76
31:BA:1973:G:H2'	31:BA:1974:C:H6	1.50	0.76
35:BF:65:TRP:CZ3	35:BF:75:HIS:HD2	2.02	0.76
37:BH:148:ILE:O	37:BH:151:ILE:HG12	1.84	0.76
46:BU:83:LEU:HB3	46:BU:88:ILE:HD11	1.67	0.76
47:BV:64:HIS:O	47:BV:64:HIS:CG	2.36	0.76
50:BY:39:VAL:HG12	50:BY:40:GLU:N	2.00	0.76
18:CR:50:ILE:HD11	18:CR:70:ILE:HG21	1.66	0.76
31:DA:1204:A:H2	31:DA:1241:A:N1	1.83	0.76
38:DI:133:HIS:HB2	38:DI:134:PRO:CD	2.14	0.76
41:DP:6:LEU:HG	41:DP:8:PRO:O	1.85	0.76
41:DP:71:VAL:CG1	41:DP:72:PRO:HD3	2.15	0.76
51:DZ:149:SER:HB2	51:DZ:172:ALA:O	1.84	0.76
1:AA:17:U:H2'	1:AA:18:C:C6	2.21	0.76
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5''	1.66	0.76
23:B1:37:ILE:HD11	31:BA:2079:U:H4'	1.67	0.76
31:BA:2850:A:OP2	31:BA:2866:U:C5	2.38	0.76
36:BG:127:GLY:HA2	36:BG:166:ASP:HB3	1.67	0.76
41:BP:30:THR:HG22	41:BP:31:ALA:N	1.98	0.76
41:BP:51:PHE:O	41:BP:52:GLU:HB2	1.84	0.76
49:BX:53:LYS:H	49:BX:80:ILE:HG22	1.49	0.76
1:CA:949:A:H61	1:CA:1232:U:H3	1.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1484:G:H22	31:DA:1505:C:H5	1.33	0.76
34:DE:3:GLY:HA3	34:DE:81:ILE:HG13	1.67	0.76
1:AA:247:G:OP2	17:AQ:100:LYS:HG2	1.84	0.76
27:B5:54:GLY:O	27:B5:56:LYS:NZ	2.18	0.76
29:B7:19:ARG:HD3	31:BA:125:G:H5''	1.66	0.76
31:BA:588:U:OP2	31:BA:588:U:H6	1.68	0.76
31:BA:1204:A:N1	31:BA:1241:A:H2	1.83	0.76
31:BA:2262:U:C2'	31:BA:2263:C:H5''	2.16	0.76
33:BD:32:SER:O	33:BD:33:LEU:CB	2.32	0.76
37:BH:41:MET:SD	37:BH:55:PRO:HD3	2.26	0.76
46:BU:92:ARG:HD3	46:BU:94:ASN:HB3	1.66	0.76
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.68	0.76
30:D8:59:LYS:HD3	41:DP:50:ARG:HB3	1.67	0.76
31:DA:1332:G:N2	31:DA:1610:A:H8	1.84	0.76
31:DA:1639:U:H2'	31:DA:1640:C:H5''	1.66	0.76
1:AA:1285:A:H1'	1:AA:1286:A:OP2	1.85	0.76
31:BA:2068:U:N3	31:BA:2430:A:C2	2.50	0.76
42:BQ:6:ARG:O	42:BQ:7:MET:HG2	1.85	0.76
47:BV:72:VAL:HG13	47:BV:88:ARG:NH2	1.99	0.76
1:CA:328:C:H2'	1:CA:328:C:O2	1.86	0.76
30:D8:52:LYS:N	30:D8:53:PRO:HD2	2.00	0.76
31:DA:2572:A:N7	34:DE:144:ARG:HD2	2.01	0.76
31:BA:2660:A:C5'	31:BA:2661:G:H21	1.99	0.76
33:BD:71:ASP:CB	33:BD:103:ARG:HH22	1.97	0.76
35:BF:22:ALA:HB1	35:BF:26:ALA:HB1	1.67	0.76
41:BP:58:THR:O	41:BP:61:ARG:NE	2.18	0.76
7:CG:146:GLU:HA	7:CG:149:ARG:HB2	1.66	0.76
22:D0:71:ASP:C	22:D0:72:ARG:HG2	2.05	0.76
35:DF:53:THR:HB	35:DF:56:GLU:OE1	1.86	0.76
50:DY:15:VAL:HG12	50:DY:17:SER:H	1.51	0.76
1:AA:594:G:H1	1:AA:645:C:H42	1.34	0.76
2:AB:217:ARG:HA	2:AB:220:ASP:HB2	1.68	0.76
13:AM:61:GLU:HA	13:AM:66:LEU:HD11	1.66	0.76
28:B6:36:LEU:HD13	28:B6:50:ARG:CZ	2.16	0.76
31:BA:157:U:H5'	31:BA:171:G:H22	1.50	0.76
31:BA:2094:G:C2'	31:BA:2095:C:H5'	2.15	0.76
33:BD:35:LYS:HZ1	33:BD:104:TYR:HB2	1.47	0.76
34:BE:95:ILE:HD12	34:BE:95:ILE:H	1.49	0.76
42:BQ:134:ARG:HH21	51:BZ:122:ARG:HD2	1.50	0.76
36:DG:43:LEU:HD12	36:DG:153:ARG:HD2	1.67	0.76
39:DN:3:THR:C	39:DN:4:TYR:CG	2.59	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:82:ARG:CG	47:DV:82:ARG:NH1	2.45	0.76
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.20	0.76
28:B6:10:LEU:CD1	30:B8:35:GLN:HE22	1.99	0.76
31:BA:2359:C:C2'	31:BA:2360:A:H5'	2.15	0.76
34:BE:34:VAL:HG22	34:BE:48:GLN:HE21	1.50	0.76
42:BQ:140:ALA:HA	51:BZ:99:TYR:CD2	2.21	0.76
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5''	1.66	0.76
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.51	0.76
25:D3:19:GLN:HE22	25:D3:52:HIS:HE1	1.32	0.76
44:DS:101:LEU:HD13	44:DS:102:ALA:O	1.86	0.76
31:BA:145:G:H2'	31:BA:146:G:C5'	2.16	0.76
46:BU:93:LYS:HD3	46:BU:93:LYS:H	1.50	0.76
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.50	0.76
11:CK:111:ASP:HA	18:CR:84:LYS:HG3	1.67	0.76
31:DA:2223:G:H2'	31:DA:2224:G:H5'	1.68	0.76
32:DB:75:G:H5'	32:DB:75:G:H8	1.50	0.76
45:DT:23:ARG:HB2	45:DT:24:PRO:HD2	1.68	0.76
49:DX:60:ARG:NE	49:DX:74:PRO:HG2	2.01	0.76
1:AA:929:G:H1	1:AA:1388:C:H42	1.29	0.75
47:BV:62:LEU:HB3	47:BV:98:GLU:HA	1.67	0.75
31:DA:322:A:H5'	31:DA:340:A:H1'	1.68	0.75
1:AA:737:A:H2'	1:AA:738:C:C6	2.22	0.75
31:BA:1884:A:H2'	31:BA:1885:A:H5''	1.69	0.75
45:BT:53:ARG:HH11	45:BT:53:ARG:CG	1.97	0.75
47:BV:73:SER:OG	47:BV:74:LYS:N	2.19	0.75
51:BZ:109:ALA:HB1	51:BZ:145:GLU:OE2	1.86	0.75
1:CA:920:U:H1'	1:CA:1080:A:C2	2.20	0.75
2:CB:17:PHE:HD1	2:CB:44:LEU:HD11	1.51	0.75
9:CI:112:LYS:HE3	9:CI:116:LYS:O	1.86	0.75
33:DD:32:SER:O	33:DD:33:LEU:CB	2.34	0.75
38:DI:133:HIS:CG	38:DI:134:PRO:HD2	2.19	0.75
45:DT:51:ARG:HG3	45:DT:98:LYS:HE2	1.66	0.75
47:DV:83:ARG:HH11	47:DV:83:ARG:CG	1.99	0.75
1:AA:545:C:O2'	1:AA:546:G:H5'	1.87	0.75
16:AP:39:TYR:HA	16:AP:48:TRP:O	1.85	0.75
27:B5:55:ARG:CD	27:B5:56:LYS:H	1.98	0.75
30:B8:4:MET:HE1	31:BA:593:G:H1'	1.68	0.75
31:BA:661:C:H4'	41:BP:18:ARG:HG2	1.68	0.75
41:BP:38:GLN:HG3	41:BP:39:LYS:H	1.50	0.75
46:BU:88:ILE:C	46:BU:90:VAL:H	1.88	0.75
1:CA:409:G:H2'	1:CA:410:G:H5'	1.66	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:71:A:OP2	31:DA:71:A:H3'	1.87	0.75
31:DA:671:C:H5'	31:DA:671:C:H6	1.49	0.75
31:DA:910:A:H62	42:DQ:12:GLN:HA	1.51	0.75
31:DA:1948:G:H5'	31:DA:1948:G:H8	1.51	0.75
41:DP:48:PRO:HG2	41:DP:49:ARG:H	1.52	0.75
41:DP:75:ILE:HD13	41:DP:75:ILE:N	2.00	0.75
47:DV:2:PHE:HB2	47:DV:42:GLY:CA	2.17	0.75
47:DV:64:HIS:CG	47:DV:64:HIS:O	2.38	0.75
48:DW:86:LEU:HD12	48:DW:87:PRO:HD2	1.68	0.75
28:B6:10:LEU:HD12	30:B8:35:GLN:NE2	2.02	0.75
31:BA:1495:A:N3	31:BA:1496:A:C2	2.54	0.75
32:BB:82:G:H2'	32:BB:83:G:H5'	1.68	0.75
20:CT:50:GLU:HB3	20:CT:100:ILE:CG1	2.16	0.75
23:D1:10:LYS:HB2	23:D1:14:VAL:N	2.02	0.75
31:DA:212:G:O2'	31:DA:213:A:H5'	1.86	0.75
31:DA:780:G:H21	31:DA:783:A:H62	1.32	0.75
31:DA:2818:G:O2'	31:DA:2819:G:H5'	1.86	0.75
39:DN:119:ARG:HG3	39:DN:119:ARG:NH1	1.96	0.75
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.15	0.75
28:B6:13:CYS:HB3	28:B6:49:HIS:HB3	1.69	0.75
30:B8:32:LEU:C	30:B8:34:TRP:N	2.39	0.75
31:BA:65:C:H2'	31:BA:66:C:H6	1.50	0.75
31:BA:1019:U:O2'	31:BA:1021:A:H2	1.66	0.75
40:BO:2:ILE:HD12	40:BO:6:THR:HG21	1.67	0.75
50:BY:44:ILE:H	50:BY:44:ILE:HD12	1.50	0.75
13:CM:61:GLU:HA	13:CM:66:LEU:HD11	1.67	0.75
28:D6:12:GLU:HB3	28:D6:23:THR:HG22	1.67	0.75
31:DA:2263:C:H5'	31:DA:2263:C:H6	1.50	0.75
34:DE:132:HIS:CD2	34:DE:135:HIS:CE1	2.74	0.75
39:DN:28:THR:CG2	39:DN:106:MET:HE1	2.13	0.75
45:DT:31:SER:C	45:DT:32:TYR:HD2	1.90	0.75
50:DY:17:SER:OG	50:DY:18:GLY:N	2.17	0.75
1:AA:148:G:O2'	1:AA:149:A:H5'	1.87	0.75
1:AA:949:A:H61	1:AA:1232:U:H3	1.34	0.75
31:BA:1405:U:H2'	31:BA:1406:U:C6	2.22	0.75
36:BG:86:MET:HB2	36:BG:87:PRO:CD	2.17	0.75
39:BN:19:GLU:HG3	39:BN:20:GLY:N	1.99	0.75
44:BS:89:ARG:O	44:BS:92:TYR:HB3	1.87	0.75
1:CA:939:G:H5''	7:CG:102:ARG:NH1	2.02	0.75
38:DI:102:SER:HA	38:DI:107:VAL:O	1.86	0.75
1:AA:559:A:H4'	1:AA:560:U:H3'	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.67	0.75
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.69	0.75
23:B1:19:GLN:OE1	23:B1:44:PRO:HB3	1.86	0.75
33:BD:172:TYR:CD1	33:BD:186:HIS:HA	2.21	0.75
51:BZ:166:SER:OG	51:BZ:167:PRO:HA	1.86	0.75
31:DA:794:G:H2'	31:DA:795:C:C6	2.22	0.75
33:DD:137:PRO:HB2	33:DD:140:THR:CG2	2.17	0.75
34:DE:132:HIS:CG	34:DE:135:HIS:NE2	2.54	0.75
38:DI:9:LEU:H	38:DI:13:GLY:HA2	1.50	0.75
39:DN:40:PRO:HB3	46:DU:68:ALA:HB2	1.69	0.75
33:BD:267:SER:C	33:BD:269:PHE:N	2.39	0.75
39:BN:57:ALA:C	39:BN:58:ASP:O	2.17	0.75
12:CL:47:LYS:CB	12:CL:48:PRO:HD3	2.15	0.75
27:D5:55:ARG:CD	27:D5:56:LYS:H	1.95	0.75
29:D7:8:ASN:HD21	29:D7:11:LYS:H	1.30	0.75
31:DA:747:U:O2	31:DA:2014:A:H1'	1.86	0.75
31:DA:1794:U:H2'	31:DA:1795:C:H6	1.50	0.75
40:DO:66:LYS:H	40:DO:82:ASN:ND2	1.83	0.75
41:DP:16:ARG:HG3	41:DP:17:LYS:N	2.02	0.75
41:DP:122:PRO:HA	41:DP:141:ALA:O	1.87	0.75
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.01	0.75
28:B6:12:GLU:HB3	28:B6:23:THR:HG22	1.68	0.75
28:B6:16:CYS:O	28:B6:17:LYS:HB2	1.85	0.75
30:B8:6:THR:CG2	30:B8:63:PRO:HD3	2.17	0.75
31:BA:2810:A:H2'	34:BE:61:ARG:NH2	2.01	0.75
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CE2	2.22	0.75
47:BV:69:LYS:HG3	47:BV:70:ILE:N	2.00	0.75
47:BV:69:LYS:HB3	47:BV:93:GLU:OE1	1.87	0.75
24:D2:54:LYS:N	24:D2:56:GLN:NE2	2.35	0.75
31:DA:286:C:H2'	31:DA:287:C:H5'	1.68	0.75
31:DA:543:C:H42	31:DA:551:G:H1	1.35	0.75
36:DG:47:LYS:HE2	36:DG:81:LYS:HB2	1.69	0.75
46:DU:91:ASP:O	46:DU:95:LEU:HB2	1.86	0.75
1:AA:392:G:H2'	1:AA:393:A:H8	1.52	0.74
1:AA:913:A:H4'	1:AA:914:A:O5'	1.87	0.74
6:AF:30:LEU:HB3	6:AF:35:ALA:HB3	1.69	0.74
31:BA:286:C:H2'	31:BA:287:C:H5'	1.68	0.74
31:BA:2723:C:H5''	43:BR:2:ARG:HD2	1.67	0.74
32:BB:15:A:H5'	32:BB:16:G:C8	2.22	0.74
38:BI:82:ARG:HG2	38:BI:89:TYR:CD2	2.21	0.74
31:DA:94:C:H5'	31:DA:94(A):G:OP2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1339:G:N2	31:DA:1603:A:H1'	2.02	0.74
39:DN:58:ASP:O	39:DN:60:ILE:N	2.19	0.74
46:DU:65:ILE:HG12	46:DU:96:ALA:HB3	1.69	0.74
51:DZ:163:LEU:HD11	51:DZ:167:PRO:HB3	1.68	0.74
4:AD:31:CYS:C	4:AD:33:MET:H	1.88	0.74
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.70	0.74
31:BA:1639:U:H2'	31:BA:1640:C:H5''	1.69	0.74
35:BF:164:ARG:HH11	35:BF:164:ARG:HG2	1.51	0.74
41:BP:146:VAL:HG22	41:BP:147:LEU:N	2.01	0.74
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.68	0.74
27:D5:2:ALA:HA	31:DA:2015:A:C1'	2.16	0.74
28:D6:13:CYS:O	28:D6:21:TYR:HA	1.87	0.74
31:DA:1181:C:O2'	31:DA:1182:A:H5'	1.88	0.74
1:AA:518:C:H2'	1:AA:530:G:C2	2.22	0.74
11:AK:111:ASP:HA	18:AR:84:LYS:HG3	1.69	0.74
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.15	0.74
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	1.87	0.74
29:B7:8:ASN:ND2	29:B7:8:ASN:C	2.40	0.74
31:BA:1158:C:O2'	31:BA:1159:U:O5'	2.03	0.74
34:BE:132:HIS:CG	34:BE:135:HIS:NE2	2.55	0.74
37:BH:153:LYS:HD3	37:BH:153:LYS:N	2.02	0.74
39:BN:121:LYS:HD2	39:BN:123:TYR:CZ	2.22	0.74
41:BP:120:ALA:O	25:D3:1:MET:HA	1.87	0.74
50:BY:97:ARG:HG3	50:BY:97:ARG:O	1.83	0.74
24:D2:26:ARG:HG2	49:DX:5:TYR:HB3	1.69	0.74
31:DA:370:G:H4'	31:DA:371:A:OP2	1.85	0.74
33:DD:270:ILE:HD12	33:DD:270:ILE:O	1.86	0.74
49:DX:59:VAL:HG23	49:DX:60:ARG:H	1.52	0.74
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.17	0.74
4:AD:161:ASN:O	4:AD:165:MET:HG2	1.88	0.74
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.51	0.74
20:AT:13:LEU:H	20:AT:13:LEU:HD12	1.52	0.74
30:B8:25:MET:HB2	41:BP:62:LEU:CD2	2.16	0.74
30:B8:34:TRP:O	30:B8:35:GLN:HB2	1.85	0.74
37:BH:137:ASP:CB	37:BH:140:LYS:HB2	2.17	0.74
44:BS:14:VAL:HG12	44:BS:15:ARG:N	2.03	0.74
31:DA:157:U:H5'	31:DA:171:G:H22	1.51	0.74
31:DA:288:C:H42	31:DA:353:G:H1	1.35	0.74
32:DB:82:G:H2'	32:DB:83:G:H5'	1.67	0.74
33:DD:267:SER:C	33:DD:269:PHE:H	1.91	0.74
34:DE:119:ARG:HH11	34:DE:119:ARG:CG	1.94	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:153:LYS:HD3	37:DH:153:LYS:N	2.01	0.74
48:DW:4:LYS:HE3	48:DW:6:ILE:HD11	1.69	0.74
50:DY:39:VAL:HG12	50:DY:40:GLU:N	2.00	0.74
1:AA:102:G:H2'	1:AA:103:C:H6	1.53	0.74
20:AT:89:ARG:HB2	20:AT:104:LEU:HD11	1.68	0.74
31:BA:92:A:H2'	31:BA:93:G:O4'	1.87	0.74
51:BZ:5:LEU:HD13	51:BZ:43:GLU:HB3	1.69	0.74
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.17	0.74
15:CO:82:ILE:HG12	15:CO:87:ILE:HB	1.67	0.74
31:DA:1582:C:O2'	31:DA:1586:A:C8	2.40	0.74
31:DA:1590:U:H2'	31:DA:1591:G:H5''	1.70	0.74
31:DA:2801(A):A:H4'	31:DA:2802:G:H5'	1.70	0.74
33:DD:31:LYS:HG2	33:DD:34:VAL:HG13	1.69	0.74
42:DQ:134:ARG:HH21	51:DZ:122:ARG:HD2	1.51	0.74
50:DY:97:ARG:O	50:DY:97:ARG:HG3	1.86	0.74
45:BT:109:GLU:O	45:BT:112:ARG:HG3	1.88	0.74
46:BU:88:ILE:C	46:BU:90:VAL:N	2.39	0.74
46:BU:92:ARG:HD2	47:BV:11:GLN:HG3	1.69	0.74
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.68	0.74
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.52	0.74
23:D1:19:GLN:NE2	31:DA:379:G:H21	1.86	0.74
31:DA:143(A):C:H5'	49:DX:36:LYS:HG2	1.69	0.74
39:DN:78:TYR:HD1	39:DN:79:PRO:CD	2.00	0.74
45:DT:109:GLU:O	45:DT:112:ARG:HG3	1.88	0.74
48:DW:18:ARG:HH11	48:DW:18:ARG:HG2	1.51	0.74
1:AA:355:C:C2'	1:AA:356:A:H5'	2.18	0.74
1:AA:409:G:H2'	1:AA:410:G:H5'	1.68	0.74
1:AA:568:G:O6	12:AL:5:PRO:HD3	1.87	0.74
9:AI:112:LYS:HE3	9:AI:116:LYS:O	1.87	0.74
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.17	0.74
31:BA:2631:G:N2	34:BE:61:ARG:HH12	1.85	0.74
38:BI:133:HIS:CG	38:BI:134:PRO:HD2	2.22	0.74
39:BN:42:TRP:CB	46:BU:64:ARG:HH11	1.97	0.74
47:BV:66:ARG:HG2	47:BV:94:LEU:HG	1.70	0.74
47:BV:83:ARG:HH11	47:BV:83:ARG:HG3	1.52	0.74
1:CA:559:A:H4'	1:CA:560:U:H3'	1.69	0.74
4:CD:119:GLN:HG3	4:CD:123:HIS:HD2	1.53	0.74
14:CN:29:ARG:HD3	14:CN:40:CYS:SG	2.27	0.74
31:DA:814:C:C5	41:DP:27:HIS:NE2	2.55	0.74
34:DE:95:ILE:H	34:DE:95:ILE:HD12	1.50	0.74
34:DE:201:THR:HG22	34:DE:202:LYS:N	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:47:ALA:HB2	39:DN:112:LEU:CD1	2.18	0.74
47:DV:51:VAL:HG12	47:DV:52:VAL:H	1.53	0.74
2:AB:172:ILE:H	2:AB:172:ILE:HD12	1.53	0.74
28:B6:27:LYS:HE3	31:BA:2285:C:H5	1.52	0.74
33:BD:27:THR:HG23	33:BD:28:GLU:N	2.03	0.74
44:BS:95:HIS:CG	44:BS:96:GLY:H	2.06	0.74
46:BU:83:LEU:CG	46:BU:88:ILE:HG12	2.17	0.74
46:BU:100:VAL:HG12	46:BU:101:ARG:N	2.03	0.74
50:BY:15:VAL:HG12	50:BY:17:SER:H	1.53	0.74
31:DA:65:C:H2'	31:DA:66:C:C6	2.22	0.74
31:DA:2572:A:C8	34:DE:144:ARG:HD2	2.23	0.74
51:DZ:166:SER:OG	51:DZ:167:PRO:HA	1.86	0.74
1:AA:186:C:H2'	1:AA:187:C:H6	1.52	0.74
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.50	0.74
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	2.03	0.74
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.52	0.74
31:BA:1836:C:O2'	31:BA:1837:C:H5'	1.88	0.74
34:BE:119:ARG:HH11	34:BE:119:ARG:CG	1.95	0.74
35:BF:24:LEU:HB3	35:BF:25:PRO:CD	2.16	0.74
36:BG:123:ASN:O	36:BG:126:ASP:HB2	1.88	0.74
39:BN:67:LEU:HA	39:BN:88:GLU:HG3	1.69	0.74
39:BN:119:ARG:HG3	39:BN:119:ARG:NH1	1.96	0.74
40:BO:13:ASN:HD21	40:BO:97:ARG:H	1.36	0.74
47:BV:70:ILE:HB	47:BV:90:PRO:HB2	1.69	0.74
47:BV:90:PRO:CG	47:BV:91:TYR:N	2.51	0.74
49:BX:38:GLU:N	49:BX:38:GLU:OE1	2.21	0.74
1:CA:102:G:C5	1:CA:103:C:C5	2.76	0.74
1:CA:148:G:O2'	1:CA:149:A:H5'	1.87	0.74
23:D1:14:VAL:O	23:D1:46:LEU:HD23	1.88	0.74
30:D8:34:TRP:O	30:D8:35:GLN:HB2	1.85	0.74
31:DA:2094:G:C2'	31:DA:2095:C:H5'	2.17	0.74
41:DP:120:ALA:CB	41:DP:138:LEU:HB3	2.18	0.74
50:DY:71:LYS:HB2	50:DY:71:LYS:HZ2	1.53	0.74
1:AA:472:A:H4'	16:AP:82:GLN:HE22	1.51	0.74
31:BA:661:C:H4'	41:BP:16:ARG:NH1	2.03	0.74
31:BA:1652:A:C2'	31:BA:1653:G:H5'	2.18	0.74
31:BA:1794:U:H2'	31:BA:1795:C:H6	1.50	0.74
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HD2	1.69	0.74
27:D5:40:LYS:NZ	27:D5:49:CYS:SG	2.61	0.74
31:DA:8:A:H2'	31:DA:9:U:C5	2.22	0.74
51:DZ:5:LEU:HD13	51:DZ:43:GLU:HB3	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.21	0.73
1:AA:859:A:H2'	1:AA:860:A:O4'	1.87	0.73
24:B2:30:ARG:HG3	24:B2:30:ARG:HH11	1.52	0.73
31:BA:83:G:N2	31:BA:102:G:O2'	2.21	0.73
31:BA:2656:U:H3	31:BA:2665:A:H2	1.32	0.73
34:BE:111:ARG:HA	43:BR:2:ARG:HG3	1.69	0.73
39:BN:62:VAL:CG2	39:BN:66:LYS:HD2	2.18	0.73
43:BR:4:LEU:O	43:BR:4:LEU:CD1	2.35	0.73
1:CA:163:C:H2'	1:CA:164:U:H6	1.52	0.73
1:CA:594:G:H1	1:CA:645:C:H42	1.34	0.73
6:CF:20:ALA:HA	6:CF:23:LYS:HB2	1.70	0.73
31:DA:1047:G:H21	31:DA:1111:A:H62	1.34	0.73
31:DA:2492:U:H2'	31:DA:2493:U:H6	1.53	0.73
33:DD:35:LYS:CD	33:DD:63:ARG:HB3	2.17	0.73
47:DV:1:MET:HE3	47:DV:44:LYS:HB3	1.70	0.73
47:DV:83:ARG:HH11	47:DV:83:ARG:HG3	1.52	0.73
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.88	0.73
4:AD:119:GLN:HG3	4:AD:123:HIS:HD2	1.53	0.73
24:B2:41:ILE:HG21	31:BA:95:G:H21	1.52	0.73
32:BB:87:G:H8	32:BB:87:G:OP2	1.71	0.73
33:BD:25:THR:HG22	33:BD:82:ILE:O	1.88	0.73
41:BP:71:VAL:HG12	41:BP:72:PRO:HD3	1.71	0.73
50:BY:96:ILE:HG21	50:BY:99:CYS:HB3	1.68	0.73
51:BZ:163:LEU:HD11	51:BZ:167:PRO:HB3	1.68	0.73
1:CA:954:G:N2	1:CA:1227:A:H62	1.85	0.73
5:CE:110:LEU:O	5:CE:115:VAL:HG23	1.89	0.73
19:CS:36:ARG:HH12	19:CS:75:ALA:HB3	1.53	0.73
31:DA:1288:U:C2	31:DA:1327:C:O2	2.41	0.73
32:DB:20:C:H2'	32:DB:21:G:C5'	2.18	0.73
50:DY:81:LYS:HG2	50:DY:96:ILE:HG22	1.69	0.73
1:AA:939:G:H5''	7:AG:102:ARG:NH1	2.03	0.73
31:BA:1022:G:N2	31:BA:1142(A):A:C2	2.56	0.73
31:BA:1047:G:N2	31:BA:1111:A:H62	1.86	0.73
39:BN:119:ARG:HH11	39:BN:119:ARG:CG	1.99	0.73
51:BZ:149:SER:HB2	51:BZ:172:ALA:O	1.86	0.73
1:CA:1123:A:O2'	10:CJ:38:ILE:HG22	1.89	0.73
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.71	0.73
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.19	0.73
31:DA:139(A):G:N2	49:DX:44:GLU:OE1	2.20	0.73
31:DA:330:A:H2	31:DA:1210:A:C2'	2.01	0.73
31:DA:2262:U:O2'	31:DA:2263:C:H5''	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:57:ALA:C	39:DN:58:ASP:O	2.24	0.73
1:AA:954:G:N2	1:AA:1227:A:H62	1.86	0.73
30:B8:59:LYS:HD3	41:BP:50:ARG:HB3	1.69	0.73
31:BA:142:A:H5'	31:BA:142(A):C:OP2	1.88	0.73
31:BA:259:G:H21	31:BA:621:A:H8	1.36	0.73
31:BA:309:G:O3'	50:BY:18:GLY:HA2	1.88	0.73
31:BA:2801(A):A:H4'	31:BA:2802:G:H5'	1.70	0.73
31:BA:2801(A):A:H4'	31:BA:2802:G:H2'	1.70	0.73
39:BN:68:GLU:HA	39:BN:86:PRO:HB3	1.70	0.73
45:BT:31:SER:C	45:BT:32:TYR:HD2	1.91	0.73
1:CA:428:G:H4'	1:CA:429:U:O5'	1.88	0.73
1:CA:859:A:H2'	1:CA:860:A:O4'	1.88	0.73
1:CA:913:A:H4'	1:CA:914:A:O5'	1.87	0.73
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	1.87	0.73
13:CM:3:ARG:NH2	36:DG:139:LEU:HD13	2.01	0.73
30:D8:27:THR:HA	41:DP:62:LEU:HD11	1.70	0.73
30:D8:43:GLN:C	30:D8:44:LYS:HD2	2.09	0.73
31:DA:1678:G:H21	31:DA:1989:G:H22	1.36	0.73
33:DD:25:THR:HG22	33:DD:82:ILE:O	1.87	0.73
33:DD:130:ALA:C	33:DD:131:LEU:HD12	2.09	0.73
1:AA:376:G:OP2	16:AP:67:THR:HG21	1.88	0.73
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.03	0.73
9:AI:103:THR:HG22	9:AI:105:ASP:H	1.54	0.73
9:AI:124:GLN:O	9:AI:125:TYR:HB2	1.88	0.73
20:AT:50:GLU:HB3	20:AT:100:ILE:CG1	2.18	0.73
23:B1:10:LYS:HB2	23:B1:14:VAL:N	2.03	0.73
31:BA:128:C:H6	31:BA:128:C:H5''	1.54	0.73
31:BA:543:C:H42	31:BA:551:G:H1	1.36	0.73
31:BA:995:C:C2	39:BN:4:TYR:OH	2.36	0.73
32:BB:32:C:C2	32:BB:51:G:N2	2.57	0.73
33:BD:77:ALA:HB2	33:BD:97:TYR:CD2	2.23	0.73
35:BF:5:ALA:HB2	35:BF:24:LEU:HD11	1.69	0.73
46:BU:92:ARG:NH2	47:BV:10:LYS:HA	2.04	0.73
49:BX:26:TYR:OH	49:BX:89:ILE:HG21	1.86	0.73
13:CM:3:ARG:HA	13:CM:9:ILE:HG13	1.70	0.73
31:DA:271(F):C:H2'	31:DA:271(G):C:H6	1.53	0.73
35:DF:57:VAL:HG13	35:DF:58:ALA:N	2.02	0.73
37:DH:13:LYS:HE2	37:DH:13:LYS:HA	1.68	0.73
1:AA:163:C:H2'	1:AA:164:U:H6	1.52	0.73
3:AC:34:LEU:O	3:AC:38:ARG:HG2	1.89	0.73
3:AC:52:LEU:H	3:AC:52:LEU:HD23	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:26:ARG:HG2	49:BX:5:TYR:HB3	1.70	0.73
31:BA:8:A:H2'	31:BA:9:U:C5	2.22	0.73
31:BA:271(K):U:H3'	31:BA:271(L):U:H5'	1.69	0.73
31:BA:1403:C:H5''	31:BA:1471:A:H1'	1.69	0.73
35:BF:3:GLU:O	35:BF:19:GLU:HA	1.88	0.73
1:CA:1502:A:C2	1:CA:1505:G:N1	2.54	0.73
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.52	0.73
31:DA:142:A:H5'	31:DA:142(A):C:OP2	1.88	0.73
31:DA:528:A:H2	31:DA:2043:C:H5'	1.54	0.73
31:DA:1188:U:C2'	31:DA:1189:A:H5'	2.19	0.73
31:DA:2305:A:H5''	36:DG:134:GLY:HA3	1.71	0.73
28:B6:12:GLU:HA	28:B6:23:THR:HA	1.70	0.73
31:BA:141:A:H8	31:BA:1408:C:O2'	1.69	0.73
31:BA:1484:G:H22	31:BA:1505:C:H5	1.36	0.73
36:BG:18:GLU:O	36:BG:22:ARG:HB2	1.87	0.73
45:BT:32:TYR:HB3	45:BT:81:PRO:HB3	1.71	0.73
49:BX:23:GLU:CG	49:BX:24:GLY:H	2.01	0.73
1:CA:353:A:H5'	1:CA:353:A:C8	2.22	0.73
31:DA:142:A:C8	31:DA:1595:G:N2	2.54	0.73
33:DD:25:THR:HG23	33:DD:27:THR:HB	1.70	0.73
33:DD:35:LYS:HD3	33:DD:63:ARG:CB	2.19	0.73
36:DG:86:MET:HB2	36:DG:87:PRO:CD	2.18	0.73
37:DH:17:VAL:HG21	37:DH:50:VAL:HG21	1.70	0.73
37:DH:137:ASP:CB	37:DH:140:LYS:HB2	2.19	0.73
37:DH:157:TYR:HE1	37:DH:171:LEU:N	1.86	0.73
41:DP:47:ASP:HB3	41:DP:48:PRO:CA	2.18	0.73
25:B3:19:GLN:NE2	25:B3:52:HIS:HE1	1.86	0.73
31:BA:925:C:H2'	31:BA:926:A:H5''	1.71	0.73
31:BA:2029:G:H2'	31:BA:2031:A:OP2	1.88	0.73
41:BP:47:ASP:HB3	41:BP:48:PRO:CA	2.18	0.73
1:CA:224:C:H2'	1:CA:225:C:H6	1.53	0.73
2:CB:172:ILE:HD12	2:CB:172:ILE:H	1.54	0.73
6:CF:30:LEU:HB3	6:CF:35:ALA:HB3	1.69	0.73
31:DA:1899:G:N2	31:DA:1902:C:H5	1.85	0.73
31:DA:2660:A:C5'	31:DA:2661:G:H21	2.01	0.73
1:AA:66:G:H4'	1:AA:173:U:C5	2.23	0.73
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.69	0.73
33:BD:35:LYS:HE3	33:BD:65:ILE:N	2.02	0.73
42:BQ:29:PHE:O	42:BQ:30:GLY:O	2.05	0.73
1:CA:240:C:H2'	1:CA:241:C:C6	2.22	0.73
1:CA:355:C:C2'	1:CA:356:A:H5'	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:30:ARG:H	24:D2:30:ARG:HD2	1.53	0.73
31:DA:92:A:H2'	31:DA:93:G:O4'	1.89	0.73
31:DA:1509(A):A:H2'	31:DA:1509(B):A:H8	1.53	0.73
33:DD:255:LYS:HZ1	33:DD:255:LYS:N	1.86	0.73
36:DG:18:GLU:O	36:DG:22:ARG:HB2	1.87	0.73
39:DN:18:ALA:HB3	39:DN:26:LEU:CD2	2.15	0.73
39:DN:56:ASN:H	39:DN:125:GLY:HA3	1.54	0.73
47:DV:19:LYS:CG	47:DV:20:LEU:N	2.46	0.73
32:BB:20:C:H2'	32:BB:21:G:C5'	2.18	0.73
32:BB:87:G:C3'	32:BB:88:C:H5''	2.19	0.73
34:BE:38:THR:HG22	34:BE:40:GLU:N	2.02	0.73
12:CL:26:ALA:O	12:CL:27:LEU:HB2	1.88	0.73
16:CP:45:THR:HG22	16:CP:47:ASP:H	1.54	0.73
28:D6:36:LEU:HD13	28:D6:50:ARG:CZ	2.19	0.73
30:D8:30:ARG:O	30:D8:31:HIS:C	2.26	0.73
31:DA:2206:G:C2	31:DA:2207:G:H5'	2.24	0.73
41:DP:85:LEU:H	41:DP:85:LEU:CD2	2.01	0.73
49:DX:60:ARG:HG2	49:DX:71:GLY:HA3	1.70	0.73
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.52	0.72
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.88	0.72
23:B1:12:PRO:HD2	23:B1:62:VAL:HG23	1.69	0.72
31:BA:1771:C:O2'	31:BA:1786:A:H8	1.67	0.72
31:BA:2360:A:O2'	31:BA:2361:A:P	2.47	0.72
33:BD:270:ILE:O	33:BD:270:ILE:HD12	1.89	0.72
39:BN:56:ASN:H	39:BN:125:GLY:HA3	1.53	0.72
1:CA:186:C:H2'	1:CA:187:C:H6	1.54	0.72
2:CB:217:ARG:HA	2:CB:220:ASP:HB2	1.69	0.72
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.69	0.72
29:D7:9:ARG:NH1	31:DA:1310:G:OP2	2.21	0.72
31:DA:2801:A:O2'	31:DA:2895:U:H4'	1.89	0.72
46:DU:88:ILE:C	46:DU:90:VAL:H	1.89	0.72
47:DV:90:PRO:HG2	47:DV:91:TYR:N	1.99	0.72
1:AA:240:C:H2'	1:AA:241:C:C6	2.23	0.72
1:AA:1502:A:C2	1:AA:1505:G:N1	2.56	0.72
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.19	0.72
31:BA:2263:C:H5'	31:BA:2263:C:H6	1.53	0.72
31:BA:2598:A:P	33:BD:236:GLY:HA3	2.29	0.72
36:BG:55:LYS:HG2	36:BG:58:GLN:HE21	1.54	0.72
41:BP:140:ALA:O	25:D3:1:MET:SD	2.47	0.72
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.23	0.72
20:CT:71:THR:HG22	20:CT:72:LEU:N	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:271(R):G:O2'	31:DA:271(S):G:H5'	1.88	0.72
35:DF:3:GLU:O	35:DF:19:GLU:HA	1.89	0.72
35:DF:67:GLN:HG3	35:DF:67:GLN:O	1.89	0.72
51:DZ:7:ALA:HB3	51:DZ:61:LEU:CD2	2.19	0.72
1:AA:622:A:C8	1:AA:623:C:C6	2.77	0.72
1:AA:627:G:H2'	1:AA:628:G:C8	2.23	0.72
31:BA:271(F):C:H2'	31:BA:271(G):C:H6	1.52	0.72
31:BA:330:A:C2	31:BA:1210:A:H2'	2.22	0.72
31:BA:1639:U:C2'	31:BA:1640:C:H5''	2.19	0.72
32:BB:87:G:OP2	32:BB:87:G:C8	2.42	0.72
40:BO:13:ASN:HD21	40:BO:96:THR:H	1.37	0.72
41:BP:71:VAL:CG1	41:BP:72:PRO:HD3	2.19	0.72
1:CA:568:G:O6	12:CL:5:PRO:HD3	1.89	0.72
3:CC:34:LEU:O	3:CC:38:ARG:HG2	1.90	0.72
31:DA:518:G:H4'	48:DW:18:ARG:NH1	2.04	0.72
31:DA:1484:G:N2	31:DA:1505:C:H41	1.86	0.72
31:DA:1821:A:H2'	31:DA:1822:G:C5'	2.19	0.72
33:DD:27:THR:O	33:DD:29:PRO:HD2	1.90	0.72
39:DN:119:ARG:HH11	39:DN:119:ARG:CG	1.99	0.72
43:DR:67:LEU:CD1	43:DR:76:VAL:HG21	2.19	0.72
46:DU:100:VAL:HG12	46:DU:101:ARG:N	2.04	0.72
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.71	0.72
4:AD:128:VAL:HG13	4:AD:129:ASN:ND2	2.02	0.72
31:BA:271(R):G:O2'	31:BA:271(S):G:H5'	1.89	0.72
42:BQ:8:LYS:HG3	42:BQ:9:TYR:N	2.02	0.72
43:BR:87:TYR:O	43:BR:89:ASP:N	2.21	0.72
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.71	0.72
1:CA:1117:G:H4'	9:CI:104:ARG:NH2	2.04	0.72
11:CK:125:PHE:N	11:CK:125:PHE:HD1	1.88	0.72
12:CL:91:LYS:O	12:CL:91:LYS:HG3	1.88	0.72
27:D5:46:CYS:SG	27:D5:47:PRO:CD	2.78	0.72
31:DA:1822:G:H5'	31:DA:1822:G:C8	2.21	0.72
31:DA:2660:A:H5'	31:DA:2661:G:H21	1.55	0.72
35:DF:28:ILE:HG21	35:DF:116:ASP:HB2	1.70	0.72
42:DQ:6:ARG:O	42:DQ:7:MET:HG2	1.90	0.72
42:DQ:140:ALA:HA	51:DZ:99:TYR:CD2	2.24	0.72
44:DS:28:VAL:O	44:DS:89:ARG:HD2	1.89	0.72
44:DS:92:TYR:HD1	44:DS:93:LYS:N	1.79	0.72
45:DT:128:GLU:O	45:DT:130:ALA:N	2.23	0.72
27:B5:2:ALA:HA	31:BA:2015:A:C1'	2.16	0.72
38:BI:133:HIS:HB2	38:BI:134:PRO:HD2	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:24:LYS:HB2	47:BV:92:THR:OG1	1.89	0.72
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.23	0.72
17:CQ:5:VAL:O	17:CQ:6:LEU:HD23	1.90	0.72
24:D2:14:ARG:O	24:D2:18:PRO:HD3	1.88	0.72
27:D5:54:GLY:O	27:D5:56:LYS:NZ	2.19	0.72
31:DA:2029:G:H2'	31:DA:2031:A:OP2	1.89	0.72
31:DA:2418:A:H2'	31:DA:2419:U:C6	2.24	0.72
31:DA:2801(A):A:H4'	31:DA:2802:G:H2'	1.70	0.72
32:DB:32:C:C2	32:DB:51:G:N2	2.58	0.72
34:DE:48:GLN:NE2	34:DE:78:LEU:HD13	2.05	0.72
35:DF:5:ALA:HB2	35:DF:24:LEU:HD11	1.71	0.72
49:DX:23:GLU:CG	49:DX:24:GLY:H	2.02	0.72
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.70	0.72
19:AS:36:ARG:HH12	19:AS:75:ALA:HB3	1.53	0.72
31:BA:607:U:N3	31:BA:621:A:C2	2.54	0.72
37:BH:157:TYR:HE1	37:BH:171:LEU:N	1.85	0.72
50:BY:45:VAL:HG11	50:BY:60:PHE:O	1.89	0.72
1:CA:247:G:OP2	17:CQ:100:LYS:HG2	1.89	0.72
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.17	0.72
9:CI:53:VAL:HG12	9:CI:95:LYS:HG2	1.72	0.72
23:D1:16:ASN:HB3	23:D1:46:LEU:HD12	1.71	0.72
31:DA:247:G:H4'	31:DA:386:G:C5	2.25	0.72
31:DA:2523:G:H2'	31:DA:2524:G:C5'	2.19	0.72
39:DN:67:LEU:HA	39:DN:88:GLU:HG3	1.69	0.72
39:DN:112:LEU:HD12	39:DN:112:LEU:O	1.90	0.72
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CE2	2.23	0.72
45:DT:55:ASN:H	45:DT:59:THR:HB	1.54	0.72
15:AO:82:ILE:HG12	15:AO:87:ILE:HB	1.70	0.72
28:B6:15:GLU:HG2	28:B6:18:ARG:NE	2.02	0.72
31:BA:528:A:H2	31:BA:2043:C:H5'	1.55	0.72
31:BA:1181:C:O2'	31:BA:1182:A:H5'	1.89	0.72
33:BD:25:THR:O	33:BD:27:THR:N	2.22	0.72
34:BE:201:THR:HG22	34:BE:202:LYS:N	2.03	0.72
37:BH:13:LYS:HE2	37:BH:13:LYS:HA	1.71	0.72
47:BV:72:VAL:HG12	47:BV:73:SER:N	2.04	0.72
48:BW:86:LEU:HD12	48:BW:87:PRO:HD2	1.71	0.72
1:CA:950:U:H3'	13:CM:102:ARG:HH12	1.54	0.72
31:DA:467:G:C2'	31:DA:468:G:H5'	2.20	0.72
31:DA:2723:C:H5''	43:DR:2:ARG:HD2	1.70	0.72
33:DD:35:LYS:HA	33:DD:64:ILE:HG22	1.72	0.72
36:DG:55:LYS:HG2	36:DG:58:GLN:HE21	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:26:LEU:HD22	44:DS:87:PHE:CE1	2.25	0.72
44:DS:89:ARG:O	44:DS:92:TYR:HB3	1.90	0.72
11:AK:125:PHE:N	11:AK:125:PHE:HD1	1.88	0.72
47:BV:2:PHE:HE1	47:BV:13:ARG:NH2	1.88	0.72
30:D8:4:MET:SD	30:D8:61:LEU:HD12	2.29	0.72
31:DA:83:G:N2	31:DA:102:G:O2'	2.22	0.72
31:DA:598:G:H5'	41:DP:15:ARG:HD2	1.70	0.72
31:DA:626:U:C2	41:DP:105:LEU:HG	2.25	0.72
31:DA:1484:G:H21	31:DA:1505:C:H41	1.38	0.72
32:DB:44:G:H1'	32:DB:47:C:N4	2.05	0.72
33:DD:25:THR:HG23	33:DD:25:THR:O	1.88	0.72
37:DH:19:VAL:HB	37:DH:44:VAL:HG13	1.71	0.72
39:DN:42:TRP:CB	46:DU:64:ARG:HH11	1.98	0.72
1:AA:1004:A:H2'	1:AA:1038:C:O2	1.90	0.72
13:AM:15:VAL:O	13:AM:19:LEU:HD23	1.89	0.72
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.89	0.72
23:B1:37:ILE:HG21	31:BA:2080:G:OP1	1.90	0.72
27:B5:40:LYS:HD3	27:B5:46:CYS:CB	2.20	0.72
31:BA:370:G:H4'	31:BA:371:A:OP2	1.87	0.72
31:BA:1464:C:O2'	31:BA:1528:A:H8	1.69	0.72
31:BA:1654:A:OP1	43:BR:3:HIS:CB	2.35	0.72
31:BA:2415:G:H4'	41:BP:67:MET:H	1.53	0.72
2:CB:22:LYS:HA	2:CB:22:LYS:NZ	2.04	0.72
18:CR:62:GLU:HA	18:CR:65:ILE:HD11	1.72	0.72
23:D1:37:ILE:HD12	31:DA:2079:U:O2'	1.89	0.72
23:D1:37:ILE:HG21	31:DA:2080:G:OP1	1.90	0.72
24:D2:53:LEU:HD12	31:DA:77:C:OP1	1.90	0.72
31:DA:1497:U:C5'	31:DA:1498:C:H5	2.02	0.72
34:DE:111:ARG:HA	43:DR:2:ARG:HG3	1.72	0.72
35:DF:158:THR:HG23	35:DF:160:ASN:N	2.04	0.72
41:DP:51:PHE:HB3	41:DP:52:GLU:OE2	1.90	0.72
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.72	0.72
18:AR:62:GLU:HA	18:AR:65:ILE:HD11	1.71	0.72
31:BA:527:C:OP2	31:BA:2779:U:H5	1.71	0.72
39:BN:19:GLU:HG3	39:BN:20:GLY:H	1.55	0.72
41:BP:112:LEU:HD22	41:BP:113:LYS:N	2.05	0.72
41:BP:120:ALA:O	25:D3:1:MET:HG2	1.88	0.72
1:CA:737:A:H2'	1:CA:738:C:C6	2.25	0.72
1:CA:1004:A:H2'	1:CA:1038:C:O2	1.90	0.72
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.52	0.72
16:CP:76:GLN:HG2	16:CP:76:GLN:O	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:40:LYS:HD3	27:D5:46:CYS:CB	2.20	0.72
34:DE:38:THR:HG22	34:DE:40:GLU:N	2.04	0.72
45:DT:32:TYR:HB3	45:DT:81:PRO:HB3	1.71	0.72
1:AA:559:A:H5''	1:AA:560:U:H3'	1.70	0.71
1:AA:662:G:H2'	1:AA:663:A:H8	1.53	0.71
10:AJ:63:PHE:HB3	14:AN:57:ARG:O	1.90	0.71
25:B3:6:VAL:CG1	25:B3:54:VAL:HG11	2.19	0.71
31:BA:1210:A:H5'	31:BA:1210:A:C8	2.15	0.71
31:BA:1419:A:O2'	31:BA:1420:U:H5''	1.88	0.71
31:BA:1822:G:H5'	31:BA:1822:G:C8	2.19	0.71
31:BA:2781:A:H5''	31:BA:2782:G:H5'	1.71	0.71
42:BQ:141:GLN:HG2	51:BZ:71:VAL:O	1.90	0.71
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.71	0.71
28:D6:44:ARG:O	28:D6:45:LYS:HG2	1.90	0.71
29:D7:8:ASN:ND2	29:D7:8:ASN:C	2.41	0.71
36:DG:123:ASN:O	36:DG:126:ASP:HB2	1.89	0.71
38:DI:133:HIS:HB2	38:DI:134:PRO:HD2	1.72	0.71
48:DW:4:LYS:HB2	48:DW:106:ILE:CG2	2.19	0.71
49:DX:38:GLU:N	49:DX:38:GLU:OE1	2.22	0.71
50:DY:44:ILE:HD12	50:DY:44:ILE:H	1.54	0.71
18:AR:50:ILE:HD11	18:AR:70:ILE:HG21	1.71	0.71
31:BA:143(A):C:H5'	49:BX:36:LYS:HG2	1.71	0.71
31:BA:1484:G:N2	31:BA:1505:C:H41	1.89	0.71
31:BA:2206:G:C2	31:BA:2207:G:H5'	2.24	0.71
38:BI:2:LYS:HB2	38:BI:39:ALA:HB3	1.70	0.71
47:BV:90:PRO:HG2	47:BV:91:TYR:N	1.99	0.71
1:CA:22:G:H2'	1:CA:23:C:C6	2.25	0.71
4:CD:161:ASN:O	4:CD:165:MET:HG2	1.89	0.71
23:D1:26:ARG:CG	23:D1:34:THR:HB	2.20	0.71
31:DA:951:C:O2'	31:DA:952:G:H5'	1.89	0.71
31:DA:1332:G:N2	31:DA:1610:A:C8	2.58	0.71
31:DA:1434:A:H61	31:DA:1558:A:N6	1.89	0.71
32:DB:62:C:H2'	32:DB:63:G:H5''	1.72	0.71
33:DD:63:ARG:HG3	33:DD:63:ARG:HH11	1.54	0.71
37:DH:41:MET:HA	37:DH:41:MET:HE2	1.70	0.71
39:DN:3:THR:HA	39:DN:4:TYR:CD1	2.24	0.71
46:DU:92:ARG:NH2	47:DV:10:LYS:HA	2.05	0.71
30:B8:40:GLU:OE1	30:B8:44:LYS:HE3	1.90	0.71
30:B8:43:GLN:C	30:B8:44:LYS:HD2	2.10	0.71
36:BG:47:LYS:HE2	36:BG:81:LYS:HB2	1.70	0.71
41:BP:6:LEU:HG	41:BP:8:PRO:O	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:81:LYS:HG2	50:BY:96:ILE:HG22	1.71	0.71
4:CD:189:PRO:HB3	4:CD:194:LEU:HD21	1.72	0.71
31:DA:527:C:OP2	31:DA:2779:U:H5	1.72	0.71
31:DA:993:G:H1'	47:DV:91:TYR:CD1	2.25	0.71
31:DA:2223:G:C2'	31:DA:2224:G:H5'	2.18	0.71
31:DA:2598:A:P	33:DD:236:GLY:HA3	2.30	0.71
34:DE:47:VAL:HG22	34:DE:84:PHE:O	1.88	0.71
34:DE:61:ARG:H	34:DE:62:PRO:HD2	1.55	0.71
41:DP:17:LYS:O	41:DP:19:VAL:N	2.22	0.71
44:DS:14:VAL:HG12	44:DS:15:ARG:N	2.05	0.71
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	1.91	0.71
12:AL:46:LYS:HG2	12:AL:47:LYS:H	1.56	0.71
28:B6:13:CYS:O	28:B6:21:TYR:HA	1.91	0.71
31:BA:671:C:H5'	31:BA:671:C:C6	2.25	0.71
31:BA:1332:G:N2	31:BA:1610:A:H8	1.88	0.71
31:BA:2206:G:N2	31:BA:2207:G:C5'	2.48	0.71
31:BA:2327:A:H2'	31:BA:2328:A:C8	2.25	0.71
38:BI:102:SER:HA	38:BI:107:VAL:O	1.90	0.71
1:CA:673:G:H2'	1:CA:674:G:C8	2.24	0.71
1:CA:1446:U:H4'	1:CA:1447:A:N7	2.06	0.71
18:CR:25:THR:HG22	18:CR:42:ARG:HH11	1.55	0.71
31:DA:2360:A:O2'	31:DA:2361:A:P	2.48	0.71
39:DN:18:ALA:CB	39:DN:26:LEU:HD22	2.17	0.71
47:DV:25:LEU:HB2	47:DV:94:LEU:HD13	1.72	0.71
1:AA:386:C:O2'	1:AA:387:U:H5'	1.91	0.71
31:BA:322:A:H5'	31:BA:340:A:H1'	1.71	0.71
31:BA:1434:A:O2'	31:BA:1435:G:H5'	1.90	0.71
31:BA:1582:C:O2'	31:BA:1586:A:C8	2.43	0.71
31:BA:2660:A:H5'	31:BA:2661:G:H21	1.55	0.71
31:BA:2801:A:O2'	31:BA:2895:U:H4'	1.90	0.71
47:BV:82:ARG:CG	47:BV:82:ARG:NH1	2.39	0.71
1:CA:687:A:N3	1:CA:688:G:H1'	2.04	0.71
1:CA:1128:C:H5'	9:CI:16:ARG:NH1	2.05	0.71
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.90	0.71
12:CL:82:VAL:HG12	12:CL:83:VAL:N	2.05	0.71
30:D8:34:TRP:HZ3	30:D8:41:ILE:HG23	1.53	0.71
31:DA:298:G:H5'	31:DA:299:A:OP1	1.90	0.71
38:DI:1:MET:HB2	38:DI:21:VAL:O	1.89	0.71
47:DV:1:MET:HE3	47:DV:44:LYS:CB	2.20	0.71
50:DY:96:ILE:HG22	50:DY:97:ARG:H	1.54	0.71
1:AA:1446:U:H4'	1:AA:1447:A:N7	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:510:C:C2'	31:BA:511:U:H5'	2.21	0.71
31:BA:916:G:C2'	31:BA:917:A:H5''	2.21	0.71
31:BA:1697:G:C8	31:BA:1697:G:C5'	2.71	0.71
31:BA:2523:G:H2'	31:BA:2524:G:C5'	2.19	0.71
31:BA:2565:A:H5''	31:BA:2566:A:OP2	1.91	0.71
37:BH:103:LEU:HD21	37:BH:105:LEU:HD11	1.72	0.71
40:BO:13:ASN:ND2	40:BO:97:ARG:H	1.89	0.71
42:BQ:140:ALA:HB1	51:BZ:99:TYR:HB2	1.71	0.71
49:BX:24:GLY:HA3	49:BX:80:ILE:HG13	1.72	0.71
1:CA:108:G:H5''	1:CA:109:A:H5''	1.72	0.71
1:CA:392:G:H2'	1:CA:393:A:H8	1.55	0.71
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.73	0.71
20:CT:13:LEU:HD12	20:CT:13:LEU:H	1.54	0.71
31:DA:661:C:H4'	41:DP:18:ARG:HG2	1.70	0.71
31:DA:794:G:H2'	31:DA:795:C:H6	1.55	0.71
31:DA:996:A:H4'	46:DU:92:ARG:NE	2.06	0.71
33:DD:77:ALA:HB2	33:DD:97:TYR:CD2	2.25	0.71
45:DT:61:PHE:CE2	45:DT:76:PHE:HB2	2.25	0.71
47:DV:38:LEU:HG	47:DV:39:LEU:N	2.04	0.71
50:DY:8:LYS:NZ	50:DY:74:PRO:HD3	2.04	0.71
51:DZ:4:ARG:HG2	51:DZ:58:VAL:HB	1.73	0.71
1:AA:382:A:H2'	1:AA:383:A:C8	2.25	0.71
1:AA:827:U:H2'	1:AA:859:A:H61	1.55	0.71
1:AA:1418:A:N3	31:BA:1959:G:H1'	2.05	0.71
31:BA:910:A:H62	42:BQ:12:GLN:HA	1.55	0.71
39:BN:65:LYS:HA	39:BN:65:LYS:CE	2.11	0.71
47:BV:1:MET:HE3	47:BV:44:LYS:HB3	1.72	0.71
50:BY:17:SER:CB	50:BY:71:LYS:HD2	2.21	0.71
50:BY:96:ILE:CD1	50:BY:99:CYS:SG	2.78	0.71
1:CA:321:A:H62	1:CA:328:C:H1'	1.55	0.71
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.71	0.71
25:D3:19:GLN:NE2	25:D3:52:HIS:CE1	2.58	0.71
31:DA:271(K):U:H3'	31:DA:271(L):U:H5'	1.70	0.71
35:DF:34:TRP:HB2	41:DP:10:PRO:O	1.90	0.71
42:DQ:29:PHE:O	42:DQ:30:GLY:O	2.08	0.71
49:DX:40:LYS:HG3	49:DX:51:VAL:HB	1.71	0.71
1:AA:1418:A:H2	31:BA:1948:G:N3	1.89	0.71
6:AF:20:ALA:HA	6:AF:23:LYS:HB2	1.72	0.71
23:B1:26:ARG:CG	23:B1:34:THR:HB	2.21	0.71
31:BA:49:A:H4'	31:BA:50:U:H5'	1.73	0.71
31:BA:1607:C:H4'	31:BA:1608:A:O5'	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2713:A:H3'	31:BA:2714:G:C5'	2.21	0.71
37:BH:149:ARG:HA	37:BH:162:ILE:HG13	1.71	0.71
45:BT:51:ARG:HG3	45:BT:98:LYS:HE2	1.72	0.71
50:BY:2:ARG:O	50:BY:4:LYS:N	2.24	0.71
1:CA:353:A:H8	1:CA:353:A:C5'	2.03	0.71
1:CA:441:A:H3'	1:CA:442:C:H6	1.56	0.71
1:CA:622:A:C8	1:CA:623:C:C6	2.79	0.71
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.19	0.71
2:CB:22:LYS:HA	2:CB:22:LYS:HZ3	1.55	0.71
9:CI:18:PHE:HB3	9:CI:20:ARG:HH11	1.56	0.71
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HH12	1.56	0.71
31:DA:286:C:N4	31:DA:355:G:H1	1.89	0.71
39:DN:66:LYS:HA	39:DN:69:GLN:HB2	1.73	0.71
42:DQ:78:PRO:O	42:DQ:79:LEU:HG	1.90	0.71
45:DT:31:SER:C	45:DT:32:TYR:CD2	2.64	0.71
49:DX:24:GLY:HA3	49:DX:80:ILE:CG1	2.21	0.71
51:DZ:152:ALA:HB2	51:DZ:168:GLU:HA	1.73	0.71
3:AC:73:PRO:O	3:AC:76:VAL:HG22	1.91	0.71
11:AK:13:GLN:HB3	11:AK:75:TYR:O	1.91	0.71
31:BA:467:G:C2'	31:BA:468:G:H5'	2.20	0.71
31:BA:2223:G:C2'	31:BA:2224:G:H5'	2.21	0.71
31:BA:2580:U:C5'	34:BE:131:ALA:H	2.04	0.71
33:BD:35:LYS:HD2	33:BD:104:TYR:CE1	2.25	0.71
33:BD:172:TYR:CE1	33:BD:186:HIS:HB2	2.24	0.71
34:BE:132:HIS:CD2	34:BE:135:HIS:CE1	2.79	0.71
35:BF:28:ILE:HG21	35:BF:116:ASP:HB2	1.72	0.71
37:BH:19:VAL:HB	37:BH:44:VAL:HG13	1.72	0.71
39:BN:18:ALA:CB	39:BN:21:LYS:HB2	2.16	0.71
45:BT:23:ARG:O	45:BT:25:GLY:N	2.23	0.71
45:BT:128:GLU:O	45:BT:130:ALA:N	2.24	0.71
46:BU:90:VAL:O	46:BU:92:ARG:N	2.23	0.71
47:BV:19:LYS:HG3	47:BV:20:LEU:O	1.91	0.71
47:BV:52:VAL:O	47:BV:53:GLU:HB3	1.91	0.71
1:CA:627:G:H2'	1:CA:628:G:C8	2.24	0.71
3:CC:105:GLU:HG2	3:CC:106:VAL:H	1.55	0.71
30:D8:6:THR:CG2	30:D8:63:PRO:HD3	2.21	0.71
31:DA:1019:U:H3	31:DA:1142(A):A:N6	1.85	0.71
31:DA:1348:G:H2'	31:DA:1349:A:H5'	1.73	0.71
31:DA:1836:C:O2'	31:DA:1837:C:H5'	1.90	0.71
40:DO:4:PRO:O	40:DO:5:GLN:HB2	1.91	0.71
40:DO:18:LYS:HB2	40:DO:45:GLU:HG2	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:18:ARG:HH21	5:AE:25:ARG:HG2	1.56	0.71
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.72	0.71
31:BA:626:U:C2	41:BP:105:LEU:HG	2.26	0.71
31:BA:1430:C:H2'	31:BA:1431:U:H6	1.52	0.71
31:BA:1484:G:H21	31:BA:1505:C:H41	1.39	0.71
31:BA:1510:G:C2'	31:BA:1511:C:H5'	2.21	0.71
31:BA:2223:G:H2'	31:BA:2224:G:H5'	1.73	0.71
31:BA:2492:U:H2'	31:BA:2493:U:H6	1.54	0.71
31:BA:2787:C:C1'	34:BE:61:ARG:HB2	2.21	0.71
32:BB:44:G:H1'	32:BB:47:C:N4	2.06	0.71
35:BF:183:VAL:O	35:BF:187:VAL:HG23	1.91	0.71
37:BH:89:ILE:HD11	37:BH:129:THR:HB	1.73	0.71
41:BP:30:THR:CG2	41:BP:31:ALA:H	2.03	0.71
49:BX:35:THR:O	49:BX:36:LYS:O	2.08	0.71
1:CA:80:G:H1	1:CA:89:C:H41	1.38	0.71
1:CA:163:C:H2'	1:CA:164:U:C6	2.25	0.71
1:CA:224:C:H2'	1:CA:225:C:C6	2.26	0.71
4:CD:68:TYR:CE2	4:CD:97:LEU:HB3	2.25	0.71
20:CT:82:SER:O	20:CT:86:ARG:HB2	1.89	0.71
33:DD:25:THR:O	33:DD:27:THR:N	2.24	0.71
44:DS:95:HIS:CG	44:DS:96:GLY:H	2.08	0.71
49:DX:53:LYS:H	49:DX:80:ILE:HG22	1.56	0.71
50:DY:96:ILE:CD1	50:DY:99:CYS:SG	2.79	0.71
1:AA:108:G:H5''	1:AA:109:A:H5''	1.72	0.70
1:AA:163:C:H2'	1:AA:164:U:C6	2.26	0.70
1:AA:262:A:H2'	1:AA:263:A:C8	2.26	0.70
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.72	0.70
1:AA:950:U:H3'	13:AM:102:ARG:HH12	1.54	0.70
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.26	0.70
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.91	0.70
23:B1:9:GLY:O	23:B1:10:LYS:HE2	1.89	0.70
31:BA:1019:U:H3	31:BA:1142(A):A:N6	1.86	0.70
33:BD:58:HIS:HD2	33:BD:59:LYS:O	1.73	0.70
36:BG:64:THR:HG23	36:BG:66:GLN:H	1.56	0.70
36:BG:124:SER:HB2	36:BG:131:TYR:CE1	2.26	0.70
41:BP:122:PRO:HA	41:BP:141:ALA:O	1.90	0.70
1:CA:475:G:H2'	1:CA:476:G:H8	1.54	0.70
31:DA:184:C:H2'	31:DA:185:U:C6	2.26	0.70
31:DA:1833:U:H2'	31:DA:1834:U:H6	1.55	0.70
31:DA:2537:U:H2'	31:DA:2538:C:C6	2.26	0.70
37:DH:103:LEU:HD21	37:DH:105:LEU:HD11	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.56	0.70
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.56	0.70
41:BP:75:ILE:HD13	41:BP:75:ILE:N	2.06	0.70
42:BQ:30:GLY:HA2	42:BQ:107:ALA:HB2	1.73	0.70
1:CA:194:C:C2'	1:CA:195:A:H5''	2.21	0.70
1:CA:518:C:H2'	1:CA:530:G:C2	2.25	0.70
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.56	0.70
29:D7:5:TRP:CD1	29:D7:7:PRO:HG3	2.26	0.70
31:DA:1429:G:H2'	31:DA:1430:C:C6	2.26	0.70
31:DA:1510:G:C2'	31:DA:1511:C:H5'	2.21	0.70
39:DN:62:VAL:CG2	39:DN:66:LYS:HD2	2.21	0.70
42:DQ:16:ARG:HB2	42:DQ:16:ARG:HH11	1.55	0.70
49:DX:70:LEU:HG	49:DX:71:GLY:H	1.56	0.70
1:AA:600:C:H2'	1:AA:601:C:H6	1.56	0.70
5:AE:101:ILE:CD1	5:AE:119:LEU:HD23	2.19	0.70
9:AI:18:PHE:HB3	9:AI:20:ARG:HH11	1.56	0.70
12:AL:26:ALA:O	12:AL:27:LEU:HB2	1.89	0.70
23:B1:16:ASN:HB3	23:B1:46:LEU:HD12	1.73	0.70
31:BA:2190:G:H2'	31:BA:2191:G:H5'	1.72	0.70
49:BX:40:LYS:HG3	49:BX:51:VAL:HB	1.71	0.70
31:DA:259:G:H21	31:DA:621:A:H8	1.39	0.70
31:DA:464:U:O2'	31:DA:465:G:H5'	1.91	0.70
31:DA:830:G:H4'	31:DA:831:G:OP2	1.91	0.70
31:DA:1697:G:C8	31:DA:1697:G:C5'	2.72	0.70
31:DA:2849:U:OP2	45:DT:95:ARG:NH1	2.25	0.70
33:DD:260:ARG:HH22	33:DD:266:SER:HB2	1.54	0.70
39:DN:89:LYS:O	39:DN:93:THR:HG22	1.91	0.70
44:DS:33:LYS:HB3	44:DS:34:HIS:HD2	1.55	0.70
48:DW:2:GLU:HA	48:DW:64:MET:HE1	1.71	0.70
1:AA:194:C:C2'	1:AA:195:A:H5''	2.20	0.70
1:AA:1337:G:H5''	1:AA:1338:G:OP1	1.91	0.70
27:B5:57:VAL:O	27:B5:58:LEU:HG	1.91	0.70
30:B8:32:LEU:HB2	30:B8:35:GLN:N	2.06	0.70
31:BA:308:G:O2'	50:BY:19:LYS:HE3	1.92	0.70
31:BA:598:G:H5'	41:BP:15:ARG:HD2	1.72	0.70
31:BA:806:C:OP2	41:BP:39:LYS:CD	2.40	0.70
31:BA:1332:G:N2	31:BA:1610:A:C8	2.60	0.70
31:BA:1348:G:H2'	31:BA:1349:A:H5'	1.73	0.70
31:BA:2036:C:H5'	31:BA:2036:C:C6	2.26	0.70
33:BD:35:LYS:CD	33:BD:63:ARG:HB3	2.20	0.70
34:BE:4:ILE:HD13	34:BE:91:VAL:HG12	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:42:TRP:CA	39:BN:48:MET:HE1	2.21	0.70
45:BT:38:ASN:HD22	45:BT:40:THR:H	1.38	0.70
1:CA:66:G:H4'	1:CA:173:U:C5	2.26	0.70
31:DA:819:A:C4	31:DA:1189:A:C2	2.80	0.70
31:DA:1406:U:H2'	31:DA:1407:C:C6	2.27	0.70
31:DA:2335:A:O2'	31:DA:2336:A:H5''	1.91	0.70
35:DF:46:ARG:HG2	35:DF:46:ARG:NH1	2.00	0.70
44:DS:36:TYR:N	44:DS:36:TYR:CD1	2.55	0.70
45:DT:23:ARG:O	45:DT:25:GLY:N	2.24	0.70
46:DU:88:ILE:C	46:DU:90:VAL:N	2.41	0.70
47:DV:72:VAL:HG12	47:DV:73:SER:N	2.05	0.70
1:AA:80:G:H1	1:AA:89:C:H41	1.39	0.70
1:AA:102:G:C5	1:AA:103:C:C5	2.80	0.70
1:AA:475:G:H2'	1:AA:476:G:H8	1.55	0.70
1:AA:1117:G:H4'	9:AI:104:ARG:NH2	2.04	0.70
18:AR:25:THR:HG22	18:AR:42:ARG:HH11	1.56	0.70
24:B2:41:ILE:HG22	24:B2:42:GLY:N	2.06	0.70
35:BF:89:VAL:HG12	35:BF:90:PHE:N	2.06	0.70
39:BN:3:THR:HA	39:BN:4:TYR:CD1	2.26	0.70
42:BQ:8:LYS:CG	42:BQ:9:TYR:N	2.55	0.70
3:CC:157:ILE:HD11	3:CC:166:GLU:HB2	1.73	0.70
31:DA:2661:G:O2'	31:DA:2662:A:OP1	2.09	0.70
37:DH:43:VAL:O	37:DH:43:VAL:HG23	1.90	0.70
49:DX:34:ALA:O	49:DX:36:LYS:HG3	1.90	0.70
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.27	0.70
1:AA:1423:G:C5'	40:BO:49:ARG:NH2	2.54	0.70
31:BA:542:C:H2'	31:BA:543:C:OP1	1.92	0.70
31:BA:662:G:OP1	41:BP:18:ARG:HD2	1.91	0.70
31:BA:825:C:H2'	31:BA:826:U:O5'	1.92	0.70
42:BQ:78:PRO:O	42:BQ:79:LEU:HG	1.91	0.70
47:BV:2:PHE:HB2	47:BV:42:GLY:CA	2.22	0.70
47:BV:25:LEU:HB2	47:BV:94:LEU:HD13	1.73	0.70
1:CA:376:G:OP2	16:CP:67:THR:HG21	1.92	0.70
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.26	0.70
13:CM:66:LEU:H	13:CM:66:LEU:HD12	1.56	0.70
31:DA:542:C:N4	31:DA:543:C:H41	1.89	0.70
33:DD:35:LYS:HE3	33:DD:65:ILE:N	2.06	0.70
33:DD:58:HIS:HD2	33:DD:59:LYS:O	1.74	0.70
45:DT:28:VAL:HG12	45:DT:28:VAL:O	1.91	0.70
1:AA:509:A:H2'	1:AA:510:A:C8	2.26	0.70
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.12	0.70
31:BA:1678:G:H21	31:BA:1989:G:H22	1.38	0.70
31:BA:2317:C:C3'	31:BA:2318:G:H5'	2.21	0.70
33:BD:27:THR:O	33:BD:29:PRO:HD2	1.91	0.70
33:BD:35:LYS:HD3	33:BD:63:ARG:CB	2.22	0.70
39:BN:89:LYS:O	39:BN:93:THR:HG22	1.92	0.70
48:BW:2:GLU:HA	48:BW:64:MET:HE1	1.74	0.70
49:BX:53:LYS:HE3	49:BX:55:ASN:HD21	1.56	0.70
1:CA:853:G:H2'	1:CA:854:G:H8	1.56	0.70
1:CA:877:C:H5''	8:CH:88:LYS:HD3	1.72	0.70
1:CA:939:G:H5''	7:CG:102:ARG:HH12	1.57	0.70
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.26	0.70
31:DA:1171:G:C8	31:DA:1173:G:H1'	2.27	0.70
31:DA:2307:G:H21	31:DA:2308:G:H5'	1.52	0.70
32:DB:37:C:C5	32:DB:38:C:C4	2.80	0.70
37:DH:90:LYS:HB2	37:DH:159:GLU:O	1.91	0.70
40:DO:2:ILE:HD12	40:DO:6:THR:HG21	1.72	0.70
43:DR:87:TYR:O	43:DR:89:ASP:N	2.23	0.70
46:DU:83:LEU:CG	46:DU:88:ILE:HG12	2.18	0.70
47:DV:24:LYS:HB2	47:DV:92:THR:OG1	1.91	0.70
47:DV:70:ILE:HB	47:DV:90:PRO:HB2	1.73	0.70
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.55	0.70
27:B5:2:ALA:CA	31:BA:2015:A:H1'	2.18	0.70
27:B5:46:CYS:SG	27:B5:47:PRO:CD	2.80	0.70
31:BA:1171:G:C8	31:BA:1173:G:H1'	2.27	0.70
31:BA:1188:U:C2'	31:BA:1189:A:H5'	2.22	0.70
31:BA:1509(A):A:H2'	31:BA:1509(B):A:H8	1.55	0.70
31:BA:1719:G:C2'	31:BA:1720:U:H5'	2.21	0.70
33:BD:31:LYS:HG2	33:BD:34:VAL:HG13	1.72	0.70
41:BP:120:ALA:CB	41:BP:138:LEU:HB3	2.21	0.70
49:BX:70:LEU:HG	49:BX:71:GLY:H	1.56	0.70
1:CA:827:U:H2'	1:CA:859:A:H61	1.55	0.70
9:CI:103:THR:HG22	9:CI:105:ASP:H	1.56	0.70
9:CI:124:GLN:O	9:CI:125:TYR:HB2	1.90	0.70
39:DN:19:GLU:HG3	39:DN:20:GLY:N	2.05	0.70
1:AA:955:U:H1'	1:AA:1227:A:N6	2.06	0.70
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.56	0.70
30:B8:58:ILE:HG22	41:BP:49:ARG:HD2	1.72	0.70
31:BA:286:C:N4	31:BA:355:G:H1	1.89	0.70
49:BX:34:ALA:O	49:BX:36:LYS:HG3	1.91	0.70
1:CA:828:A:H2'	1:CA:829:G:O4'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.55	0.70
25:D3:11:SER:OG	25:D3:13:ILE:HG12	1.92	0.70
25:D3:43:ILE:O	25:D3:47:VAL:HG23	1.91	0.70
31:DA:542:C:H2'	31:DA:543:C:OP1	1.91	0.70
31:DA:1947:C:H2'	31:DA:1948:G:H5'	1.74	0.70
50:DY:2:ARG:O	50:DY:4:LYS:N	2.25	0.70
1:AA:632:A:C8	1:AA:633:G:C8	2.80	0.70
20:AT:71:THR:HG22	20:AT:72:LEU:N	2.07	0.70
22:B0:20:ARG:NH1	31:BA:2357:U:OP1	2.25	0.70
29:B7:9:ARG:NH1	31:BA:1310:G:OP2	2.19	0.70
30:B8:32:LEU:HD23	30:B8:35:GLN:CA	2.20	0.70
31:BA:34:C:C2'	31:BA:35:G:OP1	2.40	0.70
31:BA:588:U:H2'	31:BA:589:C:C6	2.26	0.70
31:BA:1722:A:C6	31:BA:1741:A:N1	2.59	0.70
39:BN:40:PRO:HB3	46:BU:68:ALA:HB2	1.73	0.70
43:BR:11:ASN:CG	43:BR:12:ARG:H	1.94	0.70
49:BX:60:ARG:HG2	49:BX:71:GLY:HA3	1.72	0.70
50:BY:96:ILE:HG21	50:BY:99:CYS:CB	2.21	0.70
1:CA:1239:A:H62	1:CA:1299:A:H62	1.40	0.70
31:DA:639:U:H2'	31:DA:640:C:C6	2.26	0.70
32:DB:87:G:C3'	32:DB:88:C:H5''	2.20	0.70
46:DU:92:ARG:HD2	47:DV:11:GLN:HG3	1.74	0.70
1:AA:735:C:H2'	1:AA:736:C:C6	2.27	0.69
1:AA:1409:C:H42	1:AA:1491:G:H1	1.39	0.69
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.26	0.69
24:B2:30:ARG:HD2	24:B2:30:ARG:H	1.55	0.69
28:B6:27:LYS:HE3	31:BA:2285:C:C5	2.26	0.69
42:BQ:81:VAL:C	42:BQ:82:ARG:HD2	2.13	0.69
1:CA:559:A:H5''	1:CA:560:U:H3'	1.73	0.69
1:CA:632:A:C8	1:CA:633:G:C8	2.80	0.69
1:CA:650:G:O2'	1:CA:651:C:H5'	1.92	0.69
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.74	0.69
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.73	0.69
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.27	0.69
22:D0:43:THR:HG22	31:DA:2331:G:O2'	1.92	0.69
25:D3:6:VAL:HG13	25:D3:54:VAL:HG11	1.72	0.69
30:D8:32:LEU:HB2	30:D8:35:GLN:N	2.06	0.69
31:DA:1720:U:H2'	31:DA:1721:G:O4'	1.92	0.69
31:DA:1973:G:H2'	31:DA:1974:C:C6	2.27	0.69
31:DA:2199:A:H3'	31:DA:2200:C:C6	2.26	0.69
35:DF:160:ASN:HD22	35:DF:162:LEU:H	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:28:LYS:CB	50:DY:37:VAL:HB	2.15	0.69
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.74	0.69
9:AI:53:VAL:HG12	9:AI:95:LYS:HG2	1.73	0.69
39:BN:95:PRO:O	39:BN:97:ARG:N	2.23	0.69
42:BQ:16:ARG:HH11	42:BQ:16:ARG:HB2	1.57	0.69
46:BU:74:LEU:HD12	46:BU:74:LEU:N	2.07	0.69
1:CA:437:U:H5'	4:CD:155:LEU:HD13	1.73	0.69
4:CD:57:ARG:HH22	5:CE:107:ARG:HD3	1.57	0.69
22:D0:2:ALA:H	31:DA:2602:A:N6	1.89	0.69
27:D5:57:VAL:HG23	27:D5:58:LEU:N	2.06	0.69
31:DA:1162:G:H1'	47:DV:91:TYR:OH	1.92	0.69
31:DA:1291:C:H2'	31:DA:1292:U:H6	1.57	0.69
31:DA:1688:U:H1'	31:DA:1701:A:C6	2.26	0.69
31:DA:2208:A:H1'	31:DA:2219:G:C4	2.27	0.69
31:DA:2317:C:C3'	31:DA:2318:G:H5'	2.22	0.69
34:DE:8:LYS:HD2	34:DE:188:VAL:HG13	1.74	0.69
34:DE:76:ARG:HG3	34:DE:195:LEU:HD22	1.74	0.69
39:DN:15:LEU:HD21	39:DN:55:VAL:HG22	1.73	0.69
39:DN:68:GLU:HA	39:DN:86:PRO:HB3	1.72	0.69
47:DV:52:VAL:O	47:DV:53:GLU:HB3	1.92	0.69
49:DX:60:ARG:HE	49:DX:74:PRO:CG	2.05	0.69
49:DX:77:LYS:CG	49:DX:78:LYS:HG3	2.22	0.69
1:AA:428:G:H4'	1:AA:429:U:O5'	1.92	0.69
4:AD:189:PRO:HB3	4:AD:194:LEU:HD21	1.73	0.69
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.75	0.69
25:B3:54:VAL:HG12	25:B3:55:ARG:N	2.07	0.69
33:BD:260:ARG:HH22	33:BD:266:SER:HB2	1.56	0.69
35:BF:160:ASN:C	35:BF:160:ASN:HD22	1.95	0.69
41:BP:17:LYS:HG3	41:BP:19:VAL:HG23	1.73	0.69
45:BT:29:ARG:HB3	45:BT:85:LYS:HA	1.73	0.69
47:BV:69:LYS:CG	47:BV:70:ILE:H	2.04	0.69
1:CA:659:U:C2'	1:CA:660:G:H5'	2.22	0.69
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.90	0.69
23:D1:64:ALA:HA	23:D1:67:ILE:HG13	1.74	0.69
35:DF:63:LYS:CE	35:DF:67:GLN:HB2	2.22	0.69
38:DI:82:ARG:O	38:DI:89:TYR:HB2	1.92	0.69
46:DU:69:CYS:HB3	46:DU:106:PHE:CZ	2.28	0.69
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.75	0.69
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.90	0.69
12:AL:27:LEU:O	12:AL:29:GLY:N	2.26	0.69
13:AM:66:LEU:H	13:AM:66:LEU:HD12	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:43:THR:H	31:BA:2331:G:H4'	1.57	0.69
31:BA:184:C:H2'	31:BA:185:U:C6	2.26	0.69
31:BA:2310:A:O2'	31:BA:2311:A:H5''	1.93	0.69
33:BD:130:ALA:C	33:BD:131:LEU:HD12	2.12	0.69
45:BT:31:SER:C	45:BT:32:TYR:CD2	2.64	0.69
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.74	0.69
23:D1:9:GLY:O	23:D1:10:LYS:HB3	1.93	0.69
30:D8:58:ILE:HG22	41:DP:49:ARG:HD2	1.72	0.69
31:DA:1790:C:H5''	31:DA:1791:A:OP1	1.92	0.69
39:DN:77:GLY:O	39:DN:78:TYR:HB3	1.91	0.69
39:DN:95:PRO:O	39:DN:97:ARG:N	2.26	0.69
42:DQ:30:GLY:HA2	42:DQ:107:ALA:HB2	1.73	0.69
1:AA:192:U:H2'	1:AA:193:C:H6	1.56	0.69
1:AA:328:C:O2	1:AA:328:C:H2'	1.91	0.69
23:B1:41:ARG:HH11	23:B1:41:ARG:CG	1.86	0.69
31:BA:2701:C:H3'	31:BA:2702:U:H5''	1.73	0.69
33:BD:25:THR:HG21	33:BD:81:ALA:CB	2.18	0.69
33:BD:25:THR:HG23	33:BD:25:THR:O	1.92	0.69
33:BD:255:LYS:H	33:BD:255:LYS:NZ	1.90	0.69
40:BO:104:ARG:CZ	45:BT:33:LYS:HD2	2.22	0.69
44:BS:28:VAL:HB	44:BS:89:ARG:HB2	1.74	0.69
47:BV:64:HIS:O	47:BV:64:HIS:CD2	2.46	0.69
49:BX:77:LYS:CG	49:BX:78:LYS:HG3	2.18	0.69
50:BY:35:TYR:CE2	50:BY:69:ALA:HB3	2.27	0.69
1:CA:509:A:H2'	1:CA:510:A:C8	2.27	0.69
1:CA:545:C:O2'	1:CA:546:G:H5'	1.93	0.69
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.58	0.69
13:CM:15:VAL:O	13:CM:19:LEU:HD23	1.92	0.69
31:DA:484:C:H2'	31:DA:485:C:C6	2.26	0.69
31:DA:1722:A:C6	31:DA:1741:A:N1	2.60	0.69
31:DA:2652:C:C2'	31:DA:2653:U:H5'	2.22	0.69
33:DD:137:PRO:O	33:DD:140:THR:HG23	1.93	0.69
33:DD:228:PRO:HD3	33:DD:235:GLY:CA	2.22	0.69
1:AA:437:U:H5''	4:AD:155:LEU:HD13	1.73	0.69
1:AA:616:G:C2	1:AA:617:G:C8	2.81	0.69
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.74	0.69
24:B2:54:LYS:N	24:B2:56:GLN:NE2	2.39	0.69
27:B5:16:ARG:NH1	27:B5:17:ASP:OD1	2.25	0.69
28:B6:15:GLU:OE1	28:B6:43:CYS:SG	2.51	0.69
31:BA:71:A:H8	31:BA:71:A:H5'	1.56	0.69
31:BA:1022:G:H22	31:BA:1142(A):A:H2	1.35	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1162:G:H1'	47:BV:91:TYR:OH	1.92	0.69
31:BA:2859:G:H3'	31:BA:2859:G:C8	2.28	0.69
1:CA:382:A:H2'	1:CA:383:A:C8	2.26	0.69
31:DA:1116:C:C2'	31:DA:1117:G:H5'	2.21	0.69
31:DA:1652:A:C2'	31:DA:1653:G:H5'	2.21	0.69
31:DA:2106:G:H1'	31:DA:2184:G:N2	2.08	0.69
32:DB:87:G:H8	32:DB:87:G:OP2	1.74	0.69
34:DE:92:THR:H	34:DE:95:ILE:HD11	1.58	0.69
41:DP:17:LYS:C	41:DP:19:VAL:H	1.95	0.69
45:DT:29:ARG:HB3	45:DT:85:LYS:HA	1.74	0.69
20:AT:37:SER:O	20:AT:41:ILE:HG12	1.93	0.69
30:B8:27:THR:HA	41:BP:62:LEU:HD11	1.75	0.69
31:BA:1794:U:H2'	31:BA:1795:C:C6	2.28	0.69
31:BA:2208:A:H1'	31:BA:2219:G:C4	2.27	0.69
33:BD:17:THR:CG2	33:BD:205:VAL:H	1.86	0.69
38:BI:9:LEU:H	38:BI:13:GLY:HA2	1.56	0.69
39:BN:66:LYS:HA	39:BN:69:GLN:HB2	1.75	0.69
45:BT:106:SER:O	45:BT:107:ASP:OD1	2.11	0.69
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.58	0.69
31:DA:916:G:C2'	31:DA:917:A:H5''	2.23	0.69
31:DA:1047:G:N2	31:DA:1111:A:H62	1.91	0.69
32:DB:87:G:OP2	32:DB:87:G:C8	2.45	0.69
34:DE:9:VAL:HG13	34:DE:25:VAL:O	1.93	0.69
34:DE:93:VAL:H	34:DE:95:ILE:CD1	2.06	0.69
39:DN:42:TRP:CA	39:DN:48:MET:HE1	2.23	0.69
45:DT:24:PRO:HA	45:DT:49:VAL:HG13	1.74	0.69
47:DV:5:VAL:CG2	47:DV:36:PRO:HB2	2.22	0.69
51:DZ:39:VAL:HG21	51:DZ:44:PHE:HB2	1.75	0.69
1:AA:224:C:H2'	1:AA:225:C:H6	1.56	0.69
1:AA:659:U:C2'	1:AA:660:G:H5'	2.22	0.69
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.75	0.69
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.73	0.69
12:AL:91:LYS:O	12:AL:91:LYS:HG3	1.91	0.69
23:B1:26:ARG:HB2	23:B1:34:THR:HA	1.75	0.69
31:BA:747:U:O2	31:BA:2014:A:H1'	1.91	0.69
33:BD:35:LYS:HA	33:BD:64:ILE:HG22	1.74	0.69
37:BH:32:GLU:O	37:BH:33:LEU:HD23	1.92	0.69
37:BH:141:VAL:HG12	37:BH:142:GLY:N	2.07	0.69
39:BN:18:ALA:HB3	39:BN:26:LEU:CD2	2.20	0.69
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HH11	1.58	0.69
44:BS:28:VAL:O	44:BS:89:ARG:HD2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:192:U:O4'	20:CT:103:GLY:HA2	1.92	0.69
1:CA:417:C:O2'	1:CA:418:C:H5'	1.92	0.69
1:CA:616:G:C2	1:CA:617:G:C8	2.80	0.69
1:CA:662:G:H2'	1:CA:663:A:H8	1.58	0.69
1:CA:1422:G:O2'	1:CA:1423:G:H5'	1.92	0.69
2:CB:17:PHE:CD1	2:CB:44:LEU:HD11	2.28	0.69
5:CE:18:ARG:HH21	5:CE:25:ARG:HG2	1.57	0.69
5:CE:55:VAL:O	5:CE:58:ALA:HB3	1.93	0.69
31:DA:107:C:H2'	31:DA:108:U:H6	1.57	0.69
31:DA:1157:G:C6	31:DA:1158:C:N4	2.60	0.69
31:DA:1169:G:H1	31:DA:1180:C:N4	1.89	0.69
31:DA:2023:G:H5'	31:DA:2617:C:H4'	1.75	0.69
36:DG:7:LEU:HB2	36:DG:104:GLU:OE2	1.93	0.69
36:DG:64:THR:HG23	36:DG:66:GLN:H	1.57	0.69
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HH11	1.58	0.69
44:DS:28:VAL:HB	44:DS:89:ARG:HB2	1.75	0.69
47:DV:19:LYS:CE	47:DV:20:LEU:H	2.06	0.69
49:DX:35:THR:O	49:DX:36:LYS:O	2.11	0.69
1:AA:321:A:H62	1:AA:328:C:H1'	1.56	0.69
31:BA:1339:G:N2	31:BA:1603:A:H1'	2.08	0.69
31:BA:2849:U:O4	45:BT:23:ARG:NH2	2.26	0.69
35:BF:22:ALA:HB1	35:BF:26:ALA:CB	2.23	0.69
40:BO:18:LYS:HB2	40:BO:45:GLU:HG2	1.75	0.69
42:BQ:141:GLN:HE21	51:BZ:72:ARG:N	1.91	0.69
43:BR:53:HIS:HD2	43:BR:94:TYR:OH	1.76	0.69
44:BS:36:TYR:N	44:BS:36:TYR:CD1	2.55	0.69
44:BS:89:ARG:HA	44:BS:89:ARG:NE	2.08	0.69
1:CA:600:C:H2'	1:CA:601:C:H6	1.58	0.69
28:D6:12:GLU:HA	28:D6:23:THR:HA	1.75	0.69
31:DA:588:U:OP2	31:DA:588:U:C6	2.44	0.69
31:DA:1719:G:C2'	31:DA:1720:U:H5'	2.22	0.69
35:DF:110:LEU:HD21	35:DF:181:LEU:HD23	1.75	0.69
40:DO:2:ILE:HG13	40:DO:8:LEU:HD11	1.75	0.69
48:DW:86:LEU:HD12	48:DW:87:PRO:CD	2.23	0.69
50:DY:35:TYR:CE2	50:DY:69:ALA:HB3	2.27	0.69
1:AA:673:G:H2'	1:AA:674:G:C8	2.27	0.69
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.58	0.69
5:AE:110:LEU:O	5:AE:115:VAL:HG23	1.92	0.69
31:BA:896:A:C2	31:BA:898:C:H5''	2.28	0.69
31:BA:1429:G:H2'	31:BA:1430:C:C6	2.28	0.69
31:BA:1472:A:C2'	31:BA:1473:G:H5'	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1688:U:H1'	31:BA:1701:A:C6	2.28	0.69
32:BB:75:G:H8	32:BB:75:G:H5'	1.58	0.69
32:BB:87:G:H8	32:BB:87:G:P	2.16	0.69
33:BD:133:LEU:HA	33:BD:136:ILE:HD13	1.73	0.69
34:BE:47:VAL:HG22	34:BE:84:PHE:O	1.92	0.69
49:BX:60:ARG:HE	49:BX:74:PRO:CG	2.05	0.69
27:D5:2:ALA:CA	31:DA:2015:A:H1'	2.20	0.69
31:DA:661:C:H4'	41:DP:16:ARG:HH12	1.57	0.69
34:DE:4:ILE:HD13	34:DE:91:VAL:HG12	1.74	0.69
35:DF:160:ASN:ND2	35:DF:162:LEU:H	1.90	0.69
38:DI:61:ARG:O	38:DI:133:HIS:HE1	1.76	0.69
2:AB:17:PHE:CD1	2:AB:44:LEU:HD11	2.28	0.68
22:B0:2:ALA:H	31:BA:2602:A:N6	1.91	0.68
27:B5:50:GLY:O	27:B5:51:TYR:HD1	1.76	0.68
35:BF:160:ASN:ND2	35:BF:162:LEU:H	1.91	0.68
44:BS:95:HIS:ND1	44:BS:96:GLY:N	2.41	0.68
50:BY:38:ILE:HG22	50:BY:39:VAL:N	2.07	0.68
1:CA:736:C:H2'	1:CA:737:A:C8	2.28	0.68
24:D2:41:ILE:HG22	24:D2:42:GLY:N	2.07	0.68
24:D2:54:LYS:H	24:D2:56:GLN:NE2	1.90	0.68
27:D5:25:LEU:HD12	48:DW:19:LEU:O	1.93	0.68
31:DA:1592:C:H2'	31:DA:1593:G:C5'	2.21	0.68
31:DA:2190:G:H2'	31:DA:2191:G:H5'	1.74	0.68
47:DV:47:VAL:HG13	47:DV:48:GLY:N	2.07	0.68
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.56	0.68
24:B2:14:ARG:NH1	24:B2:57:ILE:HG22	2.08	0.68
31:BA:288:C:H42	31:BA:353:G:H1	1.40	0.68
31:BA:1116:C:C2'	31:BA:1117:G:H5'	2.22	0.68
31:BA:2464:C:O2'	31:BA:2465:C:O5'	2.10	0.68
31:BA:2610:C:H4'	31:BA:2611:U:OP2	1.94	0.68
45:BT:54:ARG:HA	45:BT:59:THR:HB	1.74	0.68
1:CA:1097:C:H1'	1:CA:1170:A:H1'	1.75	0.68
1:CA:1337:G:H5''	1:CA:1338:G:OP1	1.94	0.68
3:CC:125:GLU:HA	3:CC:191:THR:HG22	1.75	0.68
4:CD:138:TYR:C	4:CD:138:TYR:HD2	1.96	0.68
11:CK:13:GLN:HB3	11:CK:75:TYR:O	1.94	0.68
27:D5:16:ARG:HG2	27:D5:16:ARG:NH1	1.95	0.68
31:DA:896:A:C2	31:DA:898:C:H5''	2.28	0.68
33:DD:35:LYS:HD3	33:DD:63:ARG:CA	2.23	0.68
34:DE:93:VAL:H	34:DE:95:ILE:HD13	1.58	0.68
39:DN:65:LYS:HA	39:DN:65:LYS:CE	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:140:ALA:HB1	51:DZ:99:TYR:HB2	1.75	0.68
51:DZ:61:LEU:HB2	51:DZ:65:GLN:HB2	1.75	0.68
1:AA:266:G:H5'	1:AA:268:C:N4	2.08	0.68
1:AA:1158:C:O2'	2:AB:132:LYS:HD3	1.94	0.68
1:AA:1242:C:P	21:AU:10:ARG:HH22	2.16	0.68
31:BA:296:C:O2'	31:BA:297:C:H5'	1.93	0.68
31:BA:542:C:N4	31:BA:543:C:H41	1.91	0.68
31:BA:1658:C:OP1	34:BE:132:HIS:ND1	2.25	0.68
31:BA:1721:G:C2	31:BA:1739:U:OP2	2.46	0.68
31:BA:2652:C:C2'	31:BA:2653:U:H5'	2.23	0.68
40:BO:10:VAL:O	40:BO:10:VAL:HG23	1.93	0.68
50:BY:8:LYS:NZ	50:BY:74:PRO:HD3	2.08	0.68
1:CA:559:A:C5'	1:CA:560:U:H3'	2.24	0.68
1:CA:949:A:H1'	1:CA:1364:U:N3	2.09	0.68
1:CA:1184:G:H2'	1:CA:1185:G:H8	1.58	0.68
29:D7:43:THR:HG23	29:D7:44:PRO:HD2	1.75	0.68
30:D8:32:LEU:C	30:D8:34:TRP:N	2.43	0.68
30:D8:61:LEU:HB3	31:DA:593:G:H4'	1.75	0.68
33:DD:255:LYS:H	33:DD:255:LYS:NZ	1.91	0.68
35:DF:160:ASN:HD21	35:DF:162:LEU:HB2	1.59	0.68
39:DN:128:HIS:CD2	39:DN:131:GLN:HB2	2.28	0.68
1:AA:22:G:H2'	1:AA:23:C:C6	2.27	0.68
1:AA:176:C:H2'	1:AA:177:C:C6	2.28	0.68
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.24	0.68
1:AA:1239:A:H62	1:AA:1299:A:H62	1.41	0.68
4:AD:68:TYR:CE2	4:AD:97:LEU:HB3	2.29	0.68
22:B0:23:VAL:HG21	31:BA:857:C:H4'	1.76	0.68
22:B0:71:ASP:C	22:B0:72:ARG:HG2	2.12	0.68
23:B1:8:SER:N	23:B1:46:LEU:HD13	2.08	0.68
27:B5:16:ARG:HG2	27:B5:16:ARG:NH1	1.98	0.68
27:B5:48:GLU:O	27:B5:50:GLY:N	2.26	0.68
31:BA:71:A:H5'	31:BA:71:A:C8	2.29	0.68
31:BA:307:G:H22	31:BA:310:A:C5'	2.06	0.68
31:BA:1109:C:H5	31:BA:1110:G:C5	2.11	0.68
31:BA:2801(A):A:O3'	31:BA:2802:G:H3'	1.92	0.68
39:BN:58:ASP:O	39:BN:60:ILE:N	2.25	0.68
50:BY:96:ILE:HG22	50:BY:97:ARG:H	1.57	0.68
51:BZ:11:GLU:CD	51:BZ:11:GLU:H	1.96	0.68
1:CA:1228:C:H2'	1:CA:1229:A:H8	1.56	0.68
4:CD:128:VAL:CG1	4:CD:129:ASN:HD22	2.01	0.68
22:D0:23:VAL:HG21	31:DA:857:C:H4'	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:34:C:C2'	31:DA:35:G:OP1	2.41	0.68
31:DA:310:A:P	50:DY:18:GLY:HA2	2.34	0.68
31:DA:607:U:N3	31:DA:621:A:C2	2.57	0.68
31:DA:2300:G:N2	31:DA:2317:C:C2	2.62	0.68
33:DD:35:LYS:HD2	33:DD:104:TYR:CE1	2.27	0.68
38:DI:56:LYS:HA	38:DI:59:ALA:HB3	1.75	0.68
41:DP:85:LEU:HD23	41:DP:85:LEU:N	2.01	0.68
45:DT:106:SER:O	45:DT:107:ASP:OD1	2.10	0.68
49:DX:56:THR:C	49:DX:57:LEU:HD12	2.14	0.68
1:AA:1128:C:H5'	9:AI:16:ARG:HH12	1.59	0.68
35:BF:34:TRP:HB2	41:BP:10:PRO:O	1.93	0.68
45:BT:12:SER:O	45:BT:13:ARG:HG2	1.93	0.68
51:BZ:7:ALA:HB3	51:BZ:61:LEU:CD2	2.23	0.68
1:CA:1239:A:H62	1:CA:1299:A:N6	1.92	0.68
31:DA:1205:U:H4'	31:DA:1206:G:OP2	1.94	0.68
31:DA:2469:A:H2	31:DA:2481:G:N2	1.88	0.68
31:DA:2787:C:C1'	34:DE:61:ARG:HB2	2.20	0.68
1:AA:191:G:C4	20:AT:105:SER:HB3	2.29	0.68
3:AC:125:GLU:HA	3:AC:191:THR:HG22	1.76	0.68
12:AL:82:VAL:HG12	12:AL:83:VAL:N	2.08	0.68
31:BA:212:G:O2'	31:BA:213:A:H5'	1.92	0.68
37:BH:17:VAL:HG21	37:BH:50:VAL:HG21	1.75	0.68
37:BH:19:VAL:HG21	37:BH:44:VAL:HA	1.76	0.68
41:BP:62:LEU:H	41:BP:62:LEU:CD2	1.92	0.68
48:BW:4:LYS:HE3	48:BW:6:ILE:HD11	1.76	0.68
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.74	0.68
18:CR:53:ARG:HH21	18:CR:60:ALA:N	1.91	0.68
31:DA:919:G:H5'	32:DB:81:G:H1'	1.75	0.68
31:DA:1639:U:C2'	31:DA:1640:C:H5''	2.23	0.68
31:DA:2068:U:N3	31:DA:2430:A:C2	2.51	0.68
31:DA:2801(A):A:O3'	31:DA:2802:G:H3'	1.93	0.68
33:DD:25:THR:HG21	33:DD:81:ALA:CB	2.21	0.68
33:DD:30:GLU:HG3	33:DD:63:ARG:NE	2.07	0.68
35:DF:24:LEU:HB3	35:DF:25:PRO:CD	2.17	0.68
42:DQ:14:ARG:HG2	42:DQ:41:TRP:HH2	1.59	0.68
42:DQ:24:GLY:HA3	51:DZ:78:LYS:CB	2.23	0.68
42:DQ:52:VAL:HA	42:DQ:55:VAL:HG13	1.75	0.68
44:DS:89:ARG:NE	44:DS:89:ARG:HA	2.09	0.68
51:DZ:74:VAL:HG22	51:DZ:86:VAL:HG13	1.74	0.68
31:BA:272:G:H4'	31:BA:272(B):G:OP1	1.94	0.68
31:BA:2208:A:H1'	31:BA:2219:G:C5	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:70:TRP:CH2	33:BD:150:LYS:HA	2.29	0.68
34:BE:8:LYS:HD2	34:BE:188:VAL:HG13	1.75	0.68
34:BE:92:THR:H	34:BE:95:ILE:HD11	1.58	0.68
35:BF:22:ALA:C	35:BF:26:ALA:HB2	2.13	0.68
36:BG:7:LEU:HB2	36:BG:104:GLU:OE2	1.94	0.68
1:CA:102:G:C4	1:CA:103:C:C5	2.82	0.68
23:D1:9:GLY:O	23:D1:10:LYS:HE2	1.92	0.68
24:D2:47:ASN:C	24:D2:49:LYS:H	1.97	0.68
24:D2:54:LYS:N	24:D2:56:GLN:HE22	1.91	0.68
31:DA:719:C:H2'	31:DA:720:C:C6	2.27	0.68
31:DA:1006:C:H1'	39:DN:106:MET:CE	2.24	0.68
31:DA:1794:U:H2'	31:DA:1795:C:C6	2.27	0.68
31:DA:2418:A:H2'	31:DA:2419:U:H6	1.58	0.68
34:DE:52:LEU:O	34:DE:74:PRO:HA	1.93	0.68
1:AA:425:G:C2'	1:AA:426:G:H5'	2.23	0.68
1:AA:828:A:H2'	1:AA:829:G:O4'	1.92	0.68
1:AA:914:A:O2'	1:AA:915:A:H5'	1.93	0.68
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.57	0.68
14:AN:25:VAL:HG23	14:AN:38:GLY:O	1.94	0.68
18:AR:53:ARG:HH21	18:AR:60:ALA:N	1.91	0.68
31:BA:467:G:O2'	31:BA:468:G:H5'	1.94	0.68
31:BA:1434:A:H61	31:BA:1558:A:N6	1.90	0.68
31:BA:1821:A:H2'	31:BA:1822:G:C5'	2.24	0.68
36:BG:16:ARG:HH11	36:BG:31:VAL:HG11	1.58	0.68
39:BN:4:TYR:CD1	39:BN:4:TYR:N	2.61	0.68
39:BN:28:THR:CG2	39:BN:106:MET:HE1	2.14	0.68
41:BP:17:LYS:C	41:BP:19:VAL:H	1.95	0.68
41:BP:62:LEU:N	41:BP:62:LEU:CD2	2.53	0.68
1:CA:9:G:OP1	5:CE:122:GLU:HB2	1.93	0.68
1:CA:266:G:H5''	1:CA:268:C:N4	2.08	0.68
4:CD:68:TYR:HE2	4:CD:97:LEU:HB3	1.58	0.68
8:CH:53:VAL:O	8:CH:54:ASP:HB2	1.94	0.68
23:D1:73:LEU:HB3	23:D1:90:ILE:HG23	1.76	0.68
31:DA:1721:G:C2	31:DA:1739:U:OP2	2.47	0.68
31:DA:2787:C:H1'	34:DE:61:ARG:CB	2.22	0.68
35:DF:34:TRP:CZ2	41:DP:12:ALA:HB2	2.29	0.68
39:DN:19:GLU:HG3	39:DN:20:GLY:H	1.57	0.68
42:DQ:141:GLN:HA	51:DZ:53:ILE:HB	1.76	0.68
47:DV:69:LYS:HB3	47:DV:93:GLU:OE1	1.93	0.68
1:AA:441:A:H3'	1:AA:442:C:H6	1.59	0.68
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.20	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.59	0.68
1:AA:1239:A:H62	1:AA:1299:A:N6	1.92	0.68
2:AB:19:HIS:CD2	2:AB:20:GLU:HG2	2.27	0.68
5:AE:12:LEU:O	5:AE:13:ILE:HD12	1.94	0.68
28:B6:27:LYS:HD3	31:BA:2285:C:OP2	1.94	0.68
31:BA:2199:A:OP2	31:BA:2200:C:H5	1.77	0.68
38:BI:129:THR:HA	38:BI:137:PRO:HA	1.75	0.68
39:BN:128:HIS:CD2	39:BN:131:GLN:HB2	2.28	0.68
47:BV:72:VAL:HG12	47:BV:73:SER:H	1.58	0.68
2:CB:19:HIS:CD2	2:CB:20:GLU:HG2	2.28	0.68
14:CN:25:VAL:HG23	14:CN:38:GLY:O	1.94	0.68
22:D0:20:ARG:NH1	31:DA:2357:U:OP1	2.26	0.68
31:DA:943:U:OP2	41:DP:38:GLN:CD	2.32	0.68
31:DA:1403:C:C5'	31:DA:1471:A:H1'	2.24	0.68
31:DA:1689:A:H62	31:DA:1698:A:H2	1.42	0.68
31:DA:2524:G:H5'	31:DA:2524:G:C8	2.25	0.68
31:DA:2859:G:H3'	31:DA:2859:G:C8	2.28	0.68
50:DY:17:SER:CB	50:DY:71:LYS:HD2	2.24	0.68
50:DY:38:ILE:HG22	50:DY:39:VAL:H	1.58	0.68
1:AA:55:A:C5	1:AA:56:U:C5	2.82	0.68
1:AA:186:C:H2'	1:AA:187:C:C6	2.29	0.68
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.20	0.68
11:AK:41:THR:HG22	11:AK:42:TRP:N	2.09	0.68
23:B1:64:ALA:HA	23:B1:67:ILE:HG13	1.75	0.68
31:BA:1902:C:O2'	33:BD:244:ARG:HB2	1.93	0.68
31:BA:2199:A:H3'	31:BA:2200:C:C6	2.28	0.68
35:BF:28:ILE:HA	35:BF:112:MET:HG2	1.74	0.68
35:BF:63:LYS:CE	35:BF:67:GLN:HB2	2.24	0.68
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.58	0.68
23:D1:26:ARG:HB2	23:D1:34:THR:HA	1.74	0.68
27:D5:57:VAL:O	27:D5:58:LEU:HG	1.94	0.68
31:DA:620:G:H4'	31:DA:621:A:C5'	2.24	0.68
36:DG:124:SER:HB2	36:DG:131:TYR:CE1	2.28	0.68
39:DN:121:LYS:HD2	39:DN:123:TYR:CZ	2.29	0.68
41:DP:146:VAL:HG22	41:DP:147:LEU:N	2.08	0.68
1:AA:134:A:H61	16:AP:25:ARG:HH12	1.40	0.67
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.58	0.67
28:B6:15:GLU:CG	28:B6:18:ARG:HE	2.02	0.67
31:BA:708:C:H5'	31:BA:709:U:OP2	1.94	0.67
31:BA:2849:U:OP2	45:BT:95:ARG:NH1	2.27	0.67
34:BE:117:MET:O	34:BE:118:LYS:HB2	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:19:LYS:CE	47:BV:20:LEU:H	2.08	0.67
50:BY:37:VAL:HG13	50:BY:69:ALA:HA	1.74	0.67
1:CA:386:C:O2'	1:CA:387:U:H5'	1.94	0.67
1:CA:955:U:H1'	1:CA:1227:A:N6	2.09	0.67
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.28	0.67
31:DA:141:A:H8	31:DA:1408:C:O2'	1.73	0.67
31:DA:272:G:H4'	31:DA:272(B):G:OP1	1.93	0.67
31:DA:528:A:C2	31:DA:2043:C:H4'	2.28	0.67
31:DA:1963:U:H4'	31:DA:1964:G:OP1	1.94	0.67
31:DA:2599:G:OP2	33:DD:236:GLY:N	2.27	0.67
31:DA:2713:A:H3'	31:DA:2714:G:C5'	2.23	0.67
33:DD:27:THR:HG23	33:DD:28:GLU:N	2.09	0.67
38:DI:133:HIS:CB	38:DI:134:PRO:HD2	2.23	0.67
41:DP:112:LEU:H	41:DP:128:HIS:HD2	1.42	0.67
47:DV:19:LYS:HG2	47:DV:96:ILE:HB	1.75	0.67
49:DX:65:ARG:CZ	49:DX:66:LEU:N	2.58	0.67
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.11	0.67
1:AA:600:C:H2'	1:AA:601:C:C6	2.29	0.67
1:AA:939:G:H5''	7:AG:102:ARG:HH12	1.58	0.67
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.76	0.67
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.08	0.67
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.61	0.67
25:B3:43:ILE:O	25:B3:47:VAL:HG23	1.95	0.67
31:BA:271(Q):G:O2'	31:BA:271(R):G:OP2	2.12	0.67
31:BA:827:U:O2'	31:BA:2068:U:C2	2.42	0.67
31:BA:2655:G:H2'	31:BA:2655:G:N3	2.09	0.67
33:BD:71:ASP:HB3	33:BD:103:ARG:NH2	2.09	0.67
39:BN:3:THR:HG22	39:BN:4:TYR:N	2.07	0.67
42:BQ:141:GLN:CG	51:BZ:72:ARG:HA	2.25	0.67
49:BX:31:HIS:HD2	49:BX:33:LYS:H	1.42	0.67
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.12	0.67
1:CA:448:A:OP2	1:CA:485:G:N2	2.23	0.67
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.76	0.67
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	1.77	0.67
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.30	0.67
24:D2:49:LYS:O	24:D2:52:ASP:HB3	1.94	0.67
30:D8:52:LYS:N	30:D8:54:GLU:HG2	2.08	0.67
31:DA:1713:U:O2'	31:DA:1714:G:H5'	1.94	0.67
33:DD:31:LYS:HG2	33:DD:34:VAL:CG1	2.24	0.67
40:DO:104:ARG:CZ	45:DT:33:LYS:HD2	2.25	0.67
50:DY:96:ILE:HG21	50:DY:99:CYS:HB3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:114:ARG:HD3	2:AB:114:ARG:O	1.95	0.67
4:AD:94:LEU:HA	4:AD:97:LEU:HB2	1.75	0.67
38:BI:133:HIS:CB	38:BI:134:PRO:HD2	2.25	0.67
47:BV:5:VAL:CG2	47:BV:36:PRO:HB2	2.23	0.67
47:BV:72:VAL:O	47:BV:73:SER:OG	2.12	0.67
50:BY:68:HIS:H	50:BY:71:LYS:HZ1	1.42	0.67
50:BY:96:ILE:CG2	50:BY:99:CYS:HB3	2.24	0.67
1:CA:501:C:H2'	1:CA:502:G:H8	1.59	0.67
1:CA:914:A:O2'	1:CA:915:A:H5'	1.95	0.67
24:D2:14:ARG:NH1	24:D2:57:ILE:HG22	2.09	0.67
26:D4:19:GLY:C	26:D4:21:VAL:H	1.97	0.67
30:D8:32:LEU:O	30:D8:33:ASN:CB	2.41	0.67
31:DA:1309:G:C2'	31:DA:1310:G:H5'	2.24	0.67
31:DA:2208:A:H1'	31:DA:2219:G:C5	2.29	0.67
33:DD:70:TRP:CH2	33:DD:150:LYS:HA	2.29	0.67
34:DE:60:ASN:N	34:DE:60:ASN:ND2	2.43	0.67
34:DE:117:MET:O	34:DE:118:LYS:HB2	1.94	0.67
35:DF:89:VAL:HG12	35:DF:90:PHE:H	1.58	0.67
42:DQ:81:VAL:C	42:DQ:82:ARG:HD2	2.15	0.67
47:DV:25:LEU:H	47:DV:94:LEU:CD1	2.07	0.67
47:DV:25:LEU:H	47:DV:94:LEU:HD13	1.60	0.67
51:DZ:11:GLU:CD	51:DZ:11:GLU:H	1.95	0.67
1:AA:524:G:H2'	1:AA:525:C:C6	2.30	0.67
1:AA:949:A:H1'	1:AA:1364:U:N3	2.09	0.67
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.58	0.67
31:BA:9:U:C4	31:BA:2629:A:N6	2.62	0.67
31:BA:107:C:H2'	31:BA:108:U:H6	1.58	0.67
31:BA:1434:A:H61	31:BA:1558:A:H62	1.42	0.67
31:BA:2287:A:N6	31:BA:2344:U:N3	2.37	0.67
31:BA:2658:C:H3'	31:BA:2659:G:H5''	1.76	0.67
31:BA:2787:C:H1'	34:BE:61:ARG:CB	2.23	0.67
31:BA:2818:G:O2'	31:BA:2819:G:H5'	1.95	0.67
35:BF:83:PHE:O	35:BF:84:VAL:HB	1.94	0.67
47:BV:72:VAL:HA	47:BV:88:ARG:NH1	2.09	0.67
51:BZ:4:ARG:HG2	51:BZ:58:VAL:HB	1.75	0.67
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.25	0.67
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.24	0.67
16:CP:34:GLU:OE2	16:CP:55:ARG:HD3	1.95	0.67
28:D6:12:GLU:OE1	28:D6:23:THR:HG22	1.94	0.67
31:DA:1419:A:O2'	31:DA:1420:U:H5''	1.94	0.67
31:DA:2580:U:H5'	34:DE:131:ALA:HB3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HG2	33:DD:64:ILE:HG23	1.76	0.67
39:DN:128:HIS:O	39:DN:130:HIS:N	2.27	0.67
41:DP:17:LYS:HG3	41:DP:19:VAL:HG23	1.76	0.67
42:DQ:23:GLY:HA3	42:DQ:99:PRO:O	1.94	0.67
46:DU:65:ILE:HG12	46:DU:96:ALA:CB	2.24	0.67
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.23	0.67
2:AB:187:LEU:HD13	2:AB:187:LEU:O	1.95	0.67
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	1.95	0.67
10:AJ:39:PRO:HB3	10:AJ:70:ARG:HH12	1.59	0.67
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.29	0.67
23:B1:37:ILE:HD12	31:BA:2079:U:O2'	1.94	0.67
31:BA:1418:G:OP1	31:BA:1588:C:O2'	2.11	0.67
31:BA:1488:G:C6	31:BA:1489:U:N3	2.63	0.67
31:BA:1528(A):A:N7	31:BA:1529:G:C8	2.63	0.67
35:BF:46:ARG:HG2	35:BF:46:ARG:NH1	1.99	0.67
41:BP:144:GLU:N	41:BP:145:PRO:HD3	2.10	0.67
47:BV:38:LEU:HG	47:BV:39:LEU:N	2.08	0.67
49:BX:33:LYS:C	49:BX:35:THR:N	2.48	0.67
5:CE:68:GLU:O	5:CE:68:GLU:HG3	1.94	0.67
31:DA:2701:C:H3'	31:DA:2702:U:H5''	1.76	0.67
49:DX:53:LYS:HE3	49:DX:55:ASN:HD21	1.58	0.67
1:AA:224:C:H2'	1:AA:225:C:C6	2.29	0.67
1:AA:663:A:O2'	1:AA:664:G:H5'	1.95	0.67
4:AD:68:TYR:N	4:AD:68:TYR:HD1	1.93	0.67
10:AJ:51:ARG:NE	10:AJ:61:GLU:HB2	2.09	0.67
23:B1:13:ILE:O	23:B1:14:VAL:HB	1.95	0.67
23:B1:75:GLU:O	23:B1:76:ARG:HD3	1.95	0.67
31:BA:1292:U:H2'	31:BA:1293:C:C6	2.29	0.67
31:BA:1598:C:H5'	49:BX:37:THR:HB	1.76	0.67
31:BA:1713:U:O2'	31:BA:1714:G:H5'	1.94	0.67
32:BB:62:C:H2'	32:BB:63:G:H5''	1.76	0.67
35:BF:9:ILE:HG23	35:BF:13:SER:O	1.94	0.67
42:BQ:60:ARG:HA	51:BZ:179:ASP:N	2.08	0.67
42:BQ:75:THR:CA	42:BQ:88:GLY:HA2	2.24	0.67
1:CA:55:A:C5	1:CA:56:U:C5	2.81	0.67
1:CA:600:C:H2'	1:CA:601:C:C6	2.29	0.67
1:CA:659:U:H2'	1:CA:660:G:H5'	1.76	0.67
30:D8:43:GLN:O	30:D8:44:LYS:HD2	1.95	0.67
31:DA:1528(A):A:N7	31:DA:1529:G:C8	2.62	0.67
32:DB:21:G:O6	32:DB:63:G:C5	2.47	0.67
41:DP:65:ARG:O	41:DP:68:GLN:HB3	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:149:GLU:O	41:DP:149:GLU:HG3	1.94	0.67
50:DY:38:ILE:HG22	50:DY:39:VAL:N	2.08	0.67
50:DY:81:LYS:HG2	50:DY:96:ILE:CG2	2.24	0.67
1:AA:650:G:O2'	1:AA:651:C:H5'	1.94	0.67
1:AA:687:A:N3	1:AA:688:G:H1'	2.08	0.67
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.77	0.67
23:B1:19:GLN:HE21	31:BA:379:G:N2	1.85	0.67
23:B1:25:LYS:O	23:B1:26:ARG:CB	2.41	0.67
41:BP:149:GLU:O	41:BP:149:GLU:HG3	1.94	0.67
42:BQ:141:GLN:HA	51:BZ:53:ILE:HB	1.75	0.67
51:BZ:69:THR:HG22	51:BZ:90:VAL:HA	1.77	0.67
51:BZ:74:VAL:HG22	51:BZ:86:VAL:HG13	1.77	0.67
1:CA:16:A:O2'	1:CA:17:U:H5'	1.94	0.67
1:CA:22:G:H2'	1:CA:23:C:H6	1.60	0.67
1:CA:191:G:C4	20:CT:105:SER:HB3	2.30	0.67
1:CA:735:C:H2'	1:CA:736:C:C6	2.25	0.67
1:CA:1227:A:OP2	13:CM:111:LYS:HE2	1.94	0.67
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.75	0.67
2:CB:124:SER:OG	2:CB:125:PRO:HD2	1.94	0.67
7:CG:26:PHE:O	7:CG:30:ILE:HG12	1.94	0.67
20:CT:75:ASN:HA	20:CT:78:ALA:HB3	1.77	0.67
31:DA:467:G:O2'	31:DA:468:G:H5'	1.93	0.67
31:DA:531:C:H4'	31:DA:532:A:H5''	1.77	0.67
31:DA:542:C:N3	31:DA:543:C:N4	2.42	0.67
31:DA:867:C:C5	31:DA:868:U:C5	2.83	0.67
31:DA:1434:A:H61	31:DA:1558:A:H62	1.43	0.67
31:DA:2036:C:H5'	31:DA:2036:C:C6	2.29	0.67
42:DQ:75:THR:CA	42:DQ:88:GLY:HA2	2.24	0.67
42:DQ:141:GLN:HG2	51:DZ:71:VAL:O	1.95	0.67
1:AA:853:G:H2'	1:AA:854:G:H8	1.60	0.67
24:B2:34:GLU:O	24:B2:36:ARG:N	2.28	0.67
31:BA:464:U:O2'	31:BA:465:G:H5'	1.95	0.67
31:BA:494:G:H21	48:BW:57:ASN:HD21	1.42	0.67
31:BA:1171:G:H8	31:BA:1171:G:OP2	1.77	0.67
31:BA:2524:G:H5'	31:BA:2524:G:C8	2.25	0.67
33:BD:35:LYS:HD3	33:BD:63:ARG:CA	2.24	0.67
38:BI:82:ARG:O	38:BI:89:TYR:HB2	1.94	0.67
39:BN:112:LEU:O	39:BN:112:LEU:HD12	1.95	0.67
1:CA:963:G:H21	10:CJ:55:LYS:HE2	1.60	0.67
1:CA:1409:C:H42	1:CA:1491:G:H1	1.41	0.67
23:D1:23:LYS:HB2	23:D1:37:ILE:HG22	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:48:LYS:O	23:D1:49:VAL:HB	1.94	0.67
31:DA:1021:A:H3'	31:DA:1021:A:C8	2.30	0.67
31:DA:1405:U:H2'	31:DA:1406:U:H6	1.58	0.67
31:DA:2584:U:O4'	31:DA:2584:U:O2	2.11	0.67
31:DA:2801(A):A:C4'	31:DA:2802:G:H5'	2.25	0.67
32:DB:30:C:OP2	44:DS:32:LEU:HD11	1.94	0.67
37:DH:89:ILE:HD11	37:DH:129:THR:HB	1.76	0.67
39:DN:4:TYR:CD1	39:DN:4:TYR:N	2.61	0.67
40:DO:10:VAL:O	40:DO:10:VAL:HG23	1.93	0.67
44:DS:95:HIS:ND1	44:DS:96:GLY:N	2.43	0.67
49:DX:89:ILE:HA	49:DX:92:LEU:HD12	1.76	0.67
1:AA:963:G:H21	10:AJ:55:LYS:HE2	1.60	0.67
8:AH:1:MET:HE2	8:AH:1:MET:H3	1.58	0.67
9:AI:18:PHE:HB3	9:AI:20:ARG:NH1	2.09	0.67
16:AP:20:VAL:HG21	16:AP:32:TYR:CD1	2.30	0.67
23:B1:10:LYS:O	23:B1:13:ILE:HG23	1.95	0.67
31:BA:794:G:H2'	31:BA:795:C:C6	2.30	0.67
31:BA:1899:G:H21	31:BA:1902:C:H5	1.40	0.67
31:BA:2106:G:H1'	31:BA:2184:G:N2	2.09	0.67
31:BA:2475:C:H6	31:BA:2475:C:H5''	1.60	0.67
31:BA:2567:G:H2'	31:BA:2568:C:C6	2.30	0.67
35:BF:160:ASN:HD22	35:BF:162:LEU:H	1.42	0.67
37:BH:43:VAL:HG21	37:BH:52:VAL:HG22	1.75	0.67
46:BU:95:LEU:HD22	47:BV:4:ILE:HD13	1.76	0.67
49:BX:24:GLY:HA3	49:BX:80:ILE:CG1	2.25	0.67
50:BY:95:LYS:HD3	50:BY:100:ALA:CB	2.14	0.67
1:CA:1238:A:H62	1:CA:1299:A:H62	1.43	0.67
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	1.95	0.67
6:CF:18:GLN:HA	6:CF:21:LEU:CD2	2.19	0.67
22:D0:24:LYS:O	22:D0:25:ARG:HD2	1.94	0.67
23:D1:46:LEU:HD12	23:D1:46:LEU:N	2.05	0.67
23:D1:75:GLU:O	23:D1:76:ARG:HD3	1.95	0.67
24:D2:46:GLN:HE21	24:D2:47:ASN:CA	2.08	0.67
30:D8:6:THR:HG21	31:DA:243:U:OP1	1.94	0.67
35:DF:160:ASN:HD22	35:DF:160:ASN:C	1.97	0.67
47:DV:64:HIS:O	47:DV:64:HIS:CD2	2.48	0.67
51:DZ:5:LEU:CD1	51:DZ:43:GLU:HB3	2.25	0.67
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.77	0.67
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.77	0.67
15:AO:3:ILE:HD13	15:AO:3:ILE:H	1.60	0.67
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:49:LYS:O	24:B2:52:ASP:HB3	1.95	0.67
25:B3:19:GLN:HE22	25:B3:52:HIS:HE1	1.41	0.67
27:B5:40:LYS:CD	27:B5:46:CYS:HB3	2.25	0.67
31:BA:614(A):U:H4'	31:BA:614(B):G:H5''	1.77	0.67
31:BA:631:A:O2'	41:BP:67:MET:HB3	1.95	0.67
31:BA:1021:A:H3'	31:BA:1021:A:C8	2.29	0.67
31:BA:1592:C:O2'	31:BA:1593:G:H5''	1.95	0.67
33:BD:35:LYS:HG2	33:BD:64:ILE:N	2.09	0.67
34:BE:52:LEU:O	34:BE:74:PRO:HA	1.95	0.67
35:BF:18:ARG:CG	35:BF:19:GLU:H	2.06	0.67
37:BH:40:GLU:O	37:BH:41:MET:SD	2.53	0.67
37:BH:137:ASP:O	37:BH:138:LYS:CB	2.42	0.67
38:BI:12:LEU:O	38:BI:12:LEU:HG	1.94	0.67
42:BQ:54:MET:HG3	42:BQ:117:ALA:HB1	1.77	0.67
47:BV:46:VAL:O	47:BV:47:VAL:HB	1.94	0.67
1:CA:192:U:H2'	1:CA:193:C:H6	1.59	0.67
1:CA:425:G:C2'	1:CA:426:G:H5'	2.24	0.67
1:CA:1242:C:P	21:CU:10:ARG:HH22	2.17	0.67
2:CB:130:ARG:HE	2:CB:130:ARG:HA	1.60	0.67
16:CP:20:VAL:HG21	16:CP:32:TYR:CD1	2.30	0.67
25:D3:54:VAL:HG12	25:D3:55:ARG:N	2.10	0.67
31:DA:354:G:H8	31:DA:354:G:O5'	1.78	0.67
31:DA:953:A:O2'	31:DA:954:G:H5'	1.95	0.67
31:DA:1598:C:H5'	49:DX:37:THR:HB	1.76	0.67
47:DV:51:VAL:CG1	47:DV:52:VAL:H	2.08	0.67
50:DY:15:VAL:O	50:DY:22:GLY:HA2	1.94	0.67
1:AA:1291:G:H4'	9:AI:38:GLN:O	1.94	0.66
1:AA:1422:G:O2'	1:AA:1423:G:H5'	1.95	0.66
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.95	0.66
4:AD:138:TYR:HD2	4:AD:138:TYR:C	1.98	0.66
29:B7:16:HIS:CB	29:B7:44:PRO:HG2	2.24	0.66
31:BA:588:U:OP2	31:BA:588:U:C6	2.48	0.66
31:BA:1448:G:H1'	31:BA:1528:A:H62	1.58	0.66
31:BA:1720:U:H2'	31:BA:1721:G:O4'	1.95	0.66
37:BH:90:LYS:HB2	37:BH:159:GLU:O	1.94	0.66
45:BT:24:PRO:HA	45:BT:49:VAL:HG13	1.76	0.66
46:BU:91:ASP:O	46:BU:95:LEU:HB2	1.95	0.66
46:BU:92:ARG:CZ	47:BV:11:GLN:H	2.08	0.66
49:BX:83:VAL:O	49:BX:84:ALA:HB3	1.94	0.66
50:BY:28:LYS:HA	50:BY:39:VAL:H	1.60	0.66
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1342:C:H1'	9:CI:124:GLN:HE22	1.60	0.66
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.30	0.66
4:CD:68:TYR:N	4:CD:68:TYR:HD1	1.92	0.66
9:CI:18:PHE:HB3	9:CI:20:ARG:NH1	2.09	0.66
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.25	0.66
12:CL:46:LYS:HG2	12:CL:47:LYS:H	1.59	0.66
31:DA:1109:C:H5	31:DA:1110:G:C5	2.12	0.66
31:DA:1448:G:H1'	31:DA:1528:A:H62	1.60	0.66
31:DA:2292:C:O2'	31:DA:2293:C:H5'	1.95	0.66
39:DN:40:PRO:CA	46:DU:64:ARG:HH22	2.07	0.66
41:DP:144:GLU:N	41:DP:145:PRO:HD3	2.09	0.66
1:AA:373:A:H2'	1:AA:374:A:H8	1.60	0.66
1:AA:501:C:H2'	1:AA:502:G:H8	1.60	0.66
13:AM:12:ASN:OD1	13:AM:46:LYS:HE2	1.96	0.66
23:B1:9:GLY:O	23:B1:10:LYS:HB3	1.94	0.66
27:B5:57:VAL:HG23	27:B5:58:LEU:N	2.09	0.66
31:BA:1205:U:H4'	31:BA:1206:G:OP2	1.94	0.66
31:BA:1948:G:H5'	31:BA:1948:G:H8	1.59	0.66
41:BP:48:PRO:HG2	41:BP:49:ARG:H	1.59	0.66
47:BV:47:VAL:HG13	47:BV:48:GLY:N	2.10	0.66
49:BX:76:ARG:HH11	49:BX:76:ARG:CG	2.06	0.66
49:BX:89:ILE:HD12	49:BX:92:LEU:HD12	1.76	0.66
50:BY:42:VAL:HB	50:BY:65:ALA:HB3	1.76	0.66
3:CC:86:VAL:O	3:CC:90:GLU:HG2	1.94	0.66
4:CD:94:LEU:HA	4:CD:97:LEU:HB2	1.76	0.66
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.21	0.66
7:CG:73:MET:HA	7:CG:91:VAL:HG23	1.77	0.66
13:CM:46:LYS:HG3	13:CM:47:ASP:N	2.10	0.66
25:D3:19:GLN:HE22	25:D3:52:HIS:CE1	2.10	0.66
31:DA:767:U:O2'	31:DA:768:G:H5'	1.96	0.66
31:DA:1171:G:H8	31:DA:1171:G:OP2	1.78	0.66
35:DF:103:LYS:HA	35:DF:106:ARG:HG3	1.76	0.66
37:DH:43:VAL:HG21	37:DH:52:VAL:HG22	1.77	0.66
45:DT:78:LEU:O	45:DT:78:LEU:HD23	1.95	0.66
1:AA:814:A:N7	1:AA:816:A:C4	2.63	0.66
28:B6:12:GLU:OE1	28:B6:23:THR:HG22	1.95	0.66
29:B7:43:THR:HG23	29:B7:44:PRO:HD2	1.78	0.66
31:BA:943:U:OP2	41:BP:38:GLN:CD	2.33	0.66
32:BB:87:G:H3'	32:BB:88:C:H5''	1.75	0.66
33:BD:35:LYS:HG2	33:BD:64:ILE:HG23	1.76	0.66
49:BX:72:LYS:CG	49:BX:74:PRO:HD3	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:186:C:H2'	1:CA:187:C:C6	2.31	0.66
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.76	0.66
11:CK:21:ILE:HG13	11:CK:30:VAL:HG12	1.77	0.66
24:D2:30:ARG:HD2	24:D2:30:ARG:N	2.10	0.66
31:DA:1418:G:OP1	31:DA:1588:C:O2'	2.12	0.66
31:DA:1472:A:O2'	31:DA:1473:G:H5'	1.96	0.66
31:DA:1497:U:O2	31:DA:1497:U:H2'	1.96	0.66
31:DA:1719:G:H2'	31:DA:1720:U:H5'	1.77	0.66
33:DD:253:GLN:HB3	33:DD:255:LYS:CE	2.25	0.66
34:DE:27:LEU:HD22	45:DT:1:MET:CE	2.26	0.66
35:DF:16:GLY:O	35:DF:17:ARG:HG3	1.95	0.66
41:DP:30:THR:CG2	41:DP:31:ALA:H	2.08	0.66
45:DT:12:SER:O	45:DT:13:ARG:HG2	1.95	0.66
47:DV:2:PHE:HE1	47:DV:13:ARG:NH2	1.93	0.66
1:AA:417:C:O2'	1:AA:418:C:H5'	1.94	0.66
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.30	0.66
1:AA:833:U:H2'	1:AA:834:C:H6	1.61	0.66
1:AA:1190:G:H3'	3:AC:3:ASN:ND2	2.10	0.66
20:AT:75:ASN:HA	20:AT:78:ALA:HB3	1.77	0.66
24:B2:32:LEU:O	24:B2:33:MET:C	2.33	0.66
31:BA:639:U:H2'	31:BA:640:C:C6	2.30	0.66
31:BA:1109:C:H5	31:BA:1110:G:C4	2.13	0.66
31:BA:2335:A:O2'	31:BA:2336:A:H5''	1.94	0.66
39:BN:40:PRO:CA	46:BU:64:ARG:HH22	2.09	0.66
1:CA:346:G:H5''	45:DT:41:ARG:CZ	2.24	0.66
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.77	0.66
31:DA:271(Q):G:O2'	31:DA:271(R):G:OP2	2.13	0.66
31:DA:587:C:C4'	31:DA:588:U:OP2	2.42	0.66
33:DD:10:THR:OG1	33:DD:13:ARG:HB2	1.96	0.66
37:DH:105:LEU:H	37:DH:105:LEU:HD22	1.61	0.66
39:DN:68:GLU:HA	39:DN:86:PRO:CB	2.25	0.66
41:DP:51:PHE:O	41:DP:52:GLU:HB2	1.92	0.66
1:AA:561:U:O2'	1:AA:562:C:P	2.53	0.66
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.11	0.66
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.16	0.66
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.76	0.66
31:BA:910:A:C5	42:BQ:13:GLN:OE1	2.48	0.66
31:BA:1472:A:O2'	31:BA:1473:G:H5'	1.96	0.66
35:BF:57:VAL:HG13	35:BF:58:ALA:N	2.11	0.66
41:BP:25:SER:O	41:BP:30:THR:HG23	1.95	0.66
42:BQ:23:GLY:O	42:BQ:100:GLY:CA	2.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:81:LYS:HG2	50:BY:97:ARG:H	1.60	0.66
51:BZ:150:LEU:HD23	51:BZ:171:ILE:HD11	1.78	0.66
1:CA:1238:A:H62	1:CA:1299:A:N6	1.93	0.66
7:CG:108:ALA:O	7:CG:119:ARG:HD2	1.96	0.66
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.59	0.66
30:D8:4:MET:HE1	31:DA:593:G:H1'	1.75	0.66
32:DB:66:A:N6	32:DB:108:U:H2'	2.10	0.66
36:DG:61:ALA:HA	36:DG:64:THR:HG22	1.77	0.66
42:DQ:81:VAL:O	42:DQ:82:ARG:CD	2.30	0.66
45:DT:27:THR:O	45:DT:28:VAL:HG23	1.96	0.66
8:AH:53:VAL:O	8:AH:54:ASP:HB2	1.96	0.66
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.10	0.66
24:B2:37:PHE:HZ	24:B2:43:GLN:HB2	1.60	0.66
33:BD:145:VAL:HG12	33:BD:146:GLU:O	1.96	0.66
37:BH:99:VAL:HG12	37:BH:99:VAL:O	1.96	0.66
41:BP:10:PRO:CD	41:BP:11:GLY:H	2.08	0.66
41:BP:112:LEU:H	41:BP:128:HIS:HD2	1.42	0.66
50:BY:39:VAL:HG12	50:BY:40:GLU:H	1.61	0.66
51:BZ:64:GLY:O	51:BZ:65:GLN:O	2.12	0.66
24:D2:37:PHE:HZ	24:D2:43:GLN:HB2	1.60	0.66
28:D6:27:LYS:HD3	31:DA:2285:C:OP2	1.95	0.66
31:DA:626:U:N3	41:DP:105:LEU:HG	2.11	0.66
31:DA:1472:A:C2'	31:DA:1473:G:H5'	2.25	0.66
31:DA:2536:G:C6	31:DA:2537:U:C4	2.84	0.66
37:DH:19:VAL:HG21	37:DH:44:VAL:HA	1.78	0.66
50:DY:96:ILE:HG22	50:DY:97:ARG:N	2.10	0.66
1:AA:1238:A:H62	1:AA:1299:A:H62	1.43	0.66
2:AB:87:ARG:NE	2:AB:233:SER:HB3	2.09	0.66
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.30	0.66
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.24	0.66
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.76	0.66
17:AQ:5:VAL:O	17:AQ:6:LEU:HD23	1.96	0.66
22:B0:24:LYS:O	22:B0:25:ARG:HD2	1.95	0.66
31:BA:661:C:H4'	41:BP:16:ARG:HH12	1.61	0.66
31:BA:1790:C:H5''	31:BA:1791:A:OP1	1.95	0.66
39:BN:15:LEU:HD21	39:BN:55:VAL:HG22	1.78	0.66
39:BN:25:ARG:HG3	39:BN:25:ARG:HH11	1.60	0.66
47:BV:25:LEU:H	47:BV:94:LEU:HD13	1.60	0.66
51:BZ:105:VAL:HG12	51:BZ:139:VAL:O	1.96	0.66
1:CA:355:C:H2'	1:CA:356:A:H5'	1.78	0.66
1:CA:950:U:H2'	1:CA:951:G:H8	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:972:C:H4'	10:CJ:57:LYS:HG3	1.78	0.66
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.24	0.66
28:D6:10:LEU:H	28:D6:10:LEU:CD2	2.09	0.66
28:D6:15:GLU:CG	28:D6:18:ARG:HE	2.04	0.66
31:DA:1528(A):A:C5	31:DA:1529:G:H8	2.14	0.66
31:DA:2789:C:H4'	31:DA:2789:C:OP1	1.95	0.66
32:DB:87:G:H8	32:DB:87:G:P	2.19	0.66
33:DD:65:ILE:HD11	33:DD:67:PHE:CD1	2.30	0.66
33:DD:106:ILE:HD13	33:DD:106:ILE:O	1.95	0.66
43:DR:4:LEU:O	43:DR:6:SER:N	2.27	0.66
45:DT:83:ILE:HG13	45:DT:84:GLN:N	2.06	0.66
49:DX:89:ILE:HA	49:DX:92:LEU:HB2	1.78	0.66
1:AA:189:G:C6	1:AA:189(L):G:C6	2.84	0.66
1:AA:1288:A:H2	1:AA:1352:C:O2	1.79	0.66
8:AH:51:VAL:HG11	8:AH:60:ARG:HG3	1.77	0.66
24:B2:46:GLN:HE21	24:B2:47:ASN:CA	2.08	0.66
31:BA:196:A:O4'	41:BP:46:LYS:HE2	1.96	0.66
31:BA:912:C:C2	31:BA:913:U:C5	2.84	0.66
31:BA:2404:C:H2'	31:BA:2405:G:H5'	1.78	0.66
31:BA:2801(A):A:C4'	31:BA:2802:G:H5'	2.25	0.66
36:BG:76:SER:CB	36:BG:83:ARG:HB3	2.26	0.66
37:BH:30:LYS:HZ3	37:BH:81:GLU:HA	1.61	0.66
39:BN:95:PRO:C	39:BN:97:ARG:H	1.98	0.66
49:BX:60:ARG:HB2	49:BX:74:PRO:HD2	1.78	0.66
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.30	0.66
2:CB:19:HIS:CE1	2:CB:206:ASP:HB2	2.31	0.66
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.76	0.66
2:CB:114:ARG:O	2:CB:114:ARG:HD3	1.96	0.66
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.76	0.66
10:CJ:26:ALA:HB1	10:CJ:29:ARG:HH21	1.60	0.66
11:CK:29:ILE:HB	11:CK:44:SER:HB3	1.77	0.66
20:CT:37:SER:O	20:CT:41:ILE:HG12	1.96	0.66
31:DA:322:A:H5'	31:DA:340:A:C1'	2.26	0.66
31:DA:1592:C:O2'	31:DA:1593:G:H5''	1.95	0.66
31:DA:2849:U:O4	45:DT:23:ARG:NH2	2.28	0.66
34:DE:51:PHE:O	34:DE:74:PRO:HB3	1.95	0.66
35:DF:28:ILE:HA	35:DF:112:MET:HG2	1.77	0.66
36:DG:139:LEU:HA	36:DG:144:ILE:HG23	1.78	0.66
41:DP:48:PRO:O	41:DP:50:ARG:N	2.29	0.66
42:DQ:37:LEU:HB2	42:DQ:128:LYS:O	1.96	0.66
43:DR:11:ASN:CG	43:DR:12:ARG:H	1.99	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:33:ARG:CG	43:DR:115:GLU:HG3	2.20	0.66
44:DS:66:ALA:HA	44:DS:69:VAL:CG1	2.26	0.66
47:DV:72:VAL:HG12	47:DV:73:SER:H	1.61	0.66
47:DV:90:PRO:CG	47:DV:91:TYR:N	2.50	0.66
1:AA:349:A:O2'	1:AA:350:G:H5'	1.95	0.66
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.76	0.66
1:AA:1333:A:H2'	1:AA:1334:G:O4'	1.96	0.66
1:AA:1442:G:C8	1:AA:1442(B):A:C2	2.84	0.66
2:AB:19:HIS:CE1	2:AB:206:ASP:HB2	2.31	0.66
30:B8:34:TRP:HZ3	30:B8:41:ILE:HG23	1.60	0.66
31:BA:953:A:O2'	31:BA:954:G:H5'	1.96	0.66
31:BA:1528(A):A:C5	31:BA:1529:G:H8	2.13	0.66
33:BD:65:ILE:HD11	33:BD:67:PHE:CD1	2.29	0.66
39:BN:128:HIS:O	39:BN:130:HIS:N	2.28	0.66
45:BT:57:PHE:O	45:BT:59:THR:N	2.28	0.66
1:CA:1291:G:H4'	9:CI:38:GLN:O	1.95	0.66
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.78	0.66
8:CH:51:VAL:HG11	8:CH:60:ARG:HG3	1.76	0.66
24:D2:51:ARG:O	24:D2:51:ARG:HD3	1.94	0.66
28:D6:15:GLU:OE2	28:D6:41:PRO:CG	2.44	0.66
30:D8:26:LYS:HE2	30:D8:47:LYS:HZ2	1.60	0.66
31:DA:52:A:O2'	31:DA:53:A:H5'	1.96	0.66
31:DA:2314:C:O2'	31:DA:2315:G:H5'	1.95	0.66
35:DF:9:ILE:HG23	35:DF:13:SER:O	1.96	0.66
44:DS:66:ALA:O	44:DS:67:ARG:CB	2.43	0.66
45:DT:82:LEU:HD12	45:DT:82:LEU:N	2.11	0.66
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.25	0.66
3:AC:86:VAL:O	3:AC:90:GLU:HG2	1.96	0.66
10:AJ:26:ALA:HB1	10:AJ:29:ARG:HH21	1.61	0.66
31:BA:146:G:H5'	31:BA:146:G:C8	2.27	0.66
37:BH:155:SER:O	37:BH:157:TYR:N	2.29	0.66
41:BP:13:ASN:C	41:BP:13:ASN:HD22	1.99	0.66
47:BV:1:MET:HE2	47:BV:1:MET:HA	1.78	0.66
50:BY:95:LYS:HE2	50:BY:101:LYS:HA	1.77	0.66
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.42	0.66
1:CA:441:A:H3'	1:CA:442:C:C6	2.30	0.66
1:CA:949:A:H1'	1:CA:1364:U:H3	1.61	0.66
6:CF:99:ALA:HB1	18:CR:23:LYS:HZ2	1.61	0.66
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.78	0.66
31:DA:614(A):U:H4'	31:DA:614(B):G:H5''	1.78	0.66
31:DA:631:A:O2'	41:DP:67:MET:HB3	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1028:A:N6	31:DA:1125:G:H2'	2.11	0.66
31:DA:2591:C:P	33:DD:239:ARG:HG3	2.36	0.66
32:DB:87:G:H3'	32:DB:88:C:H5''	1.76	0.66
33:DD:173:VAL:HG23	33:DD:174:ILE:N	2.11	0.66
35:DF:18:ARG:HG2	35:DF:19:GLU:N	2.08	0.66
39:DN:95:PRO:C	39:DN:97:ARG:H	1.97	0.66
1:AA:552:U:C2'	1:AA:553:A:H5'	2.26	0.65
8:AH:10:LEU:HD23	8:AH:10:LEU:N	2.10	0.65
27:B5:25:LEU:HD12	48:BW:19:LEU:O	1.96	0.65
31:BA:1531:C:H3'	31:BA:1532:C:C5'	2.26	0.65
31:BA:2301:C:H2'	31:BA:2302:G:O4'	1.96	0.65
31:BA:2789:C:OP1	31:BA:2789:C:H4'	1.96	0.65
32:BB:21:G:O2'	32:BB:22:U:P	2.53	0.65
39:BN:68:GLU:HA	39:BN:86:PRO:CB	2.27	0.65
42:BQ:58:PHE:HD1	42:BQ:58:PHE:O	1.79	0.65
46:BU:88:ILE:HD13	46:BU:88:ILE:O	1.96	0.65
49:BX:24:GLY:O	49:BX:25:LYS:O	2.12	0.65
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.32	0.65
15:CO:3:ILE:HD13	15:CO:3:ILE:H	1.61	0.65
22:D0:8:GLY:HA3	31:DA:2255:G:H21	1.61	0.65
27:D5:50:GLY:O	27:D5:51:TYR:HD1	1.79	0.65
31:DA:1022:G:N2	31:DA:1142(A):A:H2	1.89	0.65
31:DA:1109:C:H5	31:DA:1110:G:C4	2.14	0.65
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CD	2.25	0.65
47:DV:46:VAL:O	47:DV:47:VAL:HB	1.96	0.65
47:DV:72:VAL:HA	47:DV:88:ARG:NH1	2.09	0.65
1:AA:335:C:O2'	1:AA:336:C:H5'	1.95	0.65
1:AA:559:A:C5'	1:AA:560:U:H3'	2.25	0.65
1:AA:659:U:H2'	1:AA:660:G:H5'	1.77	0.65
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.78	0.65
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.79	0.65
23:B1:73:LEU:HB3	23:B1:90:ILE:HG23	1.79	0.65
30:B8:13:ARG:NH2	31:BA:250:G:OP2	2.29	0.65
31:BA:807:U:H2'	31:BA:808:G:O5'	1.96	0.65
31:BA:951:C:O2'	31:BA:952:G:H5'	1.96	0.65
31:BA:2870:C:C2'	31:BA:2871:C:H5'	2.25	0.65
36:BG:106:LEU:O	36:BG:111:LEU:HG	1.96	0.65
47:BV:25:LEU:H	47:BV:94:LEU:CD1	2.09	0.65
50:BY:99:CYS:SG	50:BY:99:CYS:O	2.55	0.65
51:BZ:5:LEU:CD1	51:BZ:43:GLU:HB3	2.24	0.65
1:CA:922:G:O2'	1:CA:1398:A:N1	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1128:C:H5'	9:CI:16:ARG:HH12	1.61	0.65
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.61	0.65
1:CA:1530:G:H4'	1:CA:1530:G:OP1	1.96	0.65
2:CB:22:LYS:NZ	2:CB:40:HIS:HE1	1.94	0.65
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.09	0.65
16:CP:22:THR:CG2	16:CP:32:TYR:HA	2.26	0.65
31:DA:26:G:OP1	48:DW:80:PRO:HB3	1.96	0.65
31:DA:287:C:C2	31:DA:288:C:C6	2.84	0.65
31:DA:2022:U:O2'	31:DA:2617:C:H5'	1.96	0.65
31:DA:2206:G:N2	31:DA:2207:G:C5'	2.48	0.65
31:DA:2564:A:C2	31:DA:2647:U:H4'	2.29	0.65
38:DI:129:THR:HA	38:DI:137:PRO:HA	1.78	0.65
47:DV:19:LYS:HG3	47:DV:20:LEU:O	1.95	0.65
49:DX:33:LYS:C	49:DX:35:THR:N	2.50	0.65
1:AA:949:A:H1'	1:AA:1364:U:H3	1.62	0.65
19:AS:19:VAL:HG11	19:AS:44:MET:HG3	1.77	0.65
22:B0:41:ARG:HB2	31:BA:2330:G:O2'	1.96	0.65
31:BA:340:A:H2'	31:BA:341:G:H5'	1.79	0.65
31:BA:1509:C:OP1	31:BA:1509:C:H4'	1.95	0.65
31:BA:2564:A:C2	31:BA:2647:U:H4'	2.30	0.65
31:BA:2580:U:H5'	34:BE:131:ALA:H	1.61	0.65
36:BG:61:ALA:HA	36:BG:64:THR:HG22	1.77	0.65
37:BH:89:ILE:O	37:BH:90:LYS:CG	2.44	0.65
39:BN:40:PRO:O	46:BU:64:ARG:NH2	2.30	0.65
41:BP:17:LYS:O	41:BP:17:LYS:CG	2.43	0.65
44:BS:33:LYS:HB3	44:BS:34:HIS:HD2	1.57	0.65
44:BS:66:ALA:O	44:BS:67:ARG:CB	2.45	0.65
46:BU:16:LYS:O	46:BU:20:LEU:HD23	1.97	0.65
4:CD:105:VAL:HG21	4:CD:126:ILE:HG21	1.78	0.65
4:CD:117:ALA:O	4:CD:121:VAL:HG23	1.96	0.65
24:D2:55:ARG:H	24:D2:56:GLN:NE2	1.93	0.65
31:DA:958:U:O2'	31:DA:959:A:P	2.55	0.65
31:DA:1478:G:O2'	31:DA:1479:G:H5'	1.97	0.65
34:DE:36:ARG:HH11	34:DE:85:ASN:HD21	1.43	0.65
42:DQ:141:GLN:HE21	51:DZ:72:ARG:N	1.95	0.65
1:AA:448:A:H62	1:AA:486:U:H3	1.45	0.65
1:AA:706:A:N7	1:AA:707:C:H5	1.95	0.65
1:AA:1289:A:H3'	1:AA:1290:G:H8	1.61	0.65
2:AB:130:ARG:HA	2:AB:130:ARG:HE	1.61	0.65
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	1.97	0.65
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.11	0.65
24:B2:15:LYS:O	24:B2:16:LEU:CB	2.44	0.65
31:BA:1169:G:H1	31:BA:1180:C:N4	1.89	0.65
33:BD:137:PRO:O	33:BD:140:THR:HG23	1.97	0.65
1:CA:503:C:H2'	1:CA:504:C:H6	1.61	0.65
1:CA:1333:A:H2'	1:CA:1334:G:O4'	1.96	0.65
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.79	0.65
6:CF:5:GLU:HG3	6:CF:93:SER:OG	1.96	0.65
31:DA:49:A:H4'	31:DA:50:U:H5'	1.78	0.65
31:DA:1464:C:O2'	31:DA:1528:A:C8	2.44	0.65
37:DH:30:LYS:HG2	37:DH:79:VAL:O	1.96	0.65
39:DN:125:GLY:HA2	39:DN:126:PRO:O	1.97	0.65
42:DQ:141:GLN:CG	51:DZ:72:ARG:HA	2.26	0.65
51:DZ:151:HIS:N	51:DZ:151:HIS:HD2	1.94	0.65
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.32	0.65
1:AA:663:A:C2'	1:AA:664:G:H5'	2.26	0.65
1:AA:736:C:H2'	1:AA:737:A:C8	2.31	0.65
1:AA:818:G:HO2'	1:AA:820:U:H6	1.44	0.65
35:BF:158:THR:HG23	35:BF:160:ASN:N	2.10	0.65
49:BX:57:LEU:HD11	49:BX:77:LYS:HD2	1.78	0.65
1:CA:539:A:H2'	1:CA:540:G:C8	2.32	0.65
1:CA:1190:G:H3'	3:CC:3:ASN:ND2	2.11	0.65
4:CD:9:CYS:SG	4:CD:22:LYS:HD2	2.36	0.65
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.11	0.65
23:D1:19:GLN:HG3	23:D1:44:PRO:HG3	1.77	0.65
31:DA:307:G:H22	31:DA:310:A:C5'	2.08	0.65
31:DA:579:G:H2'	31:DA:580:C:C6	2.31	0.65
31:DA:1531:C:H3'	31:DA:1532:C:C5'	2.26	0.65
31:DA:2328:A:H2'	31:DA:2329:G:C8	2.31	0.65
50:DY:39:VAL:HG12	50:DY:40:GLU:H	1.62	0.65
50:DY:86:ARG:HG2	50:DY:87:LYS:H	1.62	0.65
1:AA:113:G:H2'	1:AA:114:U:C6	2.32	0.65
1:AA:707:C:O2'	1:AA:708:C:H5'	1.97	0.65
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.79	0.65
18:AR:45:SER:H	18:AR:51:LEU:HD11	1.62	0.65
26:B4:25:TYR:C	26:B4:27:THR:H	2.00	0.65
28:B6:20:ASN:O	28:B6:21:TYR:CG	2.48	0.65
30:B8:32:LEU:CB	30:B8:34:TRP:H	2.10	0.65
31:BA:620:G:H4'	31:BA:621:A:C5'	2.24	0.65
31:BA:830:G:H4'	31:BA:831:G:OP2	1.96	0.65
33:BD:27:THR:CG2	33:BD:28:GLU:N	2.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:28:VAL:HG13	45:BT:46:GLU:HB2	1.78	0.65
45:BT:28:VAL:CG2	45:BT:46:GLU:HG3	2.27	0.65
48:BW:86:LEU:HD12	48:BW:87:PRO:CD	2.26	0.65
49:BX:89:ILE:HA	49:BX:92:LEU:HD12	1.79	0.65
51:BZ:152:ALA:HB2	51:BZ:168:GLU:HA	1.77	0.65
8:CH:86:ILE:HB	8:CH:133:LEU:HD22	1.79	0.65
14:CN:23:ARG:HH11	14:CN:30:ALA:HB2	1.61	0.65
24:D2:30:ARG:HH11	24:D2:30:ARG:CG	2.09	0.65
31:DA:1204:A:C2	31:DA:1241:A:C2	2.85	0.65
31:DA:1945:G:H2'	31:DA:1946:U:C6	2.31	0.65
36:DG:52:ILE:HG22	36:DG:54:GLU:HG2	1.78	0.65
40:DO:13:ASN:HD21	40:DO:97:ARG:H	1.45	0.65
47:DV:51:VAL:HG12	47:DV:52:VAL:N	2.11	0.65
50:DY:96:ILE:HG21	50:DY:99:CYS:CB	2.27	0.65
51:DZ:152:ALA:HB2	51:DZ:168:GLU:CA	2.26	0.65
1:AA:410:G:H1'	1:AA:432:A:N6	2.12	0.65
1:AA:1530:G:OP1	1:AA:1530:G:H4'	1.94	0.65
6:AF:97:PHE:O	18:AR:31:LEU:HD23	1.97	0.65
30:B8:32:LEU:HG	30:B8:34:TRP:HE3	1.62	0.65
31:BA:151:C:O2'	31:BA:152:G:H5'	1.97	0.65
31:BA:814:C:H5	41:BP:27:HIS:NE2	1.93	0.65
31:BA:1580:A:H8	31:BA:1580:A:OP2	1.80	0.65
34:BE:76:ARG:HG3	34:BE:195:LEU:HD22	1.79	0.65
37:BH:41:MET:CE	37:BH:55:PRO:HD3	2.26	0.65
1:CA:176:C:H2'	1:CA:177:C:C6	2.32	0.65
1:CA:706:A:N7	1:CA:707:C:H5	1.94	0.65
5:CE:12:LEU:O	5:CE:13:ILE:HD12	1.97	0.65
11:CK:125:PHE:N	11:CK:125:PHE:CD1	2.61	0.65
30:D8:13:ARG:NH2	31:DA:250:G:OP2	2.29	0.65
31:DA:823:G:O2'	31:DA:824:A:H5'	1.95	0.65
31:DA:1509:C:H4'	31:DA:1509:C:OP1	1.95	0.65
31:DA:1899:G:H21	31:DA:1902:C:H5	1.43	0.65
31:DA:2309:A:N3	31:DA:2310:A:H2	1.95	0.65
32:DB:44:G:H1'	32:DB:47:C:H42	1.62	0.65
33:DD:71:ASP:HB3	33:DD:103:ARG:NH2	2.12	0.65
33:DD:173:VAL:HG23	33:DD:174:ILE:H	1.62	0.65
50:DY:95:LYS:HE2	50:DY:101:LYS:HA	1.79	0.65
51:DZ:51:ALA:O	51:DZ:52:SER:HB3	1.97	0.65
51:DZ:64:GLY:O	51:DZ:65:GLN:O	2.13	0.65
1:AA:950:U:H2'	1:AA:951:G:H8	1.60	0.65
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.62	0.65
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.78	0.65
30:B8:61:LEU:HD13	31:BA:593:G:O2'	1.97	0.65
31:BA:34:C:O2'	31:BA:35:G:OP1	2.13	0.65
31:BA:244:A:C2	31:BA:255:A:C4	2.84	0.65
31:BA:2836:U:H2'	31:BA:2837:G:C8	2.32	0.65
33:BD:31:LYS:HG2	33:BD:34:VAL:CG1	2.26	0.65
45:BT:50:ILE:HA	45:BT:99:LEU:HD11	1.78	0.65
50:BY:46:LYS:C	50:BY:47:LYS:HD2	2.17	0.65
51:BZ:61:LEU:HB2	51:BZ:65:GLN:HB2	1.78	0.65
1:CA:677:U:H3	1:CA:713:G:H22	1.45	0.65
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.79	0.65
2:CB:211:ILE:O	2:CB:215:LEU:HB2	1.97	0.65
4:CD:164:ALA:HB1	4:CD:168:ARG:NH1	2.11	0.65
5:CE:51:VAL:O	5:CE:55:VAL:HG23	1.97	0.65
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.78	0.65
18:CR:67:ALA:HA	18:CR:70:ILE:HG13	1.76	0.65
23:D1:67:ILE:N	23:D1:68:PRO:HD2	2.11	0.65
24:D2:15:LYS:O	24:D2:16:LEU:CB	2.45	0.65
30:D8:32:LEU:HD23	30:D8:35:GLN:CA	2.27	0.65
31:DA:9:U:C4	31:DA:2629:A:N6	2.65	0.65
31:DA:1884:A:C2'	31:DA:1885:A:C5'	2.74	0.65
35:DF:22:ALA:HB1	35:DF:26:ALA:HB1	1.79	0.65
36:DG:16:ARG:HH11	36:DG:31:VAL:HG11	1.61	0.65
36:DG:106:LEU:O	36:DG:111:LEU:HG	1.96	0.65
37:DH:97:ARG:O	37:DH:99:VAL:HG23	1.97	0.65
47:DV:18:LEU:HD13	47:DV:98:GLU:OE1	1.97	0.65
49:DX:24:GLY:O	49:DX:25:LYS:O	2.14	0.65
26:B4:12:ALA:O	36:BG:101:ILE:HD11	1.96	0.65
30:B8:61:LEU:HB3	31:BA:593:G:H4'	1.78	0.65
31:BA:719:C:H2'	31:BA:720:C:C6	2.32	0.65
31:BA:919:G:H5'	32:BB:81:G:H1'	1.78	0.65
31:BA:1288:U:C2	31:BA:1327:C:O2	2.50	0.65
31:BA:1884:A:C2'	31:BA:1885:A:C5'	2.75	0.65
31:BA:2584:U:O4'	31:BA:2584:U:O2	2.11	0.65
45:BT:17:THR:O	45:BT:18:ASP:CB	2.44	0.65
45:BT:42:ILE:HD13	45:BT:83:ILE:HD11	1.79	0.65
50:BY:96:ILE:HG22	50:BY:97:ARG:N	2.11	0.65
1:CA:499:A:H4'	1:CA:500:G:OP1	1.96	0.65
1:CA:814:A:N7	1:CA:816:A:C4	2.65	0.65
1:CA:983:A:H2	1:CA:984:C:C6	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.26	0.65
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.16	0.65
8:CH:112:LEU:HD12	8:CH:112:LEU:O	1.97	0.65
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	1.78	0.65
24:D2:34:GLU:O	24:D2:36:ARG:N	2.29	0.65
31:DA:146:G:H5'	31:DA:146:G:C8	2.26	0.65
31:DA:779:U:OP1	33:DD:49:ILE:HG13	1.97	0.65
31:DA:912:C:C2	31:DA:913:U:C5	2.85	0.65
31:DA:1844:C:OP1	33:DD:257:LEU:HD23	1.97	0.65
31:DA:2464:C:O2'	31:DA:2465:C:O5'	2.13	0.65
33:DD:83:GLU:HB2	33:DD:92:ILE:CD1	2.25	0.65
37:DH:32:GLU:O	37:DH:33:LEU:HD23	1.97	0.65
38:DI:117:GLU:HG3	38:DI:118:LYS:H	1.62	0.65
50:DY:10:GLY:O	50:DY:27:VAL:HG22	1.97	0.65
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.32	0.65
8:AH:6:ILE:H	8:AH:6:ILE:HD12	1.62	0.65
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.78	0.65
14:AN:23:ARG:HH11	14:AN:30:ALA:HB2	1.61	0.65
28:B6:11:LEU:CD1	28:B6:51:GLU:HB2	2.27	0.65
31:BA:1693:U:OP2	31:BA:1694:C:H5	1.80	0.65
31:BA:2314:C:O2'	31:BA:2315:G:H5'	1.96	0.65
35:BF:34:TRP:CZ2	41:BP:12:ALA:HB2	2.32	0.65
35:BF:117:ARG:HG2	35:BF:192:LEU:HB2	1.79	0.65
36:BG:115:ARG:NH1	36:BG:136:ARG:HG3	2.12	0.65
41:BP:62:LEU:H	41:BP:62:LEU:HD13	1.62	0.65
41:BP:120:ALA:O	25:D3:1:MET:CA	2.45	0.65
46:BU:88:ILE:O	46:BU:88:ILE:CD1	2.44	0.65
47:BV:51:VAL:HG12	47:BV:52:VAL:H	1.62	0.65
50:BY:81:LYS:HG2	50:BY:96:ILE:CG2	2.26	0.65
50:BY:86:ARG:HG2	50:BY:87:LYS:H	1.62	0.65
1:CA:1057:G:C5	1:CA:1204:A:C2	2.85	0.65
1:CA:1159:U:H4'	1:CA:1160:G:OP1	1.96	0.65
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.79	0.65
6:CF:50:TYR:HE2	6:CF:52:ILE:HD11	1.62	0.65
8:CH:14:ARG:O	8:CH:18:ARG:HD3	1.97	0.65
31:DA:286:C:O2'	31:DA:287:C:H5'	1.97	0.65
31:DA:910:A:C5	42:DQ:13:GLN:OE1	2.50	0.65
31:DA:1292:U:H2'	31:DA:1293:C:C6	2.31	0.65
31:DA:2199:A:OP2	31:DA:2200:C:H5	1.80	0.65
33:DD:140:THR:O	33:DD:165:ILE:HG12	1.97	0.65
33:DD:224:ALA:HB2	33:DD:233:HIS:HB3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:66:GLU:HA	48:DW:69:LEU:HD11	1.77	0.65
1:AA:22:G:H2'	1:AA:23:C:H6	1.62	0.64
1:AA:102:G:C4	1:AA:103:C:C5	2.85	0.64
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.77	0.64
22:B0:55:ARG:HG3	31:BA:2365:G:OP1	1.97	0.64
26:B4:19:GLY:C	26:B4:21:VAL:H	1.97	0.64
29:B7:11:LYS:HE2	31:BA:686:G:H5''	1.78	0.64
33:BD:30:GLU:HG3	33:BD:63:ARG:NE	2.12	0.64
34:BE:3:GLY:HA3	34:BE:81:ILE:HG13	1.78	0.64
37:BH:43:VAL:HG11	37:BH:53:GLU:H	1.62	0.64
45:BT:28:VAL:HG12	45:BT:28:VAL:O	1.96	0.64
1:CA:417:C:C2'	1:CA:418:C:H5'	2.25	0.64
1:CA:1288:A:H2	1:CA:1352:C:O2	1.80	0.64
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	1.98	0.64
20:CT:97:ALA:O	20:CT:99:LEU:N	2.29	0.64
31:DA:128:C:C6	31:DA:128:C:H3'	2.33	0.64
38:DI:77:LEU:HD11	38:DI:101:LEU:HD22	1.79	0.64
41:DP:23:PRO:O	41:DP:33:ARG:NE	2.29	0.64
42:DQ:58:PHE:HD1	42:DQ:58:PHE:O	1.80	0.64
48:DW:51:LEU:HD23	48:DW:105:VAL:HG11	1.80	0.64
1:AA:9:G:OP1	5:AE:122:GLU:HB2	1.97	0.64
1:AA:60:A:P	1:AA:60:A:H8	2.20	0.64
1:AA:175:C:H2'	1:AA:176:C:H6	1.61	0.64
1:AA:1238:A:H62	1:AA:1299:A:N6	1.94	0.64
1:AA:1501:C:H5''	1:AA:1502:A:OP2	1.97	0.64
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.77	0.64
7:AG:108:ALA:O	7:AG:119:ARG:HD2	1.97	0.64
11:AK:125:PHE:HD1	11:AK:125:PHE:H	1.45	0.64
16:AP:22:THR:CG2	16:AP:32:TYR:HA	2.27	0.64
20:AT:97:ALA:O	20:AT:99:LEU:N	2.30	0.64
30:B8:32:LEU:HG	30:B8:34:TRP:CE3	2.32	0.64
31:BA:65:C:H2'	31:BA:66:C:C6	2.30	0.64
31:BA:174:C:C3'	31:BA:175:G:H5''	2.27	0.64
31:BA:528:A:C2	31:BA:2043:C:H4'	2.32	0.64
31:BA:996:A:H4'	46:BU:92:ARG:NE	2.10	0.64
31:BA:1021:A:N6	31:BA:1141:U:H3	1.93	0.64
31:BA:1719:G:H2'	31:BA:1720:U:H5'	1.78	0.64
31:BA:2286:A:C8	31:BA:2286:A:O2'	2.50	0.64
31:BA:2713:A:H3'	31:BA:2714:G:H5'	1.79	0.64
34:BE:73:GLU:HG3	34:BE:74:PRO:CD	2.17	0.64
34:BE:101:ARG:HB3	34:BE:169:ASN:HD22	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:158:HIS:CE1	37:BH:168:PRO:HB2	2.31	0.64
45:BT:61:PHE:CE2	45:BT:76:PHE:HB2	2.32	0.64
47:BV:2:PHE:HE1	47:BV:13:ARG:CZ	2.10	0.64
47:BV:66:ARG:CD	47:BV:67:GLY:N	2.60	0.64
49:BX:65:ARG:CZ	49:BX:66:LEU:N	2.60	0.64
51:BZ:151:HIS:N	51:BZ:151:HIS:HD2	1.93	0.64
1:CA:663:A:C2'	1:CA:664:G:H5'	2.27	0.64
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.61	0.64
6:CF:48:LEU:HD13	6:CF:52:ILE:HG12	1.79	0.64
9:CI:114:TYR:CD2	9:CI:114:TYR:N	2.65	0.64
27:D5:40:LYS:CD	27:D5:46:CYS:HB3	2.26	0.64
31:DA:1291:C:H2'	31:DA:1292:U:C6	2.32	0.64
31:DA:1694:C:O2'	31:DA:1695:G:C2	2.48	0.64
31:DA:1833:U:H2'	31:DA:1834:U:C6	2.31	0.64
31:DA:1839:G:C8	31:DA:1839:G:H5'	2.31	0.64
33:DD:35:LYS:HG2	33:DD:64:ILE:N	2.12	0.64
35:DF:18:ARG:CG	35:DF:19:GLU:H	2.06	0.64
49:DX:89:ILE:HD12	49:DX:92:LEU:HD12	1.77	0.64
1:AA:448:A:H2'	1:AA:449:C:C6	2.32	0.64
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.79	0.64
3:AC:108:ASN:HB3	3:AC:111:LEU:HB2	1.79	0.64
30:B8:26:LYS:HE2	30:B8:47:LYS:HZ2	1.63	0.64
31:BA:847:U:H5	31:BA:933:A:H62	1.42	0.64
31:BA:1833:U:H2'	31:BA:1834:U:H6	1.62	0.64
31:BA:2309:A:N3	31:BA:2310:A:H2	1.96	0.64
33:BD:118:VAL:HG22	33:BD:119:ALA:N	2.13	0.64
1:CA:542:G:H2'	1:CA:543:C:H6	1.61	0.64
1:CA:818:G:O2'	1:CA:819:A:H5'	1.97	0.64
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.78	0.64
4:CD:68:TYR:N	4:CD:68:TYR:CD1	2.65	0.64
6:CF:23:LYS:O	6:CF:27:GLN:HG2	1.96	0.64
23:D1:94:LEU:HD22	23:D1:95:LEU:N	2.13	0.64
31:DA:2262:U:H2'	31:DA:2263:C:C5'	2.26	0.64
31:DA:2836:U:H2'	31:DA:2837:G:C8	2.32	0.64
45:DT:129:ARG:NH1	45:DT:131:ALA:HB3	2.12	0.64
47:DV:73:SER:OG	47:DV:75:PHE:CE1	2.50	0.64
1:AA:977:A:H2'	1:AA:978:A:H5'	1.79	0.64
1:AA:1159:U:H4'	1:AA:1160:G:OP1	1.96	0.64
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.33	0.64
11:AK:24:SER:HB3	11:AK:27:ASN:O	1.97	0.64
15:AO:8:LYS:O	15:AO:12:ILE:HG13	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:11:SER:HA	20:AT:13:LEU:HD13	1.80	0.64
31:BA:195:A:H4'	31:BA:251:A:O2'	1.97	0.64
32:BB:44:G:H1'	32:BB:47:C:H42	1.62	0.64
33:BD:10:THR:OG1	33:BD:13:ARG:HB2	1.97	0.64
33:BD:266:SER:O	33:BD:267:SER:CB	2.44	0.64
38:BI:61:ARG:O	38:BI:133:HIS:HE1	1.80	0.64
41:BP:10:PRO:HD2	41:BP:11:GLY:H	1.62	0.64
43:BR:33:ARG:CG	43:BR:115:GLU:HG3	2.21	0.64
48:BW:18:ARG:HH11	48:BW:18:ARG:CG	2.10	0.64
50:BY:8:LYS:HD2	50:BY:8:LYS:N	2.12	0.64
22:D0:72:ARG:HH21	22:D0:75:LEU:CD1	2.10	0.64
25:D3:49:LYS:HE2	31:DA:850:C:O3'	1.98	0.64
31:DA:142:A:H8	31:DA:1595:G:N2	1.93	0.64
31:DA:2404:C:H2'	31:DA:2405:G:H5'	1.80	0.64
33:DD:249:PRO:HD2	33:DD:250:TRP:CE3	2.32	0.64
37:DH:35:VAL:O	37:DH:37:VAL:HG23	1.97	0.64
41:DP:25:SER:O	41:DP:30:THR:HG23	1.98	0.64
42:DQ:8:LYS:HG3	42:DQ:9:TYR:N	2.10	0.64
45:DT:32:TYR:CD2	45:DT:32:TYR:N	2.64	0.64
47:DV:69:LYS:HB3	47:DV:93:GLU:CD	2.18	0.64
1:AA:874:G:O2'	1:AA:875:C:H5'	1.97	0.64
1:AA:983:A:H2	1:AA:984:C:C6	2.16	0.64
1:AA:1442(A):G:H8	45:BT:118:ARG:HH11	1.40	0.64
2:AB:162:ILE:O	2:AB:185:ILE:HG12	1.98	0.64
2:AB:211:ILE:O	2:AB:215:LEU:HB2	1.96	0.64
4:AD:68:TYR:HE2	4:AD:97:LEU:HB3	1.62	0.64
24:B2:54:LYS:H	24:B2:56:GLN:NE2	1.96	0.64
31:BA:1973:G:H2'	31:BA:1974:C:C6	2.32	0.64
33:BD:106:ILE:O	33:BD:106:ILE:HD13	1.98	0.64
46:BU:40:PHE:HB3	47:BV:78:LYS:HD2	1.79	0.64
47:BV:1:MET:HE3	47:BV:44:LYS:CB	2.27	0.64
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.80	0.64
22:D0:55:ARG:HG3	31:DA:2365:G:OP1	1.98	0.64
31:DA:1531:C:H5''	31:DA:1532:C:H6	1.63	0.64
31:DA:2655:G:N3	31:DA:2655:G:H2'	2.12	0.64
45:DT:54:ARG:HA	45:DT:59:THR:HB	1.80	0.64
48:DW:4:LYS:CB	48:DW:106:ILE:HG22	2.20	0.64
31:BA:2422:A:H4'	31:BA:2423:U:OP1	1.97	0.64
39:BN:125:GLY:HA2	39:BN:126:PRO:O	1.96	0.64
45:BT:30:VAL:HG23	45:BT:31:SER:N	2.13	0.64
47:BV:18:LEU:HD13	47:BV:98:GLU:OE1	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:56:THR:C	49:BX:57:LEU:HD12	2.18	0.64
1:CA:833:U:H2'	1:CA:834:C:H6	1.62	0.64
1:CA:921:U:O2	5:CE:19:MET:HB2	1.96	0.64
2:CB:187:LEU:HD13	2:CB:187:LEU:O	1.98	0.64
18:CR:45:SER:H	18:CR:51:LEU:HD11	1.62	0.64
23:D1:32:LYS:HG2	31:DA:2396:G:O2'	1.98	0.64
23:D1:47:GLN:CG	31:DA:2230:G:H1'	2.20	0.64
30:D8:14:VAL:HG13	30:D8:22:VAL:HG13	1.80	0.64
31:DA:234:C:H2'	31:DA:235:U:C6	2.33	0.64
31:DA:244:A:C2	31:DA:255:A:C4	2.85	0.64
31:DA:708:C:H5'	31:DA:709:U:OP2	1.97	0.64
31:DA:1204:A:C2	31:DA:1241:A:N1	2.66	0.64
31:DA:2310:A:O2'	31:DA:2311:A:H5''	1.98	0.64
41:DP:16:ARG:CZ	41:DP:16:ARG:HB2	2.27	0.64
41:DP:80:TYR:CD1	41:DP:111:ARG:HB3	2.32	0.64
45:DT:38:ASN:HD22	45:DT:40:THR:H	1.43	0.64
45:DT:57:PHE:O	45:DT:59:THR:N	2.30	0.64
46:DU:90:VAL:O	46:DU:92:ARG:N	2.30	0.64
47:DV:72:VAL:O	47:DV:73:SER:OG	2.14	0.64
7:AG:26:PHE:O	7:AG:30:ILE:HG12	1.96	0.64
17:AQ:40:LYS:HG2	17:AQ:41:LYS:N	2.13	0.64
18:AR:67:ALA:HA	18:AR:70:ILE:HG13	1.80	0.64
24:B2:51:ARG:O	24:B2:51:ARG:HD3	1.97	0.64
30:B8:32:LEU:HB3	30:B8:34:TRP:CB	2.23	0.64
31:BA:1405:U:H2'	31:BA:1406:U:H6	1.59	0.64
35:BF:16:GLY:O	35:BF:17:ARG:HG3	1.97	0.64
46:BU:31:SER:C	46:BU:33:ARG:H	2.01	0.64
46:BU:87:GLY:O	47:BV:52:VAL:HA	1.98	0.64
47:BV:54:GLY:O	47:BV:56:SER:N	2.30	0.64
50:BY:15:VAL:O	50:BY:22:GLY:HA2	1.98	0.64
1:CA:355:C:C4	1:CA:356:A:N7	2.66	0.64
1:CA:863:U:H2'	1:CA:865:A:OP2	1.98	0.64
1:CA:1501:C:H5''	1:CA:1502:A:OP2	1.98	0.64
10:CJ:51:ARG:NE	10:CJ:61:GLU:HB2	2.10	0.64
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.79	0.64
22:D0:43:THR:O	22:D0:45:PHE:N	2.30	0.64
23:D1:47:GLN:HG2	31:DA:2230:G:C1'	2.18	0.64
24:D2:48:HIS:NE2	31:DA:75:G:H4'	2.13	0.64
31:DA:760:G:H2'	31:DA:761:A:O4'	1.97	0.64
31:DA:1173:G:H3'	31:DA:1174:A:C5'	2.28	0.64
31:DA:1187:G:H5''	47:DV:82:ARG:NH1	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2610:C:H4'	31:DA:2611:U:OP2	1.97	0.64
37:DH:43:VAL:HG11	37:DH:53:GLU:H	1.62	0.64
1:AA:16:A:O2'	1:AA:17:U:H5'	1.98	0.64
1:AA:166:G:H2'	1:AA:167:G:H8	1.63	0.64
1:AA:447:G:H2'	1:AA:485:G:N2	2.13	0.64
6:AF:23:LYS:O	6:AF:27:GLN:HG2	1.97	0.64
7:AG:91:VAL:HG13	7:AG:95:ARG:HD3	1.80	0.64
24:B2:54:LYS:N	24:B2:56:GLN:HE22	1.96	0.64
25:B3:11:SER:OG	25:B3:13:ILE:HG12	1.97	0.64
30:B8:4:MET:HE1	31:BA:593:G:C1'	2.27	0.64
31:BA:1884:A:H2'	31:BA:1885:A:H5'	1.77	0.64
32:BB:37:C:C5	32:BB:38:C:C4	2.85	0.64
34:BE:60:ASN:ND2	34:BE:60:ASN:N	2.46	0.64
34:BE:128:SER:O	34:BE:130:GLY:N	2.31	0.64
37:BH:97:ARG:O	37:BH:98:LEU:C	2.36	0.64
38:BI:56:LYS:HA	38:BI:59:ALA:HB3	1.80	0.64
51:BZ:152:ALA:HB2	51:BZ:168:GLU:N	2.12	0.64
1:CA:524:G:H2'	1:CA:525:C:C6	2.33	0.64
1:CA:1152:A:O2'	1:CA:1153:C:H5'	1.98	0.64
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.12	0.64
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG23	1.79	0.64
19:CS:19:VAL:HG11	19:CS:44:MET:HG3	1.79	0.64
30:D8:40:GLU:OE1	30:D8:44:LYS:HE3	1.98	0.64
31:DA:542:C:H42	31:DA:543:C:N4	1.94	0.64
31:DA:828:U:H3'	31:DA:828:U:O2	1.96	0.64
32:DB:47:C:O2'	44:DS:93:LYS:HG2	1.98	0.64
33:DD:44:ASN:HB3	33:DD:49:ILE:CA	2.28	0.64
33:DD:158:ALA:O	33:DD:159:ALA:CB	2.46	0.64
34:DE:37:ARG:HD3	34:DE:44:TYR:OH	1.98	0.64
39:DN:25:ARG:HH11	39:DN:25:ARG:HG3	1.63	0.64
46:DU:87:GLY:O	47:DV:52:VAL:HA	1.97	0.64
47:DV:69:LYS:CG	47:DV:70:ILE:H	2.02	0.64
50:DY:28:LYS:HA	50:DY:39:VAL:H	1.62	0.64
1:AA:134:A:H61	16:AP:25:ARG:NH1	1.96	0.64
1:AA:448:A:OP2	1:AA:485:G:N2	2.25	0.64
1:AA:504:C:H1'	1:AA:510:A:C4	2.33	0.64
3:AC:155:GLY:O	3:AC:156:ARG:HB2	1.98	0.64
24:B2:47:ASN:C	24:B2:49:LYS:H	2.01	0.64
31:BA:1478:G:O2'	31:BA:1479:G:H5'	1.97	0.64
31:BA:1568:G:H21	33:BD:58:HIS:CE1	2.14	0.64
31:BA:1784:A:H4'	31:BA:1785:A:O5'	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2689:U:H4'	31:BA:2690:C:OP2	1.95	0.64
33:BD:25:THR:O	33:BD:27:THR:HB	1.98	0.64
33:BD:35:LYS:HE3	33:BD:65:ILE:CA	2.28	0.64
33:BD:210:GLY:O	33:BD:211:ARG:HB3	1.95	0.64
36:BG:55:LYS:HG2	36:BG:58:GLN:NE2	2.11	0.64
36:BG:139:LEU:HA	36:BG:144:ILE:HG23	1.79	0.64
39:BN:56:ASN:H	39:BN:125:GLY:CA	2.11	0.64
41:BP:85:LEU:HD23	41:BP:85:LEU:N	2.09	0.64
41:BP:140:ALA:CB	25:D3:38:GLU:HG2	2.23	0.64
44:BS:26:LEU:O	44:BS:88:ASP:HB3	1.98	0.64
46:BU:90:VAL:HG13	47:BV:39:LEU:HG	1.79	0.64
47:BV:69:LYS:HB3	47:BV:93:GLU:CD	2.18	0.64
49:BX:82:GLN:C	49:BX:85:PRO:HD2	2.17	0.64
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.33	0.64
3:CC:36:ASP:HB3	3:CC:40:ARG:NH1	2.13	0.64
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.17	0.64
31:DA:827:U:O2'	31:DA:2068:U:C2	2.45	0.64
31:DA:1916:A:H2'	31:DA:1917:U:O4'	1.98	0.64
37:DH:30:LYS:HZ3	37:DH:81:GLU:HA	1.61	0.64
1:AA:417:C:C2'	1:AA:418:C:H5'	2.27	0.64
2:AB:141:GLU:O	2:AB:145:LEU:HB2	1.97	0.64
4:AD:105:VAL:HG21	4:AD:126:ILE:HG21	1.79	0.64
22:B0:68:GLU:HG3	22:B0:80:HIS:HB2	1.79	0.64
31:BA:272(J):C:H42	31:BA:363(A):A:N6	1.95	0.64
31:BA:767:U:O2'	31:BA:768:G:H5'	1.98	0.64
31:BA:993:G:H1'	47:BV:91:TYR:CD1	2.32	0.64
31:BA:1497:U:C5'	31:BA:1498:C:H5	2.08	0.64
31:BA:2205:C:O2	31:BA:2220:G:C2	2.51	0.64
40:BO:85:VAL:HG11	40:BO:114:ILE:CD1	2.28	0.64
44:BS:66:ALA:HA	44:BS:69:VAL:CG1	2.29	0.64
44:BS:77:ALA:O	44:BS:80:LEU:HD12	1.97	0.64
45:BT:91:ARG:CB	45:BT:116:ALA:HA	2.28	0.64
46:BU:65:ILE:HG12	46:BU:96:ALA:HB3	1.80	0.64
4:CD:64:LEU:HD12	4:CD:64:LEU:C	2.17	0.64
31:DA:1278:A:OP1	43:DR:36:THR:CG2	2.45	0.64
31:DA:1763:G:H4'	31:DA:1763:G:OP1	1.98	0.64
31:DA:2475:C:H6	31:DA:2475:C:H5''	1.63	0.64
34:DE:87:GLU:O	34:DE:89:ASP:N	2.31	0.64
36:DG:76:SER:CB	36:DG:83:ARG:HB3	2.27	0.64
39:DN:3:THR:CA	39:DN:4:TYR:CD1	2.81	0.64
39:DN:67:LEU:O	39:DN:69:GLN:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:77:ALA:O	44:DS:80:LEU:HD12	1.98	0.64
48:DW:59:VAL:HG12	48:DW:60:ASN:N	2.13	0.64
50:DY:2:ARG:C	50:DY:4:LYS:H	2.01	0.64
1:AA:355:C:H2'	1:AA:356:A:H5'	1.80	0.63
1:AA:539:A:H2'	1:AA:540:G:C8	2.32	0.63
1:AA:677:U:H3	1:AA:713:G:H22	1.45	0.63
5:AE:51:VAL:O	5:AE:55:VAL:HG23	1.98	0.63
8:AH:20:TYR:HA	8:AH:65:TYR:CZ	2.33	0.63
24:B2:26:ARG:HA	24:B2:29:LYS:HE3	1.79	0.63
31:BA:443:A:H1'	31:BA:1201:C:O4'	1.98	0.63
31:BA:1980:G:O2'	31:BA:1982:C:OP2	2.16	0.63
31:BA:2307:G:H3'	31:BA:2307:G:N3	2.13	0.63
31:BA:2712:U:O2'	31:BA:2712(A):A:OP2	2.13	0.63
35:BF:18:ARG:HG2	35:BF:19:GLU:N	2.08	0.63
38:BI:29:TYR:HD2	38:BI:30:LEU:HD23	1.64	0.63
47:BV:72:VAL:O	47:BV:73:SER:CB	2.46	0.63
5:CE:144:THR:O	5:CE:148:VAL:HG23	1.97	0.63
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CZ	2.33	0.63
31:DA:358:U:H6	31:DA:358:U:H3'	1.63	0.63
31:DA:1884:A:H2'	31:DA:1885:A:H5'	1.79	0.63
31:DA:2475:C:C5'	31:DA:2476:A:OP2	2.43	0.63
32:DB:37:C:C5	32:DB:38:C:C5	2.86	0.63
38:DI:9:LEU:H	38:DI:13:GLY:CA	2.10	0.63
45:DT:28:VAL:CG2	45:DT:46:GLU:HG3	2.27	0.63
49:DX:83:VAL:O	49:DX:84:ALA:HB3	1.98	0.63
1:AA:830:G:H2'	1:AA:831:U:H6	1.63	0.63
1:AA:1446:U:O2'	1:AA:1447:A:C8	2.50	0.63
2:AB:22:LYS:NZ	2:AB:40:HIS:HE1	1.95	0.63
23:B1:67:ILE:N	23:B1:68:PRO:HD2	2.13	0.63
23:B1:85:LEU:CA	23:B1:87:PRO:HD3	2.28	0.63
27:B5:57:VAL:HB	27:B5:58:LEU:HD12	1.80	0.63
31:BA:530:G:O4'	31:BA:530:G:N3	2.31	0.63
31:BA:626:U:N3	41:BP:105:LEU:HG	2.13	0.63
31:BA:2328:A:H2'	31:BA:2329:G:C8	2.33	0.63
33:BD:253:GLN:HB3	33:BD:255:LYS:CE	2.28	0.63
35:BF:10:PRO:HG2	35:BF:13:SER:OG	1.98	0.63
40:BO:4:PRO:O	40:BO:5:GLN:CB	2.46	0.63
42:BQ:24:GLY:HA3	51:BZ:78:LYS:CB	2.25	0.63
45:BT:50:ILE:HD13	45:BT:64:ARG:HB3	1.79	0.63
1:CA:793:U:O2	1:CA:1516:G:H4'	1.98	0.63
1:CA:977:A:H2'	1:CA:978:A:H5'	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.29	0.63
2:CB:71:VAL:HB	2:CB:164:VAL:CG2	2.28	0.63
2:CB:188:ALA:HB1	2:CB:192:SER:HB2	1.81	0.63
3:CC:91:LEU:HB3	3:CC:99:VAL:HG21	1.79	0.63
16:CP:17:TYR:HE1	16:CP:41:PRO:HG3	1.63	0.63
31:DA:150:C:H2'	31:DA:151:C:H6	1.63	0.63
31:DA:1499:C:C2'	31:DA:1500:G:H5'	2.28	0.63
32:DB:21:G:O2'	32:DB:22:U:P	2.55	0.63
33:DD:71:ASP:CB	33:DD:103:ARG:NH2	2.61	0.63
33:DD:267:SER:C	33:DD:269:PHE:N	2.48	0.63
39:DN:62:VAL:HG21	39:DN:66:LYS:HD2	1.80	0.63
41:DP:95:VAL:HG22	41:DP:125:VAL:HB	1.80	0.63
3:AC:71:ALA:HA	3:AC:106:VAL:HB	1.78	0.63
4:AD:138:TYR:C	4:AD:138:TYR:CD2	2.70	0.63
16:AP:17:TYR:HE1	16:AP:41:PRO:HG3	1.63	0.63
31:BA:518:G:H4'	48:BW:18:ARG:NH1	2.13	0.63
31:BA:1593:G:H5'	31:BA:1593:G:H8	1.63	0.63
33:BD:255:LYS:H	33:BD:255:LYS:HZ1	1.44	0.63
34:BE:37:ARG:HD3	34:BE:44:TYR:OH	1.98	0.63
34:BE:51:PHE:O	34:BE:74:PRO:HB3	1.98	0.63
41:BP:107:LYS:C	41:BP:109:GLY:H	1.98	0.63
46:BU:83:LEU:HG	46:BU:88:ILE:CG1	2.23	0.63
1:CA:373:A:H2'	1:CA:374:A:H8	1.64	0.63
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.10	0.63
2:CB:111:ARG:HH11	2:CB:111:ARG:CG	1.92	0.63
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	1.99	0.63
31:DA:340:A:H2'	31:DA:341:G:H5'	1.79	0.63
31:DA:1434:A:H2'	31:DA:1435:G:C8	2.33	0.63
31:DA:2327:A:H2'	31:DA:2328:A:H8	1.62	0.63
31:DA:2335:A:C8	31:DA:2337:G:C5	2.86	0.63
31:DA:2364:C:H2'	31:DA:2365:G:O4'	1.99	0.63
31:DA:2580:U:H5'	34:DE:131:ALA:H	1.62	0.63
31:DA:2637:U:O2'	31:DA:2638:G:H5'	1.98	0.63
35:DF:117:ARG:HG2	35:DF:192:LEU:HB2	1.80	0.63
48:DW:73:ALA:HB3	48:DW:106:ILE:HD11	1.80	0.63
1:AA:499:A:H4'	1:AA:500:G:OP1	1.97	0.63
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.80	0.63
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.38	0.63
5:AE:78:HIS:CE1	5:AE:142:LEU:HD23	2.34	0.63
25:B3:19:GLN:NE2	25:B3:52:HIS:CE1	2.66	0.63
28:B6:16:CYS:O	28:B6:18:ARG:NH2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:466:A:H5'	31:BA:467:G:OP2	1.99	0.63
31:BA:1503:U:C4	31:BA:1504:C:N4	2.67	0.63
36:BG:52:ILE:HG22	36:BG:54:GLU:HG2	1.78	0.63
44:BS:26:LEU:HD22	44:BS:87:PHE:CE1	2.34	0.63
45:BT:32:TYR:CG	45:BT:81:PRO:HB2	2.34	0.63
46:BU:64:ARG:NH2	46:BU:64:ARG:CA	2.60	0.63
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.33	0.63
6:CF:76:ALA:HB1	6:CF:80:ARG:HH21	1.64	0.63
16:CP:53:VAL:O	16:CP:57:ARG:HG2	1.98	0.63
26:D4:12:ALA:O	36:DG:101:ILE:HD11	1.99	0.63
31:DA:676:A:H2	31:DA:802:A:H61	1.42	0.63
31:DA:2238:G:H4'	31:DA:2239:G:OP1	1.98	0.63
34:DE:73:GLU:HG3	34:DE:74:PRO:CD	2.20	0.63
34:DE:95:ILE:HD12	34:DE:95:ILE:N	2.14	0.63
34:DE:167:VAL:HG23	34:DE:170:LEU:HD11	1.80	0.63
36:DG:55:LYS:HG2	36:DG:58:GLN:NE2	2.13	0.63
39:DN:67:LEU:C	39:DN:69:GLN:H	2.02	0.63
40:DO:13:ASN:ND2	40:DO:97:ARG:H	1.96	0.63
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	2.12	0.63
4:AD:61:LYS:HD3	4:AD:62:GLN:N	2.14	0.63
6:AF:18:GLN:HA	6:AF:21:LEU:CD2	2.19	0.63
7:AG:13:GLN:O	7:AG:24:THR:HG21	1.98	0.63
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.34	0.63
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	1.98	0.63
23:B1:25:LYS:O	23:B1:26:ARG:HB3	1.96	0.63
23:B1:32:LYS:HG2	31:BA:2396:G:O2'	1.98	0.63
23:B1:87:PRO:CD	23:B1:88:LYS:H	2.12	0.63
30:B8:46:ARG:NH2	41:BP:65:ARG:NH2	2.40	0.63
30:B8:52:LYS:N	30:B8:54:GLU:HG2	2.11	0.63
31:BA:1157:G:C6	31:BA:1158:C:N4	2.66	0.63
31:BA:1210:A:C5'	31:BA:1210:A:C8	2.79	0.63
33:BD:224:ALA:HB2	33:BD:233:HIS:HB3	1.79	0.63
35:BF:103:LYS:HA	35:BF:106:ARG:HG3	1.80	0.63
38:BI:133:HIS:CB	38:BI:134:PRO:CD	2.77	0.63
41:BP:95:VAL:HG22	41:BP:125:VAL:HB	1.80	0.63
45:BT:129:ARG:NH1	45:BT:131:ALA:HB3	2.13	0.63
49:BX:57:LEU:CD1	49:BX:77:LYS:HD2	2.28	0.63
49:BX:89:ILE:HA	49:BX:92:LEU:HB2	1.81	0.63
1:CA:175:C:H2'	1:CA:176:C:H6	1.63	0.63
1:CA:335:C:O2'	1:CA:336:C:H5'	1.98	0.63
4:CD:138:TYR:C	4:CD:138:TYR:CD2	2.69	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:51:ALA:O	12:CL:52:LEU:HD23	1.98	0.63
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.24	0.63
22:D0:41:ARG:HB2	31:DA:2330:G:O2'	1.99	0.63
31:DA:296:C:O2'	31:DA:297:C:H5'	1.98	0.63
31:DA:911:A:C2'	42:DQ:9:TYR:OH	2.43	0.63
31:DA:1670:C:O2	34:DE:129:HIS:HE1	1.81	0.63
31:DA:1882:C:H2'	31:DA:1882:C:O2	1.98	0.63
31:DA:2712(A):A:H5''	31:DA:2713:A:OP2	1.98	0.63
33:DD:28:GLU:HB2	33:DD:29:PRO:HD3	1.80	0.63
35:DF:20:LEU:HD22	35:DF:203:GLN:NE2	2.12	0.63
40:DO:85:VAL:HG11	40:DO:114:ILE:CD1	2.29	0.63
42:DQ:20:ALA:O	42:DQ:22:LYS:N	2.31	0.63
45:DT:32:TYR:CG	45:DT:81:PRO:HB2	2.33	0.63
50:DY:17:SER:HA	50:DY:71:LYS:HG2	1.80	0.63
1:AA:952:U:H4'	1:AA:964:A:H61	1.63	0.63
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	1.99	0.63
12:AL:51:ALA:O	12:AL:52:LEU:HD23	1.97	0.63
12:AL:86:ARG:HB2	12:AL:101:VAL:HG22	1.81	0.63
23:B1:94:LEU:HD22	23:B1:95:LEU:N	2.14	0.63
31:BA:542:C:H42	31:BA:543:C:H42	1.46	0.63
31:BA:1504:C:O2'	31:BA:1505:C:O5'	2.16	0.63
32:BB:86:G:C3'	32:BB:87:G:C8	2.81	0.63
35:BF:3:GLU:HA	35:BF:24:LEU:CB	2.29	0.63
41:BP:65:ARG:O	41:BP:68:GLN:HB3	1.98	0.63
46:BU:69:CYS:HB3	46:BU:106:PHE:CZ	2.33	0.63
47:BV:36:PRO:HG2	47:BV:62:LEU:HD11	1.81	0.63
1:CA:113:G:H2'	1:CA:114:U:C6	2.34	0.63
1:CA:262:A:H2'	1:CA:263:A:C8	2.34	0.63
1:CA:539:A:OP2	12:CL:115:LYS:HE3	1.99	0.63
1:CA:604:G:C5	1:CA:605:U:C5	2.87	0.63
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.79	0.63
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.81	0.63
23:D1:85:LEU:CA	23:D1:87:PRO:HD3	2.28	0.63
23:D1:87:PRO:CD	23:D1:88:LYS:H	2.12	0.63
29:D7:11:LYS:HE2	31:DA:686:G:H5''	1.80	0.63
31:DA:1339:G:H21	31:DA:1603:A:H1'	1.64	0.63
31:DA:1694:C:O2'	31:DA:1695:G:C4	2.51	0.63
31:DA:1947:C:H2'	31:DA:1948:G:C5'	2.29	0.63
31:DA:2262:U:C2'	31:DA:2263:C:C5'	2.77	0.63
31:DA:2360:A:O2'	31:DA:2361:A:C5'	2.47	0.63
31:DA:2478:A:H2'	31:DA:2479:G:H5'	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:25:THR:O	33:DD:27:THR:HB	1.99	0.63
33:DD:210:GLY:O	33:DD:211:ARG:HB3	1.97	0.63
34:DE:14:ILE:HG12	34:DE:21:VAL:HG22	1.80	0.63
34:DE:120:TRP:CE3	34:DE:155:LYS:HD3	2.33	0.63
39:DN:40:PRO:HA	46:DU:64:ARG:NH2	2.14	0.63
39:DN:45:ASN:HD22	39:DN:45:ASN:N	1.91	0.63
41:DP:17:LYS:O	41:DP:17:LYS:CG	2.45	0.63
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	2.14	0.63
9:AI:45:ALA:O	9:AI:48:GLU:HB2	1.98	0.63
12:AL:87:GLY:HA2	12:AL:98:TYR:HA	1.80	0.63
23:B1:14:VAL:O	23:B1:46:LEU:HD23	1.99	0.63
31:BA:8:A:H2'	31:BA:9:U:C6	2.34	0.63
31:BA:17:G:H4'	46:BU:25:TRP:CH2	2.32	0.63
31:BA:322:A:OP2	35:BF:169:ASN:HB2	1.98	0.63
31:BA:1173:G:H3'	31:BA:1174:A:C5'	2.28	0.63
31:BA:2023:G:H5'	31:BA:2617:C:H4'	1.80	0.63
33:BD:35:LYS:CE	33:BD:104:TYR:HD1	2.11	0.63
39:BN:62:VAL:HG21	39:BN:66:LYS:HD2	1.79	0.63
44:BS:53:SER:OG	44:BS:54:LEU:N	2.30	0.63
44:BS:66:ALA:O	44:BS:67:ARG:HB2	1.99	0.63
1:CA:693:G:O2'	7:CG:82:GLY:HA3	1.98	0.63
27:D5:48:GLU:O	27:D5:50:GLY:N	2.32	0.63
31:DA:662:G:P	41:DP:18:ARG:HD2	2.38	0.63
31:DA:2307:G:H3'	31:DA:2307:G:N3	2.13	0.63
31:DA:2591:C:OP2	33:DD:239:ARG:HB2	1.99	0.63
38:DI:6:LEU:O	38:DI:15:VAL:HB	1.98	0.63
42:DQ:8:LYS:CG	42:DQ:9:TYR:N	2.62	0.63
42:DQ:60:ARG:HA	51:DZ:179:ASP:N	2.13	0.63
49:DX:70:LEU:HG	49:DX:71:GLY:N	2.13	0.63
2:AB:71:VAL:HB	2:AB:164:VAL:CG2	2.29	0.63
4:AD:68:TYR:N	4:AD:68:TYR:CD1	2.66	0.63
31:BA:676:A:H8	31:BA:2069:G:N2	1.86	0.63
31:BA:760:G:H2'	31:BA:761:A:O4'	1.99	0.63
31:BA:1204:A:C2	31:BA:1241:A:C2	2.86	0.63
31:BA:1744:C:C2'	31:BA:1745:C:H5'	2.28	0.63
31:BA:2360:A:O2'	31:BA:2361:A:C5'	2.47	0.63
31:BA:2364:C:H2'	31:BA:2365:G:O4'	1.99	0.63
31:BA:2496:C:OP1	42:BQ:82:ARG:HD3	1.99	0.63
33:BD:27:THR:CG2	33:BD:28:GLU:H	2.11	0.63
38:BI:117:GLU:HG3	38:BI:118:LYS:H	1.64	0.63
41:BP:48:PRO:O	41:BP:50:ARG:N	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:32:TYR:CD2	45:BT:81:PRO:O	2.52	0.63
51:BZ:152:ALA:HB2	51:BZ:168:GLU:CA	2.29	0.63
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.34	0.63
12:CL:110:VAL:HG21	12:CL:120:TYR:HB3	1.80	0.63
23:D1:26:ARG:CB	23:D1:34:THR:HA	2.29	0.63
31:DA:34:C:O2'	31:DA:35:G:OP1	2.15	0.63
31:DA:195:A:H4'	31:DA:251:A:O2'	1.97	0.63
31:DA:2286:A:C8	31:DA:2286:A:O2'	2.48	0.63
31:DA:2301:C:H2'	31:DA:2302:G:O4'	1.98	0.63
33:DD:35:LYS:NZ	33:DD:64:ILE:O	2.30	0.63
33:DD:35:LYS:CE	33:DD:104:TYR:HD1	2.11	0.63
49:DX:72:LYS:CG	49:DX:74:PRO:HD3	2.29	0.63
1:AA:1057:G:C5	1:AA:1204:A:C2	2.87	0.63
16:AP:45:THR:HG23	16:AP:46:PRO:HD2	1.80	0.63
18:AR:43:PHE:O	18:AR:44:LEU:HD12	1.99	0.63
24:B2:31:GLU:HG2	24:B2:37:PHE:HD1	1.64	0.63
30:B8:6:THR:HG21	31:BA:243:U:OP1	1.99	0.63
31:BA:354:G:H8	31:BA:354:G:O5'	1.81	0.63
31:BA:1030:G:OP2	42:BQ:128:LYS:HE2	1.99	0.63
33:BD:63:ARG:HG3	33:BD:63:ARG:NH1	2.04	0.63
50:BY:10:GLY:O	50:BY:27:VAL:HG22	1.98	0.63
4:CD:61:LYS:HD3	4:CD:62:GLN:N	2.14	0.63
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.34	0.63
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	1.98	0.63
12:CL:86:ARG:HB2	12:CL:101:VAL:HG22	1.80	0.63
24:D2:56:GLN:H	24:D2:56:GLN:CD	2.01	0.63
31:DA:314:A:O2'	31:DA:315:G:H5'	1.99	0.63
31:DA:1658:C:OP1	34:DE:132:HIS:ND1	2.30	0.63
39:DN:67:LEU:HB3	39:DN:88:GLU:OE2	1.99	0.63
49:DX:57:LEU:HD11	49:DX:77:LYS:HD2	1.80	0.63
1:AA:793:U:O2	1:AA:1516:G:H4'	1.99	0.62
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.81	0.62
16:AP:53:VAL:O	16:AP:57:ARG:HG2	1.99	0.62
30:B8:61:LEU:HD22	31:BA:593:G:O3'	1.99	0.62
31:BA:2317:C:C2'	31:BA:2318:G:C5'	2.65	0.62
33:BD:35:LYS:NZ	33:BD:64:ILE:O	2.32	0.62
34:BE:46:ALA:HA	34:BE:82:ARG:O	1.98	0.62
41:BP:80:TYR:CD1	41:BP:111:ARG:HB3	2.34	0.62
49:BX:70:LEU:HG	49:BX:71:GLY:N	2.14	0.62
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.34	0.62
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:27:LEU:O	12:CL:29:GLY:N	2.29	0.62
23:D1:25:LYS:O	23:D1:26:ARG:CB	2.46	0.62
23:D1:92:LYS:C	23:D1:94:LEU:N	2.52	0.62
31:DA:8:A:H2'	31:DA:9:U:C6	2.33	0.62
31:DA:2058:A:H5''	31:DA:2059:A:OP2	2.00	0.62
31:DA:2192:G:H2'	31:DA:2193:G:H5'	1.81	0.62
31:DA:2565:A:H5''	31:DA:2566:A:OP2	1.99	0.62
33:DD:133:LEU:HB3	33:DD:173:VAL:HG11	1.80	0.62
45:DT:91:ARG:CB	45:DT:116:ALA:HA	2.30	0.62
1:AA:543:C:C2	1:AA:544:G:C8	2.87	0.62
2:AB:188:ALA:HB1	2:AB:192:SER:HB2	1.81	0.62
23:B1:23:LYS:HB2	23:B1:37:ILE:HG22	1.79	0.62
27:B5:51:TYR:CD2	27:B5:52:TYR:CZ	2.87	0.62
31:BA:184:C:H2'	31:BA:185:U:H6	1.63	0.62
31:BA:2537:U:H2'	31:BA:2538:C:C6	2.34	0.62
31:BA:2712(A):A:H5''	31:BA:2713:A:OP2	1.98	0.62
33:BD:143:HIS:HD2	33:BD:144:ALA:CB	2.12	0.62
36:BG:10:LYS:O	36:BG:15:VAL:HG23	2.00	0.62
42:BQ:52:VAL:HA	42:BQ:55:VAL:HG13	1.81	0.62
1:CA:166:G:H2'	1:CA:167:G:H8	1.64	0.62
1:CA:344:A:O2'	1:CA:346:G:N7	2.32	0.62
1:CA:797:C:OP1	11:CK:124:LYS:HE2	1.99	0.62
2:CB:114:ARG:HD2	2:CB:141:GLU:OE1	1.99	0.62
8:CH:17:THR:HB	8:CH:78:GLN:OE1	1.99	0.62
17:CQ:40:LYS:HG2	17:CQ:41:LYS:N	2.14	0.62
22:D0:68:GLU:HG3	22:D0:80:HIS:HB2	1.81	0.62
26:D4:25:TYR:C	26:D4:27:THR:H	2.01	0.62
31:DA:530:G:O4'	31:DA:530:G:N3	2.32	0.62
31:DA:1839:G:H5'	31:DA:1839:G:H8	1.64	0.62
31:DA:2681:C:C5	31:DA:2725:A:N6	2.48	0.62
31:DA:2897:U:H2'	31:DA:2897:U:O2	1.99	0.62
38:DI:117:GLU:HG3	38:DI:118:LYS:N	2.13	0.62
1:AA:355:C:C4	1:AA:356:A:N7	2.67	0.62
1:AA:503:C:H2'	1:AA:504:C:H6	1.64	0.62
1:AA:542:G:H2'	1:AA:543:C:H6	1.63	0.62
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.64	0.62
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.34	0.62
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	1.98	0.62
6:AF:5:GLU:HG3	6:AF:93:SER:OG	1.99	0.62
27:B5:51:TYR:CD2	27:B5:52:TYR:CE2	2.87	0.62
31:BA:1478:G:C2'	31:BA:1479:G:H5'	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1694:C:O2'	31:BA:1695:G:C4	2.52	0.62
31:BA:1916:A:H2'	31:BA:1917:U:O4'	1.99	0.62
31:BA:2262:U:H2'	31:BA:2263:C:C5'	2.29	0.62
31:BA:2307:G:C2	31:BA:2308:G:H5'	2.35	0.62
33:BD:35:LYS:CG	33:BD:64:ILE:N	2.62	0.62
33:BD:83:GLU:HB2	33:BD:92:ILE:CD1	2.28	0.62
33:BD:158:ALA:O	33:BD:159:ALA:CB	2.47	0.62
33:BD:247:ALA:HA	33:BD:254:THR:HG22	1.80	0.62
34:BE:39:PRO:HA	34:BE:43:GLY:HA2	1.79	0.62
37:BH:30:LYS:HG2	37:BH:79:VAL:O	1.99	0.62
50:BY:38:ILE:HG22	50:BY:39:VAL:H	1.64	0.62
1:CA:448:A:H62	1:CA:486:U:H3	1.46	0.62
1:CA:684:A:H2'	1:CA:685:G:C8	2.34	0.62
1:CA:1199:U:H4'	10:CJ:54:PHE:CZ	2.34	0.62
2:CB:162:ILE:O	2:CB:185:ILE:HG12	1.99	0.62
3:CC:108:ASN:HB3	3:CC:111:LEU:HB2	1.81	0.62
6:CF:99:ALA:HB1	18:CR:23:LYS:NZ	2.13	0.62
8:CH:1:MET:HE2	8:CH:1:MET:H3	1.64	0.62
23:D1:8:SER:N	23:D1:46:LEU:HD13	2.14	0.62
31:DA:71:A:H5'	31:DA:71:A:C8	2.35	0.62
31:DA:195:A:C8	31:DA:197:A:OP1	2.53	0.62
31:DA:1332:G:C8	31:DA:1332:G:H5'	2.35	0.62
31:DA:1796:U:H2'	31:DA:1797:C:C6	2.34	0.62
33:DD:13:ARG:HD2	33:DD:16:MET:HE3	1.82	0.62
37:DH:149:ARG:HD3	37:DH:164:TYR:HE1	1.65	0.62
38:DI:12:LEU:O	38:DI:12:LEU:HG	1.99	0.62
43:DR:53:HIS:HD2	43:DR:94:TYR:OH	1.82	0.62
44:DS:87:PHE:HB2	44:DS:106:ARG:HD3	1.81	0.62
46:DU:102:GLU:HG3	47:DV:2:PHE:HZ	1.64	0.62
1:AA:684:A:H2'	1:AA:685:G:C8	2.34	0.62
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.00	0.62
12:AL:41:ARG:CG	12:AL:42:THR:H	2.12	0.62
16:AP:19:ILE:HG22	16:AP:36:ILE:HG13	1.82	0.62
23:B1:19:GLN:HG3	23:B1:44:PRO:HG3	1.80	0.62
24:B2:48:HIS:NE2	31:BA:75:G:H4'	2.14	0.62
31:BA:1265:A:OP1	31:BA:1265:A:H8	1.82	0.62
31:BA:1531:C:H5''	31:BA:1532:C:H6	1.64	0.62
31:BA:2101:G:C6	31:BA:2102:U:C5	2.88	0.62
31:BA:2392:A:H2	31:BA:2424:C:H42	1.46	0.62
33:BD:71:ASP:CB	33:BD:103:ARG:NH2	2.61	0.62
34:BE:167:VAL:HG23	34:BE:170:LEU:HD11	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:64:THR:HG23	36:BG:65:GLY:N	2.14	0.62
37:BH:41:MET:HE1	37:BH:54:ARG:HA	1.82	0.62
37:BH:85:LYS:HZ2	37:BH:133:VAL:HB	1.64	0.62
45:BT:82:LEU:HD12	45:BT:82:LEU:N	2.15	0.62
49:BX:85:PRO:O	49:BX:86:GLY:C	2.37	0.62
50:BY:10:GLY:CA	50:BY:27:VAL:HG13	2.14	0.62
7:CG:116:ALA:O	7:CG:120:ILE:HG12	2.00	0.62
28:D6:9:LEU:HD13	28:D6:9:LEU:C	2.19	0.62
31:DA:528:A:C2	31:DA:2043:C:H5'	2.35	0.62
44:DS:74:ALA:O	44:DS:77:ALA:HB3	1.99	0.62
47:DV:2:PHE:HE1	47:DV:13:ARG:CZ	2.13	0.62
49:DX:57:LEU:CD1	49:DX:77:LYS:HD2	2.29	0.62
50:DY:81:LYS:HG2	50:DY:97:ARG:H	1.64	0.62
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.00	0.62
2:AB:22:LYS:HA	2:AB:22:LYS:HZ3	1.62	0.62
3:AC:138:VAL:HG22	3:AC:151:VAL:HG23	1.80	0.62
4:AD:64:LEU:C	4:AD:64:LEU:HD12	2.20	0.62
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.00	0.62
23:B1:48:LYS:O	23:B1:49:VAL:HB	2.00	0.62
24:B2:15:LYS:HA	24:B2:18:PRO:HD2	1.80	0.62
31:BA:195:A:C8	31:BA:197:A:OP1	2.53	0.62
31:BA:389:G:H1	41:BP:71:VAL:H	1.48	0.62
31:BA:1497:U:H2'	31:BA:1497:U:O2	2.00	0.62
31:BA:2287:A:H61	31:BA:2344:U:H3	1.45	0.62
34:BE:87:GLU:O	34:BE:89:ASP:N	2.32	0.62
44:BS:97:ARG:C	44:BS:97:ARG:HD2	2.20	0.62
50:BY:79:CYS:O	50:BY:80:GLY:C	2.37	0.62
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.35	0.62
1:CA:626:U:C2	1:CA:627:G:N7	2.67	0.62
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.30	0.62
1:CA:1446:U:O2'	1:CA:1447:A:C8	2.51	0.62
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.00	0.62
11:CK:41:THR:HG22	11:CK:42:TRP:N	2.14	0.62
31:DA:196:A:O4'	41:DP:46:LYS:HE2	1.99	0.62
31:DA:494:G:H21	48:DW:57:ASN:HD21	1.45	0.62
35:DF:3:GLU:HA	35:DF:24:LEU:CB	2.30	0.62
37:DH:85:LYS:HZ2	37:DH:133:VAL:HB	1.65	0.62
1:AA:1064:G:H5'	1:AA:1066:C:H1'	1.82	0.62
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.31	0.62
4:AD:107:ARG:HD2	4:AD:173:TRP:HZ2	1.65	0.62
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:49:VAL:HG13	14:AN:41:ARG:HB2	1.80	0.62
13:AM:16:ASP:HB3	13:AM:41:PRO:HB3	1.82	0.62
31:BA:828:U:H3'	31:BA:828:U:O2	1.98	0.62
31:BA:1481:U:H5'	31:BA:1482:G:OP2	2.00	0.62
31:BA:2661:G:O2'	31:BA:2662:A:OP1	2.12	0.62
33:BD:35:LYS:CE	33:BD:104:TYR:CD1	2.82	0.62
51:BZ:125:LEU:HD23	51:BZ:126:VAL:N	2.15	0.62
1:CA:410:G:H1'	1:CA:432:A:N6	2.14	0.62
1:CA:561:U:O2'	1:CA:562:C:P	2.57	0.62
27:D5:36:CYS:C	27:D5:38:ALA:H	2.02	0.62
31:DA:2074:U:H2'	31:DA:2075:U:C6	2.34	0.62
32:DB:28:C:C2	32:DB:29:A:C8	2.87	0.62
33:DD:35:LYS:HE3	33:DD:65:ILE:CA	2.30	0.62
35:DF:10:PRO:HG2	35:DF:13:SER:OG	2.00	0.62
38:DI:133:HIS:CB	38:DI:134:PRO:CD	2.76	0.62
45:DT:32:TYR:CD2	45:DT:81:PRO:O	2.53	0.62
46:DU:92:ARG:CZ	47:DV:11:GLN:H	2.13	0.62
49:DX:54:VAL:C	49:DX:55:ASN:HD22	2.02	0.62
1:AA:441:A:H3'	1:AA:442:C:C6	2.34	0.62
2:AB:213:LEU:O	2:AB:213:LEU:HD23	2.00	0.62
16:AP:20:VAL:HG22	16:AP:34:GLU:O	1.98	0.62
27:B5:2:ALA:N	31:BA:747:U:N3	2.48	0.62
31:BA:102:G:C8	31:BA:102:G:C5'	2.69	0.62
31:BA:287:C:C2	31:BA:288:C:C6	2.88	0.62
31:BA:528:A:N1	31:BA:2042:A:H2'	2.15	0.62
31:BA:587:C:C4'	31:BA:588:U:OP2	2.48	0.62
34:BE:101:ARG:HB3	34:BE:169:ASN:ND2	2.15	0.62
35:BF:160:ASN:HD21	35:BF:162:LEU:HB2	1.62	0.62
36:BG:46:ALA:H	36:BG:82:LEU:HD11	1.63	0.62
38:BI:77:LEU:HD11	38:BI:101:LEU:HD22	1.80	0.62
41:BP:23:PRO:O	41:BP:33:ARG:NE	2.32	0.62
45:BT:33:LYS:NZ	45:BT:33:LYS:N	2.47	0.62
47:BV:52:VAL:O	47:BV:53:GLU:CB	2.47	0.62
50:BY:17:SER:HA	50:BY:71:LYS:HG2	1.80	0.62
1:CA:1442:G:C8	1:CA:1442(B):A:C2	2.87	0.62
1:CA:1477:C:H2'	1:CA:1478:C:C6	2.35	0.62
2:CB:21:ARG:HB3	2:CB:39:ILE:HA	1.81	0.62
2:CB:141:GLU:O	2:CB:145:LEU:HB2	1.99	0.62
3:CC:43:LEU:O	3:CC:47:LEU:HB3	1.99	0.62
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.63	0.62
28:D6:11:LEU:CD1	28:D6:51:GLU:HB2	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:68:G:H2'	31:DA:69:C:H6	1.64	0.62
31:DA:1385:G:H4'	31:DA:1386:C:OP1	1.99	0.62
31:DA:1568:G:H21	33:DD:58:HIS:CE1	2.18	0.62
31:DA:2032:G:H21	34:DE:146:THR:HG23	1.64	0.62
31:DA:2749:A:H4'	37:DH:62:LYS:HB3	1.81	0.62
48:DW:6:ILE:HA	48:DW:103:ILE:O	1.99	0.62
3:AC:130:VAL:O	3:AC:134:ILE:HG12	1.99	0.62
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.80	0.62
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.65	0.62
24:B2:55:ARG:H	24:B2:56:GLN:NE2	1.98	0.62
31:BA:27:G:N2	31:BA:512:G:H1'	2.15	0.62
31:BA:542:C:N3	31:BA:543:C:N4	2.47	0.62
44:BS:92:TYR:HD1	44:BS:93:LYS:N	1.82	0.62
50:BY:46:LYS:HG2	50:BY:47:LYS:HD2	1.82	0.62
1:CA:685:G:N2	1:CA:686:U:C4	2.68	0.62
1:CA:687:A:H1'	1:CA:688:G:OP2	1.99	0.62
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.00	0.62
1:CA:1442(A):G:C3'	1:CA:1442(B):A:H5''	2.30	0.62
5:CE:98:THR:HG22	5:CE:99:GLY:N	2.13	0.62
20:CT:23:ARG:HA	20:CT:26:ASN:HD21	1.65	0.62
23:D1:21:ARG:NH1	31:DA:380:U:OP1	2.33	0.62
24:D2:15:LYS:HA	24:D2:18:PRO:HD2	1.80	0.62
31:DA:71:A:H5'	31:DA:71:A:H8	1.64	0.62
31:DA:794:G:O2'	31:DA:795:C:H5'	2.00	0.62
31:DA:1488:G:C6	31:DA:1489:U:N3	2.68	0.62
31:DA:2252:G:H2'	31:DA:2253:G:H8	1.64	0.62
32:DB:10:C:C4	32:DB:11:C:C5	2.88	0.62
32:DB:75:G:H8	32:DB:75:G:C5'	2.12	0.62
45:DT:28:VAL:HG13	45:DT:46:GLU:HB2	1.82	0.62
1:AA:322:C:H5	1:AA:328:C:C5	2.16	0.62
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.82	0.62
1:AA:1366:C:OP1	9:AI:117:HIS:HE1	1.82	0.62
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5''	2.30	0.62
5:AE:55:VAL:O	5:AE:58:ALA:HB3	2.00	0.62
31:BA:9:U:N3	31:BA:2629:A:N6	2.48	0.62
31:BA:635:C:O2'	31:BA:639:U:OP1	2.18	0.62
31:BA:911:A:C2'	42:BQ:9:TYR:OH	2.46	0.62
34:BE:27:LEU:HD22	45:BT:1:MET:CE	2.30	0.62
37:BH:97:ARG:O	37:BH:99:VAL:HG23	1.98	0.62
42:BQ:23:GLY:HA3	42:BQ:99:PRO:O	1.99	0.62
50:BY:28:LYS:CD	50:BY:37:VAL:HG12	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:39:VAL:HG21	51:BZ:44:PHE:HB2	1.81	0.62
1:CA:134:A:H61	16:CP:25:ARG:NH1	1.98	0.62
1:CA:180:U:H2'	1:CA:181:G:H5'	1.82	0.62
1:CA:410:G:H1'	1:CA:432:A:H61	1.65	0.62
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.34	0.62
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.82	0.62
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.82	0.62
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.81	0.62
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.29	0.62
10:CJ:63:PHE:HD1	14:CN:58:LYS:HA	1.64	0.62
23:D1:10:LYS:O	23:D1:13:ILE:HG23	2.00	0.62
31:DA:671:C:H5'	31:DA:671:C:C6	2.33	0.62
31:DA:754:C:H2'	31:DA:755:C:H6	1.64	0.62
31:DA:1499:C:O2'	31:DA:1500:G:H5'	2.00	0.62
31:DA:1515:G:H2'	31:DA:1516:C:H6	1.65	0.62
31:DA:2192:G:C2'	31:DA:2193:G:H5'	2.30	0.62
31:DA:2582:G:C2	31:DA:2583:G:C8	2.87	0.62
31:DA:2713:A:H3'	31:DA:2714:G:H5'	1.82	0.62
36:DG:10:LYS:O	36:DG:15:VAL:HG23	1.99	0.62
41:DP:56:SER:O	41:DP:58:THR:N	2.33	0.62
44:DS:53:SER:OG	44:DS:54:LEU:N	2.33	0.62
47:DV:43:GLU:H	47:DV:48:GLY:HA2	1.65	0.62
1:AA:1116:C:H3'	1:AA:1117:G:H5''	1.82	0.62
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.34	0.62
3:AC:91:LEU:HB3	3:AC:99:VAL:HG21	1.80	0.62
10:AJ:63:PHE:HD1	14:AN:58:LYS:HA	1.65	0.62
31:BA:958:U:HO2'	31:BA:959:A:P	2.23	0.62
31:BA:2094:G:H2'	31:BA:2095:C:H5'	1.81	0.62
31:BA:2897:U:O2	31:BA:2897:U:H2'	1.99	0.62
35:BF:83:PHE:O	35:BF:84:VAL:CB	2.48	0.62
47:BV:19:LYS:HG2	47:BV:96:ILE:HB	1.82	0.62
51:BZ:165:VAL:HG12	51:BZ:166:SER:OG	2.00	0.62
1:CA:322:C:H5	1:CA:328:C:C5	2.14	0.62
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.00	0.62
1:CA:1117:G:H4'	9:CI:104:ARG:CZ	2.30	0.62
1:CA:1366:C:OP1	9:CI:117:HIS:HE1	1.82	0.62
1:CA:1477:C:H2'	1:CA:1478:C:H6	1.65	0.62
9:CI:45:ALA:O	9:CI:48:GLU:HB2	2.00	0.62
31:DA:322:A:OP2	35:DF:169:ASN:HB2	1.99	0.62
31:DA:1268:A:C2	31:DA:2013:A:C4	2.88	0.62
31:DA:1503:U:C4	31:DA:1504:C:N4	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2392:A:H2	31:DA:2424:C:H42	1.48	0.62
31:DA:2790:A:H2'	31:DA:2791:C:C5'	2.30	0.62
32:DB:13:A:H2'	32:DB:70:C:O2'	2.00	0.62
33:DD:43:ARG:HH11	33:DD:44:ASN:CG	2.03	0.62
34:DE:39:PRO:HA	34:DE:43:GLY:HA2	1.82	0.62
37:DH:158:HIS:CE1	37:DH:168:PRO:HB2	2.35	0.62
49:DX:24:GLY:HA3	49:DX:80:ILE:HG12	1.81	0.62
1:AA:604:G:C5	1:AA:605:U:C5	2.88	0.61
1:AA:1342:C:H1'	9:AI:124:GLN:HE22	1.64	0.61
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.82	0.61
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	1.81	0.61
13:AM:46:LYS:HG3	13:AM:47:ASP:H	1.64	0.61
28:B6:15:GLU:OE2	28:B6:41:PRO:CG	2.46	0.61
31:BA:794:G:H2'	31:BA:795:C:H6	1.65	0.61
31:BA:1309:G:C2'	31:BA:1310:G:H5'	2.30	0.61
31:BA:2475:C:C5'	31:BA:2476:A:OP2	2.44	0.61
36:BG:71:THR:HG22	36:BG:72:ARG:N	2.14	0.61
45:BT:32:TYR:CD2	45:BT:32:TYR:N	2.68	0.61
48:BW:66:GLU:HA	48:BW:69:LEU:HD11	1.80	0.61
51:BZ:151:HIS:HB3	51:BZ:170:THR:HA	1.82	0.61
1:CA:857:C:H2'	1:CA:858:G:O4'	1.99	0.61
1:CA:874:G:O2'	1:CA:875:C:H5'	1.99	0.61
3:CC:138:VAL:HG22	3:CC:151:VAL:HG23	1.81	0.61
31:DA:1486:A:O2'	31:DA:1487:G:H5'	2.00	0.61
31:DA:1744:C:C2'	31:DA:1745:C:H5'	2.30	0.61
35:DF:80:ALA:O	35:DF:83:PHE:HB2	2.00	0.61
36:DG:46:ALA:H	36:DG:82:LEU:HD11	1.65	0.61
37:DH:89:ILE:O	37:DH:90:LYS:CG	2.48	0.61
41:DP:26:GLY:HA2	41:DP:30:THR:HG21	1.80	0.61
46:DU:31:SER:C	46:DU:33:ARG:H	2.03	0.61
51:DZ:152:ALA:HB2	51:DZ:168:GLU:N	2.15	0.61
1:AA:166:G:O2'	1:AA:167:G:H5'	2.00	0.61
1:AA:376:G:OP1	16:AP:5:ARG:HB2	2.00	0.61
1:AA:687:A:H1'	1:AA:688:G:OP2	2.00	0.61
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.82	0.61
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	1.81	0.61
22:B0:43:THR:HG22	31:BA:2331:G:O2'	2.00	0.61
23:B1:30:VAL:O	23:B1:30:VAL:HG12	1.98	0.61
31:BA:494:G:H5''	31:BA:494:G:H8	1.63	0.61
31:BA:1021:A:H3'	31:BA:1021:A:H8	1.63	0.61
33:BD:44:ASN:OD1	33:BD:44:ASN:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:16:ARG:O	34:BE:18:ASP:N	2.34	0.61
41:BP:16:ARG:CZ	41:BP:16:ARG:HB2	2.29	0.61
49:BX:54:VAL:C	49:BX:55:ASN:HD22	2.03	0.61
49:BX:60:ARG:CB	49:BX:72:LYS:H	2.13	0.61
50:BY:28:LYS:HD2	50:BY:37:VAL:HG12	1.80	0.61
51:BZ:130:PRO:HA	51:BZ:133:ILE:HD11	1.82	0.61
1:CA:37:U:O2'	1:CA:38:G:H5'	2.00	0.61
1:CA:93:G:H2'	1:CA:96:U:H5'	1.82	0.61
13:CM:12:ASN:OD1	13:CM:46:LYS:HE2	1.99	0.61
23:D1:27:GLU:OE2	23:D1:32:LYS:HB2	1.99	0.61
24:D2:31:GLU:HG2	24:D2:37:PHE:HD1	1.64	0.61
31:DA:174:C:C3'	31:DA:175:G:H5''	2.28	0.61
31:DA:1030:G:OP2	42:DQ:128:LYS:HE2	1.99	0.61
31:DA:2252:G:H2'	31:DA:2253:G:C8	2.34	0.61
31:DA:2492:U:H2'	31:DA:2493:U:C6	2.34	0.61
32:DB:60:C:C2	32:DB:61:G:C8	2.88	0.61
33:DD:125:ILE:HG21	33:DD:137:PRO:HG2	1.82	0.61
33:DD:166:GLN:HB3	33:DD:174:ILE:HG22	1.82	0.61
33:DD:167:GLY:O	33:DD:168:ARG:HG2	2.00	0.61
35:DF:128:ALA:O	35:DF:142:TRP:NE1	2.33	0.61
35:DF:178:PRO:HB2	35:DF:201:VAL:CG1	2.26	0.61
45:DT:31:SER:HA	45:DT:32:TYR:CD2	2.35	0.61
49:DX:65:ARG:CZ	49:DX:66:LEU:H	2.13	0.61
49:DX:82:GLN:C	49:DX:85:PRO:HD2	2.20	0.61
50:DY:96:ILE:CG2	50:DY:99:CYS:HB3	2.30	0.61
1:AA:152:A:N6	1:AA:170:U:C2	2.69	0.61
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.35	0.61
1:AA:1418:A:C2	31:BA:1948:G:N3	2.68	0.61
5:AE:101:ILE:HG12	5:AE:101:ILE:O	2.01	0.61
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	1.82	0.61
27:B5:40:LYS:NZ	27:B5:49:CYS:SG	2.69	0.61
31:BA:1204:A:C2	31:BA:1241:A:N1	2.66	0.61
31:BA:2894:G:N3	31:BA:2894:G:H2'	2.15	0.61
41:BP:121:LYS:HB3	41:BP:123:LEU:HD23	1.82	0.61
50:BY:44:ILE:HG22	50:BY:45:VAL:H	1.65	0.61
1:CA:60:A:H8	1:CA:60:A:P	2.23	0.61
1:CA:327:A:C4	1:CA:329:A:C8	2.88	0.61
1:CA:341:C:O2'	1:CA:342:C:H5'	2.01	0.61
1:CA:923:A:H5'	5:CE:21:ALA:HB2	1.82	0.61
4:CD:104:VAL:O	4:CD:108:LEU:HB2	2.01	0.61
7:CG:91:VAL:HG13	7:CG:95:ARG:HD3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.83	0.61
17:CQ:40:LYS:HG2	17:CQ:41:LYS:H	1.65	0.61
31:DA:671:C:H6	31:DA:671:C:C5'	2.13	0.61
31:DA:864:G:C6	31:DA:865:C:N4	2.68	0.61
31:DA:901:A:H5'	31:DA:902:C:OP2	2.00	0.61
31:DA:1279:G:H5'	43:DR:34:ILE:HD11	1.81	0.61
31:DA:1484:G:N2	31:DA:1505:C:H5	1.97	0.61
31:DA:1580:A:OP2	31:DA:1580:A:H8	1.83	0.61
31:DA:2657:A:H2	31:DA:2664:G:H21	1.45	0.61
31:DA:2870:C:H5''	43:DR:65:LEU:HD21	1.81	0.61
33:DD:35:LYS:CE	33:DD:104:TYR:CD1	2.84	0.61
33:DD:143:HIS:HD2	33:DD:144:ALA:CB	2.13	0.61
36:DG:64:THR:HG23	36:DG:65:GLY:N	2.16	0.61
38:DI:85:GLU:O	38:DI:123:LEU:HD12	2.00	0.61
44:DS:66:ALA:O	44:DS:67:ARG:HB2	2.01	0.61
49:DX:76:ARG:HH11	49:DX:76:ARG:CG	2.02	0.61
50:DY:44:ILE:HG22	50:DY:45:VAL:H	1.65	0.61
51:DZ:102:LEU:HD11	51:DZ:124:ILE:HG22	1.82	0.61
1:AA:1152:A:O2'	1:AA:1153:C:H5'	1.99	0.61
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.81	0.61
22:B0:53:MET:HB2	22:B0:59:LEU:HD23	1.82	0.61
28:B6:32:ASN:O	28:B6:33:LYS:HB2	2.00	0.61
31:BA:1006:C:H1'	39:BN:106:MET:CE	2.31	0.61
31:BA:1301:A:C8	31:BA:1303:G:C8	2.88	0.61
31:BA:1486:A:O2'	31:BA:1487:G:H5'	1.99	0.61
31:BA:2580:U:H5'	34:BE:131:ALA:HB3	1.82	0.61
31:BA:2870:C:H2'	31:BA:2871:C:H5'	1.83	0.61
34:BE:95:ILE:HD12	34:BE:95:ILE:N	2.14	0.61
35:BF:8:GLN:HB3	35:BF:126:VAL:HA	1.82	0.61
1:CA:504:C:H1'	1:CA:510:A:C4	2.34	0.61
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.36	0.61
9:CI:96:LEU:HG	9:CI:102:LEU:HB2	1.80	0.61
11:CK:24:SER:HB3	11:CK:27:ASN:O	2.00	0.61
28:D6:10:LEU:H	28:D6:10:LEU:HD22	1.65	0.61
31:DA:236:C:H2'	31:DA:237:C:C6	2.34	0.61
31:DA:825:C:H2'	31:DA:826:U:O5'	2.00	0.61
31:DA:1945:G:H2'	31:DA:1946:U:H6	1.64	0.61
31:DA:2317:C:C2'	31:DA:2318:G:C5'	2.67	0.61
36:DG:115:ARG:NH1	36:DG:136:ARG:HG3	2.15	0.61
37:DH:40:GLU:O	37:DH:41:MET:SD	2.59	0.61
41:DP:88:LEU:HD11	41:DP:95:VAL:HG21	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:83:LYS:O	48:DW:84:ARG:HD3	2.01	0.61
49:DX:73:ARG:O	49:DX:74:PRO:C	2.39	0.61
1:AA:327:A:C4	1:AA:329:A:C8	2.89	0.61
1:AA:1109:C:P	3:AC:176:HIS:HD1	2.24	0.61
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.65	0.61
2:AB:194:PRO:O	2:AB:196:LEU:N	2.33	0.61
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.82	0.61
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	1.82	0.61
22:B0:16:SER:HB3	31:BA:2262:U:OP2	2.00	0.61
30:B8:30:ARG:O	30:B8:31:HIS:O	2.18	0.61
31:BA:286:C:O2'	31:BA:287:C:H5'	2.00	0.61
31:BA:536:A:H2'	31:BA:537:C:C6	2.36	0.61
31:BA:814:C:C5	41:BP:27:HIS:CE1	2.89	0.61
31:BA:867:C:C5	31:BA:868:U:C5	2.88	0.61
31:BA:1844:C:OP1	33:BD:257:LEU:HD23	2.00	0.61
31:BA:1882:C:O2	31:BA:1882:C:H2'	1.99	0.61
31:BA:2492:U:H2'	31:BA:2493:U:C6	2.34	0.61
37:BH:88:LEU:O	37:BH:89:ILE:HG23	2.00	0.61
38:BI:9:LEU:H	38:BI:13:GLY:CA	2.13	0.61
45:BT:31:SER:HA	45:BT:32:TYR:CD2	2.36	0.61
45:BT:78:LEU:O	45:BT:78:LEU:HD23	2.00	0.61
1:CA:552:U:C2'	1:CA:553:A:H5'	2.30	0.61
1:CA:663:A:O2'	1:CA:664:G:H5'	2.00	0.61
6:CF:5:GLU:HB3	6:CF:62:TRP:HE1	1.64	0.61
6:CF:45:LEU:HD11	6:CF:57:GLN:OE1	2.00	0.61
24:D2:57:ILE:HG21	24:D2:59:ARG:HH11	1.66	0.61
27:D5:57:VAL:CG2	27:D5:58:LEU:H	2.12	0.61
37:DH:41:MET:CE	37:DH:55:PRO:HD3	2.30	0.61
42:DQ:54:MET:HG3	42:DQ:117:ALA:HB1	1.81	0.61
44:DS:30:ARG:NH2	44:DS:62:LYS:HD2	2.08	0.61
46:DU:64:ARG:NH2	46:DU:64:ARG:CA	2.62	0.61
51:DZ:71:VAL:HG22	51:DZ:88:PHE:CE2	2.34	0.61
51:DZ:151:HIS:HB3	51:DZ:170:THR:HA	1.82	0.61
1:AA:760:G:H2'	1:AA:761:G:H5'	1.82	0.61
1:AA:1346:A:H5''	9:AI:120:ARG:HH12	1.64	0.61
4:AD:19:LEU:HB2	4:AD:21:LEU:CD2	2.29	0.61
4:AD:19:LEU:HB2	4:AD:21:LEU:HD21	1.82	0.61
4:AD:112:VAL:HG13	4:AD:113:SER:H	1.66	0.61
4:AD:117:ALA:O	4:AD:121:VAL:HG23	1.98	0.61
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.81	0.61
24:B2:30:ARG:HD2	24:B2:30:ARG:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:56:GLN:H	24:B2:56:GLN:CD	2.04	0.61
31:BA:128:C:H3'	31:BA:128:C:C6	2.35	0.61
31:BA:484:C:H2'	31:BA:485:C:C6	2.35	0.61
31:BA:715:G:O2'	31:BA:716:A:H5'	2.01	0.61
31:BA:1527:G:H5''	31:BA:1528:A:OP1	2.01	0.61
31:BA:2292:C:O2'	31:BA:2293:C:H5'	1.99	0.61
38:BI:88:ILE:HD11	38:BI:123:LEU:HD23	1.82	0.61
41:BP:122:PRO:HB3	25:D3:1:MET:CE	2.30	0.61
42:BQ:43:THR:HG22	42:BQ:94:VAL:HG12	1.81	0.61
43:BR:116:LEU:O	43:BR:117:VAL:HB	1.99	0.61
44:BS:42:ASP:C	44:BS:44:LYS:H	2.04	0.61
44:BS:95:HIS:O	44:BS:98:VAL:HG23	2.01	0.61
45:BT:100:TYR:HD2	45:BT:103:ARG:HH21	1.46	0.61
48:BW:51:LEU:HD23	48:BW:105:VAL:HG11	1.83	0.61
1:CA:447:G:H2'	1:CA:485:G:N2	2.15	0.61
4:CD:79:PHE:CZ	4:CD:204:ILE:HD13	2.36	0.61
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.01	0.61
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.81	0.61
30:D8:27:THR:HA	41:DP:62:LEU:CD1	2.31	0.61
31:DA:528:A:C2	31:DA:2043:C:C5'	2.84	0.61
31:DA:1946:U:H2'	31:DA:1947:C:C6	2.35	0.61
33:DD:266:SER:O	33:DD:267:SER:CB	2.49	0.61
37:DH:141:VAL:HG12	37:DH:142:GLY:N	2.13	0.61
37:DH:155:SER:OG	37:DH:155:SER:O	2.18	0.61
39:DN:3:THR:HG22	39:DN:4:TYR:N	2.12	0.61
39:DN:18:ALA:CB	39:DN:21:LYS:HB2	2.21	0.61
40:DO:35:VAL:HG11	40:DO:103:ALA:HB3	1.82	0.61
49:DX:55:ASN:HD22	49:DX:55:ASN:N	1.99	0.61
1:AA:836:G:C6	1:AA:851:G:C6	2.88	0.61
5:AE:98:THR:HG22	5:AE:99:GLY:N	2.14	0.61
6:AF:50:TYR:HE2	6:AF:52:ILE:HD11	1.66	0.61
6:AF:82:ARG:HH11	6:AF:82:ARG:HA	1.66	0.61
6:AF:100:ASN:O	18:AR:28:GLU:HG2	2.00	0.61
29:B7:5:TRP:CD1	29:B7:7:PRO:HG3	2.36	0.61
31:BA:234:C:H2'	31:BA:235:U:C6	2.36	0.61
31:BA:542:C:H42	31:BA:543:C:N4	1.94	0.61
31:BA:833:U:O2	41:BP:55:ARG:NH1	2.33	0.61
31:BA:1427:A:H4'	31:BA:1428:C:O5'	2.01	0.61
31:BA:1528:A:O2'	31:BA:1528(A):A:O5'	2.18	0.61
31:BA:2190:G:C2'	31:BA:2191:G:H5'	2.31	0.61
31:BA:2192:G:C2'	31:BA:2193:G:H5'	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2192:G:H2'	31:BA:2193:G:H5'	1.81	0.61
36:BG:131:TYR:HB3	36:BG:159:VAL:CG1	2.31	0.61
39:BN:3:THR:CA	39:BN:4:TYR:CD1	2.82	0.61
41:BP:107:LYS:O	41:BP:109:GLY:N	2.34	0.61
41:BP:146:VAL:HG22	41:BP:147:LEU:H	1.65	0.61
42:BQ:141:GLN:CG	51:BZ:72:ARG:HH11	2.14	0.61
45:BT:83:ILE:HG13	45:BT:84:GLN:N	2.07	0.61
1:CA:318:G:H1	1:CA:335:C:H42	1.49	0.61
1:CA:819:A:H4'	1:CA:820:U:OP2	2.01	0.61
1:CA:952:U:H4'	1:CA:964:A:H61	1.65	0.61
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.00	0.61
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.82	0.61
1:CA:1399:C:C2	1:CA:1502:A:N6	2.69	0.61
7:CG:13:GLN:O	7:CG:24:THR:HG21	1.99	0.61
27:D5:16:ARG:NH1	27:D5:17:ASP:OD1	2.34	0.61
30:D8:4:MET:HE1	31:DA:593:G:C1'	2.31	0.61
31:DA:1693:U:H4'	31:DA:1694:C:OP2	2.00	0.61
31:DA:2544:G:H8	31:DA:2544:G:O5'	1.84	0.61
31:DA:2699:C:H2'	31:DA:2700:C:O4'	2.00	0.61
34:DE:27:LEU:HD22	45:DT:1:MET:HE3	1.81	0.61
35:DF:83:PHE:O	35:DF:84:VAL:HB	2.01	0.61
39:DN:40:PRO:O	46:DU:64:ARG:NH2	2.33	0.61
41:DP:62:LEU:N	41:DP:62:LEU:CD2	2.61	0.61
44:DS:90:GLY:O	44:DS:92:TYR:N	2.33	0.61
45:DT:55:ASN:N	45:DT:59:THR:HB	2.15	0.61
50:DY:8:LYS:N	50:DY:8:LYS:HD2	2.16	0.61
1:AA:192:U:H2'	1:AA:193:C:C6	2.34	0.61
1:AA:243:A:H4'	1:AA:244:U:O5'	2.01	0.61
1:AA:977:A:C8	1:AA:1223:C:C4	2.89	0.61
2:AB:44:LEU:O	2:AB:47:THR:HB	2.01	0.61
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.83	0.61
31:BA:92:A:O2'	31:BA:93:G:H5'	2.01	0.61
31:BA:708:C:O2	31:BA:708:C:H2'	2.00	0.61
31:BA:828:U:H4'	31:BA:831:G:N1	2.16	0.61
31:BA:952:G:C6	31:BA:953:A:N7	2.68	0.61
31:BA:1751:C:HO2'	31:BA:2861:G:HO2'	1.45	0.61
31:BA:1887:C:H2'	31:BA:1888:G:H5'	1.82	0.61
37:BH:85:LYS:HD3	37:BH:133:VAL:HB	1.82	0.61
41:BP:56:SER:O	41:BP:58:THR:N	2.33	0.61
43:BR:50:HIS:CE1	43:BR:54:LEU:HD21	2.36	0.61
44:BS:87:PHE:HB2	44:BS:106:ARG:HD3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:111:HIS:CD2	48:BW:112:GLY:N	2.69	0.61
1:CA:189:G:C6	1:CA:189(L):G:C6	2.89	0.61
2:CB:194:PRO:O	2:CB:196:LEU:N	2.34	0.61
13:CM:16:ASP:HB3	13:CM:41:PRO:HB3	1.82	0.61
31:DA:184:C:H2'	31:DA:185:U:H6	1.66	0.61
31:DA:194:G:H2'	31:DA:195:A:O4'	2.01	0.61
31:DA:196:A:C4	31:DA:805:G:C6	2.88	0.61
31:DA:236:C:H2'	31:DA:237:C:H6	1.66	0.61
31:DA:1188:U:O2'	31:DA:1189:A:H5'	2.00	0.61
31:DA:1497:U:C5'	31:DA:1498:C:C5	2.84	0.61
31:DA:2753:A:O2'	31:DA:2754:U:O5'	2.18	0.61
44:DS:74:ALA:HB1	44:DS:103:GLU:CB	2.31	0.61
45:DT:42:ILE:HD13	45:DT:83:ILE:HD11	1.81	0.61
45:DT:50:ILE:HA	45:DT:99:LEU:HD11	1.81	0.61
47:DV:1:MET:N	47:DV:44:LYS:HD2	2.16	0.61
48:DW:70:TYR:O	48:DW:107:LEU:HD12	2.00	0.61
1:AA:170:U:O2'	1:AA:171:A:H5'	2.01	0.61
1:AA:318:G:H1	1:AA:335:C:H42	1.48	0.61
2:AB:114:ARG:HD2	2:AB:141:GLU:OE1	2.00	0.61
4:AD:104:VAL:O	4:AD:108:LEU:HB2	2.00	0.61
12:AL:115:LYS:O	12:AL:117:ARG:HG3	2.00	0.61
24:B2:53:LEU:HD12	31:BA:77:C:OP1	2.00	0.61
31:BA:257:A:H2'	31:BA:258:G:H5'	1.82	0.61
31:BA:779:U:OP1	33:BD:49:ILE:HG13	2.00	0.61
31:BA:1418:G:H8	31:BA:1418:G:O5'	1.84	0.61
31:BA:1839:G:H5'	31:BA:1839:G:C8	2.36	0.61
31:BA:2030:A:H5''	31:BA:2031:A:P	2.41	0.61
41:BP:122:PRO:HB3	25:D3:1:MET:HE1	1.83	0.61
49:BX:72:LYS:HG3	49:BX:74:PRO:CD	2.29	0.61
50:BY:2:ARG:C	50:BY:4:LYS:H	2.02	0.61
1:CA:360:A:O2'	1:CA:361:G:H5'	2.00	0.61
1:CA:622:A:C8	1:CA:623:C:C5	2.89	0.61
2:CB:111:ARG:O	2:CB:145:LEU:HD11	2.01	0.61
2:CB:213:LEU:O	2:CB:213:LEU:HD23	2.00	0.61
3:CC:54:ARG:HD3	3:CC:69:HIS:CE1	2.35	0.61
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.01	0.61
4:CD:117:ALA:O	4:CD:120:LEU:HB2	2.01	0.61
6:CF:100:ASN:O	18:CR:28:GLU:HG2	2.01	0.61
9:CI:53:VAL:HB	9:CI:92:TYR:CE2	2.36	0.61
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.00	0.61
27:D5:57:VAL:HB	27:D5:58:LEU:HD12	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:769:G:O2'	31:DA:770:G:H5'	2.00	0.61
31:DA:1042:G:H2'	31:DA:1042:G:N3	2.15	0.61
31:DA:1265:A:OP1	31:DA:1265:A:H8	1.84	0.61
31:DA:1348:G:C2'	31:DA:1349:A:H5'	2.31	0.61
31:DA:1803:A:H4'	33:DD:259:THR:HG23	1.83	0.61
31:DA:2884:U:H2'	31:DA:2885:C:H5'	1.82	0.61
33:DD:63:ARG:HG3	33:DD:63:ARG:NH1	2.15	0.61
34:DE:6:GLY:O	34:DE:195:LEU:HD12	2.01	0.61
37:DH:137:ASP:O	37:DH:138:LYS:CB	2.47	0.61
43:DR:50:HIS:CE1	43:DR:54:LEU:HD21	2.35	0.61
44:DS:35:ILE:C	44:DS:36:TYR:HD1	2.04	0.61
1:AA:392:G:H2'	1:AA:393:A:C8	2.34	0.61
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.01	0.61
15:AO:67:LEU:HD22	15:AO:78:TYR:HE1	1.65	0.61
23:B1:47:GLN:HG2	31:BA:2230:G:C1'	2.26	0.61
31:BA:568:U:H5'	31:BA:945:A:C2	2.36	0.61
31:BA:819:A:C4	31:BA:1189:A:C2	2.88	0.61
31:BA:901:A:H5'	31:BA:902:C:OP2	2.00	0.61
31:BA:1763:G:OP1	31:BA:1763:G:H4'	2.01	0.61
31:BA:2418:A:H2'	31:BA:2419:U:C6	2.36	0.61
39:BN:77:GLY:O	39:BN:78:TYR:HB3	2.01	0.61
40:BO:35:VAL:HG11	40:BO:103:ALA:HB3	1.83	0.61
44:BS:53:SER:O	44:BS:56:LEU:N	2.34	0.61
46:BU:50:ARG:CZ	47:BV:75:PHE:CE2	2.84	0.61
47:BV:43:GLU:H	47:BV:48:GLY:HA2	1.66	0.61
1:CA:543:C:C2	1:CA:544:G:C8	2.89	0.61
1:CA:629:G:H2'	1:CA:630:G:O4'	2.01	0.61
1:CA:1109:C:P	3:CC:176:HIS:HD1	2.24	0.61
4:CD:43:HIS:O	4:CD:45:GLN:N	2.34	0.61
5:CE:57:LYS:O	5:CE:61:TYR:HD2	1.84	0.61
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.83	0.61
24:D2:32:LEU:O	24:D2:33:MET:C	2.38	0.61
27:D5:33:CYS:SG	27:D5:49:CYS:CB	2.89	0.61
31:DA:271(Q):G:O2'	31:DA:271(R):G:P	2.59	0.61
31:DA:528:A:H2	31:DA:2043:C:C5'	2.14	0.61
33:DD:30:GLU:CD	33:DD:63:ARG:HE	2.03	0.61
33:DD:44:ASN:OD1	33:DD:44:ASN:N	2.34	0.61
33:DD:125:ILE:HG22	33:DD:125:ILE:O	1.99	0.61
37:DH:66:GLY:HA2	37:DH:69:ARG:HB2	1.82	0.61
38:DI:52:ARG:O	38:DI:53:ALA:C	2.38	0.61
43:DR:51:LEU:HD13	43:DR:70:LEU:HD21	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:50:ILE:HA	45:DT:99:LEU:CD1	2.31	0.61
50:DY:45:VAL:HG13	50:DY:62:GLU:CB	2.27	0.61
51:DZ:19:ARG:HA	51:DZ:23:LYS:O	2.00	0.61
1:AA:93:G:H2'	1:AA:96:U:H5'	1.82	0.60
1:AA:921:U:O2	5:AE:19:MET:HB2	2.01	0.60
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.05	0.60
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.83	0.60
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.00	0.60
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.65	0.60
25:B3:44:ARG:O	25:B3:48:GLU:HG2	2.00	0.60
30:B8:58:ILE:HG22	41:BP:49:ARG:CD	2.31	0.60
31:BA:1028:A:N6	31:BA:1125:G:H2'	2.16	0.60
31:BA:1291:C:H2'	31:BA:1292:U:H6	1.66	0.60
31:BA:2572:A:N7	34:BE:144:ARG:HD2	2.16	0.60
31:BA:2753:A:O2'	31:BA:2754:U:O5'	2.19	0.60
35:BF:3:GLU:HA	35:BF:24:LEU:HB3	1.81	0.60
37:BH:156:ALA:C	37:BH:158:HIS:N	2.54	0.60
46:BU:49:HIS:HA	46:BU:52:ARG:HB2	1.83	0.60
50:BY:45:VAL:HG13	50:BY:62:GLU:CB	2.29	0.60
1:CA:342:C:O2'	1:CA:343:U:H5'	2.01	0.60
1:CA:448:A:H2'	1:CA:449:C:C6	2.35	0.60
1:CA:509:A:O2'	1:CA:510:A:P	2.59	0.60
1:CA:1116:C:H3'	1:CA:1117:G:H5''	1.82	0.60
2:CB:76:GLN:O	2:CB:208:ILE:HG12	2.01	0.60
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.19	0.60
13:CM:46:LYS:HG3	13:CM:47:ASP:H	1.63	0.60
31:DA:298:G:C5'	31:DA:299:A:OP1	2.49	0.60
31:DA:443:A:H1'	31:DA:1201:C:O4'	2.01	0.60
31:DA:626:U:H3	41:DP:105:LEU:HG	1.66	0.60
31:DA:823:G:C2'	31:DA:824:A:H5'	2.31	0.60
31:DA:1484:G:N2	31:DA:1505:C:C5	2.69	0.60
31:DA:2360:A:HO2'	31:DA:2361:A:H8	1.49	0.60
33:DD:142:VAL:HG23	33:DD:193:VAL:HA	1.83	0.60
38:DI:5:LEU:C	38:DI:6:LEU:HD23	2.21	0.60
44:DS:53:SER:O	44:DS:56:LEU:N	2.34	0.60
46:DU:16:LYS:O	46:DU:20:LEU:HD23	2.01	0.60
51:DZ:130:PRO:HA	51:DZ:133:ILE:HD11	1.82	0.60
51:DZ:150:LEU:HD23	51:DZ:171:ILE:HD11	1.82	0.60
1:AA:421:U:C4	3:AC:127:ARG:NH1	2.67	0.60
1:AA:960:U:O2	1:AA:960:U:H2'	2.01	0.60
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:78:HIS:CE1	5:AE:143:ARG:H	2.18	0.60
8:AH:86:ILE:HB	8:AH:133:LEU:HD22	1.82	0.60
9:AI:73:GLN:O	9:AI:77:ILE:HG13	2.01	0.60
31:BA:150:C:H2'	31:BA:151:C:H6	1.65	0.60
31:BA:157:U:H5'	31:BA:171:G:N2	2.16	0.60
37:BH:28:GLY:HA3	37:BH:79:VAL:HB	1.83	0.60
38:BI:5:LEU:C	38:BI:6:LEU:HD23	2.21	0.60
44:BS:85:VAL:CG2	44:BS:106:ARG:HB2	2.23	0.60
45:BT:93:ARG:O	45:BT:94:ALA:C	2.40	0.60
48:BW:64:MET:O	48:BW:65:LEU:CB	2.39	0.60
1:CA:437:U:O2'	1:CA:438:G:H5'	2.01	0.60
4:CD:127:THR:OG1	4:CD:128:VAL:N	2.32	0.60
8:CH:10:LEU:N	8:CH:10:LEU:HD23	2.15	0.60
16:CP:19:ILE:HG22	16:CP:36:ILE:HG13	1.82	0.60
29:D7:16:HIS:CB	29:D7:44:PRO:HG2	2.27	0.60
31:DA:151:C:O2'	31:DA:152:G:H5'	2.01	0.60
31:DA:673:C:H5''	35:DF:81:PRO:HD2	1.82	0.60
31:DA:971:C:H2'	31:DA:972:G:H5'	1.82	0.60
31:DA:2376:A:OP1	31:DA:2376:A:H8	1.84	0.60
44:DS:26:LEU:O	44:DS:88:ASP:HB3	2.01	0.60
46:DU:83:LEU:HG	46:DU:88:ILE:CG1	2.25	0.60
47:DV:1:MET:HE2	47:DV:1:MET:HA	1.82	0.60
47:DV:72:VAL:O	47:DV:73:SER:CB	2.49	0.60
50:DY:45:VAL:HG11	50:DY:60:PHE:O	2.00	0.60
51:DZ:165:VAL:HG12	51:DZ:166:SER:OG	1.99	0.60
1:AA:857:C:H2'	1:AA:858:G:O4'	2.01	0.60
4:AD:133:VAL:HG12	4:AD:135:LEU:H	1.66	0.60
6:AF:7:ASN:N	6:AF:7:ASN:HD22	1.98	0.60
6:AF:99:ALA:HB1	18:AR:23:LYS:NZ	2.15	0.60
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.82	0.60
16:AP:74:LEU:O	16:AP:79:VAL:HB	2.01	0.60
23:B1:26:ARG:CB	23:B1:34:THR:HA	2.31	0.60
31:BA:626:U:O2	41:BP:105:LEU:HG	2.01	0.60
31:BA:1441:G:O2'	31:BA:1442:G:H5'	2.01	0.60
31:BA:2536:G:C6	31:BA:2537:U:C4	2.89	0.60
31:BA:2699:C:H2'	31:BA:2700:C:O4'	2.01	0.60
34:BE:9:VAL:HG13	34:BE:25:VAL:O	2.01	0.60
34:BE:48:GLN:NE2	34:BE:78:LEU:HD13	2.16	0.60
1:CA:349:A:O2'	1:CA:350:G:H5'	2.00	0.60
1:CA:392:G:H2'	1:CA:393:A:C8	2.36	0.60
1:CA:963:G:H21	10:CJ:55:LYS:CE	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.00	0.60
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.31	0.60
3:CC:35:GLU:CD	3:CC:59:ARG:HH22	2.04	0.60
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.83	0.60
6:CF:42:GLU:OE1	6:CF:59:TYR:HE2	1.84	0.60
16:CP:20:VAL:HG22	16:CP:34:GLU:O	2.01	0.60
31:DA:1021:A:H3'	31:DA:1021:A:H8	1.65	0.60
31:DA:1528:A:O2'	31:DA:1528(A):A:O5'	2.19	0.60
31:DA:2101:G:C6	31:DA:2102:U:C5	2.89	0.60
31:DA:2790:A:H2'	31:DA:2791:C:H5''	1.83	0.60
33:DD:27:THR:CG2	33:DD:28:GLU:N	2.64	0.60
35:DF:3:GLU:O	35:DF:24:LEU:HG	2.01	0.60
38:DI:63:ALA:O	38:DI:67:ARG:HD2	2.00	0.60
41:DP:107:LYS:O	41:DP:109:GLY:N	2.34	0.60
41:DP:107:LYS:C	41:DP:109:GLY:H	2.01	0.60
50:DY:76:CYS:O	50:DY:99:CYS:SG	2.60	0.60
1:AA:622:A:C8	1:AA:623:C:C5	2.88	0.60
1:AA:967:C:H5''	1:AA:968:A:OP2	2.02	0.60
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.16	0.60
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.01	0.60
1:AA:1117:G:H4'	9:AI:104:ARG:CZ	2.31	0.60
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.31	0.60
4:AD:43:HIS:O	4:AD:45:GLN:N	2.33	0.60
4:AD:79:PHE:CZ	4:AD:204:ILE:HD13	2.36	0.60
4:AD:127:THR:OG1	4:AD:128:VAL:N	2.33	0.60
4:AD:138:TYR:HD2	4:AD:139:ARG:N	2.00	0.60
4:AD:164:ALA:HB1	4:AD:168:ARG:NH1	2.16	0.60
6:AF:42:GLU:OE1	6:AF:59:TYR:HE2	1.83	0.60
9:AI:53:VAL:HB	9:AI:92:TYR:CE2	2.35	0.60
24:B2:41:ILE:O	24:B2:42:GLY:O	2.19	0.60
31:BA:307:G:N2	31:BA:310:A:H5''	2.16	0.60
31:BA:322:A:H5'	31:BA:340:A:C1'	2.32	0.60
31:BA:1722:A:N6	31:BA:1741:A:C2	2.70	0.60
31:BA:1893:C:C5	31:BA:1894:C:C5	2.89	0.60
32:BB:21:G:O6	32:BB:63:G:C5	2.54	0.60
32:BB:37:C:C5	32:BB:38:C:C5	2.89	0.60
36:BG:57:ALA:HB2	36:BG:90:LEU:HD21	1.83	0.60
38:BI:83:ALA:HA	38:BI:89:TYR:CD1	2.37	0.60
38:BI:117:GLU:HG3	38:BI:118:LYS:N	2.15	0.60
41:BP:7:ARG:O	41:BP:10:PRO:HD3	2.01	0.60
43:BR:116:LEU:O	43:BR:117:VAL:CB	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:30:ARG:NH2	44:BS:62:LYS:HD2	2.09	0.60
48:BW:6:ILE:HA	48:BW:103:ILE:O	2.02	0.60
1:CA:192:U:H2'	1:CA:193:C:C6	2.36	0.60
1:CA:343:U:C2	1:CA:347:G:N1	2.70	0.60
1:CA:960:U:H2'	1:CA:960:U:O2	2.00	0.60
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.00	0.60
2:CB:121:LEU:HD23	2:CB:127:ILE:HD11	1.83	0.60
4:CD:107:ARG:HD2	4:CD:173:TRP:HZ2	1.66	0.60
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.32	0.60
22:D0:16:SER:HB3	31:DA:2262:U:OP2	2.00	0.60
31:DA:17:G:H4'	46:DU:25:TRP:CH2	2.36	0.60
31:DA:310:A:OP1	50:DY:18:GLY:HA2	2.00	0.60
31:DA:1427:A:H4'	31:DA:1428:C:O5'	2.01	0.60
35:DF:3:GLU:HA	35:DF:24:LEU:HB3	1.82	0.60
41:DP:121:LYS:HB3	41:DP:123:LEU:HD23	1.82	0.60
1:AA:1158:C:N3	1:AA:1181:G:N2	2.49	0.60
22:B0:8:GLY:HA3	31:BA:2255:G:H21	1.67	0.60
23:B1:34:THR:HG23	31:BA:388:G:P	2.41	0.60
24:B2:45:SER:O	24:B2:48:HIS:CB	2.49	0.60
31:BA:26:G:OP1	48:BW:80:PRO:HB3	2.02	0.60
31:BA:1484:G:N2	31:BA:1505:C:H5	1.98	0.60
33:BD:44:ASN:HB3	33:BD:49:ILE:CA	2.32	0.60
33:BD:125:ILE:HG21	33:BD:137:PRO:HG2	1.83	0.60
34:BE:51:PHE:CD1	34:BE:52:LEU:N	2.69	0.60
35:BF:128:ALA:O	35:BF:142:TRP:NE1	2.35	0.60
37:BH:154:PRO:O	37:BH:156:ALA:N	2.31	0.60
37:BH:155:SER:O	37:BH:155:SER:OG	2.11	0.60
40:BO:4:PRO:O	40:BO:5:GLN:HB2	2.00	0.60
44:BS:74:ALA:HB1	44:BS:103:GLU:CB	2.31	0.60
45:BT:30:VAL:HG21	45:BT:83:ILE:H	1.66	0.60
48:BW:73:ALA:HB3	48:BW:106:ILE:HD11	1.83	0.60
49:BX:65:ARG:CZ	49:BX:66:LEU:H	2.14	0.60
50:BY:76:CYS:O	50:BY:99:CYS:SG	2.59	0.60
1:CA:612:C:O2'	1:CA:613:C:H5'	2.01	0.60
3:CC:130:VAL:O	3:CC:134:ILE:HG12	2.01	0.60
8:CH:69:ARG:HD3	8:CH:75:ARG:O	2.01	0.60
12:CL:32:PHE:HE1	12:CL:86:ARG:HG3	1.65	0.60
22:D0:2:ALA:H	31:DA:2602:A:H61	1.49	0.60
23:D1:25:LYS:O	23:D1:26:ARG:HB3	2.01	0.60
27:D5:2:ALA:N	31:DA:747:U:N3	2.49	0.60
30:D8:62:LEU:CD1	31:DA:242:G:H5''	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:272(J):C:H42	31:DA:363(A):A:N6	2.00	0.60
33:DD:133:LEU:HA	33:DD:136:ILE:HD13	1.82	0.60
37:DH:144:VAL:O	37:DH:148:ILE:HG12	2.02	0.60
38:DI:88:ILE:HD11	38:DI:123:LEU:HD23	1.83	0.60
39:DN:39:ARG:CD	39:DN:41:ASP:HB2	2.32	0.60
41:DP:45:LEU:HD22	41:DP:46:LYS:H	1.65	0.60
43:DR:13:HIS:HE1	43:DR:15:SER:OG	1.84	0.60
49:DX:66:LEU:O	49:DX:66:LEU:HD23	2.02	0.60
50:DY:46:LYS:HG2	50:DY:47:LYS:HD2	1.84	0.60
51:DZ:69:THR:HG22	51:DZ:90:VAL:HA	1.83	0.60
1:AA:343:U:C2	1:AA:347:G:N1	2.69	0.60
1:AA:360:A:O2'	1:AA:361:G:H5'	2.02	0.60
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.66	0.60
2:AB:111:ARG:O	2:AB:145:LEU:HD11	2.01	0.60
3:AC:43:LEU:O	3:AC:47:LEU:HB3	2.02	0.60
10:AJ:57:LYS:HD3	10:AJ:60:ARG:NH2	2.16	0.60
19:AS:29:ARG:HD3	19:AS:48:THR:OG1	2.01	0.60
20:AT:75:ASN:O	20:AT:79:ARG:HB2	2.01	0.60
28:B6:16:CYS:O	28:B6:18:ARG:CZ	2.50	0.60
30:B8:32:LEU:O	30:B8:33:ASN:CB	2.39	0.60
31:BA:2661:G:C8	31:BA:2662:A:C2	2.90	0.60
32:BB:10:C:C4	32:BB:11:C:C5	2.89	0.60
32:BB:47:C:O2'	44:BS:93:LYS:HG2	2.01	0.60
33:BD:68:LYS:HB3	33:BD:70:TRP:CH2	2.37	0.60
34:BE:65:GLY:C	34:BE:67:PHE:H	2.04	0.60
35:BF:3:GLU:O	35:BF:24:LEU:HG	2.01	0.60
42:BQ:14:ARG:HG2	42:BQ:41:TRP:HH2	1.67	0.60
45:BT:55:ASN:H	45:BT:59:THR:HB	1.66	0.60
47:BV:1:MET:N	47:BV:44:LYS:HD2	2.16	0.60
50:BY:38:ILE:CG2	50:BY:39:VAL:N	2.64	0.60
50:BY:68:HIS:N	50:BY:71:LYS:HZ1	2.00	0.60
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.36	0.60
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.66	0.60
2:CB:187:LEU:HD11	2:CB:204:ASN:O	2.00	0.60
4:CD:73:ARG:HD2	4:CD:77:ASN:HD21	1.66	0.60
13:CM:31:LYS:HA	13:CM:34:LEU:HD12	1.83	0.60
31:DA:863:A:C2'	31:DA:864:G:H5'	2.30	0.60
31:DA:956:G:OP2	42:DQ:14:ARG:NH2	2.35	0.60
31:DA:1434:A:H2'	31:DA:1435:G:H8	1.65	0.60
31:DA:2658:C:H3'	31:DA:2659:G:H5''	1.83	0.60
41:DP:26:GLY:HA2	41:DP:30:THR:CG2	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:60:ARG:HH21	49:DX:74:PRO:HG2	1.67	0.60
1:AA:709:G:H2'	1:AA:710:G:H8	1.66	0.60
1:AA:872:A:C4	1:AA:874:G:N7	2.69	0.60
1:AA:1065:U:C1'	1:AA:1066:C:OP2	2.50	0.60
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.01	0.60
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.67	0.60
3:AC:73:PRO:HG3	3:AC:105:GLU:HG3	1.82	0.60
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.02	0.60
27:B5:33:CYS:SG	27:B5:49:CYS:CB	2.89	0.60
31:BA:102:G:HO2'	31:BA:103:A:P	2.20	0.60
31:BA:271(Q):G:O2'	31:BA:271(R):G:P	2.59	0.60
31:BA:673:C:H5''	35:BF:81:PRO:HD2	1.83	0.60
49:BX:80:ILE:O	49:BX:81:VAL:HB	2.00	0.60
1:CA:1065:U:C1'	1:CA:1066:C:OP2	2.50	0.60
2:CB:8:LYS:NZ	2:CB:217:ARG:HH11	1.99	0.60
4:CD:62:GLN:HE22	4:CD:65:ARG:HE	1.49	0.60
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.82	0.60
10:CJ:57:LYS:HD3	10:CJ:60:ARG:NH2	2.17	0.60
11:CK:125:PHE:HD1	11:CK:125:PHE:H	1.49	0.60
23:D1:30:VAL:HG12	23:D1:30:VAL:O	2.01	0.60
25:D3:28:LEU:HA	25:D3:33:GLN:OE1	2.02	0.60
28:D6:27:LYS:HE3	31:DA:2285:C:H5	1.67	0.60
31:DA:568:U:H5'	31:DA:945:A:C2	2.36	0.60
31:DA:642:G:H21	31:DA:646:A:H2	1.50	0.60
31:DA:832:G:OP1	41:DP:40:SER:HB3	2.02	0.60
31:DA:833:U:O2	41:DP:55:ARG:NH1	2.34	0.60
31:DA:1252:G:C2	31:DA:1253:A:C2	2.90	0.60
31:DA:1478:G:C2'	31:DA:1479:G:H5'	2.32	0.60
31:DA:2422:A:H4'	31:DA:2423:U:OP1	2.00	0.60
31:DA:2881:C:H2'	31:DA:2882:A:O4'	2.02	0.60
41:DP:62:LEU:H	41:DP:62:LEU:CD2	1.99	0.60
41:DP:62:LEU:H	41:DP:62:LEU:HD13	1.67	0.60
50:DY:27:VAL:HB	50:DY:29:GLU:OE1	2.01	0.60
1:AA:473:G:H2'	1:AA:474:G:H8	1.65	0.60
1:AA:491:G:H2'	1:AA:492:G:H8	1.65	0.60
25:B3:28:LEU:HA	25:B3:33:GLN:OE1	2.02	0.60
31:BA:288:C:O2	31:BA:288:C:H2'	2.01	0.60
31:BA:607:U:O2	31:BA:621:A:N1	2.34	0.60
31:BA:823:G:O2'	31:BA:824:A:H5'	2.01	0.60
31:BA:1188:U:H2'	31:BA:1189:A:H5'	1.83	0.60
31:BA:2656:U:H2'	31:BA:2657:A:H5''	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2681:C:C5	31:BA:2725:A:N6	2.58	0.60
33:BD:158:ALA:O	33:BD:159:ALA:HB2	2.01	0.60
33:BD:228:PRO:HD3	33:BD:235:GLY:CA	2.31	0.60
38:BI:56:LYS:HZ3	38:BI:56:LYS:C	2.05	0.60
39:BN:67:LEU:HB3	39:BN:88:GLU:OE2	2.01	0.60
45:BT:27:THR:O	45:BT:28:VAL:HG23	2.01	0.60
45:BT:33:LYS:NZ	45:BT:33:LYS:CA	2.65	0.60
47:BV:96:ILE:CG2	47:BV:97:LYS:N	2.65	0.60
49:BX:83:VAL:O	49:BX:84:ALA:CB	2.49	0.60
1:CA:403:C:O2'	1:CA:404:U:H5'	2.02	0.60
5:CE:68:GLU:O	5:CE:70:PRO:HD3	2.01	0.60
7:CG:69:VAL:HA	7:CG:138:LYS:HD2	1.84	0.60
7:CG:138:LYS:HE2	7:CG:142:GLU:OE2	2.00	0.60
31:DA:1204:A:N1	31:DA:1241:A:C2	2.67	0.60
31:DA:1481:U:H5'	31:DA:1482:G:OP2	2.00	0.60
33:DD:31:LYS:O	33:DD:35:LYS:O	2.20	0.60
37:DH:85:LYS:HD3	37:DH:133:VAL:HB	1.83	0.60
37:DH:97:ARG:O	37:DH:98:LEU:C	2.40	0.60
49:DX:21:PHE:N	49:DX:21:PHE:CD1	2.69	0.60
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.37	0.60
1:AA:1090:U:C2	1:AA:1091:U:C5	2.90	0.60
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.66	0.60
2:AB:71:VAL:O	2:AB:164:VAL:HG22	2.01	0.60
6:AF:5:GLU:HB3	6:AF:62:TRP:HE1	1.66	0.60
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.66	0.60
16:AP:39:TYR:C	16:AP:39:TYR:CD1	2.73	0.60
17:AQ:97:SER:O	17:AQ:98:LEU:HD23	2.01	0.60
23:B1:92:LYS:C	23:B1:94:LEU:N	2.55	0.60
28:B6:11:LEU:CD2	28:B6:26:ASN:H	2.15	0.60
31:BA:943:U:OP2	41:BP:38:GLN:OE1	2.20	0.60
31:BA:1497:U:C2'	31:BA:1498:C:OP1	2.50	0.60
31:BA:2749:A:H4'	37:BH:62:LYS:HB3	1.84	0.60
32:BB:66:A:N6	32:BB:108:U:H2'	2.16	0.60
33:BD:28:GLU:HB2	33:BD:29:PRO:HD3	1.82	0.60
35:BF:205:ARG:C	35:BF:206:ILE:HG13	2.22	0.60
37:BH:35:VAL:O	37:BH:37:VAL:HG23	2.01	0.60
37:BH:66:GLY:HA2	37:BH:69:ARG:HB2	1.82	0.60
37:BH:138:LYS:H	37:BH:141:VAL:H	1.50	0.60
1:CA:7:G:H21	5:CE:121:LYS:HG2	1.65	0.60
1:CA:594:G:H1	1:CA:645:C:N4	2.00	0.60
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.02	0.60
31:DA:626:U:O2	41:DP:105:LEU:HG	2.01	0.60
35:DF:22:ALA:HB1	35:DF:26:ALA:CB	2.32	0.60
38:DI:61:ARG:O	38:DI:133:HIS:CE1	2.55	0.60
48:DW:56:ALA:O	48:DW:57:ASN:C	2.38	0.60
49:DX:72:LYS:HG3	49:DX:74:PRO:CD	2.31	0.60
4:AD:62:GLN:HE22	4:AD:65:ARG:HE	1.48	0.60
4:AD:119:GLN:O	4:AD:123:HIS:CD2	2.55	0.60
7:AG:116:ALA:O	7:AG:120:ILE:HG12	2.02	0.60
22:B0:72:ARG:HH21	22:B0:75:LEU:CD1	2.15	0.60
31:BA:1225:G:OP1	47:BV:88:ARG:HD2	2.02	0.60
31:BA:1348:G:C2'	31:BA:1349:A:H5'	2.32	0.60
31:BA:1378:A:H4'	31:BA:1379:A:OP1	2.02	0.60
31:BA:1963:U:H2'	31:BA:1963:U:O2	2.02	0.60
33:BD:255:LYS:HZ1	33:BD:255:LYS:N	2.00	0.60
34:BE:3:GLY:CA	34:BE:81:ILE:HG21	2.32	0.60
37:BH:149:ARG:HD3	37:BH:164:TYR:HE1	1.67	0.60
46:BU:50:ARG:NH2	47:BV:75:PHE:CD2	2.70	0.60
47:BV:51:VAL:HG12	47:BV:52:VAL:N	2.17	0.60
49:BX:35:THR:O	49:BX:36:LYS:C	2.41	0.60
49:BX:36:LYS:NZ	49:BX:38:GLU:C	2.56	0.60
1:CA:80:G:H1	1:CA:89:C:N4	1.99	0.60
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.67	0.60
1:CA:1392:G:N2	1:CA:1502:A:C8	2.67	0.60
23:D1:13:ILE:O	23:D1:14:VAL:HB	2.00	0.60
31:DA:128:C:H2'	31:DA:129:C:O4'	2.01	0.60
31:DA:829:A:N7	31:DA:2248:C:H5'	2.17	0.60
31:DA:1451:C:N3	31:DA:1459:G:O6	2.35	0.60
31:DA:1692:U:H2'	31:DA:1694:C:C5	2.37	0.60
31:DA:2094:G:N2	31:DA:2196:C:H1'	2.17	0.60
32:DB:15:A:H5'	32:DB:16:G:H8	1.67	0.60
35:DF:88:VAL:HG11	35:DF:91:GLY:HA3	1.84	0.60
38:DI:2:LYS:HB2	38:DI:39:ALA:CB	2.32	0.60
43:DR:74:LYS:HD2	43:DR:77:ARG:HH21	1.66	0.60
47:DV:52:VAL:O	47:DV:53:GLU:CB	2.49	0.60
47:DV:72:VAL:CG1	47:DV:88:ARG:HH22	2.11	0.60
1:AA:25:C:H2'	1:AA:26:A:C8	2.37	0.59
1:AA:604:G:C6	1:AA:605:U:C4	2.90	0.59
3:AC:36:ASP:HB3	3:AC:40:ARG:NH1	2.17	0.59
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.17	0.59
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.66	0.59
23:B1:87:PRO:HD2	23:B1:88:LYS:H	1.67	0.59
27:B5:4:HIS:HB3	27:B5:5:PRO:CD	2.28	0.59
31:BA:528:A:C2	31:BA:2043:C:H5'	2.36	0.59
31:BA:774:A:C2	31:BA:787:U:O2'	2.53	0.59
31:BA:995:C:N3	39:BN:4:TYR:CE1	2.69	0.59
31:BA:1042:G:N3	31:BA:1042:G:H2'	2.17	0.59
31:BA:1947:C:H2'	31:BA:1948:G:C5'	2.31	0.59
31:BA:2058:A:H5''	31:BA:2059:A:OP2	2.02	0.59
31:BA:2544:G:H8	31:BA:2544:G:O5'	1.84	0.59
31:BA:2790:A:H2'	31:BA:2791:C:C5'	2.31	0.59
35:BF:20:LEU:HD22	35:BF:203:GLN:NE2	2.17	0.59
37:BH:121:ILE:HD11	37:BH:140:LYS:HB3	1.83	0.59
38:BI:99:GLU:HG3	38:BI:103:ARG:CZ	2.32	0.59
47:BV:83:ARG:O	47:BV:84:LYS:HD2	2.02	0.59
1:CA:255:G:H1'	17:CQ:16:GLN:NE2	2.16	0.59
1:CA:760:G:H2'	1:CA:761:G:H5'	1.84	0.59
6:CF:49:ALA:HB2	18:CR:78:LEU:O	2.02	0.59
11:CK:29:ILE:HB	11:CK:44:SER:CB	2.32	0.59
30:D8:35:GLN:NE2	30:D8:36:LYS:HZ2	1.99	0.59
31:DA:796:C:H2'	31:DA:797:C:H6	1.61	0.59
31:DA:873:G:N2	31:DA:905:U:C2	2.70	0.59
31:DA:1359:A:C8	31:DA:1372:U:O4	2.55	0.59
31:DA:1441:G:O2'	31:DA:1442:G:H5'	2.01	0.59
31:DA:1497:U:C2'	31:DA:1498:C:OP1	2.50	0.59
31:DA:1902:C:O2'	33:DD:244:ARG:HB2	2.02	0.59
31:DA:2307:G:C2	31:DA:2308:G:H5'	2.37	0.59
31:DA:2762:G:H8	31:DA:2762:G:C5'	2.14	0.59
32:DB:15:A:H1'	32:DB:110:G:N9	2.17	0.59
36:DG:43:LEU:CD1	36:DG:153:ARG:HD2	2.32	0.59
36:DG:60:LEU:O	36:DG:64:THR:HG22	2.02	0.59
43:DR:84:ALA:HB3	43:DR:85:PRO:HD3	1.82	0.59
45:DT:129:ARG:CZ	45:DT:131:ALA:HB3	2.32	0.59
50:DY:38:ILE:CG2	50:DY:39:VAL:N	2.64	0.59
1:AA:738:C:H2'	1:AA:739:C:H6	1.67	0.59
2:AB:204:ASN:HD21	2:AB:207:ALA:H	1.48	0.59
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.03	0.59
31:BA:1025:G:C4	31:BA:1135:C:H1'	2.37	0.59
31:BA:1403:C:C5'	31:BA:1471:A:H1'	2.32	0.59
31:BA:1762:A:H8	31:BA:1762:A:O5'	1.85	0.59
31:BA:2186:G:C3'	31:BA:2187:G:H5''	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2308:G:H2'	31:BA:2309:A:C8	2.37	0.59
33:BD:79:VAL:HG21	33:BD:111:LEU:HD11	1.84	0.59
34:BE:56:PRO:O	34:BE:58:ARG:N	2.34	0.59
34:BE:95:ILE:H	34:BE:95:ILE:CD1	2.16	0.59
35:BF:101:LEU:CD1	35:BF:102:PRO:HD2	2.25	0.59
44:BS:35:ILE:C	44:BS:36:TYR:HD1	2.05	0.59
44:BS:57:LYS:HG2	44:BS:58:LEU:H	1.67	0.59
50:BY:27:VAL:HB	50:BY:29:GLU:OE1	2.02	0.59
1:CA:195:A:C6	1:CA:196:A:N1	2.70	0.59
1:CA:273:A:O2'	1:CA:274:A:H5'	2.02	0.59
1:CA:818:G:HO2'	1:CA:820:U:H6	1.49	0.59
1:CA:977:A:C8	1:CA:1223:C:C4	2.90	0.59
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.36	0.59
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.37	0.59
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NH1	2.17	0.59
22:D0:18:ALA:HB1	31:DA:2271:G:OP1	2.01	0.59
27:D5:4:HIS:O	31:DA:2056:G:N2	2.35	0.59
31:DA:389:G:H22	41:DP:71:VAL:HG12	1.67	0.59
31:DA:1784:A:H4'	31:DA:1785:A:O5'	2.02	0.59
31:DA:2190:G:C2'	31:DA:2191:G:H5'	2.32	0.59
31:DA:2262:U:H2'	31:DA:2263:C:H5'	1.84	0.59
32:DB:20:C:C2'	32:DB:21:G:C5'	2.80	0.59
32:DB:86:G:C3'	32:DB:87:G:C8	2.84	0.59
34:DE:46:ALA:HA	34:DE:82:ARG:O	2.01	0.59
35:DF:132:VAL:HG22	35:DF:133:ASN:N	2.16	0.59
39:DN:56:ASN:H	39:DN:125:GLY:CA	2.13	0.59
46:DU:69:CYS:HB3	46:DU:106:PHE:HZ	1.66	0.59
50:DY:37:VAL:CG2	50:DY:67:LEU:HB3	2.32	0.59
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.15	0.59
3:AC:111:LEU:HD22	3:AC:204:LEU:HD21	1.85	0.59
7:AG:138:LYS:HE2	7:AG:142:GLU:OE2	2.01	0.59
22:B0:43:THR:O	22:B0:45:PHE:N	2.35	0.59
23:B1:25:LYS:C	23:B1:26:ARG:HG3	2.23	0.59
27:B5:36:CYS:C	27:B5:38:ALA:H	2.04	0.59
30:B8:43:GLN:O	30:B8:44:LYS:HD2	2.03	0.59
31:BA:543:C:C6	31:BA:547:A:N7	2.70	0.59
31:BA:953:A:C2'	31:BA:954:G:H5'	2.32	0.59
31:BA:2334:G:H21	44:BS:18:ILE:CD1	2.07	0.59
32:BB:20:C:C2'	32:BB:21:G:C5'	2.80	0.59
35:BF:132:VAL:HG22	35:BF:133:ASN:N	2.16	0.59
36:BG:43:LEU:CD1	36:BG:153:ARG:HD2	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:127:GLY:CA	36:BG:166:ASP:HB3	2.33	0.59
37:BH:127:GLU:HA	37:BH:127:GLU:OE1	2.02	0.59
41:BP:98:GLU:HG3	41:BP:99:LEU:N	2.16	0.59
42:BQ:20:ALA:O	42:BQ:22:LYS:N	2.35	0.59
1:CA:180:U:C2'	1:CA:181:G:H5'	2.32	0.59
1:CA:546:G:P	4:CD:72:GLU:HB3	2.42	0.59
1:CA:604:G:C6	1:CA:605:U:C4	2.90	0.59
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.17	0.59
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.33	0.59
13:CM:86:CYS:HB2	19:CS:73:GLU:HB3	1.83	0.59
16:CP:39:TYR:C	16:CP:39:TYR:CD1	2.74	0.59
24:D2:52:ASP:O	24:D2:56:GLN:NE2	2.34	0.59
31:DA:1803:A:O2'	33:DD:259:THR:HG21	2.02	0.59
31:DA:2281:C:O2'	31:DA:2282:G:H5'	2.03	0.59
46:DU:49:HIS:HA	46:DU:52:ARG:HB2	1.84	0.59
50:DY:71:LYS:NZ	50:DY:71:LYS:CB	2.64	0.59
1:AA:923:A:H5''	5:AE:21:ALA:HB2	1.83	0.59
4:AD:28:SER:HB3	4:AD:30:LYS:HG2	1.83	0.59
8:AH:86:ILE:HG22	8:AH:87:SER:N	2.17	0.59
31:BA:2313:C:H2'	31:BA:2314:C:H6	1.67	0.59
31:BA:2335:A:C8	31:BA:2337:G:C5	2.90	0.59
31:BA:2790:A:H2'	31:BA:2791:C:H5''	1.84	0.59
42:BQ:141:GLN:HE21	51:BZ:71:VAL:C	2.05	0.59
1:CA:473:G:H2'	1:CA:474:G:H8	1.67	0.59
1:CA:594:G:H2'	1:CA:595:G:O4'	2.01	0.59
23:D1:92:LYS:C	23:D1:94:LEU:H	2.04	0.59
31:DA:500:G:N2	31:DA:502:A:H3'	2.17	0.59
31:DA:971:C:C2'	31:DA:972:G:H5'	2.33	0.59
31:DA:1504:C:O2'	31:DA:1505:C:O5'	2.20	0.59
31:DA:2030:A:H5''	31:DA:2031:A:P	2.42	0.59
35:DF:70:THR:HG22	35:DF:72:ARG:H	1.66	0.59
39:DN:58:ASP:OD1	39:DN:124:ALA:HB1	2.03	0.59
48:DW:111:HIS:CD2	48:DW:112:GLY:N	2.71	0.59
49:DX:24:GLY:HA3	49:DX:80:ILE:HG13	1.85	0.59
4:AD:117:ALA:O	4:AD:120:LEU:HB2	2.03	0.59
23:B1:27:GLU:OE2	23:B1:32:LYS:HB2	2.01	0.59
31:BA:676:A:H2	31:BA:802:A:H61	1.50	0.59
31:BA:823:G:C2'	31:BA:824:A:H5'	2.31	0.59
32:BB:86:G:H3'	32:BB:87:G:C8	2.38	0.59
34:BE:27:LEU:HD22	45:BT:1:MET:HE3	1.83	0.59
39:BN:67:LEU:O	39:BN:69:GLN:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:85:LEU:H	41:BP:85:LEU:CD2	2.07	0.59
45:BT:31:SER:HB3	45:BT:43:GLN:O	2.03	0.59
49:BX:73:ARG:O	49:BX:74:PRO:O	2.20	0.59
1:CA:1090:U:C2	1:CA:1091:U:C5	2.90	0.59
2:CB:20:GLU:O	2:CB:40:HIS:HB2	2.03	0.59
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.03	0.59
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.32	0.59
9:CI:73:GLN:O	9:CI:77:ILE:HG13	2.02	0.59
30:D8:32:LEU:HG	30:D8:34:TRP:HE3	1.68	0.59
31:DA:212:G:C2'	31:DA:213:A:H5'	2.32	0.59
31:DA:510:C:O2'	31:DA:511:U:H5'	2.02	0.59
31:DA:587:C:H5	41:DP:33:ARG:HH11	1.51	0.59
31:DA:995:C:N3	39:DN:4:TYR:CE1	2.71	0.59
31:DA:1158:C:HO2'	31:DA:1159:U:P	2.21	0.59
31:DA:1188:U:H2'	31:DA:1189:A:H5'	1.84	0.59
31:DA:2287:A:N6	31:DA:2344:U:N3	2.41	0.59
32:DB:82:G:O2'	32:DB:83:G:H5'	2.03	0.59
33:DD:132:PRO:O	33:DD:136:ILE:HD12	2.03	0.59
34:DE:36:ARG:HH21	34:DE:88:GLY:HA2	1.66	0.59
34:DE:75:VAL:O	34:DE:77:ILE:N	2.35	0.59
34:DE:167:VAL:CG2	34:DE:170:LEU:HD11	2.32	0.59
35:DF:2:LYS:HG3	35:DF:25:PRO:HB2	1.85	0.59
36:DG:47:LYS:HG3	36:DG:82:LEU:HD11	1.83	0.59
37:DH:28:GLY:HA3	37:DH:79:VAL:HB	1.83	0.59
38:DI:29:TYR:HD2	38:DI:30:LEU:HD23	1.67	0.59
40:DO:4:PRO:O	40:DO:5:GLN:CB	2.50	0.59
42:DQ:39:PRO:HA	42:DQ:97:VAL:O	2.03	0.59
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.03	0.59
2:AB:121:LEU:HD23	2:AB:127:ILE:HD11	1.85	0.59
4:AD:189:PRO:CB	4:AD:194:LEU:HD21	2.31	0.59
11:AK:29:ILE:HB	11:AK:44:SER:CB	2.32	0.59
31:BA:231:C:C2'	31:BA:232:G:H5'	2.33	0.59
41:BP:141:ALA:HB3	25:D3:1:MET:CE	2.32	0.59
44:BS:59:LYS:HE3	44:BS:68:GLN:HE22	1.67	0.59
44:BS:74:ALA:O	44:BS:77:ALA:HB3	2.02	0.59
50:BY:96:ILE:HG13	50:BY:99:CYS:C	2.22	0.59
1:CA:1072:G:C6	1:CA:1073:U:C4	2.91	0.59
6:CF:7:ASN:N	6:CF:7:ASN:HD22	2.00	0.59
6:CF:50:TYR:CE2	6:CF:52:ILE:HD11	2.37	0.59
19:CS:29:ARG:HD3	19:CS:48:THR:OG1	2.02	0.59
23:D1:56:GLN:HA	23:D1:56:GLN:OE1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:20:ASN:O	28:D6:21:TYR:CG	2.55	0.59
31:DA:310:A:OP1	50:DY:17:SER:O	2.19	0.59
31:DA:2472:G:N1	31:DA:2477:C:OP1	2.21	0.59
31:DA:2632:A:H1'	34:DE:61:ARG:NH1	2.18	0.59
33:DD:167:GLY:C	33:DD:168:ARG:HG2	2.22	0.59
34:DE:34:VAL:CG2	34:DE:48:GLN:HE21	2.15	0.59
35:DF:8:GLN:HB3	35:DF:126:VAL:HA	1.84	0.59
36:DG:71:THR:HB	36:DG:89:GLY:HA3	1.83	0.59
42:DQ:32:TYR:HE2	42:DQ:133:ARG:HG2	1.67	0.59
46:DU:93:LYS:H	46:DU:93:LYS:CD	2.15	0.59
50:DY:79:CYS:O	50:DY:80:GLY:C	2.39	0.59
1:AA:80:G:H1	1:AA:89:C:N4	2.00	0.59
1:AA:629:G:H2'	1:AA:630:G:O4'	2.01	0.59
1:AA:757:U:H2'	1:AA:758:G:O4'	2.02	0.59
1:AA:957:U:H4'	19:AS:79:THR:HB	1.84	0.59
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.03	0.59
2:AB:76:GLN:O	2:AB:208:ILE:HG12	2.03	0.59
20:AT:89:ARG:HH21	20:AT:104:LEU:HD21	1.68	0.59
31:BA:358:U:H3'	31:BA:358:U:H6	1.68	0.59
31:BA:2300:G:N2	31:BA:2317:C:C2	2.71	0.59
31:BA:2599:G:OP2	33:BD:236:GLY:N	2.36	0.59
35:BF:123:LEU:HD12	35:BF:124:LEU:H	1.67	0.59
36:BG:47:LYS:HG3	36:BG:82:LEU:HD11	1.85	0.59
42:BQ:20:ALA:HB2	42:BQ:99:PRO:CD	2.32	0.59
42:BQ:32:TYR:HE2	42:BQ:133:ARG:HG2	1.67	0.59
43:BR:84:ALA:HB3	43:BR:85:PRO:HD3	1.84	0.59
44:BS:87:PHE:CE2	44:BS:97:ARG:NH2	2.71	0.59
46:BU:102:GLU:HG3	47:BV:2:PHE:HZ	1.67	0.59
48:BW:4:LYS:HB2	48:BW:106:ILE:CG2	2.30	0.59
1:CA:1150:U:O4	1:CA:1151:A:N6	2.36	0.59
2:CB:185:ILE:HG22	2:CB:199:TYR:CB	2.22	0.59
4:CD:33:MET:CE	4:CD:37:PRO:HA	2.33	0.59
4:CD:110:PHE:H	4:CD:110:PHE:HD1	1.51	0.59
6:CF:11:ASN:O	6:CF:14:LEU:HB2	2.02	0.59
31:DA:491:G:H2'	31:DA:492:A:C8	2.38	0.59
31:DA:1021:A:N6	31:DA:1141:U:H3	1.92	0.59
31:DA:2312:U:O3'	36:DG:71:THR:HG21	2.02	0.59
31:DA:2342:C:H6	31:DA:2342:C:OP2	1.86	0.59
31:DA:2463:C:O2'	31:DA:2464:C:H5'	2.03	0.59
33:DD:30:GLU:HG3	33:DD:63:ARG:NH2	2.18	0.59
34:DE:95:ILE:H	34:DE:95:ILE:CD1	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:127:GLY:CA	36:DG:166:ASP:HB3	2.32	0.59
39:DN:78:TYR:CE1	39:DN:79:PRO:HB3	2.38	0.59
43:DR:55:ALA:CB	43:DR:79:LEU:HD13	2.32	0.59
1:AA:273:A:O2'	1:AA:274:A:H5'	2.03	0.59
1:AA:403:C:O2'	1:AA:404:U:H5'	2.03	0.59
1:AA:1049:U:H4'	1:AA:1050:G:C5'	2.32	0.59
2:AB:8:LYS:NZ	2:AB:217:ARG:HH11	2.01	0.59
3:AC:54:ARG:HD3	3:AC:69:HIS:CE1	2.38	0.59
6:AF:45:LEU:HD11	6:AF:57:GLN:OE1	2.03	0.59
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.03	0.59
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.02	0.59
31:BA:528:A:C2	31:BA:2043:C:C5'	2.86	0.59
31:BA:1833:U:H2'	31:BA:1834:U:C6	2.37	0.59
34:BE:36:ARG:HH11	34:BE:85:ASN:HD21	1.50	0.59
34:BE:61:ARG:N	34:BE:62:PRO:HD2	2.16	0.59
34:BE:116:VAL:HG13	34:BE:122:PHE:CG	2.38	0.59
44:BS:42:ASP:O	44:BS:43:GLU:HB2	2.03	0.59
44:BS:76:LYS:O	44:BS:79:ALA:HB3	2.02	0.59
46:BU:92:ARG:HD2	47:BV:11:GLN:CG	2.32	0.59
47:BV:51:VAL:CG1	47:BV:52:VAL:H	2.16	0.59
50:BY:37:VAL:HG23	50:BY:38:ILE:N	2.18	0.59
50:BY:71:LYS:HB2	50:BY:71:LYS:HZ3	1.68	0.59
1:CA:170:U:O2'	1:CA:171:A:H5'	2.02	0.59
2:CB:204:ASN:HD21	2:CB:207:ALA:H	1.50	0.59
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.70	0.59
4:CD:109:GLY:O	4:CD:111:ALA:N	2.36	0.59
8:CH:113:SER:H	8:CH:134:ILE:HG12	1.66	0.59
22:D0:53:MET:HB2	22:D0:59:LEU:HD23	1.83	0.59
23:D1:26:ARG:HG2	23:D1:34:THR:HB	1.84	0.59
30:D8:35:GLN:HA	31:DA:2420:C:OP2	2.02	0.59
31:DA:2186:G:C3'	31:DA:2187:G:H5''	2.33	0.59
31:DA:2350:C:H2'	31:DA:2351:G:O4'	2.03	0.59
31:DA:2536:G:C5	31:DA:2537:U:C5	2.91	0.59
31:DA:2894:G:H2'	31:DA:2894:G:N3	2.17	0.59
37:DH:137:ASP:HB3	37:DH:140:LYS:HB2	1.83	0.59
39:DN:65:LYS:CD	39:DN:67:LEU:HG	2.33	0.59
44:DS:93:LYS:O	44:DS:93:LYS:HE3	2.02	0.59
50:DY:99:CYS:SG	50:DY:99:CYS:O	2.60	0.59
1:AA:180:U:H2'	1:AA:181:G:H5'	1.84	0.59
1:AA:186:C:C2	1:AA:187:C:C5	2.91	0.59
1:AA:626:U:C2	1:AA:627:G:N7	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:797:C:OP1	11:AK:124:LYS:HE2	2.03	0.59
3:AC:95:THR:HG22	3:AC:97:LYS:H	1.68	0.59
4:AD:90:GLY:O	4:AD:94:LEU:HD12	2.02	0.59
6:AF:76:ALA:HB1	6:AF:80:ARG:HH21	1.67	0.59
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.03	0.59
17:AQ:40:LYS:HG2	17:AQ:41:LYS:H	1.64	0.59
31:BA:1158:C:O2'	31:BA:1159:U:OP2	2.20	0.59
31:BA:1417:C:C2'	31:BA:1418:G:H5'	2.33	0.59
31:BA:2262:U:O2'	31:BA:2263:C:H5''	2.03	0.59
44:BS:90:GLY:O	44:BS:92:TYR:N	2.36	0.59
46:BU:90:VAL:HG12	46:BU:91:ASP:H	1.68	0.59
50:BY:68:HIS:ND1	50:BY:70:SER:HB3	2.18	0.59
1:CA:166:G:O2'	1:CA:167:G:H5'	2.02	0.59
1:CA:501:C:H2'	1:CA:502:G:C8	2.38	0.59
3:CC:73:PRO:HG3	3:CC:105:GLU:HG3	1.84	0.59
5:CE:36:ASP:OD1	5:CE:37:ARG:N	2.36	0.59
31:DA:71:A:C2	49:DX:31:HIS:CE1	2.72	0.59
31:DA:607:U:OP1	35:DF:102:PRO:HA	2.03	0.59
31:DA:848:G:H2'	31:DA:849:A:C8	2.38	0.59
31:DA:953:A:C2	31:DA:954:G:C8	2.91	0.59
31:DA:1270:C:H5''	31:DA:1271:G:O5'	2.02	0.59
38:DI:99:GLU:HG3	38:DI:103:ARG:CZ	2.33	0.59
41:DP:7:ARG:O	41:DP:10:PRO:HD3	2.03	0.59
47:DV:96:ILE:CG2	47:DV:97:LYS:N	2.65	0.59
50:DY:37:VAL:HG11	50:DY:72:VAL:CG2	2.33	0.59
1:AA:175:C:H2'	1:AA:176:C:C6	2.37	0.59
1:AA:250:A:H1'	1:AA:251:G:OP2	2.03	0.59
1:AA:341:C:O2'	1:AA:342:C:H5'	2.03	0.59
1:AA:594:G:H2'	1:AA:595:G:O4'	2.02	0.59
1:AA:1049:U:H4'	1:AA:1050:G:O5'	2.01	0.59
2:AB:20:GLU:O	2:AB:40:HIS:HB2	2.03	0.59
4:AD:109:GLY:O	4:AD:111:ALA:N	2.36	0.59
6:AF:48:LEU:HD13	6:AF:52:ILE:HG12	1.84	0.59
23:B1:46:LEU:HD12	23:B1:46:LEU:N	2.05	0.59
28:B6:35:GLU:O	28:B6:35:GLU:HG3	2.00	0.59
31:BA:61:G:H1	31:BA:94:C:H42	1.50	0.59
31:BA:671:C:H6	31:BA:671:C:C5'	2.12	0.59
31:BA:1497:U:H3	31:BA:1578:U:P	2.26	0.59
31:BA:2895:U:H5	31:BA:2896:C:C5	2.20	0.59
33:BD:175:LEU:HD12	33:BD:185:VAL:HG21	1.85	0.59
36:BG:71:THR:HB	36:BG:89:GLY:HA3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:67:ARG:H	44:BS:69:VAL:HG13	1.68	0.59
45:BT:33:LYS:NZ	45:BT:33:LYS:HA	2.17	0.59
45:BT:80:SER:HB3	45:BT:81:PRO:HD3	1.85	0.59
47:BV:73:SER:OG	47:BV:75:PHE:CE1	2.56	0.59
49:BX:55:ASN:HD22	49:BX:55:ASN:N	1.99	0.59
1:CA:836:G:C6	1:CA:851:G:C6	2.91	0.59
4:CD:19:LEU:HB2	4:CD:21:LEU:CD2	2.31	0.59
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.02	0.59
4:CD:119:GLN:O	4:CD:123:HIS:CD2	2.56	0.59
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.85	0.59
7:CG:47:CYS:O	7:CG:50:ILE:HB	2.02	0.59
31:DA:954:G:C5	31:DA:955:C:C5	2.90	0.59
36:DG:106:LEU:O	36:DG:110:ALA:HB3	2.02	0.59
37:DH:155:SER:O	37:DH:157:TYR:N	2.36	0.59
38:DI:98:ALA:HA	38:DI:109:ILE:HD11	1.83	0.59
44:DS:42:ASP:C	44:DS:44:LYS:H	2.05	0.59
44:DS:83:LYS:CE	44:DS:105:ALA:HB2	2.33	0.59
45:DT:30:VAL:HG23	45:DT:31:SER:N	2.18	0.59
45:DT:33:LYS:NZ	45:DT:33:LYS:N	2.51	0.59
49:DX:21:PHE:N	49:DX:21:PHE:HD1	2.00	0.59
1:AA:1054:C:O2'	1:AA:1055:A:H5''	2.03	0.58
5:AE:11:ILE:HD11	5:AE:108:ALA:HB3	1.85	0.58
8:AH:6:ILE:HD12	8:AH:6:ILE:N	2.18	0.58
8:AH:113:SER:H	8:AH:134:ILE:HG12	1.67	0.58
13:AM:25:ILE:HD11	13:AM:66:LEU:HD23	1.85	0.58
25:B3:54:VAL:CG1	25:B3:55:ARG:N	2.65	0.58
27:B5:2:ALA:N	31:BA:747:U:C4	2.71	0.58
28:B6:30:THR:O	28:B6:31:PRO:C	2.40	0.58
31:BA:247:G:H4'	31:BA:386:G:C5	2.38	0.58
31:BA:776:G:H4'	31:BA:777:A:O5'	2.02	0.58
31:BA:2591:C:P	33:BD:239:ARG:HG3	2.43	0.58
33:BD:142:VAL:HG23	33:BD:193:VAL:HA	1.84	0.58
41:BP:101:VAL:C	41:BP:103:ALA:H	2.07	0.58
45:BT:42:ILE:O	45:BT:42:ILE:HG13	2.01	0.58
1:CA:937:A:H1'	1:CA:1379:G:N2	2.18	0.58
4:CD:138:TYR:HD2	4:CD:139:ARG:N	2.01	0.58
20:CT:39:LYS:O	20:CT:43:LEU:HG	2.03	0.58
25:D3:44:ARG:O	25:D3:48:GLU:HG2	2.03	0.58
31:DA:27:G:N2	31:DA:512:G:H1'	2.17	0.58
31:DA:547:A:H8	31:DA:549:G:C6	2.20	0.58
31:DA:743:G:C2'	31:DA:744:G:H5'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:754:C:H2'	31:DA:755:C:C6	2.38	0.58
31:DA:1027:A:C6	31:DA:1126:A:C4	2.91	0.58
31:DA:1138:G:H21	39:DN:106:MET:HE3	1.68	0.58
31:DA:1406:U:H2'	31:DA:1407:C:H6	1.67	0.58
31:DA:2700:C:C2'	31:DA:2701:C:H5'	2.33	0.58
31:DA:2703:C:H2'	31:DA:2704:C:H6	1.68	0.58
35:DF:101:LEU:CD1	35:DF:102:PRO:HD2	2.19	0.58
43:DR:4:LEU:O	43:DR:4:LEU:CD1	2.45	0.58
47:DV:36:PRO:HG2	47:DV:62:LEU:HD11	1.85	0.58
49:DX:60:ARG:HB2	49:DX:74:PRO:HD2	1.85	0.58
50:DY:37:VAL:HG11	50:DY:72:VAL:HG21	1.85	0.58
1:AA:410:G:H1'	1:AA:432:A:H61	1.66	0.58
1:AA:819:A:H4'	1:AA:820:U:OP2	2.01	0.58
1:AA:857:C:O2	1:AA:858:G:H1'	2.02	0.58
1:AA:1278:U:O4	10:AJ:99:LYS:HE3	2.03	0.58
2:AB:228:GLY:O	2:AB:230:VAL:HG13	2.02	0.58
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.02	0.58
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.85	0.58
23:B1:21:ARG:NH1	31:BA:380:U:OP1	2.35	0.58
24:B2:57:ILE:HG21	24:B2:59:ARG:HH11	1.67	0.58
31:BA:551:G:O2'	31:BA:1220:A:N3	2.27	0.58
31:BA:626:U:H3	41:BP:105:LEU:HG	1.68	0.58
31:BA:1108:U:C2'	31:BA:1109:C:H5'	2.33	0.58
31:BA:1278:A:OP1	43:BR:36:THR:CG2	2.50	0.58
31:BA:1451:C:N3	31:BA:1459:G:O6	2.36	0.58
31:BA:2197:U:H1'	31:BA:2198:A:C8	2.38	0.58
41:BP:14:LYS:O	41:BP:15:ARG:HB2	2.03	0.58
42:BQ:75:THR:HA	42:BQ:88:GLY:CA	2.33	0.58
1:CA:713:G:H2'	1:CA:714:G:C8	2.37	0.58
7:CG:150:ALA:O	11:CK:57:THR:HG21	2.03	0.58
31:DA:309:G:O3'	50:DY:18:GLY:CA	2.50	0.58
31:DA:543:C:C6	31:DA:547:A:N7	2.71	0.58
31:DA:649:G:H2'	31:DA:650:C:C6	2.38	0.58
31:DA:2055:C:H5'	31:DA:2056:G:O5'	2.03	0.58
37:DH:99:VAL:HG12	37:DH:99:VAL:O	2.03	0.58
37:DH:158:HIS:CE1	37:DH:169:VAL:C	2.77	0.58
39:DN:2:LYS:HZ3	46:DU:94:ASN:ND2	2.00	0.58
47:DV:73:SER:OG	47:DV:74:LYS:N	2.36	0.58
1:AA:187:C:H2'	1:AA:188:C:H6	1.67	0.58
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.03	0.58
1:AA:721:G:H4'	1:AA:722:A:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:187:LEU:HD11	2:AB:204:ASN:O	2.02	0.58
4:AD:17:VAL:HG11	4:AD:197:PRO:CB	2.33	0.58
8:AH:114:THR:HG23	8:AH:117:GLY:O	2.02	0.58
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.38	0.58
28:B6:10:LEU:H	28:B6:10:LEU:CD2	2.15	0.58
31:BA:642:G:H21	31:BA:646:A:H2	1.51	0.58
31:BA:2660:A:H5''	31:BA:2661:G:C2	2.39	0.58
38:BI:109:ILE:HG22	38:BI:130:TYR:OH	2.03	0.58
44:BS:83:LYS:CE	44:BS:105:ALA:HB2	2.33	0.58
45:BT:78:LEU:C	45:BT:79:HIS:ND1	2.56	0.58
45:BT:129:ARG:CZ	45:BT:131:ALA:HB3	2.33	0.58
48:BW:10:VAL:O	48:BW:11:ARG:CB	2.51	0.58
1:CA:957:U:H4'	19:CS:79:THR:HB	1.85	0.58
1:CA:967:C:H5''	1:CA:968:A:OP2	2.03	0.58
1:CA:1026:G:H2'	1:CA:1026:G:N3	2.18	0.58
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.17	0.58
31:DA:528:A:N1	31:DA:2042:A:H2'	2.18	0.58
31:DA:528:A:H2'	31:DA:529:A:H5'	1.84	0.58
31:DA:1112:G:H1'	31:DA:1113:U:OP1	2.03	0.58
31:DA:1225:G:OP1	47:DV:88:ARG:HD2	2.03	0.58
31:DA:2197:U:H1'	31:DA:2198:A:C8	2.38	0.58
31:DA:2205:C:O2	31:DA:2220:G:C2	2.56	0.58
33:DD:35:LYS:CG	33:DD:64:ILE:N	2.66	0.58
35:DF:22:ALA:C	35:DF:26:ALA:HB2	2.23	0.58
39:DN:28:THR:HA	39:DN:106:MET:HE2	1.85	0.58
40:DO:13:ASN:ND2	40:DO:96:THR:H	2.00	0.58
44:DS:97:ARG:HD2	44:DS:97:ARG:C	2.24	0.58
48:DW:9:TYR:N	48:DW:102:HIS:HD2	1.94	0.58
1:AA:938:A:N6	1:AA:939:G:C6	2.72	0.58
1:AA:1321:C:H5''	1:AA:1322:C:H5''	1.85	0.58
4:AD:33:MET:CE	4:AD:37:PRO:HA	2.34	0.58
4:AD:73:ARG:HD2	4:AD:77:ASN:HD21	1.69	0.58
8:AH:17:THR:HB	8:AH:78:GLN:OE1	2.03	0.58
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.17	0.58
20:AT:39:LYS:O	20:AT:43:LEU:HG	2.02	0.58
30:B8:35:GLN:OE1	31:BA:2421:G:OP2	2.21	0.58
31:BA:271(K):U:H3'	31:BA:271(L):U:C5'	2.32	0.58
31:BA:1112:G:H1'	31:BA:1113:U:OP1	2.03	0.58
31:BA:1204:A:N1	31:BA:1241:A:C2	2.68	0.58
31:BA:1963:U:H4'	31:BA:1964:G:OP1	2.02	0.58
33:BD:255:LYS:NZ	33:BD:255:LYS:N	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:137:ASP:HB3	37:BH:140:LYS:HB2	1.83	0.58
44:BS:97:ARG:O	44:BS:98:VAL:HG23	2.04	0.58
50:BY:45:VAL:CG2	50:BY:62:GLU:H	2.16	0.58
1:CA:564:C:C2	17:CQ:31:LEU:HD11	2.39	0.58
1:CA:709:G:H2'	1:CA:710:G:H8	1.67	0.58
1:CA:757:U:H2'	1:CA:758:G:O4'	2.03	0.58
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.18	0.58
2:CB:61:LEU:HA	2:CB:64:ARG:HG2	1.85	0.58
9:CI:46:ALA:O	9:CI:49:PRO:HD2	2.02	0.58
11:CK:31:THR:HA	11:CK:42:TRP:HA	1.86	0.58
20:CT:89:ARG:HH21	20:CT:104:LEU:HD21	1.68	0.58
28:D6:42:TRP:CZ2	31:DA:642:G:O3'	2.57	0.58
30:D8:32:LEU:HG	30:D8:34:TRP:CE3	2.38	0.58
30:D8:34:TRP:HZ3	30:D8:41:ILE:CG2	2.16	0.58
31:DA:83:G:H1	31:DA:102:G:H2'	1.68	0.58
31:DA:150:C:H2'	31:DA:151:C:C6	2.38	0.58
31:DA:542:C:C2'	31:DA:543:C:OP1	2.51	0.58
31:DA:814:C:H5	41:DP:27:HIS:NE2	2.02	0.58
31:DA:992:C:O2'	31:DA:993:G:H5'	2.03	0.58
31:DA:1693:U:OP2	31:DA:1694:C:H5	1.87	0.58
31:DA:1722:A:N6	31:DA:1741:A:C2	2.72	0.58
31:DA:2092:U:H4'	31:DA:2093:G:O5'	2.04	0.58
31:DA:2309:A:C2	31:DA:2310:A:H2	2.20	0.58
32:DB:28:C:H2'	32:DB:29:A:H8	1.69	0.58
34:DE:101:ARG:HB3	34:DE:169:ASN:HD22	1.69	0.58
48:DW:18:ARG:HH11	48:DW:18:ARG:CG	2.17	0.58
49:DX:60:ARG:CB	49:DX:72:LYS:H	2.16	0.58
1:AA:833:U:H2'	1:AA:834:C:C6	2.37	0.58
1:AA:1256:A:N6	1:AA:1278:U:H1'	2.15	0.58
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.03	0.58
22:B0:36:ILE:HD13	22:B0:36:ILE:C	2.24	0.58
23:B1:26:ARG:HB3	23:B1:35:THR:H	1.69	0.58
31:BA:430:G:H5''	31:BA:431:U:OP2	2.03	0.58
31:BA:542:C:C2'	31:BA:543:C:OP1	2.51	0.58
31:BA:1484:G:N2	31:BA:1505:C:C5	2.70	0.58
31:BA:1885:A:H5'	31:BA:1885:A:H8	1.69	0.58
31:BA:2262:U:H2'	31:BA:2263:C:H5''	1.86	0.58
31:BA:2532:G:O2'	31:BA:2657:A:N6	2.37	0.58
33:BD:166:GLN:HB3	33:BD:174:ILE:HG22	1.85	0.58
39:BN:78:TYR:CE1	39:BN:79:PRO:HB3	2.38	0.58
43:BR:33:ARG:HG2	43:BR:115:GLU:CG	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:45:PHE:HE2	45:BT:63:VAL:HG22	1.68	0.58
1:CA:624:C:H2'	1:CA:625:G:H8	1.68	0.58
1:CA:927:G:OP2	1:CA:1503:A:C4	2.56	0.58
1:CA:949:A:N6	1:CA:1232:U:H3	2.01	0.58
1:CA:1478:C:H2'	1:CA:1479:C:H6	1.68	0.58
4:CD:108:LEU:HD13	4:CD:174:LEU:HD13	1.86	0.58
4:CD:141:ARG:HB3	4:CD:142:PRO:CD	2.34	0.58
4:CD:156:GLU:O	4:CD:159:ARG:HB2	2.04	0.58
6:CF:89:MET:SD	18:CR:76:LEU:HD21	2.44	0.58
11:CK:84:VAL:O	11:CK:85:ARG:HG3	2.03	0.58
14:CN:44:LEU:HD12	14:CN:44:LEU:O	2.04	0.58
23:D1:70:VAL:O	23:D1:73:LEU:HB2	2.03	0.58
24:D2:26:ARG:HA	24:D2:29:LYS:HE3	1.85	0.58
30:D8:32:LEU:HB3	30:D8:34:TRP:CB	2.28	0.58
31:DA:157:U:H5'	31:DA:171:G:N2	2.17	0.58
31:DA:1488:G:C2	31:DA:1489:U:O2	2.56	0.58
31:DA:2652:C:H2'	31:DA:2653:U:H5'	1.85	0.58
33:DD:68:LYS:HB3	33:DD:70:TRP:CH2	2.37	0.58
33:DD:173:VAL:CG2	33:DD:174:ILE:N	2.65	0.58
34:DE:59:VAL:CG2	34:DE:63:LEU:HA	2.31	0.58
35:DF:83:PHE:O	35:DF:84:VAL:CB	2.51	0.58
41:DP:10:PRO:CD	41:DP:11:GLY:H	2.15	0.58
46:DU:90:VAL:HG13	47:DV:39:LEU:HG	1.83	0.58
49:DX:36:LYS:NZ	49:DX:38:GLU:C	2.56	0.58
1:AA:344:A:O2'	1:AA:346:G:N7	2.33	0.58
1:AA:437:U:O2'	1:AA:438:G:H5'	2.03	0.58
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.38	0.58
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.84	0.58
6:AF:49:ALA:HB2	18:AR:78:LEU:O	2.02	0.58
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.04	0.58
14:AN:44:LEU:O	14:AN:44:LEU:HD12	2.03	0.58
23:B1:26:ARG:HG2	23:B1:34:THR:HB	1.86	0.58
31:BA:52:A:O2'	31:BA:53:A:H5'	2.04	0.58
31:BA:1839:G:N7	31:BA:1927:A:H1'	2.19	0.58
31:BA:2312:U:O3'	36:BG:71:THR:HG21	2.04	0.58
31:BA:2577:A:H5''	31:BA:2578:G:C5'	2.31	0.58
31:BA:2580:U:H5'	34:BE:131:ALA:HB2	1.83	0.58
31:BA:2619:C:O2'	31:BA:2620:C:H5'	2.04	0.58
33:BD:140:THR:O	33:BD:165:ILE:HG12	2.04	0.58
34:BE:14:ILE:HG12	34:BE:21:VAL:HG22	1.86	0.58
39:BN:75:TYR:N	39:BN:75:TYR:CD1	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:69:LYS:O	47:BV:70:ILE:CG2	2.51	0.58
1:CA:101:A:C2'	1:CA:102:G:H5'	2.34	0.58
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.02	0.58
5:CE:11:ILE:HD11	5:CE:108:ALA:HB3	1.85	0.58
6:CF:82:ARG:HA	6:CF:82:ARG:HH11	1.68	0.58
20:CT:26:ASN:O	20:CT:30:LYS:HB2	2.04	0.58
23:D1:85:LEU:C	23:D1:87:PRO:CD	2.71	0.58
25:D3:54:VAL:CG1	25:D3:55:ARG:N	2.66	0.58
29:D7:5:TRP:NE1	29:D7:7:PRO:HG3	2.17	0.58
31:DA:389:G:H1	41:DP:71:VAL:H	1.50	0.58
31:DA:542:C:H42	31:DA:543:C:H42	1.50	0.58
31:DA:1332:G:H22	31:DA:1609:A:H2'	1.67	0.58
31:DA:1777:U:O2'	31:DA:1778:U:H5'	2.04	0.58
34:DE:111:ARG:HB2	34:DE:160:TYR:O	2.04	0.58
34:DE:111:ARG:CZ	43:DR:2:ARG:HH21	2.17	0.58
41:DP:83:VAL:CG1	41:DP:112:LEU:HD21	2.34	0.58
46:DU:74:LEU:HD12	46:DU:74:LEU:N	2.19	0.58
1:AA:357:G:C2	1:AA:358:U:C6	2.92	0.58
1:AA:546:G:P	4:AD:72:GLU:HB3	2.43	0.58
1:AA:750:G:C2	1:AA:751:U:C6	2.91	0.58
1:AA:1191:A:P	3:AC:3:ASN:HD21	2.27	0.58
12:AL:24:VAL:HG12	12:AL:24:VAL:O	2.02	0.58
12:AL:46:LYS:HG2	12:AL:47:LYS:N	2.19	0.58
28:B6:9:LEU:C	28:B6:9:LEU:HD13	2.23	0.58
31:BA:500:G:N2	31:BA:502:A:H3'	2.19	0.58
31:BA:958:U:O2'	31:BA:959:A:P	2.61	0.58
33:BD:118:VAL:HG22	33:BD:119:ALA:H	1.67	0.58
34:BE:120:TRP:CE3	34:BE:155:LYS:HD3	2.38	0.58
37:BH:158:HIS:CE1	37:BH:169:VAL:C	2.76	0.58
39:BN:57:ALA:O	39:BN:58:ASP:O	2.22	0.58
41:BP:105:LEU:O	41:BP:106:LEU:CB	2.51	0.58
43:BR:9:LYS:C	43:BR:10:LEU:HG	2.23	0.58
43:BR:74:LYS:HD2	43:BR:77:ARG:HH21	1.68	0.58
44:BS:88:ASP:O	44:BS:89:ARG:O	2.22	0.58
44:BS:97:ARG:C	44:BS:97:ARG:CD	2.72	0.58
1:CA:505:G:C6	1:CA:535:A:C2	2.91	0.58
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.68	0.58
1:CA:1278:U:O4	10:CJ:99:LYS:HE3	2.04	0.58
3:CC:150:LYS:HE2	3:CC:152:ILE:HD11	1.85	0.58
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.86	0.58
9:CI:3:GLN:HB3	9:CI:20:ARG:CZ	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:48:TRP:H	16:CP:48:TRP:HD1	1.46	0.58
17:CQ:45:HIS:HD2	17:CQ:47:PRO:HD3	1.68	0.58
24:D2:18:PRO:O	24:D2:22:GLU:HB2	2.04	0.58
31:DA:9:U:N3	31:DA:2629:A:N6	2.51	0.58
31:DA:271(K):U:H3'	31:DA:271(L):U:C5'	2.34	0.58
31:DA:479:A:N3	31:DA:481:G:H5''	2.17	0.58
31:DA:848:G:N9	31:DA:933:A:H8	2.02	0.58
31:DA:1839:G:N7	31:DA:1927:A:H1'	2.19	0.58
31:DA:1893:C:C5	31:DA:1894:C:C5	2.91	0.58
31:DA:2661:G:C8	31:DA:2662:A:C2	2.91	0.58
34:DE:200:GLU:OE2	34:DE:200:GLU:N	2.36	0.58
39:DN:67:LEU:HB3	39:DN:88:GLU:CD	2.24	0.58
42:DQ:38:GLU:HB2	42:DQ:127:ILE:HG22	1.85	0.58
44:DS:74:ALA:HB2	44:DS:101:LEU:HD11	1.84	0.58
44:DS:95:HIS:O	44:DS:98:VAL:HG23	2.04	0.58
47:DV:38:LEU:HG	47:DV:39:LEU:H	1.68	0.58
48:DW:10:VAL:O	48:DW:11:ARG:CB	2.51	0.58
49:DX:23:GLU:HG3	49:DX:24:GLY:N	2.19	0.58
50:DY:68:HIS:ND1	50:DY:70:SER:HB3	2.19	0.58
1:AA:101:A:C2'	1:AA:102:G:H5'	2.34	0.58
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.38	0.58
3:AC:152:ILE:HB	3:AC:199:LYS:HB2	1.86	0.58
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.38	0.58
8:AH:69:ARG:HD3	8:AH:75:ARG:O	2.03	0.58
8:AH:112:LEU:O	8:AH:112:LEU:HD12	2.03	0.58
31:BA:1040:C:O2'	31:BA:1041:C:P	2.61	0.58
31:BA:1138:G:H21	39:BN:106:MET:HE3	1.69	0.58
31:BA:2309:A:C2	31:BA:2310:A:H2	2.21	0.58
31:BA:2875:C:O2'	45:BT:5:ALA:HB3	2.03	0.58
33:BD:70:TRP:HZ3	33:BD:146:GLU:OE2	1.87	0.58
35:BF:66:PRO:O	35:BF:67:GLN:CB	2.48	0.58
38:BI:85:GLU:O	38:BI:123:LEU:HD12	2.03	0.58
42:BQ:140:ALA:CB	51:BZ:99:TYR:HB2	2.33	0.58
1:CA:152:A:N6	1:CA:170:U:C2	2.72	0.58
1:CA:659:U:O2'	1:CA:660:G:H5'	2.04	0.58
1:CA:765:G:H5''	1:CA:766:A:OP1	2.04	0.58
1:CA:937:A:H1'	1:CA:1379:G:H22	1.68	0.58
1:CA:1058:G:H2'	1:CA:1059:C:O4'	2.04	0.58
1:CA:1281:U:H5'	1:CA:1282:C:C5	2.30	0.58
3:CC:181:ASN:O	3:CC:204:LEU:HB2	2.04	0.58
4:CD:17:VAL:HG11	4:CD:197:PRO:CB	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:31:CYS:C	4:CD:33:MET:N	2.57	0.58
23:D1:88:LYS:O	23:D1:92:LYS:HB2	2.04	0.58
28:D6:27:LYS:HE3	31:DA:2285:C:C5	2.38	0.58
31:DA:128:C:C6	31:DA:128:C:C3'	2.87	0.58
31:DA:466:A:H5''	31:DA:467:G:OP2	2.03	0.58
31:DA:542:C:N4	31:DA:543:C:H42	2.02	0.58
31:DA:1108:U:C2'	31:DA:1109:C:H5'	2.33	0.58
31:DA:1963:U:O2	31:DA:1963:U:H2'	2.03	0.58
31:DA:2094:G:H2'	31:DA:2095:C:H5'	1.85	0.58
31:DA:2308:G:H2'	31:DA:2309:A:C8	2.38	0.58
33:DD:83:GLU:HB2	33:DD:92:ILE:HD11	1.84	0.58
34:DE:61:ARG:N	34:DE:62:PRO:HD2	2.17	0.58
38:DI:83:ALA:HA	38:DI:89:TYR:CD1	2.39	0.58
39:DN:78:TYR:CD1	39:DN:79:PRO:HB3	2.39	0.58
41:DP:36:LYS:O	41:DP:38:GLN:HG2	2.02	0.58
46:DU:112:ARG:O	46:DU:115:ALA:HB3	2.04	0.58
49:DX:63:LYS:O	49:DX:68:ARG:HA	2.04	0.58
49:DX:82:GLN:HB3	49:DX:85:PRO:HG2	1.84	0.58
50:DY:8:LYS:NZ	50:DY:73:ARG:HA	2.16	0.58
50:DY:28:LYS:HD2	50:DY:37:VAL:HG12	1.84	0.58
1:AA:594:G:H1	1:AA:645:C:N4	2.00	0.58
1:AA:1190:G:H3'	3:AC:3:ASN:HD21	1.69	0.58
5:AE:36:ASP:OD1	5:AE:37:ARG:N	2.36	0.58
13:AM:86:CYS:HB2	19:AS:73:GLU:HB3	1.85	0.58
24:B2:49:LYS:O	24:B2:50:ILE:C	2.42	0.58
31:BA:236:C:H2'	31:BA:237:C:C6	2.38	0.58
31:BA:806:C:OP2	41:BP:39:LYS:HD2	2.04	0.58
31:BA:1291:C:H2'	31:BA:1292:U:C6	2.39	0.58
31:BA:1486:A:H2'	31:BA:1487:G:H8	1.69	0.58
31:BA:1528(A):A:C5	31:BA:1529:G:C8	2.92	0.58
32:BB:29:A:C2	32:BB:30:C:C2	2.92	0.58
38:BI:63:ALA:O	38:BI:67:ARG:HD2	2.04	0.58
38:BI:98:ALA:HA	38:BI:109:ILE:HD11	1.84	0.58
39:BN:39:ARG:CD	39:BN:41:ASP:HB2	2.34	0.58
47:BV:61:VAL:C	47:BV:62:LEU:HD23	2.24	0.58
1:CA:25:C:H2'	1:CA:26:A:C8	2.39	0.58
1:CA:509:A:H4'	1:CA:510:A:OP1	2.02	0.58
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.03	0.58
23:D1:19:GLN:HE21	31:DA:379:G:N2	1.93	0.58
30:D8:58:ILE:HG22	41:DP:49:ARG:CD	2.32	0.58
31:DA:1407:C:H2'	31:DA:1407:C:O2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2065:C:H2'	31:DA:2066:C:C6	2.38	0.58
31:DA:2478:A:C2'	31:DA:2479:G:H5'	2.34	0.58
31:DA:2657:A:C2	31:DA:2664:G:N2	2.71	0.58
31:DA:2683:C:OP1	45:DT:53:ARG:NH2	2.37	0.58
31:DA:2801(A):A:C4'	31:DA:2802:G:H2'	2.33	0.58
32:DB:49:C:H2'	32:DB:50:G:C8	2.39	0.58
35:DF:198:ALA:O	35:DF:201:VAL:HG12	2.03	0.58
36:DG:16:ARG:O	36:DG:20:ILE:HG13	2.03	0.58
36:DG:120:LEU:HB2	36:DG:179:PRO:O	2.04	0.58
37:DH:149:ARG:HD3	37:DH:164:TYR:CE1	2.39	0.58
41:DP:38:GLN:CG	41:DP:39:LYS:H	2.14	0.58
44:DS:89:ARG:HE	44:DS:90:GLY:H	1.52	0.58
1:AA:180:U:C2'	1:AA:181:G:H5'	2.33	0.58
1:AA:356:A:H2'	1:AA:357:G:H8	1.67	0.58
1:AA:501:C:H2'	1:AA:502:G:C8	2.38	0.58
1:AA:937:A:H1'	1:AA:1379:G:N2	2.18	0.58
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.19	0.58
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.68	0.58
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.71	0.58
7:AG:32:ARG:O	7:AG:33:ASP:HB2	2.04	0.58
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.67	0.58
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.18	0.58
24:B2:14:ARG:O	24:B2:18:PRO:CD	2.52	0.58
28:B6:14:THR:O	28:B6:49:HIS:HA	2.04	0.58
31:BA:340:A:C2'	31:BA:341:G:H5'	2.34	0.58
31:BA:576:U:H2'	31:BA:577:G:C8	2.39	0.58
39:BN:65:LYS:CD	39:BN:67:LEU:HG	2.33	0.58
43:BR:67:LEU:CD1	43:BR:76:VAL:HG21	2.28	0.58
49:BX:82:GLN:HB3	49:BX:85:PRO:HG2	1.86	0.58
1:CA:738:C:H2'	1:CA:739:C:H6	1.69	0.58
1:CA:868:C:H2'	1:CA:869:G:O4'	2.03	0.58
1:CA:1256:A:H5'	1:CA:1257:U:OP1	2.04	0.58
12:CL:41:ARG:CG	12:CL:42:THR:H	2.16	0.58
12:CL:102:ARG:CG	12:CL:102:ARG:HH11	2.17	0.58
13:CM:25:ILE:HD11	13:CM:66:LEU:HD23	1.86	0.58
23:D1:76:ARG:HB3	23:D1:78:LYS:HE3	1.86	0.58
24:D2:45:SER:O	24:D2:48:HIS:CB	2.49	0.58
28:D6:15:GLU:OE1	28:D6:43:CYS:SG	2.62	0.58
31:DA:363(E):U:H2'	31:DA:363(F):A:O4'	2.03	0.58
31:DA:430:G:H5''	31:DA:431:U:OP2	2.04	0.58
31:DA:1025:G:C4	31:DA:1135:C:H1'	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1378:A:H4'	31:DA:1379:A:OP1	2.04	0.58
36:DG:71:THR:HG22	36:DG:72:ARG:N	2.18	0.58
38:DI:29:TYR:C	38:DI:32:PRO:HD2	2.23	0.58
38:DI:130:TYR:CB	38:DI:136:VAL:HG13	2.27	0.58
38:DI:131:LYS:CG	38:DI:132:PRO:HA	2.34	0.58
41:DP:14:LYS:O	41:DP:15:ARG:HB2	2.03	0.58
41:DP:50:ARG:O	41:DP:57:THR:HG23	2.04	0.58
42:DQ:12:GLN:HG2	42:DQ:73:PRO:HD2	1.86	0.58
44:DS:67:ARG:H	44:DS:69:VAL:HG13	1.68	0.58
45:DT:28:VAL:HG22	45:DT:46:GLU:HG3	1.85	0.58
49:DX:35:THR:O	49:DX:36:LYS:C	2.41	0.58
1:AA:69:G:C2	1:AA:70:G:N7	2.72	0.57
1:AA:863:U:H2'	1:AA:865:A:OP2	2.03	0.57
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.49	0.57
1:AA:1150:U:O4	1:AA:1151:A:N6	2.35	0.57
2:AB:67:THR:HG22	2:AB:90:MET:HE1	1.85	0.57
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.19	0.57
3:AC:181:ASN:O	3:AC:204:LEU:HB2	2.03	0.57
5:AE:57:LYS:O	5:AE:61:TYR:HD2	1.87	0.57
13:AM:31:LYS:HA	13:AM:34:LEU:HD12	1.84	0.57
15:AO:37:ASN:N	15:AO:37:ASN:HD22	2.00	0.57
24:B2:26:ARG:NH1	24:B2:29:LYS:HE2	2.19	0.57
25:B3:6:VAL:HG12	25:B3:54:VAL:HG11	1.86	0.57
28:B6:20:ASN:O	28:B6:21:TYR:CD1	2.57	0.57
31:BA:662:G:P	41:BP:18:ARG:HD2	2.44	0.57
31:BA:794:G:O2'	31:BA:795:C:H5'	2.04	0.57
31:BA:2562:U:H1'	40:BO:23:ARG:NH1	2.17	0.57
31:BA:2646:C:H6	31:BA:2646:C:O5'	1.87	0.57
33:BD:16:MET:HG3	33:BD:206:LEU:O	2.04	0.57
34:BE:36:ARG:HH21	34:BE:88:GLY:HA2	1.65	0.57
34:BE:59:VAL:CG2	34:BE:63:LEU:HA	2.31	0.57
41:BP:45:LEU:HD22	41:BP:46:LYS:H	1.68	0.57
44:BS:89:ARG:HE	44:BS:90:GLY:H	1.52	0.57
1:CA:721:G:H4'	1:CA:722:A:O4'	2.04	0.57
2:CB:71:VAL:O	2:CB:164:VAL:HG22	2.03	0.57
13:CM:66:LEU:HD12	13:CM:66:LEU:N	2.17	0.57
31:DA:280:C:H2'	31:DA:281:G:O5'	2.04	0.57
31:DA:352:G:O2'	31:DA:353:G:O5'	2.22	0.57
31:DA:2309:A:C2	31:DA:2310:A:C2	2.92	0.57
31:DA:2488:A:H2'	31:DA:2489:G:O4'	2.03	0.57
34:DE:101:ARG:HB3	34:DE:169:ASN:ND2	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:57:ALA:HB2	36:DG:90:LEU:HD21	1.86	0.57
42:DQ:141:GLN:CG	51:DZ:72:ARG:HH11	2.16	0.57
44:DS:35:ILE:H	44:DS:53:SER:HB3	1.69	0.57
46:DU:90:VAL:HG12	46:DU:91:ASP:H	1.69	0.57
1:AA:375:U:C2	1:AA:376:G:C8	2.92	0.57
1:AA:748:C:H1'	1:AA:749:C:OP2	2.04	0.57
1:AA:1452:C:H5'	1:AA:1456:G:C4	2.39	0.57
9:AI:3:GLN:HB3	9:AI:20:ARG:CZ	2.33	0.57
23:B1:92:LYS:C	23:B1:94:LEU:H	2.08	0.57
24:B2:46:GLN:HE21	24:B2:46:GLN:C	2.07	0.57
28:B6:51:GLU:O	28:B6:52:VAL:HB	2.03	0.57
31:BA:212:G:C2'	31:BA:213:A:H5'	2.33	0.57
31:BA:352:G:O2'	31:BA:353:G:O5'	2.22	0.57
31:BA:548:A:O2'	31:BA:549:G:OP1	2.20	0.57
32:BB:6:C:C2	32:BB:116:G:N2	2.71	0.57
32:BB:15:A:H1'	32:BB:110:G:N9	2.18	0.57
33:BD:35:LYS:N	33:BD:64:ILE:HG23	2.19	0.57
40:BO:34:THR:OG1	40:BO:35:VAL:N	2.36	0.57
44:BS:61:ASN:HD22	44:BS:62:LYS:N	2.02	0.57
1:CA:832:C:N4	1:CA:855:G:C6	2.73	0.57
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.04	0.57
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.05	0.57
1:CA:1479:C:O2'	1:CA:1480:G:H5'	2.04	0.57
2:CB:163:PHE:HD2	2:CB:185:ILE:HG13	1.68	0.57
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.19	0.57
4:CD:58:LEU:HD23	4:CD:206:PHE:CE1	2.39	0.57
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.15	0.57
5:CE:101:ILE:HG12	5:CE:101:ILE:O	2.02	0.57
15:CO:74:ASP:OD2	15:CO:76:GLU:HB3	2.05	0.57
18:CR:43:PHE:O	18:CR:44:LEU:HD12	2.04	0.57
28:D6:15:GLU:HG2	28:D6:18:ARG:NE	2.06	0.57
28:D6:30:THR:O	28:D6:31:PRO:C	2.41	0.57
30:D8:35:GLN:CB	31:DA:2420:C:OP1	2.52	0.57
31:DA:288:C:H2'	31:DA:288:C:O2	2.03	0.57
31:DA:528:A:C2'	31:DA:529:A:H5'	2.34	0.57
31:DA:860:U:C5	31:DA:2268:A:C8	2.92	0.57
31:DA:1515:G:H2'	31:DA:1516:C:C6	2.39	0.57
31:DA:2334:G:H21	44:DS:18:ILE:CD1	2.04	0.57
31:DA:2562:U:H1'	40:DO:23:ARG:NH1	2.15	0.57
32:DB:28:C:H2'	32:DB:29:A:C8	2.39	0.57
43:DR:59:ASP:OD1	43:DR:61:HIS:HB3	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:17:THR:O	45:DT:18:ASP:CB	2.46	0.57
45:DT:91:ARG:HB2	45:DT:115:ARG:O	2.05	0.57
51:DZ:71:VAL:HG22	51:DZ:88:PHE:HE2	1.68	0.57
1:AA:937:A:H1'	1:AA:1379:G:H22	1.70	0.57
1:AA:1470:G:O2'	1:AA:1471:G:H5'	2.03	0.57
1:AA:1471:G:O2'	1:AA:1472:U:H5'	2.04	0.57
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.85	0.57
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.19	0.57
7:AG:69:VAL:HA	7:AG:138:LYS:HD2	1.86	0.57
12:AL:110:VAL:HG21	12:AL:120:TYR:HB3	1.86	0.57
22:B0:2:ALA:H	31:BA:2602:A:H61	1.51	0.57
24:B2:14:ARG:CZ	24:B2:57:ILE:CG2	2.82	0.57
30:B8:52:LYS:N	30:B8:53:PRO:CD	2.63	0.57
31:BA:314:A:O2'	31:BA:315:G:H5'	2.04	0.57
31:BA:528:A:H2	31:BA:2043:C:C5'	2.17	0.57
31:BA:579:G:H2'	31:BA:580:C:C6	2.40	0.57
31:BA:848:G:N9	31:BA:933:A:H8	2.01	0.57
31:BA:2690:C:OP1	43:BR:17:ARG:NH1	2.37	0.57
31:BA:2881:C:H2'	31:BA:2882:A:O4'	2.04	0.57
32:BB:13:A:H2'	32:BB:70:C:O2'	2.04	0.57
33:BD:58:HIS:CD2	33:BD:59:LYS:N	2.73	0.57
35:BF:198:ALA:O	35:BF:201:VAL:HG12	2.04	0.57
39:BN:3:THR:CA	39:BN:4:TYR:CE1	2.79	0.57
41:BP:23:PRO:O	41:BP:33:ARG:HG3	2.04	0.57
41:BP:26:GLY:HA2	41:BP:30:THR:HG21	1.84	0.57
45:BT:50:ILE:HA	45:BT:99:LEU:CD1	2.34	0.57
49:BX:35:THR:CB	49:BX:75:ASP:OD2	2.50	0.57
1:CA:706:A:C5	1:CA:707:C:H5	2.22	0.57
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.87	0.57
2:CB:228:GLY:O	2:CB:230:VAL:HG13	2.04	0.57
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.04	0.57
12:CL:115:LYS:O	12:CL:117:ARG:HG3	2.04	0.57
13:CM:44:ARG:HB2	13:CM:46:LYS:HG2	1.86	0.57
16:CP:50:LYS:C	16:CP:50:LYS:HD3	2.25	0.57
31:DA:196:A:C4	31:DA:805:G:O6	2.57	0.57
31:DA:2313:C:H2'	31:DA:2314:C:H6	1.67	0.57
31:DA:2875:C:O2'	45:DT:5:ALA:HB3	2.04	0.57
34:DE:116:VAL:HG13	34:DE:122:PHE:CG	2.39	0.57
39:DN:90:MET:O	39:DN:93:THR:O	2.22	0.57
41:DP:24:GLY:HA3	41:DP:33:ARG:NH2	2.13	0.57
43:DR:38:VAL:HB	43:DR:39:PRO:HD3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:102:GLU:HG3	47:DV:2:PHE:CE2	2.39	0.57
47:DV:19:LYS:CE	47:DV:20:LEU:N	2.67	0.57
1:AA:254:G:O2'	1:AA:255:G:H5'	2.04	0.57
1:AA:509:A:O2'	1:AA:510:A:P	2.62	0.57
1:AA:612:C:O2'	1:AA:613:C:H5'	2.04	0.57
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.05	0.57
8:AH:21:LYS:O	8:AH:63:LEU:HD23	2.04	0.57
13:AM:69:GLU:HB3	13:AM:72:ALA:HB3	1.85	0.57
23:B1:85:LEU:C	23:B1:87:PRO:CD	2.71	0.57
31:BA:649:G:H2'	31:BA:650:C:C6	2.39	0.57
31:BA:2074:U:H2'	31:BA:2075:U:C6	2.39	0.57
34:BE:93:VAL:H	34:BE:95:ILE:CD1	2.16	0.57
39:BN:67:LEU:C	39:BN:69:GLN:H	2.07	0.57
41:BP:121:LYS:HB3	41:BP:123:LEU:CD2	2.34	0.57
43:BR:100:LEU:HD11	43:BR:113:LEU:HD13	1.86	0.57
49:BX:31:HIS:CD2	49:BX:33:LYS:H	2.23	0.57
49:BX:73:ARG:N	49:BX:74:PRO:CD	2.65	0.57
1:CA:159:G:O2'	1:CA:160:A:C8	2.57	0.57
1:CA:1068:G:N3	1:CA:1191:A:C2	2.72	0.57
1:CA:1422:G:H4'	40:DO:49:ARG:HH12	1.69	0.57
2:CB:97:TRP:HH2	2:CB:176:GLU:HG3	1.68	0.57
8:CH:51:VAL:HG11	8:CH:60:ARG:CG	2.34	0.57
13:CM:69:GLU:HB3	13:CM:72:ALA:HB3	1.86	0.57
20:CT:11:SER:HA	20:CT:13:LEU:HD13	1.85	0.57
23:D1:53:VAL:HG21	23:D1:74:VAL:HG21	1.86	0.57
31:DA:271(A):A:H2	31:DA:272(D):G:N3	2.02	0.57
31:DA:715:G:O2'	31:DA:716:A:H5'	2.05	0.57
31:DA:2656:U:H2'	31:DA:2657:A:H5''	1.86	0.57
31:DA:2895:U:H5	31:DA:2896:C:C5	2.22	0.57
40:DO:50:GLY:C	40:DO:52:VAL:H	2.08	0.57
40:DO:73:ASP:OD2	45:DT:32:TYR:CE1	2.57	0.57
41:DP:16:ARG:NH1	41:DP:16:ARG:O	2.37	0.57
42:DQ:75:THR:HA	42:DQ:88:GLY:CA	2.32	0.57
45:DT:90:GLN:HG2	45:DT:120:ARG:NH2	2.20	0.57
49:DX:73:ARG:O	49:DX:74:PRO:O	2.22	0.57
1:AA:342:C:O2'	1:AA:343:U:H5'	2.05	0.57
1:AA:659:U:O2'	1:AA:660:G:H5'	2.04	0.57
1:AA:1423:G:H5''	40:BO:49:ARG:NH2	2.18	0.57
2:AB:74:LYS:NZ	2:AB:76:GLN:HB2	2.20	0.57
3:AC:34:LEU:O	3:AC:34:LEU:HD23	2.04	0.57
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:19:LEU:O	6:AF:19:LEU:HD23	2.04	0.57
8:AH:88:LYS:O	8:AH:92:ARG:HD2	2.04	0.57
10:AJ:61:GLU:OE1	14:AN:58:LYS:HE2	2.05	0.57
20:AT:11:SER:HA	20:AT:13:LEU:CD1	2.35	0.57
23:B1:26:ARG:HG2	23:B1:34:THR:CB	2.34	0.57
23:B1:76:ARG:HB3	23:B1:78:LYS:HE3	1.85	0.57
30:B8:62:LEU:O	30:B8:64:TYR:N	2.37	0.57
31:BA:2478:A:H2'	31:BA:2479:G:H5'	1.86	0.57
31:BA:2652:C:H2'	31:BA:2653:U:H5'	1.84	0.57
31:BA:2657:A:H2	31:BA:2664:G:H21	1.50	0.57
32:BB:60:C:C2	32:BB:61:G:C8	2.93	0.57
39:BN:78:TYR:CD1	39:BN:79:PRO:HB3	2.39	0.57
40:BO:98:VAL:HG13	40:BO:117:LEU:HB3	1.84	0.57
42:BQ:39:PRO:HA	42:BQ:97:VAL:O	2.05	0.57
1:CA:159:G:N2	1:CA:161:A:H3'	2.19	0.57
1:CA:707:C:O2'	1:CA:708:C:H5'	2.04	0.57
1:CA:748:C:H1'	1:CA:749:C:OP2	2.04	0.57
1:CA:980:C:H5'	1:CA:981:U:C5	2.40	0.57
1:CA:1084:G:C5	1:CA:1085:U:C4	2.93	0.57
1:CA:1256:A:O3'	1:CA:1257:U:H4'	2.05	0.57
3:CC:111:LEU:HD22	3:CC:204:LEU:HD21	1.85	0.57
4:CD:19:LEU:HB2	4:CD:21:LEU:HD21	1.85	0.57
12:CL:75:HIS:HD2	12:CL:77:LEU:H	1.53	0.57
31:DA:671:C:H2'	31:DA:672:C:C6	2.39	0.57
31:DA:1309:G:O2'	31:DA:1310:G:H5'	2.04	0.57
31:DA:1412:A:H2'	31:DA:1413:G:C8	2.39	0.57
31:DA:1762:A:H8	31:DA:1762:A:O5'	1.87	0.57
36:DG:19:LEU:HD13	36:DG:32:PRO:HG2	1.87	0.57
42:DQ:34:LEU:HD11	42:DQ:129:THR:HB	1.86	0.57
50:DY:96:ILE:HG13	50:DY:99:CYS:C	2.25	0.57
1:AA:509:A:H4'	1:AA:510:A:OP1	2.04	0.57
2:AB:19:HIS:O	2:AB:39:ILE:HG23	2.04	0.57
2:AB:97:TRP:HH2	2:AB:176:GLU:HG3	1.69	0.57
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.85	0.57
7:AG:70:LYS:HB3	7:AG:96:GLN:OE1	2.04	0.57
23:B1:70:VAL:O	23:B1:73:LEU:HB2	2.04	0.57
31:BA:1252:G:C2	31:BA:1253:A:C2	2.93	0.57
31:BA:1372:U:H2'	31:BA:1373:A:O4'	2.05	0.57
33:BD:43:ARG:HH11	33:BD:44:ASN:CG	2.07	0.57
38:BI:130:TYR:CB	38:BI:136:VAL:HG13	2.27	0.57
42:BQ:12:GLN:HG2	42:BQ:73:PRO:HD2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:42:ILE:HD13	42:BQ:97:VAL:HG21	1.87	0.57
49:BX:73:ARG:O	49:BX:74:PRO:C	2.42	0.57
1:CA:186:C:C2	1:CA:187:C:C5	2.92	0.57
1:CA:833:U:H2'	1:CA:834:C:C6	2.39	0.57
1:CA:938:A:N6	1:CA:939:G:C6	2.73	0.57
1:CA:979:C:H3'	1:CA:980:C:H5''	1.87	0.57
1:CA:1190:G:H3'	3:CC:3:ASN:HD21	1.70	0.57
1:CA:1248:A:C2'	1:CA:1249:C:H5'	2.35	0.57
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.19	0.57
4:CD:194:LEU:HD22	4:CD:194:LEU:N	2.20	0.57
23:D1:26:ARG:HG2	23:D1:34:THR:CB	2.34	0.57
31:DA:661:C:C4'	41:DP:16:ARG:HH12	2.18	0.57
31:DA:1204:A:H61	31:DA:1240:U:H2'	1.69	0.57
31:DA:1418:G:H8	31:DA:1418:G:O5'	1.87	0.57
31:DA:2532:G:O2'	31:DA:2657:A:N6	2.37	0.57
31:DA:2580:U:H4'	34:DE:131:ALA:H	1.68	0.57
36:DG:71:THR:HB	36:DG:89:GLY:CA	2.34	0.57
37:DH:163:TYR:N	37:DH:163:TYR:CD1	2.72	0.57
39:DN:3:THR:CA	39:DN:4:TYR:CE1	2.77	0.57
41:DP:101:VAL:C	41:DP:103:ALA:H	2.07	0.57
43:DR:33:ARG:HG2	43:DR:115:GLU:CG	2.23	0.57
43:DR:95:THR:HA	43:DR:116:LEU:O	2.05	0.57
46:DU:85:LYS:O	46:DU:116:ALA:HB1	2.04	0.57
1:AA:68:G:H5'	1:AA:171:A:H1'	1.87	0.57
1:AA:505:G:C6	1:AA:535:A:C2	2.93	0.57
1:AA:706:A:C5	1:AA:707:C:H5	2.22	0.57
1:AA:1084:G:C5	1:AA:1085:U:C4	2.92	0.57
6:AF:69:GLU:HG2	6:AF:70:ASP:H	1.70	0.57
12:AL:82:VAL:O	12:AL:83:VAL:HB	2.05	0.57
16:AP:22:THR:HG22	16:AP:32:TYR:HA	1.86	0.57
27:B5:51:TYR:HB3	27:B5:52:TYR:CD2	2.40	0.57
31:BA:280:C:H2'	31:BA:281:G:O5'	2.05	0.57
31:BA:825:C:C2'	31:BA:826:U:O5'	2.52	0.57
31:BA:993:G:C5'	47:BV:75:PHE:CZ	2.85	0.57
31:BA:1359:A:C8	31:BA:1372:U:O4	2.57	0.57
31:BA:1952:A:C5	40:BO:22:ILE:HD11	2.40	0.57
31:BA:2309:A:C2	31:BA:2310:A:C2	2.93	0.57
31:BA:2476:A:C2	31:BA:2477:C:C6	2.92	0.57
33:BD:35:LYS:CE	33:BD:64:ILE:C	2.71	0.57
35:BF:88:VAL:HG11	35:BF:91:GLY:HA3	1.87	0.57
36:BG:39:ILE:HB	36:BG:157:ILE:HG22	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:138:LYS:O	37:BH:139:GLN:C	2.42	0.57
38:BI:29:TYR:C	38:BI:32:PRO:HD2	2.25	0.57
41:BP:62:LEU:N	41:BP:62:LEU:HD13	2.19	0.57
43:BR:95:THR:HA	43:BR:116:LEU:O	2.04	0.57
44:BS:74:ALA:HB2	44:BS:101:LEU:HD11	1.85	0.57
50:BY:44:ILE:HG22	50:BY:45:VAL:N	2.20	0.57
1:CA:675:A:H61	1:CA:715:A:H61	1.53	0.57
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.40	0.57
1:CA:1072:G:C5	1:CA:1073:U:C4	2.92	0.57
2:CB:158:LEU:H	2:CB:158:LEU:HD12	1.70	0.57
4:CD:108:LEU:HB3	4:CD:110:PHE:CE1	2.40	0.57
7:CG:32:ARG:O	7:CG:33:ASP:HB2	2.04	0.57
7:CG:69:VAL:HG13	7:CG:134:ALA:O	2.05	0.57
8:CH:88:LYS:O	8:CH:92:ARG:HD2	2.05	0.57
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.68	0.57
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.87	0.57
30:D8:32:LEU:CB	30:D8:34:TRP:H	2.17	0.57
31:DA:11:G:C2'	31:DA:12:U:H5'	2.34	0.57
31:DA:389:G:N2	41:DP:71:VAL:HG12	2.20	0.57
31:DA:543:C:N3	31:DA:551:G:C2	2.73	0.57
31:DA:985:C:H2'	31:DA:986:C:H6	1.70	0.57
31:DA:2656:U:N3	31:DA:2665:A:H2	2.01	0.57
33:DD:186:HIS:CD2	33:DD:187:GLY:N	2.73	0.57
36:DG:131:TYR:HB3	36:DG:159:VAL:CG1	2.34	0.57
37:DH:88:LEU:O	37:DH:89:ILE:HG23	2.05	0.57
45:DT:93:ARG:O	45:DT:94:ALA:C	2.41	0.57
49:DX:73:ARG:N	49:DX:74:PRO:CD	2.66	0.57
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.04	0.57
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.38	0.57
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.84	0.57
12:AL:102:ARG:HH11	12:AL:102:ARG:CG	2.18	0.57
17:AQ:45:HIS:HD2	17:AQ:47:PRO:HD3	1.69	0.57
24:B2:41:ILE:O	24:B2:43:GLN:N	2.37	0.57
27:B5:36:CYS:CB	27:B5:49:CYS:SG	2.93	0.57
27:B5:40:LYS:NZ	27:B5:46:CYS:O	2.30	0.57
27:B5:57:VAL:CG2	27:B5:58:LEU:H	2.16	0.57
30:B8:27:THR:HA	41:BP:62:LEU:CD1	2.35	0.57
31:BA:1279:G:H5'	43:BR:34:ILE:HD11	1.87	0.57
31:BA:1717:G:C2	31:BA:1718:G:C8	2.93	0.57
31:BA:1803:A:H4'	33:BD:259:THR:HG23	1.87	0.57
33:BD:35:LYS:HE2	33:BD:104:TYR:CB	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:111:ARG:CZ	43:BR:2:ARG:HH21	2.17	0.57
45:BT:29:ARG:HB2	45:BT:86:ILE:H	1.70	0.57
1:CA:79:G:C4'	1:CA:80:G:OP1	2.52	0.57
1:CA:854:G:H3'	1:CA:871:U:O4	2.05	0.57
2:CB:27:LYS:HD2	2:CB:193:ASP:HB2	1.87	0.57
3:CC:152:ILE:HB	3:CC:199:LYS:HB2	1.87	0.57
23:D1:25:LYS:C	23:D1:26:ARG:HG3	2.24	0.57
27:D5:2:ALA:N	31:DA:747:U:C4	2.73	0.57
30:D8:46:ARG:NH2	41:DP:65:ARG:NH2	2.41	0.57
30:D8:61:LEU:HD13	31:DA:593:G:O2'	2.05	0.57
31:DA:995:C:C2	39:DN:4:TYR:OH	2.42	0.57
31:DA:1210:A:C8	31:DA:1210:A:C5'	2.79	0.57
31:DA:2655:G:N3	31:DA:2664:G:O6	2.38	0.57
37:DH:156:ALA:C	37:DH:158:HIS:N	2.58	0.57
40:DO:77:ILE:HB	45:DT:74:ARG:HD3	1.87	0.57
40:DO:107:ARG:NH2	45:DT:35:LYS:HD2	2.18	0.57
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.05	0.57
2:AB:28:PHE:CD1	2:AB:190:THR:HA	2.39	0.57
2:AB:168:THR:HG21	2:AB:192:SER:HA	1.86	0.57
4:AD:128:VAL:CG1	4:AD:129:ASN:HD22	2.06	0.57
4:AD:156:GLU:O	4:AD:159:ARG:HB2	2.05	0.57
7:AG:32:ARG:O	7:AG:33:ASP:CB	2.53	0.57
23:B1:88:LYS:O	23:B1:92:LYS:HB2	2.05	0.57
28:B6:40:CYS:SG	28:B6:45:LYS:HD3	2.45	0.57
31:BA:518:G:H2'	31:BA:519:U:C6	2.39	0.57
31:BA:1820:U:C2	33:BD:202:LYS:HB3	2.40	0.57
31:BA:2591:C:OP2	33:BD:239:ARG:HB2	2.05	0.57
31:BA:2801(A):A:C4'	31:BA:2802:G:H2'	2.33	0.57
33:BD:31:LYS:O	33:BD:35:LYS:O	2.23	0.57
36:BG:39:ILE:HA	36:BG:157:ILE:HA	1.86	0.57
49:BX:60:ARG:CG	49:BX:71:GLY:HA3	2.35	0.57
50:BY:75:ILE:O	50:BY:76:CYS:HB2	2.05	0.57
51:BZ:23:LYS:HE3	51:BZ:40:ASP:OD2	2.05	0.57
1:CA:1172:C:H2'	1:CA:1173:G:H8	1.68	0.57
1:CA:1248:A:H2'	1:CA:1249:C:H5'	1.87	0.57
3:CC:89:GLU:O	3:CC:93:LYS:HB2	2.05	0.57
23:D1:85:LEU:HB3	23:D1:87:PRO:CD	2.35	0.57
31:DA:52:A:C2'	31:DA:53:A:H5'	2.35	0.57
31:DA:1786:A:H1'	31:DA:1938:A:N6	2.19	0.57
31:DA:1980:G:O2'	31:DA:1982:C:OP2	2.15	0.57
31:DA:2386:C:H2'	31:DA:2387:U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2657:A:H2	31:DA:2664:G:N2	2.02	0.57
35:DF:205:ARG:C	35:DF:206:ILE:HG13	2.25	0.57
38:DI:62:LYS:HE2	38:DI:134:PRO:CG	2.35	0.57
44:DS:87:PHE:CE2	44:DS:97:ARG:NH2	2.71	0.57
45:DT:80:SER:HB3	45:DT:81:PRO:HD3	1.86	0.57
50:DY:37:VAL:HG23	50:DY:38:ILE:N	2.20	0.57
50:DY:46:LYS:C	50:DY:47:LYS:HD2	2.25	0.57
1:AA:32:A:H2'	1:AA:33:A:C8	2.40	0.57
1:AA:979:C:H3'	1:AA:980:C:H5''	1.86	0.57
1:AA:1072:G:C5	1:AA:1073:U:C4	2.93	0.57
13:AM:91:ARG:HB2	13:AM:98:VAL:HG21	1.87	0.57
17:AQ:68:ARG:O	17:AQ:68:ARG:HG3	2.04	0.57
23:B1:33:LYS:HZ1	23:B1:35:THR:HG21	1.70	0.57
28:B6:32:ASN:OD1	28:B6:33:LYS:N	2.38	0.57
31:BA:142:A:H8	31:BA:1595:G:N2	2.00	0.57
33:BD:35:LYS:CE	33:BD:65:ILE:HA	2.35	0.57
35:BF:141:ALA:O	35:BF:144:LYS:HB3	2.05	0.57
39:BN:78:TYR:HD1	39:BN:79:PRO:HD3	1.70	0.57
39:BN:131:GLN:NE2	39:BN:134:ARG:HA	2.19	0.57
42:BQ:34:LEU:HD11	42:BQ:129:THR:HB	1.86	0.57
1:CA:69:G:C2	1:CA:70:G:N7	2.73	0.57
1:CA:356:A:H2'	1:CA:357:G:H8	1.69	0.57
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.05	0.57
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.40	0.57
9:CI:10:ARG:HG2	9:CI:104:ARG:O	2.05	0.57
12:CL:82:VAL:O	12:CL:83:VAL:HB	2.04	0.57
22:D0:41:ARG:H	22:D0:41:ARG:CD	2.16	0.57
28:D6:19:ARG:NH1	31:DA:2400:G:H4'	2.20	0.57
31:DA:773:U:H5'	33:DD:47:GLY:HA2	1.86	0.57
31:DA:2300:G:H1	31:DA:2316:C:H42	1.52	0.57
37:DH:85:LYS:CE	37:DH:133:VAL:HB	2.35	0.57
41:DP:13:ASN:C	41:DP:13:ASN:HD22	2.07	0.57
43:DR:50:HIS:O	43:DR:54:LEU:HD22	2.04	0.57
44:DS:28:VAL:O	44:DS:89:ARG:CD	2.52	0.57
1:AA:193:C:H2'	1:AA:194:C:H6	1.70	0.56
1:AA:227:G:O2'	1:AA:228:A:H5'	2.05	0.56
1:AA:657:G:C2	1:AA:658:G:C8	2.93	0.56
1:AA:939:G:H5''	7:AG:102:ARG:CZ	2.34	0.56
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.05	0.56
1:AA:1256:A:O3'	1:AA:1257:U:H4'	2.05	0.56
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:7:VAL:O	2:AB:11:LEU:HG	2.05	0.56
2:AB:163:PHE:HD2	2:AB:185:ILE:HG13	1.69	0.56
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.05	0.56
25:B3:6:VAL:HG13	25:B3:54:VAL:HG11	1.86	0.56
31:BA:154(A):C:H5	31:BA:171:G:N1	2.03	0.56
31:BA:307:G:H22	31:BA:310:A:H5''	1.69	0.56
31:BA:559:G:H22	46:BU:49:HIS:CD2	2.22	0.56
31:BA:754:C:H2'	31:BA:755:C:H6	1.70	0.56
31:BA:1497:U:C5'	31:BA:1498:C:C5	2.88	0.56
31:BA:1590:U:C2'	31:BA:1591:G:H5''	2.34	0.56
35:BF:9:ILE:HG12	35:BF:14:PRO:C	2.25	0.56
37:BH:163:TYR:N	37:BH:163:TYR:CD1	2.73	0.56
39:BN:74:ARG:NH2	39:BN:101:HIS:HB3	2.19	0.56
42:BQ:75:THR:HG22	42:BQ:88:GLY:HA3	1.86	0.56
47:BV:72:VAL:CG1	47:BV:88:ARG:HH22	2.12	0.56
1:CA:175:C:H2'	1:CA:176:C:C6	2.39	0.56
1:CA:830:G:H2'	1:CA:831:U:H6	1.70	0.56
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.37	0.56
1:CA:1471:G:O2'	1:CA:1472:U:H5'	2.04	0.56
4:CD:112:VAL:HG13	4:CD:113:SER:H	1.69	0.56
24:D2:47:ASN:HA	24:D2:50:ILE:O	2.05	0.56
31:DA:272(D):G:H1	31:DA:364:C:H42	1.53	0.56
31:DA:1372:U:H2'	31:DA:1373:A:O4'	2.04	0.56
31:DA:1563:G:H2'	31:DA:1564:C:H6	1.68	0.56
31:DA:2233:U:H2'	31:DA:2234:G:C8	2.39	0.56
31:DA:2360:A:O2'	31:DA:2361:A:O5'	2.23	0.56
31:DA:2646:C:O5'	31:DA:2646:C:H6	1.87	0.56
32:DB:94:C:H2'	32:DB:95:C:H6	1.70	0.56
34:DE:128:SER:O	34:DE:130:GLY:N	2.38	0.56
36:DG:121:ASN:OD1	36:DG:123:ASN:HB2	2.05	0.56
44:DS:38:GLN:HG2	44:DS:47:THR:HG21	1.86	0.56
50:DY:28:LYS:CD	50:DY:37:VAL:HG12	2.35	0.56
50:DY:45:VAL:HG22	50:DY:62:GLU:HB2	1.87	0.56
1:AA:52:G:O2'	1:AA:53:A:H5'	2.05	0.56
1:AA:818:G:O2'	1:AA:819:A:H5'	2.05	0.56
1:AA:1392:G:N2	1:AA:1502:A:H8	2.02	0.56
4:AD:58:LEU:HD23	4:AD:206:PHE:CE1	2.40	0.56
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.05	0.56
24:B2:47:ASN:HA	24:B2:50:ILE:O	2.05	0.56
30:B8:14:VAL:HG13	30:B8:22:VAL:HG13	1.86	0.56
31:BA:68:G:H2'	31:BA:69:C:H6	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:298:G:H5'	31:BA:299:A:OP1	2.05	0.56
31:BA:301:G:C4	31:BA:302:C:C5	2.93	0.56
31:BA:479:A:N3	31:BA:481:G:H5''	2.20	0.56
31:BA:547:A:H8	31:BA:549:G:C6	2.23	0.56
31:BA:1952:A:C6	31:BA:1953:A:N1	2.72	0.56
31:BA:2252:G:H2'	31:BA:2253:G:C8	2.40	0.56
31:BA:2360:A:O2'	31:BA:2361:A:OP2	2.21	0.56
31:BA:2580:U:H4'	34:BE:131:ALA:H	1.70	0.56
31:BA:2703:C:H2'	31:BA:2704:C:H6	1.69	0.56
31:BA:2713:A:C3'	31:BA:2714:G:C5'	2.83	0.56
32:BB:30:C:OP2	44:BS:32:LEU:HD11	2.05	0.56
35:BF:178:PRO:HB2	35:BF:201:VAL:CG1	2.29	0.56
36:BG:114:ILE:HB	36:BG:117:PHE:HB2	1.87	0.56
39:BN:40:PRO:HA	46:BU:64:ARG:NH2	2.15	0.56
42:BQ:141:GLN:CA	51:BZ:53:ILE:HB	2.36	0.56
43:BR:4:LEU:O	43:BR:6:SER:N	2.33	0.56
45:BT:32:TYR:HB3	45:BT:81:PRO:CB	2.35	0.56
45:BT:57:PHE:O	45:BT:58:ASN:ND2	2.38	0.56
45:BT:93:ARG:O	45:BT:94:ALA:O	2.23	0.56
49:BX:33:LYS:C	49:BX:35:THR:HG22	2.24	0.56
51:BZ:30:ASN:ND2	51:BZ:32:HIS:H	2.02	0.56
1:CA:32:A:H2'	1:CA:33:A:C8	2.41	0.56
1:CA:159:G:H21	1:CA:161:A:H3'	1.70	0.56
1:CA:187:C:H2'	1:CA:188:C:H6	1.69	0.56
1:CA:227:G:O2'	1:CA:228:A:H5'	2.04	0.56
1:CA:920:U:C1'	1:CA:1080:A:C2	2.88	0.56
1:CA:1074:G:C4	1:CA:1102:A:C2	2.94	0.56
2:CB:44:LEU:O	2:CB:47:THR:HB	2.06	0.56
5:CE:78:HIS:CE1	5:CE:142:LEU:HA	2.34	0.56
12:CL:24:VAL:O	12:CL:24:VAL:HG12	2.05	0.56
23:D1:40:ARG:CD	23:D1:41:ARG:H	2.17	0.56
26:D4:5:ILE:CB	36:DG:67:LYS:HG2	2.35	0.56
28:D6:42:TRP:CE3	28:D6:42:TRP:HA	2.39	0.56
31:DA:454:A:H4'	31:DA:455:C:OP2	2.05	0.56
31:DA:952:G:C6	31:DA:953:A:N7	2.74	0.56
32:DB:82:G:H2'	32:DB:83:G:C5'	2.33	0.56
33:DD:35:LYS:CE	33:DD:65:ILE:HA	2.34	0.56
34:DE:15:PHE:HA	34:DE:19:ARG:O	2.05	0.56
36:DG:47:LYS:CD	36:DG:81:LYS:HD2	2.29	0.56
36:DG:106:LEU:HD12	36:DG:110:ALA:CB	2.35	0.56
41:DP:17:LYS:O	41:DP:17:LYS:HG2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:75:LEU:HD13	43:DR:75:LEU:O	2.04	0.56
49:DX:88:LYS:N	49:DX:88:LYS:HD2	2.20	0.56
50:DY:45:VAL:CG1	50:DY:62:GLU:HB2	2.30	0.56
1:AA:135:C:H2'	1:AA:136:C:H5'	1.86	0.56
1:AA:234:C:H2'	1:AA:235:C:H6	1.70	0.56
1:AA:564:C:C2	17:AQ:31:LEU:HD11	2.41	0.56
1:AA:713:G:H2'	1:AA:714:G:C8	2.40	0.56
1:AA:1072:G:C6	1:AA:1073:U:C4	2.94	0.56
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.40	0.56
3:AC:16:ARG:HB2	3:AC:16:ARG:NH1	2.20	0.56
4:AD:110:PHE:HD1	4:AD:110:PHE:H	1.52	0.56
10:AJ:39:PRO:HB3	10:AJ:70:ARG:NH1	2.21	0.56
16:AP:48:TRP:HD1	16:AP:48:TRP:H	1.47	0.56
20:AT:61:SER:O	20:AT:65:LYS:HG3	2.05	0.56
27:B5:16:ARG:NH2	31:BA:517:C:OP1	2.38	0.56
30:B8:32:LEU:H	30:B8:32:LEU:CD1	2.12	0.56
31:BA:171:G:H2'	31:BA:172:C:C1'	2.35	0.56
31:BA:257:A:C2'	31:BA:258:G:H5'	2.35	0.56
31:BA:675:A:C8	31:BA:804:A:C6	2.92	0.56
31:BA:916:G:H2'	31:BA:917:A:H5''	1.88	0.56
31:BA:1510:G:O2'	31:BA:1511:C:H5'	2.04	0.56
31:BA:1796:U:H2'	31:BA:1797:C:C6	2.40	0.56
31:BA:2418:A:H2'	31:BA:2419:U:H6	1.70	0.56
33:BD:28:GLU:HB2	33:BD:29:PRO:CD	2.34	0.56
33:BD:125:ILE:HG22	33:BD:125:ILE:O	2.04	0.56
34:BE:6:GLY:O	34:BE:195:LEU:HD12	2.05	0.56
34:BE:200:GLU:N	34:BE:200:GLU:OE2	2.38	0.56
41:BP:17:LYS:O	41:BP:17:LYS:HG2	2.05	0.56
43:BR:9:LYS:O	43:BR:10:LEU:HG	2.05	0.56
48:BW:20:VAL:O	48:BW:23:LEU:HB2	2.05	0.56
51:BZ:124:ILE:HG13	51:BZ:125:LEU:N	2.20	0.56
51:BZ:165:VAL:HG12	51:BZ:166:SER:N	2.18	0.56
1:CA:52:G:O2'	1:CA:53:A:H5'	2.06	0.56
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.05	0.56
1:CA:308:C:H2'	1:CA:309:G:H8	1.68	0.56
1:CA:621:A:C2'	1:CA:622:A:H5'	2.35	0.56
1:CA:857:C:O2	1:CA:858:G:H1'	2.04	0.56
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.05	0.56
1:CA:1064:G:H5'	1:CA:1066:C:H1'	1.87	0.56
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.86	0.56
2:CB:74:LYS:O	2:CB:78:GLN:HG3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.87	0.56
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.86	0.56
4:CD:28:SER:HB3	4:CD:30:LYS:HG2	1.86	0.56
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.86	0.56
4:CD:108:LEU:O	4:CD:110:PHE:CD1	2.57	0.56
8:CH:25:ASP:HB3	8:CH:58:TYR:HB3	1.86	0.56
10:CJ:49:VAL:HG13	14:CN:41:ARG:HB2	1.86	0.56
15:CO:37:ASN:N	15:CO:37:ASN:HD22	2.01	0.56
20:CT:61:SER:O	20:CT:65:LYS:HG3	2.05	0.56
31:DA:218:A:C2	31:DA:235:U:H4'	2.39	0.56
31:DA:536:A:H2'	31:DA:537:C:C6	2.40	0.56
31:DA:838:C:O2'	31:DA:839:U:H5'	2.04	0.56
31:DA:1022:G:C6	31:DA:1140:C:C4	2.93	0.56
31:DA:1141:U:OP2	39:DN:63:THR:OG1	2.18	0.56
31:DA:1590:U:C2'	31:DA:1591:G:H5''	2.36	0.56
31:DA:1885:A:H5'	31:DA:1885:A:H8	1.70	0.56
31:DA:2584:U:O2	31:DA:2584:U:O5'	2.23	0.56
32:DB:21:G:O2'	32:DB:22:U:H6	1.88	0.56
32:DB:29:A:C2	32:DB:30:C:C2	2.92	0.56
32:DB:86:G:H3'	32:DB:87:G:C8	2.41	0.56
34:DE:56:PRO:O	34:DE:58:ARG:N	2.38	0.56
35:DF:9:ILE:HG12	35:DF:14:PRO:C	2.25	0.56
35:DF:129:PHE:CD2	35:DF:163:VAL:HG21	2.40	0.56
36:DG:171:ALA:O	36:DG:175:LEU:HG	2.05	0.56
37:DH:127:GLU:HA	37:DH:127:GLU:OE1	2.05	0.56
38:DI:76:THR:HG22	38:DI:139:GLN:HB3	1.87	0.56
39:DN:42:TRP:HA	39:DN:48:MET:CE	2.31	0.56
44:DS:57:LYS:HG2	44:DS:58:LEU:H	1.70	0.56
44:DS:61:ASN:HD22	44:DS:62:LYS:N	2.03	0.56
46:DU:40:PHE:HB3	47:DV:78:LYS:HD2	1.86	0.56
46:DU:65:ILE:CG1	46:DU:96:ALA:HB3	2.35	0.56
46:DU:76:TYR:CZ	46:DU:80:ILE:HG13	2.41	0.56
46:DU:88:ILE:HD13	46:DU:88:ILE:O	2.05	0.56
46:DU:88:ILE:O	46:DU:88:ILE:CD1	2.53	0.56
49:DX:83:VAL:O	49:DX:84:ALA:CB	2.54	0.56
51:DZ:23:LYS:HE3	51:DZ:40:ASP:OD2	2.05	0.56
51:DZ:101:PRO:O	51:DZ:102:LEU:CD2	2.52	0.56
1:AA:195:A:C6	1:AA:196:A:N1	2.73	0.56
1:AA:425:G:N2	1:AA:426:G:H1'	2.20	0.56
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.35	0.56
3:AC:89:GLU:O	3:AC:93:LYS:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:108:LEU:HD13	4:AD:174:LEU:HD13	1.86	0.56
6:AF:12:PRO:HG2	6:AF:55:ASP:OD1	2.06	0.56
26:B4:5:ILE:CB	36:BG:67:LYS:HG2	2.34	0.56
33:BD:25:THR:CG2	33:BD:82:ILE:H	2.19	0.56
35:BF:2:LYS:HG3	35:BF:25:PRO:HB2	1.85	0.56
39:BN:18:ALA:CB	39:BN:26:LEU:HD22	2.24	0.56
39:BN:45:ASN:HD22	39:BN:45:ASN:N	1.91	0.56
41:BP:24:GLY:HA3	41:BP:33:ARG:NH2	2.12	0.56
41:BP:121:LYS:HD2	25:D3:2:PRO:HD3	1.87	0.56
46:BU:69:CYS:HB3	46:BU:106:PHE:HZ	1.70	0.56
47:BV:66:ARG:HD3	47:BV:67:GLY:N	2.21	0.56
47:BV:83:ARG:CG	47:BV:83:ARG:NH1	2.63	0.56
1:CA:328:C:O2	1:CA:328:C:C2'	2.52	0.56
2:CB:7:VAL:O	2:CB:11:LEU:HG	2.04	0.56
4:CD:106:TYR:HE1	4:CD:113:SER:HA	1.70	0.56
17:CQ:10:VAL:HG13	17:CQ:19:VAL:HB	1.87	0.56
24:D2:14:ARG:CZ	24:D2:57:ILE:CG2	2.84	0.56
28:D6:32:ASN:OD1	28:D6:33:LYS:N	2.39	0.56
31:DA:231:C:C2'	31:DA:232:G:H5'	2.35	0.56
31:DA:494:G:H8	31:DA:494:G:H5''	1.70	0.56
31:DA:603:A:O2'	31:DA:604:G:OP2	2.16	0.56
31:DA:635:C:O2'	31:DA:639:U:OP1	2.24	0.56
31:DA:1512:U:C2'	31:DA:1513:C:H5'	2.35	0.56
31:DA:1568:G:H5''	33:DD:61:LEU:HD22	1.87	0.56
31:DA:1887:C:H2'	31:DA:1888:G:H5'	1.85	0.56
42:DQ:43:THR:HG22	42:DQ:94:VAL:HG12	1.88	0.56
42:DQ:137:TYR:HB2	51:DZ:76:LEU:HD11	1.87	0.56
44:DS:97:ARG:O	44:DS:98:VAL:HG23	2.04	0.56
45:DT:29:ARG:HB2	45:DT:86:ILE:H	1.70	0.56
45:DT:32:TYR:CD2	45:DT:81:PRO:HB2	2.40	0.56
51:DZ:92:SER:O	51:DZ:130:PRO:HG2	2.06	0.56
1:AA:683:G:C2	1:AA:708:C:N3	2.74	0.56
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.37	0.56
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.20	0.56
18:AR:58:LEU:HB3	18:AR:62:GLU:HB2	1.88	0.56
31:BA:102:G:O2'	31:BA:103:A:P	2.63	0.56
31:BA:1385:G:H4'	31:BA:1386:C:OP1	2.06	0.56
31:BA:2300:G:H1	31:BA:2316:C:H42	1.52	0.56
33:BD:210:GLY:O	33:BD:212:SER:N	2.39	0.56
36:BG:171:ALA:O	36:BG:175:LEU:HG	2.05	0.56
38:BI:6:LEU:O	38:BI:15:VAL:HB	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:76:LYS:H	42:BQ:88:GLY:HA2	1.70	0.56
42:BQ:137:TYR:HB2	51:BZ:76:LEU:HD11	1.86	0.56
47:BV:19:LYS:CE	47:BV:20:LEU:N	2.68	0.56
49:BX:66:LEU:O	49:BX:66:LEU:HD23	2.06	0.56
50:BY:8:LYS:NZ	50:BY:73:ARG:HA	2.15	0.56
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.41	0.56
6:CF:69:GLU:CD	6:CF:69:GLU:H	2.09	0.56
7:CG:40:ALA:O	7:CG:44:TYR:CD1	2.59	0.56
12:CL:87:GLY:HA2	12:CL:98:TYR:HA	1.86	0.56
16:CP:28:ARG:NH1	16:CP:29:ASP:OD2	2.38	0.56
24:D2:41:ILE:O	24:D2:43:GLN:N	2.39	0.56
37:DH:121:ILE:HD11	37:DH:140:LYS:HB3	1.88	0.56
42:DQ:141:GLN:O	51:DZ:70:LEU:HD22	2.05	0.56
42:DQ:141:GLN:HE22	51:DZ:89:PHE:HB3	1.70	0.56
43:DR:116:LEU:O	43:DR:117:VAL:HB	2.05	0.56
45:DT:50:ILE:HD13	45:DT:64:ARG:HB3	1.87	0.56
47:DV:6:LYS:O	47:DV:6:LYS:HG3	2.04	0.56
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.05	0.56
1:AA:675:A:H61	1:AA:715:A:H61	1.53	0.56
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.88	0.56
25:B3:49:LYS:HE2	31:BA:850:C:O3'	2.06	0.56
31:BA:218:A:C2	31:BA:235:U:H4'	2.40	0.56
31:BA:363(E):U:H2'	31:BA:363(F):A:O4'	2.05	0.56
31:BA:1179:C:C3'	31:BA:1180:C:H5''	2.36	0.56
31:BA:1406:U:H2'	31:BA:1407:C:C6	2.41	0.56
31:BA:2756:U:H4'	31:BA:2757:A:OP1	2.05	0.56
36:BG:58:GLN:HA	36:BG:61:ALA:HB3	1.88	0.56
40:BO:50:GLY:C	40:BO:52:VAL:H	2.08	0.56
40:BO:107:ARG:NH2	45:BT:35:LYS:HD2	2.20	0.56
49:BX:41:ASN:O	49:BX:45:THR:HG23	2.05	0.56
51:BZ:152:ALA:HB1	51:BZ:167:PRO:HB2	1.86	0.56
1:CA:1054:C:O2'	1:CA:1055:A:H5''	2.06	0.56
2:CB:67:THR:HG22	2:CB:90:MET:HE1	1.87	0.56
10:CJ:7:LYS:HD3	10:CJ:71:LEU:CD1	2.35	0.56
24:D2:26:ARG:NH1	24:D2:29:LYS:HE2	2.20	0.56
27:D5:11:THR:HG23	31:DA:1263:U:O2'	2.05	0.56
27:D5:46:CYS:O	27:D5:48:GLU:N	2.38	0.56
31:DA:92:A:O2'	31:DA:93:G:H5'	2.05	0.56
31:DA:171:G:H2'	31:DA:172:C:C1'	2.35	0.56
31:DA:774:A:C2	31:DA:787:U:O2'	2.53	0.56
31:DA:861:A:C2	31:DA:917:A:C4	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1312:U:H4'	31:DA:1313:U:O5'	2.06	0.56
31:DA:1783:A:C2	31:DA:2587:A:C5	2.93	0.56
31:DA:2619:C:H2'	31:DA:2620:C:H6	1.70	0.56
31:DA:2716:U:O2'	31:DA:2717:G:H5'	2.05	0.56
34:DE:132:HIS:HA	34:DE:135:HIS:CE1	2.41	0.56
42:DQ:20:ALA:C	42:DQ:22:LYS:H	2.08	0.56
46:DU:60:LEU:O	46:DU:64:ARG:HG2	2.05	0.56
51:DZ:6:LYS:HB3	51:DZ:8:TYR:CE1	2.41	0.56
51:DZ:165:VAL:HG12	51:DZ:166:SER:N	2.21	0.56
1:AA:110:C:H2'	1:AA:111:G:O4'	2.05	0.56
1:AA:685:G:N2	1:AA:686:U:C4	2.74	0.56
1:AA:1074:G:C4	1:AA:1102:A:C2	2.94	0.56
1:AA:1154:G:H2'	1:AA:1155:G:C8	2.40	0.56
2:AB:204:ASN:HD21	2:AB:207:ALA:N	2.04	0.56
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.06	0.56
17:AQ:23:VAL:O	17:AQ:39:SER:HB2	2.06	0.56
20:AT:10:LEU:O	20:AT:12:ALA:N	2.39	0.56
31:BA:344:G:O2'	31:BA:345:A:H5'	2.04	0.56
31:BA:1444:G:N2	31:BA:1548:C:C2	2.74	0.56
31:BA:1496:A:C8	31:BA:1577:C:O2'	2.59	0.56
31:BA:1742:G:H3'	31:BA:1742:G:H8	1.71	0.56
31:BA:1750:G:O2'	31:BA:2860:A:N1	2.37	0.56
31:BA:1884:A:O2'	31:BA:1885:A:H5''	2.05	0.56
32:BB:75:G:H8	32:BB:75:G:C5'	2.19	0.56
37:BH:44:VAL:O	37:BH:46:GLU:OE2	2.24	0.56
39:BN:28:THR:HA	39:BN:106:MET:HE2	1.86	0.56
39:BN:131:GLN:HG2	39:BN:133:GLN:O	2.05	0.56
44:BS:35:ILE:H	44:BS:53:SER:HB3	1.71	0.56
45:BT:3:ARG:HB2	45:BT:6:LEU:CB	2.33	0.56
45:BT:33:LYS:N	45:BT:33:LYS:HZ3	2.02	0.56
48:BW:10:VAL:O	48:BW:11:ARG:HB2	2.04	0.56
1:CA:145:G:C2	1:CA:146:G:H1'	2.40	0.56
1:CA:1191:A:P	3:CC:3:ASN:HD21	2.29	0.56
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.06	0.56
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.35	0.56
6:CF:6:VAL:HG13	6:CF:90:VAL:HG22	1.88	0.56
6:CF:8:ILE:HG22	6:CF:9:VAL:N	2.20	0.56
8:CH:10:LEU:HD13	8:CH:83:ILE:HD11	1.87	0.56
17:CQ:68:ARG:HG3	17:CQ:68:ARG:O	2.04	0.56
18:CR:58:LEU:HB3	18:CR:62:GLU:HB2	1.87	0.56
31:DA:953:A:C2'	31:DA:954:G:H5'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1164:G:H2'	31:DA:1165:U:C6	2.41	0.56
31:DA:1527:G:H5''	31:DA:1528:A:OP1	2.05	0.56
31:DA:1528(A):A:C5	31:DA:1529:G:C8	2.93	0.56
31:DA:1884:A:O2'	31:DA:1885:A:H5''	2.05	0.56
31:DA:2461:C:H2'	31:DA:2462:U:C6	2.40	0.56
31:DA:2870:C:C2'	31:DA:2871:C:H5'	2.35	0.56
32:DB:45:A:C2	32:DB:46:A:C1'	2.88	0.56
43:DR:52:ILE:O	43:DR:55:ALA:N	2.39	0.56
1:AA:322:C:C5	1:AA:328:C:H5	2.20	0.56
1:AA:624:C:H2'	1:AA:625:G:H8	1.70	0.56
1:AA:949:A:N6	1:AA:1232:U:H3	2.02	0.56
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.41	0.56
1:AA:1399:C:C2	1:AA:1502:A:N6	2.74	0.56
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	1.87	0.56
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.71	0.56
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.09	0.56
28:B6:42:TRP:HA	28:B6:42:TRP:CE3	2.40	0.56
30:B8:35:GLN:HE21	30:B8:36:LYS:HG3	1.70	0.56
31:BA:150:C:H2'	31:BA:151:C:C6	2.41	0.56
31:BA:271(A):A:H2	31:BA:272(D):G:N3	2.03	0.56
31:BA:995:C:N3	46:BU:57:PHE:CE2	2.74	0.56
31:BA:1488:G:C2	31:BA:1489:U:O2	2.59	0.56
31:BA:2469:A:H2	31:BA:2481:G:N2	1.96	0.56
33:BD:133:LEU:HB3	33:BD:173:VAL:HG11	1.86	0.56
34:BE:39:PRO:HD3	34:BE:45:THR:OG1	2.06	0.56
34:BE:75:VAL:O	34:BE:77:ILE:N	2.39	0.56
35:BF:80:ALA:O	35:BF:83:PHE:HB2	2.06	0.56
37:BH:89:ILE:O	37:BH:90:LYS:CB	2.53	0.56
38:BI:5:LEU:N	38:BI:5:LEU:HD23	2.19	0.56
40:BO:73:ASP:OD2	45:BT:32:TYR:CE1	2.59	0.56
44:BS:87:PHE:HE2	44:BS:97:ARG:NH2	2.03	0.56
45:BT:28:VAL:HG22	45:BT:46:GLU:HG3	1.87	0.56
47:BV:61:VAL:O	47:BV:62:LEU:HD23	2.06	0.56
1:CA:551:U:O2'	12:CL:86:ARG:HD2	2.06	0.56
1:CA:626:U:C2	1:CA:627:G:C8	2.94	0.56
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.40	0.56
2:CB:87:ARG:O	2:CB:87:ARG:HD2	2.06	0.56
28:D6:19:ARG:HH11	31:DA:2400:G:H4'	1.71	0.56
31:DA:287:C:C4	31:DA:288:C:C5	2.94	0.56
31:DA:661:C:H2'	31:DA:662:G:H8	1.71	0.56
31:DA:708:C:H2'	31:DA:708:C:O2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1317:A:H2'	31:DA:1318:C:H6	1.70	0.56
31:DA:1510:G:O2'	31:DA:1511:C:H5'	2.05	0.56
31:DA:2206:G:H3'	31:DA:2206:G:N3	2.21	0.56
31:DA:2315:G:H2'	31:DA:2316:C:C6	2.41	0.56
37:DH:85:LYS:NZ	37:DH:133:VAL:HB	2.21	0.56
45:DT:33:LYS:NZ	45:DT:33:LYS:HA	2.21	0.56
46:DU:88:ILE:O	46:DU:90:VAL:N	2.39	0.56
47:DV:2:PHE:CE1	47:DV:13:ARG:NE	2.74	0.56
51:DZ:145:GLU:HG3	51:DZ:146:ILE:H	1.71	0.56
1:AA:262:A:C6	1:AA:263:A:C6	2.94	0.56
1:AA:472:A:C4'	16:AP:82:GLN:HE22	2.19	0.56
1:AA:660:G:H2'	1:AA:661:G:O4'	2.06	0.56
1:AA:763:G:H2'	1:AA:764:C:H6	1.71	0.56
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.06	0.56
3:AC:11:ARG:O	3:AC:14:ILE:O	2.24	0.56
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.06	0.56
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.59	0.56
9:AI:105:ASP:OD1	9:AI:107:ARG:HD3	2.06	0.56
24:B2:30:ARG:HH11	24:B2:30:ARG:CG	2.17	0.56
31:BA:272(J):C:C2'	31:BA:274:G:OP1	2.53	0.56
31:BA:1945:G:H2'	31:BA:1946:U:C6	2.40	0.56
31:BA:2584:U:O2	31:BA:2584:U:O5'	2.24	0.56
33:BD:249:PRO:HD2	33:BD:250:TRP:CE3	2.40	0.56
35:BF:21:ALA:C	35:BF:23:ASP:H	2.09	0.56
37:BH:92:ILE:O	37:BH:94:TYR:N	2.39	0.56
41:BP:36:LYS:O	41:BP:38:GLN:HG2	2.05	0.56
45:BT:26:ASP:HB3	45:BT:89:VAL:O	2.06	0.56
46:BU:101:ARG:O	46:BU:102:GLU:C	2.44	0.56
48:BW:56:ALA:O	48:BW:57:ASN:C	2.44	0.56
49:BX:23:GLU:HG3	49:BX:24:GLY:N	2.19	0.56
1:CA:110:C:H2'	1:CA:111:G:O4'	2.05	0.56
1:CA:623:C:C4	1:CA:624:C:C4	2.94	0.56
1:CA:685:G:C2	1:CA:686:U:C4	2.94	0.56
1:CA:872:A:C4	1:CA:874:G:N7	2.74	0.56
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.15	0.56
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H4'	2.06	0.56
2:CB:67:THR:HG21	2:CB:155:LEU:CD2	2.36	0.56
8:CH:21:LYS:O	8:CH:63:LEU:HD23	2.06	0.56
27:D5:51:TYR:CD2	27:D5:52:TYR:CZ	2.94	0.56
31:DA:17:G:H2'	31:DA:18:C:C6	2.41	0.56
31:DA:272(J):C:C2'	31:DA:274:G:OP1	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1459:G:H2'	31:DA:1459:G:N3	2.20	0.56
31:DA:2360:A:O2'	31:DA:2361:A:OP2	2.24	0.56
31:DA:2859:G:C8	31:DA:2859:G:C3'	2.89	0.56
41:DP:33:ARG:O	41:DP:35:HIS:N	2.39	0.56
44:DS:26:LEU:HA	44:DS:39:ILE:HD13	1.88	0.56
44:DS:89:ARG:O	44:DS:90:GLY:O	2.23	0.56
46:DU:47:TYR:HA	46:DU:50:ARG:NH2	2.20	0.56
1:AA:131:C:H2'	1:AA:132:C:C6	2.41	0.56
1:AA:559:A:C4'	1:AA:560:U:H3'	2.36	0.56
1:AA:1441:G:H5''	1:AA:1442:G:H5'	1.88	0.56
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.87	0.56
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.39	0.56
22:B0:18:ALA:HB1	31:BA:2271:G:OP1	2.06	0.56
30:B8:6:THR:CG2	31:BA:243:U:OP1	2.54	0.56
31:BA:234:C:H2'	31:BA:235:U:H6	1.71	0.56
31:BA:259:G:N2	31:BA:621:A:H8	2.02	0.56
31:BA:829:A:N7	31:BA:2248:C:H5'	2.20	0.56
31:BA:2272:U:H5''	31:BA:2273:A:OP1	2.07	0.56
31:BA:2859:G:C8	31:BA:2859:G:C3'	2.89	0.56
36:BG:71:THR:HB	36:BG:89:GLY:CA	2.35	0.56
42:BQ:37:LEU:HB2	42:BQ:128:LYS:O	2.05	0.56
44:BS:38:GLN:HG2	44:BS:47:THR:HG21	1.88	0.56
45:BT:33:LYS:NZ	45:BT:33:LYS:H	2.03	0.56
50:BY:45:VAL:CG2	50:BY:62:GLU:N	2.69	0.56
1:CA:189(B):C:H42	1:CA:189(I):G:H1	1.53	0.56
1:CA:1158:C:N3	1:CA:1181:G:N2	2.52	0.56
1:CA:1201:A:C1'	1:CA:1202:G:OP2	2.52	0.56
1:CA:1470:G:O2'	1:CA:1471:G:H5'	2.06	0.56
2:CB:28:PHE:CD1	2:CB:190:THR:HA	2.41	0.56
2:CB:204:ASN:HD21	2:CB:207:ALA:N	2.04	0.56
3:CC:20:SER:CB	3:CC:40:ARG:HH22	2.17	0.56
12:CL:46:LYS:HD3	12:CL:94:PRO:CG	2.36	0.56
22:D0:53:MET:HB2	22:D0:59:LEU:CD2	2.36	0.56
24:D2:14:ARG:CZ	24:D2:57:ILE:HB	2.37	0.56
27:D5:40:LYS:NZ	27:D5:46:CYS:O	2.36	0.56
31:DA:836:G:H2'	31:DA:837:C:C6	2.41	0.56
31:DA:2511:U:O4	31:DA:2575:C:N3	2.39	0.56
31:DA:2660:A:H3'	31:DA:2661:G:O4'	2.06	0.56
32:DB:81:G:O6	32:DB:96:U:O2	2.23	0.56
33:DD:172:TYR:CD1	33:DD:186:HIS:CA	2.88	0.56
33:DD:246:PRO:HB2	33:DD:255:LYS:HG3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:247:ALA:HA	33:DD:254:THR:HG22	1.86	0.56
39:DN:111:PRO:HA	39:DN:114:ARG:NH1	2.21	0.56
42:DQ:29:PHE:N	42:DQ:29:PHE:CD1	2.74	0.56
47:DV:54:GLY:O	47:DV:56:SER:N	2.39	0.56
51:DZ:125:LEU:HD23	51:DZ:126:VAL:N	2.20	0.56
1:AA:1483:A:H1'	31:BA:1948:G:O4'	2.06	0.55
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.86	0.55
14:AN:51:GLY:C	14:AN:53:LEU:H	2.10	0.55
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.88	0.55
27:B5:47:PRO:O	27:B5:48:GLU:HG3	2.06	0.55
28:B6:25:LYS:O	31:BA:2286:A:H2	1.89	0.55
31:BA:271(M):G:H4'	38:BI:53:ALA:HB1	1.88	0.55
31:BA:543:C:N3	31:BA:551:G:C2	2.73	0.55
31:BA:956:G:OP2	42:BQ:14:ARG:NH2	2.38	0.55
31:BA:1109:C:C5	31:BA:1110:G:C4	2.95	0.55
31:BA:2376:A:OP1	31:BA:2376:A:H8	1.89	0.55
31:BA:2404:C:C2'	31:BA:2405:G:H5'	2.35	0.55
31:BA:2655:G:N3	31:BA:2664:G:O6	2.39	0.55
31:BA:2702:U:OP1	31:BA:2702:U:O2	2.24	0.55
34:BE:111:ARG:HB2	34:BE:160:TYR:O	2.06	0.55
37:BH:98:LEU:HD13	37:BH:125:VAL:HG23	1.88	0.55
41:BP:27:HIS:C	41:BP:27:HIS:CD2	2.79	0.55
42:BQ:141:GLN:HE22	51:BZ:89:PHE:HB3	1.71	0.55
43:BR:13:HIS:HE1	43:BR:15:SER:OG	1.89	0.55
45:BT:78:LEU:O	45:BT:79:HIS:ND1	2.38	0.55
1:CA:109:A:C6	1:CA:326:G:C6	2.94	0.55
1:CA:339:C:OP2	40:DO:97:ARG:NH1	2.38	0.55
1:CA:559:A:C4'	1:CA:560:U:H3'	2.36	0.55
1:CA:929:G:C6	1:CA:930:C:N4	2.74	0.55
1:CA:951:G:H1'	1:CA:970:C:O2'	2.05	0.55
2:CB:11:LEU:HB3	2:CB:213:LEU:HD11	1.88	0.55
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.87	0.55
7:CG:85:TYR:CD1	7:CG:154:TYR:HE1	2.24	0.55
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.21	0.55
14:CN:51:GLY:C	14:CN:53:LEU:H	2.08	0.55
19:CS:69:HIS:HB2	19:CS:74:PHE:HE2	1.71	0.55
23:D1:86:SER:N	23:D1:87:PRO:CD	2.69	0.55
23:D1:87:PRO:HD2	23:D1:88:LYS:H	1.70	0.55
24:D2:25:VAL:C	24:D2:27:GLU:H	2.10	0.55
31:DA:271(P):C:H2'	31:DA:271(Q):G:H5'	1.88	0.55
31:DA:288:C:N4	31:DA:353:G:H1	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2580:U:H5'	34:DE:131:ALA:HB2	1.87	0.55
31:DA:2652:C:O2'	31:DA:2653:U:H5'	2.06	0.55
35:DF:123:LEU:HD12	35:DF:124:LEU:H	1.71	0.55
36:DG:60:LEU:O	36:DG:60:LEU:HD22	2.06	0.55
36:DG:114:ILE:HB	36:DG:117:PHE:HB2	1.88	0.55
37:DH:98:LEU:HD13	37:DH:125:VAL:HG23	1.87	0.55
45:DT:16:ARG:H	45:DT:79:HIS:CD2	2.22	0.55
45:DT:48:ILE:HG22	45:DT:50:ILE:HD12	1.88	0.55
47:DV:47:VAL:HG22	47:DV:48:GLY:N	2.21	0.55
47:DV:61:VAL:C	47:DV:62:LEU:HD23	2.25	0.55
1:AA:386:C:H2'	1:AA:387:U:C5'	2.33	0.55
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.07	0.55
31:BA:203:C:H3'	31:BA:204:A:H5''	1.89	0.55
31:BA:446:G:OP1	46:BU:3:ARG:NH1	2.40	0.55
31:BA:1187:G:H5''	47:BV:82:ARG:NH1	2.21	0.55
31:BA:2684:U:H1'	40:BO:70:LYS:HD2	1.88	0.55
32:BB:81:G:O6	32:BB:96:U:O2	2.24	0.55
40:BO:10:VAL:HG22	40:BO:17:ARG:O	2.06	0.55
1:CA:1330:U:H4'	13:CM:23:TYR:CE2	2.41	0.55
7:CG:46:ALA:O	7:CG:50:ILE:HG12	2.06	0.55
7:CG:69:VAL:O	7:CG:71:PRO:HD3	2.06	0.55
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	2.06	0.55
12:CL:92:ASP:C	12:CL:93:LEU:HD23	2.26	0.55
15:CO:82:ILE:HD11	15:CO:87:ILE:O	2.07	0.55
19:CS:42:PRO:O	19:CS:43:GLU:HB3	2.06	0.55
20:CT:56:MET:CG	20:CT:88:VAL:HG21	2.36	0.55
22:D0:48:GLY:HA3	22:D0:80:HIS:CE1	2.40	0.55
24:D2:50:ILE:O	24:D2:51:ARG:HB3	2.06	0.55
27:D5:51:TYR:CD2	27:D5:52:TYR:CE2	2.94	0.55
28:D6:36:LEU:O	28:D6:36:LEU:HG	2.06	0.55
31:DA:307:G:N2	31:DA:310:A:H5''	2.21	0.55
31:DA:910:A:C4	42:DQ:13:GLN:OE1	2.60	0.55
31:DA:1657:C:H2'	31:DA:1658:C:C6	2.42	0.55
31:DA:2810:A:C2'	34:DE:61:ARG:NH2	2.69	0.55
33:DD:35:LYS:CE	33:DD:64:ILE:O	2.54	0.55
33:DD:210:GLY:O	33:DD:212:SER:N	2.39	0.55
34:DE:39:PRO:HD3	34:DE:45:THR:OG1	2.05	0.55
35:DF:24:LEU:O	35:DF:26:ALA:N	2.39	0.55
36:DG:39:ILE:HA	36:DG:157:ILE:HA	1.88	0.55
39:DN:56:ASN:C	39:DN:57:ALA:O	2.43	0.55
41:DP:5:ASP:O	41:DP:6:LEU:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:19:LYS:HG2	47:DV:96:ILE:CB	2.35	0.55
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.89	0.55
1:AA:1074:G:N3	1:AA:1102:A:C2	2.74	0.55
1:AA:1479:C:O2'	1:AA:1480:G:H5'	2.05	0.55
2:AB:61:LEU:HA	2:AB:64:ARG:HG2	1.87	0.55
2:AB:61:LEU:HD23	2:AB:68:ILE:HD11	1.88	0.55
4:AD:49:ARG:HA	4:AD:49:ARG:NE	2.18	0.55
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.07	0.55
7:AG:97:GLN:HE21	7:AG:101:LEU:HD11	1.71	0.55
10:AJ:7:LYS:HD3	10:AJ:71:LEU:CD1	2.36	0.55
28:B6:40:CYS:SG	28:B6:45:LYS:NZ	2.60	0.55
31:BA:128:C:C6	31:BA:128:C:C3'	2.89	0.55
31:BA:298:G:C5'	31:BA:299:A:OP1	2.55	0.55
31:BA:1021:A:C8	31:BA:1021:A:C3'	2.89	0.55
31:BA:1499:C:C2'	31:BA:1500:G:H5'	2.36	0.55
31:BA:1741:A:N7	31:BA:1742:G:C2	2.74	0.55
31:BA:1839:G:H5'	31:BA:1839:G:H8	1.71	0.55
36:BG:5:VAL:HB	36:BG:104:GLU:OE2	2.07	0.55
37:BH:149:ARG:HD3	37:BH:164:TYR:CE1	2.41	0.55
41:BP:120:ALA:O	25:D3:1:MET:CG	2.53	0.55
46:BU:65:ILE:HG12	46:BU:96:ALA:CB	2.36	0.55
48:BW:54:ALA:HB1	48:BW:107:LEU:HD22	1.88	0.55
49:BX:40:LYS:O	49:BX:42:ALA:N	2.40	0.55
50:BY:37:VAL:HG11	50:BY:72:VAL:HG21	1.89	0.55
50:BY:71:LYS:HB2	50:BY:71:LYS:HZ2	1.66	0.55
51:BZ:71:VAL:HG22	51:BZ:88:PHE:CE2	2.42	0.55
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD2	2.07	0.55
1:CA:243:A:H4'	1:CA:244:U:O5'	2.05	0.55
1:CA:791:G:C6	1:CA:792:A:N7	2.74	0.55
1:CA:971:G:H3'	1:CA:971:G:OP1	2.07	0.55
1:CA:1216:G:OP1	14:CN:2:ALA:HA	2.06	0.55
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.06	0.55
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.07	0.55
7:CG:32:ARG:O	7:CG:33:ASP:CB	2.54	0.55
13:CM:91:ARG:HB2	13:CM:98:VAL:HG21	1.88	0.55
31:DA:27:G:C2	31:DA:512:G:N3	2.75	0.55
31:DA:340:A:C2'	31:DA:341:G:H5'	2.36	0.55
31:DA:580:C:H2'	31:DA:581:C:C6	2.42	0.55
31:DA:634:C:H2'	31:DA:635:C:C6	2.41	0.55
31:DA:883:G:H1	31:DA:893:C:H41	1.54	0.55
31:DA:1588:C:H2'	31:DA:1588:C:O2	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2335:A:C8	31:DA:2337:G:N7	2.74	0.55
31:DA:2498:C:O2'	31:DA:2499:C:H5'	2.05	0.55
33:DD:17:THR:CG2	33:DD:204:ILE:HA	2.36	0.55
33:DD:28:GLU:HB2	33:DD:29:PRO:CD	2.35	0.55
33:DD:35:LYS:HE3	33:DD:65:ILE:HA	1.88	0.55
37:DH:138:LYS:H	37:DH:141:VAL:H	1.52	0.55
37:DH:154:PRO:O	37:DH:156:ALA:N	2.37	0.55
39:DN:67:LEU:C	39:DN:69:GLN:N	2.59	0.55
45:DT:3:ARG:HB2	45:DT:6:LEU:CB	2.32	0.55
46:DU:87:GLY:CA	47:DV:52:VAL:HG13	2.28	0.55
47:DV:53:GLU:O	47:DV:55:ALA:N	2.40	0.55
49:DX:30:VAL:HG23	49:DX:76:ARG:HA	1.87	0.55
1:AA:1068:G:N3	1:AA:1191:A:C2	2.74	0.55
1:AA:1201:A:C1'	1:AA:1202:G:OP2	2.53	0.55
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.36	0.55
1:AA:1366:C:OP1	9:AI:117:HIS:CE1	2.59	0.55
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.89	0.55
27:B5:33:CYS:SG	27:B5:40:LYS:HE3	2.46	0.55
27:B5:55:ARG:C	27:B5:56:LYS:HG3	2.26	0.55
28:B6:15:GLU:OE2	28:B6:43:CYS:HB3	2.07	0.55
28:B6:29:ASN:O	28:B6:30:THR:C	2.44	0.55
30:B8:35:GLN:CB	31:BA:2420:C:OP1	2.54	0.55
31:BA:71:A:C2	49:BX:31:HIS:CE1	2.75	0.55
31:BA:1332:G:H22	31:BA:1609:A:H2'	1.71	0.55
31:BA:1495:A:H5''	31:BA:1496:A:OP2	2.05	0.55
31:BA:1833:U:O2'	31:BA:1969:A:N1	2.36	0.55
31:BA:2350:C:H2'	31:BA:2351:G:O4'	2.06	0.55
31:BA:2444:G:OP2	35:BF:68:LYS:HE2	2.06	0.55
36:BG:120:LEU:HB2	36:BG:179:PRO:O	2.05	0.55
38:BI:131:LYS:CG	38:BI:132:PRO:HA	2.37	0.55
41:BP:5:ASP:O	41:BP:6:LEU:HB3	2.06	0.55
43:BR:53:HIS:CD2	43:BR:94:TYR:OH	2.58	0.55
1:CA:97:G:O2'	1:CA:98:G:O5'	2.24	0.55
1:CA:386:C:H2'	1:CA:387:U:C5'	2.33	0.55
1:CA:437:U:OP1	4:CD:155:LEU:HD22	2.07	0.55
1:CA:503:C:H2'	1:CA:504:C:C6	2.40	0.55
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.41	0.55
3:CC:52:LEU:H	3:CC:52:LEU:CD2	2.18	0.55
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.42	0.55
15:CO:23:GLY:O	15:CO:27:VAL:HB	2.06	0.55
23:D1:20:ARG:HD3	23:D1:41:ARG:HD3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:26:ARG:HB3	23:D1:35:THR:H	1.70	0.55
27:D5:52:TYR:CD1	27:D5:52:TYR:O	2.60	0.55
31:DA:142:A:H1'	31:DA:1408:C:O4'	2.06	0.55
31:DA:207:A:H2'	31:DA:208:C:O4'	2.07	0.55
31:DA:271(J):C:H5'	31:DA:271(K):U:OP2	2.06	0.55
31:DA:271(X):G:C2'	31:DA:271(Y):U:H5''	2.37	0.55
31:DA:870:A:C5'	42:DQ:7:MET:HB2	2.22	0.55
33:DD:255:LYS:N	33:DD:255:LYS:NZ	2.52	0.55
34:DE:3:GLY:CA	34:DE:81:ILE:HG21	2.37	0.55
38:DI:56:LYS:HZ3	38:DI:56:LYS:C	2.09	0.55
39:DN:43:THR:HG22	39:DN:45:ASN:ND2	2.21	0.55
45:DT:53:ARG:HG3	45:DT:53:ARG:O	2.07	0.55
45:DT:93:ARG:O	45:DT:94:ALA:O	2.25	0.55
48:DW:4:LYS:CE	48:DW:6:ILE:HD11	2.37	0.55
1:AA:79:G:C4'	1:AA:80:G:OP1	2.53	0.55
1:AA:145:G:C2	1:AA:146:G:H1'	2.42	0.55
1:AA:192:U:O2'	1:AA:193:C:H5'	2.06	0.55
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.88	0.55
2:AB:67:THR:HG21	2:AB:155:LEU:CD2	2.36	0.55
4:AD:13:ARG:O	4:AD:15:GLU:N	2.39	0.55
4:AD:19:LEU:HD13	4:AD:21:LEU:HD21	1.88	0.55
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.36	0.55
5:AE:18:ARG:NH2	5:AE:25:ARG:HG2	2.21	0.55
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.25	0.55
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.06	0.55
22:B0:68:GLU:CG	22:B0:80:HIS:HB2	2.36	0.55
30:B8:34:TRP:HZ3	30:B8:41:ILE:CG2	2.20	0.55
30:B8:35:GLN:NE2	30:B8:36:LYS:NZ	2.55	0.55
31:BA:173:G:C6	31:BA:174:C:C4	2.95	0.55
31:BA:814:C:H5	41:BP:27:HIS:CD2	2.24	0.55
31:BA:884:C:O2'	31:BA:892:G:C8	2.51	0.55
31:BA:930:U:O4'	31:BA:930:U:O2	2.24	0.55
31:BA:1947:C:C2'	31:BA:1948:G:H5'	2.36	0.55
31:BA:2022:U:O2'	31:BA:2617:C:H5'	2.06	0.55
31:BA:2206:G:H3'	31:BA:2206:G:N3	2.22	0.55
31:BA:2478:A:C2'	31:BA:2479:G:H5'	2.37	0.55
32:BB:21:G:O2'	32:BB:22:U:H6	1.90	0.55
33:BD:146:GLU:HB2	33:BD:189:CYS:HB3	1.88	0.55
34:BE:134:ILE:HD13	34:BE:134:ILE:H	1.71	0.55
36:BG:16:ARG:O	36:BG:20:ILE:HG13	2.06	0.55
41:BP:33:ARG:O	41:BP:35:HIS:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:22:LYS:NZ	42:BQ:25:ASP:OD1	2.39	0.55
42:BQ:141:GLN:HG2	51:BZ:72:ARG:HA	1.88	0.55
43:BR:38:VAL:HB	43:BR:39:PRO:HD3	1.86	0.55
44:BS:56:LEU:C	44:BS:56:LEU:HD23	2.27	0.55
45:BT:91:ARG:HB2	45:BT:115:ARG:O	2.06	0.55
47:BV:44:LYS:HG2	47:BV:45:THR:H	1.72	0.55
49:BX:72:LYS:HG3	49:BX:73:ARG:N	2.17	0.55
50:BY:52:SER:O	50:BY:54:LYS:N	2.39	0.55
1:CA:445:G:C4	1:CA:446:G:C8	2.94	0.55
1:CA:658:G:C4	1:CA:659:U:C5	2.94	0.55
1:CA:659:U:H2'	1:CA:660:G:C5'	2.37	0.55
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.42	0.55
6:CF:12:PRO:CB	6:CF:57:GLN:HB2	2.35	0.55
6:CF:39:LYS:HB2	6:CF:62:TRP:CZ3	2.42	0.55
7:CG:75:VAL:HG21	7:CG:144:MET:HB3	1.89	0.55
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.07	0.55
16:CP:22:THR:HG22	16:CP:32:TYR:HA	1.89	0.55
24:D2:46:GLN:HE21	24:D2:46:GLN:C	2.09	0.55
28:D6:11:LEU:CD2	28:D6:26:ASN:H	2.19	0.55
29:D7:48:LYS:HD3	29:D7:48:LYS:N	2.22	0.55
30:D8:61:LEU:HD22	31:DA:593:G:O3'	2.06	0.55
31:DA:90:U:H1'	31:DA:92:A:H5''	1.88	0.55
31:DA:106:C:H1'	50:DY:2:ARG:HE	1.72	0.55
31:DA:271(P):C:H2'	31:DA:271(Q):G:C5'	2.37	0.55
31:DA:875:G:C4'	51:DZ:170:THR:HG21	2.33	0.55
31:DA:1266:G:O5'	48:DW:15:ARG:NH2	2.40	0.55
33:DD:145:VAL:HG12	33:DD:146:GLU:O	2.07	0.55
41:DP:23:PRO:O	41:DP:33:ARG:HG3	2.07	0.55
41:DP:27:HIS:CD2	41:DP:27:HIS:C	2.80	0.55
41:DP:84:ASN:HA	41:DP:115:LEU:O	2.06	0.55
41:DP:121:LYS:HB3	41:DP:123:LEU:CD2	2.36	0.55
42:DQ:57:HIS:CE1	42:DQ:116:GLU:HB3	2.41	0.55
48:DW:95:ILE:O	48:DW:95:ILE:HG13	2.07	0.55
49:DX:33:LYS:C	49:DX:35:THR:HG22	2.27	0.55
1:AA:370:C:H2'	1:AA:371:G:H8	1.71	0.55
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.07	0.55
1:AA:1492:A:H5'	1:AA:1493:A:OP2	2.06	0.55
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.89	0.55
13:AM:25:ILE:CD1	13:AM:66:LEU:HD23	2.36	0.55
19:AS:42:PRO:O	19:AS:43:GLU:HB3	2.05	0.55
24:B2:26:ARG:HG3	24:B2:29:LYS:NZ	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:52:ASP:O	24:B2:56:GLN:NE2	2.39	0.55
25:B3:19:GLN:HE22	25:B3:52:HIS:CE1	2.21	0.55
31:BA:11:G:C2'	31:BA:12:U:H5'	2.36	0.55
31:BA:389:G:H22	41:BP:71:VAL:HG12	1.71	0.55
31:BA:790:C:O2'	31:BA:791:C:H5'	2.07	0.55
31:BA:855:G:C4	31:BA:856:C:C5	2.94	0.55
31:BA:1164:G:H2'	31:BA:1165:U:C6	2.42	0.55
31:BA:1247:A:OP1	35:BF:95:ARG:NH2	2.37	0.55
31:BA:1505:C:H2'	31:BA:1506:C:O4'	2.06	0.55
31:BA:2186:G:H2'	31:BA:2187:G:H5''	1.88	0.55
35:BF:53:THR:HG22	35:BF:55:GLY:CA	2.37	0.55
37:BH:144:VAL:O	37:BH:148:ILE:HG12	2.06	0.55
44:BS:83:LYS:HE2	44:BS:105:ALA:HB2	1.89	0.55
49:BX:85:PRO:O	49:BX:87:GLN:N	2.40	0.55
51:BZ:144:LEU:N	51:BZ:144:LEU:HD22	2.21	0.55
1:CA:375:U:C2	1:CA:376:G:C8	2.95	0.55
1:CA:428:G:C4'	1:CA:429:U:O5'	2.55	0.55
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.06	0.55
2:CB:19:HIS:O	2:CB:39:ILE:HG23	2.06	0.55
2:CB:74:LYS:NZ	2:CB:76:GLN:HB2	2.21	0.55
24:D2:26:ARG:HG2	49:DX:5:TYR:CB	2.37	0.55
28:D6:16:CYS:O	28:D6:18:ARG:NH2	2.39	0.55
30:D8:32:LEU:HD13	30:D8:32:LEU:N	2.05	0.55
31:DA:271(E):U:H2'	31:DA:271(F):C:C6	2.41	0.55
31:DA:776:G:H4'	31:DA:777:A:O5'	2.06	0.55
31:DA:828:U:O2	31:DA:828:U:C3'	2.54	0.55
31:DA:2854:G:H2'	31:DA:2855:C:C6	2.41	0.55
38:DI:56:LYS:C	38:DI:56:LYS:NZ	2.59	0.55
40:DO:24:VAL:HB	40:DO:33:ALA:HB2	1.88	0.55
42:DQ:75:THR:HG22	42:DQ:88:GLY:HA3	1.89	0.55
42:DQ:141:GLN:HG2	51:DZ:72:ARG:HA	1.88	0.55
43:DR:9:LYS:C	43:DR:10:LEU:HG	2.26	0.55
49:DX:76:ARG:O	49:DX:77:LYS:HB2	2.07	0.55
50:DY:45:VAL:CG2	50:DY:62:GLU:H	2.20	0.55
51:DZ:105:VAL:HG12	51:DZ:139:VAL:O	2.06	0.55
1:AA:308:C:H2'	1:AA:309:G:H8	1.70	0.55
1:AA:445:G:C4	1:AA:446:G:C8	2.94	0.55
1:AA:552:U:O2'	1:AA:553:A:H5'	2.06	0.55
1:AA:868:C:H2'	1:AA:869:G:O4'	2.06	0.55
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.06	0.55
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:78:HIS:CE1	5:AE:142:LEU:HA	2.33	0.55
6:AF:11:ASN:O	6:AF:14:LEU:HB2	2.06	0.55
6:AF:39:LYS:CB	6:AF:62:TRP:HZ3	2.20	0.55
11:AK:41:THR:CG2	11:AK:42:TRP:N	2.69	0.55
17:AQ:65:ILE:H	17:AQ:65:ILE:HD12	1.72	0.55
19:AS:69:HIS:HB2	19:AS:74:PHE:HE2	1.71	0.55
28:B6:36:LEU:O	28:B6:36:LEU:HG	2.06	0.55
31:BA:322:A:H3'	35:BF:169:ASN:ND2	2.22	0.55
31:BA:573:G:O2'	31:BA:574:C:H3'	2.07	0.55
31:BA:706:A:OP1	33:BD:7:LYS:HE3	2.07	0.55
31:BA:883:G:H1	31:BA:893:C:H41	1.55	0.55
31:BA:1027:A:C6	31:BA:1126:A:C4	2.94	0.55
31:BA:1276:A:O2'	43:BR:16:HIS:HE1	1.89	0.55
31:BA:1434:A:H2'	31:BA:1435:G:C8	2.42	0.55
31:BA:2252:G:H2'	31:BA:2253:G:H8	1.71	0.55
31:BA:2359:C:H2'	31:BA:2360:A:C5'	2.27	0.55
31:BA:2364:C:C2'	31:BA:2365:G:H5'	2.37	0.55
31:BA:2473:U:N3	31:BA:2474:C:C6	2.75	0.55
31:BA:2582:G:C2	31:BA:2583:G:C8	2.94	0.55
34:BE:50:GLY:HA3	34:BE:74:PRO:HG3	1.89	0.55
41:BP:26:GLY:HA2	41:BP:30:THR:CG2	2.37	0.55
41:BP:88:LEU:C	41:BP:90:ARG:H	2.09	0.55
45:BT:28:VAL:HG11	45:BT:46:GLU:OE1	2.05	0.55
49:BX:63:LYS:HD2	49:BX:70:LEU:HD13	1.87	0.55
50:BY:20:TYR:CD2	50:BY:41:GLY:HA2	2.42	0.55
50:BY:39:VAL:O	50:BY:40:GLU:CD	2.45	0.55
51:BZ:45:ASP:O	51:BZ:46:LYS:C	2.43	0.55
51:BZ:166:SER:OG	51:BZ:167:PRO:CA	2.54	0.55
1:CA:192:U:O2'	1:CA:193:C:H5'	2.06	0.55
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.37	0.55
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.71	0.55
12:CL:32:PHE:HD1	12:CL:86:ARG:HA	1.72	0.55
15:CO:63:ARG:HG2	15:CO:67:LEU:HD12	1.89	0.55
30:D8:6:THR:HB	30:D8:63:PRO:HG3	1.88	0.55
31:DA:1106:A:C2'	31:DA:1107:G:O5'	2.55	0.55
31:DA:1224:C:O3'	47:DV:88:ARG:HB3	2.07	0.55
31:DA:2020:A:HO2'	31:DA:2021:C:H5'	1.67	0.55
33:DD:27:THR:CG2	33:DD:28:GLU:H	2.19	0.55
40:DO:26:LYS:HB2	40:DO:30:ALA:HB2	1.88	0.55
44:DS:56:LEU:O	44:DS:57:LYS:HB2	2.06	0.55
46:DU:64:ARG:CZ	46:DU:64:ARG:CA	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:328:C:O2	1:AA:328:C:C2'	2.55	0.55
1:AA:353:A:C8	1:AA:353:A:C5'	2.83	0.55
1:AA:1422:G:H4'	40:BO:49:ARG:NH1	2.22	0.55
1:AA:1494:G:N2	31:BA:1912:A:N3	2.54	0.55
2:AB:121:LEU:HD23	2:AB:121:LEU:O	2.07	0.55
4:AD:10:ARG:HA	4:AD:13:ARG:HG3	1.87	0.55
4:AD:106:TYR:HE1	4:AD:113:SER:HA	1.72	0.55
5:AE:68:GLU:O	5:AE:70:PRO:HD3	2.06	0.55
12:AL:32:PHE:HD1	12:AL:86:ARG:HA	1.72	0.55
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.71	0.55
22:B0:41:ARG:H	22:B0:41:ARG:CD	2.19	0.55
23:B1:33:LYS:NZ	23:B1:35:THR:HG21	2.22	0.55
28:B6:19:ARG:NH1	31:BA:2400:G:H4'	2.22	0.55
31:BA:271(H):G:O2'	31:BA:271(I):G:H5''	2.07	0.55
31:BA:479:A:H4'	31:BA:480:A:OP1	2.07	0.55
31:BA:828:U:O2	31:BA:828:U:C3'	2.55	0.55
31:BA:1204:A:H61	31:BA:1240:U:H2'	1.72	0.55
31:BA:2488:A:H2'	31:BA:2489:G:O4'	2.07	0.55
31:BA:2572:A:C8	34:BE:144:ARG:HD2	2.42	0.55
33:BD:35:LYS:HE3	33:BD:65:ILE:HA	1.89	0.55
36:BG:106:LEU:O	36:BG:110:ALA:HB3	2.07	0.55
39:BN:56:ASN:C	39:BN:57:ALA:O	2.42	0.55
42:BQ:108:GLY:HA3	51:BZ:116:VAL:HG21	1.89	0.55
44:BS:28:VAL:O	44:BS:89:ARG:HB2	2.06	0.55
45:BT:45:PHE:CE2	45:BT:63:VAL:HG22	2.42	0.55
1:CA:510:A:H5''	1:CA:511:C:OP2	2.06	0.55
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.06	0.55
1:CA:1103:C:H2'	1:CA:1104:G:O4'	2.07	0.55
7:CG:146:GLU:OE2	7:CG:149:ARG:HD2	2.07	0.55
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.07	0.55
17:CQ:21:VAL:HG21	17:CQ:59:ILE:HD11	1.89	0.55
23:D1:21:ARG:O	23:D1:21:ARG:HD3	2.06	0.55
26:D4:29:PRO:C	26:D4:31:ILE:H	2.10	0.55
27:D5:51:TYR:HB3	27:D5:52:TYR:CD2	2.42	0.55
28:D6:16:CYS:O	28:D6:18:ARG:CZ	2.55	0.55
30:D8:62:LEU:O	30:D8:64:TYR:N	2.40	0.55
31:DA:1141:U:OP1	39:DN:25:ARG:NH1	2.40	0.55
31:DA:1288:U:C2	31:DA:1327:C:C2	2.95	0.55
31:DA:2660:A:H5''	31:DA:2661:G:C2	2.41	0.55
32:DB:86:G:H2'	32:DB:87:G:C8	2.42	0.55
39:DN:131:GLN:HG2	39:DN:133:GLN:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:105:LEU:O	41:DP:106:LEU:CB	2.52	0.55
42:DQ:78:PRO:O	42:DQ:79:LEU:CG	2.54	0.55
42:DQ:140:ALA:CB	51:DZ:99:TYR:HB2	2.36	0.55
42:DQ:141:GLN:CA	51:DZ:53:ILE:HB	2.36	0.55
44:DS:59:LYS:HE3	44:DS:68:GLN:HE22	1.72	0.55
49:DX:80:ILE:O	49:DX:81:VAL:HB	2.06	0.55
1:AA:187:C:H2'	1:AA:188:C:C6	2.41	0.55
1:AA:380:G:C2	1:AA:384:G:C6	2.95	0.55
1:AA:620:C:H2'	1:AA:621:A:O4'	2.07	0.55
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.07	0.55
1:AA:1330:U:H4'	13:AM:23:TYR:CE2	2.42	0.55
1:AA:1477:C:H2'	1:AA:1478:C:C6	2.41	0.55
2:AB:163:PHE:O	2:AB:164:VAL:HG23	2.07	0.55
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.07	0.55
12:AL:62:SER:C	12:AL:64:TYR:H	2.10	0.55
12:AL:82:VAL:CG1	12:AL:83:VAL:H	2.15	0.55
22:B0:65:GLY:HA2	22:B0:84:LEU:HD21	1.89	0.55
31:BA:128:C:H2'	31:BA:129:C:O4'	2.06	0.55
31:BA:174:C:H3'	31:BA:175:G:H5''	1.89	0.55
31:BA:229:A:H3'	31:BA:230:U:H5'	1.89	0.55
31:BA:1946:U:H2'	31:BA:1947:C:C6	2.42	0.55
31:BA:2032:G:H21	34:BE:146:THR:HG23	1.71	0.55
31:BA:2262:U:C2'	31:BA:2263:C:C5'	2.84	0.55
31:BA:2376:A:O2'	44:BS:108:GLY:HA2	2.07	0.55
31:BA:2801(A):A:C3'	31:BA:2802:G:H5'	2.37	0.55
34:BE:174:ASP:OD2	34:BE:175:VAL:N	2.40	0.55
36:BG:60:LEU:O	36:BG:60:LEU:HD22	2.07	0.55
44:BS:53:SER:O	44:BS:55:ALA:N	2.40	0.55
49:BX:60:ARG:HH21	49:BX:74:PRO:HG2	1.72	0.55
1:CA:380:G:C2	1:CA:384:G:C6	2.94	0.55
1:CA:491:G:H2'	1:CA:492:G:H8	1.71	0.55
7:CG:115:ARG:HB2	7:CG:118:VAL:HG22	1.89	0.55
17:CQ:97:SER:O	17:CQ:98:LEU:HD23	2.07	0.55
23:D1:87:PRO:HB2	23:D1:91:LYS:CE	2.37	0.55
24:D2:26:ARG:HG3	24:D2:29:LYS:NZ	2.22	0.55
31:DA:196:A:H2'	31:DA:196:A:N3	2.22	0.55
31:DA:234:C:H2'	31:DA:235:U:H6	1.71	0.55
31:DA:1040:C:O2'	31:DA:1041:C:P	2.64	0.55
31:DA:1179:C:C3'	31:DA:1180:C:H5''	2.36	0.55
31:DA:1209:G:H21	31:DA:1210:A:N6	2.04	0.55
31:DA:2661:G:N7	31:DA:2662:A:C2	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:27:C:C4	32:DB:28:C:C4	2.95	0.55
39:DN:128:HIS:NE2	39:DN:131:GLN:OE1	2.40	0.55
50:DY:77:PRO:O	50:DY:78:ALA:HB2	2.07	0.55
1:AA:1112:C:N3	3:AC:178:LEU:HD23	2.22	0.55
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.42	0.55
5:AE:77:PRO:HG2	5:AE:142:LEU:HD22	1.89	0.55
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.07	0.55
13:AM:44:ARG:HB2	13:AM:46:LYS:HG2	1.88	0.55
30:B8:6:THR:HB	30:B8:63:PRO:HG3	1.89	0.55
31:BA:142:A:N6	31:BA:1595:G:O2'	2.40	0.55
32:BB:86:G:H2'	32:BB:87:G:C8	2.42	0.55
33:BD:39:LYS:HB2	33:BD:62:TYR:HB2	1.89	0.55
38:BI:38:LEU:H	38:BI:38:LEU:CD1	2.12	0.55
39:BN:57:ALA:O	39:BN:58:ASP:C	2.44	0.55
47:BV:85:LYS:C	47:BV:87:HIS:H	2.05	0.55
49:BX:23:GLU:CG	49:BX:24:GLY:N	2.69	0.55
51:BZ:6:LYS:HB3	51:BZ:8:TYR:CE1	2.42	0.55
1:CA:135:C:H2'	1:CA:136:C:H5'	1.87	0.55
1:CA:620:C:H2'	1:CA:621:A:O4'	2.07	0.55
1:CA:939:G:H5''	7:CG:102:ARG:CZ	2.36	0.55
1:CA:1206:G:O4'	3:CC:194:GLY:HA2	2.06	0.55
2:CB:32:ILE:HD12	2:CB:42:ILE:HA	1.87	0.55
3:CC:95:THR:HG22	3:CC:97:LYS:H	1.71	0.55
4:CD:19:LEU:HD13	4:CD:21:LEU:HD21	1.89	0.55
5:CE:147:ASP:HA	5:CE:150:ARG:HB3	1.89	0.55
27:D5:7:PRO:HA	31:DA:2615:U:C2	2.42	0.55
31:DA:102:G:C8	31:DA:102:G:C5'	2.70	0.55
31:DA:142:A:H5''	31:DA:142(A):C:C5	2.41	0.55
31:DA:484:C:H2'	31:DA:485:C:H6	1.68	0.55
31:DA:573:G:O2'	31:DA:574:C:H3'	2.07	0.55
31:DA:836:G:C5	31:DA:837:C:C4	2.94	0.55
31:DA:1210:A:H5''	31:DA:1212:G:O4'	2.07	0.55
31:DA:1925:C:C2'	31:DA:1926:U:H5'	2.37	0.55
31:DA:2376:A:O2'	44:DS:108:GLY:HA2	2.07	0.55
33:DD:24:ILE:HG22	33:DD:24:ILE:O	2.06	0.55
33:DD:158:ALA:O	33:DD:159:ALA:HB2	2.06	0.55
33:DD:175:LEU:HD12	33:DD:185:VAL:HG21	1.89	0.55
42:DQ:35:VAL:CG1	42:DQ:130:LYS:HB3	2.32	0.55
42:DQ:137:TYR:HE2	51:DZ:74:VAL:O	1.89	0.55
45:DT:31:SER:CA	45:DT:32:TYR:CD2	2.90	0.55
50:DY:10:GLY:CA	50:DY:27:VAL:HG13	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:343:U:C2	1:AA:347:G:C2	2.96	0.54
1:AA:437:U:OP1	4:AD:155:LEU:HD22	2.06	0.54
1:AA:1147:C:C5	1:AA:1148:U:C4	2.95	0.54
5:AE:105:VAL:O	5:AE:109:ILE:HG13	2.06	0.54
8:AH:25:ASP:HB3	8:AH:58:TYR:HB3	1.89	0.54
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.37	0.54
22:B0:53:MET:HB2	22:B0:59:LEU:CD2	2.36	0.54
28:B6:10:LEU:H	28:B6:10:LEU:HD22	1.73	0.54
28:B6:42:TRP:CZ2	31:BA:642:G:O3'	2.60	0.54
29:B7:48:LYS:HD3	29:B7:48:LYS:N	2.22	0.54
30:B8:39:LYS:HD3	30:B8:39:LYS:C	2.28	0.54
31:BA:860:U:C5	31:BA:2268:A:C8	2.95	0.54
31:BA:993:G:C5'	47:BV:75:PHE:CE2	2.84	0.54
31:BA:1022:G:N2	31:BA:1142(A):A:H2	1.99	0.54
31:BA:1339:G:H21	31:BA:1603:A:H1'	1.71	0.54
31:BA:2315:G:H2'	31:BA:2316:C:C6	2.42	0.54
33:BD:31:LYS:O	33:BD:32:SER:C	2.45	0.54
35:BF:21:ALA:HB3	35:BF:23:ASP:OD2	2.06	0.54
37:BH:105:LEU:HD22	37:BH:105:LEU:H	1.72	0.54
38:BI:38:LEU:HB2	38:BI:40:THR:HG22	1.89	0.54
42:BQ:16:ARG:HB2	42:BQ:16:ARG:NH1	2.22	0.54
43:BR:71:GLN:HE21	43:BR:71:GLN:CA	2.14	0.54
48:BW:59:VAL:HG12	48:BW:60:ASN:N	2.20	0.54
51:BZ:27:VAL:HG23	51:BZ:36:LYS:HA	1.89	0.54
51:BZ:51:ALA:O	51:BZ:52:SER:HB3	2.07	0.54
1:CA:427:U:P	4:CD:13:ARG:HH22	2.31	0.54
1:CA:1422:G:H4'	40:DO:49:ARG:NH1	2.22	0.54
2:CB:144:ARG:HA	2:CB:147:LYS:HB2	1.90	0.54
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.35	0.54
6:CF:19:LEU:O	6:CF:19:LEU:HD23	2.07	0.54
23:D1:19:GLN:CG	23:D1:44:PRO:HG3	2.37	0.54
30:D8:34:TRP:CZ3	30:D8:41:ILE:HG23	2.38	0.54
31:DA:175:G:H8	31:DA:175:G:H5'	1.72	0.54
31:DA:185:U:H4'	31:DA:218:A:H4'	1.88	0.54
31:DA:807:U:H2'	31:DA:808:G:O5'	2.06	0.54
31:DA:1502:C:H2'	31:DA:1502:C:O2	2.06	0.54
31:DA:2818:G:C2'	31:DA:2819:G:H5'	2.38	0.54
38:DI:38:LEU:HB2	38:DI:40:THR:HG22	1.89	0.54
38:DI:72:LEU:HD12	38:DI:138:ILE:CG2	2.32	0.54
42:DQ:54:MET:HB3	42:DQ:64:ILE:CD1	2.37	0.54
49:DX:60:ARG:NH2	49:DX:74:PRO:HG2	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:45:ASP:O	51:DZ:46:LYS:C	2.44	0.54
1:AA:370:C:H2'	1:AA:371:G:C8	2.42	0.54
1:AA:491:G:H2'	1:AA:492:G:C8	2.41	0.54
4:AD:62:GLN:NE2	4:AD:65:ARG:HE	2.05	0.54
7:AG:69:VAL:HG13	7:AG:134:ALA:O	2.07	0.54
9:AI:114:TYR:HE1	10:AJ:60:ARG:O	1.90	0.54
15:AO:67:LEU:HD22	15:AO:78:TYR:CE1	2.42	0.54
23:B1:21:ARG:HD3	23:B1:21:ARG:O	2.08	0.54
31:BA:362:U:H6	31:BA:362:U:H3'	1.72	0.54
31:BA:389:G:N2	41:BP:71:VAL:HG12	2.22	0.54
31:BA:527:C:O4'	31:BA:527:C:O2	2.18	0.54
31:BA:614:U:O2	31:BA:614:U:O5'	2.25	0.54
31:BA:824:A:O2'	31:BA:825:C:H5'	2.07	0.54
31:BA:1161:C:O2'	47:BV:8:GLY:HA2	2.08	0.54
31:BA:1568:G:H5''	33:BD:61:LEU:HD22	1.88	0.54
31:BA:1692:U:H2'	31:BA:1694:C:C5	2.43	0.54
31:BA:2360:A:O2'	31:BA:2361:A:O5'	2.26	0.54
31:BA:2632:A:H1'	34:BE:61:ARG:NH1	2.22	0.54
34:BE:3:GLY:HA3	34:BE:81:ILE:HG21	1.89	0.54
34:BE:61:ARG:H	34:BE:62:PRO:CD	2.19	0.54
35:BF:110:LEU:HD21	35:BF:181:LEU:HD23	1.88	0.54
45:BT:38:ASN:HD22	45:BT:40:THR:N	2.03	0.54
45:BT:53:ARG:HG3	45:BT:53:ARG:O	2.06	0.54
47:BV:2:PHE:CE1	47:BV:13:ARG:NE	2.74	0.54
48:BW:9:TYR:N	48:BW:102:HIS:HD2	1.99	0.54
1:CA:664:G:H22	1:CA:741:G:H1	1.55	0.54
1:CA:1147:C:C5	1:CA:1148:U:C4	2.96	0.54
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.07	0.54
1:CA:1392:G:H21	1:CA:1502:A:H8	1.55	0.54
2:CB:135:GLN:O	2:CB:139:LYS:HB2	2.07	0.54
5:CE:18:ARG:NH2	5:CE:25:ARG:HG2	2.22	0.54
5:CE:57:LYS:HB3	5:CE:61:TYR:HE2	1.72	0.54
8:CH:95:VAL:HG12	8:CH:99:GLU:HB2	1.88	0.54
9:CI:8:GLY:HA2	9:CI:79:LEU:HD12	1.90	0.54
13:CM:25:ILE:CD1	13:CM:66:LEU:HD23	2.37	0.54
17:CQ:23:VAL:O	17:CQ:39:SER:HB2	2.06	0.54
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.07	0.54
22:D0:36:ILE:C	22:D0:36:ILE:HD13	2.27	0.54
24:D2:49:LYS:O	24:D2:50:ILE:C	2.46	0.54
28:D6:42:TRP:HA	28:D6:42:TRP:HE3	1.72	0.54
31:DA:344:G:O2'	31:DA:345:A:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:828:U:H4'	31:DA:831:G:N1	2.23	0.54
31:DA:1106:A:H2'	31:DA:1107:G:O5'	2.08	0.54
31:DA:2394:C:P	41:DP:63:PRO:HD2	2.47	0.54
33:DD:35:LYS:CE	33:DD:64:ILE:C	2.73	0.54
36:DG:12:TYR:HA	36:DG:16:ARG:HG3	1.89	0.54
40:DO:112:MET:HA	40:DO:112:MET:HE3	1.89	0.54
45:DT:26:ASP:HB3	45:DT:89:VAL:O	2.07	0.54
46:DU:92:ARG:HD2	47:DV:11:GLN:CG	2.37	0.54
49:DX:85:PRO:O	49:DX:86:GLY:C	2.44	0.54
51:DZ:27:VAL:HG23	51:DZ:36:LYS:HA	1.89	0.54
1:AA:191:G:H1'	20:AT:105:SER:HA	1.89	0.54
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.08	0.54
3:AC:102:ASN:O	3:AC:103:VAL:HG23	2.08	0.54
4:AD:31:CYS:C	4:AD:33:MET:N	2.58	0.54
4:AD:108:LEU:O	4:AD:110:PHE:CD1	2.60	0.54
20:AT:56:MET:CG	20:AT:88:VAL:HG21	2.37	0.54
31:BA:985:C:H2'	31:BA:986:C:H6	1.72	0.54
31:BA:1803:A:O2'	33:BD:259:THR:HG21	2.07	0.54
31:BA:2660:A:H5''	31:BA:2661:G:H21	1.73	0.54
31:BA:2795:G:N2	31:BA:2796:U:O2'	2.40	0.54
31:BA:2884:U:H2'	31:BA:2885:C:H5'	1.88	0.54
34:BE:103:ASP:OD2	34:BE:168:MET:HE1	2.08	0.54
38:BI:110:ASP:C	38:BI:112:LYS:H	2.11	0.54
43:BR:103:ARG:NH1	43:BR:108:GLY:O	2.40	0.54
46:BU:92:ARG:CZ	47:BV:11:GLN:HG2	2.38	0.54
51:BZ:165:VAL:HG12	51:BZ:166:SER:HG	1.73	0.54
1:CA:92:C:H2'	1:CA:93:G:C8	2.43	0.54
1:CA:412:A:C8	4:CD:35:ARG:NH2	2.75	0.54
1:CA:425:G:H2'	1:CA:426:G:H5'	1.89	0.54
1:CA:832:C:O2'	1:CA:833:U:P	2.65	0.54
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.89	0.54
1:CA:1366:C:OP1	9:CI:117:HIS:CE1	2.60	0.54
1:CA:1492:A:H5'	1:CA:1493:A:OP2	2.06	0.54
2:CB:84:GLU:OE1	2:CB:219:VAL:HB	2.07	0.54
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.89	0.54
6:CF:39:LYS:CB	6:CF:62:TRP:HZ3	2.20	0.54
7:CG:50:ILE:HD12	7:CG:61:VAL:HG11	1.90	0.54
16:CP:17:TYR:CE1	16:CP:41:PRO:HG3	2.42	0.54
28:D6:32:ASN:O	28:D6:33:LYS:HB2	2.07	0.54
31:DA:559:G:H22	46:DU:49:HIS:CD2	2.26	0.54
31:DA:1288:U:H4'	31:DA:1289:C:OP2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1417:C:C2'	31:DA:1418:G:H5'	2.38	0.54
31:DA:1578:U:OP2	31:DA:1578:U:H6	1.91	0.54
35:DF:65:TRP:CZ3	35:DF:72:ARG:HB3	2.42	0.54
39:DN:65:LYS:HD2	39:DN:67:LEU:HG	1.89	0.54
39:DN:68:GLU:HG2	39:DN:86:PRO:HG3	1.90	0.54
42:DQ:16:ARG:HB2	42:DQ:16:ARG:NH1	2.20	0.54
44:DS:76:LYS:O	44:DS:79:ALA:HB3	2.08	0.54
44:DS:97:ARG:C	44:DS:97:ARG:CD	2.75	0.54
48:DW:20:VAL:O	48:DW:23:LEU:HB2	2.07	0.54
1:AA:159:G:H2'	1:AA:161:A:OP2	2.08	0.54
1:AA:159:G:N2	1:AA:161:A:H3'	2.21	0.54
1:AA:165:C:H2'	1:AA:166:G:C8	2.42	0.54
1:AA:242:C:H2'	1:AA:243:A:H5'	1.88	0.54
1:AA:590:C:H2'	1:AA:591:U:H6	1.73	0.54
1:AA:951:G:H1'	1:AA:970:C:O2'	2.07	0.54
1:AA:986:A:H2'	1:AA:987:G:O4'	2.08	0.54
5:AE:79:GLU:HB3	5:AE:92:LYS:HG3	1.89	0.54
6:AF:39:LYS:HB2	6:AF:62:TRP:HZ3	1.73	0.54
7:AG:75:VAL:HG21	7:AG:144:MET:HB3	1.88	0.54
8:AH:51:VAL:HG11	8:AH:60:ARG:CG	2.37	0.54
15:AO:82:ILE:HD11	15:AO:87:ILE:O	2.08	0.54
23:B1:47:GLN:CG	31:BA:2230:G:H1'	2.28	0.54
27:B5:50:GLY:O	27:B5:51:TYR:CD1	2.60	0.54
31:BA:90:U:H1'	31:BA:92:A:H5''	1.89	0.54
31:BA:271(T):C:H2'	31:BA:271(T):C:O2	2.07	0.54
31:BA:531:C:H4'	31:BA:532:A:H5''	1.90	0.54
31:BA:607:U:OP1	35:BF:102:PRO:HA	2.06	0.54
31:BA:863:A:C2'	31:BA:864:G:H5'	2.36	0.54
31:BA:910:A:C4	42:BQ:13:GLN:OE1	2.61	0.54
31:BA:1526:G:C6	31:BA:1527:G:C2	2.95	0.54
31:BA:1858:G:O2'	31:BA:1884:A:N6	2.40	0.54
31:BA:2342:C:OP2	31:BA:2342:C:H6	1.90	0.54
31:BA:2661:G:N7	31:BA:2662:A:C2	2.75	0.54
33:BD:132:PRO:O	33:BD:136:ILE:HD12	2.07	0.54
37:BH:153:LYS:HG2	37:BH:154:PRO:N	2.23	0.54
38:BI:61:ARG:O	38:BI:133:HIS:CE1	2.60	0.54
39:BN:68:GLU:HG2	39:BN:86:PRO:HG3	1.89	0.54
39:BN:128:HIS:NE2	39:BN:131:GLN:OE1	2.40	0.54
40:BO:13:ASN:HD21	40:BO:97:ARG:N	2.02	0.54
41:BP:16:ARG:NH1	41:BP:16:ARG:O	2.41	0.54
42:BQ:78:PRO:O	42:BQ:79:LEU:CG	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:28:VAL:O	44:BS:89:ARG:CD	2.55	0.54
46:BU:88:ILE:O	46:BU:90:VAL:N	2.40	0.54
47:BV:19:LYS:CD	47:BV:20:LEU:H	2.21	0.54
51:BZ:102:LEU:HD11	51:BZ:124:ILE:HG22	1.89	0.54
51:BZ:145:GLU:HG3	51:BZ:146:ILE:H	1.73	0.54
1:CA:660:G:H2'	1:CA:661:G:O4'	2.06	0.54
1:CA:683:G:C6	1:CA:684:A:C5	2.95	0.54
1:CA:1442(B):A:N1	45:DT:118:ARG:NH2	2.54	0.54
1:CA:1452:C:H5'	1:CA:1456:G:C4	2.41	0.54
2:CB:71:VAL:HG22	2:CB:93:VAL:HB	1.90	0.54
3:CC:126:ARG:O	3:CC:127:ARG:HB2	2.08	0.54
4:CD:90:GLY:O	4:CD:94:LEU:HD12	2.07	0.54
9:CI:17:VAL:HG22	9:CI:63:ILE:HG12	1.90	0.54
12:CL:62:SER:C	12:CL:64:TYR:H	2.10	0.54
16:CP:21:VAL:HG22	16:CP:34:GLU:O	2.08	0.54
23:D1:89:GLU:O	23:D1:93:GLU:N	2.39	0.54
27:D5:11:THR:CG2	31:DA:1264:G:H5'	2.38	0.54
30:D8:35:GLN:HA	31:DA:2420:C:P	2.48	0.54
31:DA:146:G:H2'	31:DA:147:U:O4'	2.07	0.54
31:DA:708:C:H42	31:DA:723:G:H1	1.55	0.54
31:DA:1051:G:H5'	31:DA:2752:C:O2'	2.07	0.54
31:DA:2557:G:H2'	31:DA:2558:C:C6	2.43	0.54
31:DA:2801(A):A:C3'	31:DA:2802:G:H5'	2.37	0.54
33:DD:8:PRO:HB3	33:DD:14:ARG:CB	2.34	0.54
33:DD:209:ALA:C	33:DD:210:GLY:O	2.42	0.54
35:DF:53:THR:HG22	35:DF:55:GLY:CA	2.37	0.54
36:DG:20:ILE:O	36:DG:24:GLY:HA2	2.07	0.54
41:DP:71:VAL:CG1	41:DP:72:PRO:CD	2.86	0.54
41:DP:108:LYS:C	41:DP:110:TYR:H	2.10	0.54
41:DP:112:LEU:H	41:DP:128:HIS:CD2	2.23	0.54
44:DS:95:HIS:CG	44:DS:96:GLY:N	2.76	0.54
47:DV:47:VAL:HG21	47:DV:49:THR:HB	1.88	0.54
47:DV:72:VAL:CA	47:DV:88:ARG:HH12	2.15	0.54
49:DX:60:ARG:CG	49:DX:71:GLY:HA3	2.36	0.54
50:DY:13:VAL:HG12	50:DY:73:ARG:C	2.28	0.54
50:DY:61:ILE:HD12	50:DY:61:ILE:N	2.23	0.54
1:AA:37:U:O2'	1:AA:38:G:H5'	2.06	0.54
1:AA:425:G:H2'	1:AA:426:G:H5'	1.88	0.54
1:AA:719:C:H5	1:AA:720:C:C4	2.25	0.54
3:AC:138:VAL:HG22	3:AC:151:VAL:CG2	2.36	0.54
26:B4:29:PRO:C	26:B4:31:ILE:H	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:19:ARG:HH11	31:BA:2400:G:H4'	1.73	0.54
28:B6:28:ARG:CA	28:B6:32:ASN:HB3	2.36	0.54
31:BA:142:A:C8	31:BA:1595:G:N2	2.61	0.54
31:BA:587:C:H5	41:BP:33:ARG:HH11	1.55	0.54
31:BA:1657:C:H2'	31:BA:1658:C:C6	2.42	0.54
31:BA:2394:C:P	41:BP:63:PRO:HD2	2.47	0.54
31:BA:2464:C:O2'	31:BA:2465:C:P	2.65	0.54
35:BF:119:ARG:HG2	35:BF:119:ARG:O	2.06	0.54
37:BH:158:HIS:CE1	37:BH:168:PRO:C	2.81	0.54
39:BN:45:ASN:H	39:BN:45:ASN:ND2	1.98	0.54
44:BS:34:HIS:CD2	44:BS:34:HIS:N	2.73	0.54
45:BT:16:ARG:H	45:BT:79:HIS:CD2	2.25	0.54
45:BT:32:TYR:HD2	45:BT:81:PRO:O	1.90	0.54
49:BX:53:LYS:N	49:BX:80:ILE:HG22	2.21	0.54
51:BZ:101:PRO:O	51:BZ:102:LEU:CD2	2.52	0.54
1:CA:159:G:H2'	1:CA:161:A:OP2	2.08	0.54
1:CA:189:G:C6	1:CA:189(A):C:N4	2.76	0.54
2:CB:121:LEU:HD23	2:CB:121:LEU:O	2.07	0.54
8:CH:44:PHE:HA	8:CH:79:VAL:HG11	1.89	0.54
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	1.88	0.54
23:D1:19:GLN:CD	23:D1:44:PRO:HB3	2.27	0.54
24:D2:30:ARG:H	24:D2:30:ARG:CD	2.15	0.54
31:DA:1486:A:H2'	31:DA:1487:G:H8	1.72	0.54
31:DA:2756:U:H4'	31:DA:2757:A:OP1	2.07	0.54
33:DD:35:LYS:N	33:DD:64:ILE:HG23	2.22	0.54
34:DE:51:PHE:CD1	34:DE:52:LEU:N	2.75	0.54
35:DF:53:THR:H	35:DF:56:GLU:HB2	1.73	0.54
42:DQ:29:PHE:N	42:DQ:29:PHE:HD1	2.06	0.54
42:DQ:108:GLY:HA3	51:DZ:116:VAL:HG21	1.89	0.54
45:DT:33:LYS:NZ	45:DT:33:LYS:CA	2.71	0.54
45:DT:33:LYS:NZ	45:DT:33:LYS:H	2.05	0.54
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.42	0.54
4:AD:31:CYS:SG	4:AD:31:CYS:O	2.65	0.54
6:AF:50:TYR:CE2	6:AF:52:ILE:HD11	2.42	0.54
7:AG:69:VAL:O	7:AG:71:PRO:HD3	2.07	0.54
9:AI:17:VAL:HG22	9:AI:63:ILE:HG12	1.88	0.54
10:AJ:40:LEU:HD21	10:AJ:69:ASN:HB3	1.90	0.54
30:B8:35:GLN:NE2	30:B8:36:LYS:HZ2	2.05	0.54
31:BA:320:A:OP2	35:BF:137:LYS:HE2	2.08	0.54
31:BA:773:U:H5'	33:BD:47:GLY:HA2	1.90	0.54
31:BA:864:G:C6	31:BA:865:C:N4	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1309:G:O2'	31:BA:1310:G:H5'	2.08	0.54
33:BD:255:LYS:C	33:BD:255:LYS:HZ2	2.11	0.54
36:BG:81:LYS:O	36:BG:82:LEU:O	2.26	0.54
39:BN:65:LYS:HD2	39:BN:67:LEU:HG	1.90	0.54
49:BX:80:ILE:HG23	49:BX:81:VAL:N	2.22	0.54
50:BY:37:VAL:HG11	50:BY:72:VAL:CG2	2.38	0.54
1:CA:310:G:H5''	16:CP:31:LYS:HB2	1.89	0.54
1:CA:542:G:P	4:CD:10:ARG:HH21	2.30	0.54
1:CA:707:C:O2	1:CA:708:C:C6	2.61	0.54
1:CA:811:C:O2'	1:CA:901:A:N1	2.39	0.54
1:CA:1112:C:N3	3:CC:178:LEU:HD23	2.23	0.54
1:CA:1386:G:C2	1:CA:1387:G:C8	2.95	0.54
5:CE:145:LYS:O	5:CE:149:GLU:HG2	2.07	0.54
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	1.87	0.54
7:CG:70:LYS:HB3	7:CG:96:GLN:OE1	2.08	0.54
9:CI:53:VAL:CG1	9:CI:95:LYS:HE3	2.38	0.54
10:CJ:40:LEU:HD21	10:CJ:69:ASN:HB3	1.90	0.54
12:CL:92:ASP:O	12:CL:93:LEU:HD23	2.08	0.54
13:CM:68:GLY:O	13:CM:69:GLU:HB2	2.07	0.54
24:D2:55:ARG:HH22	49:DX:3:THR:CG2	2.21	0.54
31:DA:271(H):G:O2'	31:DA:271(I):G:H5''	2.07	0.54
31:DA:548:A:O2'	31:DA:549:G:OP1	2.22	0.54
31:DA:833:U:H5''	41:DP:48:PRO:HB3	1.89	0.54
31:DA:855:G:C4	31:DA:856:C:C5	2.96	0.54
31:DA:1179:C:H3'	31:DA:1180:C:H5''	1.90	0.54
31:DA:1568:G:OP2	33:DD:63:ARG:NH2	2.41	0.54
31:DA:1742:G:H3'	31:DA:1742:G:H8	1.73	0.54
31:DA:2025:C:H2'	31:DA:2026:C:C6	2.43	0.54
31:DA:2286:A:H5''	31:DA:2287:A:O4'	2.07	0.54
36:DG:5:VAL:HB	36:DG:104:GLU:OE2	2.08	0.54
37:DH:92:ILE:O	37:DH:94:TYR:N	2.40	0.54
38:DI:15:VAL:HG23	38:DI:16:GLY:N	2.22	0.54
39:DN:13:TRP:O	39:DN:135:PRO:HG2	2.08	0.54
39:DN:74:ARG:NH2	39:DN:101:HIS:HB3	2.22	0.54
43:DR:10:LEU:HD22	43:DR:17:ARG:HD2	1.89	0.54
45:DT:42:ILE:O	45:DT:42:ILE:HG13	2.07	0.54
50:DY:20:TYR:CD2	50:DY:41:GLY:HA2	2.43	0.54
51:DZ:40:ASP:HB3	51:DZ:43:GLU:HB2	1.89	0.54
1:AA:200:G:H1	1:AA:217:C:N4	1.99	0.54
1:AA:310:G:H5''	16:AP:31:LYS:HB2	1.88	0.54
1:AA:542:G:P	4:AD:10:ARG:HH21	2.30	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1312:G:N2	1:AA:1326:C:C2	2.75	0.54
1:AA:1410:G:O2'	1:AA:1411:C:H5'	2.08	0.54
1:AA:1422:G:O3'	40:BO:49:ARG:NH2	2.40	0.54
2:AB:144:ARG:HA	2:AB:147:LYS:HB2	1.89	0.54
4:AD:79:PHE:CG	4:AD:207:TYR:HD1	2.25	0.54
8:AH:95:VAL:HG12	8:AH:99:GLU:HB2	1.88	0.54
12:AL:46:LYS:HD3	12:AL:94:PRO:CG	2.38	0.54
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.37	0.54
31:BA:106:C:H1'	50:BY:2:ARG:HE	1.72	0.54
31:BA:836:G:C5	31:BA:837:C:C4	2.96	0.54
31:BA:876:C:C4	31:BA:877:U:C5	2.96	0.54
31:BA:1396:U:O2	31:BA:1396:U:C2'	2.56	0.54
31:BA:1515:G:H2'	31:BA:1516:C:H6	1.72	0.54
31:BA:2075:U:H2'	31:BA:2238:G:N2	2.22	0.54
31:BA:2660:A:H3'	31:BA:2661:G:O4'	2.07	0.54
36:BG:19:LEU:HD13	36:BG:32:PRO:HG2	1.89	0.54
36:BG:91:ARG:HD2	36:BG:91:ARG:C	2.28	0.54
41:BP:88:LEU:HD11	41:BP:95:VAL:HG21	1.88	0.54
1:CA:189:G:C6	1:CA:189(A):C:C4	2.95	0.54
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.88	0.54
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.41	0.54
1:CA:1079:G:O3'	5:CE:14:ARG:NH2	2.41	0.54
1:CA:1312:G:N2	1:CA:1326:C:C2	2.76	0.54
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.07	0.54
3:CC:11:ARG:O	3:CC:14:ILE:O	2.25	0.54
12:CL:46:LYS:HG2	12:CL:47:LYS:N	2.22	0.54
31:DA:68:G:H2'	31:DA:69:C:C6	2.42	0.54
31:DA:301:G:C4	31:DA:302:C:C5	2.96	0.54
31:DA:577:G:O2'	31:DA:1254:A:OP1	2.26	0.54
31:DA:870:A:C2	31:DA:908:C:C2	2.96	0.54
31:DA:1328:G:H2'	31:DA:1330:C:C5	2.43	0.54
31:DA:2272:U:H5''	31:DA:2273:A:OP1	2.06	0.54
31:DA:2404:C:C2'	31:DA:2405:G:H5'	2.37	0.54
32:DB:66:A:C5	32:DB:109:C:C5	2.96	0.54
39:DN:130:HIS:O	39:DN:130:HIS:CD2	2.61	0.54
40:DO:104:ARG:O	40:DO:107:ARG:HB3	2.08	0.54
43:DR:18:LEU:O	43:DR:19:ALA:C	2.43	0.54
43:DR:116:LEU:O	43:DR:117:VAL:CB	2.55	0.54
45:DT:23:ARG:HB2	45:DT:24:PRO:CD	2.37	0.54
45:DT:40:THR:O	45:DT:41:ARG:HB2	2.08	0.54
46:DU:83:LEU:CB	46:DU:88:ILE:HD11	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:41:ASN:O	49:DX:45:THR:HG23	2.06	0.54
1:AA:327:A:O2'	1:AA:329:A:H8	1.91	0.54
2:AB:32:ILE:HD12	2:AB:42:ILE:HA	1.89	0.54
2:AB:74:LYS:O	2:AB:78:GLN:HG3	2.08	0.54
4:AD:14:ARG:HA	4:AD:39:PRO:HG3	1.89	0.54
6:AF:12:PRO:CB	6:AF:57:GLN:HB2	2.36	0.54
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.48	0.54
9:AI:53:VAL:CG1	9:AI:95:LYS:HE3	2.38	0.54
23:B1:94:LEU:HD22	23:B1:95:LEU:HB2	1.90	0.54
30:B8:60:LEU:C	30:B8:63:PRO:HD2	2.28	0.54
31:BA:52:A:C2'	31:BA:53:A:H5'	2.38	0.54
31:BA:271(P):C:H2'	31:BA:271(Q):G:H5'	1.90	0.54
31:BA:562:U:C4	31:BA:2036:C:O4'	2.61	0.54
31:BA:1270:C:H5''	31:BA:1271:G:O5'	2.08	0.54
33:BD:35:LYS:CE	33:BD:64:ILE:O	2.56	0.54
34:BE:34:VAL:CG2	34:BE:48:GLN:HE21	2.20	0.54
35:BF:185:ASP:HA	35:BF:188:ARG:HG2	1.89	0.54
37:BH:85:LYS:CE	37:BH:133:VAL:HB	2.37	0.54
37:BH:85:LYS:HE2	37:BH:145:ALA:HB2	1.89	0.54
45:BT:68:TYR:CD2	45:BT:68:TYR:N	2.75	0.54
45:BT:91:ARG:HB2	45:BT:116:ALA:HA	1.89	0.54
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	2.07	0.54
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.42	0.54
2:CB:20:GLU:HG3	2:CB:189:ASP:OD2	2.08	0.54
4:CD:13:ARG:O	4:CD:15:GLU:N	2.41	0.54
30:D8:14:VAL:CG1	30:D8:22:VAL:HG13	2.37	0.54
31:DA:90:U:O2	31:DA:90:U:C2'	2.51	0.54
31:DA:307:G:H22	31:DA:310:A:H5''	1.73	0.54
31:DA:329:G:OP2	50:DY:71:LYS:HE2	2.07	0.54
31:DA:966:G:H2'	31:DA:967:C:H6	1.72	0.54
31:DA:1001:A:H2'	31:DA:1002:G:O4'	2.06	0.54
31:DA:1109:C:C5	31:DA:1110:G:C4	2.96	0.54
31:DA:1142(A):A:C4	31:DA:1144:G:C8	2.96	0.54
31:DA:2000:G:OP2	43:DR:3:HIS:CE1	2.61	0.54
31:DA:2496:C:OP1	42:DQ:82:ARG:HD3	2.08	0.54
31:DA:2579:C:O3'	34:DE:131:ALA:HB3	2.08	0.54
32:DB:117:G:H4'	44:DS:55:ALA:HB1	1.90	0.54
34:DE:160:TYR:CD2	34:DE:161:GLY:N	2.76	0.54
41:DP:105:LEU:HD12	41:DP:105:LEU:N	2.22	0.54
42:DQ:38:GLU:OE2	42:DQ:127:ILE:HG22	2.08	0.54
43:DR:101:ALA:O	43:DR:102:GLU:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:78:LEU:C	45:DT:79:HIS:ND1	2.61	0.54
50:DY:8:LYS:HD2	50:DY:8:LYS:H	1.73	0.54
51:DZ:65:GLN:OE1	51:DZ:67:LEU:HD11	2.08	0.54
1:AA:7:G:H21	5:AE:121:LYS:HG2	1.72	0.54
1:AA:69:G:C2	1:AA:70:G:C5	2.96	0.54
1:AA:189(B):C:H42	1:AA:189(I):G:H1	1.56	0.54
1:AA:551:U:O2'	12:AL:86:ARG:HD2	2.08	0.54
1:AA:658:G:C4	1:AA:659:U:C5	2.95	0.54
1:AA:832:C:O2'	1:AA:833:U:P	2.65	0.54
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.07	0.54
1:AA:1385:G:C2	1:AA:1386:G:C8	2.96	0.54
3:AC:52:LEU:H	3:AC:52:LEU:CD2	2.19	0.54
6:AF:8:ILE:HG22	6:AF:9:VAL:N	2.22	0.54
17:AQ:21:VAL:HG21	17:AQ:59:ILE:HD11	1.89	0.54
18:AR:57:GLY:C	18:AR:58:LEU:HD12	2.29	0.54
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.07	0.54
31:BA:287:C:C4	31:BA:288:C:C5	2.96	0.54
31:BA:322:A:H3'	35:BF:169:ASN:HD21	1.73	0.54
31:BA:1459:G:H2'	31:BA:1459:G:N3	2.21	0.54
31:BA:2359:C:C2'	31:BA:2360:A:C5'	2.84	0.54
31:BA:2660:A:C2'	31:BA:2661:G:O5'	2.55	0.54
34:BE:48:GLN:CG	34:BE:78:LEU:HB3	2.38	0.54
38:BI:13:GLY:O	38:BI:14:ASP:C	2.46	0.54
41:BP:146:VAL:HG13	41:BP:147:LEU:H	1.73	0.54
44:BS:54:LEU:HA	44:BS:57:LYS:O	2.07	0.54
47:BV:67:GLY:O	47:BV:69:LYS:N	2.41	0.54
1:CA:173:U:O4'	1:CA:197:A:C4	2.61	0.54
1:CA:510:A:H5''	1:CA:511:C:P	2.48	0.54
1:CA:986:A:H2'	1:CA:987:G:O4'	2.08	0.54
1:CA:1184:G:H2'	1:CA:1185:G:C8	2.42	0.54
4:CD:49:ARG:HA	4:CD:49:ARG:NE	2.20	0.54
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.07	0.54
10:CJ:61:GLU:OE1	14:CN:58:LYS:HE2	2.08	0.54
20:CT:93:GLU:HG2	20:CT:93:GLU:O	2.06	0.54
31:DA:229:A:H3'	31:DA:230:U:H5'	1.89	0.54
31:DA:477:A:H2'	31:DA:478:A:C8	2.43	0.54
31:DA:661:C:H2'	31:DA:662:G:C8	2.43	0.54
31:DA:1579:A:H2'	31:DA:1580:A:C8	2.43	0.54
31:DA:2762:G:H8	31:DA:2762:G:H5'	1.73	0.54
31:DA:2795:G:N2	31:DA:2796:U:O2'	2.41	0.54
32:DB:43:C:H4'	36:DG:66:GLN:NE2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:16:MET:HG3	33:DD:206:LEU:O	2.08	0.54
34:DE:93:VAL:N	34:DE:95:ILE:HD13	2.22	0.54
36:DG:58:GLN:HA	36:DG:61:ALA:HB3	1.89	0.54
37:DH:89:ILE:O	37:DH:90:LYS:CB	2.56	0.54
38:DI:1:MET:O	38:DI:20:ASP:HA	2.08	0.54
41:DP:83:VAL:HG12	41:DP:112:LEU:HD21	1.89	0.54
44:DS:34:HIS:CD2	44:DS:34:HIS:N	2.76	0.54
47:DV:44:LYS:HG2	47:DV:45:THR:H	1.72	0.54
49:DX:23:GLU:CG	49:DX:24:GLY:N	2.70	0.54
1:AA:129:U:O2	1:AA:131:C:C5	2.60	0.54
1:AA:950:U:H2'	1:AA:951:G:C8	2.41	0.54
1:AA:1371:G:C6	1:AA:1372:U:C4	2.96	0.54
5:AE:57:LYS:HB3	5:AE:61:TYR:HE2	1.73	0.54
5:AE:147:ASP:HA	5:AE:150:ARG:HB3	1.89	0.54
6:AF:39:LYS:HB2	6:AF:62:TRP:CZ3	2.42	0.54
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.08	0.54
15:AO:74:ASP:OD2	15:AO:76:GLU:HB3	2.08	0.54
17:AQ:99:SER:O	17:AQ:100:LYS:HD3	2.08	0.54
23:B1:56:GLN:OE1	23:B1:56:GLN:HA	2.06	0.54
23:B1:94:LEU:O	23:B1:95:LEU:HG	2.07	0.54
24:B2:26:ARG:HG2	49:BX:5:TYR:CB	2.36	0.54
24:B2:34:GLU:N	24:B2:34:GLU:OE2	2.39	0.54
31:BA:146:G:H2'	31:BA:147:U:O4'	2.08	0.54
31:BA:271(J):C:H5'	31:BA:271(K):U:OP2	2.07	0.54
31:BA:661:C:O3'	41:BP:18:ARG:HD2	2.08	0.54
31:BA:661:C:C4'	41:BP:16:ARG:HH12	2.21	0.54
31:BA:1043:C:O2'	31:BA:1044:G:C8	2.58	0.54
31:BA:1670:C:O2	34:BE:129:HIS:HE1	1.91	0.54
31:BA:1859:A:C2	31:BA:1884:A:H1'	2.43	0.54
32:BB:31:C:H4'	36:BG:29:TRP:CH2	2.44	0.54
33:BD:35:LYS:HA	33:BD:64:ILE:CG2	2.38	0.54
36:BG:56:ALA:HA	36:BG:59:GLU:OE1	2.07	0.54
38:BI:125:GLU:OE1	38:BI:141:LYS:HG2	2.07	0.54
42:BQ:18:LYS:O	42:BQ:19:GLY:C	2.45	0.54
42:BQ:38:GLU:HB2	42:BQ:127:ILE:HG22	1.88	0.54
48:BW:2:GLU:OE1	48:BW:72:LYS:NZ	2.41	0.54
50:BY:13:VAL:HG12	50:BY:73:ARG:C	2.28	0.54
1:CA:450:G:H1	1:CA:483:C:H42	1.55	0.54
1:CA:472:A:C4'	16:CP:82:GLN:HE22	2.19	0.54
6:CF:37:VAL:HG12	6:CF:38:GLU:N	2.23	0.54
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:105:ASP:OD1	9:CI:107:ARG:HD3	2.08	0.54
13:CM:81:LEU:HD21	13:CM:88:ARG:HH22	1.73	0.54
23:D1:34:THR:HG23	31:DA:388:G:P	2.47	0.54
24:D2:43:GLN:O	24:D2:46:GLN:HB3	2.08	0.54
24:D2:49:LYS:HE2	31:DA:76:C:OP1	2.07	0.54
27:D5:41:PRO:HG2	27:D5:44:THR:OG1	2.08	0.54
30:D8:6:THR:CG2	31:DA:243:U:OP1	2.55	0.54
30:D8:35:GLN:HE21	30:D8:36:LYS:HG3	1.73	0.54
31:DA:257:A:H2'	31:DA:258:G:H5'	1.90	0.54
31:DA:547:A:C8	31:DA:549:G:C6	2.96	0.54
31:DA:1947:C:C2'	31:DA:1948:G:H5''	2.38	0.54
31:DA:2186:G:H2'	31:DA:2187:G:H5''	1.90	0.54
33:DD:39:LYS:HB2	33:DD:62:TYR:HB2	1.90	0.54
33:DD:118:VAL:HG22	33:DD:119:ALA:H	1.73	0.54
37:DH:153:LYS:N	37:DH:153:LYS:CD	2.71	0.54
39:DN:15:LEU:HD22	39:DN:16:ILE:H	1.73	0.54
41:DP:23:PRO:HB2	41:DP:33:ARG:HG3	1.90	0.54
44:DS:63:THR:O	44:DS:66:ALA:O	2.26	0.54
45:DT:32:TYR:HB3	45:DT:81:PRO:CB	2.38	0.54
49:DX:63:LYS:HE3	49:DX:70:LEU:CD2	2.34	0.54
51:DZ:124:ILE:HG13	51:DZ:125:LEU:N	2.23	0.54
51:DZ:144:LEU:N	51:DZ:144:LEU:HD22	2.23	0.54
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.08	0.53
1:AA:854:G:H3'	1:AA:871:U:O4	2.08	0.53
1:AA:1399:C:H4'	1:AA:1400:C:H5''	1.90	0.53
6:AF:73:ASN:O	6:AF:76:ALA:HB3	2.09	0.53
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.08	0.53
7:AG:50:ILE:HD12	7:AG:61:VAL:HG11	1.89	0.53
8:AH:44:PHE:HA	8:AH:79:VAL:HG11	1.90	0.53
11:AK:84:VAL:O	11:AK:85:ARG:HG3	2.08	0.53
12:AL:32:PHE:HB3	12:AL:85:ILE:O	2.08	0.53
13:AM:78:ILE:HA	13:AM:81:LEU:HD12	1.90	0.53
31:BA:175:G:H5'	31:BA:175:G:H8	1.73	0.53
31:BA:535:C:O3'	46:BU:53:ARG:NH1	2.41	0.53
31:BA:662:G:OP1	41:BP:18:ARG:NH1	2.42	0.53
31:BA:993:G:OP1	47:BV:75:PHE:CE2	2.61	0.53
31:BA:1106:A:C2'	31:BA:1107:G:O5'	2.56	0.53
31:BA:1268:A:C2	31:BA:2013:A:C4	2.97	0.53
31:BA:1472:A:H2'	31:BA:1473:G:H5'	1.91	0.53
31:BA:1822:G:H8	31:BA:1822:G:C5'	2.12	0.53
31:BA:2461:C:H2'	31:BA:2462:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:255:LYS:O	33:BD:255:LYS:HD2	2.07	0.53
36:BG:47:LYS:CD	36:BG:81:LYS:HD2	2.29	0.53
36:BG:60:LEU:O	36:BG:64:THR:HG22	2.08	0.53
38:BI:10:GLU:O	38:BI:12:LEU:HD23	2.06	0.53
41:BP:96:THR:HG22	41:BP:126:VAL:CG2	2.38	0.53
42:BQ:29:PHE:CD1	42:BQ:29:PHE:N	2.76	0.53
44:BS:38:GLN:HG2	44:BS:47:THR:CG2	2.39	0.53
45:BT:28:VAL:HG21	45:BT:46:GLU:HG3	1.89	0.53
50:BY:29:GLU:OE1	50:BY:29:GLU:N	2.41	0.53
50:BY:49:VAL:HG12	50:BY:53:PRO:HG3	1.90	0.53
1:CA:321:A:N6	1:CA:328:C:H1'	2.22	0.53
1:CA:450:G:C5'	16:CP:41:PRO:O	2.54	0.53
1:CA:636:U:H2'	1:CA:637:G:C8	2.42	0.53
3:CC:73:PRO:HA	3:CC:76:VAL:HG13	1.89	0.53
4:CD:62:GLN:NE2	4:CD:65:ARG:HE	2.06	0.53
20:CT:11:SER:HA	20:CT:13:LEU:CD1	2.37	0.53
27:D5:55:ARG:C	27:D5:56:LYS:HG3	2.28	0.53
31:DA:107:C:N3	31:DA:108:U:C5	2.76	0.53
31:DA:259:G:N2	31:DA:621:A:H8	2.04	0.53
31:DA:271(D):G:H2'	31:DA:271(E):U:O4'	2.08	0.53
31:DA:662:G:OP1	41:DP:18:ARG:NH1	2.41	0.53
31:DA:999:U:O2'	31:DA:1000:A:H5'	2.08	0.53
31:DA:1505:C:H2'	31:DA:1506:C:O4'	2.07	0.53
31:DA:2690:C:OP1	43:DR:17:ARG:NH1	2.41	0.53
33:DD:43:ARG:HD2	33:DD:44:ASN:OD1	2.08	0.53
34:DE:36:ARG:NH1	34:DE:85:ASN:ND2	2.56	0.53
34:DE:65:GLY:C	34:DE:67:PHE:H	2.11	0.53
34:DE:70:ALA:O	34:DE:72:VAL:O	2.25	0.53
36:DG:45:GLU:HB2	36:DG:47:LYS:HG3	1.90	0.53
43:DR:87:TYR:HE1	43:DR:117:VAL:HG12	1.72	0.53
44:DS:17:ARG:O	44:DS:18:ILE:HB	2.07	0.53
45:DT:31:SER:HB3	45:DT:43:GLN:O	2.08	0.53
45:DT:34:VAL:O	45:DT:35:LYS:HB3	2.08	0.53
49:DX:40:LYS:O	49:DX:42:ALA:N	2.41	0.53
49:DX:85:PRO:O	49:DX:87:GLN:N	2.41	0.53
50:DY:52:SER:C	50:DY:54:LYS:H	2.12	0.53
1:AA:62:U:O2'	1:AA:379:C:H1'	2.08	0.53
1:AA:177:C:OP1	20:AT:65:LYS:HD3	2.08	0.53
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.08	0.53
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.08	0.53
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.08	0.53
23:B1:85:LEU:HB3	23:B1:87:PRO:CD	2.38	0.53
23:B1:86:SER:N	23:B1:87:PRO:CD	2.71	0.53
24:B2:43:GLN:O	24:B2:46:GLN:HB3	2.09	0.53
28:B6:28:ARG:HA	28:B6:32:ASN:ND2	2.16	0.53
31:BA:27:G:C2	31:BA:512:G:N3	2.76	0.53
31:BA:510:C:H2'	31:BA:511:U:H5'	1.89	0.53
31:BA:1278:A:O2'	43:BR:34:ILE:HD11	2.08	0.53
31:BA:1662:C:O2'	31:BA:1663:C:H5'	2.08	0.53
31:BA:2086:U:H2'	31:BA:2087:G:C8	2.43	0.53
31:BA:2503:A:C8	55:BA:3364:ERY:H293	2.43	0.53
37:BH:41:MET:HB3	37:BH:43:VAL:HG13	1.91	0.53
45:BT:30:VAL:HG21	45:BT:83:ILE:N	2.23	0.53
45:BT:40:THR:O	45:BT:41:ARG:HB2	2.06	0.53
47:BV:69:LYS:O	47:BV:70:ILE:HG23	2.08	0.53
48:BW:18:ARG:CG	48:BW:18:ARG:NH1	2.69	0.53
49:BX:63:LYS:HE3	49:BX:70:LEU:CD2	2.37	0.53
1:CA:254:G:O2'	1:CA:255:G:H5'	2.08	0.53
1:CA:370:C:H2'	1:CA:371:G:H8	1.73	0.53
1:CA:585:G:N3	1:CA:879:C:H4'	2.23	0.53
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.43	0.53
4:CD:79:PHE:CG	4:CD:207:TYR:HD1	2.26	0.53
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB3	1.89	0.53
14:CN:6:LEU:HD23	14:CN:9:LYS:HD3	1.89	0.53
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.08	0.53
31:DA:518:G:H2'	31:DA:519:U:C6	2.43	0.53
31:DA:993:G:C5'	47:DV:75:PHE:CZ	2.90	0.53
31:DA:993:G:N3	47:DV:91:TYR:CE1	2.76	0.53
31:DA:1396:U:O2	31:DA:1396:U:C2'	2.53	0.53
31:DA:1496:A:C8	31:DA:1577:C:O2'	2.58	0.53
31:DA:1657:C:H2'	31:DA:1658:C:H6	1.72	0.53
31:DA:1895:C:C2	31:DA:1896:G:C8	2.95	0.53
31:DA:2473:U:N3	31:DA:2474:C:C6	2.77	0.53
34:DE:134:ILE:H	34:DE:134:ILE:HD13	1.72	0.53
35:DF:21:ALA:C	35:DF:23:ASP:H	2.10	0.53
41:DP:140:ALA:O	41:DP:141:ALA:CB	2.56	0.53
41:DP:148:LEU:HD22	41:DP:148:LEU:O	2.08	0.53
42:DQ:76:LYS:H	42:DQ:88:GLY:HA2	1.73	0.53
47:DV:1:MET:HA	47:DV:1:MET:CE	2.37	0.53
51:DZ:166:SER:OG	51:DZ:168:GLU:N	2.41	0.53
1:AA:765:G:H5''	1:AA:766:A:OP1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.24	0.53
16:AP:17:TYR:CE1	16:AP:41:PRO:HG3	2.43	0.53
28:B6:15:GLU:OE2	28:B6:43:CYS:CB	2.57	0.53
28:B6:34:LEU:HD22	28:B6:50:ARG:NH1	2.24	0.53
31:BA:252:G:P	41:BP:50:ARG:HH11	2.31	0.53
31:BA:1040:C:O2'	31:BA:1041:C:OP2	2.24	0.53
31:BA:1771:C:O2'	31:BA:1786:A:C8	2.51	0.53
31:BA:2055:C:H5'	31:BA:2056:G:O5'	2.08	0.53
33:BD:172:TYR:CD1	33:BD:186:HIS:CA	2.90	0.53
34:BE:128:SER:OG	34:BE:129:HIS:N	2.36	0.53
34:BE:167:VAL:CG2	34:BE:170:LEU:HD11	2.37	0.53
35:BF:178:PRO:HG2	35:BF:179:GLU:OE1	2.09	0.53
38:BI:56:LYS:C	38:BI:56:LYS:NZ	2.62	0.53
42:BQ:32:TYR:CE2	42:BQ:133:ARG:HG2	2.43	0.53
45:BT:51:ARG:HG2	45:BT:52:ILE:N	2.23	0.53
45:BT:55:ASN:N	45:BT:59:THR:HB	2.23	0.53
50:BY:37:VAL:CG2	50:BY:67:LEU:HB3	2.38	0.53
2:CB:189:ASP:OD1	2:CB:189:ASP:N	2.41	0.53
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.08	0.53
15:CO:87:ILE:CG2	15:CO:88:ARG:N	2.71	0.53
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.08	0.53
20:CT:75:ASN:O	20:CT:79:ARG:HB2	2.07	0.53
29:D7:40:TRP:CD2	31:DA:459:U:H5''	2.43	0.53
31:DA:271(D):G:C6	31:DA:271(E):U:C4	2.97	0.53
31:DA:706:A:OP1	33:DD:7:LYS:HE3	2.08	0.53
31:DA:997:G:O2'	31:DA:998:C:H5'	2.08	0.53
31:DA:1161:C:O2'	47:DV:8:GLY:HA2	2.08	0.53
31:DA:1410:G:H1	31:DA:1592:C:H42	1.56	0.53
31:DA:1677:A:H2'	31:DA:1678:G:C8	2.44	0.53
31:DA:1804:C:O2'	31:DA:1805:U:H5'	2.08	0.53
31:DA:1948:G:H5'	31:DA:1948:G:C8	2.39	0.53
31:DA:2784:C:O2'	31:DA:2785:C:H5'	2.09	0.53
31:DA:2801(A):A:H4'	31:DA:2802:G:C2'	2.38	0.53
33:DD:58:HIS:CD2	33:DD:59:LYS:N	2.76	0.53
34:DE:50:GLY:HA3	34:DE:74:PRO:HG3	1.90	0.53
44:DS:38:GLN:HG2	44:DS:47:THR:CG2	2.39	0.53
45:DT:33:LYS:HA	45:DT:33:LYS:HZ2	1.73	0.53
47:DV:19:LYS:HE2	47:DV:20:LEU:H	1.73	0.53
51:DZ:99:TYR:HB3	51:DZ:123:ASP:OD1	2.08	0.53
1:AA:321:A:N6	1:AA:328:C:H1'	2.23	0.53
1:AA:376:G:O2'	1:AA:377:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:427:U:P	4:AD:13:ARG:HH22	2.32	0.53
1:AA:658:G:H2'	1:AA:659:U:H6	1.73	0.53
7:AG:152:ALA:O	7:AG:155:ARG:HG3	2.07	0.53
11:AK:21:ILE:HD12	11:AK:21:ILE:N	2.23	0.53
15:AO:17:ARG:CG	15:AO:17:ARG:NH1	2.64	0.53
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.89	0.53
15:AO:81:LEU:HD11	15:AO:85:LEU:HD12	1.89	0.53
23:B1:20:ARG:HD3	23:B1:41:ARG:HD3	1.89	0.53
31:BA:196:A:N3	31:BA:196:A:H2'	2.23	0.53
31:BA:271(X):G:C2'	31:BA:271(Y):U:H5''	2.39	0.53
31:BA:607:U:C2	31:BA:621:A:N1	2.77	0.53
31:BA:675:A:C4	31:BA:804:A:C2	2.96	0.53
31:BA:775:G:C4	31:BA:794:G:C8	2.95	0.53
31:BA:875:G:C4'	51:BZ:170:THR:HG21	2.34	0.53
31:BA:2243:U:H2'	31:BA:2244:U:C6	2.43	0.53
31:BA:2475:C:H5''	31:BA:2475:C:C6	2.43	0.53
31:BA:2801(A):A:H4'	31:BA:2802:G:C2'	2.38	0.53
31:BA:2810:A:C2'	34:BE:61:ARG:NH2	2.68	0.53
33:BD:143:HIS:HD2	33:BD:144:ALA:HB2	1.73	0.53
35:BF:24:LEU:O	35:BF:26:ALA:N	2.41	0.53
36:BG:12:TYR:HA	36:BG:16:ARG:HG3	1.91	0.53
36:BG:45:GLU:HB2	36:BG:47:LYS:HG3	1.89	0.53
38:BI:76:THR:HG22	38:BI:139:GLN:HB3	1.89	0.53
42:BQ:20:ALA:C	42:BQ:22:LYS:H	2.10	0.53
46:BU:57:PHE:O	46:BU:58:ARG:C	2.47	0.53
50:BY:8:LYS:HD2	50:BY:8:LYS:H	1.73	0.53
1:CA:125:U:H2'	1:CA:126:G:C8	2.43	0.53
1:CA:250:A:H1'	1:CA:251:G:OP2	2.09	0.53
1:CA:346:G:H5''	45:DT:41:ARG:NH2	2.24	0.53
1:CA:495:A:H4'	1:CA:496:A:OP1	2.08	0.53
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.08	0.53
1:CA:1320:C:H5'	19:CS:70:LYS:HG2	1.90	0.53
4:CD:128:VAL:O	4:CD:130:GLY:N	2.41	0.53
6:CF:55:ASP:HB2	6:CF:86:ARG:HH12	1.73	0.53
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.91	0.53
23:D1:60:PHE:HZ	23:D1:90:ILE:HG21	1.73	0.53
24:D2:14:ARG:O	24:D2:18:PRO:CD	2.56	0.53
27:D5:4:HIS:HB3	27:D5:5:PRO:CD	2.30	0.53
31:DA:107:C:C2	31:DA:108:U:C5	2.96	0.53
31:DA:128:C:H6	31:DA:128:C:C5'	2.20	0.53
31:DA:2359:C:C2'	31:DA:2360:A:C5'	2.86	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:NZ	33:DD:104:TYR:CB	2.65	0.53
34:DE:16:ARG:O	34:DE:18:ASP:N	2.42	0.53
35:DF:185:ASP:HA	35:DF:188:ARG:HG2	1.89	0.53
35:DF:200:GLU:O	35:DF:204:ASN:HB2	2.09	0.53
38:DI:78:THR:HA	38:DI:141:LYS:HB2	1.90	0.53
38:DI:82:ARG:HG2	38:DI:89:TYR:HD2	1.69	0.53
38:DI:98:ALA:HA	38:DI:109:ILE:CD1	2.39	0.53
41:DP:98:GLU:HG3	41:DP:99:LEU:N	2.21	0.53
51:DZ:102:LEU:HG	51:DZ:123:ASP:HA	1.90	0.53
51:DZ:150:LEU:N	51:DZ:150:LEU:HD13	2.23	0.53
1:AA:52:G:C2'	1:AA:53:A:H5'	2.39	0.53
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.90	0.53
1:AA:939:G:H5''	7:AG:102:ARG:NH2	2.23	0.53
1:AA:1423:G:P	40:BO:49:ARG:NH2	2.82	0.53
1:AA:1478:C:H2'	1:AA:1479:C:H6	1.73	0.53
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.39	0.53
23:B1:40:ARG:HD3	23:B1:41:ARG:N	2.21	0.53
30:B8:62:LEU:CD1	31:BA:242:G:H5''	2.30	0.53
31:BA:310:A:P	50:BY:18:GLY:HA2	2.47	0.53
31:BA:1486:A:H2'	31:BA:1487:G:C8	2.43	0.53
31:BA:2306:C:H5''	31:BA:2307:G:O4'	2.08	0.53
38:BI:2:LYS:HB2	38:BI:39:ALA:CB	2.38	0.53
40:BO:77:ILE:HB	45:BT:74:ARG:HD3	1.91	0.53
42:BQ:17:LEU:HD23	42:BQ:17:LEU:N	2.22	0.53
43:BR:55:ALA:CB	43:BR:79:LEU:HD13	2.35	0.53
48:BW:4:LYS:CE	48:BW:6:ILE:HD11	2.38	0.53
51:BZ:166:SER:OG	51:BZ:168:GLU:N	2.41	0.53
1:CA:1410:G:C4	1:CA:1491:G:N2	2.76	0.53
4:CD:64:LEU:HD12	4:CD:64:LEU:O	2.08	0.53
8:CH:103:VAL:CG2	8:CH:110:ALA:HB2	2.38	0.53
12:CL:32:PHE:HB3	12:CL:85:ILE:O	2.09	0.53
28:D6:40:CYS:SG	28:D6:45:LYS:NZ	2.62	0.53
31:DA:154(A):C:H5	31:DA:171:G:N1	2.07	0.53
31:DA:614:U:O2	31:DA:614:U:O5'	2.26	0.53
31:DA:661:C:O3'	41:DP:18:ARG:HD2	2.08	0.53
31:DA:943:U:OP2	41:DP:38:GLN:OE1	2.25	0.53
31:DA:966:G:C4	31:DA:967:C:C5	2.96	0.53
31:DA:1495:A:H5''	31:DA:1496:A:OP2	2.09	0.53
31:DA:2001:A:H2'	31:DA:2002:G:C8	2.44	0.53
31:DA:2437:U:H2'	31:DA:2438:U:C6	2.44	0.53
32:DB:6:C:C2	32:DB:116:G:N2	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:88:LEU:C	41:DP:90:ARG:H	2.11	0.53
44:DS:16:ASN:C	44:DS:17:ARG:O	2.46	0.53
44:DS:34:HIS:CE1	44:DS:54:LEU:CB	2.89	0.53
45:DT:47:GLY:HA3	45:DT:63:VAL:HG23	1.89	0.53
1:AA:409:G:C2'	1:AA:410:G:H5'	2.38	0.53
1:AA:460:G:O6	1:AA:470:C:H5''	2.09	0.53
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.44	0.53
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.38	0.53
7:AG:115:ARG:HB2	7:AG:118:VAL:HG22	1.90	0.53
8:AH:10:LEU:HD23	8:AH:10:LEU:H	1.72	0.53
9:AI:79:LEU:O	9:AI:79:LEU:HD22	2.08	0.53
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.47	0.53
23:B1:17:SER:O	23:B1:44:PRO:CD	2.43	0.53
24:B2:25:VAL:C	24:B2:27:GLU:H	2.12	0.53
30:B8:31:HIS:O	30:B8:32:LEU:C	2.46	0.53
31:BA:151:C:C2'	31:BA:152:G:H5'	2.39	0.53
31:BA:271(P):C:H2'	31:BA:271(Q):G:C5'	2.39	0.53
31:BA:838:C:O2'	31:BA:839:U:H5'	2.08	0.53
31:BA:866:A:C6	31:BA:914:C:C5	2.97	0.53
31:BA:1176:G:C4'	31:BA:1177:A:OP1	2.57	0.53
31:BA:1407:C:O2	31:BA:1407:C:H2'	2.07	0.53
31:BA:1887:C:C2'	31:BA:1888:G:H5'	2.38	0.53
31:BA:2463:C:O2'	31:BA:2464:C:H5'	2.09	0.53
33:BD:8:PRO:HB3	33:BD:14:ARG:CB	2.34	0.53
33:BD:167:GLY:C	33:BD:168:ARG:HG2	2.29	0.53
39:BN:67:LEU:HB3	39:BN:88:GLU:CD	2.29	0.53
41:BP:23:PRO:HB2	41:BP:33:ARG:HG3	1.91	0.53
44:BS:17:ARG:NE	44:BS:89:ARG:HH21	2.06	0.53
46:BU:75:ASN:HB2	46:BU:78:THR:H	1.73	0.53
47:BV:47:VAL:HG21	47:BV:49:THR:HB	1.89	0.53
49:BX:21:PHE:N	49:BX:21:PHE:CD1	2.76	0.53
50:BY:77:PRO:O	50:BY:78:ALA:HB2	2.09	0.53
51:BZ:102:LEU:HG	51:BZ:123:ASP:HA	1.91	0.53
51:BZ:128:VAL:CG2	51:BZ:161:VAL:HG22	2.39	0.53
1:CA:278:G:O4'	1:CA:282:A:H1'	2.08	0.53
1:CA:1371:G:C6	1:CA:1372:U:C4	2.97	0.53
5:CE:103:GLY:C	5:CE:106:PRO:HD2	2.29	0.53
6:CF:18:GLN:O	6:CF:21:LEU:HB2	2.09	0.53
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.08	0.53
7:CG:92:SER:OG	7:CG:93:PRO:HD2	2.08	0.53
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:92:ARG:HD2	8:CH:92:ARG:N	2.23	0.53
14:CN:45:ARG:HG2	14:CN:49:HIS:CD2	2.43	0.53
20:CT:56:MET:HG2	20:CT:84:LEU:HD11	1.90	0.53
30:D8:30:ARG:O	30:D8:31:HIS:O	2.25	0.53
31:DA:64:A:C2'	31:DA:65:C:H5'	2.39	0.53
31:DA:109:G:C4	31:DA:110:G:C8	2.97	0.53
31:DA:189:G:H2'	31:DA:205:G:N2	2.23	0.53
31:DA:643:A:O2'	31:DA:644:A:H5'	2.08	0.53
31:DA:1341:U:H3'	31:DA:1397:U:O2	2.09	0.53
31:DA:2884:U:C2'	31:DA:2885:C:H5'	2.38	0.53
33:DD:70:TRP:HZ3	33:DD:146:GLU:OE2	1.92	0.53
33:DD:255:LYS:O	33:DD:255:LYS:HD2	2.09	0.53
35:DF:84:VAL:O	35:DF:85:GLY:C	2.46	0.53
36:DG:33:ARG:HB2	36:DG:162:THR:OG1	2.09	0.53
36:DG:81:LYS:O	36:DG:82:LEU:O	2.26	0.53
37:DH:138:LYS:O	37:DH:139:GLN:C	2.47	0.53
43:DR:104:ARG:HD2	43:DR:111:LEU:HD11	1.91	0.53
45:DT:31:SER:HA	45:DT:32:TYR:CE2	2.44	0.53
49:DX:35:THR:CB	49:DX:75:ASP:OD2	2.53	0.53
50:DY:75:ILE:HD11	50:DY:80:GLY:N	2.24	0.53
51:DZ:128:VAL:CG2	51:DZ:161:VAL:HG22	2.38	0.53
1:AA:659:U:H2'	1:AA:660:G:C5'	2.38	0.53
1:AA:1157:A:C1'	1:AA:1181:G:H21	2.21	0.53
1:AA:1410:G:C4	1:AA:1491:G:N2	2.77	0.53
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.89	0.53
2:AB:22:LYS:HZ3	2:AB:40:HIS:HE1	1.55	0.53
2:AB:87:ARG:O	2:AB:87:ARG:HD2	2.09	0.53
6:AF:55:ASP:HB2	6:AF:86:ARG:HH12	1.74	0.53
13:AM:32:GLU:OE2	13:AM:64:TRP:HH2	1.92	0.53
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	1.91	0.53
20:AT:46:GLU:HG2	20:AT:48:LYS:HE2	1.90	0.53
20:AT:55:ILE:O	20:AT:58:LYS:N	2.41	0.53
24:B2:14:ARG:CZ	24:B2:57:ILE:HB	2.38	0.53
24:B2:50:ILE:O	24:B2:51:ARG:HB3	2.08	0.53
30:B8:35:GLN:HA	31:BA:2420:C:OP2	2.08	0.53
30:B8:35:GLN:HE21	30:B8:36:LYS:NZ	2.07	0.53
31:BA:92:A:C2'	31:BA:93:G:O4'	2.56	0.53
31:BA:196:A:C4	31:BA:805:G:C6	2.96	0.53
31:BA:435:C:C5	31:BA:436:C:C5	2.97	0.53
31:BA:848:G:H2'	31:BA:849:A:C8	2.44	0.53
31:BA:1947:C:C2'	31:BA:1948:G:C5'	2.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2291:U:H5''	31:BA:2380:C:O2'	2.09	0.53
31:BA:2845:G:C2'	31:BA:2846:G:H5'	2.39	0.53
35:BF:63:LYS:HE2	35:BF:67:GLN:HB2	1.89	0.53
39:BN:67:LEU:C	39:BN:69:GLN:N	2.63	0.53
42:BQ:137:TYR:HE2	51:BZ:74:VAL:O	1.91	0.53
42:BQ:140:ALA:CB	51:BZ:53:ILE:HG13	2.30	0.53
43:BR:101:ALA:O	43:BR:102:GLU:HB2	2.09	0.53
45:BT:47:GLY:HA3	45:BT:63:VAL:HG23	1.91	0.53
50:BY:68:HIS:N	50:BY:71:LYS:NZ	2.57	0.53
1:CA:457:C:H2'	1:CA:458:C:H6	1.74	0.53
1:CA:945:G:H2'	1:CA:945:G:N3	2.24	0.53
1:CA:1157:A:C1'	1:CA:1181:G:H21	2.21	0.53
1:CA:1385:G:C2	1:CA:1386:G:C8	2.97	0.53
1:CA:1399:C:H4'	1:CA:1400:C:H5''	1.91	0.53
4:CD:176:LEU:HG	4:CD:178:VAL:HG22	1.90	0.53
11:CK:57:THR:HG22	11:CK:59:TYR:H	1.73	0.53
12:CL:58:VAL:O	12:CL:65:GLU:HA	2.09	0.53
15:CO:9:GLN:HA	15:CO:12:ILE:HD12	1.91	0.53
22:D0:1:MET:CB	31:DA:2602:A:H62	2.21	0.53
31:DA:102:G:O2'	31:DA:103:A:P	2.65	0.53
31:DA:154:G:H2'	31:DA:154(A):C:O2	2.09	0.53
31:DA:824:A:O2'	31:DA:825:C:H5'	2.09	0.53
31:DA:1359:A:H2'	31:DA:1360:A:H5'	1.90	0.53
31:DA:1587:A:H3'	31:DA:1588:C:H6	1.73	0.53
31:DA:1859:A:C2	31:DA:1884:A:H1'	2.44	0.53
31:DA:1935:G:C6	31:DA:1962:C:C6	2.96	0.53
31:DA:1952:A:C6	31:DA:1953:A:N1	2.76	0.53
31:DA:2820:A:H1'	43:DR:5:LYS:HZ3	1.74	0.53
33:DD:43:ARG:NH1	33:DD:44:ASN:ND2	2.57	0.53
37:DH:118:PRO:HG2	37:DH:121:ILE:HD12	1.91	0.53
39:DN:75:TYR:N	39:DN:75:TYR:CD1	2.76	0.53
43:DR:9:LYS:O	43:DR:10:LEU:HG	2.09	0.53
1:AA:41:G:H2'	1:AA:42:G:C8	2.43	0.53
1:AA:173:U:O4'	1:AA:197:A:C4	2.62	0.53
1:AA:412:A:C8	4:AD:35:ARG:NH2	2.76	0.53
1:AA:520:A:H2	1:AA:536:C:O2	1.91	0.53
1:AA:731:G:H5'	1:AA:766:A:H4'	1.91	0.53
1:AA:971:G:OP1	1:AA:971:G:H3'	2.08	0.53
1:AA:994:A:N6	1:AA:1046:A:C2	2.77	0.53
10:AJ:29:ARG:HG2	10:AJ:29:ARG:O	2.07	0.53
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.09	0.53
24:B2:44:LEU:O	24:B2:44:LEU:HD12	2.09	0.53
30:B8:30:ARG:HB2	31:BA:2393:A:OP1	2.08	0.53
31:BA:1438:U:O2'	31:BA:1439:A:H5'	2.08	0.53
31:BA:1515:G:H2'	31:BA:1516:C:C6	2.44	0.53
31:BA:2360:A:O2'	31:BA:2361:A:H5''	2.08	0.53
31:BA:2854:G:H2'	31:BA:2855:C:C6	2.43	0.53
33:BD:70:TRP:C	33:BD:70:TRP:CD1	2.82	0.53
33:BD:83:GLU:HB2	33:BD:92:ILE:HD11	1.90	0.53
33:BD:267:SER:O	33:BD:268:ARG:HB2	2.08	0.53
36:BG:46:ALA:H	36:BG:82:LEU:CD1	2.22	0.53
39:BN:13:TRP:O	39:BN:135:PRO:HG2	2.09	0.53
42:BQ:16:ARG:CG	42:BQ:17:LEU:H	2.21	0.53
42:BQ:16:ARG:CG	42:BQ:17:LEU:N	2.72	0.53
46:BU:91:ASP:O	46:BU:92:ARG:HB3	2.08	0.53
50:BY:52:SER:C	50:BY:54:LYS:H	2.12	0.53
50:BY:88:LYS:O	50:BY:89:PHE:HB2	2.07	0.53
1:CA:69:G:C2	1:CA:70:G:C5	2.97	0.53
1:CA:343:U:O2'	1:CA:346:G:O6	2.25	0.53
1:CA:380:G:N2	1:CA:384:G:C5	2.77	0.53
1:CA:380:G:N2	1:CA:384:G:C6	2.77	0.53
1:CA:460:G:O6	1:CA:470:C:H5''	2.09	0.53
1:CA:963:G:N3	10:CJ:55:LYS:NZ	2.50	0.53
1:CA:994:A:N6	1:CA:1046:A:C2	2.76	0.53
1:CA:1201:A:H4'	1:CA:1202:G:O5'	2.09	0.53
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.24	0.53
4:CD:170:VAL:HG13	4:CD:171:GLY:N	2.22	0.53
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.42	0.53
12:CL:110:VAL:HG23	12:CL:120:TYR:O	2.08	0.53
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.91	0.53
23:D1:94:LEU:HD22	23:D1:95:LEU:HB2	1.89	0.53
29:D7:47:ARG:C	29:D7:48:LYS:HD3	2.29	0.53
31:DA:1802:A:N1	31:DA:1822:G:H1'	2.24	0.53
31:DA:2378:A:C2	44:DS:20:ARG:NH1	2.77	0.53
32:DB:73:A:H3'	32:DB:74:U:H6	1.74	0.53
33:DD:108:PRO:HD2	33:DD:111:LEU:HG	1.90	0.53
34:DE:70:ALA:O	34:DE:71:GLY:C	2.47	0.53
39:DN:47:ALA:CB	39:DN:112:LEU:HD11	2.34	0.53
40:DO:98:VAL:HG13	40:DO:117:LEU:HB3	1.90	0.53
42:DQ:20:ALA:HA	42:DQ:98:LYS:HD3	1.90	0.53
42:DQ:23:GLY:O	42:DQ:100:GLY:CA	2.51	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:45:PHE:HE2	45:DT:63:VAL:HG22	1.74	0.53
46:DU:50:ARG:CZ	47:DV:75:PHE:CE2	2.92	0.53
47:DV:67:GLY:O	47:DV:69:LYS:N	2.42	0.53
50:DY:96:ILE:CG1	50:DY:99:CYS:SG	2.97	0.53
1:AA:343:U:N3	1:AA:347:G:C6	2.76	0.53
1:AA:623:C:C4	1:AA:624:C:C4	2.97	0.53
1:AA:980:C:H5'	1:AA:981:U:C5	2.43	0.53
1:AA:1477:C:H2'	1:AA:1478:C:H6	1.72	0.53
6:AF:24:GLU:HG2	6:AF:28:ARG:CZ	2.39	0.53
7:AG:146:GLU:OE2	7:AG:149:ARG:HD2	2.09	0.53
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.29	0.53
18:AR:44:LEU:HA	18:AR:49:LYS:O	2.09	0.53
20:AT:93:GLU:HG2	20:AT:93:GLU:O	2.09	0.53
27:B5:4:HIS:O	31:BA:2056:G:N2	2.42	0.53
31:BA:873:G:N2	31:BA:905:U:C2	2.77	0.53
31:BA:993:G:N2	47:BV:91:TYR:OH	2.42	0.53
31:BA:1282:U:H2'	31:BA:1283:G:O4'	2.09	0.53
31:BA:1312:U:H4'	31:BA:1313:U:O5'	2.08	0.53
31:BA:1410:G:H1	31:BA:1592:C:H42	1.55	0.53
31:BA:1693:U:H4'	31:BA:1694:C:OP2	2.09	0.53
31:BA:2069:G:C2'	31:BA:2070:G:H5'	2.38	0.53
31:BA:2646:C:OP2	31:BA:2732:G:O2'	2.18	0.53
31:BA:2657:A:H2	31:BA:2664:G:N2	2.07	0.53
34:BE:51:PHE:CE1	34:BE:52:LEU:HG	2.43	0.53
41:BP:62:LEU:H	41:BP:62:LEU:CD1	2.14	0.53
42:BQ:75:THR:HA	42:BQ:89:ASN:H	1.74	0.53
42:BQ:78:PRO:O	42:BQ:79:LEU:CB	2.57	0.53
43:BR:11:ASN:CG	43:BR:12:ARG:N	2.61	0.53
47:BV:56:SER:O	47:BV:57:VAL:HB	2.09	0.53
48:BW:71:VAL:HA	48:BW:107:LEU:HD12	1.91	0.53
50:BY:28:LYS:HD2	50:BY:37:VAL:CG1	2.38	0.53
50:BY:45:VAL:HG11	50:BY:60:PHE:C	2.28	0.53
1:CA:242:C:H2'	1:CA:243:A:H5'	1.90	0.53
1:CA:936:C:H2'	1:CA:937:A:O4'	2.08	0.53
2:CB:239:VAL:O	2:CB:239:VAL:HG12	2.09	0.53
5:CE:77:PRO:HG2	5:CE:142:LEU:HD22	1.90	0.53
6:CF:7:ASN:N	6:CF:7:ASN:ND2	2.56	0.53
16:CP:75:ARG:C	16:CP:77:ALA:H	2.12	0.53
25:D3:6:VAL:HG12	25:D3:54:VAL:HG11	1.89	0.53
30:D8:31:HIS:CD2	31:DA:2419:U:O4	2.62	0.53
31:DA:28:A:C2	31:DA:513:A:C8	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1227:G:OP1	46:DU:13:LYS:HG2	2.09	0.53
31:DA:1741:A:N7	31:DA:1742:G:C2	2.77	0.53
31:DA:1885:A:H2'	31:DA:1886:C:O4'	2.09	0.53
31:DA:2069:G:C2'	31:DA:2070:G:H5'	2.39	0.53
31:DA:2518:A:H5'	31:DA:2518:A:C8	2.44	0.53
31:DA:2543:G:H2'	31:DA:2544:G:C8	2.44	0.53
31:DA:2689:U:H4'	31:DA:2690:C:OP2	2.09	0.53
34:DE:60:ASN:N	34:DE:60:ASN:HD22	2.06	0.53
34:DE:77:ILE:HG23	34:DE:78:LEU:N	2.24	0.53
34:DE:120:TRP:O	34:DE:121:ASN:HB2	2.09	0.53
36:DG:125:PHE:CE2	36:DG:173:LEU:HD12	2.44	0.53
39:DN:57:ALA:O	39:DN:58:ASP:C	2.48	0.53
41:DP:30:THR:CG2	41:DP:31:ALA:N	2.69	0.53
41:DP:62:LEU:N	41:DP:62:LEU:HD13	2.24	0.53
42:DQ:54:MET:HB3	42:DQ:64:ILE:HD13	1.91	0.53
43:DR:37:THR:OG1	43:DR:40:LYS:HG3	2.08	0.53
44:DS:56:LEU:O	44:DS:57:LYS:CB	2.56	0.53
45:DT:32:TYR:HD2	45:DT:81:PRO:O	1.91	0.53
45:DT:91:ARG:HB2	45:DT:116:ALA:HA	1.91	0.53
50:DY:35:TYR:CD2	50:DY:69:ALA:HB3	2.43	0.53
1:AA:116:A:H61	1:AA:313:A:H1'	1.73	0.53
1:AA:355:C:C2	1:AA:356:A:C8	2.96	0.53
1:AA:664:G:H22	1:AA:741:G:H1	1.57	0.53
4:AD:22:LYS:HB2	4:AD:26:CYS:SG	2.49	0.53
4:AD:176:LEU:HG	4:AD:178:VAL:HG22	1.91	0.53
7:AG:92:SER:OG	7:AG:93:PRO:HD2	2.09	0.53
9:AI:10:ARG:HG2	9:AI:104:ARG:O	2.09	0.53
9:AI:53:VAL:HB	9:AI:92:TYR:HE2	1.74	0.53
13:AM:68:GLY:O	13:AM:69:GLU:HB2	2.07	0.53
14:AN:45:ARG:HG2	14:AN:49:HIS:CD2	2.44	0.53
15:AO:9:GLN:HA	15:AO:12:ILE:HD12	1.91	0.53
20:AT:56:MET:HG2	20:AT:84:LEU:HD11	1.91	0.53
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.09	0.53
28:B6:42:TRP:HA	28:B6:42:TRP:HE3	1.73	0.53
31:BA:207:A:H2'	31:BA:208:C:O4'	2.07	0.53
31:BA:528:A:C2'	31:BA:529:A:H5'	2.39	0.53
31:BA:1109:C:C5	31:BA:1110:G:C5	2.96	0.53
31:BA:1225:G:OP1	47:BV:88:ARG:HB3	2.09	0.53
31:BA:1332:G:N2	31:BA:1609:A:H2'	2.24	0.53
31:BA:2286:A:HO2'	31:BA:2286:A:H8	1.53	0.53
35:BF:89:VAL:HG12	35:BF:90:PHE:H	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:131:TYR:O	36:BG:159:VAL:HG12	2.09	0.53
38:BI:15:VAL:HG23	38:BI:16:GLY:N	2.23	0.53
41:BP:148:LEU:HD22	41:BP:148:LEU:O	2.09	0.53
44:BS:35:ILE:H	44:BS:53:SER:CB	2.22	0.53
47:BV:54:GLY:O	47:BV:56:SER:OG	2.17	0.53
49:BX:76:ARG:O	49:BX:77:LYS:HB2	2.08	0.53
50:BY:96:ILE:CG1	50:BY:99:CYS:SG	2.97	0.53
1:CA:68:G:H5'	1:CA:171:A:H1'	1.90	0.53
1:CA:193:C:H2'	1:CA:194:C:H6	1.74	0.53
1:CA:343:U:N3	1:CA:347:G:C6	2.77	0.53
1:CA:723:U:H5''	1:CA:724:G:OP2	2.09	0.53
1:CA:763:G:H2'	1:CA:764:C:H6	1.74	0.53
1:CA:853:G:H2'	1:CA:854:G:C8	2.43	0.53
3:CC:153:VAL:HG12	3:CC:154:SER:H	1.74	0.53
12:CL:32:PHE:CB	12:CL:84:LEU:HD21	2.39	0.53
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.09	0.53
27:D5:52:TYR:O	27:D5:52:TYR:CG	2.62	0.53
31:DA:721:C:H2'	31:DA:721:C:O2	2.09	0.53
31:DA:790:C:O2'	31:DA:791:C:H5'	2.09	0.53
31:DA:995:C:N3	46:DU:57:PHE:CE2	2.77	0.53
31:DA:1109:C:C5	31:DA:1110:G:C5	2.97	0.53
31:DA:1176:G:C4'	31:DA:1177:A:OP1	2.57	0.53
31:DA:1282:U:H2'	31:DA:1283:G:O4'	2.08	0.53
31:DA:2552:U:H2'	31:DA:2554:U:OP2	2.09	0.53
31:DA:2639:A:C2'	31:DA:2640:G:H5'	2.39	0.53
31:DA:2845:G:C2'	31:DA:2846:G:H5'	2.39	0.53
32:DB:31:C:H4'	36:DG:29:TRP:CH2	2.44	0.53
34:DE:12:THR:O	34:DE:23:VAL:HG23	2.09	0.53
35:DF:113:ALA:HB1	35:DF:186:ILE:HG21	1.89	0.53
35:DF:141:ALA:O	35:DF:144:LYS:HB3	2.09	0.53
36:DG:98:ARG:O	36:DG:101:ILE:HG22	2.09	0.53
39:DN:2:LYS:NZ	46:DU:94:ASN:HD21	2.07	0.53
50:DY:75:ILE:O	50:DY:76:CYS:HB2	2.09	0.53
1:AA:92:C:H2'	1:AA:93:G:C8	2.43	0.52
1:AA:136:C:H42	1:AA:227:G:H1	1.56	0.52
1:AA:457:C:H2'	1:AA:458:C:H6	1.74	0.52
1:AA:495:A:H4'	1:AA:496:A:OP1	2.09	0.52
1:AA:1452:C:O4'	1:AA:1456:G:C2	2.61	0.52
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	2.10	0.52
13:AM:32:GLU:OE2	13:AM:64:TRP:CH2	2.63	0.52
19:AS:63:THR:O	19:AS:66:MET:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1:MET:CB	31:BA:2602:A:H62	2.22	0.52
24:B2:18:PRO:O	24:B2:22:GLU:HB2	2.09	0.52
31:BA:1925:C:C2'	31:BA:1926:U:H5'	2.38	0.52
31:BA:2017:U:H5''	31:BA:2018:G:P	2.49	0.52
31:BA:2092:U:H4'	31:BA:2093:G:O5'	2.09	0.52
31:BA:2652:C:O2'	31:BA:2653:U:H5'	2.08	0.52
32:BB:28:C:C2	32:BB:29:A:C8	2.97	0.52
33:BD:35:LYS:NZ	33:BD:65:ILE:HA	2.24	0.52
33:BD:246:PRO:HB2	33:BD:255:LYS:HG3	1.90	0.52
40:BO:35:VAL:HA	40:BO:62:VAL:HG12	1.91	0.52
40:BO:112:MET:HA	40:BO:112:MET:HE3	1.91	0.52
41:BP:108:LYS:C	41:BP:110:TYR:H	2.11	0.52
43:BR:10:LEU:HD22	43:BR:17:ARG:HD2	1.91	0.52
46:BU:92:ARG:NE	47:BV:11:GLN:HG2	2.23	0.52
1:CA:322:C:C5	1:CA:328:C:H5	2.20	0.52
1:CA:1236:A:O2'	1:CA:1304:G:H4'	2.10	0.52
1:CA:1255:G:H5'	1:CA:1256:A:OP1	2.09	0.52
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.44	0.52
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.90	0.52
15:CO:67:LEU:HD22	15:CO:78:TYR:HE1	1.74	0.52
23:D1:40:ARG:HD3	23:D1:41:ARG:N	2.19	0.52
28:D6:19:ARG:O	28:D6:20:ASN:O	2.27	0.52
31:DA:271(T):C:C2	31:DA:271(U):G:C8	2.97	0.52
31:DA:387:U:H4'	31:DA:388:G:O5'	2.09	0.52
31:DA:693:C:H2'	31:DA:694:U:C6	2.44	0.52
31:DA:706:A:H2'	31:DA:707:G:O4'	2.09	0.52
31:DA:1162:G:O2'	47:DV:92:THR:HG23	2.07	0.52
31:DA:1526:G:C6	31:DA:1527:G:C2	2.97	0.52
31:DA:1820:U:C2	33:DD:202:LYS:HB3	2.43	0.52
31:DA:1826:G:H2'	31:DA:1827:C:H6	1.74	0.52
31:DA:2086:U:H2'	31:DA:2087:G:C8	2.44	0.52
31:DA:2476:A:C2	31:DA:2477:C:H5''	2.44	0.52
31:DA:2494:G:C4	31:DA:2495:G:C8	2.97	0.52
31:DA:2728:U:O2'	31:DA:2729:G:H5'	2.07	0.52
34:DE:36:ARG:HH11	34:DE:85:ASN:ND2	2.07	0.52
38:DI:144:VAL:HG12	38:DI:145:VAL:H	1.74	0.52
42:DQ:32:TYR:CE2	42:DQ:133:ARG:HG2	2.43	0.52
44:DS:17:ARG:C	44:DS:19:LYS:H	2.12	0.52
44:DS:42:ASP:O	44:DS:43:GLU:HB2	2.08	0.52
44:DS:56:LEU:HD23	44:DS:56:LEU:C	2.30	0.52
49:DX:31:HIS:HD2	49:DX:33:LYS:H	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:83:VAL:O	49:DX:83:VAL:HG23	2.09	0.52
50:DY:71:LYS:HB2	50:DY:71:LYS:HZ3	1.72	0.52
51:DZ:10:ARG:HH21	51:DZ:26:GLY:H	1.55	0.52
1:AA:343:U:O2	1:AA:347:G:C2	2.62	0.52
1:AA:353:A:C2'	1:AA:354:G:OP2	2.56	0.52
1:AA:377:G:O2'	1:AA:378:G:H5'	2.09	0.52
1:AA:380:G:N2	1:AA:384:G:C6	2.77	0.52
1:AA:621:A:C2'	1:AA:622:A:H5'	2.39	0.52
1:AA:804:U:H5''	1:AA:805:C:OP2	2.09	0.52
1:AA:858:G:O6	1:AA:869:G:H3'	2.08	0.52
1:AA:1074:G:C2	1:AA:1102:A:C2	2.97	0.52
1:AA:1255:G:H5'	1:AA:1256:A:OP1	2.09	0.52
2:AB:98:LEU:HB2	2:AB:101:MET:CE	2.39	0.52
5:AE:126:ARG:HA	5:AE:131:ILE:HD11	1.90	0.52
6:AF:18:GLN:O	6:AF:21:LEU:HB2	2.09	0.52
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.92	0.52
16:AP:79:VAL:HG12	16:AP:80:PHE:CG	2.44	0.52
18:AR:59:SER:OG	18:AR:62:GLU:HG3	2.09	0.52
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.09	0.52
24:B2:26:ARG:NE	24:B2:29:LYS:HE2	2.24	0.52
30:B8:22:VAL:O	30:B8:49:VAL:HG23	2.08	0.52
31:BA:481:G:O2'	31:BA:482:A:P	2.67	0.52
31:BA:536:A:H2'	31:BA:537:C:H6	1.74	0.52
31:BA:2863:C:OP1	45:BT:93:ARG:NH1	2.43	0.52
33:BD:64:ILE:O	33:BD:64:ILE:HG12	2.08	0.52
37:BH:85:LYS:NZ	37:BH:133:VAL:HB	2.24	0.52
38:BI:6:LEU:HD23	38:BI:6:LEU:N	2.25	0.52
41:BP:105:LEU:HD12	41:BP:105:LEU:N	2.24	0.52
45:BT:35:LYS:O	45:BT:37:GLY:N	2.43	0.52
45:BT:90:GLN:HG2	45:BT:120:ARG:NH2	2.24	0.52
45:BT:109:GLU:HB3	45:BT:113:LYS:HE3	1.90	0.52
46:BU:85:LYS:O	46:BU:116:ALA:HB1	2.09	0.52
47:BV:53:GLU:O	47:BV:55:ALA:N	2.43	0.52
49:BX:88:LYS:N	49:BX:88:LYS:HD2	2.23	0.52
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD1	2.10	0.52
1:CA:234:C:H2'	1:CA:235:C:H6	1.74	0.52
1:CA:590:C:H2'	1:CA:591:U:H6	1.74	0.52
1:CA:1410:G:O2'	1:CA:1411:C:H5'	2.09	0.52
6:CF:50:TYR:CZ	18:CR:77:GLY:HA2	2.43	0.52
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.30	0.52
28:D6:34:LEU:HD22	28:D6:50:ARG:NH1	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:32:LEU:H	30:D8:32:LEU:CD1	2.11	0.52
31:DA:151:C:C2'	31:DA:152:G:H5'	2.40	0.52
31:DA:271(P):C:C2'	31:DA:271(Q):G:H5'	2.38	0.52
31:DA:315:G:H2'	31:DA:316:C:C6	2.43	0.52
31:DA:643:A:C2'	31:DA:644:A:O5'	2.58	0.52
31:DA:1420:U:O2'	31:DA:1421:G:OP1	2.26	0.52
31:DA:1947:C:C2'	31:DA:1948:G:C5'	2.88	0.52
31:DA:2065:C:H2'	31:DA:2066:C:H6	1.72	0.52
31:DA:2199:A:H5''	31:DA:2200:C:OP2	2.09	0.52
31:DA:2660:A:C2'	31:DA:2661:G:O5'	2.57	0.52
31:DA:2713:A:C3'	31:DA:2714:G:C5'	2.86	0.52
31:DA:2762:G:H5'	31:DA:2762:G:C8	2.45	0.52
32:DB:60:C:O2	32:DB:61:G:C8	2.63	0.52
34:DE:31:CYS:HB3	34:DE:49:LEU:HD12	1.90	0.52
37:DH:148:ILE:O	37:DH:162:ILE:HD11	2.08	0.52
38:DI:125:GLU:OE1	38:DI:141:LYS:HG2	2.09	0.52
40:DO:42:SER:OG	40:DO:44:LYS:HE2	2.09	0.52
42:DQ:16:ARG:CG	42:DQ:17:LEU:H	2.23	0.52
44:DS:28:VAL:O	44:DS:89:ARG:HB2	2.08	0.52
45:DT:33:LYS:H	45:DT:33:LYS:HZ2	1.56	0.52
47:DV:61:VAL:O	47:DV:62:LEU:HD23	2.08	0.52
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD2	2.09	0.52
1:AA:262:A:C6	1:AA:263:A:N6	2.77	0.52
1:AA:626:U:C2	1:AA:627:G:C8	2.98	0.52
1:AA:1084:G:OP1	1:AA:1086:U:C2	2.62	0.52
1:AA:1452:C:H4'	1:AA:1456:G:N3	2.24	0.52
2:AB:20:GLU:HG3	2:AB:189:ASP:OD2	2.09	0.52
2:AB:71:VAL:HG22	2:AB:93:VAL:HB	1.90	0.52
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.91	0.52
8:AH:123:GLU:O	8:AH:127:LEU:HB2	2.10	0.52
14:AN:6:LEU:HD23	14:AN:9:LYS:HD3	1.90	0.52
19:AS:29:ARG:HB3	19:AS:47:HIS:HA	1.91	0.52
31:BA:143:G:H1'	49:BX:38:GLU:HG3	1.91	0.52
31:BA:866:A:C6	31:BA:914:C:C6	2.98	0.52
31:BA:1047:G:H21	31:BA:1111:A:N6	2.04	0.52
31:BA:1179:C:H3'	31:BA:1180:C:H5''	1.90	0.52
31:BA:1587:A:H3'	31:BA:1588:C:H6	1.74	0.52
31:BA:2660:A:C5'	31:BA:2661:G:N2	2.71	0.52
34:BE:116:VAL:HG13	34:BE:122:PHE:HB2	1.91	0.52
34:BE:201:THR:CG2	34:BE:202:LYS:N	2.71	0.52
35:BF:200:GLU:O	35:BF:204:ASN:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:144:VAL:HG12	38:BI:145:VAL:H	1.74	0.52
40:BO:24:VAL:HB	40:BO:33:ALA:HB2	1.90	0.52
41:BP:17:LYS:O	41:BP:19:VAL:HG23	2.09	0.52
45:BT:91:ARG:HB3	45:BT:116:ALA:HA	1.90	0.52
50:BY:45:VAL:CG1	50:BY:62:GLU:HB2	2.33	0.52
1:CA:300:A:H8	1:CA:300:A:O5'	1.91	0.52
1:CA:475:G:H2'	1:CA:476:G:C8	2.41	0.52
1:CA:657:G:C2	1:CA:658:G:C8	2.97	0.52
1:CA:1125:U:H2'	1:CA:1126:U:OP2	2.10	0.52
3:CC:138:VAL:HG22	3:CC:151:VAL:CG2	2.38	0.52
8:CH:114:THR:HG23	8:CH:117:GLY:O	2.08	0.52
9:CI:55:ALA:CB	9:CI:58:ARG:HD2	2.40	0.52
15:CO:36:ILE:HG22	15:CO:37:ASN:HD22	1.74	0.52
20:CT:63:ILE:HD13	20:CT:80:ARG:HB2	1.90	0.52
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.09	0.52
22:D0:27:GLU:HB3	31:DA:856:C:H1'	1.92	0.52
22:D0:65:GLY:HA2	22:D0:84:LEU:HD21	1.90	0.52
28:D6:28:ARG:CA	28:D6:32:ASN:HB3	2.39	0.52
31:DA:495:G:H1'	48:DW:57:ASN:ND2	2.23	0.52
31:DA:814:C:H5	41:DP:27:HIS:CD2	2.27	0.52
31:DA:991:C:O2	31:DA:1164:G:C2	2.62	0.52
31:DA:1497:U:H5''	31:DA:1498:C:C5	2.45	0.52
31:DA:1642:G:C2'	31:DA:1643:G:H5'	2.40	0.52
31:DA:1751:C:HO2'	31:DA:2861:G:HO2'	1.55	0.52
31:DA:2287:A:H61	31:DA:2344:U:H3	1.49	0.52
31:DA:2291:U:H5''	31:DA:2380:C:O2'	2.09	0.52
31:DA:2410:G:C2	31:DA:2411:A:H1'	2.45	0.52
31:DA:2865:U:C4	31:DA:2866:U:C4	2.97	0.52
33:DD:70:TRP:CD1	33:DD:70:TRP:C	2.82	0.52
33:DD:118:VAL:HG22	33:DD:119:ALA:N	2.24	0.52
36:DG:39:ILE:HB	36:DG:157:ILE:HG22	1.90	0.52
37:DH:153:LYS:HG2	37:DH:154:PRO:N	2.25	0.52
39:DN:34:LEU:O	39:DN:49:GLY:HA3	2.08	0.52
45:DT:30:VAL:HG21	45:DT:83:ILE:H	1.73	0.52
45:DT:51:ARG:CG	45:DT:98:LYS:HE2	2.37	0.52
50:DY:44:ILE:HG22	50:DY:45:VAL:N	2.23	0.52
1:AA:250:A:C4'	1:AA:251:G:O5'	2.52	0.52
1:AA:865:A:C2	1:AA:918:A:H4'	2.45	0.52
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.10	0.52
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.39	0.52
1:AA:1530:G:OP1	1:AA:1530:G:C4'	2.56	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:148:VAL:HG21	8:AH:107:LEU:HD22	1.91	0.52
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.09	0.52
16:AP:74:LEU:HB3	16:AP:79:VAL:HG11	1.91	0.52
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.09	0.52
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.10	0.52
23:B1:10:LYS:O	23:B1:13:ILE:CG2	2.58	0.52
31:BA:142:A:H5''	31:BA:142(A):C:C5	2.45	0.52
31:BA:570:G:H2'	31:BA:2030:A:C5	2.44	0.52
31:BA:643:A:C2'	31:BA:644:A:O5'	2.58	0.52
31:BA:1502:C:H2'	31:BA:1502:C:O2	2.09	0.52
31:BA:1512:U:C2'	31:BA:1513:C:H5'	2.40	0.52
31:BA:1865:G:H2'	31:BA:1876:A:N7	2.25	0.52
31:BA:2036:C:H6	31:BA:2036:C:C5'	2.18	0.52
31:BA:2069:G:H2'	31:BA:2070:G:H5'	1.91	0.52
31:BA:2102:U:C6	31:BA:2187:G:O6	2.63	0.52
31:BA:2476:A:C6	31:BA:2477:C:C5	2.97	0.52
32:BB:21:G:O2'	32:BB:22:U:OP2	2.27	0.52
33:BD:35:LYS:NZ	33:BD:104:TYR:CB	2.61	0.52
33:BD:209:ALA:C	33:BD:210:GLY:O	2.44	0.52
34:BE:31:CYS:HB3	34:BE:49:LEU:HD12	1.89	0.52
35:BF:22:ALA:O	35:BF:26:ALA:CB	2.43	0.52
37:BH:89:ILE:HG22	37:BH:162:ILE:HG22	1.91	0.52
38:BI:82:ARG:HG2	38:BI:89:TYR:HD2	1.71	0.52
42:BQ:85:LYS:HG3	42:BQ:86:GLY:N	2.24	0.52
43:BR:59:ASP:OD1	43:BR:61:HIS:HB3	2.09	0.52
49:BX:87:GLN:HB2	49:BX:88:LYS:HD2	1.92	0.52
50:BY:61:ILE:HD12	50:BY:61:ILE:N	2.24	0.52
1:CA:327:A:O2'	1:CA:329:A:H8	1.92	0.52
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.09	0.52
1:CA:804:U:H5''	1:CA:805:C:OP2	2.09	0.52
1:CA:1441:G:H5''	1:CA:1442:G:H5'	1.90	0.52
6:CF:100:ASN:H	18:CR:23:LYS:HZ2	1.58	0.52
7:CG:97:GLN:HE21	7:CG:101:LEU:HD11	1.73	0.52
12:CL:34:ARG:O	12:CL:61:THR:HG23	2.10	0.52
13:CM:78:ILE:HA	13:CM:81:LEU:HD12	1.92	0.52
14:CN:22:THR:HB	14:CN:33:VAL:HG11	1.90	0.52
31:DA:53:A:H61	31:DA:117:G:C2'	2.23	0.52
31:DA:271(P):C:O2'	31:DA:271(Q):G:H5'	2.09	0.52
31:DA:271(R):G:C2'	31:DA:271(S):G:H5'	2.39	0.52
31:DA:271(T):C:O2	31:DA:271(T):C:H2'	2.09	0.52
31:DA:510:C:H2'	31:DA:511:U:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:528:A:H3'	31:DA:528:A:C8	2.45	0.52
31:DA:1245:G:OP1	41:DP:16:ARG:HD2	2.09	0.52
31:DA:1448:G:H1'	31:DA:1528:A:H61	1.71	0.52
31:DA:2324:C:H5''	31:DA:2325:G:H5'	1.91	0.52
31:DA:2639:A:H2'	31:DA:2640:G:H5'	1.92	0.52
38:DI:8:PRO:HA	38:DI:13:GLY:O	2.10	0.52
41:DP:146:VAL:HG13	41:DP:147:LEU:H	1.74	0.52
42:DQ:141:GLN:HE21	51:DZ:71:VAL:C	2.11	0.52
45:DT:91:ARG:HA	45:DT:117:ASP:H	1.73	0.52
45:DT:91:ARG:HB3	45:DT:116:ALA:HA	1.91	0.52
45:DT:92:GLY:C	45:DT:94:ALA:H	2.13	0.52
45:DT:109:GLU:HB3	45:DT:113:LYS:HE3	1.90	0.52
49:DX:65:ARG:HA	49:DX:65:ARG:HE	1.74	0.52
51:DZ:39:VAL:CG2	51:DZ:44:PHE:HB2	2.39	0.52
1:AA:356:A:H2	1:AA:368:U:O2	1.93	0.52
1:AA:636:U:H2'	1:AA:637:G:C8	2.44	0.52
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.90	0.52
13:AM:97:PRO:O	13:AM:98:VAL:HA	2.10	0.52
16:AP:75:ARG:C	16:AP:77:ALA:H	2.13	0.52
23:B1:10:LYS:CG	23:B1:11:ARG:H	2.22	0.52
24:B2:47:ASN:ND2	24:B2:48:HIS:N	2.57	0.52
27:B5:36:CYS:HB2	27:B5:49:CYS:SG	2.50	0.52
27:B5:57:VAL:CB	27:B5:58:LEU:HD12	2.39	0.52
30:B8:31:HIS:CD2	31:BA:2419:U:O4	2.60	0.52
30:B8:32:LEU:HD13	30:B8:32:LEU:N	2.05	0.52
31:BA:582:G:H2'	31:BA:583:G:C8	2.45	0.52
31:BA:643:A:O2'	31:BA:644:A:H5'	2.09	0.52
31:BA:1045:A:H3'	31:BA:1045:A:N3	2.25	0.52
31:BA:1191:G:OP1	41:BP:35:HIS:ND1	2.42	0.52
33:BD:96:HIS:CE1	33:BD:102:LYS:HD3	2.44	0.52
38:BI:1:MET:O	38:BI:20:ASP:HA	2.09	0.52
38:BI:69:LYS:HG2	38:BI:69:LYS:O	2.10	0.52
39:BN:78:TYR:CD1	39:BN:79:PRO:HD3	2.44	0.52
39:BN:90:MET:O	39:BN:93:THR:O	2.28	0.52
45:BT:31:SER:CA	45:BT:32:TYR:CD2	2.92	0.52
47:BV:38:LEU:HG	47:BV:39:LEU:H	1.74	0.52
1:CA:304:U:H2'	1:CA:305:G:C8	2.45	0.52
1:CA:336:C:O2'	1:CA:337:C:H5'	2.09	0.52
1:CA:356:A:H2	1:CA:368:U:O2	1.91	0.52
1:CA:523:A:H61	12:CL:53:ARG:HH12	1.57	0.52
1:CA:1135:U:H4'	1:CA:1136:U:H5	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:97:TRP:HH2	2:CB:176:GLU:CG	2.22	0.52
2:CB:163:PHE:O	2:CB:164:VAL:HG23	2.10	0.52
5:CE:79:GLU:HB3	5:CE:92:LYS:HG3	1.91	0.52
5:CE:80:ILE:HG22	8:CH:104:ARG:CZ	2.40	0.52
7:CG:121:ALA:O	7:CG:125:MET:HG3	2.10	0.52
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.92	0.52
28:D6:28:ARG:HA	28:D6:32:ASN:HB3	1.91	0.52
31:DA:1006:C:C1'	39:DN:106:MET:HE3	2.35	0.52
31:DA:1332:G:N2	31:DA:1609:A:H2'	2.24	0.52
31:DA:1833:U:O2'	31:DA:1969:A:N1	2.37	0.52
31:DA:2820:A:O4'	43:DR:5:LYS:HG3	2.08	0.52
33:DD:89:SER:HB2	33:DD:159:ALA:HB2	1.92	0.52
33:DD:131:LEU:HD12	33:DD:131:LEU:N	2.25	0.52
33:DD:146:GLU:HB2	33:DD:189:CYS:HB3	1.90	0.52
39:DN:45:ASN:H	39:DN:45:ASN:ND2	2.00	0.52
41:DP:10:PRO:HD2	41:DP:11:GLY:H	1.74	0.52
42:DQ:18:LYS:O	42:DQ:19:GLY:C	2.47	0.52
42:DQ:75:THR:HA	42:DQ:89:ASN:H	1.74	0.52
47:DV:70:ILE:CB	47:DV:90:PRO:HB2	2.38	0.52
50:DY:68:HIS:N	50:DY:71:LYS:HZ1	2.08	0.52
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.44	0.52
2:AB:239:VAL:HG12	2:AB:239:VAL:O	2.09	0.52
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.08	0.52
7:AG:121:ALA:O	7:AG:125:MET:HG3	2.09	0.52
24:B2:55:ARG:HH22	49:BX:3:THR:CG2	2.23	0.52
30:B8:32:LEU:CB	30:B8:35:GLN:N	2.62	0.52
30:B8:35:GLN:HE21	30:B8:36:LYS:HZ3	1.57	0.52
31:BA:330:A:H2	31:BA:1210:A:C2'	2.11	0.52
31:BA:1138:G:H21	39:BN:106:MET:CE	2.21	0.52
31:BA:2712:U:O2'	31:BA:2713:A:H5'	2.10	0.52
33:BD:255:LYS:H	33:BD:255:LYS:CE	2.23	0.52
34:BE:60:ASN:OD1	34:BE:62:PRO:HD2	2.10	0.52
40:BO:90:GLN:O	40:BO:91:LEU:HB2	2.10	0.52
47:BV:70:ILE:HB	47:BV:90:PRO:CB	2.40	0.52
51:BZ:118:GLN:O	51:BZ:120:ILE:N	2.40	0.52
1:CA:187:C:H2'	1:CA:188:C:C6	2.44	0.52
1:CA:579:G:H2'	1:CA:580:U:C6	2.44	0.52
1:CA:665:A:C5	1:CA:733:A:C5	2.98	0.52
1:CA:763:G:O2'	1:CA:764:C:H5'	2.09	0.52
6:CF:12:PRO:HG2	6:CF:55:ASP:OD1	2.09	0.52
6:CF:39:LYS:HB2	6:CF:62:TRP:HZ3	1.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:69:GLU:HG2	6:CF:70:ASP:H	1.73	0.52
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.10	0.52
27:D5:40:LYS:CE	27:D5:46:CYS:HB3	2.39	0.52
28:D6:20:ASN:O	28:D6:21:TYR:CD1	2.63	0.52
30:D8:35:GLN:NE2	30:D8:36:LYS:NZ	2.58	0.52
31:DA:173:G:C6	31:DA:174:C:C4	2.98	0.52
31:DA:784:A:C8	31:DA:792:G:C5	2.97	0.52
31:DA:1138:G:H21	39:DN:106:MET:CE	2.22	0.52
31:DA:1169:G:N2	31:DA:1181:C:C2	2.78	0.52
31:DA:1839:G:C8	31:DA:1927:A:H1'	2.44	0.52
31:DA:1865:G:H2'	31:DA:1876:A:N7	2.24	0.52
31:DA:2632:A:H1'	34:DE:61:ARG:CZ	2.40	0.52
31:DA:2632:A:N3	34:DE:61:ARG:NH1	2.58	0.52
32:DB:41:U:C2'	32:DB:42:C:OP1	2.58	0.52
33:DD:35:LYS:NZ	33:DD:65:ILE:HA	2.25	0.52
33:DD:79:VAL:HG21	33:DD:111:LEU:HD11	1.91	0.52
34:DE:111:ARG:HD2	34:DE:160:TYR:CE1	2.43	0.52
34:DE:174:ASP:OD2	34:DE:175:VAL:N	2.40	0.52
37:DH:54:ARG:CG	37:DH:65:HIS:HD2	2.22	0.52
39:DN:2:LYS:NZ	46:DU:94:ASN:ND2	2.57	0.52
39:DN:95:PRO:HG2	39:DN:96:GLU:OE2	2.09	0.52
44:DS:26:LEU:HD22	44:DS:87:PHE:CD1	2.44	0.52
44:DS:35:ILE:C	44:DS:36:TYR:CD1	2.83	0.52
44:DS:83:LYS:HE2	44:DS:105:ALA:HB2	1.92	0.52
46:DU:91:ASP:OD2	46:DU:96:ALA:N	2.42	0.52
47:DV:51:VAL:CG1	47:DV:52:VAL:N	2.72	0.52
47:DV:69:LYS:O	47:DV:70:ILE:CG2	2.57	0.52
50:DY:49:VAL:HG12	50:DY:53:PRO:HG3	1.92	0.52
51:DZ:152:ALA:HB1	51:DZ:167:PRO:HB2	1.91	0.52
1:AA:70:G:H2'	1:AA:71:C:C6	2.45	0.52
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.92	0.52
1:AA:936:C:H2'	1:AA:937:A:O4'	2.10	0.52
1:AA:1320:C:H5'	19:AS:70:LYS:HG2	1.90	0.52
3:AC:157:ILE:CD1	3:AC:166:GLU:HB2	2.39	0.52
11:AK:15:ALA:HA	11:AK:77:MET:HA	1.91	0.52
23:B1:25:LYS:O	23:B1:26:ARG:HG3	2.10	0.52
28:B6:19:ARG:O	28:B6:20:ASN:O	2.28	0.52
31:BA:185:U:H4'	31:BA:218:A:H4'	1.92	0.52
31:BA:271(D):G:H2'	31:BA:271(E):U:O4'	2.10	0.52
31:BA:790:C:O2'	31:BA:791:C:C5'	2.57	0.52
31:BA:1288:U:H4'	31:BA:1289:C:OP2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2030:A:C5'	31:BA:2031:A:OP1	2.54	0.52
31:BA:2536:G:C5	31:BA:2537:U:C5	2.98	0.52
31:BA:2807:G:H3'	31:BA:2808:U:H5''	1.92	0.52
39:BN:47:ALA:CB	39:BN:112:LEU:HD11	2.31	0.52
43:BR:2:ARG:HB2	43:BR:5:LYS:HE3	1.92	0.52
45:BT:92:GLY:C	45:BT:94:ALA:H	2.12	0.52
47:BV:15:GLU:O	47:BV:98:GLU:OE2	2.28	0.52
1:CA:20:U:H2'	1:CA:21:G:O4'	2.09	0.52
1:CA:342:C:C2'	1:CA:343:U:H5'	2.39	0.52
1:CA:343:U:C2	1:CA:347:G:C2	2.97	0.52
1:CA:553:A:H2'	1:CA:554:C:C6	2.45	0.52
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.25	0.52
1:CA:1316:G:H2'	1:CA:1317:C:H5''	1.91	0.52
1:CA:1470:G:C2'	1:CA:1471:G:H5'	2.39	0.52
3:CC:157:ILE:CD1	3:CC:166:GLU:HB2	2.39	0.52
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.25	0.52
9:CI:53:VAL:HB	9:CI:92:TYR:HE2	1.75	0.52
9:CI:116:LYS:O	9:CI:118:LYS:N	2.42	0.52
19:CS:29:ARG:HB3	19:CS:47:HIS:HA	1.92	0.52
24:D2:57:ILE:HG21	24:D2:59:ARG:NH1	2.24	0.52
31:DA:1027:A:N6	31:DA:1126:A:C4	2.78	0.52
31:DA:2306:C:H5''	31:DA:2307:G:O4'	2.09	0.52
38:DI:109:ILE:HG22	38:DI:130:TYR:OH	2.09	0.52
50:DY:52:SER:O	50:DY:54:LYS:N	2.41	0.52
1:AA:376:G:H2'	1:AA:377:G:H8	1.74	0.52
1:AA:707:C:O2	1:AA:708:C:C6	2.63	0.52
1:AA:929:G:C6	1:AA:930:C:N4	2.78	0.52
1:AA:989:C:N4	1:AA:1216:G:H1	2.07	0.52
2:AB:135:GLN:O	2:AB:139:LYS:HB2	2.09	0.52
3:AC:108:ASN:ND2	3:AC:111:LEU:HD12	2.24	0.52
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.10	0.52
7:AG:111:ARG:HB3	7:AG:113:GLU:HG2	1.92	0.52
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.92	0.52
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.10	0.52
20:AT:75:ASN:ND2	20:AT:75:ASN:H	2.07	0.52
24:B2:22:GLU:O	24:B2:25:VAL:HG12	2.10	0.52
31:BA:309:G:N3	31:BA:329:G:O2'	2.41	0.52
31:BA:357:A:C2	31:BA:358:U:O2	2.63	0.52
31:BA:693:C:O2'	31:BA:694:U:H5'	2.09	0.52
31:BA:971:C:H2'	31:BA:972:G:H5'	1.91	0.52
31:BA:1330:C:O2'	31:BA:1331:A:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1527:G:C5'	31:BA:1528:A:OP1	2.58	0.52
31:BA:1786:A:H2	31:BA:2606:C:H1'	1.75	0.52
31:BA:2302:G:C6	31:BA:2315:G:C6	2.98	0.52
31:BA:2656:U:N3	31:BA:2665:A:H2	2.05	0.52
31:BA:2660:A:H5''	31:BA:2661:G:N2	2.24	0.52
31:BA:2779:U:O2	31:BA:2779:U:O4'	2.28	0.52
50:BY:9:LYS:HA	50:BY:30:VAL:HG21	1.92	0.52
1:CA:52:G:C2'	1:CA:53:A:H5'	2.39	0.52
1:CA:377:G:O2'	1:CA:378:G:H5'	2.10	0.52
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.91	0.52
1:CA:719:C:H5	1:CA:720:C:C4	2.27	0.52
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.44	0.52
1:CA:1452:C:O4'	1:CA:1456:G:C2	2.63	0.52
7:CG:111:ARG:HB3	7:CG:113:GLU:HG2	1.92	0.52
9:CI:79:LEU:HD22	9:CI:79:LEU:O	2.09	0.52
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	1.92	0.52
18:CR:57:GLY:C	18:CR:58:LEU:HD12	2.29	0.52
22:D0:43:THR:HG22	31:DA:2331:G:O3'	2.09	0.52
30:D8:31:HIS:O	30:D8:32:LEU:C	2.47	0.52
31:DA:639:U:H2'	31:DA:640:C:H6	1.73	0.52
31:DA:1497:U:H3	31:DA:1578:U:P	2.32	0.52
31:DA:2016:U:H2'	31:DA:2017:U:C6	2.44	0.52
31:DA:2102:U:C6	31:DA:2187:G:O6	2.62	0.52
31:DA:2335:A:N7	31:DA:2337:G:C5	2.78	0.52
31:DA:2646:C:H2'	31:DA:2647:U:O4'	2.09	0.52
32:DB:42:C:O4'	36:DG:69:ALA:HB2	2.10	0.52
33:DD:131:LEU:HB2	33:DD:136:ILE:CD1	2.38	0.52
33:DD:255:LYS:H	33:DD:255:LYS:CE	2.21	0.52
35:DF:63:LYS:HE2	35:DF:67:GLN:HB2	1.91	0.52
35:DF:65:TRP:O	35:DF:67:GLN:N	2.43	0.52
36:DG:52:ILE:HG22	36:DG:54:GLU:CG	2.39	0.52
37:DH:54:ARG:HB3	37:DH:65:HIS:CD2	2.45	0.52
39:DN:39:ARG:HD3	39:DN:41:ASP:HB2	1.91	0.52
39:DN:131:GLN:NE2	39:DN:134:ARG:HA	2.24	0.52
41:DP:17:LYS:C	41:DP:19:VAL:N	2.62	0.52
41:DP:108:LYS:O	41:DP:110:TYR:N	2.41	0.52
44:DS:35:ILE:H	44:DS:53:SER:CB	2.23	0.52
45:DT:35:LYS:O	45:DT:37:GLY:N	2.43	0.52
45:DT:38:ASN:HD22	45:DT:40:THR:N	2.07	0.52
47:DV:83:ARG:CG	47:DV:83:ARG:NH1	2.64	0.52
1:AA:38:G:N1	1:AA:397:A:C2	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:657:G:C2	1:AA:750:G:C5	2.98	0.52
1:AA:683:G:C6	1:AA:684:A:C5	2.98	0.52
1:AA:1052:U:H2'	1:AA:1055:A:OP1	2.10	0.52
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.42	0.52
6:AF:7:ASN:N	6:AF:7:ASN:ND2	2.56	0.52
8:AH:6:ILE:H	8:AH:6:ILE:CD1	2.23	0.52
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.91	0.52
22:B0:11:ARG:O	22:B0:14:ARG:NH2	2.43	0.52
23:B1:26:ARG:CD	23:B1:34:THR:HB	2.40	0.52
23:B1:33:LYS:HB3	31:BA:2395:C:O2'	2.10	0.52
25:B3:13:ILE:N	25:B3:13:ILE:HD13	2.25	0.52
31:BA:300:A:H2'	31:BA:334:C:H1'	1.92	0.52
31:BA:768:G:O2'	31:BA:1379:A:N6	2.42	0.52
31:BA:995:C:O2	39:BN:4:TYR:OH	2.25	0.52
31:BA:1015:G:C2'	31:BA:1016:G:H5'	2.40	0.52
31:BA:1047:G:N2	31:BA:1111:A:N6	2.54	0.52
31:BA:2394:C:OP1	41:BP:63:PRO:CD	2.50	0.52
31:BA:2632:A:N3	34:BE:61:ARG:NH1	2.58	0.52
31:BA:2870:C:H5''	43:BR:65:LEU:HD21	1.91	0.52
33:BD:43:ARG:HD2	33:BD:44:ASN:OD1	2.10	0.52
34:BE:70:ALA:O	34:BE:71:GLY:C	2.48	0.52
39:BN:43:THR:HG22	39:BN:45:ASN:ND2	2.24	0.52
39:BN:98:VAL:HG23	39:BN:99:LEU:H	1.74	0.52
40:BO:69:ILE:O	40:BO:76:ALA:HA	2.10	0.52
41:BP:47:ASP:CB	41:BP:48:PRO:O	2.46	0.52
45:BT:33:LYS:H	45:BT:33:LYS:HZ2	1.58	0.52
1:CA:70:G:H2'	1:CA:71:C:C6	2.45	0.52
1:CA:192:U:H4'	20:CT:103:GLY:HA2	1.92	0.52
1:CA:376:G:O2'	1:CA:377:G:H5'	2.10	0.52
1:CA:560:U:H5'	1:CA:566:G:N2	2.24	0.52
1:CA:621:A:O2'	1:CA:622:A:H5'	2.10	0.52
1:CA:624:C:H2'	1:CA:625:G:C8	2.44	0.52
1:CA:826:C:H2'	1:CA:827:U:C6	2.44	0.52
1:CA:1410:G:C2	1:CA:1411:C:C2	2.98	0.52
2:CB:71:VAL:HB	2:CB:164:VAL:HG22	1.92	0.52
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.10	0.52
5:CE:148:VAL:HG21	8:CH:107:LEU:HD22	1.92	0.52
7:CG:66:VAL:O	7:CG:70:LYS:HG3	2.09	0.52
19:CS:51:VAL:HG21	19:CS:71:LEU:HB3	1.91	0.52
25:D3:45:GLY:O	25:D3:48:GLU:HB2	2.10	0.52
27:D5:16:ARG:NH2	31:DA:517:C:OP1	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:50:GLY:O	27:D5:51:TYR:CD1	2.62	0.52
31:DA:562:U:C4	31:DA:2036:C:O4'	2.63	0.52
31:DA:582:G:H2'	31:DA:583:G:C8	2.45	0.52
31:DA:664:C:H4'	31:DA:941:A:OP1	2.10	0.52
31:DA:768:G:O2'	31:DA:1379:A:N6	2.43	0.52
31:DA:1578:U:H2'	31:DA:1578:U:O2	2.09	0.52
31:DA:1836:C:H2'	31:DA:1837:C:H6	1.75	0.52
31:DA:1856:G:H2'	31:DA:1857:G:H5'	1.92	0.52
31:DA:2017:U:H5''	31:DA:2018:G:P	2.49	0.52
31:DA:2567:G:H2'	31:DA:2568:C:H6	1.70	0.52
42:DQ:58:PHE:O	42:DQ:58:PHE:CD1	2.62	0.52
45:DT:106:SER:O	45:DT:107:ASP:CB	2.58	0.52
49:DX:62:LYS:CB	49:DX:69:TYR:H	2.18	0.52
49:DX:72:LYS:HG3	49:DX:73:ARG:N	2.19	0.52
50:DY:2:ARG:C	50:DY:4:LYS:N	2.62	0.52
1:AA:355:C:O2'	1:AA:356:A:H5'	2.10	0.52
1:AA:450:G:H1	1:AA:483:C:H42	1.58	0.52
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	2.10	0.52
1:AA:1103:C:H5''	2:AB:98:LEU:HD13	1.92	0.52
3:AC:46:GLU:O	3:AC:47:LEU:HB2	2.10	0.52
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.09	0.52
5:AE:80:ILE:HG22	8:AH:104:ARG:CZ	2.39	0.52
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	1.92	0.52
8:AH:10:LEU:HD13	8:AH:83:ILE:HD11	1.92	0.52
9:AI:99:LEU:HD12	9:AI:101:PHE:CE1	2.44	0.52
16:AP:49:LEU:HG	16:AP:50:LYS:N	2.25	0.52
31:BA:272(D):G:H1	31:BA:364:C:H42	1.56	0.52
31:BA:449:A:OP1	35:BF:84:VAL:O	2.28	0.52
31:BA:1051:G:H5'	31:BA:2752:C:O2'	2.10	0.52
31:BA:1141:U:OP1	39:BN:25:ARG:NH1	2.43	0.52
31:BA:1446:C:O2	31:BA:1447:G:C8	2.63	0.52
31:BA:1495:A:N3	31:BA:1495:A:H2'	2.25	0.52
31:BA:1820:U:H4'	31:BA:1821:A:OP2	2.10	0.52
31:BA:1839:G:C8	31:BA:1927:A:H1'	2.45	0.52
31:BA:2000:G:OP2	43:BR:3:HIS:CE1	2.63	0.52
31:BA:2810:A:H2'	34:BE:61:ARG:HH21	1.75	0.52
33:BD:173:VAL:HG23	33:BD:174:ILE:N	2.25	0.52
34:BE:87:GLU:O	34:BE:87:GLU:HG3	2.10	0.52
35:BF:199:TRP:CH2	35:BF:203:GLN:NE2	2.77	0.52
36:BG:52:ILE:HG22	36:BG:54:GLU:CG	2.39	0.52
44:BS:56:LEU:O	44:BS:57:LYS:CB	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:28:VAL:O	45:BT:29:ARG:HD2	2.09	0.52
45:BT:32:TYR:CD2	45:BT:81:PRO:HB2	2.45	0.52
51:BZ:54:HIS:HE1	51:BZ:123:ASP:CG	2.14	0.52
1:CA:96:U:O2'	1:CA:97:G:P	2.68	0.52
1:CA:134:A:H1'	1:CA:325:A:C5	2.45	0.52
1:CA:552:U:O2'	1:CA:553:A:H5'	2.09	0.52
1:CA:577:G:C8	1:CA:816:A:C6	2.98	0.52
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.75	0.52
3:CC:46:GLU:O	3:CC:47:LEU:HB2	2.10	0.52
4:CD:106:TYR:CE1	4:CD:112:VAL:O	2.63	0.52
9:CI:99:LEU:HD12	9:CI:101:PHE:CE1	2.44	0.52
17:CQ:65:ILE:HD12	17:CQ:69:LYS:O	2.10	0.52
23:D1:26:ARG:CD	23:D1:34:THR:HB	2.39	0.52
24:D2:22:GLU:O	24:D2:25:VAL:HG12	2.10	0.52
31:DA:142:A:N6	31:DA:1595:G:O2'	2.42	0.52
31:DA:271(X):G:H2'	31:DA:271(Y):U:H5''	1.92	0.52
31:DA:1300:U:C3'	31:DA:1301:A:C5'	2.88	0.52
31:DA:1495:A:N3	31:DA:1495:A:H2'	2.24	0.52
31:DA:1670:C:O2	34:DE:129:HIS:CE1	2.62	0.52
31:DA:2021:C:H4'	31:DA:2022:U:OP2	2.09	0.52
34:DE:116:VAL:HG13	34:DE:122:PHE:HB2	1.92	0.52
34:DE:119:ARG:HB3	34:DE:120:TRP:CD1	2.45	0.52
36:DG:37:VAL:HG23	36:DG:99:MET:HG3	1.92	0.52
42:DQ:42:ILE:HD13	42:DQ:97:VAL:CG2	2.40	0.52
45:DT:100:TYR:HD2	45:DT:103:ARG:HH21	1.53	0.52
49:DX:37:THR:HG23	49:DX:54:VAL:HB	1.91	0.52
49:DX:55:ASN:HB2	49:DX:78:LYS:CD	2.40	0.52
50:DY:88:LYS:O	50:DY:89:PHE:HB2	2.09	0.52
1:AA:189:G:C6	1:AA:189(A):C:C4	2.98	0.51
1:AA:304:U:H2'	1:AA:305:G:C8	2.45	0.51
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.43	0.51
1:AA:1386:G:C2	1:AA:1387:G:C8	2.98	0.51
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.09	0.51
3:AC:111:LEU:HD21	3:AC:145:GLY:O	2.10	0.51
6:AF:6:VAL:HG13	6:AF:90:VAL:HG22	1.92	0.51
10:AJ:96:ILE:N	10:AJ:96:ILE:HD13	2.25	0.51
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.75	0.51
19:AS:65:ASN:HB2	19:AS:66:MET:HE3	1.91	0.51
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.10	0.51
28:B6:32:ASN:O	28:B6:33:LYS:CB	2.59	0.51
31:BA:236:C:H2'	31:BA:237:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:547:A:C8	31:BA:549:G:C6	2.98	0.51
31:BA:892:G:H3'	31:BA:892:G:N3	2.26	0.51
31:BA:1109:C:H5	31:BA:1110:G:C8	2.28	0.51
31:BA:1323:U:H2'	31:BA:1324:G:H5'	1.91	0.51
31:BA:1657:C:H2'	31:BA:1658:C:H6	1.74	0.51
31:BA:2700:C:C2'	31:BA:2701:C:H5'	2.40	0.51
41:BP:17:LYS:C	41:BP:19:VAL:N	2.60	0.51
42:BQ:54:MET:HB3	42:BQ:64:ILE:CD1	2.40	0.51
46:BU:92:ARG:HH22	47:BV:10:LYS:CB	2.23	0.51
49:BX:60:ARG:NH2	49:BX:74:PRO:HG2	2.25	0.51
51:BZ:40:ASP:HB3	51:BZ:43:GLU:HB2	1.90	0.51
1:CA:327:A:H3'	1:CA:328:C:H5''	1.92	0.51
1:CA:353:A:C2'	1:CA:354:G:OP2	2.58	0.51
1:CA:370:C:H2'	1:CA:371:G:C8	2.44	0.51
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.58	0.51
1:CA:696:A:H8	1:CA:696:A:O5'	1.93	0.51
1:CA:710:G:OP1	6:CF:54:LYS:HE3	2.09	0.51
1:CA:858:G:O6	1:CA:869:G:H3'	2.09	0.51
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.33	0.51
1:CA:1189:C:H5''	3:CC:5:ILE:HG21	1.91	0.51
1:CA:1416:G:H2'	1:CA:1417:G:O4'	2.10	0.51
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.57	0.51
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.30	0.51
13:CM:32:GLU:OE2	13:CM:64:TRP:HH2	1.93	0.51
19:CS:22:LEU:HD13	19:CS:27:GLU:HB2	1.92	0.51
27:D5:34:PRO:HG3	31:DA:2885:C:O2'	2.10	0.51
28:D6:15:GLU:OE2	28:D6:43:CYS:HB3	2.10	0.51
31:DA:228:A:H2'	31:DA:230:U:O4'	2.10	0.51
31:DA:506:G:O3'	31:DA:507:A:H8	1.93	0.51
31:DA:993:G:N2	47:DV:91:TYR:OH	2.43	0.51
31:DA:1486:A:H2'	31:DA:1487:G:C8	2.45	0.51
31:DA:1935:G:H1'	31:DA:1964:G:N2	2.26	0.51
38:DI:5:LEU:HD23	38:DI:5:LEU:N	2.25	0.51
1:AA:278:G:O4'	1:AA:282:A:H1'	2.10	0.51
1:AA:375:U:O3'	16:AP:6:LEU:HB2	2.10	0.51
1:AA:781:A:C3'	1:AA:782:A:H5'	2.39	0.51
1:AA:811:C:O2'	1:AA:901:A:N1	2.42	0.51
1:AA:816:A:OP2	1:AA:1527:C:H5'	2.10	0.51
1:AA:1233:G:H2'	1:AA:1234:C:C6	2.45	0.51
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.92	0.51
1:AA:1409:C:N4	1:AA:1491:G:H1	2.07	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:73:PRO:HA	3:AC:76:VAL:HG13	1.91	0.51
4:AD:30:LYS:C	4:AD:32:ALA:H	2.14	0.51
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.44	0.51
7:AG:22:LEU:HG	7:AG:62:PHE:HE2	1.75	0.51
22:B0:48:GLY:HA3	22:B0:80:HIS:CE1	2.45	0.51
23:B1:19:GLN:CD	23:B1:44:PRO:HB3	2.30	0.51
31:BA:228:A:H2'	31:BA:230:U:O4'	2.10	0.51
31:BA:542:C:N4	31:BA:543:C:H42	1.96	0.51
31:BA:1420:U:O2'	31:BA:1421:G:OP1	2.27	0.51
31:BA:1439:A:C2	31:BA:1553:A:C4	2.98	0.51
31:BA:1531:C:H3'	31:BA:1532:C:C4'	2.40	0.51
34:BE:201:THR:HG22	34:BE:203:LYS:N	2.25	0.51
36:BG:125:PHE:CE2	36:BG:173:LEU:HD12	2.45	0.51
38:BI:62:LYS:HE2	38:BI:134:PRO:CG	2.40	0.51
44:BS:16:ASN:C	44:BS:17:ARG:O	2.46	0.51
45:BT:100:TYR:HB3	45:BT:103:ARG:HE	1.76	0.51
46:BU:104:GLN:HB2	47:BV:43:GLU:OE2	2.10	0.51
49:BX:8:ILE:HD12	49:BX:8:ILE:H	1.75	0.51
50:BY:45:VAL:HG22	50:BY:62:GLU:HB2	1.91	0.51
51:BZ:150:LEU:N	51:BZ:150:LEU:HD13	2.25	0.51
1:CA:81:U:C4	1:CA:83:U:C5	2.99	0.51
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.40	0.51
2:CB:84:GLU:HB3	2:CB:219:VAL:CG2	2.29	0.51
3:CC:102:ASN:O	3:CC:103:VAL:HG23	2.11	0.51
5:CE:34:VAL:O	5:CE:41:VAL:HG12	2.10	0.51
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.92	0.51
12:CL:102:ARG:HD2	12:CL:108:ALA:O	2.10	0.51
14:CN:40:CYS:SG	14:CN:42:ILE:HG12	2.50	0.51
16:CP:39:TYR:CD2	16:CP:73:LEU:HD13	2.46	0.51
31:DA:527:C:O4'	31:DA:527:C:O2	2.27	0.51
31:DA:782:A:H5'	31:DA:783:A:C2	2.45	0.51
31:DA:786:C:O2'	31:DA:787:U:H5'	2.09	0.51
31:DA:1171:G:N7	31:DA:1173:G:H1'	2.25	0.51
31:DA:1198:U:H2'	31:DA:1199:U:C6	2.46	0.51
31:DA:1531:C:H3'	31:DA:1532:C:C4'	2.41	0.51
31:DA:2019:A:H2'	31:DA:2020:A:O5'	2.10	0.51
31:DA:2484:G:C2	31:DA:2485:G:C8	2.98	0.51
34:DE:108:SER:HB3	34:DE:165:VAL:HG21	1.92	0.51
37:DH:41:MET:HE1	37:DH:54:ARG:HA	1.91	0.51
37:DH:126:PRO:HB2	37:DH:130:ARG:NH1	2.25	0.51
38:DI:45:LYS:O	38:DI:48:GLU:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:110:ASP:C	38:DI:112:LYS:H	2.13	0.51
41:DP:108:LYS:C	41:DP:110:TYR:N	2.64	0.51
49:DX:35:THR:O	49:DX:39:ILE:CG2	2.58	0.51
1:AA:22:G:O2'	1:AA:23:C:H5'	2.11	0.51
1:AA:27:G:O2'	1:AA:28:G:H5'	2.10	0.51
1:AA:66:G:C4'	1:AA:173:U:C4	2.94	0.51
1:AA:79:G:H4'	1:AA:80:G:OP1	2.10	0.51
1:AA:97:G:O2'	1:AA:98:G:O5'	2.28	0.51
1:AA:246:A:C4	1:AA:282:A:N6	2.78	0.51
1:AA:585:G:N3	1:AA:879:C:H4'	2.25	0.51
1:AA:723:U:H5''	1:AA:724:G:OP2	2.08	0.51
1:AA:1003:G:N3	1:AA:1004:A:H1'	2.26	0.51
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.11	0.51
1:AA:1290:G:H2'	1:AA:1290:G:N3	2.24	0.51
2:AB:27:LYS:HD2	2:AB:193:ASP:HB2	1.90	0.51
2:AB:84:GLU:OE1	2:AB:219:VAL:HB	2.10	0.51
5:AE:34:VAL:O	5:AE:41:VAL:HG12	2.11	0.51
6:AF:50:TYR:CZ	18:AR:77:GLY:HA2	2.45	0.51
12:AL:32:PHE:CB	12:AL:84:LEU:HD21	2.40	0.51
13:AM:81:LEU:HD21	13:AM:88:ARG:HH22	1.75	0.51
16:AP:39:TYR:CE1	16:AP:41:PRO:HA	2.46	0.51
19:AS:22:LEU:HD13	19:AS:27:GLU:HB2	1.92	0.51
29:B7:47:ARG:C	29:B7:48:LYS:HD3	2.30	0.51
31:BA:106:C:H1'	50:BY:2:ARG:NE	2.25	0.51
31:BA:117:G:H5''	31:BA:118:A:OP2	2.10	0.51
31:BA:271(P):C:H2'	31:BA:271(Q):G:O5'	2.10	0.51
31:BA:271(R):G:C2'	31:BA:271(S):G:H5'	2.40	0.51
31:BA:310:A:OP1	50:BY:18:GLY:HA2	2.11	0.51
31:BA:995:C:N3	39:BN:4:TYR:HE1	2.08	0.51
31:BA:1499:C:O2'	31:BA:1500:G:H5'	2.09	0.51
31:BA:1786:A:C2	31:BA:2606:C:H1'	2.44	0.51
31:BA:1935:G:C6	31:BA:1962:C:C6	2.97	0.51
31:BA:2065:C:H2'	31:BA:2066:C:C6	2.45	0.51
31:BA:2308:G:H2'	31:BA:2309:A:N7	2.26	0.51
31:BA:2386:C:H2'	31:BA:2387:U:C6	2.45	0.51
31:BA:2646:C:H2'	31:BA:2647:U:O4'	2.10	0.51
34:BE:93:VAL:H	34:BE:95:ILE:HD13	1.75	0.51
34:BE:179:GLU:HB3	34:BE:181:LEU:CD2	2.40	0.51
35:BF:1:MET:O	35:BF:2:LYS:C	2.48	0.51
35:BF:2:LYS:O	35:BF:25:PRO:HG2	2.11	0.51
36:BG:133:LEU:HD12	36:BG:133:LEU:C	2.30	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:54:ARG:CG	37:BH:65:HIS:HD2	2.22	0.51
44:BS:26:LEU:HA	44:BS:39:ILE:HD13	1.92	0.51
45:BT:33:LYS:HA	45:BT:33:LYS:HZ2	1.75	0.51
45:BT:56:GLY:O	45:BT:59:THR:CG2	2.58	0.51
45:BT:91:ARG:HA	45:BT:117:ASP:H	1.76	0.51
45:BT:106:SER:O	45:BT:107:ASP:CB	2.58	0.51
46:BU:64:ARG:CZ	46:BU:64:ARG:CA	2.70	0.51
47:BV:43:GLU:N	47:BV:48:GLY:HA2	2.25	0.51
50:BY:28:LYS:CE	50:BY:30:VAL:HG22	2.28	0.51
51:BZ:99:TYR:HB3	51:BZ:123:ASP:OD1	2.11	0.51
1:CA:55:A:C4	1:CA:56:U:C6	2.99	0.51
1:CA:80:G:N1	1:CA:89:C:N4	2.57	0.51
1:CA:1074:G:N3	1:CA:1102:A:C2	2.78	0.51
1:CA:1233:G:H2'	1:CA:1234:C:C6	2.45	0.51
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	2.08	0.51
3:CC:36:ASP:HB3	3:CC:40:ARG:HH12	1.75	0.51
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.91	0.51
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.10	0.51
15:CO:87:ILE:HG22	15:CO:88:ARG:HG3	1.92	0.51
16:CP:49:LEU:HG	16:CP:50:LYS:N	2.25	0.51
27:D5:11:THR:HG23	31:DA:1264:G:H5'	1.92	0.51
27:D5:32:PRO:HD2	31:DA:2886:G:O2'	2.10	0.51
31:DA:363(C):G:H2'	31:DA:363(D):G:O4'	2.11	0.51
31:DA:466:A:H1'	31:DA:683:C:O4'	2.10	0.51
31:DA:467:G:H2'	31:DA:468:G:H5'	1.92	0.51
31:DA:1859:A:C6	31:DA:1884:A:C8	2.98	0.51
31:DA:2023:G:C2	31:DA:2024:G:C8	2.98	0.51
32:DB:52:A:O2'	32:DB:53:A:C8	2.58	0.51
35:DF:1:MET:O	35:DF:2:LYS:C	2.48	0.51
40:DO:35:VAL:HA	40:DO:62:VAL:HG12	1.92	0.51
49:DX:40:LYS:C	49:DX:42:ALA:H	2.13	0.51
1:AA:189:G:C6	1:AA:189(A):C:N4	2.79	0.51
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	2.10	0.51
1:AA:342:C:C2'	1:AA:343:U:H5'	2.40	0.51
1:AA:428:G:C4'	1:AA:429:U:O5'	2.58	0.51
1:AA:503:C:H2'	1:AA:504:C:C6	2.43	0.51
1:AA:564:C:C4	17:AQ:31:LEU:HD11	2.46	0.51
1:AA:649:G:H2'	1:AA:650:G:H8	1.75	0.51
1:AA:832:C:N4	1:AA:855:G:C6	2.79	0.51
1:AA:945:G:H2'	1:AA:945:G:N3	2.24	0.51
1:AA:1238:A:N6	1:AA:1299:A:H62	2.07	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1410:G:C2	1:AA:1411:C:C2	2.99	0.51
9:AI:116:LYS:O	9:AI:118:LYS:N	2.43	0.51
12:AL:55:VAL:HG13	12:AL:68:ALA:O	2.10	0.51
13:AM:68:GLY:HA2	13:AM:71:ARG:HB3	1.93	0.51
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	1.91	0.51
15:AO:87:ILE:CG2	15:AO:88:ARG:N	2.73	0.51
22:B0:43:THR:HG22	31:BA:2331:G:O3'	2.09	0.51
31:BA:271(X):G:H2'	31:BA:271(Y):U:H5''	1.92	0.51
31:BA:1001:A:H2'	31:BA:1002:G:O4'	2.10	0.51
31:BA:2689:U:C4'	31:BA:2690:C:OP2	2.59	0.51
37:BH:153:LYS:N	37:BH:153:LYS:CD	2.73	0.51
41:BP:112:LEU:H	41:BP:128:HIS:CD2	2.25	0.51
42:BQ:7:MET:O	42:BQ:10:ARG:NH2	2.43	0.51
49:BX:38:GLU:OE1	49:BX:38:GLU:CA	2.58	0.51
49:BX:73:ARG:N	49:BX:74:PRO:HD3	2.25	0.51
50:BY:2:ARG:C	50:BY:4:LYS:N	2.62	0.51
1:CA:229:U:C2'	1:CA:230:G:H5'	2.40	0.51
1:CA:532:A:H61	3:CC:193:TYR:CB	2.19	0.51
1:CA:561:U:O2'	1:CA:562:C:OP2	2.26	0.51
1:CA:989:C:N4	1:CA:1216:G:H1	2.08	0.51
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.09	0.51
1:CA:1003:G:N3	1:CA:1004:A:H1'	2.25	0.51
2:CB:115:LEU:HB2	2:CB:145:LEU:HD12	1.92	0.51
3:CC:64:VAL:HB	3:CC:99:VAL:HG12	1.93	0.51
5:CE:34:VAL:O	5:CE:41:VAL:HA	2.11	0.51
10:CJ:84:GLN:O	10:CJ:88:LEU:HB2	2.09	0.51
12:CL:82:VAL:CG1	12:CL:83:VAL:H	2.16	0.51
18:CR:44:LEU:HA	18:CR:49:LYS:O	2.11	0.51
24:D2:23:LYS:HB2	49:DX:5:TYR:CE1	2.46	0.51
28:D6:29:ASN:O	28:D6:30:THR:C	2.49	0.51
30:D8:22:VAL:O	30:D8:49:VAL:HG23	2.09	0.51
31:DA:175:G:H8	31:DA:175:G:C5'	2.23	0.51
31:DA:676:A:C2	31:DA:802:A:N6	2.69	0.51
31:DA:780:G:C2	31:DA:782:A:C2	2.98	0.51
31:DA:975:C:H2'	31:DA:975:C:O2	2.10	0.51
31:DA:1040:C:O2'	31:DA:1041:C:OP2	2.26	0.51
31:DA:1495:A:H2'	31:DA:1496:A:N3	2.25	0.51
31:DA:1786:A:C2	31:DA:2606:C:H1'	2.44	0.51
31:DA:1786:A:H2	31:DA:2606:C:H1'	1.76	0.51
31:DA:2394:C:OP1	41:DP:63:PRO:CD	2.52	0.51
31:DA:2557:G:H2'	31:DA:2558:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2880:C:O2'	43:DR:90:ARG:HD3	2.10	0.51
36:DG:91:ARG:HD2	36:DG:91:ARG:C	2.31	0.51
38:DI:13:GLY:O	38:DI:14:ASP:C	2.49	0.51
39:DN:78:TYR:HD1	39:DN:79:PRO:HD3	1.75	0.51
39:DN:78:TYR:CD1	39:DN:79:PRO:CD	2.89	0.51
45:DT:28:VAL:HB	45:DT:88:ILE:HG13	1.91	0.51
47:DV:75:PHE:CE1	47:DV:89:GLN:CB	2.84	0.51
49:DX:38:GLU:OE1	49:DX:38:GLU:CA	2.58	0.51
50:DY:95:LYS:HD3	50:DY:100:ALA:CB	2.14	0.51
51:DZ:27:VAL:HG13	51:DZ:29:TYR:HD2	1.75	0.51
51:DZ:30:ASN:ND2	51:DZ:32:HIS:H	2.07	0.51
1:AA:590:C:H2'	1:AA:591:U:C6	2.46	0.51
1:AA:930:C:O2'	1:AA:931:C:H5'	2.10	0.51
3:AC:121:ALA:HB2	3:AC:187:ALA:HB1	1.93	0.51
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.91	0.51
4:AD:74:GLN:O	4:AD:78:LEU:HG	2.10	0.51
23:B1:19:GLN:CG	23:B1:44:PRO:HG3	2.40	0.51
24:B2:57:ILE:HG21	24:B2:59:ARG:NH1	2.26	0.51
31:BA:953:A:C2	31:BA:954:G:C8	2.98	0.51
31:BA:1588:C:H2'	31:BA:1588:C:O2	2.10	0.51
31:BA:1895:C:C2	31:BA:1896:G:C8	2.99	0.51
31:BA:1973:G:C4	31:BA:1974:C:C5	2.98	0.51
31:BA:2321:G:H5''	31:BA:2322:A:OP2	2.10	0.51
31:BA:2335:A:C8	31:BA:2337:G:N7	2.79	0.51
31:BA:2521:C:H42	31:BA:2544:G:H1	1.58	0.51
31:BA:2683:C:OP1	45:BT:53:ARG:NH2	2.43	0.51
34:BE:70:ALA:O	34:BE:72:VAL:O	2.28	0.51
36:BG:20:ILE:O	36:BG:24:GLY:HA2	2.10	0.51
38:BI:124:GLY:H	38:BI:142:VAL:HG23	1.76	0.51
41:BP:95:VAL:HG13	41:BP:123:LEU:HD11	1.91	0.51
45:BT:100:TYR:HD2	45:BT:103:ARG:NH2	2.08	0.51
49:BX:21:PHE:HB3	49:BX:90:GLU:HG3	1.91	0.51
50:BY:28:LYS:HE3	50:BY:37:VAL:HG12	1.92	0.51
51:BZ:19:ARG:HA	51:BZ:23:LYS:O	2.10	0.51
1:CA:678:U:H2'	1:CA:679:C:C6	2.45	0.51
1:CA:1006:C:H42	1:CA:1024:G:H21	1.58	0.51
1:CA:1452:C:H4'	1:CA:1456:G:N3	2.25	0.51
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	1.92	0.51
5:CE:75:THR:HG23	5:CE:76:ILE:H	1.75	0.51
9:CI:114:TYR:HE1	10:CJ:60:ARG:O	1.93	0.51
13:CM:32:GLU:OE2	13:CM:64:TRP:CH2	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:71:ARG:O	13:CM:71:ARG:HG3	2.10	0.51
25:D3:52:HIS:CD2	32:DB:83:G:H4'	2.45	0.51
31:DA:213:A:H2'	31:DA:214:G:O4'	2.11	0.51
31:DA:271(K):U:H2'	31:DA:271(M):G:N2	2.24	0.51
31:DA:271(P):C:H2'	31:DA:271(Q):G:O5'	2.10	0.51
31:DA:548:A:HO2'	31:DA:549:G:P	2.32	0.51
31:DA:824:A:C2'	31:DA:825:C:H5'	2.40	0.51
31:DA:825:C:C2'	31:DA:826:U:O5'	2.58	0.51
31:DA:1045:A:H3'	31:DA:1045:A:N3	2.25	0.51
31:DA:1256:G:H5'	31:DA:1257:C:OP2	2.11	0.51
31:DA:1750:G:O2'	31:DA:2860:A:N1	2.40	0.51
31:DA:2199:A:C5'	31:DA:2200:C:OP2	2.58	0.51
34:DE:60:ASN:OD1	34:DE:62:PRO:HD2	2.11	0.51
34:DE:87:GLU:O	34:DE:87:GLU:HG3	2.09	0.51
36:DG:39:ILE:HD12	36:DG:40:ASN:N	2.25	0.51
36:DG:56:ALA:HA	36:DG:59:GLU:OE1	2.10	0.51
38:DI:73:GLU:O	38:DI:73:GLU:HG3	2.11	0.51
41:DP:48:PRO:O	41:DP:49:ARG:C	2.47	0.51
46:DU:75:ASN:HB2	46:DU:78:THR:H	1.74	0.51
48:DW:10:VAL:O	48:DW:11:ARG:HB2	2.09	0.51
49:DX:65:ARG:HA	49:DX:65:ARG:NE	2.25	0.51
51:DZ:166:SER:OG	51:DZ:167:PRO:CA	2.56	0.51
1:AA:80:G:N1	1:AA:89:C:N4	2.58	0.51
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.41	0.51
1:AA:475:G:O2'	1:AA:476:G:H5'	2.11	0.51
1:AA:705:U:C5	1:AA:706:A:C5	2.99	0.51
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.32	0.51
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.92	0.51
5:AE:139:LEU:HA	5:AE:142:LEU:HD12	1.92	0.51
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.92	0.51
16:AP:1:MET:HG2	16:AP:2:VAL:O	2.10	0.51
23:B1:40:ARG:CD	23:B1:41:ARG:H	2.21	0.51
23:B1:87:PRO:HB2	23:B1:91:LYS:CE	2.40	0.51
24:B2:18:PRO:O	24:B2:19:VAL:C	2.47	0.51
30:B8:62:LEU:N	30:B8:63:PRO:HD2	2.25	0.51
31:BA:194:G:H2'	31:BA:195:A:O4'	2.11	0.51
31:BA:649:G:H2'	31:BA:650:C:H6	1.75	0.51
31:BA:796:C:H2'	31:BA:797:C:H6	1.71	0.51
31:BA:1568:G:OP2	33:BD:63:ARG:NH2	2.43	0.51
31:BA:1784:A:H4'	31:BA:1785:A:C5'	2.41	0.51
31:BA:1856:G:H2'	31:BA:1857:G:H5'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1858:G:H1'	31:BA:1884:A:N6	2.26	0.51
31:BA:2565:A:C5'	31:BA:2566:A:OP2	2.58	0.51
31:BA:2787:C:O2	34:BE:61:ARG:NH1	2.44	0.51
32:BB:41:U:C2'	32:BB:42:C:OP1	2.58	0.51
32:BB:50:G:H8	32:BB:50:G:O5'	1.93	0.51
33:BD:17:THR:CG2	33:BD:204:ILE:HA	2.40	0.51
33:BD:186:HIS:CD2	33:BD:187:GLY:N	2.79	0.51
38:BI:78:THR:HA	38:BI:141:LYS:HB2	1.92	0.51
40:BO:26:LYS:HB2	40:BO:30:ALA:HB2	1.92	0.51
41:BP:108:LYS:O	41:BP:110:TYR:N	2.44	0.51
1:CA:166:G:C4	1:CA:167:G:C8	2.99	0.51
1:CA:343:U:O2	1:CA:347:G:C2	2.64	0.51
1:CA:365:U:H5''	1:CA:366:C:OP1	2.11	0.51
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.11	0.51
1:CA:475:G:O2'	1:CA:476:G:H5'	2.10	0.51
1:CA:987:G:N2	1:CA:1219:U:C2	2.79	0.51
1:CA:1442:G:O2'	1:CA:1442(A):G:C5'	2.48	0.51
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.64	0.51
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.91	0.51
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.26	0.51
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HD3	1.92	0.51
22:D0:68:GLU:CG	22:D0:80:HIS:HB2	2.40	0.51
23:D1:9:GLY:O	23:D1:10:LYS:CB	2.59	0.51
31:DA:84:A:H5''	50:DY:9:LYS:HD3	1.92	0.51
31:DA:547:A:C8	31:DA:549:G:O6	2.63	0.51
31:DA:596:G:C5	31:DA:597:U:C5	2.99	0.51
31:DA:729:G:O5'	33:DD:208:LYS:NZ	2.38	0.51
31:DA:934:G:H2'	31:DA:935:C:C6	2.46	0.51
31:DA:1490:A:H5'	31:DA:1491:G:OP2	2.10	0.51
31:DA:1659:U:C4	31:DA:1660:C:C5	2.99	0.51
31:DA:2723:C:H5''	43:DR:2:ARG:CD	2.40	0.51
33:DD:132:PRO:HG3	33:DD:190:TYR:CE1	2.45	0.51
36:DG:120:LEU:O	36:DG:122:PRO:HD3	2.11	0.51
45:DT:28:VAL:HG21	45:DT:46:GLU:HG3	1.92	0.51
47:DV:73:SER:OG	47:DV:75:PHE:HE1	1.91	0.51
50:DY:86:ARG:HG2	50:DY:87:LYS:N	2.24	0.51
1:AA:109:A:C6	1:AA:326:G:C6	2.99	0.51
1:AA:323:U:OP1	20:AT:26:ASN:ND2	2.44	0.51
1:AA:458:C:H2'	1:AA:460:G:H8	1.76	0.51
1:AA:552:U:H2'	1:AA:553:A:H5'	1.92	0.51
1:AA:665:A:C5	1:AA:733:A:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:791:G:C6	1:AA:792:A:N7	2.79	0.51
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.41	0.51
1:AA:1054:C:H3'	1:AA:1054:C:O2	2.11	0.51
1:AA:1252:A:H61	1:AA:1285:A:H61	1.58	0.51
2:AB:17:PHE:O	2:AB:18:GLY:O	2.28	0.51
9:AI:55:ALA:CB	9:AI:58:ARG:HD2	2.40	0.51
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.57	0.51
30:B8:39:LYS:C	30:B8:39:LYS:CD	2.79	0.51
31:BA:83:G:H1	31:BA:102:G:H2'	1.76	0.51
31:BA:271(K):U:H2'	31:BA:271(M):G:N2	2.26	0.51
31:BA:807:U:C2'	31:BA:808:G:O5'	2.57	0.51
31:BA:917:A:H8	31:BA:917:A:H5'	1.75	0.51
31:BA:1341:U:H3'	31:BA:1397:U:O2	2.11	0.51
31:BA:2199:A:OP2	31:BA:2200:C:C5	2.61	0.51
31:BA:2286:A:H5''	31:BA:2287:A:O4'	2.10	0.51
31:BA:2639:A:C2'	31:BA:2640:G:H5'	2.41	0.51
31:BA:2639:A:H2'	31:BA:2640:G:H5'	1.92	0.51
31:BA:2722:G:H2'	31:BA:2723:C:C6	2.45	0.51
31:BA:2791:C:H4'	31:BA:2792:G:O5'	2.11	0.51
32:BB:82:G:H2'	32:BB:83:G:C5'	2.37	0.51
33:BD:224:ALA:O	33:BD:225:ALA:HB2	2.10	0.51
36:BG:98:ARG:O	36:BG:101:ILE:HG22	2.10	0.51
39:BN:2:LYS:NZ	46:BU:94:ASN:ND2	2.59	0.51
39:BN:17:ASP:O	39:BN:17:ASP:CG	2.44	0.51
39:BN:78:TYR:HD1	39:BN:79:PRO:CG	2.23	0.51
42:BQ:141:GLN:O	51:BZ:70:LEU:HD22	2.11	0.51
44:BS:57:LYS:CG	44:BS:58:LEU:H	2.24	0.51
50:BY:81:LYS:HD3	50:BY:97:ARG:HG3	1.93	0.51
1:CA:22:G:O2'	1:CA:23:C:H5'	2.11	0.51
1:CA:376:G:O3'	16:CP:5:ARG:HD2	2.10	0.51
1:CA:1084:G:OP1	1:CA:1086:U:C2	2.64	0.51
1:CA:1478:C:O2'	1:CA:1479:C:H5'	2.11	0.51
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.11	0.51
1:CA:1508:G:H2'	1:CA:1509:C:C6	2.45	0.51
3:CC:121:ALA:HB2	3:CC:187:ALA:HB1	1.92	0.51
6:CF:17:SER:O	6:CF:21:LEU:HD22	2.11	0.51
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.14	0.51
24:D2:26:ARG:NE	24:D2:29:LYS:HE2	2.24	0.51
24:D2:34:GLU:O	24:D2:36:ARG:HB2	2.11	0.51
31:DA:455:C:N3	31:DA:473:G:H5'	2.26	0.51
31:DA:607:U:O2	31:DA:621:A:N1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:686:G:N2	31:DA:788:A:H61	2.08	0.51
31:DA:740:U:H2'	31:DA:741:G:C8	2.46	0.51
31:DA:753:C:H6	31:DA:753:C:O5'	1.92	0.51
31:DA:826:U:OP1	31:DA:2428:G:H3'	2.10	0.51
31:DA:1301:A:C8	31:DA:1303:G:C8	2.99	0.51
31:DA:1902:C:H2'	31:DA:1903:G:O5'	2.11	0.51
31:DA:1946:U:H2'	31:DA:1947:C:H6	1.75	0.51
31:DA:2870:C:H2'	31:DA:2871:C:H5'	1.93	0.51
34:DE:52:LEU:O	34:DE:74:PRO:CA	2.59	0.51
35:DF:21:ALA:HB3	35:DF:23:ASP:OD2	2.10	0.51
36:DG:152:LEU:O	36:DG:153:ARG:HB2	2.09	0.51
39:DN:78:TYR:HD1	39:DN:79:PRO:N	2.08	0.51
42:DQ:42:ILE:HD13	42:DQ:97:VAL:HG21	1.92	0.51
44:DS:54:LEU:HA	44:DS:57:LYS:O	2.09	0.51
48:DW:54:ALA:HB1	48:DW:107:LEU:HD22	1.92	0.51
1:AA:394:G:H2'	1:AA:395:C:H6	1.76	0.51
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.11	0.51
5:AE:139:LEU:HA	5:AE:142:LEU:CD1	2.41	0.51
6:AF:5:GLU:HB3	6:AF:62:TRP:NE1	2.25	0.51
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.11	0.51
15:AO:51:HIS:O	15:AO:54:ARG:HB3	2.11	0.51
22:B0:1:MET:HA	31:BA:2451:A:H4'	1.93	0.51
24:B2:37:PHE:O	24:B2:37:PHE:CD2	2.64	0.51
27:B5:42:PRO:HB2	27:B5:43:HIS:HD2	1.75	0.51
27:B5:52:TYR:CD1	27:B5:52:TYR:O	2.63	0.51
30:B8:35:GLN:CG	31:BA:2420:C:OP1	2.59	0.51
31:BA:92:A:H2'	31:BA:93:G:H8	1.75	0.51
31:BA:271(E):U:H2'	31:BA:271(F):C:C6	2.46	0.51
31:BA:340:A:H2'	31:BA:341:G:C5'	2.41	0.51
31:BA:494:G:H5''	31:BA:494:G:C8	2.45	0.51
31:BA:743:G:C2'	31:BA:744:G:H5'	2.41	0.51
31:BA:1171:G:N7	31:BA:1173:G:H1'	2.25	0.51
31:BA:2320:A:H2'	31:BA:2320:A:N3	2.25	0.51
34:BE:96:PHE:HA	34:BE:100:GLU:OE1	2.11	0.51
35:BF:203:GLN:O	35:BF:206:ILE:C	2.49	0.51
41:BP:16:ARG:O	41:BP:18:ARG:N	2.44	0.51
42:BQ:27:VAL:HA	42:BQ:105:GLU:OE1	2.11	0.51
43:BR:53:HIS:O	43:BR:56:LYS:HB3	2.11	0.51
46:BU:83:LEU:CB	46:BU:88:ILE:HD11	2.39	0.51
49:BX:21:PHE:N	49:BX:21:PHE:HD1	2.09	0.51
50:BY:7:VAL:CB	50:BY:8:LYS:NZ	2.72	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:147:G:N2	1:CA:148:G:H1'	2.26	0.51
1:CA:542:G:H2'	1:CA:543:C:C6	2.44	0.51
1:CA:545:C:H5''	4:CD:72:GLU:HG2	1.92	0.51
1:CA:944:G:H5''	1:CA:945:G:OP2	2.11	0.51
1:CA:1211:U:H5'	1:CA:1212:U:OP1	2.11	0.51
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.41	0.51
2:CB:139:LYS:O	2:CB:143:GLU:HG2	2.10	0.51
4:CD:30:LYS:C	4:CD:32:ALA:H	2.14	0.51
5:CE:80:ILE:HD11	5:CE:138:ALA:HB1	1.91	0.51
6:CF:3:ARG:HB3	6:CF:93:SER:HB2	1.93	0.51
11:CK:41:THR:CG2	11:CK:42:TRP:N	2.73	0.51
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.11	0.51
27:D5:36:CYS:C	27:D5:38:ALA:N	2.64	0.51
27:D5:47:PRO:O	27:D5:48:GLU:HG3	2.11	0.51
31:DA:27:G:C4	31:DA:512:G:N2	2.78	0.51
31:DA:272(B):G:O2'	31:DA:272(C):G:O4'	2.29	0.51
31:DA:363(C):G:C4	31:DA:363(D):G:C8	2.98	0.51
31:DA:479:A:H4'	31:DA:480:A:OP1	2.09	0.51
31:DA:693:C:O2'	31:DA:694:U:H5'	2.11	0.51
31:DA:993:G:H1'	47:DV:91:TYR:CE1	2.45	0.51
31:DA:1131:G:H4'	39:DN:82:LEU:HG	1.93	0.51
31:DA:2476:A:C2	31:DA:2477:C:C6	2.98	0.51
35:DF:4:VAL:O	35:DF:4:VAL:HG12	2.11	0.51
35:DF:70:THR:HG21	35:DF:72:ARG:HB2	1.92	0.51
42:DQ:70:PRO:HA	42:DQ:95:ALA:HB2	1.92	0.51
1:AA:132:C:O2'	1:AA:133:U:H5'	2.10	0.51
1:AA:149:A:HO2'	1:AA:150:C:H6	1.52	0.51
1:AA:299:G:C6	1:AA:300:A:C6	2.99	0.51
1:AA:310:G:C5'	16:AP:31:LYS:HB2	2.41	0.51
1:AA:1201:A:H4'	1:AA:1202:G:O5'	2.11	0.51
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.45	0.51
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.11	0.51
2:AB:97:TRP:HH2	2:AB:176:GLU:CG	2.24	0.51
10:AJ:82:ILE:O	10:AJ:86:MET:HB3	2.11	0.51
13:AM:3:ARG:HG2	13:AM:9:ILE:CG1	2.41	0.51
17:AQ:65:ILE:HD12	17:AQ:69:LYS:O	2.10	0.51
24:B2:41:ILE:O	24:B2:44:LEU:N	2.41	0.51
24:B2:47:ASN:N	24:B2:47:ASN:HD22	2.09	0.51
28:B6:23:THR:HG21	31:BA:2419:U:H4'	1.93	0.51
28:B6:28:ARG:HA	28:B6:32:ASN:HB3	1.91	0.51
29:B7:19:ARG:HH11	29:B7:19:ARG:HG2	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:10:ALA:HB2	30:B8:59:LYS:HZ2	1.76	0.51
31:BA:288:C:N4	31:BA:353:G:H1	2.08	0.51
31:BA:1171:G:H3'	31:BA:1173:G:O4'	2.11	0.51
31:BA:1256:G:H5'	31:BA:1257:C:OP2	2.11	0.51
31:BA:1416:G:O2'	31:BA:1417:C:P	2.69	0.51
31:BA:1578:U:O2	31:BA:1578:U:H2'	2.10	0.51
31:BA:2753:A:O2'	31:BA:2754:U:P	2.69	0.51
33:BD:24:ILE:HG22	33:BD:24:ILE:O	2.11	0.51
34:BE:132:HIS:HA	34:BE:135:HIS:CE1	2.46	0.51
38:BI:79:ILE:HG22	38:BI:81:VAL:HG23	1.93	0.51
44:BS:56:LEU:O	44:BS:57:LYS:HB2	2.09	0.51
45:BT:28:VAL:HG22	45:BT:46:GLU:HA	1.92	0.51
46:BU:92:ARG:NH2	47:BV:10:LYS:CA	2.74	0.51
50:BY:90:LEU:HD12	50:BY:91:GLU:HG2	1.92	0.51
1:CA:165:C:H2'	1:CA:166:G:C8	2.46	0.51
1:CA:195:A:C5	1:CA:196:A:N1	2.78	0.51
1:CA:950:U:H2'	1:CA:951:G:C8	2.43	0.51
10:CJ:82:ILE:O	10:CJ:86:MET:HB3	2.11	0.51
30:D8:31:HIS:HB3	31:DA:2420:C:H41	1.76	0.51
31:DA:241:A:O4'	31:DA:243:U:C6	2.63	0.51
31:DA:576:U:H2'	31:DA:577:G:C8	2.46	0.51
31:DA:588:U:O4	31:DA:670:A:H1'	2.10	0.51
31:DA:1024:G:C3'	31:DA:1025:G:H5''	2.33	0.51
31:DA:1191:G:OP1	41:DP:35:HIS:ND1	2.43	0.51
31:DA:1330:C:O2'	31:DA:1331:A:H5'	2.10	0.51
31:DA:1487:G:C2	31:DA:1488:G:C4	2.99	0.51
31:DA:1796:U:H2'	31:DA:1797:C:H6	1.72	0.51
31:DA:2656:U:C2'	31:DA:2657:A:H5''	2.40	0.51
33:DD:64:ILE:O	33:DD:64:ILE:HG12	2.11	0.51
38:DI:6:LEU:HD23	38:DI:6:LEU:N	2.25	0.51
42:DQ:7:MET:O	42:DQ:10:ARG:NH2	2.41	0.51
45:DT:41:ARG:CZ	45:DT:43:GLN:HB2	2.41	0.51
47:DV:18:LEU:O	47:DV:19:LYS:HB2	2.11	0.51
47:DV:62:LEU:CB	47:DV:98:GLU:HA	2.38	0.51
50:DY:7:VAL:CB	50:DY:8:LYS:NZ	2.73	0.51
1:AA:20:U:H2'	1:AA:21:G:O4'	2.11	0.51
1:AA:327:A:H3'	1:AA:328:C:H5''	1.92	0.51
1:AA:685:G:C2	1:AA:686:U:C4	2.99	0.51
1:AA:877:C:H5''	8:AH:88:LYS:CD	2.41	0.51
1:AA:1418:A:C2	1:AA:1483:A:C2	2.99	0.51
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:20:SER:CB	3:AC:40:ARG:HH22	2.15	0.51
4:AD:14:ARG:HA	4:AD:39:PRO:HB3	1.92	0.51
4:AD:108:LEU:HB3	4:AD:110:PHE:CD1	2.45	0.51
6:AF:17:SER:O	6:AF:21:LEU:HD22	2.11	0.51
10:AJ:84:GLN:O	10:AJ:88:LEU:HB2	2.11	0.51
18:AR:19:LYS:O	18:AR:20:ALA:HB2	2.10	0.51
23:B1:60:PHE:HZ	23:B1:90:ILE:HG21	1.74	0.51
31:BA:109:G:C4	31:BA:110:G:C8	2.99	0.51
31:BA:271(L):U:H4'	31:BA:271(M):G:N7	2.26	0.51
31:BA:870:A:C5'	42:BQ:7:MET:HB2	2.26	0.51
31:BA:900:A:H5''	31:BA:901:A:OP2	2.11	0.51
31:BA:1168:G:C2'	31:BA:1169:G:H5'	2.41	0.51
31:BA:1300:U:C3'	31:BA:1301:A:C5'	2.89	0.51
31:BA:1505:C:C2'	31:BA:1506:C:O5'	2.59	0.51
31:BA:1786:A:H1'	31:BA:1938:A:N6	2.26	0.51
31:BA:2238:G:H4'	31:BA:2239:G:OP1	2.10	0.51
31:BA:2619:C:H2'	31:BA:2620:C:H6	1.76	0.51
31:BA:2774:C:H2'	31:BA:2775:A:O4'	2.10	0.51
35:BF:46:ARG:CG	35:BF:46:ARG:NH1	2.61	0.51
39:BN:56:ASN:N	39:BN:125:GLY:H	2.08	0.51
39:BN:111:PRO:HA	39:BN:114:ARG:NH1	2.25	0.51
41:BP:88:LEU:O	41:BP:90:ARG:N	2.41	0.51
41:BP:115:LEU:HA	41:BP:134:ALA:CB	2.33	0.51
42:BQ:29:PHE:N	42:BQ:29:PHE:HD1	2.09	0.51
43:BR:10:LEU:HB3	43:BR:17:ARG:CZ	2.40	0.51
44:BS:74:ALA:HB1	44:BS:103:GLU:HB2	1.93	0.51
44:BS:97:ARG:HD2	44:BS:98:VAL:N	2.26	0.51
45:BT:57:PHE:C	45:BT:59:THR:H	2.13	0.51
47:BV:18:LEU:CD1	47:BV:98:GLU:OE1	2.57	0.51
47:BV:70:ILE:CB	47:BV:90:PRO:HB2	2.38	0.51
48:BW:92:ARG:O	48:BW:93:ALA:HB3	2.10	0.51
51:BZ:65:GLN:OE1	51:BZ:67:LEU:HD11	2.11	0.51
51:BZ:151:HIS:HA	51:BZ:171:ILE:HD13	1.93	0.51
1:CA:343:U:H2'	1:CA:346:G:O6	2.10	0.51
1:CA:356:A:H1'	1:CA:368:U:O2'	2.11	0.51
1:CA:736:C:H2'	1:CA:737:A:H8	1.74	0.51
1:CA:1068:G:OP2	1:CA:1068:G:H8	1.94	0.51
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.11	0.51
4:CD:14:ARG:HA	4:CD:39:PRO:HB3	1.92	0.51
4:CD:93:PHE:O	4:CD:97:LEU:HG	2.11	0.51
5:CE:105:VAL:O	5:CE:109:ILE:HG13	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:152:ALA:O	7:CG:155:ARG:HG3	2.10	0.51
10:CJ:51:ARG:HG3	10:CJ:61:GLU:N	2.26	0.51
13:CM:97:PRO:O	13:CM:98:VAL:HA	2.11	0.51
18:CR:59:SER:OG	18:CR:62:GLU:HG3	2.10	0.51
18:CR:61:LYS:O	18:CR:65:ILE:HG13	2.11	0.51
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.93	0.51
23:D1:73:LEU:HD13	23:D1:90:ILE:HG22	1.92	0.51
24:D2:29:LYS:O	24:D2:33:MET:SD	2.69	0.51
24:D2:41:ILE:O	24:D2:44:LEU:N	2.41	0.51
30:D8:35:GLN:OE1	31:DA:2421:G:OP2	2.28	0.51
30:D8:39:LYS:HE2	30:D8:42:ARG:NH1	2.27	0.51
31:DA:64:A:O2'	31:DA:65:C:H5'	2.11	0.51
31:DA:174:C:H3''	31:DA:175:G:H5''	1.90	0.51
31:DA:271(G):C:H2'	31:DA:271(G):C:O2	2.11	0.51
31:DA:1112:G:C1'	31:DA:1113:U:OP1	2.59	0.51
31:DA:1970:A:C5'	31:DA:1972:A:H1'	2.36	0.51
31:DA:2302:G:C6	31:DA:2315:G:C6	2.98	0.51
31:DA:2364:C:C2'	31:DA:2365:G:H5'	2.41	0.51
31:DA:2864:G:H2'	31:DA:2865:U:O4'	2.09	0.51
32:DB:38:C:O4'	44:DS:95:HIS:NE2	2.37	0.51
33:DD:241:PRO:O	33:DD:243:GLY:N	2.43	0.51
36:DG:174:GLU:HG3	36:DG:180:PHE:CD1	2.46	0.51
38:DI:40:THR:CG2	38:DI:43:ASN:HD22	2.24	0.51
39:DN:87:LEU:O	39:DN:88:GLU:C	2.49	0.51
41:DP:71:VAL:HG13	41:DP:72:PRO:HD3	1.91	0.51
46:DU:92:ARG:HH22	47:DV:10:LYS:CB	2.24	0.51
46:DU:104:GLN:HB2	47:DV:43:GLU:OE2	2.11	0.51
50:DY:68:HIS:H	50:DY:71:LYS:HZ1	1.58	0.51
1:AA:55:A:C4	1:AA:56:U:C6	2.99	0.50
1:AA:510:A:H5''	1:AA:511:C:OP2	2.11	0.50
1:AA:944:G:H5''	1:AA:945:G:OP2	2.10	0.50
1:AA:987:G:N2	1:AA:1219:U:C2	2.80	0.50
1:AA:1189:C:H5''	3:AC:5:ILE:HG21	1.92	0.50
1:AA:1470:G:C2'	1:AA:1471:G:H5'	2.41	0.50
2:AB:153:ARG:O	2:AB:154:LEU:C	2.50	0.50
2:AB:178:ARG:HH21	8:AH:68:ARG:HH22	1.58	0.50
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.43	0.50
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.14	0.50
23:B1:89:GLU:O	23:B1:93:GLU:N	2.42	0.50
24:B2:14:ARG:NE	24:B2:57:ILE:HB	2.27	0.50
27:B5:36:CYS:O	27:B5:38:ALA:N	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:51:TYR:HD2	27:B5:52:TYR:CZ	2.28	0.50
30:B8:10:ALA:HB2	30:B8:59:LYS:NZ	2.26	0.50
31:BA:271(D):G:C6	31:BA:271(E):U:C4	2.99	0.50
31:BA:363(A):A:C2	31:BA:363(B):G:C8	2.99	0.50
31:BA:454:A:H4'	31:BA:455:C:OP2	2.11	0.50
31:BA:836:G:H2'	31:BA:837:C:C6	2.46	0.50
31:BA:1112:G:C1'	31:BA:1113:U:OP1	2.59	0.50
31:BA:1412:A:H2'	31:BA:1413:G:C8	2.46	0.50
31:BA:1449:A:H8	31:BA:1449:A:H5''	1.75	0.50
31:BA:2262:U:H2'	31:BA:2263:C:H5'	1.92	0.50
31:BA:2579:C:O3'	34:BE:131:ALA:HB3	2.11	0.50
31:BA:2656:U:C2'	31:BA:2657:A:H5''	2.41	0.50
31:BA:2762:G:C5'	31:BA:2762:G:H8	2.23	0.50
33:BD:27:THR:HG23	33:BD:28:GLU:H	1.70	0.50
33:BD:30:GLU:CD	33:BD:63:ARG:HE	2.14	0.50
36:BG:39:ILE:HD12	36:BG:40:ASN:N	2.26	0.50
37:BH:170:ARG:HD2	37:BH:170:ARG:H	1.75	0.50
41:BP:124:LYS:HG2	41:BP:143:GLY:HA3	1.93	0.50
46:BU:61:TRP:O	46:BU:62:ILE:C	2.49	0.50
47:BV:1:MET:H2	47:BV:44:LYS:HD2	1.76	0.50
49:BX:63:LYS:O	49:BX:68:ARG:HA	2.11	0.50
50:BY:7:VAL:HB	50:BY:8:LYS:HD2	1.92	0.50
51:BZ:67:LEU:HD12	51:BZ:67:LEU:N	2.26	0.50
1:CA:363:A:C2	12:CL:31:PRO:HG2	2.45	0.50
1:CA:458:C:H2'	1:CA:460:G:H8	1.76	0.50
1:CA:473:G:N3	1:CA:474:G:C8	2.79	0.50
1:CA:491:G:H2'	1:CA:492:G:C8	2.46	0.50
1:CA:738:C:C2	1:CA:739:C:C5	2.99	0.50
1:CA:839:U:OP2	1:CA:840:C:H5	1.94	0.50
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.46	0.50
1:CA:1530:G:OP1	1:CA:1530:G:C4'	2.58	0.50
5:CE:139:LEU:HA	5:CE:142:LEU:CD1	2.41	0.50
13:CM:81:LEU:CD1	13:CM:88:ARG:HH12	2.24	0.50
23:D1:33:LYS:HB3	31:DA:2395:C:O2'	2.11	0.50
23:D1:69:LYS:NZ	31:DA:372:G:OP2	2.33	0.50
25:D3:11:SER:HB3	31:DA:988:A:P	2.51	0.50
30:D8:39:LYS:HD3	30:D8:39:LYS:C	2.31	0.50
31:DA:620:G:H5'	31:DA:620:G:N3	2.26	0.50
31:DA:790:C:O2'	31:DA:791:C:C5'	2.59	0.50
31:DA:814:C:C5	41:DP:27:HIS:CE1	2.99	0.50
31:DA:916:G:H2'	31:DA:917:A:H5''	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1948:G:H2'	31:DA:1949:G:O5'	2.11	0.50
31:DA:2461:C:H2'	31:DA:2462:U:H6	1.76	0.50
31:DA:2480:C:N4	31:DA:2481:G:C6	2.79	0.50
31:DA:2863:C:OP1	45:DT:93:ARG:NH1	2.44	0.50
31:DA:2870:C:C5'	43:DR:65:LEU:HD21	2.40	0.50
33:DD:31:LYS:O	33:DD:32:SER:C	2.49	0.50
34:DE:66:HIS:O	34:DE:66:HIS:CG	2.64	0.50
37:DH:85:LYS:HE2	37:DH:145:ALA:HB2	1.92	0.50
39:DN:87:LEU:HD22	39:DN:91:LEU:HD11	1.92	0.50
39:DN:112:LEU:HD12	39:DN:112:LEU:C	2.27	0.50
40:DO:43:VAL:HG23	40:DO:56:ASP:O	2.11	0.50
43:DR:4:LEU:C	43:DR:6:SER:H	2.12	0.50
47:DV:18:LEU:CD1	47:DV:98:GLU:OE1	2.59	0.50
1:AA:159:G:H21	1:AA:161:A:H3'	1.73	0.50
1:AA:674:G:O2'	1:AA:675:A:H5'	2.11	0.50
1:AA:1058:G:C6	1:AA:1059:C:N3	2.80	0.50
1:AA:1159:U:C4	1:AA:1182:G:C4	2.99	0.50
1:AA:1216:G:H5''	14:AN:5:ALA:CB	2.41	0.50
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.10	0.50
13:AM:94:ARG:HG2	19:AS:82:GLY:N	2.26	0.50
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.92	0.50
23:B1:85:LEU:HD23	23:B1:85:LEU:N	2.26	0.50
31:BA:196:A:C4	31:BA:805:G:O6	2.64	0.50
31:BA:466:A:H1'	31:BA:683:C:O4'	2.11	0.50
31:BA:1173:G:H3'	31:BA:1174:A:H5'	1.92	0.50
31:BA:1495:A:C2	31:BA:1496:A:C2	3.00	0.50
31:BA:1935:G:H1'	31:BA:1964:G:N2	2.26	0.50
31:BA:2186:G:C2'	31:BA:2187:G:H5''	2.42	0.50
31:BA:2511:U:O4	31:BA:2575:C:N3	2.45	0.50
31:BA:2624:G:C2'	31:BA:2625:G:H5'	2.41	0.50
31:BA:2689:U:H5''	31:BA:2690:C:H5'	1.92	0.50
38:BI:27:ARG:HH11	38:BI:27:ARG:CG	2.24	0.50
45:BT:23:ARG:HB2	45:BT:24:PRO:CD	2.39	0.50
49:BX:40:LYS:C	49:BX:42:ALA:H	2.15	0.50
1:CA:264:U:O2'	17:CQ:64:PRO:HB2	2.11	0.50
1:CA:1089:G:C6	1:CA:1090:U:C4	2.99	0.50
1:CA:1108:G:OP1	3:CC:175:LEU:HD12	2.11	0.50
3:CC:18:TRP:HD1	14:CN:51:GLY:O	1.94	0.50
6:CF:73:ASN:O	6:CF:76:ALA:HB3	2.11	0.50
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.11	0.50
27:D5:45:VAL:HA	27:D5:51:TYR:HE1	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:51:GLU:O	28:D6:52:VAL:HB	2.09	0.50
30:D8:53:PRO:HA	30:D8:56:GLU:HB2	1.94	0.50
30:D8:60:LEU:C	30:D8:63:PRO:HD2	2.32	0.50
31:DA:271(L):U:H5''	31:DA:271(M):G:C4	2.46	0.50
31:DA:322:A:H3'	35:DF:169:ASN:HD21	1.75	0.50
31:DA:414:C:H2'	31:DA:415:A:C8	2.45	0.50
31:DA:675:A:C8	31:DA:804:A:C6	2.98	0.50
31:DA:1642:G:H2'	31:DA:1643:G:O4'	2.12	0.50
31:DA:1826:G:H4'	33:DD:242:ARG:CZ	2.41	0.50
31:DA:2308:G:H2'	31:DA:2309:A:N7	2.26	0.50
31:DA:2360:A:O2'	31:DA:2361:A:H5''	2.11	0.50
31:DA:2702:U:OP1	31:DA:2702:U:O2	2.28	0.50
33:DD:35:LYS:HA	33:DD:64:ILE:CG2	2.41	0.50
33:DD:221:VAL:HG22	33:DD:226:MET:HE2	1.93	0.50
34:DE:137:HIS:HB3	34:DE:138:PRO:HD2	1.93	0.50
35:DF:110:LEU:HD21	35:DF:181:LEU:CD2	2.42	0.50
36:DG:29:TRP:C	36:DG:31:VAL:N	2.64	0.50
37:DH:89:ILE:HG22	37:DH:162:ILE:HG22	1.93	0.50
40:DO:26:LYS:HE3	40:DO:37:ASP:OD1	2.11	0.50
42:DQ:141:GLN:HB3	51:DZ:70:LEU:HD13	1.93	0.50
46:DU:91:ASP:O	46:DU:92:ARG:HB3	2.10	0.50
47:DV:66:ARG:CD	47:DV:67:GLY:N	2.74	0.50
49:DX:73:ARG:N	49:DX:74:PRO:HD3	2.27	0.50
1:AA:125:U:H2'	1:AA:126:G:C8	2.47	0.50
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.46	0.50
1:AA:380:G:N2	1:AA:384:G:C5	2.78	0.50
1:AA:450:G:OP1	1:AA:452:A:OP1	2.29	0.50
1:AA:654:G:C2	1:AA:753:A:C4	2.99	0.50
1:AA:687:A:H4'	11:AK:47:VAL:HG13	1.94	0.50
1:AA:820:U:H4'	1:AA:821:G:OP2	2.12	0.50
1:AA:1030(A):G:H1'	1:AA:1031:G:N2	2.17	0.50
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.41	0.50
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.47	0.50
1:AA:1442(B):A:H4'	1:AA:1442(B):A:OP1	2.10	0.50
1:AA:1494:G:N2	31:BA:1912:A:C2	2.79	0.50
3:AC:153:VAL:HG12	3:AC:154:SER:H	1.76	0.50
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.26	0.50
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.26	0.50
6:AF:3:ARG:HB3	6:AF:93:SER:HB2	1.93	0.50
10:AJ:16:LEU:HD13	10:AJ:16:LEU:O	2.11	0.50
10:AJ:51:ARG:HG3	10:AJ:61:GLU:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:14:ARG:NH1	13:AM:42:ALA:HA	2.26	0.50
13:AM:17:VAL:O	13:AM:20:THR:HB	2.12	0.50
31:BA:543:C:N3	31:BA:551:G:N1	2.58	0.50
31:BA:548:A:HO2'	31:BA:549:G:P	2.35	0.50
31:BA:588:U:O4	31:BA:670:A:H1'	2.11	0.50
31:BA:1190:G:O3'	41:BP:35:HIS:HB3	2.12	0.50
31:BA:1328:G:H2'	31:BA:1330:C:C5	2.46	0.50
31:BA:2712:U:O2'	31:BA:2712(A):A:P	2.70	0.50
32:BB:35:U:O2'	32:BB:36:C:H5'	2.11	0.50
32:BB:43:C:H4'	36:BG:66:GLN:NE2	2.26	0.50
33:BD:35:LYS:HB3	33:BD:63:ARG:CA	2.30	0.50
37:BH:158:HIS:HE1	37:BH:168:PRO:O	1.94	0.50
39:BN:39:ARG:HD3	39:BN:41:ASP:HB2	1.92	0.50
39:BN:78:TYR:H	39:BN:79:PRO:CD	2.25	0.50
41:BP:50:ARG:O	41:BP:57:THR:HG23	2.11	0.50
43:BR:5:LYS:N	43:BR:5:LYS:HD2	2.27	0.50
50:BY:42:VAL:CG2	50:BY:67:LEU:HD13	2.41	0.50
1:CA:105:G:H2'	1:CA:106:C:C6	2.47	0.50
1:CA:171:A:H2'	1:CA:172:A:C8	2.45	0.50
1:CA:425:G:N2	1:CA:426:G:H1'	2.26	0.50
1:CA:657:G:C2	1:CA:750:G:C5	3.00	0.50
1:CA:673:G:H2'	1:CA:674:G:H8	1.73	0.50
1:CA:963:G:N2	10:CJ:55:LYS:HE2	2.27	0.50
1:CA:1252:A:H61	1:CA:1285:A:H61	1.57	0.50
1:CA:1329:A:N7	21:CU:7:ARG:NH2	2.56	0.50
4:CD:160:GLN:HA	4:CD:163:GLU:HB2	1.92	0.50
7:CG:85:TYR:HD1	7:CG:154:TYR:HE1	1.60	0.50
16:CP:50:LYS:HD3	16:CP:51:VAL:N	2.26	0.50
22:D0:71:ASP:O	22:D0:72:ARG:HG2	2.11	0.50
22:D0:72:ARG:HH21	22:D0:75:LEU:HD12	1.75	0.50
23:D1:8:SER:HB3	31:DA:1364:G:OP1	2.12	0.50
24:D2:14:ARG:NE	24:D2:57:ILE:HB	2.27	0.50
30:D8:18:ALA:HB3	31:DA:651:G:H4'	1.93	0.50
31:DA:28:A:C5	31:DA:29:U:C5	2.99	0.50
31:DA:92:A:H2'	31:DA:93:G:H8	1.76	0.50
31:DA:996:A:H4'	46:DU:92:ARG:CZ	2.41	0.50
31:DA:1209:G:H21	31:DA:1210:A:H62	1.58	0.50
31:DA:1902:C:OP1	33:DD:242:ARG:HD2	2.10	0.50
31:DA:2820:A:H2'	31:DA:2820:A:N3	2.26	0.50
32:DB:29:A:H2'	32:DB:30:C:C6	2.47	0.50
35:DF:199:TRP:CH2	35:DF:203:GLN:NE2	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:41:MET:HB3	37:DH:43:VAL:HG13	1.94	0.50
39:DN:79:PRO:HD2	39:DN:81:GLY:H	1.76	0.50
41:DP:16:ARG:O	41:DP:18:ARG:N	2.45	0.50
41:DP:146:VAL:HG22	41:DP:147:LEU:H	1.75	0.50
47:DV:56:SER:O	47:DV:57:VAL:HB	2.12	0.50
1:AA:81:U:C4	1:AA:83:U:C5	3.00	0.50
1:AA:90:U:O2'	1:AA:91:C:C5	2.62	0.50
1:AA:96:U:O2'	1:AA:97:G:P	2.70	0.50
1:AA:357:G:C2'	1:AA:358:U:H5'	2.42	0.50
1:AA:515:G:N2	1:AA:537:G:C4	2.79	0.50
1:AA:1205:U:O2'	3:AC:195:VAL:HG23	2.12	0.50
1:AA:1441:G:H5''	1:AA:1442:G:C5'	2.42	0.50
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.11	0.50
3:AC:64:VAL:HB	3:AC:99:VAL:HG12	1.94	0.50
7:AG:69:VAL:O	7:AG:69:VAL:HG12	2.12	0.50
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.10	0.50
24:B2:26:ARG:CG	49:BX:5:TYR:HB3	2.41	0.50
24:B2:49:LYS:HE2	31:BA:76:C:OP1	2.12	0.50
25:B3:11:SER:HB3	31:BA:988:A:P	2.52	0.50
27:B5:36:CYS:C	27:B5:38:ALA:N	2.65	0.50
30:B8:25:MET:HG3	41:BP:64:LYS:HB2	1.93	0.50
31:BA:17:G:H2'	31:BA:18:C:C6	2.46	0.50
31:BA:352:G:O2'	31:BA:353:G:H3'	2.11	0.50
31:BA:833:U:H5''	41:BP:48:PRO:HB3	1.93	0.50
31:BA:1245:G:OP1	41:BP:16:ARG:HD2	2.11	0.50
31:BA:1592:C:C2'	31:BA:1593:G:C5'	2.75	0.50
31:BA:1886:C:O5'	31:BA:1886:C:H6	1.94	0.50
31:BA:2723:C:H5''	43:BR:2:ARG:CD	2.38	0.50
33:BD:125:ILE:HG13	33:BD:137:PRO:CD	2.41	0.50
34:BE:63:LEU:O	34:BE:64:LYS:C	2.50	0.50
34:BE:160:TYR:CD2	34:BE:161:GLY:N	2.79	0.50
38:BI:1:MET:CG	38:BI:23:PRO:HA	2.35	0.50
39:BN:34:LEU:O	39:BN:49:GLY:HA3	2.11	0.50
43:BR:12:ARG:HH11	43:BR:12:ARG:HG3	1.76	0.50
44:BS:16:ASN:C	44:BS:20:ARG:HH21	2.15	0.50
45:BT:28:VAL:HB	45:BT:88:ILE:HG13	1.94	0.50
45:BT:34:VAL:O	45:BT:35:LYS:HB3	2.10	0.50
47:BV:18:LEU:O	47:BV:19:LYS:HB2	2.11	0.50
47:BV:72:VAL:CA	47:BV:88:ARG:HH12	2.15	0.50
1:CA:41:G:H2'	1:CA:42:G:C8	2.46	0.50
1:CA:353:A:C8	1:CA:353:A:C5'	2.88	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:411:A:C6	1:CA:429:U:C4	2.99	0.50
1:CA:710:G:H5''	6:CF:54:LYS:HE3	1.94	0.50
1:CA:750:G:C2	1:CA:751:U:C6	3.00	0.50
1:CA:977:A:H8	1:CA:1223:C:N3	2.10	0.50
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.10	0.50
1:CA:1206:G:C6	1:CA:1207:G:C6	2.99	0.50
1:CA:1429:C:H2'	1:CA:1430:C:H6	1.77	0.50
2:CB:106:LYS:HG2	2:CB:106:LYS:O	2.11	0.50
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.27	0.50
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.22	0.50
11:CK:15:ALA:HA	11:CK:77:MET:HA	1.93	0.50
24:D2:57:ILE:HG23	24:D2:57:ILE:O	2.11	0.50
27:D5:29:THR:HG21	31:DA:2815:C:H5'	1.93	0.50
30:D8:50:LEU:HD12	30:D8:51:ALA:N	2.26	0.50
31:DA:570:G:H2'	31:DA:2030:A:C5	2.46	0.50
31:DA:631:A:OP1	41:DP:64:LYS:CE	2.59	0.50
31:DA:1005:C:C2	31:DA:1143:A:C5	2.99	0.50
31:DA:1140:C:OP1	39:DN:23:LEU:O	2.29	0.50
31:DA:1446:C:O2	31:DA:1447:G:C8	2.64	0.50
31:DA:1593:G:H8	31:DA:1593:G:H5'	1.76	0.50
31:DA:2192:G:O2'	31:DA:2193:G:H5'	2.11	0.50
31:DA:2846:G:H2'	31:DA:2847:U:O4'	2.11	0.50
33:DD:13:ARG:HD2	33:DD:16:MET:CE	2.41	0.50
33:DD:35:LYS:HE2	33:DD:104:TYR:CB	2.36	0.50
35:DF:119:ARG:HG2	35:DF:119:ARG:O	2.12	0.50
35:DF:203:GLN:HA	35:DF:206:ILE:O	2.11	0.50
41:DP:47:ASP:CB	41:DP:48:PRO:O	2.51	0.50
50:DY:45:VAL:CG2	50:DY:62:GLU:N	2.74	0.50
1:AA:131:C:H2'	1:AA:132:C:H6	1.77	0.50
1:AA:192:U:H4'	20:AT:103:GLY:HA2	1.93	0.50
1:AA:373:A:C2	1:AA:374:A:C8	3.00	0.50
1:AA:738:C:C2	1:AA:739:C:C5	2.99	0.50
11:AK:124:LYS:HB3	11:AK:125:PHE:HD1	1.75	0.50
14:AN:24:CYS:HB3	14:AN:27:CYS:O	2.12	0.50
16:AP:36:ILE:HG13	16:AP:36:ILE:O	2.11	0.50
23:B1:10:LYS:HB2	23:B1:14:VAL:CA	2.41	0.50
24:B2:40:SER:OG	24:B2:41:ILE:N	2.44	0.50
25:B3:45:GLY:O	25:B3:48:GLU:HB2	2.12	0.50
31:BA:363(B):G:N3	31:BA:363(B):G:H2'	2.26	0.50
31:BA:414:C:H2'	31:BA:415:A:C8	2.46	0.50
31:BA:706:A:H2'	31:BA:707:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1332:G:H5'	31:BA:1332:G:H8	1.74	0.50
31:BA:1563:G:H2'	31:BA:1564:C:H6	1.76	0.50
31:BA:1593:G:H5'	31:BA:1593:G:C8	2.46	0.50
31:BA:1902:C:H2'	31:BA:1903:G:O5'	2.12	0.50
31:BA:2001:A:H2'	31:BA:2002:G:C8	2.46	0.50
31:BA:2664:G:C2'	31:BA:2665:A:O5'	2.60	0.50
32:BB:42:C:O4'	36:BG:69:ALA:HB2	2.12	0.50
34:BE:3:GLY:O	34:BE:4:ILE:HB	2.12	0.50
34:BE:61:ARG:N	34:BE:62:PRO:CD	2.75	0.50
44:BS:39:ILE:O	44:BS:48:LEU:HD12	2.12	0.50
50:BY:14:LEU:HD11	50:BY:22:GLY:HA2	1.93	0.50
51:BZ:146:ILE:HA	51:BZ:174:VAL:HG12	1.93	0.50
1:CA:73:G:N1	1:CA:97:G:C6	2.80	0.50
1:CA:509:A:O2'	1:CA:510:A:O5'	2.29	0.50
1:CA:532:A:N6	3:CC:193:TYR:HB3	2.17	0.50
1:CA:668:G:O2'	1:CA:669:U:H5'	2.11	0.50
1:CA:682:G:C6	1:CA:683:G:N7	2.80	0.50
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.12	0.50
2:CB:12:GLU:HA	2:CB:16:HIS:HB2	1.93	0.50
3:CC:34:LEU:O	3:CC:34:LEU:HD23	2.12	0.50
5:CE:75:THR:HG23	5:CE:76:ILE:N	2.26	0.50
6:CF:12:PRO:HB2	6:CF:57:GLN:HB2	1.93	0.50
8:CH:123:GLU:O	8:CH:127:LEU:HB2	2.11	0.50
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	1.94	0.50
23:D1:46:LEU:H	23:D1:46:LEU:CD1	2.03	0.50
23:D1:90:ILE:O	23:D1:94:LEU:HB2	2.11	0.50
24:D2:34:GLU:N	24:D2:34:GLU:OE2	2.44	0.50
24:D2:44:LEU:HD12	24:D2:44:LEU:O	2.12	0.50
24:D2:46:GLN:NE2	24:D2:47:ASN:CA	2.74	0.50
24:D2:47:ASN:N	24:D2:47:ASN:HD22	2.09	0.50
24:D2:53:LEU:CA	24:D2:56:GLN:HE22	2.23	0.50
31:DA:442:G:O4'	35:DF:46:ARG:HD3	2.12	0.50
31:DA:1165:U:O2'	31:DA:1166:C:H5'	2.10	0.50
31:DA:1300:U:H2'	31:DA:1626:G:C2	2.46	0.50
31:DA:1628:G:H2'	31:DA:1629:U:C6	2.47	0.50
31:DA:1783:A:C2	31:DA:2587:A:C4	2.99	0.50
31:DA:1932:A:C2	31:DA:1969:A:C2	3.00	0.50
31:DA:2471:C:C4	31:DA:2472:G:C5	2.99	0.50
31:DA:2537:U:H2'	31:DA:2538:C:H6	1.76	0.50
31:DA:2762:G:C5'	31:DA:2762:G:C8	2.94	0.50
32:DB:21:G:O2'	32:DB:22:U:OP2	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:28:ALA:HB3	34:DE:93:VAL:HG22	1.92	0.50
35:DF:205:ARG:O	35:DF:206:ILE:HG13	2.12	0.50
36:DG:133:LEU:C	36:DG:133:LEU:HD12	2.32	0.50
38:DI:10:GLU:O	38:DI:12:LEU:HD23	2.10	0.50
39:DN:30:ILE:HG22	39:DN:34:LEU:CD2	2.42	0.50
45:DT:58:ASN:HD22	45:DT:58:ASN:C	2.14	0.50
51:DZ:165:VAL:HG12	51:DZ:166:SER:HG	1.76	0.50
1:AA:624:C:H2'	1:AA:625:G:C8	2.46	0.50
1:AA:1236:A:O2'	1:AA:1304:G:H4'	2.11	0.50
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.26	0.50
5:AE:34:VAL:O	5:AE:41:VAL:HA	2.12	0.50
7:AG:75:VAL:CG2	7:AG:144:MET:HB3	2.42	0.50
8:AH:54:ASP:O	8:AH:56:LYS:HG3	2.10	0.50
8:AH:82:HIS:CD2	8:AH:138:TRP:NE1	2.80	0.50
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.94	0.50
11:AK:65:ALA:HB3	11:AK:97:ALA:HB3	1.93	0.50
12:AL:22:SER:C	12:AL:24:VAL:H	2.15	0.50
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.32	0.50
13:AM:71:ARG:O	13:AM:71:ARG:HG3	2.12	0.50
23:B1:11:ARG:HG3	23:B1:61:ARG:O	2.11	0.50
24:B2:35:LEU:HD23	24:B2:35:LEU:H	1.76	0.50
31:BA:1210:A:H5''	31:BA:1212:G:O4'	2.11	0.50
31:BA:1719:G:H2'	31:BA:1720:U:C5'	2.42	0.50
31:BA:1742:G:H3'	31:BA:1742:G:C8	2.46	0.50
31:BA:1970:A:C5'	31:BA:1972:A:H1'	2.37	0.50
31:BA:2092:U:C5	31:BA:2226:C:OP2	2.64	0.50
32:BB:49:C:H2'	32:BB:50:G:C8	2.47	0.50
32:BB:94:C:H2'	32:BB:95:C:H6	1.77	0.50
36:BG:33:ARG:HB2	36:BG:162:THR:OG1	2.12	0.50
36:BG:121:ASN:OD1	36:BG:123:ASN:HB2	2.11	0.50
37:BH:43:VAL:O	37:BH:43:VAL:CG2	2.55	0.50
39:BN:87:LEU:HD22	39:BN:91:LEU:HD11	1.94	0.50
39:BN:133:GLN:HG2	39:BN:135:PRO:HD3	1.93	0.50
49:BX:31:HIS:HD2	49:BX:33:LYS:N	2.09	0.50
1:CA:229:U:O2'	1:CA:230:G:H5'	2.10	0.50
1:CA:654:G:C2	1:CA:753:A:C4	3.00	0.50
1:CA:658:G:H2'	1:CA:659:U:H6	1.75	0.50
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.42	0.50
1:CA:1441:G:H5''	1:CA:1442:G:C5'	2.42	0.50
13:CM:24:GLY:C	13:CM:25:ILE:HD12	2.31	0.50
16:CP:20:VAL:HG23	16:CP:35:LYS:HA	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:63:THR:O	19:CS:66:MET:HG2	2.11	0.50
23:D1:89:GLU:O	23:D1:90:ILE:C	2.50	0.50
24:D2:26:ARG:O	24:D2:30:ARG:HD3	2.11	0.50
25:D3:13:ILE:HD13	25:D3:13:ILE:N	2.26	0.50
28:D6:14:THR:O	28:D6:49:HIS:HA	2.12	0.50
29:D7:35:ARG:HG3	29:D7:42:LEU:HD11	1.94	0.50
31:DA:543:C:N3	31:DA:551:G:N1	2.60	0.50
31:DA:854:G:H2'	31:DA:855:G:H8	1.76	0.50
31:DA:1109:C:H5	31:DA:1110:G:C8	2.29	0.50
31:DA:1278:A:O2'	43:DR:34:ILE:HD11	2.12	0.50
31:DA:1839:G:H8	31:DA:1839:G:C5'	2.25	0.50
31:DA:1858:G:O2'	31:DA:1884:A:N6	2.44	0.50
31:DA:2400:G:H2'	31:DA:2400:G:N3	2.26	0.50
34:DE:82:ARG:HG3	34:DE:83:ASP:N	2.27	0.50
34:DE:201:THR:CG2	34:DE:202:LYS:N	2.71	0.50
37:DH:85:LYS:CD	37:DH:133:VAL:HB	2.41	0.50
39:DN:95:PRO:C	39:DN:97:ARG:N	2.65	0.50
51:DZ:108:PRO:HA	51:DZ:142:SER:HA	1.93	0.50
1:AA:119:A:H4'	1:AA:120:A:O5'	2.11	0.50
1:AA:166:G:C4	1:AA:167:G:C8	3.00	0.50
1:AA:189(B):C:O2'	1:AA:189(C):C:H5'	2.11	0.50
1:AA:299:G:C6	1:AA:300:A:N1	2.80	0.50
1:AA:363:A:C5	12:AL:31:PRO:HD2	2.47	0.50
1:AA:1006:C:H42	1:AA:1024:G:H21	1.60	0.50
3:AC:94:LEU:HD12	3:AC:95:THR:N	2.26	0.50
4:AD:160:GLN:HA	4:AD:163:GLU:HB2	1.93	0.50
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.94	0.50
22:B0:72:ARG:HH21	22:B0:75:LEU:HD12	1.77	0.50
30:B8:60:LEU:HB3	30:B8:63:PRO:HG2	1.93	0.50
31:BA:118:A:C8	31:BA:119:A:C8	3.00	0.50
31:BA:175:G:H8	31:BA:175:G:C5'	2.24	0.50
31:BA:213:A:H2'	31:BA:214:G:O4'	2.12	0.50
31:BA:271(G):C:O2	31:BA:271(G):C:H2'	2.11	0.50
31:BA:271(P):C:O2'	31:BA:271(Q):G:H5'	2.12	0.50
31:BA:671:C:H2'	31:BA:672:C:C6	2.47	0.50
31:BA:1142(A):A:C4	31:BA:1144:G:C8	3.00	0.50
31:BA:2192:G:O2'	31:BA:2193:G:H5'	2.11	0.50
33:BD:266:SER:O	33:BD:267:SER:OG	2.26	0.50
36:BG:120:LEU:O	36:BG:122:PRO:HD3	2.10	0.50
36:BG:152:LEU:O	36:BG:153:ARG:HB2	2.12	0.50
39:BN:40:PRO:C	46:BU:64:ARG:NH2	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:48:PRO:O	41:BP:49:ARG:C	2.50	0.50
41:BP:84:ASN:HA	41:BP:115:LEU:O	2.12	0.50
42:BQ:133:ARG:O	42:BQ:134:ARG:HB2	2.11	0.50
46:BU:87:GLY:CA	47:BV:52:VAL:HG13	2.32	0.50
50:BY:86:ARG:HG2	50:BY:87:LYS:N	2.25	0.50
1:CA:310:G:C5'	16:CP:31:LYS:HB2	2.41	0.50
1:CA:682:G:N1	1:CA:683:G:C5	2.80	0.50
1:CA:1409:C:N4	1:CA:1491:G:H1	2.09	0.50
4:CD:108:LEU:O	4:CD:110:PHE:HD1	1.93	0.50
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.11	0.50
11:CK:65:ALA:HB3	11:CK:97:ALA:HB3	1.92	0.50
16:CP:4:ILE:HG13	16:CP:21:VAL:CG1	2.30	0.50
22:D0:40:GLN:NE2	22:D0:43:THR:HA	2.26	0.50
23:D1:85:LEU:HB3	23:D1:87:PRO:HD3	1.92	0.50
30:D8:35:GLN:CG	31:DA:2420:C:OP1	2.60	0.50
31:DA:693:C:H2'	31:DA:694:U:H6	1.77	0.50
31:DA:876:C:C4	31:DA:877:U:C5	2.99	0.50
31:DA:892:G:H3'	31:DA:892:G:N3	2.26	0.50
31:DA:1353:A:H5''	33:DD:38:LYS:HZ1	1.77	0.50
31:DA:1449:A:H5''	31:DA:1449:A:H8	1.77	0.50
31:DA:1527:G:C5'	31:DA:1528:A:OP1	2.60	0.50
31:DA:2580:U:C4'	34:DE:131:ALA:H	2.24	0.50
31:DA:2694:G:C6	31:DA:2695:C:C4	3.00	0.50
31:DA:2740:A:C6	31:DA:2764:A:C8	3.00	0.50
31:DA:2821:A:H2'	31:DA:2822:G:C8	2.46	0.50
31:DA:2850:A:C2	31:DA:2851:A:C4	3.00	0.50
33:DD:224:ALA:O	33:DD:225:ALA:HB2	2.11	0.50
40:DO:13:ASN:HD21	40:DO:97:ARG:N	2.08	0.50
44:DS:28:VAL:HB	44:DS:89:ARG:CB	2.40	0.50
49:DX:21:PHE:HB3	49:DX:90:GLU:HG3	1.94	0.50
1:AA:41:G:H2'	1:AA:42:G:H8	1.77	0.50
1:AA:277:C:P	17:AQ:68:ARG:HH12	2.35	0.50
1:AA:657:G:N2	1:AA:750:G:C8	2.80	0.50
1:AA:977:A:H8	1:AA:1223:C:N3	2.09	0.50
1:AA:1064:G:H8	1:AA:1064:G:O5'	1.95	0.50
1:AA:1125:U:H2'	1:AA:1126:U:OP2	2.10	0.50
14:AN:40:CYS:SG	14:AN:42:ILE:HG12	2.52	0.50
17:AQ:33:GLY:O	17:AQ:34:LYS:O	2.30	0.50
22:B0:27:GLU:HB3	31:BA:856:C:H1'	1.93	0.50
23:B1:53:VAL:HG21	23:B1:74:VAL:HG21	1.93	0.50
23:B1:85:LEU:HB3	23:B1:87:PRO:HD3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:485:C:O2'	31:BA:486:C:H5'	2.12	0.50
31:BA:832:G:OP1	41:BP:40:SER:HB3	2.11	0.50
31:BA:2233:U:H2'	31:BA:2234:G:C8	2.47	0.50
33:BD:69:ARG:NH2	33:BD:128:GLY:O	2.40	0.50
34:BE:70:ALA:O	34:BE:72:VAL:N	2.45	0.50
35:BF:203:GLN:HA	35:BF:206:ILE:O	2.12	0.50
38:BI:78:THR:O	38:BI:79:ILE:HD13	2.12	0.50
39:BN:102:ALA:O	39:BN:106:MET:HG3	2.12	0.50
46:BU:8:VAL:HG11	46:BU:12:ARG:CZ	2.42	0.50
46:BU:104:GLN:HB2	47:BV:43:GLU:OE1	2.12	0.50
47:BV:2:PHE:CE1	47:BV:13:ARG:CZ	2.93	0.50
49:BX:34:ALA:O	49:BX:35:THR:C	2.51	0.50
49:BX:37:THR:HG23	49:BX:54:VAL:HB	1.93	0.50
1:CA:39:G:C6	1:CA:40:C:C5	3.00	0.50
1:CA:191:G:H1'	20:CT:105:SER:HA	1.92	0.50
1:CA:355:C:C2	1:CA:356:A:C8	2.99	0.50
1:CA:382:A:C2	1:CA:383:A:C4	2.99	0.50
1:CA:1058:G:C6	1:CA:1059:C:N3	2.80	0.50
1:CA:1372:U:OP1	9:CI:72:GLY:N	2.44	0.50
2:CB:98:LEU:HB2	2:CB:101:MET:CE	2.42	0.50
6:CF:8:ILE:HG22	6:CF:9:VAL:H	1.77	0.50
6:CF:24:GLU:HG2	6:CF:28:ARG:CZ	2.42	0.50
9:CI:16:ARG:O	9:CI:63:ILE:HA	2.12	0.50
13:CM:94:ARG:HG2	19:CS:82:GLY:N	2.26	0.50
16:CP:22:THR:HG23	16:CP:32:TYR:HA	1.94	0.50
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.12	0.50
23:D1:67:ILE:HD12	23:D1:68:PRO:HD2	1.93	0.50
27:D5:57:VAL:CB	27:D5:58:LEU:HD12	2.41	0.50
30:D8:25:MET:HG3	41:DP:64:LYS:HB2	1.92	0.50
31:DA:683:C:O5'	31:DA:683:C:H6	1.95	0.50
31:DA:1173:G:H3'	31:DA:1174:A:H5'	1.93	0.50
31:DA:1717:G:C2	31:DA:1718:G:C8	3.00	0.50
31:DA:1887:C:C2'	31:DA:1888:G:H5'	2.42	0.50
31:DA:2494:G:C5	31:DA:2495:G:N7	2.80	0.50
31:DA:2680:C:H5'	34:DE:189:PRO:HA	1.94	0.50
38:DI:1:MET:CG	38:DI:23:PRO:HA	2.33	0.50
40:DO:9:GLU:O	40:DO:83:ALA:HA	2.11	0.50
41:DP:32:THR:O	41:DP:36:LYS:HB2	2.12	0.50
1:AA:414:A:H2'	1:AA:415:A:H8	1.77	0.50
1:AA:561:U:O2'	1:AA:562:C:OP2	2.22	0.50
1:AA:609:A:C2'	1:AA:610:G:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	2.12	0.50
1:AA:1206:G:C6	1:AA:1207:G:C6	3.00	0.50
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.09	0.50
5:AE:36:ASP:O	5:AE:37:ARG:CB	2.60	0.50
13:AM:97:PRO:HB2	13:AM:101:GLN:NE2	2.27	0.50
16:AP:20:VAL:HG23	16:AP:35:LYS:HA	1.93	0.50
19:AS:36:ARG:HD2	19:AS:52:TYR:O	2.11	0.50
22:B0:56:ASP:OD1	31:BA:2364:C:H5'	2.12	0.50
24:B2:45:SER:HA	24:B2:47:ASN:HD21	1.76	0.50
31:BA:68:G:H2'	31:BA:69:C:C6	2.47	0.50
31:BA:271(P):C:C2'	31:BA:271(Q):G:H5'	2.41	0.50
31:BA:922:U:H2'	31:BA:923:C:C6	2.46	0.50
31:BA:1050:A:C2	31:BA:2751:G:C5	3.00	0.50
31:BA:1131:G:H4'	39:BN:82:LEU:HG	1.94	0.50
31:BA:2019:A:H2'	31:BA:2020:A:O5'	2.12	0.50
31:BA:2020:A:C2'	31:BA:2021:C:H5'	2.41	0.50
31:BA:2518:A:C8	31:BA:2518:A:H5'	2.47	0.50
31:BA:2637:U:O2'	31:BA:2638:G:H5'	2.12	0.50
31:BA:2728:U:O2'	31:BA:2729:G:H5'	2.12	0.50
31:BA:2820:A:H2'	31:BA:2820:A:N3	2.27	0.50
31:BA:2849:U:H5'	31:BA:2867:G:H21	1.77	0.50
39:BN:23:LEU:HD23	39:BN:23:LEU:O	2.12	0.50
41:BP:71:VAL:HG13	41:BP:72:PRO:HD3	1.92	0.50
44:BS:93:LYS:HE3	44:BS:93:LYS:O	2.12	0.50
45:BT:31:SER:HA	45:BT:32:TYR:CE2	2.47	0.50
45:BT:50:ILE:CD1	45:BT:64:ARG:HB3	2.42	0.50
47:BV:19:LYS:HE2	47:BV:20:LEU:H	1.77	0.50
1:CA:93:G:C2'	1:CA:96:U:H5'	2.42	0.50
1:CA:450:G:OP1	1:CA:452:A:OP1	2.30	0.50
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.77	0.50
1:CA:1242:C:H5''	21:CU:10:ARG:NH1	2.27	0.50
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.46	0.50
4:CD:92:VAL:O	4:CD:96:LEU:HD23	2.12	0.50
7:CG:22:LEU:HG	7:CG:62:PHE:HE2	1.77	0.50
10:CJ:30:SER:HG	10:CJ:81:THR:HG22	1.76	0.50
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.12	0.50
18:CR:19:LYS:O	18:CR:20:ALA:HB2	2.11	0.50
23:D1:14:VAL:O	23:D1:46:LEU:CD2	2.58	0.50
28:D6:23:THR:HG21	31:DA:2419:U:H4'	1.94	0.50
31:DA:61:G:H1	31:DA:94:C:H42	1.58	0.50
31:DA:142:A:H8	31:DA:1408:C:H1'	1.72	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:203:C:H3'	31:DA:204:A:H5''	1.94	0.50
31:DA:340:A:H2'	31:DA:341:G:C5'	2.41	0.50
31:DA:357:A:C2	31:DA:358:U:O2	2.65	0.50
31:DA:435:C:C5	31:DA:436:C:C5	3.00	0.50
31:DA:966:G:C6	31:DA:967:C:N4	2.80	0.50
31:DA:1161:C:H1'	47:DV:8:GLY:O	2.12	0.50
31:DA:1269:A:H2'	31:DA:1270:C:C6	2.46	0.50
31:DA:1688:U:H5'	31:DA:1689:A:OP1	2.12	0.50
31:DA:2646:C:OP2	31:DA:2732:G:O2'	2.21	0.50
31:DA:2664:G:C2'	31:DA:2665:A:O5'	2.60	0.50
32:DB:8:U:H5'	32:DB:9:G:OP2	2.11	0.50
32:DB:93:G:H2'	32:DB:94:C:C6	2.46	0.50
32:DB:93:G:H2'	32:DB:94:C:H6	1.76	0.50
34:DE:27:LEU:HD12	34:DE:181:LEU:HD13	1.94	0.50
34:DE:48:GLN:CG	34:DE:78:LEU:HB3	2.41	0.50
34:DE:75:VAL:C	34:DE:77:ILE:N	2.65	0.50
34:DE:179:GLU:O	34:DE:180:ASN:HB2	2.12	0.50
36:DG:29:TRP:C	36:DG:31:VAL:H	2.15	0.50
38:DI:131:LYS:HG2	38:DI:132:PRO:HA	1.92	0.50
42:DQ:16:ARG:CG	42:DQ:17:LEU:N	2.75	0.50
43:DR:71:GLN:HE21	43:DR:71:GLN:CA	2.19	0.50
46:DU:101:ARG:O	46:DU:102:GLU:C	2.50	0.50
49:DX:44:GLU:HB2	49:DX:49:VAL:O	2.12	0.50
50:DY:45:VAL:CG1	50:DY:46:LYS:H	2.25	0.50
1:AA:343:U:O2'	1:AA:346:G:O6	2.24	0.49
1:AA:1135:U:H4'	1:AA:1136:U:H5	1.76	0.49
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.12	0.49
1:AA:1442(A):G:C3'	1:AA:1442(B):A:C5'	2.87	0.49
4:AD:172:PRO:O	4:AD:187:ARG:NH1	2.43	0.49
15:AO:87:ILE:HG22	15:AO:88:ARG:HG3	1.94	0.49
24:B2:53:LEU:CA	24:B2:56:GLN:HE22	2.24	0.49
30:B8:32:LEU:CG	30:B8:35:GLN:H	2.24	0.49
31:BA:84:A:H5''	50:BY:9:LYS:HD3	1.94	0.49
31:BA:154:G:H2'	31:BA:154(A):C:O2	2.11	0.49
31:BA:643:A:H2'	31:BA:644:A:O5'	2.12	0.49
31:BA:716:A:H2'	31:BA:717:G:O5'	2.12	0.49
31:BA:754:C:H2'	31:BA:755:C:C6	2.47	0.49
31:BA:876:C:C2	31:BA:877:U:C6	2.99	0.49
31:BA:1331:A:HO2'	31:BA:1332:G:H8	1.60	0.49
31:BA:1357:U:H2'	31:BA:1358:G:O4'	2.12	0.49
31:BA:1884:A:N1	31:BA:1885:A:C5	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2756:U:H1'	31:BA:2757:A:H5''	1.94	0.49
33:BD:231:HIS:ND1	33:BD:232:PRO:HD2	2.27	0.49
38:BI:98:ALA:HA	38:BI:109:ILE:CD1	2.42	0.49
41:BP:52:GLU:C	41:BP:54:GLY:H	2.15	0.49
41:BP:55:ARG:O	41:BP:56:SER:OG	2.21	0.49
42:BQ:23:GLY:O	42:BQ:99:PRO:O	2.30	0.49
44:BS:34:HIS:CE1	44:BS:54:LEU:CB	2.89	0.49
44:BS:97:ARG:O	44:BS:97:ARG:HG3	2.12	0.49
48:BW:70:TYR:O	48:BW:107:LEU:HD12	2.12	0.49
1:CA:62:U:O2'	1:CA:379:C:H1'	2.12	0.49
1:CA:79:G:H4'	1:CA:80:G:OP1	2.11	0.49
1:CA:376:G:H2'	1:CA:377:G:H8	1.77	0.49
1:CA:948:C:OP1	13:CM:107:ALA:HA	2.11	0.49
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.24	0.49
3:CC:125:GLU:OE2	3:CC:189:ALA:HA	2.12	0.49
4:CD:3:ARG:HD3	4:CD:5:ILE:HG13	1.94	0.49
4:CD:50:ARG:HD2	4:CD:51:PRO:O	2.12	0.49
9:CI:79:LEU:HD11	9:CI:83:ARG:NH2	2.27	0.49
10:CJ:16:LEU:HD13	10:CJ:16:LEU:O	2.12	0.49
23:D1:87:PRO:O	23:D1:91:LYS:N	2.28	0.49
28:D6:10:LEU:N	28:D6:10:LEU:CD2	2.74	0.49
30:D8:47:LYS:HD2	30:D8:48:PHE:O	2.11	0.49
31:DA:143:G:H1'	49:DX:38:GLU:HG3	1.93	0.49
31:DA:389:G:H22	41:DP:72:PRO:HD3	1.77	0.49
31:DA:601:C:O2	31:DA:605:C:H4'	2.12	0.49
31:DA:607:U:C2	31:DA:621:A:N1	2.80	0.49
31:DA:866:A:C6	31:DA:914:C:C5	3.00	0.49
31:DA:1168:G:C2'	31:DA:1169:G:H5'	2.42	0.49
31:DA:1804:C:H2'	31:DA:1805:U:H6	1.77	0.49
31:DA:2503:A:C8	55:DA:3330:ERY:H293	2.47	0.49
31:DA:2660:A:C5'	31:DA:2661:G:N2	2.72	0.49
31:DA:2712:U:O2'	31:DA:2712(A):A:OP2	2.27	0.49
34:DE:103:ASP:OD2	34:DE:168:MET:HE1	2.12	0.49
41:DP:144:GLU:N	41:DP:145:PRO:CD	2.75	0.49
44:DS:35:ILE:HG22	44:DS:53:SER:HB2	1.93	0.49
44:DS:98:VAL:CG1	44:DS:100:ALA:H	2.24	0.49
49:DX:18:TYR:O	49:DX:19:ALA:C	2.50	0.49
49:DX:25:LYS:CG	49:DX:26:TYR:N	2.55	0.49
51:DZ:54:HIS:HE1	51:DZ:123:ASP:CG	2.14	0.49
51:DZ:156:LYS:O	51:DZ:158:PRO:HD3	2.12	0.49
1:AA:195:A:C5	1:AA:196:A:N1	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:343:U:H2'	1:AA:346:G:O6	2.12	0.49
1:AA:688:G:H2'	1:AA:689:C:C6	2.47	0.49
1:AA:814:A:N7	1:AA:816:A:C5	2.80	0.49
1:AA:872:A:C2	1:AA:874:G:C6	3.00	0.49
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.35	0.49
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.93	0.49
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.93	0.49
5:AE:103:GLY:C	5:AE:106:PRO:HD2	2.32	0.49
6:AF:63:TYR:CD2	6:AF:63:TYR:N	2.80	0.49
6:AF:78:GLU:O	6:AF:81:ILE:HG13	2.11	0.49
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.12	0.49
17:AQ:99:SER:C	17:AQ:100:LYS:HD3	2.32	0.49
20:AT:63:ILE:HD13	20:AT:80:ARG:HB2	1.93	0.49
23:B1:73:LEU:HD13	23:B1:90:ILE:HG22	1.93	0.49
24:B2:23:LYS:HB2	49:BX:5:TYR:CE1	2.47	0.49
31:BA:53:A:H61	31:BA:117:G:C2'	2.25	0.49
31:BA:530:G:C5	31:BA:2022:U:H5''	2.48	0.49
31:BA:877:U:O2'	31:BA:878:A:H5''	2.11	0.49
31:BA:1106:A:H2'	31:BA:1107:G:O5'	2.10	0.49
31:BA:1859:A:C6	31:BA:1884:A:C8	2.99	0.49
31:BA:2820:A:H1'	43:BR:5:LYS:HZ3	1.78	0.49
31:BA:2880:C:O2'	43:BR:90:ARG:HD3	2.12	0.49
33:BD:25:THR:CG2	33:BD:82:ILE:N	2.75	0.49
37:BH:137:ASP:HB3	37:BH:140:LYS:H	1.77	0.49
37:BH:149:ARG:O	37:BH:152:ARG:O	2.30	0.49
39:BN:25:ARG:HH11	39:BN:25:ARG:CG	2.22	0.49
41:BP:108:LYS:C	41:BP:110:TYR:N	2.66	0.49
49:BX:21:PHE:CE1	49:BX:26:TYR:CG	3.00	0.49
50:BY:8:LYS:HE3	50:BY:72:VAL:HG23	1.94	0.49
51:BZ:92:SER:O	51:BZ:130:PRO:HG2	2.12	0.49
1:CA:119:A:H4'	1:CA:120:A:O5'	2.12	0.49
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.12	0.49
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.48	0.49
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.94	0.49
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.28	0.49
10:CJ:96:ILE:N	10:CJ:96:ILE:HD13	2.27	0.49
12:CL:32:PHE:CE1	12:CL:86:ARG:HG3	2.45	0.49
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.77	0.49
18:CR:25:THR:CG2	18:CR:42:ARG:HH11	2.25	0.49
20:CT:97:ALA:O	20:CT:99:LEU:HG	2.13	0.49
23:D1:33:LYS:HZ1	23:D1:35:THR:HG21	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:37:PHE:O	24:D2:37:PHE:CD2	2.65	0.49
24:D2:53:LEU:C	24:D2:56:GLN:HE22	2.15	0.49
31:DA:106:C:H1'	50:DY:2:ARG:NE	2.27	0.49
31:DA:252:G:P	41:DP:50:ARG:HH11	2.35	0.49
31:DA:491:G:O2'	31:DA:492:A:H5'	2.12	0.49
31:DA:565:C:H4'	31:DA:1253:A:C6	2.47	0.49
31:DA:1952:A:C6	31:DA:1953:A:C6	3.00	0.49
31:DA:2075:U:H2'	31:DA:2238:G:N2	2.27	0.49
32:DB:20:C:O2'	32:DB:21:G:H5''	2.12	0.49
34:DE:96:PHE:HA	34:DE:100:GLU:OE1	2.12	0.49
45:DT:4:GLY:O	45:DT:7:ILE:HB	2.11	0.49
45:DT:40:THR:O	45:DT:41:ARG:CB	2.60	0.49
47:DV:43:GLU:N	47:DV:48:GLY:HA2	2.26	0.49
50:DY:39:VAL:O	50:DY:40:GLU:CD	2.51	0.49
1:AA:352:C:O2'	1:AA:354:G:OP1	2.25	0.49
1:AA:688:G:H2'	1:AA:689:C:H6	1.77	0.49
3:AC:18:TRP:HD1	14:AN:51:GLY:O	1.95	0.49
4:AD:79:PHE:HZ	4:AD:204:ILE:HD13	1.77	0.49
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.11	0.49
7:AG:66:VAL:O	7:AG:70:LYS:HG3	2.12	0.49
7:AG:85:TYR:HD1	7:AG:154:TYR:HE1	1.60	0.49
12:AL:38:THR:CG2	12:AL:57:LYS:HB2	2.42	0.49
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.93	0.49
27:B5:11:THR:HG23	31:BA:1263:U:O2'	2.12	0.49
31:BA:271(L):U:H5''	31:BA:271(M):G:C4	2.46	0.49
31:BA:428:A:H8	31:BA:428:A:OP2	1.95	0.49
31:BA:966:G:H2'	31:BA:967:C:H6	1.76	0.49
31:BA:1300:U:H2'	31:BA:1626:G:C2	2.47	0.49
31:BA:2196:C:O2'	31:BA:2197:U:H5'	2.12	0.49
31:BA:2282:G:OP1	31:BA:2283:C:H1'	2.13	0.49
31:BA:2287:A:C4	31:BA:2289:G:C8	2.99	0.49
31:BA:2663:G:C5	31:BA:2664:G:C5	3.00	0.49
31:BA:2689:U:C4'	31:BA:2690:C:H5'	2.42	0.49
31:BA:2864:G:H2'	31:BA:2865:U:O4'	2.11	0.49
31:BA:2869:G:H2'	31:BA:2870:C:O4'	2.12	0.49
33:BD:30:GLU:HG3	33:BD:63:ARG:NH2	2.27	0.49
34:BE:111:ARG:HG3	43:BR:2:ARG:HG3	1.93	0.49
41:BP:81:GLN:NE2	41:BP:106:LEU:HA	2.27	0.49
45:BT:48:ILE:HG22	45:BT:50:ILE:HD12	1.92	0.49
1:CA:102:G:C6	1:CA:103:C:C4	3.01	0.49
1:CA:116:A:H61	1:CA:313:A:H1'	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:791:G:C5	1:CA:792:A:N7	2.81	0.49
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.77	0.49
2:CB:17:PHE:O	2:CB:18:GLY:O	2.30	0.49
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.12	0.49
5:CE:101:ILE:HD11	5:CE:119:LEU:HA	1.93	0.49
12:CL:86:ARG:HB2	12:CL:101:VAL:CG2	2.42	0.49
13:CM:14:ARG:NH1	13:CM:42:ALA:HA	2.27	0.49
17:CQ:65:ILE:HD12	17:CQ:65:ILE:H	1.77	0.49
24:D2:26:ARG:CG	49:DX:5:TYR:HB3	2.40	0.49
24:D2:51:ARG:O	24:D2:52:ASP:HB2	2.11	0.49
31:DA:446:G:OP1	46:DU:3:ARG:NH1	2.45	0.49
31:DA:485:C:O2'	31:DA:486:C:H5'	2.12	0.49
31:DA:1317:A:H2'	31:DA:1318:C:C6	2.46	0.49
31:DA:2018:G:H2'	31:DA:2019:A:C8	2.48	0.49
31:DA:2196:C:O2'	31:DA:2197:U:H5'	2.12	0.49
32:DB:102:A:H8	32:DB:102:A:OP2	1.95	0.49
33:DD:36:PRO:HA	33:DD:62:TYR:O	2.12	0.49
35:DF:24:LEU:CB	35:DF:25:PRO:HD2	2.29	0.49
43:DR:10:LEU:HB3	43:DR:17:ARG:CD	2.41	0.49
45:DT:51:ARG:HG2	45:DT:52:ILE:N	2.26	0.49
47:DV:83:ARG:O	47:DV:84:LYS:HD2	2.12	0.49
48:DW:64:MET:O	48:DW:65:LEU:CB	2.50	0.49
49:DX:65:ARG:NH2	49:DX:66:LEU:H	2.10	0.49
50:DY:9:LYS:HA	50:DY:30:VAL:HG21	1.95	0.49
51:DZ:146:ILE:HA	51:DZ:174:VAL:HG12	1.93	0.49
1:AA:229:U:O2'	1:AA:230:G:H5'	2.12	0.49
1:AA:336:C:O2'	1:AA:337:C:H5'	2.13	0.49
1:AA:365:U:H5''	1:AA:366:C:OP1	2.12	0.49
1:AA:577:G:C8	1:AA:816:A:C6	3.01	0.49
1:AA:1316:G:H1	19:AS:5:LEU:HD21	1.78	0.49
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.30	0.49
20:AT:89:ARG:HD2	20:AT:104:LEU:HD21	1.93	0.49
30:B8:32:LEU:CA	30:B8:34:TRP:H	2.25	0.49
30:B8:34:TRP:HD1	31:BA:2391:G:OP1	1.95	0.49
30:B8:53:PRO:HA	30:B8:56:GLU:HB2	1.94	0.49
31:BA:142:A:H8	31:BA:1408:C:H1'	1.71	0.49
31:BA:993:G:N3	47:BV:91:TYR:CE1	2.80	0.49
31:BA:1027:A:N6	31:BA:1126:A:C4	2.81	0.49
31:BA:1227:G:OP1	46:BU:13:LYS:HG2	2.12	0.49
31:BA:1417:C:H2'	31:BA:1418:G:H5'	1.94	0.49
31:BA:1494:A:H2'	31:BA:1494:A:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1495:A:H2'	31:BA:1496:A:N3	2.27	0.49
31:BA:1578:U:H6	31:BA:1578:U:OP2	1.96	0.49
31:BA:1836:C:C2'	31:BA:1837:C:H5'	2.42	0.49
31:BA:1836:C:H2'	31:BA:1837:C:H6	1.76	0.49
31:BA:1893:C:C6	31:BA:1894:C:C5	3.00	0.49
32:BB:30:C:H2'	32:BB:31:C:H5'	1.95	0.49
36:BG:11:TYR:HD2	36:BG:12:TYR:CD1	2.31	0.49
36:BG:55:LYS:O	36:BG:59:GLU:HB2	2.12	0.49
38:BI:73:GLU:O	38:BI:73:GLU:HG3	2.12	0.49
42:BQ:38:GLU:OE2	42:BQ:127:ILE:HG22	2.12	0.49
44:BS:89:ARG:O	44:BS:90:GLY:O	2.30	0.49
50:BY:8:LYS:H	50:BY:28:LYS:NZ	2.09	0.49
1:CA:409:G:C2'	1:CA:410:G:H5'	2.38	0.49
1:CA:538:G:OP2	12:CL:115:LYS:HG3	2.12	0.49
1:CA:939:G:H5''	7:CG:102:ARG:NH2	2.28	0.49
1:CA:1030(A):G:H1'	1:CA:1031:G:N2	2.16	0.49
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.10	0.49
1:CA:1228:C:P	13:CM:108:ARG:HH22	2.35	0.49
4:CD:108:LEU:HB3	4:CD:110:PHE:CD1	2.46	0.49
5:CE:13:ILE:HG13	5:CE:29:GLY:O	2.12	0.49
5:CE:103:GLY:O	5:CE:106:PRO:HD2	2.13	0.49
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	2.13	0.49
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	1.94	0.49
13:CM:3:ARG:HG2	13:CM:9:ILE:CG1	2.42	0.49
24:D2:40:SER:OG	24:D2:41:ILE:N	2.45	0.49
26:D4:11:PRO:C	26:D4:13:ARG:H	2.16	0.49
27:D5:36:CYS:HG	27:D5:49:CYS:HG	0.50	0.49
31:DA:26:G:C6	31:DA:27:G:N1	2.81	0.49
31:DA:27:G:O2'	31:DA:28:A:OP2	2.27	0.49
31:DA:515:A:H1'	31:DA:581:C:H1'	1.93	0.49
31:DA:1495:A:C2	31:DA:1496:A:C2	3.00	0.49
31:DA:1719:G:H2'	31:DA:1720:U:C5'	2.42	0.49
31:DA:1884:A:N1	31:DA:1885:A:C5	2.80	0.49
31:DA:2469:A:C5	31:DA:2470:G:H1'	2.48	0.49
31:DA:2544:G:H1'	31:DA:2646:C:H4'	1.92	0.49
33:DD:77:ALA:HB2	33:DD:97:TYR:CG	2.46	0.49
34:DE:111:ARG:HG3	43:DR:2:ARG:HG3	1.95	0.49
35:DF:2:LYS:O	35:DF:25:PRO:HG2	2.13	0.49
40:DO:10:VAL:HG22	40:DO:17:ARG:O	2.13	0.49
41:DP:14:LYS:O	41:DP:15:ARG:CB	2.59	0.49
43:DR:41:ALA:O	43:DR:44:LEU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:57:LYS:CG	44:DS:58:LEU:H	2.26	0.49
50:DY:8:LYS:HE3	50:DY:72:VAL:HG23	1.93	0.49
50:DY:42:VAL:CG2	50:DY:67:LEU:HD13	2.43	0.49
51:DZ:16:SER:HA	51:DZ:19:ARG:HD2	1.93	0.49
51:DZ:118:GLN:O	51:DZ:120:ILE:N	2.44	0.49
51:DZ:151:HIS:HA	51:DZ:171:ILE:HD13	1.93	0.49
1:AA:69:G:N3	1:AA:70:G:C8	2.81	0.49
1:AA:147:G:N2	1:AA:148:G:H1'	2.27	0.49
1:AA:189(B):C:N4	1:AA:189(J):G:C6	2.81	0.49
1:AA:605:U:H2'	1:AA:606:G:C8	2.48	0.49
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.76	0.49
1:AA:1365:G:C5	1:AA:1366:C:C5	3.01	0.49
2:AB:44:LEU:HD12	2:AB:44:LEU:N	2.22	0.49
2:AB:106:LYS:HG2	2:AB:106:LYS:O	2.13	0.49
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.11	0.49
3:AC:125:GLU:OE2	3:AC:189:ALA:HA	2.12	0.49
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.60	0.49
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.27	0.49
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.95	0.49
20:AT:97:ALA:O	20:AT:99:LEU:HG	2.11	0.49
24:B2:12:GLU:CD	24:B2:12:GLU:C	2.72	0.49
31:BA:910:A:N7	42:BQ:13:GLN:HB2	2.27	0.49
31:BA:1185:C:H5''	31:BA:1186:G:OP1	2.13	0.49
31:BA:1654:A:H2'	31:BA:1655:A:H8	1.77	0.49
31:BA:1802:A:N1	31:BA:1822:G:H1'	2.28	0.49
31:BA:2223:G:H2'	31:BA:2224:G:C5'	2.41	0.49
32:BB:20:C:O2'	32:BB:21:G:H5''	2.13	0.49
34:BE:66:HIS:O	34:BE:66:HIS:CG	2.64	0.49
35:BF:132:VAL:CG2	35:BF:133:ASN:N	2.76	0.49
36:BG:165:THR:OG1	36:BG:168:GLU:HG3	2.12	0.49
41:BP:141:ALA:HB3	25:D3:1:MET:HE1	1.94	0.49
44:BS:16:ASN:O	44:BS:20:ARG:NH2	2.46	0.49
44:BS:98:VAL:HG12	44:BS:100:ALA:H	1.78	0.49
49:BX:25:LYS:CG	49:BX:26:TYR:N	2.57	0.49
49:BX:60:ARG:CZ	49:BX:74:PRO:HG2	2.42	0.49
50:BY:71:LYS:NZ	50:BY:71:LYS:CB	2.70	0.49
1:CA:38:G:N1	1:CA:397:A:C2	2.79	0.49
1:CA:200:G:H1	1:CA:217:C:N4	2.02	0.49
1:CA:1160:G:H5'	2:CB:132:LYS:HE3	1.95	0.49
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.13	0.49
3:CC:108:ASN:ND2	3:CC:111:LEU:HD12	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:89:ARG:HD2	20:CT:104:LEU:HD21	1.93	0.49
31:DA:352:G:O2'	31:DA:353:G:H3'	2.12	0.49
31:DA:362:U:H3'	31:DA:362:U:H6	1.77	0.49
31:DA:717:G:H2'	31:DA:718:A:O4'	2.12	0.49
31:DA:743:G:H2'	31:DA:744:G:H5'	1.94	0.49
31:DA:866:A:C6	31:DA:914:C:C6	3.00	0.49
31:DA:1015:G:C2'	31:DA:1016:G:H5'	2.43	0.49
31:DA:1510:G:H2'	31:DA:1511:C:H5'	1.93	0.49
31:DA:2563:U:O2	31:DA:2565:A:H8	1.95	0.49
31:DA:2700:C:O2'	31:DA:2701:C:H5'	2.12	0.49
31:DA:2753:A:HO2'	31:DA:2754:U:H6	1.58	0.49
31:DA:2869:G:H2'	31:DA:2870:C:O4'	2.12	0.49
32:DB:30:C:H2'	32:DB:31:C:H5'	1.93	0.49
34:DE:51:PHE:HB3	34:DE:76:ARG:HB3	1.94	0.49
36:DG:11:TYR:HD2	36:DG:12:TYR:CD1	2.30	0.49
38:DI:69:LYS:HG2	38:DI:69:LYS:O	2.13	0.49
39:DN:17:ASP:CG	39:DN:17:ASP:O	2.49	0.49
40:DO:90:GLN:O	40:DO:91:LEU:HB2	2.12	0.49
41:DP:96:THR:HG22	41:DP:126:VAL:CG2	2.42	0.49
43:DR:10:LEU:HB3	43:DR:17:ARG:CZ	2.41	0.49
45:DT:28:VAL:HG11	45:DT:46:GLU:OE1	2.12	0.49
48:DW:9:TYR:N	48:DW:102:HIS:CD2	2.72	0.49
1:AA:427:U:C4	1:AA:428:G:C6	3.01	0.49
1:AA:586:C:C2'	1:AA:587:G:H5'	2.42	0.49
1:AA:1053:G:N7	1:AA:1200:C:H5'	2.28	0.49
5:AE:12:LEU:C	5:AE:12:LEU:HD22	2.32	0.49
10:AJ:51:ARG:HE	10:AJ:61:GLU:CB	2.21	0.49
15:AO:36:ILE:HG22	15:AO:37:ASN:HD22	1.77	0.49
24:B2:29:LYS:O	24:B2:33:MET:SD	2.70	0.49
31:BA:309:G:O3'	50:BY:18:GLY:CA	2.60	0.49
31:BA:477:A:H2'	31:BA:478:A:C8	2.47	0.49
31:BA:810:U:O2'	41:BP:33:ARG:CZ	2.60	0.49
31:BA:892:G:H2'	31:BA:893:C:O4'	2.13	0.49
31:BA:1359:A:H2'	31:BA:1360:A:H5'	1.93	0.49
31:BA:1425:G:H2'	31:BA:1426:G:O4'	2.13	0.49
31:BA:1945:G:H2'	31:BA:1946:U:H6	1.76	0.49
31:BA:2557:G:H2'	31:BA:2558:C:C6	2.48	0.49
34:BE:201:THR:HG22	34:BE:202:LYS:H	1.73	0.49
35:BF:70:THR:HG22	35:BF:72:ARG:H	1.76	0.49
44:BS:98:VAL:CG1	44:BS:100:ALA:H	2.26	0.49
46:BU:91:ASP:OD2	46:BU:96:ALA:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:27:VAL:HG13	51:BZ:29:TYR:HD2	1.77	0.49
1:CA:69:G:N3	1:CA:70:G:C8	2.81	0.49
1:CA:136:C:H42	1:CA:227:G:H1	1.60	0.49
1:CA:177:C:OP1	20:CT:65:LYS:HD3	2.12	0.49
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.76	0.49
5:CE:72:GLN:O	5:CE:75:THR:HG22	2.12	0.49
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.13	0.49
12:CL:55:VAL:HG13	12:CL:68:ALA:O	2.13	0.49
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.12	0.49
23:D1:10:LYS:CG	23:D1:11:ARG:H	2.25	0.49
30:D8:51:ALA:N	30:D8:53:PRO:HD2	2.27	0.49
31:DA:271(F):C:C2	31:DA:271(G):C:C6	3.00	0.49
31:DA:300:A:H2'	31:DA:334:C:H1'	1.95	0.49
31:DA:358:U:H3'	31:DA:358:U:C6	2.46	0.49
31:DA:373:U:H2'	31:DA:374:A:H8	1.78	0.49
31:DA:804:A:H5''	31:DA:805:G:OP1	2.13	0.49
31:DA:814:C:H5''	47:DV:86:GLY:HA3	1.93	0.49
31:DA:1130:U:O2	31:DA:2025:C:H5''	2.13	0.49
31:DA:1505:C:C2'	31:DA:1506:C:O5'	2.61	0.49
31:DA:1827:C:C2'	31:DA:1828:G:H5'	2.42	0.49
31:DA:2660:A:H5''	31:DA:2661:G:H21	1.77	0.49
31:DA:2774:C:H2'	31:DA:2775:A:O4'	2.13	0.49
34:DE:48:GLN:HE22	34:DE:64:LYS:HE2	1.78	0.49
35:DF:132:VAL:CG2	35:DF:133:ASN:N	2.75	0.49
36:DG:61:ALA:HA	36:DG:64:THR:CG2	2.41	0.49
36:DG:173:LEU:HB3	36:DG:178:PHE:CG	2.47	0.49
37:DH:93:GLY:O	37:DH:95:ARG:HG2	2.12	0.49
40:DO:69:ILE:O	40:DO:76:ALA:HA	2.13	0.49
42:DQ:85:LYS:HG3	42:DQ:86:GLY:N	2.28	0.49
44:DS:98:VAL:HG12	44:DS:100:ALA:H	1.77	0.49
48:DW:29:LEU:O	48:DW:33:ARG:HD2	2.13	0.49
50:DY:81:LYS:HD3	50:DY:97:ARG:HG3	1.93	0.49
51:DZ:128:VAL:HG21	51:DZ:161:VAL:HG22	1.94	0.49
1:AA:159:G:O2'	1:AA:160:A:C8	2.60	0.49
1:AA:356:A:H1'	1:AA:368:U:O2'	2.13	0.49
1:AA:425:G:O2'	1:AA:426:G:H5'	2.13	0.49
1:AA:448:A:C2	1:AA:449:C:C4	3.00	0.49
1:AA:542:G:C2	1:AA:543:C:C5	3.01	0.49
1:AA:560:U:H5'	1:AA:566:G:N2	2.27	0.49
1:AA:682:G:N1	1:AA:683:G:C5	2.81	0.49
1:AA:963:G:H1	1:AA:972:C:H42	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1329:A:N7	21:AU:7:ARG:NH2	2.56	0.49
2:AB:21:ARG:CB	2:AB:39:ILE:HA	2.43	0.49
4:AD:61:LYS:NZ	4:AD:62:GLN:NE2	2.61	0.49
10:AJ:8:LEU:HG	10:AJ:96:ILE:HG22	1.94	0.49
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.27	0.49
12:AL:32:PHE:CE1	12:AL:86:ARG:HG3	2.46	0.49
14:AN:22:THR:HB	14:AN:33:VAL:HG11	1.95	0.49
31:BA:142:A:H1'	31:BA:1408:C:O4'	2.12	0.49
31:BA:966:G:C4	31:BA:967:C:C5	3.01	0.49
31:BA:1688:U:H5'	31:BA:1689:A:OP1	2.13	0.49
31:BA:1827:C:C2'	31:BA:1828:G:H5'	2.43	0.49
31:BA:2498:C:O2'	31:BA:2499:C:H5'	2.13	0.49
31:BA:2658:C:C3'	31:BA:2659:G:H5''	2.41	0.49
32:BB:71:C:H2'	32:BB:71:C:O2	2.11	0.49
33:BD:43:ARG:NH1	33:BD:44:ASN:ND2	2.60	0.49
34:BE:39:PRO:HA	34:BE:43:GLY:CA	2.42	0.49
35:BF:65:TRP:CZ3	35:BF:72:ARG:HB3	2.48	0.49
36:BG:29:TRP:C	36:BG:31:VAL:N	2.66	0.49
36:BG:114:ILE:O	36:BG:116:ASP:N	2.45	0.49
37:BH:85:LYS:CE	37:BH:145:ALA:HB2	2.42	0.49
37:BH:93:GLY:O	37:BH:95:ARG:HG2	2.13	0.49
39:BN:131:GLN:CD	39:BN:134:ARG:HB3	2.33	0.49
43:BR:18:LEU:O	43:BR:19:ALA:C	2.49	0.49
45:BT:58:ASN:C	45:BT:58:ASN:HD22	2.16	0.49
47:BV:36:PRO:CD	47:BV:60:GLU:O	2.61	0.49
49:BX:30:VAL:HG23	49:BX:76:ARG:HA	1.94	0.49
51:BZ:28:MET:CE	51:BZ:59:LEU:HD12	2.42	0.49
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.47	0.49
1:CA:674:G:H2'	1:CA:675:A:H8	1.77	0.49
1:CA:930:C:O2'	1:CA:931:C:H5'	2.12	0.49
1:CA:932:C:H4'	7:CG:4:ARG:NH2	2.28	0.49
1:CA:1133:G:N3	1:CA:1142:G:N2	2.60	0.49
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	2.13	0.49
2:CB:74:LYS:C	2:CB:78:GLN:HG3	2.33	0.49
3:CC:94:LEU:HD12	3:CC:95:THR:N	2.28	0.49
9:CI:79:LEU:HD11	9:CI:83:ARG:CZ	2.42	0.49
11:CK:124:LYS:HB3	11:CK:125:PHE:HD1	1.77	0.49
12:CL:27:LEU:HD11	12:CL:64:TYR:CE1	2.47	0.49
12:CL:82:VAL:CG1	12:CL:83:VAL:N	2.76	0.49
16:CP:74:LEU:O	16:CP:79:VAL:HB	2.12	0.49
24:D2:37:PHE:CE2	24:D2:39:ALA:O	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:292:C:O2'	31:DA:293:U:H5'	2.12	0.49
31:DA:363(A):A:C2	31:DA:363(B):G:C8	3.01	0.49
31:DA:557:U:O2	39:DN:45:ASN:HB2	2.13	0.49
31:DA:910:A:C8	42:DQ:13:GLN:HB2	2.48	0.49
31:DA:1309:G:H2'	31:DA:1310:G:H5'	1.93	0.49
31:DA:1445(A):C:H2'	31:DA:1446:C:H6	1.78	0.49
31:DA:2031:A:OP1	31:DA:2031:A:O4'	2.31	0.49
31:DA:2518:A:H5'	31:DA:2518:A:H8	1.77	0.49
31:DA:2722:G:H2'	31:DA:2723:C:C6	2.47	0.49
32:DB:2:C:H2'	32:DB:3:C:C6	2.48	0.49
32:DB:45:A:H2'	32:DB:46:A:H5'	1.95	0.49
33:DD:17:THR:CG2	33:DD:205:VAL:N	2.62	0.49
36:DG:165:THR:OG1	36:DG:168:GLU:HG3	2.13	0.49
39:DN:98:VAL:HG23	39:DN:99:LEU:H	1.77	0.49
40:DO:16:ALA:HB2	40:DO:52:VAL:HG11	1.95	0.49
44:DS:16:ASN:C	44:DS:20:ARG:HH21	2.15	0.49
44:DS:74:ALA:HB1	44:DS:103:GLU:HB2	1.94	0.49
46:DU:14:HIS:O	46:DU:15:LYS:C	2.51	0.49
50:DY:28:LYS:HD2	50:DY:37:VAL:CG1	2.43	0.49
51:DZ:14:LYS:HB2	51:DZ:17:ALA:CB	2.42	0.49
51:DZ:56:VAL:HA	51:DZ:70:LEU:HD23	1.93	0.49
1:AA:201:C:H42	1:AA:203:U:H1'	1.78	0.49
1:AA:355:C:N3	1:AA:356:A:N7	2.61	0.49
1:AA:363:A:C2	12:AL:31:PRO:HG2	2.47	0.49
1:AA:682:G:C6	1:AA:683:G:N7	2.80	0.49
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.66	0.49
1:AA:1293:G:O2'	1:AA:1294:G:H8	1.95	0.49
6:AF:40:VAL:HA	6:AF:62:TRP:O	2.12	0.49
17:AQ:22:LEU:HD12	17:AQ:23:VAL:H	1.77	0.49
27:B5:25:LEU:HD21	48:BW:41:LYS:HE3	1.95	0.49
31:BA:125:G:H4'	31:BA:126:A:OP2	2.13	0.49
31:BA:241:A:O4'	31:BA:243:U:C6	2.66	0.49
31:BA:693:C:H2'	31:BA:694:U:C6	2.48	0.49
31:BA:801:G:N7	35:BF:53:THR:HG23	2.28	0.49
31:BA:1024:G:C3'	31:BA:1025:G:H5''	2.35	0.49
31:BA:1568:G:P	33:BD:63:ARG:HH22	2.36	0.49
31:BA:2327:A:H2'	31:BA:2328:A:H8	1.74	0.49
31:BA:2880:C:H1'	43:BR:92:GLY:O	2.13	0.49
34:BE:60:ASN:N	34:BE:60:ASN:HD22	2.09	0.49
36:BG:106:LEU:HD12	36:BG:110:ALA:CB	2.42	0.49
40:BO:42:SER:OG	40:BO:44:LYS:HE2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:35:ILE:C	44:BS:36:TYR:CD1	2.84	0.49
51:BZ:56:VAL:HA	51:BZ:70:LEU:HD23	1.95	0.49
1:CA:402:G:C6	1:CA:403:C:C4	3.01	0.49
1:CA:684:A:C6	1:CA:685:G:C6	3.01	0.49
1:CA:865:A:C2	1:CA:918:A:H4'	2.47	0.49
1:CA:976:G:C5'	1:CA:1358:U:O2'	2.58	0.49
4:CD:119:GLN:O	4:CD:123:HIS:HD2	1.95	0.49
5:CE:126:ARG:HA	5:CE:131:ILE:HD11	1.94	0.49
8:CH:91:ARG:HH11	8:CH:91:ARG:HG2	1.77	0.49
9:CI:28:VAL:HA	9:CI:63:ILE:O	2.13	0.49
10:CJ:8:LEU:HG	10:CJ:96:ILE:HG22	1.94	0.49
17:CQ:59:ILE:HG22	17:CQ:60:ILE:N	2.28	0.49
22:D0:1:MET:HA	31:DA:2451:A:H4'	1.95	0.49
31:DA:336:C:H5''	50:DY:7:VAL:HG13	1.95	0.49
31:DA:338:G:H2'	31:DA:339:U:H6	1.77	0.49
31:DA:1049:C:H1'	31:DA:1113:U:O2'	2.13	0.49
31:DA:1171:G:H3'	31:DA:1173:G:O4'	2.12	0.49
31:DA:1189:A:N7	31:DA:1190:G:C8	2.81	0.49
31:DA:1858:G:H1'	31:DA:1884:A:N6	2.28	0.49
31:DA:1893:C:C6	31:DA:1894:C:C5	3.01	0.49
31:DA:2020:A:C2'	31:DA:2021:C:H5'	2.43	0.49
31:DA:2069:G:H2'	31:DA:2070:G:H5'	1.94	0.49
31:DA:2228:G:C6	31:DA:2229:C:C4	3.00	0.49
32:DB:21:G:O2'	32:DB:22:U:O5'	2.31	0.49
34:DE:179:GLU:HB3	34:DE:181:LEU:CD2	2.43	0.49
36:DG:45:GLU:HB2	36:DG:47:LYS:CD	2.42	0.49
38:DI:79:ILE:HG22	38:DI:81:VAL:HG23	1.95	0.49
41:DP:47:ASP:HB2	41:DP:51:PHE:HB2	1.95	0.49
42:DQ:17:LEU:N	42:DQ:17:LEU:HD23	2.28	0.49
46:DU:92:ARG:CZ	47:DV:11:GLN:HG2	2.43	0.49
47:DV:80:GLN:HA	47:DV:82:ARG:H	1.77	0.49
49:DX:21:PHE:CE1	49:DX:26:TYR:CG	3.00	0.49
51:DZ:28:MET:CE	51:DZ:59:LEU:HD12	2.43	0.49
1:AA:60:A:P	1:AA:60:A:C8	3.05	0.49
1:AA:538:G:OP2	12:AL:115:LYS:HG3	2.13	0.49
1:AA:710:G:H5''	6:AF:54:LYS:HE3	1.95	0.49
1:AA:920:U:H1'	1:AA:1080:A:C2	2.48	0.49
8:AH:11:THR:HG23	8:AH:14:ARG:NH1	2.28	0.49
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.80	0.49
12:AL:62:SER:O	12:AL:64:TYR:N	2.46	0.49
12:AL:110:VAL:HG23	12:AL:120:TYR:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:8:ARG:O	16:AP:9:PHE:CG	2.66	0.49
27:B5:7:PRO:HA	31:BA:2615:U:C2	2.48	0.49
30:B8:47:LYS:HD2	30:B8:48:PHE:O	2.12	0.49
31:BA:329:G:OP2	50:BY:71:LYS:HE2	2.13	0.49
31:BA:631:A:OP1	41:BP:64:LYS:CE	2.61	0.49
31:BA:721:C:H2'	31:BA:721:C:O2	2.11	0.49
31:BA:1162:G:O2'	47:BV:92:THR:HG23	2.12	0.49
31:BA:1354:A:H2'	31:BA:1355:G:O4'	2.13	0.49
31:BA:2275:C:H5'	31:BA:2275:C:H6	1.78	0.49
31:BA:2472:G:N1	31:BA:2477:C:OP1	2.25	0.49
31:BA:2476:A:C2	31:BA:2477:C:H5''	2.47	0.49
32:BB:41:U:C4	36:BG:70:VAL:O	2.66	0.49
34:BE:57:LYS:O	34:BE:57:LYS:HG3	2.13	0.49
35:BF:67:GLN:O	35:BF:67:GLN:HG3	2.12	0.49
35:BF:195:ASP:CG	35:BF:197:ASP:HB3	2.33	0.49
36:BG:6:ALA:HB3	36:BG:104:GLU:OE1	2.13	0.49
36:BG:45:GLU:HB2	36:BG:47:LYS:CD	2.43	0.49
37:BH:85:LYS:CD	37:BH:133:VAL:HB	2.42	0.49
39:BN:2:LYS:NZ	46:BU:94:ASN:HD21	2.11	0.49
43:BR:51:LEU:HD13	43:BR:70:LEU:HD21	1.93	0.49
43:BR:117:VAL:O	43:BR:117:VAL:HG12	2.12	0.49
44:BS:61:ASN:ND2	44:BS:64:GLU:OE2	2.46	0.49
47:BV:15:GLU:O	47:BV:98:GLU:CD	2.51	0.49
47:BV:47:VAL:HG22	47:BV:48:GLY:N	2.28	0.49
1:CA:189(B):C:O2'	1:CA:189(C):C:H5'	2.13	0.49
1:CA:363:A:C5	12:CL:31:PRO:HD2	2.47	0.49
1:CA:447:G:C6	1:CA:485:G:H1'	2.47	0.49
1:CA:541:G:H2'	1:CA:542:G:H8	1.78	0.49
1:CA:586:C:C2'	1:CA:587:G:H5'	2.43	0.49
1:CA:590:C:H2'	1:CA:591:U:C6	2.48	0.49
1:CA:605:U:H2'	1:CA:606:G:C8	2.46	0.49
1:CA:920:U:H1'	1:CA:1080:A:N3	2.27	0.49
1:CA:994:A:N6	1:CA:1046:A:H2	2.10	0.49
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.94	0.49
2:CB:67:THR:HG21	2:CB:155:LEU:HG	1.95	0.49
2:CB:97:TRP:CH2	2:CB:176:GLU:HG3	2.48	0.49
2:CB:153:ARG:O	2:CB:154:LEU:C	2.51	0.49
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	1.95	0.49
7:CG:75:VAL:CG2	7:CG:144:MET:HB3	2.42	0.49
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.81	0.49
11:CK:48:ILE:HG21	11:CK:63:LEU:HD13	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:81:LEU:HB3	13:CM:89:GLY:CA	2.39	0.49
16:CP:20:VAL:HG13	16:CP:21:VAL:N	2.28	0.49
24:D2:12:GLU:C	24:D2:14:ARG:N	2.66	0.49
31:DA:271(L):U:H4'	31:DA:271(M):G:N7	2.26	0.49
31:DA:300:A:P	50:DY:84:ARG:NH2	2.86	0.49
31:DA:307:G:H22	31:DA:310:A:H5'	1.75	0.49
31:DA:443:A:H3'	35:DF:45:ARG:HH21	1.78	0.49
31:DA:444:C:H4'	35:DF:49:ALA:HB2	1.95	0.49
31:DA:643:A:H2'	31:DA:644:A:O5'	2.13	0.49
31:DA:854:G:H2'	31:DA:855:G:C8	2.47	0.49
31:DA:877:U:O2'	31:DA:878:A:H5''	2.12	0.49
31:DA:1107:G:H2'	31:DA:1108:U:O4'	2.13	0.49
31:DA:1185:C:H5''	31:DA:1186:G:OP1	2.13	0.49
31:DA:1359:A:N7	31:DA:1372:U:C4	2.80	0.49
31:DA:1512:U:O2'	31:DA:1513:C:H5'	2.13	0.49
31:DA:2199:A:OP2	31:DA:2200:C:C5	2.63	0.49
31:DA:2287:A:C4	31:DA:2289:G:C8	3.00	0.49
31:DA:2359:C:H2'	31:DA:2360:A:C5'	2.30	0.49
31:DA:2660:A:H5''	31:DA:2661:G:N2	2.28	0.49
33:DD:186:HIS:CD2	33:DD:186:HIS:C	2.87	0.49
37:DH:44:VAL:HG12	37:DH:45:VAL:N	2.19	0.49
50:DY:7:VAL:HB	50:DY:8:LYS:HD2	1.94	0.49
1:AA:78:G:H22	1:AA:91:C:N4	2.11	0.49
1:AA:411:A:C6	1:AA:429:U:C4	3.00	0.49
1:AA:475:G:H2'	1:AA:476:G:C8	2.42	0.49
1:AA:922:G:C2	1:AA:923:A:C4	3.00	0.49
1:AA:1108:G:OP1	3:AC:175:LEU:HD12	2.12	0.49
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.13	0.49
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.52	0.49
2:AB:36:ARG:HB2	2:AB:41:ILE:HD13	1.95	0.49
2:AB:115:LEU:HB2	2:AB:145:LEU:HD12	1.95	0.49
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.28	0.49
4:AD:10:ARG:O	4:AD:13:ARG:HB2	2.12	0.49
4:AD:112:VAL:HG13	4:AD:113:SER:N	2.28	0.49
12:AL:18:VAL:HG23	12:AL:19:ARG:N	2.26	0.49
12:AL:20:LYS:HD3	12:AL:20:LYS:H	1.78	0.49
12:AL:55:VAL:CG1	12:AL:56:ALA:N	2.75	0.49
30:B8:51:ALA:N	30:B8:53:PRO:HD2	2.28	0.49
31:BA:271(F):C:C2	31:BA:271(G):C:C6	3.00	0.49
31:BA:824:A:C2'	31:BA:825:C:H5'	2.42	0.49
31:BA:1048:A:OP2	31:BA:1110:G:N1	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1439:A:C2	31:BA:1553:A:C5	3.01	0.49
31:BA:1494:A:N3	31:BA:1494:A:C2'	2.75	0.49
31:BA:1510:G:H2'	31:BA:1511:C:H5'	1.94	0.49
31:BA:1525:G:H2'	31:BA:1526:G:C8	2.48	0.49
31:BA:2480:C:N4	31:BA:2481:G:C6	2.81	0.49
31:BA:2632:A:H1'	34:BE:61:ARG:CZ	2.43	0.49
31:BA:2661:G:HO2'	31:BA:2662:A:P	2.33	0.49
31:BA:2752:C:H2'	31:BA:2753:A:H5'	1.94	0.49
32:BB:21:G:O2'	32:BB:22:U:O5'	2.29	0.49
33:BD:173:VAL:HG23	33:BD:174:ILE:H	1.78	0.49
33:BD:267:SER:O	33:BD:268:ARG:CB	2.61	0.49
42:BQ:16:ARG:C	42:BQ:17:LEU:HD23	2.33	0.49
44:BS:16:ASN:HB3	44:BS:20:ARG:NH2	2.28	0.49
45:BT:41:ARG:CZ	45:BT:43:GLN:HB2	2.42	0.49
46:BU:60:LEU:O	46:BU:64:ARG:HG2	2.13	0.49
46:BU:102:GLU:HG3	47:BV:2:PHE:CE2	2.47	0.49
47:BV:79:VAL:HG23	47:BV:82:ARG:CD	2.43	0.49
49:BX:77:LYS:HD3	49:BX:78:LYS:HD2	1.95	0.49
50:BY:28:LYS:CE	50:BY:37:VAL:HG12	2.42	0.49
1:CA:20:U:O2'	1:CA:21:G:H5'	2.13	0.49
1:CA:410:G:OP2	4:CD:25:ARG:HG3	2.13	0.49
1:CA:435:C:N4	1:CA:436:C:H41	2.11	0.49
1:CA:731:G:H5'	1:CA:766:A:H4'	1.95	0.49
1:CA:834:C:H2'	1:CA:835:U:C6	2.47	0.49
1:CA:963:G:H1	1:CA:972:C:H42	1.60	0.49
1:CA:1054:C:O2	1:CA:1054:C:H3'	2.12	0.49
1:CA:1068:G:N3	1:CA:1191:A:H2	2.09	0.49
1:CA:1086:U:H2'	1:CA:1087:G:H8	1.78	0.49
1:CA:1238:A:N6	1:CA:1299:A:H62	2.08	0.49
2:CB:204:ASN:HD21	2:CB:206:ASP:H	1.61	0.49
9:CI:114:TYR:N	9:CI:114:TYR:HD2	2.11	0.49
15:CO:67:LEU:HD22	15:CO:78:TYR:CE1	2.47	0.49
20:CT:46:GLU:HG2	20:CT:48:LYS:HE2	1.95	0.49
23:D1:85:LEU:N	23:D1:85:LEU:HD23	2.26	0.49
24:D2:16:LEU:N	24:D2:18:PRO:HD2	2.27	0.49
31:DA:70:G:H21	31:DA:71:A:H62	1.61	0.49
31:DA:526:A:H5''	31:DA:527:C:OP1	2.12	0.49
31:DA:990:A:OP2	31:DA:991:C:OP2	2.30	0.49
31:DA:995:C:N3	39:DN:4:TYR:HE1	2.11	0.49
31:DA:1158:C:O2'	31:DA:1159:U:OP2	2.31	0.49
31:DA:1276:A:O2'	43:DR:16:HIS:HE1	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1327:C:C2'	31:DA:1328:G:H5'	2.43	0.49
31:DA:1472:A:H2'	31:DA:1473:G:H5'	1.93	0.49
31:DA:2753:A:O2'	31:DA:2754:U:P	2.71	0.49
31:DA:2756:U:H1'	31:DA:2757:A:H5''	1.94	0.49
32:DB:27:C:H6	32:DB:27:C:H5''	1.76	0.49
33:DD:35:LYS:HB3	33:DD:63:ARG:CA	2.31	0.49
35:DF:157:VAL:HB	35:DF:194:MET:HB3	1.94	0.49
36:DG:46:ALA:H	36:DG:82:LEU:CD1	2.24	0.49
43:DR:8:ARG:HA	43:DR:8:ARG:NE	2.28	0.49
43:DR:41:ALA:O	43:DR:42:LYS:C	2.51	0.49
45:DT:84:GLN:OE1	45:DT:86:ILE:HD12	2.13	0.49
49:DX:60:ARG:CZ	49:DX:74:PRO:HG2	2.42	0.49
50:DY:29:GLU:OE1	50:DY:29:GLU:N	2.46	0.49
50:DY:87:LYS:O	50:DY:88:LYS:HB2	2.13	0.49
1:AA:262:A:N6	1:AA:263:A:N6	2.60	0.48
1:AA:731:G:OP1	1:AA:766:A:H1'	2.13	0.48
1:AA:1004:A:C2'	1:AA:1038:C:O2	2.61	0.48
1:AA:1058:G:H8	1:AA:1058:G:O5'	1.96	0.48
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.77	0.48
1:AA:1271:G:H5'	1:AA:1314:C:H5'	1.95	0.48
1:AA:1416:G:H2'	1:AA:1417:G:O4'	2.13	0.48
1:AA:1418:A:H1'	31:BA:1959:G:O4'	2.13	0.48
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.13	0.48
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.78	0.48
6:AF:67:MET:CE	6:AF:75:LEU:HD12	2.43	0.48
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.48	0.48
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.78	0.48
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.13	0.48
24:B2:34:GLU:O	24:B2:36:ARG:HB2	2.13	0.48
25:B3:1:MET:O	25:B3:3:ARG:N	2.46	0.48
27:B5:40:LYS:CE	27:B5:46:CYS:HB3	2.43	0.48
28:B6:24:GLU:CA	28:B6:24:GLU:OE1	2.58	0.48
31:BA:997:G:O2'	31:BA:998:C:H5'	2.13	0.48
31:BA:1952:A:C6	31:BA:1953:A:C6	3.00	0.48
31:BA:2598:A:O5'	33:BD:236:GLY:HA3	2.11	0.48
35:BF:7:TYR:HD2	35:BF:16:GLY:HA3	1.77	0.48
36:BG:64:THR:CG2	36:BG:65:GLY:N	2.77	0.48
37:BH:32:GLU:C	37:BH:33:LEU:HD23	2.33	0.48
43:BR:44:LEU:HD22	43:BR:48:VAL:HG23	1.94	0.48
47:BV:1:MET:HA	47:BV:1:MET:CE	2.43	0.48
47:BV:22:VAL:O	47:BV:23:GLU:CB	2.51	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:47:VAL:CG1	47:BV:48:GLY:H	2.13	0.48
1:CA:189(B):C:N4	1:CA:189(J):G:C6	2.80	0.48
1:CA:277:C:P	17:CQ:68:ARG:HH12	2.36	0.48
1:CA:477:A:O2'	1:CA:479:C:H5'	2.12	0.48
1:CA:693:G:H1'	7:CG:82:GLY:CA	2.43	0.48
1:CA:706:A:C5	1:CA:707:C:C5	3.02	0.48
1:CA:731:G:OP1	1:CA:766:A:H1'	2.13	0.48
1:CA:1004:A:C2'	1:CA:1038:C:O2	2.60	0.48
1:CA:1226:C:OP1	13:CM:91:ARG:NH1	2.46	0.48
1:CA:1313:U:P	19:CS:6:LYS:HG3	2.53	0.48
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.48	0.48
4:CD:60:GLU:HG2	4:CD:202:LEU:HB2	1.95	0.48
5:CE:36:ASP:O	5:CE:37:ARG:CB	2.61	0.48
12:CL:62:SER:HB2	12:CL:64:TYR:HD1	1.78	0.48
13:CM:81:LEU:HD11	13:CM:88:ARG:HH12	1.78	0.48
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.13	0.48
22:D0:84:LEU:HD12	22:D0:84:LEU:N	2.27	0.48
31:DA:1865:G:H5''	31:DA:1865:G:H8	1.78	0.48
31:DA:2602:A:H4'	31:DA:2603:G:O5'	2.13	0.48
31:DA:2807:G:H22	31:DA:2892:A:N6	2.11	0.48
31:DA:2807:G:H3'	31:DA:2808:U:H5''	1.94	0.48
34:DE:63:LEU:O	34:DE:64:LYS:C	2.51	0.48
36:DG:13:GLU:O	36:DG:14:GLU:HB2	2.13	0.48
36:DG:55:LYS:O	36:DG:59:GLU:HB2	2.13	0.48
39:DN:78:TYR:H	39:DN:79:PRO:CD	2.26	0.48
42:DQ:45:GLN:CD	42:DQ:45:GLN:H	2.15	0.48
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD1	2.13	0.48
1:AA:763:G:O2'	1:AA:764:C:H5'	2.13	0.48
1:AA:826:C:H2'	1:AA:827:U:C6	2.48	0.48
1:AA:983:A:H3'	1:AA:983:A:N3	2.28	0.48
1:AA:1068:G:N3	1:AA:1191:A:H2	2.11	0.48
1:AA:1088:G:C6	1:AA:1089:G:C6	3.01	0.48
2:AB:67:THR:HG21	2:AB:155:LEU:HG	1.96	0.48
3:AC:82:GLU:O	3:AC:86:VAL:HG13	2.13	0.48
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.94	0.48
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.28	0.48
8:AH:92:ARG:HD2	8:AH:92:ARG:N	2.28	0.48
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.34	0.48
12:AL:102:ARG:HD2	12:AL:108:ALA:O	2.13	0.48
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.13	0.48
20:AT:64:ASP:OD2	20:AT:81:LYS:NZ	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:52:TYR:O	27:B5:52:TYR:CG	2.66	0.48
31:BA:547:A:C8	31:BA:549:G:O6	2.66	0.48
31:BA:954:G:C5	31:BA:955:C:C5	3.01	0.48
31:BA:1050:A:C2	31:BA:2751:G:C4	3.01	0.48
31:BA:1174:A:OP1	31:BA:1175:U:H5''	2.13	0.48
31:BA:1827:C:O2'	31:BA:1970:A:N3	2.37	0.48
31:BA:2228:G:OP1	33:BD:261:LYS:NZ	2.46	0.48
31:BA:2802:G:H3'	31:BA:2802:G:P	2.53	0.48
33:BD:79:VAL:HG21	33:BD:111:LEU:CD1	2.42	0.48
33:BD:101:GLU:OE1	33:BD:103:ARG:HD3	2.13	0.48
35:BF:164:ARG:HG2	35:BF:164:ARG:NH1	2.24	0.48
37:BH:54:ARG:HB3	37:BH:65:HIS:CD2	2.48	0.48
38:BI:37:VAL:HG12	38:BI:38:LEU:N	2.28	0.48
42:BQ:16:ARG:HG3	42:BQ:17:LEU:H	1.78	0.48
45:BT:109:GLU:HA	45:BT:112:ARG:CG	2.43	0.48
47:BV:32:THR:HB	47:BV:64:HIS:HE1	1.79	0.48
49:BX:34:ALA:C	49:BX:36:LYS:N	2.65	0.48
49:BX:62:LYS:CB	49:BX:69:TYR:H	2.19	0.48
51:BZ:108:PRO:HA	51:BZ:142:SER:HA	1.95	0.48
1:CA:189(B):C:N4	1:CA:189(I):G:H1	2.11	0.48
1:CA:561:U:HO2'	1:CA:562:C:P	2.33	0.48
1:CA:687:A:H4'	11:CK:47:VAL:HG13	1.95	0.48
2:CB:188:ALA:HB1	2:CB:192:SER:CB	2.42	0.48
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.95	0.48
8:CH:87:SER:HB3	8:CH:133:LEU:O	2.12	0.48
12:CL:22:SER:C	12:CL:24:VAL:H	2.16	0.48
24:D2:32:LEU:HD21	31:DA:61:G:O2'	2.13	0.48
29:D7:5:TRP:CH2	31:DA:686:G:N7	2.81	0.48
31:DA:28:A:O2'	31:DA:583:G:H5'	2.13	0.48
31:DA:284:U:H2'	31:DA:285:C:C6	2.48	0.48
31:DA:1225:G:H8	31:DA:1225:G:O5'	1.96	0.48
31:DA:1444:G:N2	31:DA:1548:C:C2	2.81	0.48
31:DA:1563:G:C5	31:DA:1564:C:C5	3.02	0.48
31:DA:1667:G:H22	31:DA:1992:G:H5''	1.78	0.48
31:DA:1685:C:H2'	31:DA:1686:C:H6	1.78	0.48
31:DA:1799:G:N7	33:DD:179:SER:OG	2.44	0.48
31:DA:1803:A:H2	31:DA:1822:G:N3	2.11	0.48
31:DA:1902:C:C4'	33:DD:244:ARG:HB2	2.42	0.48
31:DA:2186:G:C2'	31:DA:2187:G:H5''	2.43	0.48
34:DE:70:ALA:O	34:DE:72:VAL:N	2.45	0.48
38:DI:78:THR:O	38:DI:79:ILE:HD13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:78:TYR:CD1	39:DN:79:PRO:HD3	2.47	0.48
43:DR:53:HIS:O	43:DR:56:LYS:HB3	2.13	0.48
46:DU:95:LEU:HD12	47:DV:11:GLN:HG3	1.95	0.48
48:DW:71:VAL:HA	48:DW:107:LEU:HD12	1.94	0.48
1:AA:359:U:H2'	1:AA:360:A:C8	2.48	0.48
1:AA:706:A:C5	1:AA:707:C:C5	3.01	0.48
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	2.14	0.48
1:AA:1407:C:O5'	1:AA:1407:C:H6	1.96	0.48
2:AB:188:ALA:HB1	2:AB:192:SER:CB	2.43	0.48
4:AD:60:GLU:HG2	4:AD:202:LEU:HB2	1.96	0.48
4:AD:170:VAL:HG13	4:AD:171:GLY:N	2.27	0.48
5:AE:122:GLU:OE1	5:AE:131:ILE:HG13	2.13	0.48
7:AG:37:ASN:HD21	9:AI:40:LEU:CD2	2.26	0.48
8:AH:97:VAL:O	8:AH:100:ILE:HG13	2.13	0.48
9:AI:105:ASP:CG	9:AI:107:ARG:HD3	2.33	0.48
13:AM:94:ARG:O	13:AM:96:LEU:HG	2.13	0.48
27:B5:57:VAL:CG2	27:B5:58:LEU:N	2.76	0.48
31:BA:272(G):C:H42	31:BA:363(C):G:H1	1.61	0.48
31:BA:547:A:O2'	31:BA:548:A:OP2	2.28	0.48
31:BA:610:G:H2'	31:BA:611:C:C6	2.49	0.48
31:BA:662:G:O2'	31:BA:663:G:H5'	2.13	0.48
31:BA:855:G:C5	31:BA:856:C:C5	3.00	0.48
31:BA:1642:G:C2'	31:BA:1643:G:H5'	2.44	0.48
32:BB:13:A:O2'	32:BB:15:A:O5'	2.32	0.48
32:BB:45:A:C2	32:BB:46:A:C1'	2.96	0.48
36:BG:13:GLU:O	36:BG:14:GLU:HB2	2.12	0.48
37:BH:54:ARG:HG2	37:BH:65:HIS:HD2	1.79	0.48
38:BI:109:ILE:HG22	38:BI:130:TYR:CZ	2.48	0.48
39:BN:58:ASP:OD1	39:BN:124:ALA:HB1	2.13	0.48
41:BP:83:VAL:CG1	41:BP:112:LEU:HD21	2.44	0.48
44:BS:17:ARG:O	44:BS:18:ILE:HB	2.12	0.48
44:BS:57:LYS:HG2	44:BS:58:LEU:N	2.28	0.48
49:BX:65:ARG:NE	49:BX:65:ARG:HA	2.28	0.48
51:BZ:156:LYS:O	51:BZ:158:PRO:HD3	2.13	0.48
1:CA:84:U:C5	1:CA:88:A:C8	3.01	0.48
1:CA:106:C:H2'	1:CA:107:G:H8	1.79	0.48
1:CA:738:C:N3	1:CA:739:C:C5	2.82	0.48
1:CA:781:A:C3'	1:CA:782:A:H5'	2.43	0.48
1:CA:1058:G:H8	1:CA:1058:G:O5'	1.97	0.48
3:CC:111:LEU:HD21	3:CC:145:GLY:O	2.12	0.48
7:CG:66:VAL:HG12	7:CG:70:LYS:HE3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:38:THR:CG2	12:CL:57:LYS:HB2	2.44	0.48
19:CS:65:ASN:HB2	19:CS:66:MET:HE3	1.94	0.48
22:D0:36:ILE:HG23	31:DA:2354:G:O2'	2.13	0.48
22:D0:43:THR:N	31:DA:2331:G:H4'	2.24	0.48
27:D5:41:PRO:O	27:D5:44:THR:OG1	2.31	0.48
28:D6:48:VAL:O	28:D6:49:HIS:O	2.31	0.48
29:D7:19:ARG:HH11	29:D7:19:ARG:HG2	1.78	0.48
30:D8:30:ARG:NH2	41:DP:62:LEU:HB2	2.29	0.48
31:DA:107:C:C4	31:DA:108:U:C5	3.01	0.48
31:DA:363(B):G:H2'	31:DA:363(B):G:N3	2.29	0.48
31:DA:524:U:H2'	31:DA:525:U:C6	2.49	0.48
31:DA:795:C:H2'	31:DA:796:C:H6	1.78	0.48
31:DA:1047:G:N2	31:DA:1111:A:N6	2.59	0.48
31:DA:1195:G:C2'	31:DA:1196:C:H5'	2.43	0.48
31:DA:1416:G:O2'	31:DA:1417:C:P	2.71	0.48
31:DA:1478:G:O2'	31:DA:1558:A:H2	1.97	0.48
31:DA:1497:U:H2'	31:DA:1498:C:OP1	2.13	0.48
31:DA:1925:C:O2'	31:DA:1926:U:H5'	2.13	0.48
31:DA:2311:A:O2'	31:DA:2312:U:O4'	2.27	0.48
31:DA:2619:C:O2'	31:DA:2620:C:H5'	2.13	0.48
37:DH:170:ARG:H	37:DH:170:ARG:HD2	1.77	0.48
39:DN:133:GLN:HG2	39:DN:135:PRO:HD3	1.95	0.48
41:DP:35:HIS:O	41:DP:36:LYS:HG3	2.13	0.48
44:DS:95:HIS:O	44:DS:96:GLY:C	2.52	0.48
45:DT:56:GLY:O	45:DT:59:THR:CG2	2.61	0.48
46:DU:92:ARG:NH2	47:DV:10:LYS:CA	2.76	0.48
47:DV:70:ILE:HB	47:DV:90:PRO:CB	2.40	0.48
1:AA:46:G:O2'	1:AA:365:U:H1'	2.13	0.48
1:AA:300:A:H8	1:AA:300:A:O5'	1.96	0.48
1:AA:439:A:C4	1:AA:496:A:C2	3.01	0.48
1:AA:542:G:H2'	1:AA:543:C:C6	2.46	0.48
1:AA:1133:G:N3	1:AA:1142:G:N2	2.60	0.48
2:AB:139:LYS:O	2:AB:143:GLU:HG2	2.13	0.48
4:AD:106:TYR:CE1	4:AD:112:VAL:O	2.67	0.48
4:AD:146:ILE:H	4:AD:146:ILE:HD12	1.79	0.48
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.94	0.48
6:AF:12:PRO:HB2	6:AF:57:GLN:HB2	1.94	0.48
9:AI:4:TYR:N	9:AI:4:TYR:CD1	2.81	0.48
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.29	0.48
15:AO:56:LEU:HD21	31:BA:715:G:C2	2.48	0.48
18:AR:62:GLU:O	18:AR:65:ILE:HD12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.78	0.48
28:B6:24:GLU:OE1	28:B6:24:GLU:HA	2.13	0.48
30:B8:29:LYS:O	30:B8:31:HIS:N	2.46	0.48
30:B8:62:LEU:N	30:B8:63:PRO:CD	2.76	0.48
31:BA:310:A:OP1	50:BY:17:SER:O	2.31	0.48
31:BA:478:A:N1	31:BA:500:G:H4'	2.28	0.48
31:BA:691:C:O2'	31:BA:692:C:H5'	2.13	0.48
31:BA:795:C:H2'	31:BA:796:C:H6	1.79	0.48
31:BA:832:G:H21	41:BP:53:GLY:HA3	1.78	0.48
31:BA:1266:G:O5'	48:BW:15:ARG:NH2	2.47	0.48
31:BA:1436:G:H3'	31:BA:1437:C:H5''	1.96	0.48
32:BB:41:U:O4	36:BG:70:VAL:O	2.31	0.48
32:BB:79:C:H2'	32:BB:80:U:O4'	2.13	0.48
34:BE:47:VAL:HB	34:BE:49:LEU:HD22	1.96	0.48
34:BE:134:ILE:H	34:BE:134:ILE:CD1	2.26	0.48
35:BF:22:ALA:CA	35:BF:26:ALA:HB2	2.43	0.48
37:BH:44:VAL:HG12	37:BH:45:VAL:N	2.22	0.48
38:BI:94:ALA:HB1	38:BI:114:LEU:HD12	1.94	0.48
44:BS:16:ASN:HB3	44:BS:20:ARG:HH21	1.78	0.48
44:BS:28:VAL:HB	44:BS:89:ARG:CB	2.41	0.48
45:BT:87:ASP:OD1	45:BT:87:ASP:N	2.45	0.48
51:BZ:10:ARG:HH21	51:BZ:26:GLY:H	1.60	0.48
1:CA:109:A:H2'	1:CA:326:G:N2	2.28	0.48
1:CA:339:C:H2'	1:CA:340:U:C6	2.48	0.48
1:CA:523:A:N6	12:CL:53:ARG:HH12	2.11	0.48
1:CA:820:U:H4'	1:CA:821:G:OP2	2.13	0.48
3:CC:119:ARG:HH21	3:CC:140:ARG:CZ	2.26	0.48
4:CD:62:GLN:HE21	4:CD:62:GLN:HA	1.78	0.48
6:CF:5:GLU:HB3	6:CF:62:TRP:NE1	2.27	0.48
6:CF:63:TYR:N	6:CF:63:TYR:CD2	2.81	0.48
10:CJ:22:LYS:NZ	10:CJ:88:LEU:HD23	2.28	0.48
13:CM:97:PRO:HB2	13:CM:101:GLN:NE2	2.28	0.48
17:CQ:99:SER:O	17:CQ:100:LYS:HD3	2.14	0.48
19:CS:6:LYS:HG2	19:CS:7:LYS:HD3	1.95	0.48
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.46	0.48
24:D2:41:ILE:CG1	31:DA:94(A):G:H22	2.26	0.48
30:D8:29:LYS:O	30:D8:32:LEU:N	2.47	0.48
30:D8:59:LYS:CD	41:DP:50:ARG:HB3	2.41	0.48
31:DA:78:A:C6	31:DA:109:G:C6	3.00	0.48
31:DA:817:C:C2	31:DA:818:G:C8	3.01	0.48
31:DA:848:G:C4	31:DA:933:A:H8	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1568:G:P	33:DD:63:ARG:HH22	2.36	0.48
31:DA:2276:G:O2'	31:DA:2277:G:H5'	2.12	0.48
31:DA:2313:C:H2'	31:DA:2314:C:C6	2.47	0.48
31:DA:2580:U:C5'	34:DE:131:ALA:HB2	2.43	0.48
31:DA:2593:U:H2'	31:DA:2594:C:C6	2.48	0.48
32:DB:41:U:C4	36:DG:70:VAL:O	2.67	0.48
33:DD:101:GLU:OE1	33:DD:103:ARG:HD3	2.13	0.48
33:DD:231:HIS:HB3	33:DD:233:HIS:O	2.14	0.48
34:DE:179:GLU:HB3	34:DE:181:LEU:HD22	1.95	0.48
38:DI:76:THR:CG2	38:DI:139:GLN:HB3	2.43	0.48
44:DS:17:ARG:C	44:DS:19:LYS:N	2.67	0.48
45:DT:28:VAL:O	45:DT:29:ARG:HD2	2.13	0.48
47:DV:19:LYS:CD	47:DV:20:LEU:H	2.24	0.48
49:DX:65:ARG:NE	49:DX:66:LEU:N	2.61	0.48
50:DY:54:LYS:O	50:DY:55:TYR:O	2.30	0.48
1:AA:678:U:H2'	1:AA:679:C:C6	2.48	0.48
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.77	0.48
8:AH:48:TYR:HA	8:AH:60:ARG:O	2.13	0.48
14:AN:21:TYR:OH	14:AN:23:ARG:NH2	2.47	0.48
14:AN:41:ARG:HG3	14:AN:42:ILE:HD13	1.95	0.48
16:AP:39:TYR:CD2	16:AP:73:LEU:HD13	2.49	0.48
23:B1:8:SER:HB3	31:BA:1364:G:OP1	2.14	0.48
24:B2:51:ARG:O	24:B2:52:ASP:HB2	2.14	0.48
24:B2:57:ILE:O	24:B2:57:ILE:HG23	2.12	0.48
28:B6:39:TYR:HB3	28:B6:49:HIS:ND1	2.28	0.48
31:BA:614:U:H5'	31:BA:614(C):A:N6	2.27	0.48
31:BA:634:C:H2'	31:BA:635:C:C6	2.48	0.48
31:BA:848:G:N3	31:BA:933:A:H1'	2.28	0.48
31:BA:971:C:C2'	31:BA:972:G:H5'	2.44	0.48
31:BA:1188:U:O2'	31:BA:1189:A:H5'	2.14	0.48
31:BA:1628:G:H2'	31:BA:1629:U:C6	2.48	0.48
31:BA:2364:C:O2'	31:BA:2365:G:H5'	2.14	0.48
31:BA:2680:C:H5'	34:BE:189:PRO:HA	1.96	0.48
31:BA:2865:U:C4	31:BA:2866:U:C4	3.01	0.48
32:BB:73:A:H3'	32:BB:74:U:H6	1.77	0.48
32:BB:82:G:O2'	32:BB:83:G:H5'	2.12	0.48
34:BE:167:VAL:CG1	34:BE:189:PRO:HD3	2.43	0.48
36:BG:57:ALA:CB	36:BG:90:LEU:HD21	2.43	0.48
37:BH:138:LYS:C	37:BH:140:LYS:N	2.66	0.48
38:BI:8:PRO:HA	38:BI:13:GLY:O	2.14	0.48
38:BI:136:VAL:HG22	38:BI:136:VAL:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:2:LYS:HZ2	46:BU:94:ASN:HD21	1.62	0.48
41:BP:71:VAL:CG1	41:BP:72:PRO:CD	2.90	0.48
42:BQ:58:PHE:O	42:BQ:58:PHE:CD1	2.62	0.48
47:BV:64:HIS:HB3	47:BV:96:ILE:HG12	1.95	0.48
1:CA:131:C:H2'	1:CA:132:C:C6	2.48	0.48
1:CA:394:G:H2'	1:CA:395:C:H6	1.78	0.48
1:CA:719:C:C5	1:CA:720:C:C4	3.02	0.48
1:CA:814:A:N7	1:CA:816:A:C5	2.81	0.48
2:CB:161:ALA:HB1	2:CB:185:ILE:CD1	2.44	0.48
3:CC:188:LEU:O	3:CC:189:ALA:CB	2.61	0.48
4:CD:107:ARG:CD	4:CD:173:TRP:HZ2	2.27	0.48
5:CE:36:ASP:O	5:CE:37:ARG:HB2	2.13	0.48
7:CG:69:VAL:O	7:CG:69:VAL:HG12	2.13	0.48
9:CI:61:ALA:HB1	9:CI:63:ILE:HD11	1.96	0.48
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.95	0.48
11:CK:111:ASP:HA	18:CR:84:LYS:HE2	1.95	0.48
30:D8:10:ALA:HB2	30:D8:59:LYS:NZ	2.28	0.48
31:DA:118:A:C8	31:DA:119:A:C8	3.02	0.48
31:DA:175:G:H5'	31:DA:175:G:C8	2.48	0.48
31:DA:247:G:H4'	31:DA:386:G:C6	2.49	0.48
31:DA:257:A:C2'	31:DA:258:G:H5'	2.43	0.48
31:DA:810:U:O2'	41:DP:33:ARG:CZ	2.61	0.48
31:DA:825:C:H3'	31:DA:825:C:C6	2.48	0.48
31:DA:1279:G:H5'	43:DR:34:ILE:CD1	2.44	0.48
31:DA:1509(A):A:C5	31:DA:1509(B):A:N7	2.82	0.48
31:DA:1572:A:O5'	31:DA:1572:A:H8	1.96	0.48
31:DA:1836:C:C2'	31:DA:1837:C:H5'	2.44	0.48
31:DA:2321:G:H5''	31:DA:2322:A:OP2	2.13	0.48
31:DA:2694:G:C5	31:DA:2695:C:C5	3.02	0.48
31:DA:2773:C:O2'	31:DA:2774:C:H5'	2.14	0.48
31:DA:2887:U:H2'	31:DA:2888:C:C6	2.48	0.48
33:DD:25:THR:O	33:DD:25:THR:CG2	2.59	0.48
33:DD:34:VAL:C	33:DD:35:LYS:O	2.50	0.48
34:DE:2:LYS:NZ	34:DE:95:ILE:O	2.47	0.48
34:DE:201:THR:HG22	34:DE:202:LYS:H	1.76	0.48
35:DF:41:LEU:O	35:DF:44:ARG:HG2	2.14	0.48
35:DF:203:GLN:O	35:DF:206:ILE:C	2.51	0.48
36:DG:64:THR:HG23	36:DG:66:GLN:N	2.27	0.48
39:DN:128:HIS:CD2	39:DN:128:HIS:O	2.66	0.48
41:DP:52:GLU:C	41:DP:54:GLY:H	2.15	0.48
41:DP:95:VAL:HG13	41:DP:123:LEU:HD11	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:72:LYS:HB3	42:DQ:94:VAL:HG23	1.96	0.48
44:DS:16:ASN:ND2	44:DS:92:TYR:CZ	2.82	0.48
45:DT:27:THR:O	45:DT:28:VAL:CG2	2.61	0.48
49:DX:53:LYS:N	49:DX:80:ILE:HG22	2.25	0.48
1:AA:66:G:C6	1:AA:67:C:C5	3.01	0.48
1:AA:510:A:H5''	1:AA:511:C:P	2.53	0.48
1:AA:674:G:H2'	1:AA:675:A:H8	1.78	0.48
1:AA:779:C:H2'	1:AA:780:A:O4'	2.14	0.48
1:AA:963:G:N2	10:AJ:55:LYS:HE2	2.28	0.48
1:AA:994:A:N6	1:AA:1046:A:H2	2.10	0.48
1:AA:1092:A:C2	1:AA:1183:A:C2	3.02	0.48
1:AA:1132:C:H2'	1:AA:1133:G:O4'	2.13	0.48
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.49	0.48
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.13	0.48
3:AC:119:ARG:HH21	3:AC:140:ARG:CZ	2.26	0.48
4:AD:119:GLN:O	4:AD:123:HIS:HD2	1.94	0.48
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.47	0.48
8:AH:91:ARG:HH11	8:AH:91:ARG:HG2	1.77	0.48
9:AI:16:ARG:O	9:AI:63:ILE:HA	2.13	0.48
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HD3	1.94	0.48
11:AK:41:THR:CG2	11:AK:42:TRP:H	2.25	0.48
22:B0:41:ARG:HB3	31:BA:2330:G:H1'	1.95	0.48
29:B7:15:THR:HG22	29:B7:16:HIS:ND1	2.26	0.48
30:B8:35:GLN:HA	31:BA:2420:C:P	2.54	0.48
31:BA:271(O):C:O2'	31:BA:271(P):C:C5	2.67	0.48
31:BA:528:A:H2'	31:BA:529:A:H5'	1.95	0.48
31:BA:1040:C:N4	31:BA:1115:G:H1	2.12	0.48
31:BA:1106:A:C2'	31:BA:1107:G:C8	2.96	0.48
31:BA:1579:A:H2'	31:BA:1580:A:C8	2.49	0.48
31:BA:2416:C:O5'	31:BA:2416:C:H6	1.97	0.48
31:BA:2580:U:C5'	34:BE:131:ALA:HB2	2.44	0.48
31:BA:2659:G:H8	31:BA:2659:G:C5'	2.27	0.48
31:BA:2846:G:H2'	31:BA:2847:U:O4'	2.14	0.48
32:BB:20:C:C2'	32:BB:21:G:H5''	2.43	0.48
34:BE:4:ILE:HG23	34:BE:4:ILE:O	2.13	0.48
34:BE:52:LEU:O	34:BE:74:PRO:CA	2.62	0.48
35:BF:4:VAL:HG12	35:BF:4:VAL:O	2.13	0.48
37:BH:41:MET:HE2	37:BH:41:MET:CA	2.37	0.48
37:BH:85:LYS:NZ	37:BH:145:ALA:HA	2.29	0.48
37:BH:153:LYS:HB2	37:BH:154:PRO:HD3	1.95	0.48
43:BR:71:GLN:HA	43:BR:71:GLN:NE2	2.19	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:75:LEU:HD13	43:BR:75:LEU:O	2.14	0.48
47:BV:73:SER:HG	47:BV:74:LYS:N	2.12	0.48
48:BW:111:HIS:CD2	48:BW:112:GLY:H	2.30	0.48
49:BX:3:THR:HA	49:BX:6:ASP:OD2	2.14	0.48
50:BY:95:LYS:CD	50:BY:100:ALA:HB1	2.15	0.48
51:BZ:16:SER:HA	51:BZ:19:ARG:HD2	1.95	0.48
1:CA:192:U:C1'	20:CT:103:GLY:HA2	2.43	0.48
1:CA:233:C:H2'	1:CA:234:C:H6	1.79	0.48
1:CA:520:A:H2	1:CA:536:C:O2	1.96	0.48
1:CA:645:C:O2'	1:CA:646:U:H5'	2.14	0.48
1:CA:1316:G:H1	19:CS:5:LEU:HD21	1.78	0.48
1:CA:1442(A):G:C6	31:DA:2863:C:H4'	2.49	0.48
1:CA:1504:G:H4'	1:CA:1505:G:O4'	2.13	0.48
3:CC:24:ALA:HB1	3:CC:28:GLN:O	2.14	0.48
4:CD:79:PHE:HZ	4:CD:204:ILE:HD13	1.78	0.48
7:CG:12:LEU:HD13	7:CG:24:THR:OG1	2.14	0.48
9:CI:4:TYR:N	9:CI:4:TYR:CD1	2.82	0.48
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.28	0.48
22:D0:13:GLY:O	22:D0:14:ARG:CB	2.38	0.48
24:D2:35:LEU:HD23	24:D2:35:LEU:H	1.79	0.48
25:D3:1:MET:O	25:D3:3:ARG:N	2.47	0.48
25:D3:39:ASP:OD1	25:D3:44:ARG:HG3	2.14	0.48
31:DA:51:G:N3	31:DA:119:A:C2	2.81	0.48
31:DA:892:G:H2'	31:DA:893:C:O4'	2.13	0.48
31:DA:1331:A:O2'	31:DA:1332:G:H8	1.96	0.48
31:DA:2006:C:O5'	31:DA:2006:C:H6	1.97	0.48
31:DA:2184:G:O5'	31:DA:2184:G:H8	1.97	0.48
31:DA:2702:U:OP1	31:DA:2702:U:O4'	2.31	0.48
32:DB:44:G:C5'	32:DB:45:A:OP1	2.55	0.48
33:DD:17:THR:CG2	33:DD:17:THR:O	2.61	0.48
33:DD:127:VAL:HA	33:DD:193:VAL:HG22	1.94	0.48
34:DE:39:PRO:HA	34:DE:43:GLY:CA	2.44	0.48
34:DE:61:ARG:N	34:DE:62:PRO:CD	2.76	0.48
35:DF:178:PRO:HG2	35:DF:179:GLU:OE1	2.14	0.48
42:DQ:27:VAL:HA	42:DQ:105:GLU:OE1	2.14	0.48
42:DQ:78:PRO:O	42:DQ:79:LEU:CB	2.62	0.48
43:DR:24:GLN:HE22	43:DR:36:THR:HG21	1.78	0.48
44:DS:39:ILE:O	44:DS:48:LEU:HD12	2.14	0.48
48:DW:28:SER:OG	48:DW:31:GLU:HB2	2.14	0.48
49:DX:59:VAL:O	49:DX:60:ARG:O	2.31	0.48
50:DY:28:LYS:HE3	50:DY:37:VAL:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:52:SER:OG	51:DZ:53:ILE:N	2.45	0.48
1:AA:93:G:C2'	1:AA:96:U:H5'	2.42	0.48
1:AA:105:G:H2'	1:AA:106:C:C6	2.48	0.48
1:AA:243:A:C2	1:AA:246:A:C8	3.02	0.48
1:AA:273:A:C2'	1:AA:274:A:H5'	2.44	0.48
1:AA:541:G:H2'	1:AA:542:G:H8	1.79	0.48
1:AA:1081:G:N2	1:AA:1082:G:H1'	2.27	0.48
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.79	0.48
1:AA:1098:C:C4	1:AA:1099:G:C8	3.02	0.48
1:AA:1332:A:H8	1:AA:1332:A:O5'	1.97	0.48
1:AA:1410:G:N2	1:AA:1411:C:C2	2.81	0.48
1:AA:1446:U:HO2'	1:AA:1447:A:H8	1.50	0.48
5:AE:13:ILE:HG13	5:AE:29:GLY:O	2.14	0.48
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.49	0.48
8:AH:53:VAL:O	8:AH:54:ASP:CB	2.62	0.48
13:AM:86:CYS:HB2	19:AS:73:GLU:OE1	2.14	0.48
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.14	0.48
18:AR:25:THR:CG2	18:AR:42:ARG:HH11	2.26	0.48
24:B2:16:LEU:N	24:B2:18:PRO:HD2	2.29	0.48
27:B5:29:THR:HG21	31:BA:2815:C:H5'	1.95	0.48
27:B5:32:PRO:O	27:B5:33:CYS:CB	2.60	0.48
29:B7:15:THR:HG22	29:B7:16:HIS:CE1	2.49	0.48
30:B8:39:LYS:HE2	30:B8:39:LYS:O	2.14	0.48
30:B8:58:ILE:O	30:B8:61:LEU:HG	2.14	0.48
31:BA:61:G:H1	31:BA:94:C:N4	2.11	0.48
31:BA:92:A:H2'	31:BA:93:G:C8	2.49	0.48
31:BA:664:C:H4'	31:BA:941:A:OP1	2.13	0.48
31:BA:740:U:H2'	31:BA:741:G:C8	2.49	0.48
31:BA:1885:A:H2'	31:BA:1886:C:O4'	2.13	0.48
31:BA:1925:C:O2'	31:BA:1926:U:H5'	2.13	0.48
31:BA:1932:A:C2	31:BA:1969:A:C2	3.02	0.48
31:BA:2448:A:H4'	31:BA:2449:U:OP2	2.13	0.48
31:BA:2602:A:H4'	31:BA:2603:G:O5'	2.14	0.48
31:BA:2849:U:H5'	31:BA:2867:G:N2	2.27	0.48
33:BD:35:LYS:CA	33:BD:64:ILE:CG2	2.91	0.48
33:BD:167:GLY:O	33:BD:168:ARG:HG2	2.14	0.48
34:BE:28:ALA:HB3	34:BE:93:VAL:HG22	1.93	0.48
35:BF:205:ARG:O	35:BF:206:ILE:HG13	2.13	0.48
39:BN:39:ARG:O	46:BU:64:ARG:NH1	2.47	0.48
39:BN:130:HIS:O	39:BN:130:HIS:CD2	2.66	0.48
43:BR:4:LEU:C	43:BR:6:SER:H	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:50:ARG:NH2	47:BV:75:PHE:CE2	2.81	0.48
47:BV:6:LYS:O	47:BV:6:LYS:HG3	2.14	0.48
47:BV:51:VAL:CG1	47:BV:52:VAL:N	2.77	0.48
47:BV:73:SER:O	47:BV:74:LYS:HB2	2.13	0.48
1:CA:90:U:O2'	1:CA:91:C:C5	2.63	0.48
1:CA:373:A:C2	1:CA:374:A:C8	3.01	0.48
1:CA:1081:G:N2	1:CA:1082:G:H1'	2.29	0.48
1:CA:1365:G:C5	1:CA:1366:C:C5	3.02	0.48
2:CB:36:ARG:HB2	2:CB:41:ILE:HD13	1.95	0.48
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.17	0.48
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.13	0.48
4:CD:126:ILE:CG2	4:CD:127:THR:H	2.20	0.48
6:CF:45:LEU:HG	6:CF:46:ARG:N	2.29	0.48
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.31	0.48
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.78	0.48
20:CT:56:MET:O	20:CT:59:ALA:HB3	2.13	0.48
24:D2:41:ILE:O	24:D2:42:GLY:O	2.32	0.48
26:D4:19:GLY:C	26:D4:21:VAL:N	2.66	0.48
27:D5:32:PRO:O	27:D5:33:CYS:CB	2.61	0.48
30:D8:39:LYS:C	30:D8:39:LYS:CD	2.81	0.48
31:DA:303:U:H2'	31:DA:304:G:C8	2.49	0.48
31:DA:478:A:C6	31:DA:480:A:C6	3.01	0.48
31:DA:1174:A:OP1	31:DA:1175:U:H5''	2.14	0.48
31:DA:1342:A:H5'	31:DA:1398:C:OP1	2.14	0.48
31:DA:1669:A:H5''	31:DA:2550:G:OP1	2.14	0.48
31:DA:1696:G:C6	31:DA:1697:G:C5	3.02	0.48
31:DA:1742:G:H3'	31:DA:1742:G:C8	2.49	0.48
32:DB:28:C:H2'	32:DB:29:A:O4'	2.14	0.48
32:DB:45:A:H2'	32:DB:45:A:N3	2.28	0.48
32:DB:79:C:H2'	32:DB:80:U:O4'	2.13	0.48
35:DF:7:TYR:HD1	35:DF:8:GLN:H	1.58	0.48
37:DH:41:MET:HE1	37:DH:55:PRO:HD3	1.95	0.48
44:DS:66:ALA:HA	44:DS:69:VAL:HG12	1.96	0.48
45:DT:30:VAL:HG21	45:DT:83:ILE:HG12	1.96	0.48
46:DU:75:ASN:HB3	46:DU:77:SER:OG	2.14	0.48
1:AA:175:C:C2	1:AA:176:C:C5	3.02	0.48
1:AA:295:C:H2'	1:AA:296:U:O4'	2.13	0.48
1:AA:738:C:N3	1:AA:739:C:C5	2.82	0.48
1:AA:985:C:O5'	1:AA:985:C:H6	1.96	0.48
2:AB:68:ILE:HG22	2:AB:70:PHE:CE1	2.49	0.48
4:AD:93:PHE:O	4:AD:97:LEU:HG	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:79:LEU:HD11	9:AI:83:ARG:CZ	2.44	0.48
12:AL:22:SER:O	12:AL:24:VAL:N	2.47	0.48
20:AT:46:GLU:CG	20:AT:48:LYS:HE2	2.44	0.48
22:B0:55:ARG:HE	22:B0:55:ARG:HB3	1.27	0.48
30:B8:35:GLN:HB3	30:B8:36:LYS:H	1.40	0.48
31:BA:960:A:H5'	31:BA:961:C:OP2	2.13	0.48
31:BA:1044:G:C2	31:BA:1112:G:O6	2.67	0.48
31:BA:1481:U:H5'	31:BA:1482:G:P	2.54	0.48
31:BA:1563:G:C5	31:BA:1564:C:C5	3.01	0.48
31:BA:1668:A:H4'	31:BA:1669:A:O5'	2.13	0.48
31:BA:1722:A:N6	31:BA:1741:A:H2	2.11	0.48
31:BA:2092:U:C4	31:BA:2226:C:OP2	2.67	0.48
31:BA:2184:G:H8	31:BA:2184:G:O5'	1.96	0.48
31:BA:2518:A:H5'	31:BA:2518:A:H8	1.79	0.48
31:BA:2820:A:O4'	43:BR:5:LYS:HG3	2.13	0.48
34:BE:36:ARG:NH1	34:BE:85:ASN:ND2	2.62	0.48
35:BF:129:PHE:CD2	35:BF:163:VAL:HG21	2.48	0.48
40:BO:13:ASN:HD22	40:BO:13:ASN:H	1.60	0.48
40:BO:50:GLY:C	40:BO:52:VAL:N	2.67	0.48
41:BP:59:LEU:CA	41:BP:61:ARG:NH1	2.59	0.48
42:BQ:20:ALA:CB	42:BQ:99:PRO:HG2	2.43	0.48
44:BS:95:HIS:CG	44:BS:96:GLY:N	2.74	0.48
45:BT:40:THR:O	45:BT:41:ARG:CB	2.62	0.48
50:BY:45:VAL:HG22	50:BY:62:GLU:CA	2.43	0.48
50:BY:45:VAL:HG21	50:BY:62:GLU:H	1.79	0.48
51:BZ:14:LYS:HB2	51:BZ:17:ALA:CB	2.44	0.48
1:CA:563:A:N7	1:CA:567:G:H1'	2.28	0.48
1:CA:582:U:C2	1:CA:760:G:C6	3.02	0.48
1:CA:985:C:O5'	1:CA:985:C:H6	1.97	0.48
1:CA:1085:U:C6	1:CA:1094:G:N1	2.82	0.48
1:CA:1410:G:N2	1:CA:1411:C:C2	2.82	0.48
2:CB:20:GLU:HG3	2:CB:191:ASP:HB2	1.96	0.48
2:CB:61:LEU:CD2	2:CB:68:ILE:HD11	2.44	0.48
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.14	0.48
4:CD:14:ARG:HA	4:CD:39:PRO:HG3	1.94	0.48
7:CG:27:ILE:HD11	7:CG:43:PHE:CD2	2.49	0.48
16:CP:79:VAL:HG12	16:CP:80:PHE:CG	2.49	0.48
22:D0:56:ASP:OD1	31:DA:2364:C:H5'	2.14	0.48
27:D5:5:PRO:O	27:D5:6:VAL:HG23	2.14	0.48
31:DA:481:G:O2'	31:DA:482:A:P	2.71	0.48
31:DA:494:G:O2'	48:DW:5:ALA:O	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1158:C:O5'	31:DA:1158:C:H6	1.96	0.48
31:DA:1341:U:N3	49:DX:77:LYS:HE2	2.28	0.48
31:DA:1386:C:OP2	31:DA:1396:U:H5	1.97	0.48
31:DA:1550:C:O2'	31:DA:1551:C:H5'	2.13	0.48
31:DA:2243:U:H2'	31:DA:2244:U:C6	2.49	0.48
31:DA:2273:A:O2'	31:DA:2274:A:H5'	2.13	0.48
31:DA:2319:G:H4'	31:DA:2319:G:OP2	2.13	0.48
31:DA:2476:A:C6	31:DA:2477:C:C5	3.02	0.48
31:DA:2521:C:H42	31:DA:2544:G:H1	1.61	0.48
33:DD:33:LEU:HB3	33:DD:34:VAL:H	1.35	0.48
34:DE:101:ARG:HG3	34:DE:169:ASN:HD21	1.78	0.48
41:DP:10:PRO:CD	41:DP:11:GLY:N	2.75	0.48
41:DP:85:LEU:HA	41:DP:88:LEU:HB2	1.95	0.48
45:DT:30:VAL:HG21	45:DT:83:ILE:N	2.28	0.48
47:DV:79:VAL:HG23	47:DV:82:ARG:CD	2.43	0.48
51:DZ:96:VAL:N	51:DZ:128:VAL:O	2.47	0.48
1:AA:357:G:H2'	1:AA:358:U:H5'	1.95	0.48
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.61	0.48
1:AA:684:A:C6	1:AA:685:G:C6	3.02	0.48
1:AA:710:G:OP1	6:AF:54:LYS:HE3	2.14	0.48
1:AA:719:C:C5	1:AA:720:C:C4	3.01	0.48
1:AA:930:C:C2'	1:AA:931:C:H5'	2.44	0.48
1:AA:1456:G:H2'	1:AA:1457:G:O4'	2.14	0.48
2:AB:97:TRP:CH2	2:AB:176:GLU:HG3	2.49	0.48
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.35	0.48
4:AD:128:VAL:O	4:AD:130:GLY:N	2.46	0.48
5:AE:75:THR:HG23	5:AE:76:ILE:N	2.28	0.48
8:AH:82:HIS:HD2	8:AH:138:TRP:NE1	2.11	0.48
10:AJ:22:LYS:NZ	10:AJ:88:LEU:HD23	2.29	0.48
20:AT:53:LEU:HA	20:AT:56:MET:HB2	1.96	0.48
20:AT:75:ASN:H	20:AT:75:ASN:HD22	1.62	0.48
23:B1:9:GLY:O	23:B1:10:LYS:CB	2.60	0.48
24:B2:46:GLN:NE2	24:B2:47:ASN:CA	2.75	0.48
29:B7:5:TRP:CH2	31:BA:686:G:N7	2.81	0.48
30:B8:39:LYS:HE2	30:B8:42:ARG:NH1	2.29	0.48
31:BA:49:A:H5''	31:BA:51:G:O4'	2.14	0.48
31:BA:271(P):C:O3'	38:BI:42:SER:OG	2.31	0.48
31:BA:363(C):G:C4	31:BA:363(D):G:C8	3.02	0.48
31:BA:708:C:H42	31:BA:723:G:H1	1.60	0.48
31:BA:1327:C:C2'	31:BA:1328:G:H5'	2.44	0.48
31:BA:1353:A:H5''	33:BD:38:LYS:HZ1	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1783:A:C2	31:BA:2587:A:C5	3.02	0.48
31:BA:1948:G:H2'	31:BA:1949:G:O5'	2.14	0.48
31:BA:2070:G:H2'	31:BA:2071:A:H8	1.79	0.48
31:BA:2335:A:N7	31:BA:2337:G:C5	2.82	0.48
32:BB:29:A:H2'	32:BB:30:C:C6	2.48	0.48
32:BB:66:A:C5	32:BB:109:C:C5	3.02	0.48
34:BE:27:LEU:HD12	34:BE:181:LEU:HD13	1.96	0.48
34:BE:120:TRP:O	34:BE:121:ASN:HB2	2.14	0.48
39:BN:1:MET:HB3	47:BV:20:LEU:CD2	2.27	0.48
39:BN:128:HIS:CD2	39:BN:128:HIS:O	2.66	0.48
44:BS:95:HIS:O	44:BS:97:ARG:O	2.32	0.48
45:BT:51:ARG:HD2	45:BT:62:THR:HG23	1.95	0.48
50:BY:54:LYS:O	50:BY:55:TYR:O	2.32	0.48
50:BY:89:PHE:O	50:BY:90:LEU:HB3	2.14	0.48
51:BZ:7:ALA:O	51:BZ:38:TYR:O	2.31	0.48
51:BZ:128:VAL:HG21	51:BZ:161:VAL:HG22	1.96	0.48
1:CA:27:G:O2'	1:CA:28:G:H5'	2.13	0.48
1:CA:129:U:H5'	17:CQ:3:LYS:NZ	2.28	0.48
1:CA:764:C:C2	1:CA:765:G:C8	3.02	0.48
1:CA:983:A:H3'	1:CA:983:A:N3	2.29	0.48
1:CA:1064:G:H8	1:CA:1064:G:O5'	1.97	0.48
2:CB:21:ARG:CB	2:CB:39:ILE:HA	2.44	0.48
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.14	0.48
9:CI:55:ALA:HB1	9:CI:58:ARG:HD2	1.96	0.48
11:CK:20:TYR:O	11:CK:30:VAL:HA	2.14	0.48
13:CM:17:VAL:O	13:CM:20:THR:HB	2.13	0.48
13:CM:20:THR:C	13:CM:22:ILE:H	2.18	0.48
18:CR:44:LEU:O	18:CR:45:SER:O	2.32	0.48
24:D2:40:SER:HB2	31:DA:61:G:H1'	1.96	0.48
24:D2:43:GLN:O	24:D2:46:GLN:CB	2.62	0.48
29:D7:8:ASN:HD21	29:D7:11:LYS:N	2.07	0.48
30:D8:36:LYS:O	30:D8:37:SER:O	2.32	0.48
31:DA:51:G:H4'	31:DA:52:A:H5'	1.96	0.48
31:DA:92:A:C2'	31:DA:93:G:O4'	2.59	0.48
31:DA:319:C:H2'	31:DA:320:A:O4'	2.14	0.48
31:DA:588:U:H2'	31:DA:589:C:H6	1.72	0.48
31:DA:751:A:C5'	48:DW:90:ARG:HA	2.35	0.48
31:DA:1000:A:C6	31:DA:1001:A:C6	3.02	0.48
31:DA:1436:G:H3'	31:DA:1437:C:H5''	1.96	0.48
31:DA:1642:G:O2'	31:DA:1643:G:H5'	2.14	0.48
31:DA:1747(A):G:O2'	31:DA:1748:G:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1992:G:O2'	31:DA:1993:U:OP2	2.25	0.48
31:DA:2030:A:C5'	31:DA:2031:A:OP1	2.58	0.48
31:DA:2063:C:O2	31:DA:2450:A:N1	2.47	0.48
32:DB:20:C:C2'	32:DB:21:G:H5''	2.43	0.48
34:DE:14:ILE:HG23	34:DE:23:VAL:HG21	1.96	0.48
39:DN:43:THR:N	39:DN:48:MET:HE3	2.29	0.48
39:DN:57:ALA:O	39:DN:58:ASP:O	2.31	0.48
44:DS:24:LEU:HB3	44:DS:85:VAL:HG12	1.95	0.48
46:DU:12:ARG:O	46:DU:15:LYS:HG3	2.14	0.48
49:DX:87:GLN:HB2	49:DX:88:LYS:HD2	1.96	0.48
1:AA:16:A:C2'	1:AA:17:U:H5'	2.44	0.48
1:AA:308:C:H2'	1:AA:309:G:C8	2.49	0.48
1:AA:323:U:O3'	20:AT:22:ARG:HD3	2.14	0.48
1:AA:498:U:H2'	1:AA:498:U:O2	2.14	0.48
1:AA:977:A:H8	1:AA:1223:C:C4	2.31	0.48
1:AA:1089:G:C6	1:AA:1090:U:C4	3.02	0.48
1:AA:1158:C:O2	1:AA:1158:C:H2'	2.12	0.48
1:AA:1423:G:H2'	1:AA:1424:C:O4'	2.13	0.48
1:AA:1452:C:H5'	1:AA:1456:G:C5	2.49	0.48
7:AG:36:LYS:HB2	7:AG:36:LYS:NZ	2.29	0.48
12:AL:64:TYR:HB3	12:AL:65:GLU:H	1.47	0.48
19:AS:79:THR:O	19:AS:80:TYR:HB3	2.13	0.48
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.96	0.48
23:B1:25:LYS:O	23:B1:26:ARG:CG	2.61	0.48
23:B1:89:GLU:O	23:B1:90:ILE:C	2.51	0.48
31:BA:107:C:C2	31:BA:108:U:C5	3.02	0.48
31:BA:754:C:O4'	31:BA:1618:A:H2	1.97	0.48
31:BA:996:A:H4'	46:BU:92:ARG:CZ	2.43	0.48
31:BA:1022:G:C6	31:BA:1140:C:C4	3.02	0.48
31:BA:1049:C:O2	31:BA:1049:C:H2'	2.14	0.48
31:BA:1107:G:H2'	31:BA:1108:U:O4'	2.14	0.48
31:BA:1225:G:H8	31:BA:1225:G:O5'	1.97	0.48
31:BA:1386:C:OP2	31:BA:1396:U:H5	1.95	0.48
31:BA:1434:A:H2'	31:BA:1435:G:H8	1.77	0.48
31:BA:1865:G:H5'	31:BA:1866:C:OP2	2.14	0.48
31:BA:2313:C:H2'	31:BA:2314:C:C6	2.46	0.48
34:BE:108:SER:HB3	34:BE:165:VAL:HG21	1.96	0.48
35:BF:123:LEU:HD12	35:BF:124:LEU:N	2.29	0.48
36:BG:37:VAL:HG23	36:BG:99:MET:HG3	1.96	0.48
41:BP:38:GLN:CG	41:BP:39:LYS:H	2.16	0.48
42:BQ:133:ARG:O	42:BQ:134:ARG:CB	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:15:VAL:HG12	50:BY:16:ALA:N	2.29	0.48
50:BY:35:TYR:CD2	50:BY:69:ALA:HB3	2.48	0.48
50:BY:76:CYS:O	50:BY:96:ILE:HD12	2.14	0.48
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.14	0.48
1:CA:425:G:O2'	1:CA:426:G:H5'	2.14	0.48
1:CA:649:G:H2'	1:CA:650:G:H8	1.78	0.48
1:CA:927:G:OP2	1:CA:1503:A:C5	2.67	0.48
1:CA:1159:U:C4	1:CA:1182:G:C4	3.02	0.48
1:CA:1332:A:H8	1:CA:1332:A:O5'	1.97	0.48
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.49	0.48
4:CD:10:ARG:O	4:CD:13:ARG:HB2	2.14	0.48
12:CL:10:LEU:HD21	12:CL:15:ARG:HE	1.78	0.48
12:CL:62:SER:O	12:CL:64:TYR:N	2.47	0.48
13:CM:44:ARG:CB	13:CM:46:LYS:HG2	2.44	0.48
13:CM:68:GLY:HA2	13:CM:71:ARG:HB3	1.95	0.48
24:D2:12:GLU:C	24:D2:12:GLU:CD	2.72	0.48
27:D5:51:TYR:HB2	27:D5:54:GLY:HA3	1.95	0.48
30:D8:8:LYS:HB3	30:D8:12:LYS:HE3	1.96	0.48
31:DA:322:A:H3'	35:DF:169:ASN:ND2	2.28	0.48
31:DA:662:G:O2'	31:DA:663:G:H5'	2.14	0.48
31:DA:801:G:N7	35:DF:53:THR:HG23	2.28	0.48
31:DA:848:G:N3	31:DA:933:A:H1'	2.29	0.48
31:DA:922:U:H2'	31:DA:923:C:C6	2.48	0.48
31:DA:1357:U:H2'	31:DA:1358:G:O4'	2.14	0.48
31:DA:1494:A:C2'	31:DA:1494:A:N3	2.77	0.48
31:DA:1589:C:H2'	31:DA:1590:U:C6	2.49	0.48
31:DA:1688:U:O2	31:DA:1700:A:H8	1.97	0.48
31:DA:1812:A:C2	31:DA:1813:G:C4	3.02	0.48
31:DA:2097:C:H2'	31:DA:2098:U:O4'	2.13	0.48
31:DA:2323:G:H2'	31:DA:2324:C:O4'	2.14	0.48
31:DA:2328:A:H2'	31:DA:2329:G:H8	1.79	0.48
33:DD:43:ARG:HH11	33:DD:44:ASN:ND2	2.12	0.48
33:DD:143:HIS:HD2	33:DD:144:ALA:HB2	1.77	0.48
33:DD:267:SER:O	33:DD:268:ARG:HB2	2.14	0.48
36:DG:131:TYR:O	36:DG:159:VAL:HG12	2.13	0.48
37:DH:149:ARG:O	37:DH:152:ARG:O	2.32	0.48
38:DI:124:GLY:H	38:DI:142:VAL:HG23	1.78	0.48
39:DN:23:LEU:O	39:DN:23:LEU:HD23	2.13	0.48
39:DN:128:HIS:NE2	39:DN:131:GLN:HB2	2.28	0.48
42:DQ:20:ALA:C	42:DQ:22:LYS:N	2.68	0.48
44:DS:67:ARG:H	44:DS:69:VAL:CG1	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:97:ARG:O	44:DS:97:ARG:HG3	2.14	0.48
46:DU:69:CYS:HB3	46:DU:106:PHE:CE2	2.48	0.48
48:DW:57:ASN:O	48:DW:58:ALA:C	2.52	0.48
50:DY:27:VAL:C	50:DY:29:GLU:OE1	2.52	0.48
1:AA:39:G:C6	1:AA:40:C:C5	3.02	0.47
1:AA:101:A:H2'	1:AA:102:G:H5'	1.95	0.47
1:AA:817:C:H4'	1:AA:818:G:OP1	2.13	0.47
1:AA:932:C:H4'	7:AG:4:ARG:NH2	2.29	0.47
1:AA:1085:U:C6	1:AA:1094:G:N1	2.81	0.47
1:AA:1442(A):G:N7	45:BT:118:ARG:HD2	2.29	0.47
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.43	0.47
2:AB:44:LEU:H	2:AB:44:LEU:CD1	2.23	0.47
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.95	0.47
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.13	0.47
4:AD:108:LEU:O	4:AD:110:PHE:HD1	1.96	0.47
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.14	0.47
26:B4:11:PRO:C	26:B4:13:ARG:H	2.16	0.47
29:B7:35:ARG:HD3	31:BA:54:G:O2'	2.13	0.47
31:BA:467:G:H2'	31:BA:468:G:H5'	1.93	0.47
31:BA:814:C:H5''	47:BV:86:GLY:HA3	1.94	0.47
31:BA:1411:C:O2'	31:BA:1412:A:H5'	2.13	0.47
31:BA:1497:U:H2'	31:BA:1498:C:OP1	2.12	0.47
31:BA:1685:C:H2'	31:BA:1686:C:H6	1.79	0.47
31:BA:2199:A:H5''	31:BA:2200:C:OP2	2.14	0.47
31:BA:2273:A:O2'	31:BA:2274:A:H5'	2.14	0.47
31:BA:2281:C:O2'	31:BA:2282:G:H5'	2.14	0.47
31:BA:2473:U:C2	31:BA:2474:C:C6	3.02	0.47
31:BA:2507:C:H5''	31:BA:2573:C:N4	2.29	0.47
32:BB:28:C:H2'	32:BB:29:A:C8	2.48	0.47
33:BD:79:VAL:CG2	33:BD:111:LEU:HD11	2.44	0.47
34:BE:15:PHE:HA	34:BE:19:ARG:O	2.13	0.47
37:BH:156:ALA:O	37:BH:157:TYR:C	2.53	0.47
38:BI:131:LYS:HG2	38:BI:132:PRO:HA	1.94	0.47
39:BN:46:VAL:O	39:BN:47:ALA:HB3	2.14	0.47
41:BP:148:LEU:N	41:BP:148:LEU:HD13	2.29	0.47
45:BT:28:VAL:O	45:BT:29:ARG:CD	2.62	0.47
45:BT:92:GLY:HA2	45:BT:114:LEU:HB3	1.95	0.47
50:BY:79:CYS:SG	50:BY:80:GLY:N	2.87	0.47
50:BY:87:LYS:HG3	50:BY:88:LYS:N	2.28	0.47
1:CA:46:G:O2'	1:CA:365:U:H1'	2.14	0.47
1:CA:84:U:H5	1:CA:88:A:N7	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:382:A:C2	1:CA:383:A:C5	3.02	0.47
1:CA:457:C:C2	1:CA:458:C:C5	3.01	0.47
1:CA:684:A:H2'	1:CA:685:G:H8	1.79	0.47
1:CA:705:U:C5	1:CA:706:A:C5	3.01	0.47
1:CA:999:C:H2'	1:CA:1000:U:C6	2.49	0.47
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.14	0.47
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.49	0.47
1:CA:1423:G:H2'	1:CA:1424:C:O4'	2.14	0.47
15:CO:51:HIS:O	15:CO:54:ARG:HB3	2.13	0.47
23:D1:33:LYS:NZ	23:D1:35:THR:HG21	2.28	0.47
23:D1:87:PRO:CD	23:D1:88:LYS:N	2.77	0.47
28:D6:20:ASN:CG	28:D6:21:TYR:N	2.68	0.47
31:DA:917:A:H5'	31:DA:917:A:H8	1.79	0.47
31:DA:1021:A:C8	31:DA:1021:A:C3'	2.90	0.47
31:DA:1300:U:H2'	31:DA:1626:G:N2	2.29	0.47
31:DA:1319:G:C6	31:DA:1320:C:N4	2.82	0.47
31:DA:1439:A:C2	31:DA:1553:A:C4	3.02	0.47
31:DA:1820:U:H4'	31:DA:1821:A:OP2	2.14	0.47
31:DA:2464:C:O2'	31:DA:2465:C:P	2.72	0.47
31:DA:2475:C:H5''	31:DA:2475:C:C6	2.46	0.47
31:DA:2663:G:C5	31:DA:2664:G:C5	3.02	0.47
31:DA:2698:U:H2'	31:DA:2699:C:C6	2.48	0.47
33:DD:12:SER:O	33:DD:16:MET:HB2	2.14	0.47
34:DE:27:LEU:HD22	45:DT:1:MET:HE2	1.95	0.47
36:DG:88:ILE:CG2	36:DG:89:GLY:N	2.77	0.47
38:DI:77:LEU:CD1	38:DI:101:LEU:HD22	2.43	0.47
39:DN:40:PRO:C	46:DU:64:ARG:NH2	2.67	0.47
42:DQ:16:ARG:C	42:DQ:17:LEU:HD23	2.34	0.47
42:DQ:20:ALA:CB	42:DQ:99:PRO:HG2	2.44	0.47
48:DW:18:ARG:NH1	48:DW:18:ARG:CG	2.74	0.47
49:DX:70:LEU:O	49:DX:71:GLY:C	2.51	0.47
1:AA:66:G:C2	1:AA:67:C:C6	3.02	0.47
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.13	0.47
1:AA:651:C:O2'	1:AA:652:U:H5'	2.13	0.47
1:AA:966:G:H21	9:AI:127:LYS:HE3	1.79	0.47
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.46	0.47
2:AB:204:ASN:HD21	2:AB:206:ASP:H	1.61	0.47
4:AD:64:LEU:HD12	4:AD:64:LEU:O	2.14	0.47
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	2.29	0.47
8:AH:87:SER:HB3	8:AH:133:LEU:O	2.13	0.47
9:AI:45:ALA:O	9:AI:78:LYS:HE3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:21:VAL:HG22	16:AP:34:GLU:O	2.13	0.47
23:B1:90:ILE:O	23:B1:94:LEU:HB2	2.14	0.47
27:B5:10:LYS:HE3	31:BA:1262:A:N3	2.29	0.47
31:BA:8:A:H2'	31:BA:9:U:H5	1.76	0.47
31:BA:154:G:N1	31:BA:154(A):C:N4	2.62	0.47
31:BA:292:C:O2'	31:BA:293:U:H5'	2.15	0.47
31:BA:661:C:H2'	31:BA:662:G:H8	1.79	0.47
31:BA:717:G:H2'	31:BA:718:A:O4'	2.13	0.47
31:BA:992:C:O2'	31:BA:993:G:H5'	2.15	0.47
31:BA:1173:G:H5'	31:BA:1174:A:OP2	2.14	0.47
31:BA:1649:G:C6	31:BA:2009:G:C6	3.02	0.47
31:BA:1902:C:C4'	33:BD:244:ARG:HB2	2.44	0.47
31:BA:2031:A:C6	31:BA:2498:C:H1'	2.49	0.47
31:BA:2789:C:H2'	31:BA:2790:A:OP2	2.13	0.47
33:BD:83:GLU:OE1	33:BD:104:TYR:OH	2.27	0.47
34:BE:75:VAL:C	34:BE:77:ILE:N	2.67	0.47
40:BO:13:ASN:ND2	40:BO:96:THR:H	2.07	0.47
41:BP:85:LEU:HB3	41:BP:114:ILE:HD12	1.95	0.47
41:BP:121:LYS:CE	25:D3:2:PRO:HD3	2.44	0.47
44:BS:11:LYS:N	44:BS:11:LYS:HD2	2.29	0.47
44:BS:42:ASP:C	44:BS:44:LYS:N	2.68	0.47
49:BX:35:THR:O	49:BX:39:ILE:CG2	2.62	0.47
49:BX:93:GLU:O	49:BX:93:GLU:HG3	2.15	0.47
1:CA:101:A:H2'	1:CA:102:G:H5'	1.95	0.47
1:CA:246:A:C4	1:CA:282:A:N6	2.82	0.47
1:CA:316:G:OP2	1:CA:351:G:O2'	2.32	0.47
1:CA:651:C:O2'	1:CA:652:U:H5'	2.14	0.47
1:CA:829:G:O2'	1:CA:830:G:H5'	2.14	0.47
1:CA:1074:G:C2	1:CA:1102:A:C2	3.02	0.47
1:CA:1132:C:H2'	1:CA:1133:G:O4'	2.14	0.47
4:CD:33:MET:HE2	4:CD:37:PRO:HA	1.95	0.47
5:CE:31:LEU:HD22	5:CE:43:LEU:HD11	1.95	0.47
7:CG:92:SER:HB3	7:CG:94:ARG:HH21	1.78	0.47
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.14	0.47
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.49	0.47
11:CK:48:ILE:HG22	11:CK:49:GLY:H	1.79	0.47
13:CM:82:MET:HB2	13:CM:93:ARG:NH1	2.29	0.47
15:CO:81:LEU:HD11	15:CO:85:LEU:HD12	1.94	0.47
20:CT:14:LYS:HA	20:CT:17:ARG:HE	1.79	0.47
24:D2:34:GLU:O	24:D2:34:GLU:HG2	2.14	0.47
29:D7:39:ARG:NH2	31:DA:468:G:N7	2.59	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:34:C:H2'	31:DA:35:G:OP1	2.14	0.47
31:DA:82:G:O2'	31:DA:83:G:H5'	2.14	0.47
31:DA:117:G:H5''	31:DA:118:A:OP2	2.14	0.47
31:DA:535:C:O3'	46:DU:53:ARG:NH1	2.47	0.47
31:DA:774:A:H2	31:DA:787:U:HO2'	1.53	0.47
31:DA:966:G:H2'	31:DA:967:C:C6	2.48	0.47
31:DA:1106:A:C2'	31:DA:1107:G:C8	2.97	0.47
31:DA:1425:G:H2'	31:DA:1426:G:O4'	2.15	0.47
31:DA:1497:U:O2	31:DA:1497:U:C2'	2.61	0.47
31:DA:2070:G:C2	31:DA:2442:C:C2	3.02	0.47
31:DA:2810:A:H2'	34:DE:61:ARG:HH21	1.75	0.47
34:DE:137:HIS:HB3	34:DE:138:PRO:CD	2.44	0.47
35:DF:123:LEU:HD12	35:DF:124:LEU:N	2.28	0.47
37:DH:44:VAL:O	37:DH:46:GLU:OE2	2.32	0.47
38:DI:62:LYS:HE2	38:DI:134:PRO:HG3	1.95	0.47
42:DQ:30:GLY:CA	42:DQ:107:ALA:HB2	2.43	0.47
45:DT:33:LYS:N	45:DT:33:LYS:HZ3	2.12	0.47
45:DT:109:GLU:HA	45:DT:112:ARG:CG	2.43	0.47
46:DU:92:ARG:NE	47:DV:11:GLN:HG2	2.28	0.47
47:DV:72:VAL:O	47:DV:89:GLN:O	2.32	0.47
48:DW:18:ARG:HG2	48:DW:18:ARG:NH1	2.24	0.47
51:DZ:108:PRO:HG3	51:DZ:141:VAL:HG22	1.96	0.47
1:AA:171:A:H2'	1:AA:172:A:C8	2.49	0.47
1:AA:373:A:N3	1:AA:374:A:C8	2.82	0.47
1:AA:375:U:N3	1:AA:376:G:N7	2.62	0.47
1:AA:839:U:OP2	1:AA:840:C:H5	1.97	0.47
1:AA:1242:C:H5''	21:AU:10:ARG:NH1	2.29	0.47
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.14	0.47
2:AB:16:HIS:HA	2:AB:210:SER:HB2	1.96	0.47
3:AC:154:SER:O	3:AC:165:THR:HA	2.14	0.47
5:AE:75:THR:HG23	5:AE:76:ILE:H	1.78	0.47
9:AI:61:ALA:HB1	9:AI:63:ILE:HD11	1.95	0.47
9:AI:79:LEU:HD11	9:AI:83:ARG:NH2	2.29	0.47
29:B7:40:TRP:CD2	31:BA:459:U:H5''	2.49	0.47
30:B8:29:LYS:O	30:B8:30:ARG:C	2.51	0.47
31:BA:287:C:N4	31:BA:354:G:H1	2.05	0.47
31:BA:861:A:C2	31:BA:917:A:C4	3.01	0.47
31:BA:985:C:H2'	31:BA:986:C:C6	2.50	0.47
31:BA:2097:C:H2'	31:BA:2098:U:O4'	2.15	0.47
32:BB:38:C:O4'	44:BS:95:HIS:NE2	2.37	0.47
35:BF:84:VAL:O	35:BF:85:GLY:C	2.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:13:ASN:ND2	40:BO:97:ARG:N	2.60	0.47
46:BU:75:ASN:HB3	46:BU:77:SER:OG	2.14	0.47
46:BU:76:TYR:CZ	46:BU:80:ILE:HG13	2.49	0.47
47:BV:66:ARG:HG3	47:BV:66:ARG:HH11	1.79	0.47
50:BY:90:LEU:CD1	50:BY:91:GLU:HG2	2.43	0.47
1:CA:84:U:H5	1:CA:88:A:C8	2.32	0.47
1:CA:357:G:C2	1:CA:358:U:C6	3.02	0.47
1:CA:484:G:H4'	1:CA:485:G:OP1	2.15	0.47
1:CA:577:G:H2'	1:CA:578:C:H6	1.79	0.47
1:CA:626:U:H4'	16:CP:38:TYR:CZ	2.49	0.47
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.45	0.47
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.14	0.47
12:CL:70:ILE:HD12	12:CL:70:ILE:N	2.29	0.47
16:CP:8:ARG:O	16:CP:9:PHE:CG	2.68	0.47
28:D6:39:TYR:HB3	28:D6:49:HIS:ND1	2.29	0.47
29:D7:24:THR:O	29:D7:28:ARG:HG3	2.14	0.47
31:DA:241:A:H5'	31:DA:243:U:O4'	2.14	0.47
31:DA:271(O):C:O2'	31:DA:271(P):C:C5	2.67	0.47
31:DA:491:G:H2'	31:DA:492:A:H8	1.79	0.47
31:DA:723:G:H2'	31:DA:724:U:O4'	2.15	0.47
31:DA:884:C:O2'	31:DA:892:G:C8	2.51	0.47
31:DA:900:A:H5''	31:DA:901:A:OP2	2.14	0.47
31:DA:1040:C:N4	31:DA:1115:G:H1	2.12	0.47
31:DA:1138:G:O2'	39:DN:105:GLY:HA3	2.14	0.47
31:DA:1635:G:H2'	31:DA:1636:C:H6	1.79	0.47
31:DA:2393:A:OP1	41:DP:62:LEU:HD12	2.14	0.47
33:DD:221:VAL:HG22	33:DD:226:MET:CE	2.43	0.47
35:DF:3:GLU:HB2	35:DF:20:LEU:H	1.78	0.47
35:DF:164:ARG:HG2	35:DF:164:ARG:NH1	2.23	0.47
35:DF:195:ASP:CG	35:DF:197:ASP:HB3	2.35	0.47
44:DS:17:ARG:NE	44:DS:89:ARG:HH21	2.12	0.47
47:DV:2:PHE:CE1	47:DV:13:ARG:CZ	2.97	0.47
47:DV:32:THR:HB	47:DV:64:HIS:HE1	1.78	0.47
48:DW:111:HIS:CD2	48:DW:112:GLY:H	2.32	0.47
49:DX:12:VAL:HG13	49:DX:27:THR:O	2.15	0.47
49:DX:63:LYS:HD2	49:DX:70:LEU:HD13	1.95	0.47
1:AA:106:C:H2'	1:AA:107:G:H8	1.80	0.47
1:AA:116:A:OP2	1:AA:116:A:C8	2.67	0.47
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.43	0.47
1:AA:781:A:H5'	1:AA:782:A:OP2	2.14	0.47
1:AA:914:A:C2'	1:AA:915:A:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1068:G:H8	1:AA:1068:G:OP2	1.97	0.47
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.14	0.47
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.15	0.47
6:AF:19:LEU:HD11	6:AF:59:TYR:CG	2.50	0.47
6:AF:45:LEU:HG	6:AF:46:ARG:N	2.28	0.47
7:AG:66:VAL:HG12	7:AG:70:LYS:HE3	1.96	0.47
10:AJ:49:VAL:HG11	14:AN:41:ARG:O	2.15	0.47
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.49	0.47
13:AM:75:ALA:O	13:AM:79:LYS:HG3	2.14	0.47
19:AS:16:LEU:O	19:AS:20:LEU:HB2	2.15	0.47
23:B1:26:ARG:HB2	23:B1:34:THR:HB	1.97	0.47
23:B1:33:LYS:NZ	23:B1:35:THR:CG2	2.77	0.47
31:BA:27:G:C4	31:BA:512:G:N2	2.83	0.47
31:BA:84:A:H5''	50:BY:9:LYS:CD	2.44	0.47
31:BA:157:U:OP2	31:BA:157:U:H6	1.97	0.47
31:BA:280:C:C2'	31:BA:281:G:O5'	2.63	0.47
31:BA:329:G:H22	50:BY:19:LYS:NZ	2.13	0.47
31:BA:543:C:H5	31:BA:547:A:H62	1.62	0.47
31:BA:784:A:C8	31:BA:792:G:C5	3.03	0.47
31:BA:2199:A:H2'	31:BA:2199:A:N3	2.29	0.47
31:BA:2836:U:C4	31:BA:2883:A:N6	2.82	0.47
32:BB:28:C:H2'	32:BB:29:A:H8	1.80	0.47
32:BB:110:G:N1	32:BB:111:G:C5	2.83	0.47
33:BD:35:LYS:HG2	33:BD:64:ILE:H	1.79	0.47
33:BD:131:LEU:HB2	33:BD:136:ILE:CD1	2.42	0.47
35:BF:68:LYS:HG2	35:BF:68:LYS:O	2.15	0.47
36:BG:61:ALA:HA	36:BG:64:THR:CG2	2.44	0.47
37:BH:94:TYR:N	37:BH:94:TYR:CD1	2.83	0.47
37:BH:94:TYR:HA	37:BH:106:THR:O	2.15	0.47
38:BI:77:LEU:CD1	38:BI:101:LEU:HD22	2.44	0.47
47:BV:80:GLN:HA	47:BV:82:ARG:H	1.79	0.47
49:BX:59:VAL:O	49:BX:60:ARG:O	2.32	0.47
51:BZ:73:GLN:HG2	51:BZ:87:ASP:CG	2.34	0.47
51:BZ:135:GLU:O	51:BZ:136:PHE:HB3	2.14	0.47
1:CA:78:G:H22	1:CA:91:C:N4	2.12	0.47
1:CA:308:C:H2'	1:CA:309:G:C8	2.48	0.47
1:CA:355:C:O2'	1:CA:356:A:H5'	2.14	0.47
1:CA:451:A:N7	1:CA:481:G:C6	2.82	0.47
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.27	0.47
1:CA:1125:U:O4	10:CJ:73:ASP:OD2	2.32	0.47
3:CC:154:SER:O	3:CC:165:THR:HA	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:155:GLY:O	3:CC:156:ARG:CB	2.63	0.47
4:CD:148:VAL:CG1	4:CD:149:ALA:N	2.77	0.47
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.14	0.47
9:CI:21:PRO:HA	9:CI:58:ARG:O	2.14	0.47
9:CI:105:ASP:CG	9:CI:107:ARG:HD3	2.35	0.47
13:CM:86:CYS:HB2	19:CS:73:GLU:OE1	2.15	0.47
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.14	0.47
23:D1:10:LYS:HB2	23:D1:14:VAL:CA	2.43	0.47
27:D5:2:ALA:N	31:DA:2015:A:N3	2.63	0.47
30:D8:29:LYS:O	30:D8:31:HIS:N	2.48	0.47
31:DA:280:C:C2'	31:DA:281:G:O5'	2.62	0.47
31:DA:287:C:N4	31:DA:354:G:H1	2.05	0.47
31:DA:329:G:H22	50:DY:19:LYS:NZ	2.12	0.47
31:DA:670:A:H4'	31:DA:671:C:O5'	2.14	0.47
31:DA:1173:G:H5'	31:DA:1174:A:OP2	2.14	0.47
31:DA:1225:G:OP1	47:DV:88:ARG:HB3	2.14	0.47
31:DA:1241:A:C2'	31:DA:1242:A:O5'	2.62	0.47
31:DA:1384:A:H1'	31:DA:1405:U:O4'	2.14	0.47
31:DA:1689:A:N6	31:DA:1698:A:H2	2.09	0.47
31:DA:1783:A:N1	31:DA:2587:A:C4	2.83	0.47
31:DA:1803:A:H4'	33:DD:259:THR:CG2	2.45	0.47
31:DA:2274:A:O5'	31:DA:2275:C:OP2	2.32	0.47
31:DA:2299:G:N1	31:DA:2318:G:C8	2.83	0.47
31:DA:2416:C:H6	31:DA:2416:C:O5'	1.98	0.47
32:DB:21:G:O6	32:DB:63:G:C4	2.68	0.47
32:DB:42:C:O2	36:DG:93:THR:N	2.48	0.47
33:DD:35:LYS:CA	33:DD:64:ILE:CG2	2.93	0.47
33:DD:125:ILE:HG13	33:DD:137:PRO:CD	2.45	0.47
34:DE:101:ARG:CG	34:DE:169:ASN:ND2	2.77	0.47
37:DH:54:ARG:HG2	37:DH:65:HIS:HD2	1.80	0.47
37:DH:158:HIS:CE1	37:DH:168:PRO:C	2.87	0.47
38:DI:44:LEU:O	38:DI:47:LEU:HB3	2.14	0.47
39:DN:39:ARG:O	46:DU:64:ARG:NH1	2.47	0.47
39:DN:78:TYR:HD1	39:DN:79:PRO:CG	2.27	0.47
44:DS:88:ASP:O	44:DS:89:ARG:O	2.31	0.47
1:AA:96:U:O2'	1:AA:97:G:H8	1.97	0.47
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.45	0.47
1:AA:450:G:C5'	16:AP:41:PRO:O	2.57	0.47
2:AB:15:VAL:HG23	2:AB:16:HIS:CE1	2.49	0.47
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.72	0.47
8:AH:77:GLU:HG2	8:AH:78:GLN:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:10:LEU:HD21	12:AL:15:ARG:HE	1.80	0.47
12:AL:62:SER:HB2	12:AL:64:TYR:HD1	1.80	0.47
18:AR:66:LEU:HD11	18:AR:70:ILE:HD11	1.96	0.47
22:B0:13:GLY:O	22:B0:14:ARG:CB	2.40	0.47
31:BA:83:G:H22	31:BA:102:G:HO2'	1.61	0.47
31:BA:303:U:H2'	31:BA:304:G:C8	2.49	0.47
31:BA:528:A:O2'	31:BA:529:A:H5'	2.15	0.47
31:BA:753:C:O5'	31:BA:753:C:H6	1.97	0.47
31:BA:900:A:C5'	31:BA:901:A:OP2	2.62	0.47
31:BA:1321:A:H2'	31:BA:1322:A:O4'	2.15	0.47
31:BA:1490:A:H5'	31:BA:1491:G:OP2	2.15	0.47
31:BA:1507:A:C2	31:BA:1508:A:H1'	2.50	0.47
31:BA:1659:U:C4	31:BA:1660:C:C5	3.03	0.47
31:BA:1777:U:O2'	31:BA:1778:U:H5'	2.15	0.47
31:BA:2199:A:C5'	31:BA:2200:C:OP2	2.63	0.47
31:BA:2526:G:H5'	31:BA:2742:C:O2'	2.15	0.47
31:BA:2884:U:C2'	31:BA:2885:C:H5'	2.45	0.47
32:BB:78:A:C2	32:BB:100:A:C4	3.02	0.47
33:BD:89:SER:HB2	33:BD:159:ALA:HB2	1.95	0.47
36:BG:174:GLU:HG3	36:BG:180:PHE:CD1	2.49	0.47
37:BH:90:LYS:CB	37:BH:159:GLU:O	2.63	0.47
37:BH:117:PRO:HA	37:BH:123:PHE:HE1	1.79	0.47
38:BI:114:LEU:HD23	38:BI:114:LEU:HA	1.69	0.47
41:BP:14:LYS:O	41:BP:15:ARG:CB	2.62	0.47
41:BP:146:VAL:CG2	41:BP:147:LEU:N	2.71	0.47
43:BR:10:LEU:HB3	43:BR:17:ARG:CD	2.45	0.47
43:BR:50:HIS:O	43:BR:54:LEU:HD22	2.14	0.47
44:BS:16:ASN:ND2	44:BS:92:TYR:CZ	2.82	0.47
44:BS:63:THR:O	44:BS:66:ALA:O	2.32	0.47
50:BY:87:LYS:O	50:BY:88:LYS:HB2	2.15	0.47
51:BZ:167:PRO:O	51:BZ:168:GLU:HB2	2.15	0.47
1:CA:255:G:H2'	1:CA:256:U:C6	2.50	0.47
1:CA:448:A:C2	1:CA:449:C:C4	3.02	0.47
1:CA:524:G:H8	1:CA:524:G:O5'	1.97	0.47
1:CA:1098:C:C4	1:CA:1099:G:C8	3.02	0.47
1:CA:1338:G:O2'	1:CA:1339:A:H5'	2.14	0.47
2:CB:53:ARG:HA	2:CB:56:ARG:HB2	1.96	0.47
5:CE:80:ILE:HG22	8:CH:104:ARG:NH2	2.29	0.47
8:CH:53:VAL:O	8:CH:54:ASP:CB	2.60	0.47
8:CH:77:GLU:HG2	8:CH:78:GLN:H	1.79	0.47
11:CK:91:ARG:O	11:CK:95:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:53:LEU:HA	20:CT:56:MET:HB2	1.96	0.47
27:D5:7:PRO:HA	31:DA:2615:U:N1	2.29	0.47
30:D8:35:GLN:HE21	30:D8:36:LYS:NZ	2.12	0.47
31:DA:1022:G:C5	31:DA:1140:C:N4	2.82	0.47
31:DA:1525:G:H2'	31:DA:1526:G:C8	2.49	0.47
31:DA:1662:C:O2'	31:DA:1663:C:H5'	2.15	0.47
31:DA:1948:G:H2'	31:DA:1949:G:C5'	2.45	0.47
31:DA:2228:G:OP1	33:DD:261:LYS:NZ	2.47	0.47
31:DA:2298:A:H2'	31:DA:2299:G:O4'	2.14	0.47
31:DA:2598:A:O5'	33:DD:236:GLY:HA3	2.13	0.47
31:DA:2802:G:H3'	31:DA:2802:G:P	2.54	0.47
31:DA:2859:G:H4'	31:DA:2860:A:OP1	2.15	0.47
32:DB:73:A:C4	32:DB:105:A:C2	3.02	0.47
34:DE:61:ARG:H	34:DE:62:PRO:CD	2.24	0.47
35:DF:46:ARG:CG	35:DF:46:ARG:NH1	2.63	0.47
37:DH:94:TYR:HA	37:DH:106:THR:O	2.15	0.47
43:DR:77:ARG:O	43:DR:78:LYS:C	2.52	0.47
45:DT:106:SER:O	45:DT:107:ASP:HB3	2.15	0.47
48:DW:29:LEU:HG	48:DW:33:ARG:HD2	1.96	0.47
1:AA:84:U:C5	1:AA:88:A:C8	3.02	0.47
1:AA:154:C:H2'	1:AA:155:C:H6	1.80	0.47
1:AA:189(B):C:N4	1:AA:189(I):G:H1	2.13	0.47
1:AA:338:A:C6	1:AA:339:C:C4	3.02	0.47
1:AA:451:A:N7	1:AA:481:G:C6	2.83	0.47
1:AA:473:G:N3	1:AA:474:G:C8	2.81	0.47
1:AA:696:A:H8	1:AA:696:A:O5'	1.98	0.47
1:AA:999:C:H2'	1:AA:1000:U:C6	2.50	0.47
1:AA:1067:A:O2'	1:AA:1093:A:O2'	2.27	0.47
1:AA:1270:C:H2'	1:AA:1271:G:O4'	2.14	0.47
2:AB:12:GLU:HA	2:AB:16:HIS:HB2	1.96	0.47
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.15	0.47
3:AC:155:GLY:O	3:AC:156:ARG:CB	2.60	0.47
4:AD:92:VAL:O	4:AD:96:LEU:HD23	2.14	0.47
16:AP:20:VAL:HG13	16:AP:21:VAL:N	2.28	0.47
30:B8:35:GLN:O	30:B8:37:SER:N	2.48	0.47
31:BA:616:G:H2'	31:BA:618:C:O4'	2.15	0.47
31:BA:825:C:C6	31:BA:825:C:H3'	2.50	0.47
31:BA:1015:G:H2'	31:BA:1016:G:H5'	1.97	0.47
31:BA:1025:G:OP1	31:BA:1025:G:H8	1.97	0.47
31:BA:1040:C:H42	31:BA:1115:G:H1	1.62	0.47
31:BA:1719:G:O2'	31:BA:1720:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2564:A:C6	31:BA:2565:A:C6	3.03	0.47
33:BD:34:VAL:C	33:BD:35:LYS:O	2.52	0.47
33:BD:35:LYS:HD3	33:BD:64:ILE:N	2.29	0.47
33:BD:85:ASP:OD1	33:BD:86:PRO:HD2	2.14	0.47
34:BE:2:LYS:NZ	34:BE:95:ILE:O	2.46	0.47
36:BG:88:ILE:CG2	36:BG:89:GLY:N	2.78	0.47
37:BH:137:ASP:HB2	37:BH:140:LYS:HB2	1.94	0.47
38:BI:27:ARG:HH11	38:BI:27:ARG:HG2	1.80	0.47
38:BI:29:TYR:O	38:BI:32:PRO:HD2	2.14	0.47
39:BN:128:HIS:NE2	39:BN:131:GLN:HB2	2.29	0.47
40:BO:87:ILE:CG2	40:BO:88:ASN:N	2.77	0.47
41:BP:107:LYS:C	41:BP:109:GLY:N	2.66	0.47
42:BQ:42:ILE:HD13	42:BQ:97:VAL:CG2	2.43	0.47
43:BR:8:ARG:NE	43:BR:8:ARG:HA	2.29	0.47
46:BU:93:LYS:H	46:BU:93:LYS:CD	2.23	0.47
47:BV:36:PRO:HD2	47:BV:60:GLU:O	2.14	0.47
49:BX:18:TYR:O	49:BX:19:ALA:C	2.52	0.47
50:BY:27:VAL:C	50:BY:29:GLU:OE1	2.53	0.47
1:CA:154:C:H2'	1:CA:155:C:H6	1.80	0.47
1:CA:343:U:C2'	1:CA:346:G:O6	2.63	0.47
1:CA:750:G:H21	15:CO:24:SER:H	1.61	0.47
1:CA:977:A:H8	1:CA:1223:C:C4	2.33	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5'	2.29	0.47
1:CA:1238:A:N6	1:CA:1299:A:N6	2.61	0.47
2:CB:8:LYS:HZ2	2:CB:217:ARG:HH11	1.61	0.47
3:CC:107:GLN:O	3:CC:108:ASN:HB2	2.14	0.47
4:CD:74:GLN:O	4:CD:78:LEU:HG	2.14	0.47
4:CD:82:ALA:O	4:CD:83:SER:C	2.53	0.47
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.29	0.47
12:CL:25:PRO:O	12:CL:27:LEU:HD22	2.14	0.47
15:CO:17:ARG:HG2	15:CO:26:GLU:HG3	1.97	0.47
16:CP:48:TRP:CD1	16:CP:48:TRP:N	2.75	0.47
26:D4:14:ILE:CB	36:DG:5:VAL:HG13	2.45	0.47
31:DA:92:A:H2'	31:DA:93:G:C8	2.50	0.47
31:DA:352:G:HO2'	31:DA:353:G:P	2.38	0.47
31:DA:543:C:H5	31:DA:547:A:H62	1.62	0.47
31:DA:910:A:N7	42:DQ:13:GLN:HB2	2.30	0.47
31:DA:1900:A:N1	31:DA:1970:A:C6	2.83	0.47
31:DA:2287:A:O2'	31:DA:2288:A:H3'	2.14	0.47
31:DA:2645:G:H3'	31:DA:2646:C:H5'	1.95	0.47
31:DA:2703:C:H2'	31:DA:2704:C:C6	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:120:TRP:CD2	34:DE:155:LYS:HD3	2.50	0.47
37:DH:85:LYS:NZ	37:DH:145:ALA:HA	2.29	0.47
39:DN:22:THR:HA	39:DN:61:ARG:O	2.15	0.47
41:DP:78:PRO:HB2	41:DP:111:ARG:HE	1.80	0.47
43:DR:74:LYS:O	43:DR:77:ARG:HB2	2.15	0.47
44:DS:53:SER:O	44:DS:55:ALA:N	2.48	0.47
45:DT:16:ARG:HD3	45:DT:16:ARG:HA	1.54	0.47
45:DT:51:ARG:HD2	45:DT:62:THR:HG23	1.96	0.47
47:DV:25:LEU:HD12	47:DV:94:LEU:HD22	1.97	0.47
47:DV:73:SER:O	47:DV:74:LYS:HB2	2.14	0.47
47:DV:79:VAL:O	47:DV:80:GLN:CG	2.62	0.47
49:DX:55:ASN:HB2	49:DX:78:LYS:HD2	1.96	0.47
51:DZ:117:LEU:HA	51:DZ:174:VAL:HA	1.95	0.47
1:AA:20:U:O2'	1:AA:21:G:H5'	2.15	0.47
1:AA:51:A:C4	1:AA:353:A:C6	3.03	0.47
1:AA:109:A:H2'	1:AA:326:G:N2	2.29	0.47
1:AA:134:A:H1'	1:AA:325:A:C5	2.49	0.47
1:AA:343:U:C2'	1:AA:346:G:O6	2.63	0.47
1:AA:407:G:H4'	4:AD:115:ARG:O	2.14	0.47
1:AA:484:G:H4'	1:AA:485:G:OP1	2.15	0.47
1:AA:625:G:C4	1:AA:626:U:C5	3.03	0.47
1:AA:668:G:O2'	1:AA:669:U:H5'	2.15	0.47
1:AA:721:G:N1	1:AA:733:A:C2	2.82	0.47
1:AA:976:G:C5'	1:AA:1358:U:O2'	2.56	0.47
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.15	0.47
1:AA:1077:G:C6	1:AA:1081:G:O6	2.68	0.47
1:AA:1254:C:OP1	10:AJ:45:ARG:HG2	2.15	0.47
1:AA:1301:U:H3'	1:AA:1302:U:C5'	2.45	0.47
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.14	0.47
2:AB:107:THR:O	2:AB:110:GLN:HB2	2.15	0.47
3:AC:24:ALA:HB1	3:AC:28:GLN:O	2.14	0.47
4:AD:3:ARG:HD3	4:AD:5:ILE:HG13	1.95	0.47
4:AD:150:GLU:CD	4:AD:150:GLU:H	2.17	0.47
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.95	0.47
11:AK:20:TYR:O	11:AK:30:VAL:HA	2.15	0.47
13:AM:78:ILE:HG22	13:AM:93:ARG:HH22	1.79	0.47
13:AM:91:ARG:HB2	13:AM:98:VAL:CG2	2.45	0.47
15:AO:25:THR:O	15:AO:29:VAL:HG23	2.15	0.47
15:AO:66:LEU:O	15:AO:69:TYR:HB3	2.15	0.47
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.29	0.47
16:AP:51:VAL:HG12	16:AP:51:VAL:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:22:LEU:O	19:AS:26:GLY:HA2	2.15	0.47
20:AT:29:LYS:O	20:AT:33:ILE:HG12	2.14	0.47
20:AT:94:ALA:O	20:AT:95:ALA:CB	2.63	0.47
22:B0:56:ASP:O	22:B0:57:PHE:HB2	2.15	0.47
24:B2:26:ARG:O	24:B2:30:ARG:HD3	2.15	0.47
24:B2:43:GLN:O	24:B2:46:GLN:CB	2.62	0.47
31:BA:9:U:HO2'	31:BA:10:G:P	2.38	0.47
31:BA:302:C:O2'	31:BA:303:U:H5'	2.14	0.47
31:BA:455:C:N3	31:BA:473:G:H5'	2.29	0.47
31:BA:557:U:O2	39:BN:45:ASN:HB2	2.15	0.47
31:BA:661:C:H2'	31:BA:662:G:C8	2.49	0.47
31:BA:795:C:H2'	31:BA:796:C:C6	2.49	0.47
31:BA:855:G:C6	31:BA:856:C:C4	3.02	0.47
31:BA:911:A:C4	42:BQ:9:TYR:OH	2.66	0.47
31:BA:975:C:O2	31:BA:975:C:H2'	2.15	0.47
31:BA:1359:A:N7	31:BA:1372:U:C4	2.81	0.47
31:BA:1487:G:C2	31:BA:1488:G:C4	3.03	0.47
31:BA:1509(A):A:C5	31:BA:1509(B):A:N7	2.82	0.47
31:BA:1803:A:H4'	33:BD:259:THR:CG2	2.45	0.47
31:BA:2232:U:O2'	31:BA:2233:U:H5'	2.15	0.47
31:BA:2287:A:C5	31:BA:2289:G:C5	3.02	0.47
31:BA:2378:A:C2	44:BS:20:ARG:NH1	2.82	0.47
31:BA:2469:A:C5	31:BA:2470:G:H1'	2.49	0.47
31:BA:2524:G:H8	31:BA:2524:G:C5'	2.17	0.47
31:BA:2674:G:H2'	31:BA:2675:A:O4'	2.14	0.47
33:BD:115:GLN:HG2	33:BD:116:GLN:O	2.14	0.47
33:BD:267:SER:HA	33:BD:270:ILE:HG13	1.96	0.47
34:BE:77:ILE:HG23	34:BE:78:LEU:N	2.29	0.47
35:BF:113:ALA:HB1	35:BF:186:ILE:HG21	1.97	0.47
36:BG:29:TRP:C	36:BG:31:VAL:H	2.17	0.47
36:BG:67:LYS:HD2	36:BG:67:LYS:H	1.78	0.47
36:BG:86:MET:HB2	36:BG:87:PRO:HD2	1.97	0.47
36:BG:125:PHE:HE2	36:BG:173:LEU:HD12	1.80	0.47
37:BH:85:LYS:HZ3	37:BH:145:ALA:HB2	1.80	0.47
37:BH:89:ILE:HG13	37:BH:129:THR:O	2.15	0.47
38:BI:3:VAL:HG12	38:BI:38:LEU:HA	1.95	0.47
38:BI:40:THR:CG2	38:BI:43:ASN:HD22	2.27	0.47
38:BI:88:ILE:HG13	38:BI:122:GLU:N	2.30	0.47
39:BN:36:GLY:H	39:BN:42:TRP:HZ3	1.60	0.47
40:BO:43:VAL:HG23	40:BO:56:ASP:O	2.14	0.47
41:BP:10:PRO:CD	41:BP:11:GLY:N	2.70	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:85:LEU:HD13	41:BP:114:ILE:HD11	1.97	0.47
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CZ	2.50	0.47
43:BR:37:THR:OG1	43:BR:40:LYS:HG3	2.15	0.47
45:BT:68:TYR:O	45:BT:70:VAL:N	2.47	0.47
46:BU:83:LEU:C	46:BU:88:ILE:HD11	2.35	0.47
46:BU:112:ARG:HH11	46:BU:112:ARG:HG2	1.80	0.47
47:BV:2:PHE:O	47:BV:3:ALA:HB3	2.14	0.47
47:BV:50:PRO:C	47:BV:51:VAL:HG23	2.35	0.47
49:BX:41:ASN:O	49:BX:45:THR:CG2	2.63	0.47
49:BX:70:LEU:O	49:BX:71:GLY:C	2.53	0.47
50:BY:45:VAL:HG22	50:BY:62:GLU:N	2.29	0.47
51:BZ:117:LEU:HA	51:BZ:174:VAL:HA	1.96	0.47
1:CA:73:G:H2'	1:CA:76:C:O5'	2.15	0.47
1:CA:115:G:H4'	1:CA:116:A:O5'	2.14	0.47
1:CA:273:A:C2'	1:CA:274:A:H5'	2.45	0.47
1:CA:540:G:H2'	1:CA:541:G:O4'	2.14	0.47
1:CA:764:C:H2'	1:CA:765:G:O5'	2.14	0.47
1:CA:950:U:H6	13:CM:102:ARG:NH1	2.12	0.47
1:CA:1084:G:OP1	1:CA:1086:U:C4	2.67	0.47
1:CA:1206:G:O6	1:CA:1207:G:C6	2.68	0.47
1:CA:1271:G:H5'	1:CA:1314:C:H5'	1.96	0.47
1:CA:1293:G:O2'	1:CA:1294:G:H8	1.97	0.47
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.50	0.47
1:CA:1442(A):G:C3'	1:CA:1442(B):A:C5'	2.87	0.47
1:CA:1456:G:H2'	1:CA:1457:G:O4'	2.15	0.47
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.95	0.47
3:CC:82:GLU:O	3:CC:86:VAL:HG13	2.15	0.47
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.73	0.47
4:CD:79:PHE:CD1	4:CD:207:TYR:HD1	2.32	0.47
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.29	0.47
5:CE:122:GLU:OE1	5:CE:131:ILE:HG13	2.14	0.47
6:CF:11:ASN:HB3	6:CF:14:LEU:CG	2.38	0.47
6:CF:50:TYR:CE1	18:CR:77:GLY:HA2	2.50	0.47
8:CH:82:HIS:CD2	8:CH:138:TRP:NE1	2.82	0.47
10:CJ:22:LYS:HZ2	10:CJ:88:LEU:HD23	1.79	0.47
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	1.97	0.47
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.30	0.47
23:D1:41:ARG:NH1	23:D1:41:ARG:CG	2.53	0.47
23:D1:94:LEU:O	23:D1:95:LEU:HG	2.14	0.47
24:D2:56:GLN:CD	24:D2:56:GLN:N	2.68	0.47
28:D6:32:ASN:O	28:D6:33:LYS:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:40:CYS:SG	28:D6:45:LYS:HD3	2.55	0.47
30:D8:62:LEU:N	30:D8:63:PRO:HD2	2.29	0.47
31:DA:49:A:H5''	31:DA:51:G:O4'	2.15	0.47
31:DA:125:G:H4'	31:DA:126:A:OP2	2.15	0.47
31:DA:271(F):C:H2'	31:DA:271(G):C:C6	2.42	0.47
31:DA:481:G:C4	31:DA:507:A:C2	3.03	0.47
31:DA:528:A:H3'	31:DA:528:A:H8	1.79	0.47
31:DA:839:U:H2'	31:DA:840:C:C6	2.49	0.47
31:DA:878:A:C6	31:DA:900:A:C8	3.02	0.47
31:DA:971:C:H2'	31:DA:972:G:C5'	2.44	0.47
31:DA:996:A:O4'	46:DU:92:ARG:NH2	2.46	0.47
31:DA:1012:U:OP1	46:DU:75:ASN:OD1	2.33	0.47
31:DA:1108:U:H2'	31:DA:1109:C:C5'	2.41	0.47
31:DA:1181:C:C2'	31:DA:1182:A:H5'	2.45	0.47
31:DA:1264:G:H3'	31:DA:1265:A:H5''	1.97	0.47
31:DA:1380:G:N2	31:DA:1570:A:C2	2.83	0.47
31:DA:1464:C:O2'	31:DA:1528:A:H1'	2.14	0.47
31:DA:1494:A:N3	31:DA:1494:A:H2'	2.29	0.47
31:DA:1507:A:C2	31:DA:1508:A:H1'	2.49	0.47
31:DA:2199:A:H2'	31:DA:2199:A:N3	2.30	0.47
31:DA:2287:A:C2	31:DA:2346:A:N1	2.83	0.47
31:DA:2299:G:C6	31:DA:2318:G:C8	3.02	0.47
31:DA:2406:U:C2	41:DP:72:PRO:HG2	2.50	0.47
31:DA:2543:G:H8	31:DA:2543:G:H5'	1.80	0.47
31:DA:2629:A:H2'	31:DA:2629:A:N3	2.30	0.47
31:DA:2635:C:H2'	31:DA:2636:U:O5'	2.14	0.47
31:DA:2655:G:O2'	31:DA:2656:U:H5	1.97	0.47
31:DA:2772:C:H2'	31:DA:2773:C:C6	2.49	0.47
31:DA:2789:C:H2'	31:DA:2790:A:OP2	2.14	0.47
31:DA:2876:G:H4'	45:DT:3:ARG:HD3	1.96	0.47
32:DB:1:U:C5	32:DB:2:C:C5	3.02	0.47
32:DB:21:G:H2'	32:DB:21:G:N3	2.30	0.47
32:DB:110:G:N1	32:DB:111:G:C5	2.83	0.47
33:DD:30:GLU:CG	33:DD:63:ARG:NE	2.77	0.47
33:DD:62:TYR:CE1	33:DD:64:ILE:HA	2.50	0.47
33:DD:228:PRO:CD	33:DD:235:GLY:HA3	2.38	0.47
34:DE:47:VAL:O	34:DE:80:GLU:HA	2.15	0.47
36:DG:101:ILE:HG23	36:DG:102:PHE:N	2.30	0.47
36:DG:135:LEU:HD23	36:DG:140:ILE:HD11	1.95	0.47
38:DI:56:LYS:HZ2	38:DI:57:ARG:N	2.13	0.47
38:DI:75:LEU:HD11	38:DI:105:HIS:CE1	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:22:ILE:HA	40:DO:22:ILE:HD13	1.54	0.47
42:DQ:141:GLN:C	51:DZ:70:LEU:HD13	2.35	0.47
43:DR:13:HIS:CE1	43:DR:15:SER:OG	2.68	0.47
45:DT:29:ARG:HD2	45:DT:29:ARG:HA	1.51	0.47
45:DT:100:TYR:HD2	45:DT:103:ARG:NH2	2.12	0.47
46:DU:92:ARG:HH22	47:DV:10:LYS:HG2	1.79	0.47
46:DU:104:GLN:HB2	47:DV:43:GLU:OE1	2.14	0.47
47:DV:19:LYS:HE2	47:DV:20:LEU:N	2.28	0.47
47:DV:64:HIS:HB3	47:DV:96:ILE:HG12	1.96	0.47
49:DX:65:ARG:O	49:DX:66:LEU:HB3	2.15	0.47
49:DX:80:ILE:HG23	49:DX:81:VAL:N	2.28	0.47
1:AA:284:G:H2'	1:AA:285:G:H8	1.80	0.47
1:AA:376:G:C4	1:AA:389:A:C2	3.03	0.47
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.14	0.47
1:AA:626:U:H4'	16:AP:38:TYR:CZ	2.50	0.47
1:AA:719:C:H1'	18:AR:49:LYS:HB3	1.97	0.47
1:AA:834:C:H2'	1:AA:835:U:C6	2.50	0.47
1:AA:1206:G:H4'	3:AC:192:THR:O	2.14	0.47
1:AA:1245:A:N1	1:AA:1293:G:C6	2.83	0.47
1:AA:1338:G:O2'	1:AA:1339:A:H5'	2.15	0.47
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.50	0.47
1:AA:1478:C:H2'	1:AA:1479:C:C6	2.50	0.47
1:AA:1483:A:H2	31:BA:1959:G:N3	2.13	0.47
1:AA:1525:G:OP1	11:AK:120:ARG:NH2	2.48	0.47
2:AB:161:ALA:HB1	2:AB:185:ILE:CD1	2.45	0.47
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.97	0.47
3:AC:108:ASN:HD22	3:AC:111:LEU:HD12	1.80	0.47
4:AD:107:ARG:CD	4:AD:173:TRP:HZ2	2.25	0.47
17:AQ:59:ILE:HG22	17:AQ:60:ILE:N	2.30	0.47
18:AR:22:VAL:O	18:AR:22:VAL:HG12	2.15	0.47
23:B1:79:GLY:O	23:B1:80:LEU:HG	2.14	0.47
25:B3:36:VAL:HG23	25:B3:36:VAL:O	2.13	0.47
26:B4:19:GLY:C	26:B4:21:VAL:N	2.67	0.47
27:B5:40:LYS:CE	27:B5:49:CYS:SG	3.03	0.47
29:B7:19:ARG:HG2	29:B7:19:ARG:NH1	2.30	0.47
30:B8:31:HIS:HB3	31:BA:2420:C:H41	1.80	0.47
30:B8:50:LEU:HD12	30:B8:51:ALA:N	2.30	0.47
31:BA:226:G:H21	31:BA:228:A:H62	1.62	0.47
31:BA:362:U:H3'	31:BA:362:U:C6	2.49	0.47
31:BA:363(C):G:H2'	31:BA:363(D):G:O4'	2.15	0.47
31:BA:1209:G:H21	31:BA:1210:A:N6	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1528:A:O2'	31:BA:1528(A):A:P	2.73	0.47
31:BA:2722:G:O2'	43:BR:5:LYS:HB2	2.13	0.47
33:BD:127:VAL:HA	33:BD:193:VAL:HG22	1.97	0.47
36:BG:118:ARG:HB2	36:BG:181:ARG:CZ	2.45	0.47
41:BP:119:GLU:HB3	25:D3:1:MET:H2	1.80	0.47
44:BS:24:LEU:HB3	44:BS:85:VAL:HG12	1.96	0.47
44:BS:35:ILE:HG22	44:BS:53:SER:HB2	1.97	0.47
47:BV:40:LEU:HD12	47:BV:40:LEU:C	2.35	0.47
50:BY:90:LEU:HG	50:BY:91:GLU:N	2.29	0.47
1:CA:102:G:C4	1:CA:103:C:C6	3.03	0.47
1:CA:295:C:H2'	1:CA:296:U:O4'	2.14	0.47
1:CA:411:A:C4	1:CA:413:G:O4'	2.68	0.47
1:CA:414:A:H2'	1:CA:415:A:H8	1.80	0.47
1:CA:417:C:H2'	1:CA:418:C:H5'	1.95	0.47
1:CA:785:G:C2'	1:CA:786:G:H5'	2.45	0.47
1:CA:940:C:H2'	1:CA:941:G:H8	1.80	0.47
1:CA:994:A:H62	1:CA:1046:A:H2	1.63	0.47
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.29	0.47
2:CB:68:ILE:HG22	2:CB:70:PHE:CE1	2.50	0.47
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.29	0.47
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.97	0.47
6:CF:76:ALA:HB1	6:CF:80:ARG:NH2	2.30	0.47
9:CI:11:LYS:HG2	9:CI:11:LYS:O	2.15	0.47
14:CN:21:TYR:OH	14:CN:23:ARG:NH2	2.48	0.47
19:CS:16:LEU:O	19:CS:20:LEU:HB2	2.15	0.47
23:D1:19:GLN:CD	23:D1:44:PRO:HG3	2.35	0.47
30:D8:48:PHE:CD1	30:D8:48:PHE:N	2.81	0.47
31:DA:26:G:H1'	31:DA:515:A:H61	1.80	0.47
31:DA:606:U:H4'	31:DA:658:C:H4'	1.96	0.47
31:DA:745:G:OP2	34:DE:133:LYS:HE3	2.15	0.47
31:DA:847:U:OP2	31:DA:928:G:O6	2.31	0.47
31:DA:904:C:O2	31:DA:904:C:H2'	2.15	0.47
31:DA:1312:U:OP2	49:DX:62:LYS:HE3	2.14	0.47
31:DA:1655:A:C8	31:DA:1656:C:C5	3.02	0.47
31:DA:2471:C:H2'	31:DA:2471:C:O2	2.14	0.47
31:DA:2471:C:N4	31:DA:2472:G:C6	2.82	0.47
31:DA:2804:C:C2'	31:DA:2805:G:H5'	2.45	0.47
36:DG:139:LEU:C	36:DG:141:PHE:H	2.17	0.47
38:DI:94:ALA:HB1	38:DI:114:LEU:HD12	1.96	0.47
38:DI:109:ILE:HG22	38:DI:130:TYR:CZ	2.50	0.47
39:DN:15:LEU:HD21	39:DN:55:VAL:CG2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:73:ASP:OD2	45:DT:32:TYR:HE1	1.97	0.47
41:DP:140:ALA:O	41:DP:141:ALA:HB3	2.14	0.47
41:DP:148:LEU:HD13	41:DP:148:LEU:N	2.29	0.47
43:DR:5:LYS:N	43:DR:5:LYS:HD2	2.30	0.47
44:DS:11:LYS:N	44:DS:11:LYS:HD2	2.30	0.47
44:DS:16:ASN:O	44:DS:20:ARG:NH2	2.48	0.47
50:DY:14:LEU:HD11	50:DY:22:GLY:HA2	1.97	0.47
1:AA:193:C:H2'	1:AA:194:C:C6	2.49	0.47
1:AA:292:G:N7	1:AA:293:G:H1'	2.30	0.47
1:AA:339:C:H2'	1:AA:340:U:C6	2.50	0.47
1:AA:405:U:H5''	1:AA:406:G:O4'	2.14	0.47
1:AA:586:C:H2'	1:AA:587:G:H5'	1.96	0.47
1:AA:785:G:C2'	1:AA:786:G:H5'	2.44	0.47
1:AA:881:G:P	12:AL:12:ARG:HH22	2.38	0.47
1:AA:1442(A):G:C8	45:BT:118:ARG:HD2	2.49	0.47
3:AC:19:GLU:HG2	3:AC:19:GLU:O	2.14	0.47
7:AG:27:ILE:HD11	7:AG:43:PHE:CD2	2.50	0.47
8:AH:113:SER:H	8:AH:134:ILE:CG1	2.27	0.47
11:AK:41:THR:HG22	11:AK:42:TRP:H	1.80	0.47
12:AL:38:THR:HG23	12:AL:39:VAL:N	2.30	0.47
12:AL:87:GLY:H	12:AL:99:HIS:H	1.63	0.47
15:AO:37:ASN:N	15:AO:37:ASN:ND2	2.62	0.47
27:B5:51:TYR:HB2	27:B5:54:GLY:HA3	1.96	0.47
27:B5:57:VAL:C	27:B5:58:LEU:HD12	2.35	0.47
31:BA:132:G:H1	31:BA:147:U:H3	1.61	0.47
31:BA:322:A:C5	31:BA:340:A:C2	3.03	0.47
31:BA:484:C:H2'	31:BA:485:C:H6	1.77	0.47
31:BA:528:A:H3'	31:BA:528:A:C8	2.49	0.47
31:BA:639:U:H2'	31:BA:640:C:H6	1.79	0.47
31:BA:892:G:C5	31:BA:893:C:C5	3.02	0.47
31:BA:1331:A:O2'	31:BA:1332:G:H8	1.98	0.47
31:BA:2070:G:H2'	31:BA:2071:A:C8	2.50	0.47
31:BA:2287:A:O2'	31:BA:2288:A:H3'	2.15	0.47
31:BA:2593:U:H2'	31:BA:2594:C:C6	2.50	0.47
31:BA:2659:G:H5''	31:BA:2659:G:H8	1.80	0.47
31:BA:2821:A:H2'	31:BA:2822:G:C8	2.50	0.47
32:BB:40:U:H3'	32:BB:41:U:H5''	1.96	0.47
36:BG:139:LEU:C	36:BG:141:PHE:H	2.18	0.47
40:BO:104:ARG:O	40:BO:107:ARG:HB3	2.15	0.47
41:BP:144:GLU:N	41:BP:145:PRO:CD	2.76	0.47
43:BR:75:LEU:C	43:BR:75:LEU:CD1	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:67:ARG:H	44:BS:69:VAL:CG1	2.27	0.47
44:BS:95:HIS:O	44:BS:98:VAL:CG2	2.63	0.47
49:BX:52:VAL:HB	49:BX:80:ILE:CG2	2.45	0.47
49:BX:76:ARG:HD2	49:BX:77:LYS:HB2	1.97	0.47
50:BY:45:VAL:HG13	50:BY:62:GLU:OE2	2.14	0.47
51:BZ:117:LEU:CB	51:BZ:174:VAL:HG22	2.45	0.47
51:BZ:143:GLY:C	51:BZ:144:LEU:HD22	2.36	0.47
51:BZ:151:HIS:ND1	51:BZ:170:THR:HG22	2.30	0.47
1:CA:137:C:H2'	1:CA:137:C:O2	2.14	0.47
1:CA:149:A:O2'	1:CA:150:C:P	2.73	0.47
1:CA:373:A:N3	1:CA:374:A:C8	2.82	0.47
1:CA:407:G:H4'	4:CD:115:ARG:O	2.14	0.47
1:CA:427:U:C4	1:CA:428:G:C6	3.03	0.47
1:CA:444:C:H2'	1:CA:445:G:H8	1.80	0.47
1:CA:790:A:C6	1:CA:791:G:C6	3.03	0.47
2:CB:238:LEU:O	2:CB:240:GLN:N	2.47	0.47
12:CL:64:TYR:HB3	12:CL:65:GLU:H	1.48	0.47
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.45	0.47
13:CM:75:ALA:O	13:CM:79:LYS:HG3	2.15	0.47
17:CQ:18:THR:OG1	17:CQ:69:LYS:NZ	2.43	0.47
23:D1:25:LYS:O	23:D1:26:ARG:HG3	2.14	0.47
24:D2:26:ARG:HG3	24:D2:29:LYS:HZ1	1.80	0.47
28:D6:24:GLU:CA	28:D6:24:GLU:OE1	2.62	0.47
28:D6:25:LYS:O	31:DA:2286:A:H2	1.98	0.47
30:D8:52:LYS:N	30:D8:53:PRO:CD	2.63	0.47
31:DA:540:C:H2'	31:DA:541:C:C6	2.50	0.47
31:DA:676:A:H2	31:DA:802:A:N6	2.11	0.47
31:DA:773:U:C5'	33:DD:47:GLY:HA2	2.45	0.47
31:DA:832:G:H21	41:DP:53:GLY:HA3	1.80	0.47
31:DA:864:G:N2	31:DA:913:U:C2	2.83	0.47
31:DA:876:C:C2	31:DA:877:U:C6	3.02	0.47
31:DA:1353:A:H5''	33:DD:38:LYS:NZ	2.30	0.47
31:DA:1592:C:C2'	31:DA:1593:G:C5'	2.80	0.47
31:DA:1803:A:C2	31:DA:1822:G:N3	2.83	0.47
31:DA:1865:G:N2	31:DA:1877:A:C8	2.83	0.47
31:DA:2292:C:C2'	31:DA:2293:C:H5'	2.45	0.47
31:DA:2439:A:C8	31:DA:2439:A:C5'	2.98	0.47
32:DB:71:C:O2	32:DB:71:C:H2'	2.15	0.47
34:DE:57:LYS:O	34:DE:57:LYS:HG3	2.15	0.47
34:DE:201:THR:HG22	34:DE:203:LYS:N	2.30	0.47
36:DG:19:LEU:HG	36:DG:175:LEU:CD1	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:114:ILE:O	36:DG:116:ASP:N	2.48	0.47
37:DH:153:LYS:HB2	37:DH:154:PRO:HD3	1.97	0.47
38:DI:5:LEU:HD21	38:DI:19:VAL:CG1	2.45	0.47
38:DI:29:TYR:O	38:DI:32:PRO:HD2	2.15	0.47
41:DP:81:GLN:NE2	41:DP:106:LEU:HA	2.29	0.47
41:DP:112:LEU:O	41:DP:128:HIS:HB2	2.15	0.47
42:DQ:134:ARG:NH2	51:DZ:122:ARG:HD2	2.25	0.47
43:DR:53:HIS:CD2	43:DR:94:TYR:OH	2.64	0.47
44:DS:89:ARG:NE	44:DS:89:ARG:CA	2.76	0.47
45:DT:33:LYS:N	45:DT:33:LYS:HZ2	2.12	0.47
50:DY:87:LYS:HG3	50:DY:88:LYS:N	2.30	0.47
50:DY:97:ARG:O	50:DY:98:VAL:C	2.53	0.47
1:AA:137:C:O2	1:AA:137:C:H2'	2.14	0.47
1:AA:402:G:C6	1:AA:403:C:C4	3.03	0.47
1:AA:411:A:C4	1:AA:413:G:O4'	2.68	0.47
1:AA:477:A:O2'	1:AA:479:C:H5'	2.14	0.47
1:AA:539:A:OP1	12:AL:114:LYS:HE2	2.15	0.47
1:AA:563:A:N7	1:AA:567:G:H1'	2.30	0.47
1:AA:665:A:C2	1:AA:732:C:C2	3.03	0.47
1:AA:946:A:C2	1:AA:1236:A:C2	3.03	0.47
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.80	0.47
1:AA:1504:G:H4'	1:AA:1505:G:O4'	2.15	0.47
2:AB:91:PRO:N	2:AB:154:LEU:HD12	2.30	0.47
4:AD:50:ARG:HD2	4:AD:51:PRO:O	2.15	0.47
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	1.97	0.47
4:AD:65:ARG:HG3	4:AD:75:PHE:CD1	2.48	0.47
4:AD:158:ILE:HG23	4:AD:162:LEU:HD12	1.97	0.47
9:AI:55:ALA:HB1	9:AI:58:ARG:HD2	1.96	0.47
11:AK:85:ARG:HA	11:AK:112:THR:OG1	2.15	0.47
13:AM:81:LEU:CD1	13:AM:88:ARG:HH12	2.28	0.47
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.97	0.47
22:B0:65:GLY:HA2	22:B0:84:LEU:CD2	2.45	0.47
23:B1:19:GLN:CD	23:B1:44:PRO:HG3	2.35	0.47
29:B7:5:TRP:NE1	29:B7:7:PRO:HG3	2.30	0.47
30:B8:8:LYS:O	30:B8:12:LYS:HG3	2.15	0.47
30:B8:18:ALA:HB3	31:BA:651:G:H4'	1.97	0.47
31:BA:128:C:O2'	31:BA:129:C:O5'	2.33	0.47
31:BA:670:A:H4'	31:BA:671:C:O5'	2.14	0.47
31:BA:878:A:H2'	31:BA:879:G:H5'	1.96	0.47
31:BA:1224:C:O3'	47:BV:88:ARG:HB3	2.15	0.47
31:BA:1475:G:H5'	31:BA:1476:C:OP2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1866:C:H2'	31:BA:1876:A:O4'	2.14	0.47
31:BA:1992:G:O2'	31:BA:1993:U:OP2	2.28	0.47
32:BB:27:C:H6	32:BB:27:C:H5''	1.79	0.47
32:BB:52:A:O2'	32:BB:53:A:C8	2.61	0.47
33:BD:34:VAL:HG13	33:BD:34:VAL:O	2.15	0.47
33:BD:35:LYS:HG2	33:BD:64:ILE:CA	2.45	0.47
34:BE:12:THR:O	34:BE:23:VAL:HG23	2.14	0.47
35:BF:64:ILE:HD12	35:BF:65:TRP:CE2	2.50	0.47
37:BH:85:LYS:NZ	37:BH:145:ALA:CA	2.78	0.47
38:BI:75:LEU:HD11	38:BI:105:HIS:CE1	2.49	0.47
38:BI:76:THR:CG2	38:BI:139:GLN:HB3	2.45	0.47
39:BN:2:LYS:HZ3	46:BU:94:ASN:ND2	2.12	0.47
39:BN:15:LEU:HD22	39:BN:16:ILE:H	1.80	0.47
41:BP:100:LEU:HD12	41:BP:100:LEU:HA	1.77	0.47
42:BQ:20:ALA:HA	42:BQ:98:LYS:HD3	1.97	0.47
45:BT:109:GLU:HA	45:BT:112:ARG:HG2	1.97	0.47
47:BV:27:ALA:O	47:BV:28:GLU:C	2.52	0.47
49:BX:65:ARG:NH2	49:BX:66:LEU:H	2.13	0.47
1:CA:66:G:C2	1:CA:67:C:C6	3.03	0.47
1:CA:375:U:N3	1:CA:376:G:N7	2.63	0.47
1:CA:734:G:C5	1:CA:735:C:C4	3.03	0.47
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.97	0.47
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.48	0.47
7:CG:37:ASN:HD21	9:CI:40:LEU:CD2	2.28	0.47
20:CT:30:LYS:O	20:CT:30:LYS:HD2	2.15	0.47
20:CT:75:ASN:ND2	20:CT:75:ASN:H	2.13	0.47
22:D0:77:ARG:NH2	31:DA:857:C:OP1	2.42	0.47
28:D6:45:LYS:HB3	31:DA:2371:G:H4'	1.96	0.47
31:DA:9:U:HO2'	31:DA:10:G:P	2.38	0.47
31:DA:910:A:H2'	31:DA:2264:C:O2'	2.15	0.47
31:DA:1003:G:N2	31:DA:1153:C:C2	2.83	0.47
31:DA:1050:A:C2	31:DA:2751:G:C5	3.03	0.47
31:DA:1481:U:H5'	31:DA:1482:G:P	2.55	0.47
31:DA:1591:G:C5'	31:DA:1591:G:H8	2.27	0.47
31:DA:1901:A:H2'	31:DA:1902:C:H5'	1.97	0.47
31:DA:2017:U:H5''	31:DA:2018:G:OP2	2.14	0.47
31:DA:2287:A:C5	31:DA:2289:G:C5	3.03	0.47
31:DA:2392:A:C8	41:DP:60:MET:HG2	2.50	0.47
31:DA:2473:U:C2	31:DA:2474:C:C6	3.03	0.47
31:DA:2524:G:H8	31:DA:2524:G:C5'	2.17	0.47
31:DA:2712:U:O2'	31:DA:2713:A:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2791:C:H4'	31:DA:2792:G:O5'	2.13	0.47
32:DB:1:U:C6	32:DB:2:C:C5	3.03	0.47
32:DB:20:C:C2'	32:DB:21:G:H5'	2.34	0.47
33:DD:35:LYS:HG2	33:DD:64:ILE:CG2	2.42	0.47
34:DE:3:GLY:O	34:DE:4:ILE:HB	2.15	0.47
36:DG:57:ALA:CB	36:DG:90:LEU:HD21	2.45	0.47
39:DN:82:LEU:H	39:DN:82:LEU:CD1	2.22	0.47
42:DQ:16:ARG:NH1	42:DQ:16:ARG:CB	2.78	0.47
43:DR:117:VAL:HG12	43:DR:117:VAL:O	2.15	0.47
50:DY:45:VAL:CG1	50:DY:46:LYS:N	2.78	0.47
1:AA:73:G:H2'	1:AA:76:C:O5'	2.15	0.46
1:AA:129:U:H5'	17:AQ:3:LYS:NZ	2.30	0.46
1:AA:553:A:H2'	1:AA:554:C:C6	2.49	0.46
1:AA:621:A:O2'	1:AA:622:A:H5'	2.15	0.46
1:AA:736:C:H2'	1:AA:737:A:H8	1.77	0.46
1:AA:872:A:C5	1:AA:874:G:C8	3.03	0.46
1:AA:1054:C:C2'	1:AA:1055:A:H5''	2.45	0.46
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.50	0.46
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.50	0.46
4:AD:79:PHE:CD1	4:AD:207:TYR:HD1	2.33	0.46
4:AD:135:LEU:O	4:AD:136:PRO:C	2.53	0.46
12:AL:126:LYS:HE2	12:AL:128:ALA:H	1.80	0.46
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.98	0.46
13:AM:14:ARG:CZ	13:AM:42:ALA:HA	2.45	0.46
13:AM:82:MET:HB2	13:AM:93:ARG:NH1	2.29	0.46
15:AO:55:GLY:O	15:AO:58:MET:N	2.48	0.46
23:B1:48:LYS:HD3	23:B1:48:LYS:HA	1.35	0.46
27:B5:45:VAL:HA	27:B5:51:TYR:HE1	1.80	0.46
31:BA:26:G:C6	31:BA:27:G:N1	2.83	0.46
31:BA:175:G:H5'	31:BA:175:G:C8	2.50	0.46
31:BA:389:G:H22	41:BP:72:PRO:HD3	1.80	0.46
31:BA:603:A:O2'	31:BA:604:G:OP2	2.17	0.46
31:BA:780:G:C2	31:BA:782:A:C2	3.03	0.46
31:BA:882:G:H8	31:BA:882:G:O5'	1.98	0.46
31:BA:1417:C:O2'	31:BA:1418:G:H5'	2.15	0.46
31:BA:2876:G:H4'	45:BT:3:ARG:HE	1.80	0.46
34:BE:36:ARG:HH11	34:BE:85:ASN:ND2	2.12	0.46
35:BF:160:ASN:C	35:BF:160:ASN:ND2	2.66	0.46
36:BG:64:THR:HG23	36:BG:66:GLN:N	2.26	0.46
37:BH:157:TYR:CD1	37:BH:171:LEU:N	2.82	0.46
46:BU:104:GLN:HB2	47:BV:43:GLU:CD	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:112:ARG:O	46:BU:115:ALA:HB3	2.16	0.46
47:BV:52:VAL:O	47:BV:52:VAL:HG12	2.15	0.46
49:BX:83:VAL:O	49:BX:83:VAL:HG23	2.15	0.46
51:BZ:33:LEU:HD12	51:BZ:33:LEU:HA	1.71	0.46
51:BZ:96:VAL:N	51:BZ:128:VAL:O	2.45	0.46
1:CA:127:G:C2	1:CA:128:G:C8	3.04	0.46
1:CA:175:C:C2	1:CA:176:C:C5	3.03	0.46
1:CA:322:C:C5	1:CA:328:C:C5	2.98	0.46
1:CA:355:C:N3	1:CA:356:A:N7	2.64	0.46
1:CA:575:G:H4'	1:CA:575:G:OP1	2.15	0.46
1:CA:1422:G:O3'	40:DO:49:ARG:NH2	2.48	0.46
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.50	0.46
2:CB:107:THR:O	2:CB:110:GLN:HB2	2.15	0.46
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.46	0.46
4:CD:158:ILE:HG23	4:CD:162:LEU:HD12	1.97	0.46
6:CF:2:ARG:HB2	6:CF:4:TYR:CE2	2.49	0.46
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.96	0.46
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.15	0.46
20:CT:94:ALA:O	20:CT:95:ALA:CB	2.62	0.46
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.96	0.46
25:D3:12:PRO:HA	25:D3:15:TYR:HD1	1.80	0.46
28:D6:35:GLU:O	28:D6:35:GLU:HG3	2.10	0.46
29:D7:30:VAL:O	29:D7:34:ARG:HG3	2.14	0.46
30:D8:10:ALA:HB2	30:D8:59:LYS:HZ2	1.79	0.46
31:DA:518:G:H4'	48:DW:18:ARG:CZ	2.44	0.46
31:DA:900:A:C5'	31:DA:901:A:OP2	2.63	0.46
31:DA:921:G:C5	31:DA:922:U:C4	3.03	0.46
31:DA:1048:A:OP2	31:DA:1110:G:N1	2.46	0.46
31:DA:1234:U:O2'	31:DA:1235:G:H5'	2.15	0.46
31:DA:1321:A:H2'	31:DA:1322:A:O4'	2.15	0.46
31:DA:1465:G:N1	31:DA:1466:G:C5	2.83	0.46
31:DA:1649:G:C6	31:DA:2009:G:C6	3.03	0.46
31:DA:2320:A:N3	31:DA:2320:A:H2'	2.29	0.46
31:DA:2364:C:O2'	31:DA:2365:G:H5'	2.15	0.46
31:DA:2684:U:H1'	40:DO:70:LYS:HD2	1.96	0.46
32:DB:40:U:H3'	32:DB:41:U:H5''	1.98	0.46
33:DD:237:GLU:HB3	33:DD:238:GLY:H	1.58	0.46
36:DG:82:LEU:C	36:DG:83:ARG:HG3	2.36	0.46
41:DP:85:LEU:HD21	41:DP:116:GLY:O	2.14	0.46
47:DV:21:ARG:HB3	47:DV:93:GLU:HB2	1.96	0.46
47:DV:50:PRO:C	47:DV:51:VAL:HG23	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:48:PHE:HE2	51:DZ:71:VAL:HG11	1.79	0.46
1:AA:69:G:H2'	1:AA:70:G:H8	1.79	0.46
1:AA:189:G:N1	1:AA:189(L):G:C6	2.83	0.46
1:AA:565:U:H3'	1:AA:566:G:H2'	1.96	0.46
1:AA:939:G:C6	1:AA:940:C:N4	2.83	0.46
1:AA:966:G:H5''	1:AA:969:A:N7	2.31	0.46
1:AA:1098:C:N3	1:AA:1099:G:C8	2.83	0.46
3:AC:19:GLU:HA	3:AC:54:ARG:NH2	2.30	0.46
4:AD:62:GLN:HA	4:AD:62:GLN:HE21	1.81	0.46
7:AG:75:VAL:HG13	7:AG:145:ALA:HB2	1.98	0.46
20:AT:92:LEU:C	20:AT:94:ALA:H	2.19	0.46
23:B1:76:ARG:CB	23:B1:78:LYS:HE3	2.46	0.46
31:BA:64:A:C2'	31:BA:65:C:H5'	2.45	0.46
31:BA:307:G:H22	31:BA:310:A:H5'	1.78	0.46
31:BA:900:A:C5	31:BA:901:A:C8	3.04	0.46
31:BA:1241:A:C2'	31:BA:1242:A:O5'	2.63	0.46
31:BA:1531:C:H5'	31:BA:1532:C:OP2	2.15	0.46
31:BA:1902:C:O2'	33:BD:244:ARG:CB	2.60	0.46
31:BA:2103:C:N3	31:BA:2187:G:C6	2.83	0.46
31:BA:2400:G:N3	31:BA:2400:G:H2'	2.28	0.46
31:BA:2818:G:C2'	31:BA:2819:G:H5'	2.44	0.46
32:BB:1:U:C5	32:BB:2:C:C5	3.03	0.46
33:BD:35:LYS:H	33:BD:64:ILE:HG23	1.80	0.46
35:BF:7:TYR:HD1	35:BF:8:GLN:H	1.58	0.46
36:BG:60:LEU:C	36:BG:60:LEU:HD13	2.35	0.46
36:BG:82:LEU:C	36:BG:83:ARG:HG3	2.35	0.46
36:BG:129:GLY:O	36:BG:130:ASN:CB	2.63	0.46
37:BH:158:HIS:NE2	37:BH:169:VAL:O	2.48	0.46
39:BN:95:PRO:C	39:BN:97:ARG:N	2.65	0.46
39:BN:109:LYS:H	39:BN:109:LYS:HG2	1.59	0.46
41:BP:47:ASP:HB2	41:BP:51:PHE:HB2	1.96	0.46
41:BP:85:LEU:HA	41:BP:88:LEU:HB2	1.96	0.46
42:BQ:16:ARG:NH1	42:BQ:16:ARG:CB	2.79	0.46
44:BS:106:ARG:HE	44:BS:106:ARG:HB3	1.34	0.46
45:BT:84:GLN:OE1	45:BT:86:ILE:HD12	2.14	0.46
45:BT:106:SER:O	45:BT:107:ASP:HB3	2.15	0.46
47:BV:19:LYS:HG2	47:BV:96:ILE:CB	2.43	0.46
51:BZ:29:TYR:HA	51:BZ:33:LEU:O	2.14	0.46
1:CA:51:A:C4	1:CA:353:A:C6	3.04	0.46
1:CA:760:G:C2'	1:CA:761:G:H5'	2.45	0.46
1:CA:926:G:C6	1:CA:1505:G:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:966:G:H21	9:CI:127:LYS:HE3	1.80	0.46
1:CA:992:U:C1'	1:CA:993:G:OP2	2.57	0.46
1:CA:1245:A:N1	1:CA:1293:G:C6	2.84	0.46
1:CA:1270:C:H2'	1:CA:1271:G:O4'	2.16	0.46
1:CA:1386:G:C2	1:CA:1387:G:N7	2.83	0.46
2:CB:98:LEU:HB2	2:CB:101:MET:HE2	1.96	0.46
7:CG:153:HIS:HE1	11:CK:57:THR:HG23	1.80	0.46
8:CH:54:ASP:O	8:CH:56:LYS:HG3	2.15	0.46
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.27	0.46
13:CM:78:ILE:HG22	13:CM:93:ARG:HH22	1.81	0.46
15:CO:17:ARG:CG	15:CO:26:GLU:HG3	2.45	0.46
18:CR:22:VAL:HG12	18:CR:22:VAL:O	2.15	0.46
18:CR:25:THR:HG22	18:CR:42:ARG:NH1	2.28	0.46
20:CT:73:HIS:O	20:CT:74:LYS:O	2.33	0.46
23:D1:79:GLY:O	23:D1:80:LEU:HG	2.15	0.46
24:D2:47:ASN:ND2	24:D2:48:HIS:N	2.63	0.46
28:D6:15:GLU:OE2	28:D6:43:CYS:CB	2.63	0.46
31:DA:1044:G:C2	31:DA:1112:G:O6	2.69	0.46
31:DA:1050:A:C2	31:DA:2751:G:C4	3.04	0.46
31:DA:1354:A:H2'	31:DA:1355:G:O4'	2.15	0.46
31:DA:1545:A:C2'	31:DA:1546:C:O5'	2.64	0.46
31:DA:1558:A:H1'	31:DA:1559:G:OP2	2.14	0.46
31:DA:1658:C:H2'	31:DA:1659:U:C6	2.50	0.46
31:DA:2506:U:H4'	31:DA:2507:C:OP1	2.15	0.46
31:DA:2544:G:O2'	31:DA:2545:G:H5'	2.16	0.46
32:DB:15:A:O2'	32:DB:110:G:C8	2.65	0.46
32:DB:41:U:O4	36:DG:70:VAL:O	2.32	0.46
33:DD:206:LEU:HA	33:DD:206:LEU:HD23	1.51	0.46
34:DE:47:VAL:HB	34:DE:49:LEU:HD22	1.96	0.46
34:DE:167:VAL:CG1	34:DE:189:PRO:HD3	2.45	0.46
35:DF:7:TYR:HD2	35:DF:16:GLY:HA3	1.80	0.46
35:DF:158:THR:HG21	35:DF:160:ASN:HB3	1.96	0.46
39:DN:102:ALA:O	39:DN:106:MET:HG3	2.14	0.46
43:DR:41:ALA:O	43:DR:43:GLU:N	2.48	0.46
43:DR:75:LEU:HD13	43:DR:75:LEU:C	2.35	0.46
43:DR:103:ARG:NH1	43:DR:108:GLY:O	2.45	0.46
44:DS:85:VAL:CG2	44:DS:106:ARG:HB2	2.26	0.46
46:DU:28:ARG:HG2	46:DU:38:THR:OG1	2.15	0.46
48:DW:28:SER:C	48:DW:30:GLU:N	2.68	0.46
1:AA:33:A:H2'	1:AA:34:C:C6	2.50	0.46
1:AA:73:G:N1	1:AA:97:G:C6	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:233:C:H2'	1:AA:234:C:H6	1.81	0.46
1:AA:579:G:H2'	1:AA:580:U:C6	2.50	0.46
1:AA:691:G:H1'	1:AA:696:A:N6	2.30	0.46
1:AA:708:C:O2'	1:AA:709:G:H5'	2.15	0.46
1:AA:992:U:C1'	1:AA:993:G:OP2	2.56	0.46
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.50	0.46
3:AC:107:GLN:O	3:AC:108:ASN:HB2	2.14	0.46
4:AD:14:ARG:HA	4:AD:39:PRO:CB	2.45	0.46
4:AD:148:VAL:CG1	4:AD:149:ALA:N	2.78	0.46
6:AF:12:PRO:C	6:AF:14:LEU:H	2.19	0.46
6:AF:19:LEU:O	6:AF:23:LYS:HG3	2.16	0.46
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.98	0.46
11:AK:62:GLN:O	11:AK:63:LEU:C	2.53	0.46
13:AM:20:THR:C	13:AM:22:ILE:H	2.19	0.46
24:B2:53:LEU:C	24:B2:56:GLN:HE22	2.18	0.46
30:B8:34:TRP:CZ3	30:B8:41:ILE:HG23	2.45	0.46
30:B8:61:LEU:CD1	31:BA:593:G:O2'	2.63	0.46
31:BA:237:C:C2'	31:BA:238:C:H5'	2.45	0.46
31:BA:272(B):G:O2'	31:BA:272(C):G:O4'	2.32	0.46
31:BA:1178:C:H2'	31:BA:1179:C:H6	1.81	0.46
31:BA:1839:G:H8	31:BA:1839:G:C5'	2.29	0.46
31:BA:2094:G:N2	31:BA:2196:C:H1'	2.30	0.46
31:BA:2319:G:OP2	31:BA:2319:G:H4'	2.15	0.46
31:BA:2698:U:H2'	31:BA:2699:C:C6	2.50	0.46
31:BA:2808:U:H2'	31:BA:2809:A:O5'	2.14	0.46
35:BF:132:VAL:CG2	35:BF:133:ASN:H	2.28	0.46
37:BH:85:LYS:HE2	37:BH:145:ALA:H	1.80	0.46
40:BO:2:ILE:N	40:BO:2:ILE:HD13	2.31	0.46
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HG2	1.98	0.46
43:BR:75:LEU:HD13	43:BR:75:LEU:C	2.36	0.46
45:BT:51:ARG:CG	45:BT:98:LYS:HE2	2.42	0.46
47:BV:79:VAL:O	47:BV:80:GLN:CG	2.63	0.46
50:BY:31:LEU:N	50:BY:31:LEU:HD22	2.30	0.46
51:BZ:71:VAL:HG22	51:BZ:88:PHE:HE2	1.79	0.46
1:CA:12:U:H4'	1:CA:526:C:O2'	2.15	0.46
1:CA:327:A:C5	1:CA:329:A:C5	3.03	0.46
1:CA:376:G:C4	1:CA:389:A:C2	3.03	0.46
1:CA:612:C:O2	1:CA:629:G:N2	2.48	0.46
1:CA:674:G:O2'	1:CA:675:A:H5'	2.16	0.46
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.63	0.46
1:CA:1242:C:H5''	21:CU:10:ARG:HH12	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.14	0.46
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.80	0.46
6:CF:40:VAL:HA	6:CF:62:TRP:O	2.15	0.46
12:CL:36:VAL:HG12	12:CL:37:CYS:N	2.30	0.46
13:CM:91:ARG:HB2	13:CM:98:VAL:CG2	2.45	0.46
22:D0:25:ARG:HB2	22:D0:37:LEU:HD23	1.98	0.46
24:D2:30:ARG:CG	24:D2:30:ARG:NH1	2.72	0.46
28:D6:10:LEU:N	28:D6:10:LEU:HD22	2.27	0.46
31:DA:284:U:H2'	31:DA:285:C:H6	1.78	0.46
31:DA:303:U:H2'	31:DA:304:G:H8	1.80	0.46
31:DA:574:C:N3	34:DE:145:LYS:HE2	2.30	0.46
31:DA:877:U:C2'	31:DA:878:A:H5''	2.45	0.46
31:DA:993:G:N3	47:DV:91:TYR:HE1	2.13	0.46
31:DA:1012:U:O4	39:DN:25:ARG:HA	2.15	0.46
31:DA:1648:C:H2'	31:DA:1649:G:O5'	2.16	0.46
31:DA:1826:G:C2'	31:DA:1827:C:O5'	2.63	0.46
31:DA:2280:G:C2'	31:DA:2281:C:H5'	2.45	0.46
31:DA:2636:U:C2'	31:DA:2637:U:H5'	2.46	0.46
34:DE:70:ALA:O	34:DE:72:VAL:C	2.54	0.46
38:DI:114:LEU:HD23	38:DI:114:LEU:HA	1.71	0.46
39:DN:56:ASN:N	39:DN:125:GLY:H	2.13	0.46
45:DT:50:ILE:HD11	45:DT:102:ILE:CD1	2.43	0.46
47:DV:69:LYS:HB2	47:DV:93:GLU:OE2	2.16	0.46
51:DZ:167:PRO:O	51:DZ:168:GLU:HB2	2.15	0.46
1:AA:66:G:O4'	1:AA:173:U:C4	2.69	0.46
1:AA:143:A:N1	1:AA:220:G:O6	2.48	0.46
1:AA:509:A:O2'	1:AA:510:A:O5'	2.34	0.46
1:AA:523:A:H61	12:AL:53:ARG:HH12	1.63	0.46
1:AA:582:U:C2	1:AA:760:G:C6	3.04	0.46
1:AA:735:C:O5'	1:AA:735:C:H6	1.98	0.46
1:AA:760:G:C2'	1:AA:761:G:H5'	2.44	0.46
1:AA:1129:C:H4'	1:AA:1130:A:H5'	1.97	0.46
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.50	0.46
2:AB:61:LEU:CD2	2:AB:68:ILE:HD11	2.45	0.46
8:AH:114:THR:HB	8:AH:130:GLY:O	2.15	0.46
12:AL:34:ARG:O	12:AL:61:THR:HG23	2.16	0.46
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.98	0.46
16:AP:39:TYR:OH	16:AP:41:PRO:HB3	2.16	0.46
28:B6:11:LEU:HD23	28:B6:26:ASN:H	1.80	0.46
29:B7:8:ASN:ND2	29:B7:11:LYS:N	2.47	0.46
30:B8:29:LYS:O	30:B8:32:LEU:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:34:C:H2'	31:BA:35:G:OP1	2.14	0.46
31:BA:303:U:H2'	31:BA:304:G:H8	1.80	0.46
31:BA:338:G:H2'	31:BA:339:U:H6	1.80	0.46
31:BA:729:G:O5'	33:BD:208:LYS:NZ	2.41	0.46
31:BA:1209:G:H21	31:BA:1210:A:H62	1.64	0.46
31:BA:1319:G:C6	31:BA:1320:C:N4	2.84	0.46
31:BA:1444:G:C2	31:BA:1548:C:N3	2.84	0.46
31:BA:1502:C:C6	31:BA:1502:C:H5''	2.51	0.46
31:BA:1741:A:C8	31:BA:1742:G:C2	3.03	0.46
31:BA:2021:C:H4'	31:BA:2022:U:OP2	2.16	0.46
31:BA:2082:A:H2'	31:BA:2083:G:O4'	2.15	0.46
32:BB:40:U:C2'	32:BB:41:U:OP1	2.64	0.46
34:BE:24:THR:HG23	34:BE:184:VAL:CG2	2.45	0.46
34:BE:47:VAL:O	34:BE:80:GLU:HA	2.15	0.46
34:BE:51:PHE:CG	34:BE:52:LEU:N	2.83	0.46
34:BE:201:THR:HG22	34:BE:203:LYS:H	1.79	0.46
35:BF:89:VAL:CG1	35:BF:90:PHE:N	2.78	0.46
36:BG:173:LEU:HB3	36:BG:178:PHE:CG	2.50	0.46
37:BH:86:GLU:HA	37:BH:132:ARG:HA	1.98	0.46
37:BH:156:ALA:C	37:BH:158:HIS:H	2.19	0.46
39:BN:78:TYR:HD1	39:BN:79:PRO:N	2.13	0.46
39:BN:79:PRO:HD2	39:BN:81:GLY:H	1.80	0.46
42:BQ:54:MET:HB3	42:BQ:64:ILE:HD13	1.97	0.46
49:BX:8:ILE:HD12	49:BX:8:ILE:N	2.29	0.46
50:BY:97:ARG:O	50:BY:98:VAL:C	2.53	0.46
1:CA:539:A:H2'	1:CA:540:G:H8	1.79	0.46
1:CA:574:A:H5''	1:CA:575:G:OP2	2.16	0.46
1:CA:609:A:C2'	1:CA:610:G:H5'	2.45	0.46
1:CA:625:G:H2'	1:CA:626:U:H6	1.81	0.46
1:CA:830:G:C5	1:CA:831:U:C5	3.04	0.46
1:CA:1206:G:H4'	3:CC:192:THR:O	2.14	0.46
2:CB:15:VAL:HG23	2:CB:16:HIS:CE1	2.51	0.46
6:CF:12:PRO:C	6:CF:14:LEU:H	2.19	0.46
8:CH:109:ILE:HG12	8:CH:110:ALA:N	2.30	0.46
12:CL:126:LYS:HD2	12:CL:127:GLU:H	1.80	0.46
22:D0:53:MET:HA	22:D0:58:THR:O	2.16	0.46
23:D1:28:GLY:C	23:D1:30:VAL:H	2.18	0.46
25:D3:24:LYS:HB3	31:DA:849:A:H2	1.81	0.46
28:D6:11:LEU:HD11	28:D6:51:GLU:HB2	1.97	0.46
31:DA:416:C:C2	31:DA:417:C:C6	3.04	0.46
31:DA:649:G:H2'	31:DA:650:C:H6	1.77	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1464:C:C2'	31:DA:1528:A:H8	2.27	0.46
32:DB:35:U:O2'	32:DB:36:C:H5'	2.16	0.46
32:DB:45:A:H1'	36:DG:95:ARG:NH2	2.30	0.46
35:DF:70:THR:HG22	35:DF:72:ARG:N	2.29	0.46
36:DG:129:GLY:O	36:DG:130:ASN:CB	2.63	0.46
38:DI:37:VAL:HG12	38:DI:38:LEU:N	2.30	0.46
38:DI:38:LEU:O	38:DI:40:THR:HG23	2.16	0.46
39:DN:1:MET:HB3	47:DV:20:LEU:CD2	2.27	0.46
39:DN:131:GLN:CD	39:DN:134:ARG:HB3	2.36	0.46
41:DP:85:LEU:CD2	41:DP:85:LEU:N	2.70	0.46
43:DR:74:LYS:CD	43:DR:77:ARG:HH21	2.28	0.46
45:DT:50:ILE:CD1	45:DT:64:ARG:HB3	2.45	0.46
47:DV:1:MET:H2	47:DV:44:LYS:HD2	1.78	0.46
47:DV:36:PRO:HD2	47:DV:60:GLU:O	2.14	0.46
49:DX:81:VAL:O	49:DX:81:VAL:HG12	2.14	0.46
50:DY:28:LYS:CE	50:DY:37:VAL:HG12	2.46	0.46
51:DZ:127:LYS:HB3	51:DZ:162:GLU:HG3	1.97	0.46
1:AA:84:U:H5	1:AA:88:A:C8	2.33	0.46
1:AA:119:A:N7	1:AA:288:A:C2	2.83	0.46
1:AA:329:A:C2	1:AA:332:G:C4	3.03	0.46
1:AA:457:C:C2	1:AA:458:C:C5	3.03	0.46
1:AA:518:C:H2'	1:AA:530:G:N3	2.30	0.46
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.49	0.46
1:AA:735:C:O2'	1:AA:736:C:H5'	2.15	0.46
1:AA:829:G:O2'	1:AA:830:G:H5'	2.15	0.46
1:AA:955:U:C1'	1:AA:1227:A:H61	2.21	0.46
2:AB:7:VAL:HG12	2:AB:11:LEU:HD11	1.98	0.46
2:AB:105:PHE:C	2:AB:107:THR:H	2.19	0.46
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.44	0.46
5:AE:103:GLY:O	5:AE:106:PRO:HD2	2.16	0.46
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.97	0.46
7:AG:92:SER:HB3	7:AG:94:ARG:HH21	1.80	0.46
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.15	0.46
19:AS:6:LYS:HG2	19:AS:7:LYS:HD3	1.97	0.46
20:AT:73:HIS:O	20:AT:74:LYS:O	2.34	0.46
27:B5:32:PRO:HD2	31:BA:2886:G:O2'	2.16	0.46
27:B5:56:LYS:O	27:B5:57:VAL:C	2.50	0.46
31:BA:94:C:O2	31:BA:94:C:H2'	2.14	0.46
31:BA:265:A:H1'	31:BA:266:G:O4'	2.16	0.46
31:BA:363(D):G:C6	31:BA:363(E):U:O4	2.69	0.46
31:BA:783:A:C8	31:BA:783:A:H3'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1169:G:N2	31:BA:1181:C:C2	2.84	0.46
31:BA:1288:U:C2	31:BA:1327:C:C2	3.03	0.46
31:BA:1648:C:H2'	31:BA:1649:G:O5'	2.16	0.46
31:BA:2287:A:C2	31:BA:2346:A:N1	2.84	0.46
31:BA:2635:C:H2'	31:BA:2636:U:O5'	2.15	0.46
31:BA:2636:U:C2'	31:BA:2637:U:H5'	2.45	0.46
32:BB:27:C:C4	32:BB:28:C:C4	3.04	0.46
33:BD:35:LYS:CG	33:BD:64:ILE:H	2.28	0.46
35:BF:132:VAL:HG22	35:BF:133:ASN:H	1.79	0.46
37:BH:153:LYS:CG	37:BH:154:PRO:N	2.77	0.46
39:BN:3:THR:CG2	39:BN:4:TYR:N	2.78	0.46
39:BN:78:TYR:N	39:BN:79:PRO:HD3	2.30	0.46
43:BR:50:HIS:NE2	43:BR:54:LEU:HD21	2.30	0.46
43:BR:104:ARG:HD2	43:BR:111:LEU:HD11	1.96	0.46
48:BW:62:HIS:O	48:BW:63:ASP:C	2.53	0.46
50:BY:80:GLY:O	50:BY:81:LYS:CB	2.64	0.46
1:CA:66:G:C4'	1:CA:173:U:C4	2.98	0.46
1:CA:132:C:O2'	1:CA:133:U:H5'	2.16	0.46
1:CA:359:U:H2'	1:CA:360:A:C8	2.49	0.46
1:CA:565:U:H3'	1:CA:566:G:H2'	1.98	0.46
1:CA:625:G:C4	1:CA:626:U:C5	3.03	0.46
1:CA:1387:G:H2'	1:CA:1387:G:N3	2.31	0.46
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.51	0.46
3:CC:19:GLU:HA	3:CC:54:ARG:NH2	2.30	0.46
4:CD:8:VAL:O	4:CD:10:ARG:N	2.49	0.46
12:CL:119:LYS:HB2	12:CL:120:TYR:CD1	2.51	0.46
15:CO:82:ILE:HG12	15:CO:87:ILE:CB	2.43	0.46
16:CP:68:ASP:C	16:CP:70:ALA:H	2.19	0.46
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.54	0.46
23:D1:48:LYS:HD3	23:D1:48:LYS:HA	1.41	0.46
31:DA:272(J):C:H2'	31:DA:274:G:OP1	2.15	0.46
31:DA:311:A:N3	31:DA:331:A:H3'	2.30	0.46
31:DA:414:C:H2'	31:DA:415:A:H8	1.81	0.46
31:DA:900:A:C5	31:DA:901:A:C8	3.02	0.46
31:DA:1525:G:H2'	31:DA:1526:G:H8	1.80	0.46
31:DA:2031:A:OP1	31:DA:2031:A:H8	1.99	0.46
31:DA:2082:A:H2'	31:DA:2083:G:O4'	2.15	0.46
31:DA:2103:C:N3	31:DA:2187:G:C6	2.83	0.46
31:DA:2282:G:OP1	31:DA:2283:C:H1'	2.15	0.46
31:DA:2526:G:H5'	31:DA:2742:C:O2'	2.15	0.46
31:DA:2662:A:H5'	31:DA:2663:G:H1'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2761:G:C3'	31:DA:2762:G:H5''	2.46	0.46
31:DA:2876:G:H4'	45:DT:3:ARG:HE	1.80	0.46
46:DU:57:PHE:O	46:DU:58:ARG:C	2.53	0.46
49:DX:5:TYR:O	49:DX:8:ILE:N	2.48	0.46
1:AA:222:U:H2'	1:AA:223:U:C6	2.50	0.46
1:AA:429:U:H4'	1:AA:430:A:O5'	2.15	0.46
1:AA:575:G:OP1	1:AA:575:G:H4'	2.16	0.46
1:AA:702:A:H2	31:BA:1846:G:HO2'	1.63	0.46
1:AA:748:C:C4'	1:AA:749:C:O5'	2.57	0.46
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.15	0.46
1:AA:1442(A):G:C8	45:BT:118:ARG:NH1	2.71	0.46
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.80	0.46
4:AD:67:ILE:HG22	4:AD:68:TYR:CD1	2.51	0.46
4:AD:190:ASP:O	4:AD:191:ARG:C	2.54	0.46
12:AL:27:LEU:HD11	12:AL:64:TYR:CE1	2.50	0.46
23:B1:76:ARG:NH1	31:BA:271(R):G:OP1	2.49	0.46
31:BA:271(T):C:C2	31:BA:271(U):G:C8	3.03	0.46
31:BA:443:A:H3'	35:BF:45:ARG:HH21	1.78	0.46
31:BA:780:G:N2	31:BA:783:A:H62	2.05	0.46
31:BA:847:U:OP2	31:BA:928:G:O6	2.34	0.46
31:BA:999:U:O2'	31:BA:1000:A:H5'	2.15	0.46
31:BA:1042:G:C5'	31:BA:1043:C:OP2	2.64	0.46
31:BA:1140:C:OP1	39:BN:23:LEU:O	2.33	0.46
31:BA:1181:C:C2'	31:BA:1182:A:H5'	2.46	0.46
31:BA:1525:G:H2'	31:BA:1526:G:H8	1.80	0.46
31:BA:1688:U:O2	31:BA:1700:A:H8	1.97	0.46
31:BA:2408:U:H2'	31:BA:2409:G:C8	2.50	0.46
31:BA:2657:A:C2	31:BA:2664:G:N2	2.77	0.46
32:BB:21:G:N3	32:BB:21:G:H2'	2.31	0.46
35:BF:20:LEU:O	35:BF:23:ASP:HB2	2.16	0.46
37:BH:158:HIS:HE1	37:BH:168:PRO:C	2.19	0.46
45:BT:30:VAL:CG2	45:BT:31:SER:H	2.28	0.46
45:BT:33:LYS:HB3	45:BT:41:ARG:HB3	1.97	0.46
45:BT:78:LEU:O	45:BT:79:HIS:CG	2.68	0.46
51:BZ:5:LEU:HA	51:BZ:5:LEU:HD23	1.65	0.46
51:BZ:19:ARG:HH11	51:BZ:19:ARG:HG2	1.81	0.46
1:CA:129:U:O2	1:CA:131:C:C5	2.69	0.46
1:CA:942:G:C2	1:CA:1342:C:C2	3.03	0.46
1:CA:1301:U:H3'	1:CA:1302:U:C5'	2.45	0.46
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.16	0.46
1:CA:1320:C:H5'	19:CS:70:LYS:CG	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:22:LYS:HZ3	2:CB:40:HIS:HE1	1.62	0.46
3:CC:19:GLU:HG2	3:CC:19:GLU:O	2.16	0.46
4:CD:57:ARG:NH2	4:CD:205:GLU:OE2	2.49	0.46
11:CK:23:ALA:HB1	11:CK:88:GLY:HA3	1.98	0.46
11:CK:99:GLN:C	11:CK:101:SER:H	2.19	0.46
19:CS:48:THR:HG22	19:CS:61:TYR:CD1	2.51	0.46
23:D1:10:LYS:O	23:D1:13:ILE:CG2	2.63	0.46
27:D5:10:LYS:HE3	31:DA:1262:A:N3	2.31	0.46
31:DA:18:C:O2'	31:DA:19:C:H5'	2.16	0.46
31:DA:518:G:H2'	31:DA:519:U:H6	1.81	0.46
31:DA:565:C:H4'	31:DA:1253:A:N6	2.31	0.46
31:DA:656:G:H2'	31:DA:657:U:O5'	2.16	0.46
31:DA:1514:U:C2'	31:DA:1515:G:H5'	2.46	0.46
31:DA:1668:A:H4'	31:DA:1669:A:O5'	2.16	0.46
32:DB:50:G:H8	32:DB:50:G:O5'	1.97	0.46
33:DD:11:PRO:C	33:DD:13:ARG:H	2.19	0.46
33:DD:253:GLN:HB3	33:DD:255:LYS:HE2	1.98	0.46
36:DG:15:VAL:HG22	36:DG:175:LEU:HB3	1.98	0.46
36:DG:64:THR:CG2	36:DG:65:GLY:N	2.78	0.46
37:DH:85:LYS:CE	37:DH:145:ALA:HB2	2.46	0.46
37:DH:158:HIS:NE2	37:DH:169:VAL:O	2.49	0.46
39:DN:99:LEU:O	39:DN:103:VAL:HG23	2.16	0.46
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HG2	1.98	0.46
43:DR:48:VAL:O	43:DR:52:ILE:HG12	2.16	0.46
43:DR:81:ASP:O	43:DR:85:PRO:HG2	2.16	0.46
48:DW:18:ARG:HG3	48:DW:76:VAL:HG22	1.96	0.46
1:AA:103:C:OP2	20:AT:14:LYS:HD3	2.16	0.46
1:AA:229:U:C2'	1:AA:230:G:H5'	2.45	0.46
1:AA:674:G:H2'	1:AA:675:A:C8	2.51	0.46
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.28	0.46
1:AA:1128:C:H5'	9:AI:16:ARG:CZ	2.45	0.46
5:AE:72:GLN:O	5:AE:73:ASN:HB2	2.15	0.46
12:AL:91:LYS:O	12:AL:91:LYS:CG	2.63	0.46
16:AP:32:TYR:O	16:AP:32:TYR:CD2	2.69	0.46
23:B1:8:SER:N	23:B1:46:LEU:CD1	2.78	0.46
24:B2:30:ARG:HA	24:B2:33:MET:SD	2.56	0.46
27:B5:2:ALA:N	31:BA:2015:A:N3	2.64	0.46
31:BA:28:A:C2	31:BA:513:A:C8	3.04	0.46
31:BA:84:A:H5'	50:BY:9:LYS:HB3	1.97	0.46
31:BA:315:G:H2'	31:BA:316:C:C6	2.50	0.46
31:BA:470:A:C2	31:BA:471:A:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:755:C:H2'	31:BA:756:C:C6	2.51	0.46
31:BA:1742:G:N7	31:BA:1743:C:C2	2.84	0.46
31:BA:2298:A:H2'	31:BA:2299:G:O4'	2.15	0.46
31:BA:2317:C:C3'	31:BA:2318:G:C5'	2.92	0.46
31:BA:2584:U:H6	31:BA:2585:U:C5	2.33	0.46
32:BB:45:A:H2'	32:BB:45:A:N3	2.31	0.46
32:BB:87:G:H3'	32:BB:88:C:C5'	2.43	0.46
34:BE:51:PHE:HD1	34:BE:52:LEU:H	1.57	0.46
34:BE:119:ARG:HG2	34:BE:160:TYR:HB2	1.98	0.46
40:BO:3:GLN:HG3	40:BO:4:PRO:HD2	1.98	0.46
45:BT:107:ASP:H	45:BT:110:ILE:HG13	1.80	0.46
47:BV:43:GLU:HA	47:BV:48:GLY:CA	2.46	0.46
47:BV:90:PRO:CD	47:BV:91:TYR:H	2.29	0.46
48:BW:83:LYS:O	48:BW:84:ARG:HD3	2.16	0.46
49:BX:81:VAL:O	49:BX:81:VAL:HG12	2.15	0.46
51:BZ:100:VAL:O	51:BZ:101:PRO:O	2.33	0.46
51:BZ:150:LEU:C	51:BZ:151:HIS:CD2	2.89	0.46
1:CA:66:G:C6	1:CA:67:C:C5	3.03	0.46
1:CA:781:A:H5'	1:CA:782:A:OP2	2.15	0.46
1:CA:817:C:H4'	1:CA:818:G:OP1	2.16	0.46
1:CA:951:G:C6	1:CA:1231:G:C6	3.04	0.46
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.15	0.46
2:CB:16:HIS:HA	2:CB:210:SER:HB2	1.97	0.46
3:CC:109:PRO:HA	3:CC:115:LEU:HD12	1.98	0.46
4:CD:159:ARG:O	4:CD:163:GLU:N	2.48	0.46
7:CG:75:VAL:HG13	7:CG:145:ALA:HB2	1.98	0.46
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.16	0.46
8:CH:82:HIS:HD2	8:CH:138:TRP:NE1	2.14	0.46
15:CO:17:ARG:CG	15:CO:17:ARG:NH1	2.62	0.46
16:CP:9:PHE:CE2	16:CP:18:ARG:HB2	2.51	0.46
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.81	0.46
23:D1:11:ARG:HB3	23:D1:12:PRO:CD	2.45	0.46
27:D5:33:CYS:SG	27:D5:40:LYS:HE3	2.56	0.46
27:D5:56:LYS:O	27:D5:57:VAL:C	2.53	0.46
27:D5:57:VAL:CG2	27:D5:58:LEU:N	2.73	0.46
31:DA:358:U:C6	31:DA:358:U:C3'	2.99	0.46
31:DA:465:G:H2'	31:DA:466:A:C8	2.50	0.46
31:DA:541:C:H2'	31:DA:542:C:C6	2.50	0.46
31:DA:587:C:C4	41:DP:33:ARG:HG2	2.51	0.46
31:DA:952:G:C6	31:DA:966:G:C6	3.04	0.46
31:DA:1005:C:O2	31:DA:1143:A:C6	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1324:G:C4	31:DA:1328:G:O6	2.69	0.46
31:DA:1412:A:H2'	31:DA:1413:G:H8	1.79	0.46
31:DA:1491:G:O2'	33:DD:101:GLU:HB2	2.16	0.46
31:DA:1528:A:O2'	31:DA:1528(A):A:P	2.74	0.46
31:DA:2287:A:N3	31:DA:2289:G:C8	2.83	0.46
31:DA:2565:A:C5'	31:DA:2566:A:OP2	2.62	0.46
33:DD:267:SER:HA	33:DD:270:ILE:HG13	1.98	0.46
34:DE:31:CYS:SG	34:DE:51:PHE:HD2	2.39	0.46
36:DG:25:TYR:CZ	36:DG:32:PRO:HD3	2.51	0.46
37:DH:68:THR:O	37:DH:69:ARG:C	2.53	0.46
41:DP:71:VAL:HG13	41:DP:72:PRO:CD	2.46	0.46
44:DS:61:ASN:ND2	44:DS:64:GLU:OE2	2.49	0.46
45:DT:90:GLN:HG2	45:DT:120:ARG:CZ	2.46	0.46
45:DT:100:TYR:HB3	45:DT:103:ARG:HE	1.80	0.46
47:DV:85:LYS:C	47:DV:87:HIS:H	2.13	0.46
48:DW:8:ARG:HA	48:DW:102:HIS:CD2	2.50	0.46
49:DX:47:PHE:O	49:DX:48:LYS:C	2.54	0.46
49:DX:59:VAL:HG22	49:DX:74:PRO:O	2.16	0.46
50:DY:89:PHE:O	50:DY:90:LEU:HB3	2.15	0.46
51:DZ:67:LEU:HD12	51:DZ:67:LEU:N	2.31	0.46
1:AA:417:C:H2'	1:AA:418:C:H5'	1.96	0.46
1:AA:452:A:N7	1:AA:480:U:O4	2.48	0.46
1:AA:645:C:O2'	1:AA:646:U:H5'	2.15	0.46
1:AA:865:A:H5'	1:AA:1078:U:O4	2.16	0.46
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.29	0.46
1:AA:1255:G:H2'	1:AA:1255:G:N3	2.31	0.46
2:AB:166:ASP:CB	2:AB:169:LYS:HB2	2.44	0.46
3:AC:109:PRO:HA	3:AC:115:LEU:HD12	1.97	0.46
4:AD:58:LEU:HD23	4:AD:206:PHE:CZ	2.50	0.46
13:AM:81:LEU:HB3	13:AM:89:GLY:CA	2.39	0.46
16:AP:79:VAL:HG12	16:AP:80:PHE:CD1	2.50	0.46
19:AS:4:SER:O	19:AS:5:LEU:HB2	2.16	0.46
23:B1:10:LYS:CG	23:B1:11:ARG:N	2.79	0.46
24:B2:41:ILE:CG1	31:BA:94(A):G:H22	2.28	0.46
26:B4:25:TYR:C	26:B4:27:THR:N	2.68	0.46
29:B7:12:ARG:HG3	31:BA:686:G:O6	2.15	0.46
31:BA:231:C:O2'	31:BA:232:G:H5'	2.15	0.46
31:BA:319:C:H2'	31:BA:320:A:O4'	2.16	0.46
31:BA:335:C:O5'	31:BA:335:C:H6	1.99	0.46
31:BA:773:U:C5'	33:BD:47:GLY:HA2	2.45	0.46
31:BA:1902:C:OP1	33:BD:242:ARG:HD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2200:C:H2'	31:BA:2200:C:O2	2.14	0.46
31:BA:2700:C:O2'	31:BA:2701:C:H5'	2.15	0.46
31:BA:2784:C:O2'	31:BA:2785:C:H5'	2.16	0.46
31:BA:2804:C:C2'	31:BA:2805:G:H5'	2.45	0.46
32:BB:60:C:O2	32:BB:61:G:C8	2.69	0.46
33:BD:101:GLU:HG3	33:BD:102:LYS:N	2.31	0.46
34:BE:65:GLY:HA2	34:BE:70:ALA:HB2	1.96	0.46
35:BF:70:THR:HG21	35:BF:72:ARG:HB2	1.98	0.46
39:BN:65:LYS:NZ	39:BN:66:LYS:H	2.12	0.46
43:BR:41:ALA:O	43:BR:42:LYS:C	2.54	0.46
44:BS:26:LEU:HD22	44:BS:87:PHE:CD1	2.50	0.46
47:BV:21:ARG:HB3	47:BV:93:GLU:HB2	1.98	0.46
48:BW:18:ARG:HG3	48:BW:76:VAL:HG22	1.97	0.46
1:CA:69:G:H2'	1:CA:70:G:H8	1.80	0.46
1:CA:102:G:H2'	1:CA:103:C:C6	2.39	0.46
1:CA:149:A:HO2'	1:CA:150:C:H5	1.59	0.46
1:CA:539:A:OP1	12:CL:114:LYS:HE2	2.16	0.46
1:CA:577:G:H1'	1:CA:816:A:C4	2.51	0.46
1:CA:675:A:N6	1:CA:715:A:H61	2.14	0.46
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.16	0.46
2:CB:17:PHE:HD2	2:CB:17:PHE:H	1.64	0.46
2:CB:91:PRO:N	2:CB:154:LEU:HD12	2.30	0.46
5:CE:57:LYS:O	5:CE:61:TYR:CD2	2.66	0.46
6:CF:69:GLU:HG2	6:CF:70:ASP:N	2.30	0.46
11:CK:57:THR:CG2	11:CK:58:PRO:HD2	2.46	0.46
12:CL:55:VAL:CG1	12:CL:56:ALA:N	2.78	0.46
13:CM:52:GLU:O	13:CM:56:LEU:HB2	2.15	0.46
17:CQ:7:THR:HA	17:CQ:57:VAL:O	2.16	0.46
22:D0:41:ARG:HB3	31:DA:2330:G:H1'	1.97	0.46
25:D3:46:ASN:O	25:D3:49:LYS:N	2.49	0.46
28:D6:19:ARG:CG	28:D6:20:ASN:H	2.26	0.46
28:D6:24:GLU:OE1	28:D6:24:GLU:HA	2.15	0.46
31:DA:282:A:C4	31:DA:359:A:C2	3.04	0.46
31:DA:363(C):G:H2'	31:DA:363(D):G:H8	1.81	0.46
31:DA:755:C:H2'	31:DA:756:C:C6	2.51	0.46
31:DA:1040:C:H42	31:DA:1115:G:H1	1.62	0.46
31:DA:1341:U:O2	49:DX:77:LYS:HE2	2.14	0.46
31:DA:1478:G:HO2'	31:DA:1479:G:H5'	1.80	0.46
31:DA:1675:C:O2	34:DE:129:HIS:HA	2.16	0.46
31:DA:2317:C:C3'	31:DA:2318:G:C5'	2.92	0.46
31:DA:2700:C:H2'	31:DA:2701:C:H5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:116:VAL:CG1	34:DE:122:PHE:CD2	2.98	0.46
36:DG:68:PRO:HB2	36:DG:90:LEU:HG	1.98	0.46
39:DN:17:ASP:C	39:DN:19:GLU:H	2.17	0.46
41:DP:85:LEU:HD12	41:DP:120:ALA:CB	2.42	0.46
45:DT:28:VAL:HG22	45:DT:46:GLU:HA	1.98	0.46
47:DV:15:GLU:O	47:DV:98:GLU:OE2	2.33	0.46
49:DX:49:VAL:CG1	49:DX:87:GLN:HG2	2.46	0.46
50:DY:37:VAL:HG22	50:DY:67:LEU:HB3	1.98	0.46
1:AA:39:G:C2	1:AA:40:C:C6	3.04	0.46
1:AA:149:A:O2'	1:AA:150:C:P	2.73	0.46
1:AA:359:U:H2'	1:AA:360:A:H8	1.81	0.46
1:AA:458:C:N4	1:AA:474:G:H1	2.14	0.46
1:AA:564:C:C2'	1:AA:565:U:H5'	2.45	0.46
1:AA:858:G:O6	1:AA:869:G:C8	2.69	0.46
1:AA:1125:U:O4	10:AJ:73:ASP:OD2	2.33	0.46
1:AA:1169:A:C2'	1:AA:1170:A:H8	2.29	0.46
2:AB:20:GLU:HG3	2:AB:191:ASP:HB2	1.98	0.46
6:AF:2:ARG:HB2	6:AF:4:TYR:CE2	2.51	0.46
6:AF:99:ALA:HB3	18:AR:29:PHE:CE2	2.50	0.46
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.27	0.46
19:AS:10:PHE:HE2	19:AS:37:ARG:O	1.98	0.46
28:B6:45:LYS:HB3	31:BA:2371:G:H4'	1.97	0.46
31:BA:9:U:C4	31:BA:2629:A:C6	3.04	0.46
31:BA:70:G:H21	31:BA:71:A:H62	1.64	0.46
31:BA:354:G:H3'	31:BA:354:G:C8	2.51	0.46
31:BA:729:G:C5	33:BD:208:LYS:HB2	2.51	0.46
31:BA:842:G:N2	31:BA:937:U:C2	2.84	0.46
31:BA:1110:G:OP1	31:BA:1110:G:H4'	2.16	0.46
31:BA:1112:G:N2	31:BA:1113:U:O2	2.49	0.46
31:BA:1165:U:O2'	31:BA:1166:C:H5'	2.15	0.46
31:BA:1572:A:H8	31:BA:1572:A:O5'	1.99	0.46
31:BA:1826:G:C2'	31:BA:1827:C:O5'	2.64	0.46
31:BA:2018:G:H2'	31:BA:2019:A:C8	2.50	0.46
31:BA:2306:C:OP2	31:BA:2307:G:H8	1.99	0.46
31:BA:2564:A:N6	31:BA:2565:A:N6	2.64	0.46
32:BB:87:G:C2'	32:BB:88:C:H5''	2.46	0.46
33:BD:35:LYS:CD	33:BD:64:ILE:N	2.79	0.46
33:BD:35:LYS:HG2	33:BD:64:ILE:CG2	2.43	0.46
34:BE:93:VAL:N	34:BE:95:ILE:HD13	2.31	0.46
34:BE:116:VAL:CG1	34:BE:122:PHE:CD2	2.99	0.46
35:BF:132:VAL:O	35:BF:134:GLY:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:15:VAL:HG22	36:BG:175:LEU:HB3	1.97	0.46
36:BG:55:LYS:NZ	36:BG:148:MET:O	2.49	0.46
44:BS:17:ARG:HE	44:BS:89:ARG:HH21	1.64	0.46
47:BV:40:LEU:C	47:BV:40:LEU:CD1	2.84	0.46
1:CA:16:A:C2'	1:CA:17:U:H5'	2.44	0.46
1:CA:262:A:C6	1:CA:263:A:C6	3.04	0.46
1:CA:445:G:C6	1:CA:490:G:C6	3.03	0.46
1:CA:458:C:N4	1:CA:474:G:H1	2.14	0.46
1:CA:542:G:C2	1:CA:543:C:C5	3.03	0.46
1:CA:560:U:H4'	1:CA:561:U:O5'	2.15	0.46
1:CA:577:G:N3	1:CA:578:C:C6	2.84	0.46
1:CA:675:A:H2'	1:CA:676:A:H8	1.79	0.46
1:CA:805:C:O2'	1:CA:806:C:H5'	2.15	0.46
1:CA:881:G:P	12:CL:12:ARG:HH22	2.38	0.46
1:CA:1128:C:H5'	9:CI:16:ARG:CZ	2.45	0.46
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.50	0.46
1:CA:1255:G:H2'	1:CA:1255:G:N3	2.31	0.46
1:CA:1313:U:OP2	19:CS:6:LYS:HB3	2.16	0.46
1:CA:1446:U:O2	1:CA:1456:G:O6	2.34	0.46
2:CB:88:ALA:HB1	2:CB:222:ILE:HG21	1.98	0.46
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.80	0.46
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.98	0.46
8:CH:11:THR:HG23	8:CH:14:ARG:NH1	2.30	0.46
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.51	0.46
17:CQ:6:LEU:O	17:CQ:58:GLU:HA	2.15	0.46
20:CT:100:ILE:HG22	20:CT:100:ILE:O	2.16	0.46
24:D2:45:SER:HA	24:D2:47:ASN:HD21	1.80	0.46
27:D5:57:VAL:C	27:D5:58:LEU:HG	2.36	0.46
28:D6:30:THR:HB	31:DA:2286:A:OP1	2.16	0.46
30:D8:31:HIS:O	30:D8:33:ASN:N	2.48	0.46
31:DA:90:U:O2'	31:DA:92:A:H5''	2.16	0.46
31:DA:708:C:N4	31:DA:723:G:H1	2.13	0.46
31:DA:1108:U:C4	31:DA:1109:C:O2	2.69	0.46
31:DA:1434:A:C2'	31:DA:1435:G:H5'	2.45	0.46
31:DA:1902:C:C2'	31:DA:1903:G:O5'	2.63	0.46
31:DA:2048:G:C6	31:DA:2049:G:C5	3.04	0.46
31:DA:2275:C:H5'	31:DA:2275:C:H6	1.80	0.46
31:DA:2779:U:O2	31:DA:2779:U:O4'	2.34	0.46
32:DB:78:A:C2	32:DB:100:A:C4	3.04	0.46
33:DD:101:GLU:HG3	33:DD:102:LYS:N	2.31	0.46
35:DF:160:ASN:ND2	35:DF:160:ASN:C	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:60:LEU:HD13	36:DG:60:LEU:C	2.36	0.46
43:DR:50:HIS:NE2	43:DR:54:LEU:HD21	2.30	0.46
45:DT:56:GLY:C	45:DT:59:THR:CG2	2.85	0.46
50:DY:8:LYS:H	50:DY:28:LYS:NZ	2.14	0.46
50:DY:75:ILE:CD1	50:DY:79:CYS:C	2.77	0.46
1:AA:374:A:C4	1:AA:375:U:C5	3.04	0.46
1:AA:928:G:C2	1:AA:1390:U:O2	2.68	0.46
1:AA:1012:U:O5'	1:AA:1012:U:H6	1.99	0.46
1:AA:1031:G:H2'	1:AA:1032:G:C8	2.50	0.46
1:AA:1271:G:OP1	1:AA:1314:C:H4'	2.15	0.46
2:AB:53:ARG:HA	2:AB:56:ARG:HB2	1.97	0.46
3:AC:134:ILE:O	3:AC:138:VAL:HG23	2.16	0.46
4:AD:33:MET:HE2	4:AD:37:PRO:HA	1.95	0.46
8:AH:41:ARG:HG2	8:AH:41:ARG:O	2.16	0.46
10:AJ:22:LYS:HZ2	10:AJ:88:LEU:HD23	1.80	0.46
23:B1:44:PRO:HA	31:BA:2231:C:OP1	2.16	0.46
27:B5:57:VAL:C	27:B5:58:LEU:HG	2.36	0.46
31:BA:82:G:O2'	31:BA:83:G:H5'	2.15	0.46
31:BA:139(A):G:C2	49:BX:44:GLU:OE1	2.69	0.46
31:BA:1450(A):C:N4	31:BA:1451:C:H41	2.13	0.46
31:BA:1591:G:C5'	31:BA:1591:G:H8	2.29	0.46
31:BA:2629:A:H2'	31:BA:2629:A:N3	2.30	0.46
37:BH:126:PRO:HB2	37:BH:130:ARG:NH1	2.30	0.46
39:BN:17:ASP:C	39:BN:19:GLU:H	2.18	0.46
39:BN:56:ASN:H	39:BN:125:GLY:N	2.14	0.46
42:BQ:22:LYS:HA	42:BQ:22:LYS:CE	2.29	0.46
48:BW:9:TYR:N	48:BW:102:HIS:CD2	2.76	0.46
48:BW:70:TYR:OH	48:BW:72:LYS:HD2	2.16	0.46
50:BY:28:LYS:C	50:BY:30:VAL:H	2.19	0.46
50:BY:45:VAL:CG1	50:BY:62:GLU:OE2	2.64	0.46
50:BY:72:VAL:C	50:BY:73:ARG:HG3	2.36	0.46
1:CA:338:A:C6	1:CA:339:C:C4	3.03	0.46
1:CA:754:C:H3'	1:CA:754:C:O2	2.16	0.46
1:CA:779:C:H2'	1:CA:780:A:O4'	2.15	0.46
1:CA:923:A:C5'	5:CE:21:ALA:HB2	2.46	0.46
1:CA:1368:G:OP2	9:CI:112:LYS:HD3	2.16	0.46
1:CA:1476:G:C6	1:CA:1477:C:N4	2.84	0.46
4:CD:14:ARG:HA	4:CD:39:PRO:CB	2.46	0.46
8:CH:97:VAL:O	8:CH:100:ILE:HG13	2.16	0.46
18:CR:62:GLU:O	18:CR:65:ILE:HD12	2.16	0.46
23:D1:33:LYS:NZ	23:D1:35:THR:CG2	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:30:ARG:N	24:D2:30:ARG:CD	2.76	0.46
30:D8:25:MET:HB2	41:DP:62:LEU:HD21	1.94	0.46
30:D8:26:LYS:HE2	30:D8:47:LYS:NZ	2.30	0.46
30:D8:48:PHE:H	30:D8:48:PHE:HD1	1.61	0.46
30:D8:50:LEU:HD12	30:D8:51:ALA:H	1.81	0.46
31:DA:327:G:C2	31:DA:336:C:C2	3.04	0.46
31:DA:373:U:H2'	31:DA:374:A:C8	2.51	0.46
31:DA:873:G:H1	31:DA:904:C:H42	1.64	0.46
31:DA:1042:G:C5'	31:DA:1043:C:OP2	2.63	0.46
31:DA:1043:C:OP2	31:DA:1043:C:C6	2.69	0.46
31:DA:1142(A):A:C5	31:DA:1144:G:C5	3.04	0.46
31:DA:1241:A:H2'	31:DA:1242:A:O5'	2.16	0.46
31:DA:1886:C:H6	31:DA:1886:C:O5'	1.99	0.46
31:DA:2092:U:C4	31:DA:2226:C:OP2	2.69	0.46
31:DA:2722:G:O2'	43:DR:5:LYS:HB2	2.15	0.46
32:DB:13:A:O2'	32:DB:15:A:O5'	2.33	0.46
33:DD:35:LYS:H	33:DD:64:ILE:HG23	1.81	0.46
34:DE:176:ILE:HD12	34:DE:176:ILE:N	2.31	0.46
35:DF:36:VAL:O	35:DF:40:GLN:HG3	2.15	0.46
37:DH:85:LYS:HE2	37:DH:145:ALA:N	2.31	0.46
37:DH:153:LYS:HB2	37:DH:154:PRO:CD	2.46	0.46
40:DO:17:ARG:HD3	40:DO:17:ARG:HA	1.63	0.46
44:DS:58:LEU:O	44:DS:59:LYS:O	2.33	0.46
44:DS:106:ARG:HE	44:DS:106:ARG:HB3	1.36	0.46
50:DY:28:LYS:CE	50:DY:30:VAL:HG22	2.29	0.46
50:DY:41:GLY:O	50:DY:42:VAL:C	2.55	0.46
51:DZ:117:LEU:CB	51:DZ:174:VAL:HG22	2.46	0.46
1:AA:322:C:C5	1:AA:328:C:C5	2.99	0.45
1:AA:444:C:H2'	1:AA:445:G:H8	1.81	0.45
1:AA:1061:G:H5''	10:AJ:59:SER:OG	2.16	0.45
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.16	0.45
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.31	0.45
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.32	0.45
13:AM:44:ARG:CB	13:AM:46:LYS:HG2	2.45	0.45
15:AO:54:ARG:HG2	15:AO:58:MET:HE1	1.97	0.45
20:AT:89:ARG:C	20:AT:91:LEU:H	2.19	0.45
31:BA:481:G:HO2'	31:BA:482:A:P	2.39	0.45
31:BA:910:A:C8	42:BQ:13:GLN:HB2	2.50	0.45
31:BA:910:A:H2'	31:BA:2264:C:O2'	2.16	0.45
31:BA:926:A:H5''	31:BA:926:A:H8	1.81	0.45
31:BA:2287:A:N3	31:BA:2289:G:C8	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2410:G:C2	31:BA:2411:A:H1'	2.51	0.45
31:BA:2876:G:H4'	45:BT:3:ARG:HD3	1.96	0.45
32:BB:86:G:C2'	32:BB:87:G:C8	2.99	0.45
33:BD:173:VAL:CG2	33:BD:174:ILE:N	2.78	0.45
34:BE:28:ALA:O	34:BE:93:VAL:HG23	2.16	0.45
34:BE:37:ARG:HD3	34:BE:44:TYR:CZ	2.51	0.45
43:BR:24:GLN:HE22	43:BR:36:THR:HG21	1.80	0.45
44:BS:56:LEU:HD23	44:BS:56:LEU:O	2.16	0.45
45:BT:28:VAL:CG1	45:BT:46:GLU:HB2	2.45	0.45
45:BT:31:SER:OG	45:BT:43:GLN:N	2.49	0.45
46:BU:39:LEU:HD23	46:BU:39:LEU:HA	1.56	0.45
47:BV:16:PRO:C	47:BV:98:GLU:OE2	2.54	0.45
48:BW:46:PHE:O	48:BW:50:VAL:HG12	2.15	0.45
1:CA:261:U:C5	20:CT:79:ARG:CZ	2.99	0.45
1:CA:286:G:C5	1:CA:287:U:C5	3.04	0.45
1:CA:674:G:H2'	1:CA:675:A:C8	2.51	0.45
1:CA:930:C:C2'	1:CA:931:C:H5'	2.46	0.45
1:CA:1014:A:H2	1:CA:1219:U:O2	1.98	0.45
1:CA:1498:U:H1'	1:CA:1499:A:OP2	2.17	0.45
2:CB:7:VAL:HG12	2:CB:11:LEU:HD11	1.98	0.45
2:CB:16:HIS:CG	2:CB:213:LEU:HD13	2.51	0.45
4:CD:172:PRO:O	4:CD:187:ARG:NH1	2.44	0.45
6:CF:19:LEU:O	6:CF:23:LYS:HG3	2.16	0.45
6:CF:67:MET:CE	6:CF:75:LEU:HD12	2.46	0.45
6:CF:99:ALA:HB3	18:CR:29:PHE:CE2	2.50	0.45
8:CH:25:ASP:HB3	8:CH:58:TYR:CB	2.46	0.45
9:CI:19:LEU:HB3	9:CI:59:PHE:HD2	1.81	0.45
11:CK:21:ILE:HB	11:CK:84:VAL:HA	1.98	0.45
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.31	0.45
20:CT:10:LEU:O	20:CT:12:ALA:N	2.43	0.45
20:CT:71:THR:HG22	20:CT:72:LEU:H	1.80	0.45
23:D1:21:ARG:HD3	23:D1:21:ARG:C	2.36	0.45
30:D8:34:TRP:HD1	31:DA:2391:G:OP1	1.99	0.45
31:DA:195:A:H61	31:DA:198:C:H3'	1.81	0.45
31:DA:272(G):C:H42	31:DA:363(C):G:H1	1.63	0.45
31:DA:675:A:C4	31:DA:804:A:C2	3.04	0.45
31:DA:719:C:O2'	31:DA:720:C:H5'	2.16	0.45
31:DA:878:A:N6	31:DA:900:A:C8	2.85	0.45
31:DA:995:C:O2	46:DU:57:PHE:CD2	2.69	0.45
31:DA:1275:A:C8	43:DR:16:HIS:CD2	3.04	0.45
31:DA:1639:U:H4'	31:DA:2699:C:H4'	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1722:A:N6	31:DA:1741:A:H2	2.13	0.45
31:DA:2314:C:C2	31:DA:2315:G:C8	3.04	0.45
31:DA:2784:C:H1'	34:DE:37:ARG:NH2	2.31	0.45
32:DB:94:C:H2'	32:DB:95:C:C6	2.50	0.45
33:DD:96:HIS:CE1	33:DD:102:LYS:HD3	2.51	0.45
35:DF:20:LEU:HD13	35:DF:203:GLN:NE2	2.31	0.45
35:DF:162:LEU:HA	35:DF:162:LEU:HD12	1.78	0.45
36:DG:13:GLU:O	36:DG:13:GLU:HG3	2.16	0.45
38:DI:5:LEU:HD21	38:DI:19:VAL:HG12	1.97	0.45
38:DI:138:ILE:HG22	38:DI:139:GLN:H	1.81	0.45
39:DN:78:TYR:CD1	39:DN:79:PRO:CB	2.99	0.45
40:DO:34:THR:OG1	40:DO:35:VAL:N	2.48	0.45
41:DP:75:ILE:N	41:DP:75:ILE:CD1	2.70	0.45
43:DR:11:ASN:CG	43:DR:12:ARG:N	2.67	0.45
44:DS:57:LYS:HG2	44:DS:58:LEU:N	2.30	0.45
46:DU:69:CYS:O	46:DU:74:LEU:HD12	2.17	0.45
50:DY:31:LEU:HD13	50:DY:31:LEU:HA	1.53	0.45
1:AA:382:A:C2	1:AA:383:A:C4	3.04	0.45
1:AA:389:A:H2'	1:AA:390:C:C5'	2.46	0.45
1:AA:457:C:H2'	1:AA:458:C:C6	2.51	0.45
1:AA:527:G:O2'	1:AA:528:C:H5'	2.16	0.45
1:AA:577:G:H1'	1:AA:816:A:C4	2.50	0.45
1:AA:600:C:O2'	1:AA:601:C:H5'	2.17	0.45
1:AA:730:G:O2'	1:AA:766:A:H5'	2.16	0.45
1:AA:826:C:H4'	8:AH:12:ARG:HD3	1.98	0.45
1:AA:950:U:H6	13:AM:102:ARG:NH1	2.13	0.45
4:AD:203:VAL:O	4:AD:204:ILE:C	2.55	0.45
11:AK:48:ILE:HG21	11:AK:63:LEU:HD13	1.98	0.45
16:AP:22:THR:HG23	16:AP:32:TYR:HA	1.98	0.45
20:AT:14:LYS:HA	20:AT:17:ARG:HE	1.81	0.45
20:AT:73:HIS:HB3	20:AT:74:LYS:H	1.60	0.45
28:B6:20:ASN:CG	28:B6:21:TYR:N	2.70	0.45
30:B8:2:PRO:O	30:B8:3:LYS:C	2.53	0.45
30:B8:58:ILE:CG2	41:BP:49:ARG:CD	2.94	0.45
31:BA:34:C:H6	31:BA:34:C:H3'	1.81	0.45
31:BA:109:G:H2'	31:BA:110:G:O4'	2.16	0.45
31:BA:271(H):G:O6	31:BA:271(Q):G:O6	2.33	0.45
31:BA:387:U:H4'	31:BA:388:G:O5'	2.16	0.45
31:BA:518:G:H2'	31:BA:519:U:H6	1.80	0.45
31:BA:1364:G:H5''	31:BA:1365:A:OP2	2.17	0.45
31:BA:1416:G:O2'	31:BA:1417:C:C6	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1902:C:C2'	31:BA:1903:G:O5'	2.64	0.45
31:BA:2186:G:H3'	31:BA:2187:G:H5''	1.98	0.45
31:BA:2299:G:N1	31:BA:2318:G:C8	2.84	0.45
31:BA:2705:A:H2'	31:BA:2706:G:O4'	2.17	0.45
31:BA:2859:G:H4'	31:BA:2860:A:OP1	2.16	0.45
33:BD:77:ALA:HB2	33:BD:97:TYR:CG	2.50	0.45
34:BE:179:GLU:HB3	34:BE:181:LEU:HD22	1.97	0.45
35:BF:3:GLU:HB2	35:BF:20:LEU:H	1.81	0.45
37:BH:43:VAL:CG1	37:BH:53:GLU:H	2.28	0.45
37:BH:89:ILE:C	37:BH:89:ILE:HD12	2.36	0.45
38:BI:5:LEU:HD21	38:BI:19:VAL:HG12	1.97	0.45
40:BO:9:GLU:O	40:BO:83:ALA:HA	2.17	0.45
40:BO:16:ALA:HB2	40:BO:52:VAL:HG11	1.98	0.45
40:BO:73:ASP:OD2	45:BT:32:TYR:HE1	1.98	0.45
42:BQ:30:GLY:CA	42:BQ:107:ALA:HB2	2.44	0.45
44:BS:88:ASP:CG	44:BS:89:ARG:N	2.68	0.45
45:BT:56:GLY:C	45:BT:59:THR:CG2	2.84	0.45
45:BT:66:VAL:HA	45:BT:71:GLY:HA2	1.99	0.45
51:BZ:108:PRO:O	51:BZ:109:ALA:C	2.55	0.45
51:BZ:150:LEU:C	51:BZ:151:HIS:HD2	2.19	0.45
1:CA:336:C:H2'	1:CA:337:C:H6	1.80	0.45
1:CA:429:U:H4'	1:CA:430:A:O5'	2.15	0.45
1:CA:694:A:C2	1:CA:695:A:H1'	2.50	0.45
1:CA:738:C:C4	1:CA:739:C:C5	3.05	0.45
1:CA:1346:A:C5'	9:CI:120:ARG:HH12	2.29	0.45
15:CO:74:ASP:HA	15:CO:75:PRO:HD2	1.78	0.45
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.51	0.45
28:D6:15:GLU:OE1	28:D6:18:ARG:CG	2.65	0.45
31:DA:34:C:H3'	31:DA:34:C:H6	1.81	0.45
31:DA:529:A:N6	31:DA:2041:U:C2	2.85	0.45
31:DA:614:U:H5'	31:DA:614(C):A:N6	2.31	0.45
31:DA:716:A:H2'	31:DA:717:G:O5'	2.16	0.45
31:DA:795:C:H2'	31:DA:796:C:C6	2.51	0.45
31:DA:838:C:C4	31:DA:839:U:C5	3.05	0.45
31:DA:993:G:C5'	47:DV:75:PHE:CE2	2.89	0.45
31:DA:1131:G:OP1	39:DN:80:GLY:HA2	2.14	0.45
31:DA:1190:G:O3'	41:DP:35:HIS:HB3	2.16	0.45
31:DA:2023:G:H4'	31:DA:2617:C:O3'	2.16	0.45
31:DA:2306:C:OP2	31:DA:2307:G:C8	2.69	0.45
31:DA:2402:C:C3'	31:DA:2403:C:H5'	2.45	0.45
32:DB:14:U:H5'	32:DB:71:C:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:65:C:N4	32:DB:109:C:C2	2.84	0.45
34:DE:28:ALA:O	34:DE:93:VAL:HG23	2.15	0.45
35:DF:65:TRP:HZ3	35:DF:73:ALA:O	1.99	0.45
36:DG:139:LEU:HD23	36:DG:149:VAL:HG21	1.98	0.45
37:DH:90:LYS:CB	37:DH:159:GLU:O	2.61	0.45
41:DP:33:ARG:O	41:DP:35:HIS:O	2.34	0.45
41:DP:71:VAL:HG13	41:DP:72:PRO:N	2.31	0.45
42:DQ:22:LYS:NZ	42:DQ:25:ASP:OD1	2.49	0.45
43:DR:51:LEU:CD1	43:DR:70:LEU:HD21	2.46	0.45
45:DT:33:LYS:HB3	45:DT:41:ARG:HB3	1.97	0.45
51:DZ:33:LEU:HD12	51:DZ:33:LEU:HA	1.74	0.45
1:AA:84:U:H5	1:AA:88:A:N7	2.14	0.45
1:AA:299:G:C5	1:AA:300:A:C6	3.05	0.45
1:AA:577:G:C1'	1:AA:816:A:C4	3.00	0.45
1:AA:909:A:H2'	1:AA:910:C:O4'	2.16	0.45
1:AA:994:A:H62	1:AA:1046:A:H2	1.64	0.45
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.99	0.45
4:AD:82:ALA:O	4:AD:83:SER:C	2.55	0.45
6:AF:19:LEU:HD11	6:AF:59:TYR:CD2	2.51	0.45
13:AM:45:VAL:HA	13:AM:48:LEU:HD13	1.97	0.45
22:B0:77:ARG:NH2	31:BA:857:C:OP1	2.43	0.45
24:B2:48:HIS:O	24:B2:48:HIS:ND1	2.50	0.45
28:B6:11:LEU:HD11	28:B6:51:GLU:HB2	1.97	0.45
31:BA:197:A:H8	31:BA:197:A:H5'	1.81	0.45
31:BA:601:C:O2	31:BA:605:C:H4'	2.15	0.45
31:BA:745:G:H5''	31:BA:746:A:OP2	2.17	0.45
31:BA:1225:G:OP1	47:BV:88:ARG:CB	2.64	0.45
31:BA:1528:A:O2'	31:BA:1528(A):A:C8	2.62	0.45
31:BA:1865:G:N2	31:BA:1877:A:C8	2.85	0.45
31:BA:2017:U:H5'''	31:BA:2018:G:OP2	2.15	0.45
31:BA:2470:G:C6	31:BA:2471:C:C5	3.05	0.45
31:BA:2773:C:O2'	31:BA:2774:C:H5'	2.17	0.45
32:BB:45:A:H1'	36:BG:95:ARG:NH2	2.31	0.45
32:BB:71:C:O2	32:BB:71:C:C2'	2.62	0.45
33:BD:70:TRP:CZ3	33:BD:146:GLU:OE2	2.69	0.45
37:BH:68:THR:O	37:BH:69:ARG:C	2.54	0.45
38:BI:138:ILE:HG22	38:BI:139:GLN:N	2.31	0.45
41:BP:140:ALA:O	41:BP:141:ALA:CB	2.64	0.45
45:BT:28:VAL:HG13	45:BT:46:GLU:CB	2.44	0.45
49:BX:55:ASN:HB2	49:BX:78:LYS:CD	2.46	0.45
1:CA:41:G:H2'	1:CA:42:G:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:96:U:O2'	1:CA:97:G:H8	2.00	0.45
1:CA:586:C:H2'	1:CA:587:G:H5'	1.98	0.45
1:CA:602:A:C2	1:CA:637:G:C2	3.04	0.45
1:CA:657:G:N2	1:CA:750:G:C8	2.84	0.45
1:CA:826:C:H4'	8:CH:12:ARG:HD3	1.98	0.45
1:CA:981:U:O5'	1:CA:981:U:H6	1.99	0.45
1:CA:1250:A:N6	1:CA:1251:A:C6	2.85	0.45
1:CA:1433:A:N1	1:CA:1434:A:C2	2.85	0.45
2:CB:25:ASN:HA	2:CB:26:PRO:HD2	1.70	0.45
3:CC:125:GLU:HA	3:CC:191:THR:CG2	2.45	0.45
4:CD:58:LEU:HD23	4:CD:206:PHE:CZ	2.51	0.45
4:CD:96:LEU:N	4:CD:96:LEU:HD22	2.30	0.45
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.16	0.45
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG3	1.98	0.45
10:CJ:49:VAL:HG11	14:CN:41:ARG:O	2.16	0.45
11:CK:41:THR:CG2	11:CK:42:TRP:H	2.29	0.45
11:CK:58:PRO:HA	11:CK:90:GLY:HA2	1.99	0.45
19:CS:22:LEU:O	19:CS:26:GLY:HA2	2.17	0.45
25:D3:46:ASN:ND2	31:DA:851:U:C4'	2.79	0.45
30:D8:58:ILE:CG2	41:DP:49:ARG:CD	2.95	0.45
30:D8:59:LYS:HB3	30:D8:59:LYS:HE3	1.65	0.45
31:DA:94:C:H2'	31:DA:94:C:O2	2.15	0.45
31:DA:480:A:OP2	50:DY:46:LYS:HD3	2.17	0.45
31:DA:954:G:C4	31:DA:955:C:C6	3.03	0.45
31:DA:1478:G:O2'	31:DA:1558:A:C2	2.70	0.45
31:DA:1866:C:H2'	31:DA:1876:A:O4'	2.17	0.45
31:DA:2186:G:H3'	31:DA:2187:G:H5''	1.98	0.45
31:DA:2584:U:H6	31:DA:2585:U:C5	2.34	0.45
31:DA:2803:C:H3'	31:DA:2803:C:OP2	2.17	0.45
32:DB:60:C:N3	32:DB:61:G:N7	2.63	0.45
35:DF:20:LEU:O	35:DF:23:ASP:HB2	2.16	0.45
37:DH:157:TYR:O	37:DH:158:HIS:HB2	2.17	0.45
41:DP:35:HIS:O	41:DP:36:LYS:CB	2.64	0.45
41:DP:38:GLN:HG3	41:DP:39:LYS:N	2.24	0.45
43:DR:75:LEU:C	43:DR:75:LEU:CD1	2.84	0.45
47:DV:40:LEU:C	47:DV:40:LEU:HD12	2.37	0.45
47:DV:69:LYS:O	47:DV:70:ILE:HG23	2.15	0.45
51:DZ:14:LYS:HB2	51:DZ:17:ALA:HB3	1.98	0.45
51:DZ:29:TYR:HA	51:DZ:33:LEU:O	2.16	0.45
1:AA:250:A:C1'	1:AA:251:G:OP2	2.64	0.45
1:AA:867:G:N2	1:AA:868:C:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:940:C:H2'	1:AA:941:G:H8	1.81	0.45
1:AA:951:G:C6	1:AA:1231:G:C6	3.04	0.45
1:AA:1085:U:C2	1:AA:1094:G:O6	2.70	0.45
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.51	0.45
1:AA:1206:G:O6	1:AA:1207:G:C6	2.69	0.45
1:AA:1250:A:N6	1:AA:1251:A:C6	2.84	0.45
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.82	0.45
10:AJ:32:ALA:HB3	10:AJ:76:ASN:HB3	1.97	0.45
13:AM:19:LEU:HD11	13:AM:56:LEU:HD11	1.98	0.45
27:B5:11:THR:HG23	31:BA:1264:G:H5'	1.99	0.45
27:B5:11:THR:CG2	31:BA:1264:G:H5'	2.46	0.45
31:BA:272(J):C:H2'	31:BA:274:G:OP1	2.15	0.45
31:BA:877:U:C2'	31:BA:878:A:H5''	2.46	0.45
31:BA:1020:A:N1	31:BA:1141:U:O2'	2.42	0.45
31:BA:1225:G:P	47:BV:88:ARG:HB3	2.57	0.45
31:BA:1300:U:H5''	31:BA:1300:U:O2'	2.17	0.45
31:BA:1747(A):G:O2'	31:BA:1748:G:H5'	2.16	0.45
31:BA:1804:C:O2'	31:BA:1805:U:H5'	2.17	0.45
31:BA:2393:A:OP1	41:BP:62:LEU:HD12	2.17	0.45
31:BA:2580:U:C4'	34:BE:131:ALA:H	2.28	0.45
31:BA:2703:C:H2'	31:BA:2704:C:C6	2.51	0.45
36:BG:25:TYR:CZ	36:BG:32:PRO:HD3	2.51	0.45
44:BS:19:LYS:O	44:BS:19:LYS:CG	2.64	0.45
45:BT:27:THR:OG1	45:BT:28:VAL:N	2.49	0.45
45:BT:38:ASN:ND2	45:BT:38:ASN:C	2.69	0.45
47:BV:25:LEU:HD12	47:BV:94:LEU:HD22	1.99	0.45
50:BY:75:ILE:HD11	50:BY:80:GLY:N	2.30	0.45
1:CA:112:G:H2'	1:CA:112:G:N3	2.31	0.45
1:CA:299:G:C6	1:CA:300:A:C6	3.04	0.45
1:CA:577:G:H1'	1:CA:816:A:N3	2.32	0.45
1:CA:688:G:H2'	1:CA:689:C:H6	1.82	0.45
1:CA:688:G:H2'	1:CA:689:C:C6	2.51	0.45
1:CA:1031:G:H2'	1:CA:1032:G:C8	2.51	0.45
1:CA:1129:C:H4'	1:CA:1130:A:H5'	1.98	0.45
1:CA:1272:G:C6	1:CA:1273:G:N7	2.85	0.45
1:CA:1452:C:H5'	1:CA:1456:G:C5	2.51	0.45
2:CB:144:ARG:HA	2:CB:147:LYS:CB	2.46	0.45
4:CD:18:LYS:C	4:CD:19:LEU:HG	2.37	0.45
4:CD:112:VAL:HG13	4:CD:113:SER:N	2.31	0.45
4:CD:146:ILE:H	4:CD:146:ILE:HD12	1.80	0.45
4:CD:150:GLU:CD	4:CD:150:GLU:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:126:LYS:HE2	12:CL:128:ALA:H	1.80	0.45
13:CM:94:ARG:O	13:CM:96:LEU:HG	2.16	0.45
14:CN:41:ARG:HG3	14:CN:42:ILE:HD13	1.97	0.45
19:CS:10:PHE:HE2	19:CS:37:ARG:O	1.99	0.45
24:D2:25:VAL:HG13	24:D2:26:ARG:CD	2.41	0.45
30:D8:2:PRO:N	31:DA:591:C:O2	2.49	0.45
30:D8:58:ILE:O	30:D8:61:LEU:HG	2.16	0.45
31:DA:130:C:H2'	31:DA:131:G:H5''	1.98	0.45
31:DA:197:A:H8	31:DA:197:A:H5'	1.81	0.45
31:DA:251:A:C5'	41:DP:51:PHE:HZ	2.29	0.45
31:DA:641:C:O2'	31:DA:2350:C:OP1	2.29	0.45
31:DA:753:C:O5'	31:DA:753:C:C6	2.70	0.45
31:DA:985:C:H2'	31:DA:986:C:C6	2.48	0.45
31:DA:1323:U:H2'	31:DA:1324:G:H5'	1.98	0.45
31:DA:1956:U:H2'	31:DA:1957:C:H5'	1.98	0.45
31:DA:2031:A:N3	31:DA:2455:G:O2'	2.42	0.45
31:DA:2223:G:H2'	31:DA:2224:G:C5'	2.40	0.45
31:DA:2306:C:OP2	31:DA:2307:G:H8	2.00	0.45
31:DA:2704:C:H2'	31:DA:2705:A:O4'	2.16	0.45
32:DB:78:A:H2'	32:DB:79:C:O4'	2.16	0.45
33:DD:238:GLY:O	33:DD:239:ARG:HB2	2.16	0.45
34:DE:51:PHE:CE1	34:DE:52:LEU:HG	2.50	0.45
36:DG:86:MET:HB2	36:DG:87:PRO:HD2	1.98	0.45
37:DH:137:ASP:HB3	37:DH:140:LYS:H	1.81	0.45
37:DH:138:LYS:C	37:DH:140:LYS:N	2.70	0.45
38:DI:9:LEU:N	38:DI:13:GLY:HA2	2.27	0.45
38:DI:28:ASN:C	38:DI:32:PRO:HG2	2.37	0.45
40:DO:87:ILE:CG2	40:DO:88:ASN:N	2.79	0.45
42:DQ:20:ALA:CB	42:DQ:98:LYS:HB3	2.47	0.45
43:DR:71:GLN:HA	43:DR:71:GLN:NE2	2.26	0.45
44:DS:58:LEU:HD12	44:DS:58:LEU:HA	1.81	0.45
44:DS:87:PHE:HE2	44:DS:97:ARG:NH2	2.05	0.45
45:DT:33:LYS:HA	45:DT:33:LYS:HD3	1.44	0.45
48:DW:28:SER:O	48:DW:29:LEU:C	2.55	0.45
50:DY:45:VAL:HG22	50:DY:62:GLU:CB	2.46	0.45
51:DZ:100:VAL:O	51:DZ:101:PRO:O	2.35	0.45
1:AA:830:G:C5	1:AA:831:U:C5	3.05	0.45
1:AA:1054:C:OP1	1:AA:1197:G:OP2	2.35	0.45
1:AA:1065:U:H4'	1:AA:1066:C:O5'	2.17	0.45
3:AC:36:ASP:HB3	3:AC:40:ARG:HH12	1.80	0.45
7:AG:101:LEU:O	7:AG:105:VAL:HG23	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:105:VAL:O	11:AK:105:VAL:HG23	2.15	0.45
16:AP:4:ILE:HG13	16:AP:21:VAL:CG1	2.30	0.45
19:AS:48:THR:HG22	19:AS:61:TYR:CD1	2.52	0.45
20:AT:61:SER:OG	20:AT:65:LYS:HE3	2.17	0.45
22:B0:72:ARG:O	22:B0:73:GLY:C	2.52	0.45
24:B2:34:GLU:O	24:B2:34:GLU:HG2	2.16	0.45
28:B6:40:CYS:SG	28:B6:45:LYS:CD	3.04	0.45
31:BA:251:A:C5'	41:BP:51:PHE:HZ	2.29	0.45
31:BA:362:U:C6	31:BA:362:U:C3'	3.00	0.45
31:BA:448:U:H3'	31:BA:449:A:H5'	1.98	0.45
31:BA:699:A:H2'	31:BA:700:G:O4'	2.17	0.45
31:BA:873:G:H1	31:BA:904:C:H42	1.63	0.45
31:BA:990:A:OP2	31:BA:991:C:OP2	2.35	0.45
31:BA:1461:G:C2'	31:BA:1462:C:H5'	2.47	0.45
31:BA:1669:A:H5''	31:BA:2550:G:OP1	2.17	0.45
31:BA:1826:G:H2'	31:BA:1827:C:H6	1.82	0.45
31:BA:2100:G:O6	31:BA:2189:U:O4	2.35	0.45
31:BA:2543:G:H8	31:BA:2543:G:H5'	1.81	0.45
31:BA:2592:G:H2'	31:BA:2593:U:O4'	2.17	0.45
31:BA:2784:C:H1'	34:BE:37:ARG:NH2	2.32	0.45
32:BB:15:A:H5'	32:BB:16:G:H8	1.75	0.45
33:BD:33:LEU:O	33:BD:35:LYS:N	2.50	0.45
34:BE:57:LYS:O	34:BE:59:VAL:N	2.47	0.45
36:BG:91:ARG:HD2	36:BG:91:ARG:O	2.16	0.45
37:BH:85:LYS:HE2	37:BH:145:ALA:N	2.31	0.45
39:BN:75:TYR:CE2	39:BN:83:LYS:NZ	2.85	0.45
39:BN:87:LEU:O	39:BN:88:GLU:C	2.54	0.45
41:BP:83:VAL:HG12	41:BP:112:LEU:HD21	1.98	0.45
49:BX:25:LYS:HG3	49:BX:26:TYR:CD1	2.51	0.45
50:BY:46:LYS:C	50:BY:47:LYS:CD	2.85	0.45
50:BY:80:GLY:O	50:BY:81:LYS:HB2	2.17	0.45
51:BZ:48:PHE:HE2	51:BZ:71:VAL:HG11	1.82	0.45
1:CA:49:U:C2	1:CA:361:G:N2	2.85	0.45
1:CA:69:G:C2	1:CA:70:G:C8	3.05	0.45
1:CA:189(F):U:O4	17:CQ:63:ARG:N	2.39	0.45
1:CA:509:A:H2'	1:CA:510:A:N7	2.31	0.45
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.46	0.45
1:CA:655:A:C2	1:CA:754:C:N4	2.85	0.45
1:CA:827:U:O5'	1:CA:827:U:H6	1.98	0.45
1:CA:1098:C:N3	1:CA:1099:G:C8	2.84	0.45
1:CA:1216:G:H5''	14:CN:5:ALA:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.51	0.45
2:CB:19:HIS:CG	2:CB:20:GLU:N	2.84	0.45
2:CB:160:ASP:O	2:CB:183:PRO:HD2	2.16	0.45
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	1.98	0.45
9:CI:124:GLN:HB3	9:CI:125:TYR:H	1.45	0.45
10:CJ:84:GLN:O	10:CJ:88:LEU:CB	2.64	0.45
13:CM:19:LEU:HD11	13:CM:56:LEU:HD11	1.98	0.45
24:D2:14:ARG:HE	24:D2:14:ARG:HB3	1.64	0.45
25:D3:9:VAL:HG11	25:D3:55:ARG:HG3	1.96	0.45
29:D7:13:ALA:HB1	31:DA:125:G:H1'	1.98	0.45
31:DA:13:A:N1	31:DA:525:U:H2'	2.32	0.45
31:DA:21:A:O2'	31:DA:22:C:H5'	2.16	0.45
31:DA:174:C:H2'	31:DA:175:G:H5''	1.98	0.45
31:DA:226:G:H21	31:DA:228:A:H62	1.65	0.45
31:DA:493:G:H2'	31:DA:494:G:H5''	1.99	0.45
31:DA:848:G:C4	31:DA:933:A:C8	3.04	0.45
31:DA:916:G:O2'	31:DA:917:A:H5''	2.16	0.45
31:DA:1025:G:H8	31:DA:1025:G:OP1	1.99	0.45
31:DA:1327:C:O2'	31:DA:1328:G:H5'	2.17	0.45
31:DA:1341:U:C2'	31:DA:1397:U:O2	2.64	0.45
31:DA:1341:U:H2'	31:DA:1397:U:O2	2.17	0.45
31:DA:1465:G:C2	31:DA:1466:G:C4	3.05	0.45
31:DA:2228:G:C5	31:DA:2229:C:C4	3.04	0.45
31:DA:2327:A:C6	31:DA:2328:A:C6	3.04	0.45
31:DA:2333:A:C2'	31:DA:2334:G:OP2	2.65	0.45
31:DA:2776:A:N1	31:DA:2778:A:C2	2.85	0.45
31:DA:2836:U:C4	31:DA:2883:A:N6	2.85	0.45
35:DF:108:LYS:O	35:DF:111:ALA:HB3	2.16	0.45
36:DG:37:VAL:O	36:DG:94:LEU:HG	2.16	0.45
37:DH:99:VAL:O	37:DH:102:ALA:HB3	2.16	0.45
41:DP:124:LYS:HG2	41:DP:143:GLY:HA3	1.98	0.45
45:DT:57:PHE:O	45:DT:58:ASN:ND2	2.49	0.45
46:DU:17:ILE:HG23	46:DU:39:LEU:HD12	1.98	0.45
46:DU:61:TRP:O	46:DU:62:ILE:C	2.53	0.45
49:DX:34:ALA:C	49:DX:36:LYS:N	2.69	0.45
50:DY:45:VAL:HG11	50:DY:60:PHE:C	2.36	0.45
1:AA:336:C:H2'	1:AA:337:C:H6	1.82	0.45
1:AA:561:U:HO2'	1:AA:562:C:P	2.31	0.45
1:AA:675:A:H2'	1:AA:676:A:H8	1.82	0.45
1:AA:942:G:C2	1:AA:1342:C:C2	3.05	0.45
1:AA:945:G:N1	1:AA:1337:G:C2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1130:A:H1'	1:AA:1146:A:C2	2.52	0.45
8:AH:25:ASP:HB3	8:AH:58:TYR:CB	2.47	0.45
13:AM:29:ARG:HA	13:AM:32:GLU:HB3	1.99	0.45
16:AP:4:ILE:HD12	16:AP:4:ILE:N	2.32	0.45
27:B5:31:VAL:HB	27:B5:32:PRO:HD2	1.98	0.45
31:BA:282:A:C4	31:BA:359:A:C2	3.05	0.45
31:BA:686:G:N2	31:BA:788:A:H61	2.15	0.45
31:BA:916:G:O2'	31:BA:917:A:H5''	2.16	0.45
31:BA:2023:G:H4'	31:BA:2617:C:O3'	2.16	0.45
31:BA:2102:U:C4	31:BA:2103:C:N4	2.85	0.45
31:BA:2392:A:O4'	31:BA:2392:A:N3	2.48	0.45
31:BA:2469:A:O2'	42:BQ:56:ARG:CG	2.60	0.45
32:BB:42:C:O2	36:BG:93:THR:N	2.49	0.45
35:BF:81:PRO:HB3	35:BF:87:GLY:O	2.17	0.45
36:BG:63:ILE:HD13	36:BG:141:PHE:CE2	2.51	0.45
37:BH:45:VAL:CG1	37:BH:46:GLU:N	2.76	0.45
39:BN:112:LEU:HD12	39:BN:112:LEU:C	2.35	0.45
40:BO:12:ASP:C	40:BO:99:PHE:HE2	2.19	0.45
46:BU:92:ARG:NH1	47:BV:11:GLN:O	2.50	0.45
47:BV:62:LEU:CB	47:BV:98:GLU:HA	2.43	0.45
50:BY:68:HIS:H	50:BY:71:LYS:NZ	2.11	0.45
1:CA:11:G:C6	1:CA:12:U:C4	3.05	0.45
1:CA:33:A:H2'	1:CA:34:C:C6	2.52	0.45
1:CA:99:U:O2'	1:CA:100:C:H5'	2.17	0.45
1:CA:683:G:C6	1:CA:684:A:C6	3.05	0.45
1:CA:1061:G:H5''	10:CJ:59:SER:OG	2.17	0.45
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.42	0.45
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.37	0.45
5:CE:39:GLY:O	5:CE:69:VAL:N	2.40	0.45
12:CL:93:LEU:O	12:CL:94:PRO:C	2.54	0.45
25:D3:36:VAL:O	25:D3:36:VAL:HG23	2.16	0.45
31:DA:309:G:N3	31:DA:329:G:O2'	2.45	0.45
31:DA:547:A:O2'	31:DA:548:A:OP2	2.30	0.45
31:DA:616:G:H2'	31:DA:618:C:O4'	2.17	0.45
31:DA:858:U:O2	31:DA:2268:A:H2'	2.17	0.45
31:DA:1225:G:P	47:DV:88:ARG:HB3	2.57	0.45
31:DA:1531:C:H5'	31:DA:1532:C:OP2	2.16	0.45
31:DA:1797:C:O2'	33:DD:259:THR:HB	2.16	0.45
31:DA:2100:G:O6	31:DA:2189:U:O4	2.34	0.45
31:DA:2592:G:H2'	31:DA:2593:U:O4'	2.16	0.45
31:DA:2801:A:O2'	31:DA:2895:U:C4'	2.61	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2808:U:O2'	31:DA:2809:A:H5'	2.16	0.45
32:DB:2:C:H2'	32:DB:3:C:H6	1.81	0.45
32:DB:31:C:O2	32:DB:52:A:H2	2.00	0.45
34:DE:111:ARG:HD2	34:DE:160:TYR:CD1	2.52	0.45
35:DF:89:VAL:CG1	35:DF:90:PHE:N	2.70	0.45
36:DG:67:LYS:HD2	36:DG:67:LYS:H	1.80	0.45
37:DH:117:PRO:HA	37:DH:123:PHE:HE1	1.82	0.45
39:DN:99:LEU:HD22	39:DN:99:LEU:HA	1.61	0.45
43:DR:100:LEU:HD11	43:DR:113:LEU:HD13	1.98	0.45
44:DS:95:HIS:O	44:DS:98:VAL:CG2	2.65	0.45
45:DT:87:ASP:OD1	45:DT:87:ASP:N	2.49	0.45
49:DX:29:TRP:CE3	49:DX:76:ARG:HB3	2.51	0.45
49:DX:77:LYS:HD3	49:DX:78:LYS:HD2	1.97	0.45
50:DY:90:LEU:HD12	50:DY:91:GLU:HG2	1.97	0.45
51:DZ:104:PHE:HA	51:DZ:139:VAL:HB	1.99	0.45
1:AA:374:A:C6	1:AA:375:U:C4	3.05	0.45
1:AA:509:A:H2'	1:AA:510:A:N7	2.32	0.45
1:AA:673:G:H2'	1:AA:674:G:H8	1.79	0.45
1:AA:764:C:C2	1:AA:765:G:C8	3.05	0.45
1:AA:948:C:C5	13:AM:106:ASN:ND2	2.84	0.45
1:AA:1250:A:C6	1:AA:1251:A:C6	3.05	0.45
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.52	0.45
2:AB:67:THR:HG21	2:AB:155:LEU:HD21	1.99	0.45
2:AB:84:GLU:HB3	2:AB:219:VAL:CG2	2.34	0.45
2:AB:144:ARG:HA	2:AB:147:LYS:CB	2.46	0.45
5:AE:6:PHE:HD2	5:AE:36:ASP:HB3	1.81	0.45
5:AE:80:ILE:HD11	5:AE:138:ALA:HB1	1.98	0.45
9:AI:50:LEU:HD22	9:AI:55:ALA:O	2.16	0.45
24:B2:14:ARG:CD	24:B2:57:ILE:HB	2.47	0.45
28:B6:10:LEU:N	28:B6:10:LEU:CD2	2.80	0.45
30:B8:32:LEU:HB2	30:B8:34:TRP:H	1.82	0.45
31:BA:1353:A:H5''	33:BD:38:LYS:NZ	2.32	0.45
31:BA:2461:C:H2'	31:BA:2462:U:H6	1.81	0.45
31:BA:2655:G:O2'	31:BA:2656:U:H5	1.99	0.45
31:BA:2807:G:H22	31:BA:2892:A:N6	2.15	0.45
31:BA:2820:A:C8	34:BE:109:LYS:HE3	2.52	0.45
31:BA:2885:C:H2'	31:BA:2886:G:O5'	2.17	0.45
32:BB:28:C:H2'	32:BB:29:A:O4'	2.17	0.45
33:BD:12:SER:O	33:BD:16:MET:HB2	2.17	0.45
33:BD:13:ARG:HA	33:BD:16:MET:HE3	1.97	0.45
33:BD:25:THR:O	33:BD:25:THR:CG2	2.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:51:PHE:HB3	34:BE:76:ARG:HB3	1.98	0.45
34:BE:70:ALA:O	34:BE:72:VAL:C	2.55	0.45
34:BE:111:ARG:HD2	34:BE:160:TYR:CE1	2.52	0.45
34:BE:114:ALA:HB3	34:BE:160:TYR:HB3	1.98	0.45
35:BF:136:THR:HG22	35:BF:140:LEU:CD2	2.47	0.45
37:BH:118:PRO:HG2	37:BH:121:ILE:HD12	1.98	0.45
39:BN:55:VAL:HG12	39:BN:125:GLY:HA3	1.98	0.45
43:BR:5:LYS:N	43:BR:5:LYS:CD	2.79	0.45
46:BU:92:ARG:HH22	47:BV:10:LYS:HG2	1.81	0.45
48:BW:8:ARG:HA	48:BW:102:HIS:CD2	2.52	0.45
49:BX:31:HIS:CD2	49:BX:31:HIS:C	2.90	0.45
51:BZ:127:LYS:HB3	51:BZ:162:GLU:HG3	1.99	0.45
1:CA:28:G:C6	1:CA:29:G:C5	3.05	0.45
1:CA:939:G:C6	1:CA:940:C:N4	2.85	0.45
1:CA:1128:C:N3	1:CA:1139:G:C6	2.85	0.45
1:CA:1254:C:OP1	10:CJ:45:ARG:HG2	2.16	0.45
1:CA:1507:A:C8	1:CA:1530:G:N2	2.84	0.45
2:CB:15:VAL:HG21	2:CB:209:ARG:HH21	1.82	0.45
2:CB:67:THR:HG21	2:CB:155:LEU:HD21	1.99	0.45
3:CC:155:GLY:O	3:CC:196:LEU:HD13	2.16	0.45
5:CE:147:ASP:N	5:CE:147:ASP:OD2	2.50	0.45
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.17	0.45
8:CH:44:PHE:HA	8:CH:79:VAL:CG1	2.46	0.45
25:D3:46:ASN:O	25:D3:50:VAL:HG22	2.17	0.45
30:D8:30:ARG:HB2	31:DA:2393:A:OP1	2.17	0.45
31:DA:231:C:O2'	31:DA:232:G:H5'	2.17	0.45
31:DA:375:C:H2'	31:DA:376:C:C6	2.52	0.45
31:DA:878:A:H2'	31:DA:879:G:H5'	1.97	0.45
31:DA:930:U:O2	31:DA:930:U:O4'	2.32	0.45
31:DA:1141:U:P	39:DN:25:ARG:HH12	2.40	0.45
31:DA:1316:U:H2'	31:DA:1317:A:C8	2.52	0.45
31:DA:1517:G:H2'	31:DA:1518:U:O4'	2.16	0.45
31:DA:1518:U:H2'	31:DA:1519:G:O4'	2.17	0.45
32:DB:7:G:O5'	44:DS:29:PHE:CE1	2.70	0.45
32:DB:75:G:N3	51:DZ:85:HIS:CE1	2.85	0.45
33:DD:3:VAL:H	33:DD:20:ASP:HB2	1.82	0.45
40:DO:50:GLY:C	40:DO:52:VAL:N	2.70	0.45
44:DS:16:ASN:HB3	44:DS:20:ARG:NH2	2.32	0.45
44:DS:95:HIS:O	44:DS:97:ARG:O	2.33	0.45
46:DU:112:ARG:HH11	46:DU:112:ARG:HG2	1.82	0.45
47:DV:22:VAL:O	47:DV:23:GLU:CB	2.53	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:66:ARG:HD3	47:DV:67:GLY:N	2.32	0.45
49:DX:31:HIS:CD2	49:DX:31:HIS:C	2.90	0.45
50:DY:28:LYS:C	50:DY:30:VAL:H	2.20	0.45
50:DY:75:ILE:HD13	50:DY:75:ILE:HA	1.50	0.45
1:AA:115:G:H4'	1:AA:116:A:O5'	2.16	0.45
1:AA:185:A:C6	1:AA:186:C:N4	2.85	0.45
1:AA:192:U:H4'	20:AT:57:ARG:HD2	1.98	0.45
1:AA:303:A:C5	1:AA:304:U:C5	3.05	0.45
1:AA:410:G:OP2	4:AD:25:ARG:HG3	2.17	0.45
1:AA:447:G:C6	1:AA:485:G:H1'	2.51	0.45
1:AA:612:C:O2	1:AA:629:G:N2	2.50	0.45
1:AA:665:A:H1'	1:AA:733:A:O4'	2.17	0.45
1:AA:1237:C:H42	1:AA:1337:G:H1	1.65	0.45
1:AA:1433:A:C6	1:AA:1468:A:C4	3.05	0.45
3:AC:11:ARG:HB3	3:AC:15:THR:HB	1.98	0.45
13:AM:81:LEU:HD11	13:AM:88:ARG:HH12	1.82	0.45
15:AO:55:GLY:O	15:AO:56:LEU:C	2.55	0.45
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.31	0.45
23:B1:13:ILE:HG21	23:B1:63:ALA:HB3	1.99	0.45
28:B6:43:CYS:O	28:B6:44:ARG:CB	2.65	0.45
28:B6:48:VAL:O	28:B6:49:HIS:O	2.35	0.45
31:BA:854:G:H2'	31:BA:855:G:H8	1.81	0.45
31:BA:997:G:C2'	31:BA:998:C:H5'	2.47	0.45
31:BA:1272:A:OP2	31:BA:1647:G:OP1	2.35	0.45
31:BA:1545:A:C2'	31:BA:1546:C:O5'	2.64	0.45
31:BA:1593:G:H2'	31:BA:1594:G:C8	2.52	0.45
31:BA:1803:A:H2	31:BA:1822:G:N3	2.14	0.45
31:BA:1952:A:C6	40:BO:22:ILE:HD12	2.52	0.45
31:BA:2314:C:C2	31:BA:2315:G:C8	3.05	0.45
31:BA:2630:G:C8	31:BA:2894:G:C2	3.04	0.45
31:BA:2850:A:C2	31:BA:2851:A:C4	3.05	0.45
33:BD:213:ARG:HD2	33:BD:213:ARG:HA	1.72	0.45
33:BD:246:PRO:HG2	33:BD:255:LYS:HG2	1.99	0.45
34:BE:65:GLY:C	34:BE:67:PHE:N	2.70	0.45
34:BE:120:TRP:CD2	34:BE:155:LYS:HD3	2.52	0.45
42:BQ:141:GLN:HB3	51:BZ:70:LEU:HD13	1.99	0.45
43:BR:9:LYS:O	43:BR:10:LEU:CG	2.64	0.45
44:BS:95:HIS:O	44:BS:96:GLY:C	2.54	0.45
45:BT:35:LYS:C	45:BT:37:GLY:N	2.71	0.45
48:BW:29:LEU:HG	48:BW:33:ARG:HD2	1.99	0.45
50:BY:45:VAL:HG21	50:BY:62:GLU:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:201:C:H42	1:CA:203:U:H1'	1.82	0.45
1:CA:498:U:O2	1:CA:498:U:H2'	2.15	0.45
1:CA:577:G:C4	1:CA:578:C:C5	3.05	0.45
1:CA:683:G:C2	1:CA:708:C:N3	2.84	0.45
1:CA:946:A:C2	1:CA:1236:A:C2	3.05	0.45
1:CA:1054:C:C2'	1:CA:1055:A:H5''	2.46	0.45
1:CA:1137:C:H6	1:CA:1137:C:H3'	1.82	0.45
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.51	0.45
1:CA:1210:C:H4'	1:CA:1214:C:C4	2.52	0.45
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.32	0.45
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.45
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.99	0.45
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.17	0.45
4:CD:10:ARG:HA	4:CD:13:ARG:HG3	1.98	0.45
5:CE:6:PHE:HD2	5:CE:36:ASP:HB3	1.81	0.45
7:CG:36:LYS:NZ	7:CG:36:LYS:HB2	2.32	0.45
7:CG:111:ARG:CZ	7:CG:122:HIS:HB3	2.47	0.45
8:CH:103:VAL:HG21	8:CH:109:ILE:C	2.36	0.45
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.99	0.45
15:CO:37:ASN:N	15:CO:37:ASN:ND2	2.62	0.45
15:CO:66:LEU:O	15:CO:69:TYR:HB3	2.17	0.45
20:CT:92:LEU:C	20:CT:94:ALA:H	2.19	0.45
22:D0:16:SER:CB	31:DA:2262:U:OP2	2.65	0.45
24:D2:41:ILE:HG13	31:DA:94(A):G:H22	1.82	0.45
25:D3:6:VAL:HG12	25:D3:54:VAL:CG1	2.47	0.45
27:D5:49:CYS:O	27:D5:50:GLY:C	2.55	0.45
29:D7:31:LEU:O	29:D7:32:LYS:C	2.54	0.45
31:DA:109:G:H2'	31:DA:110:G:O4'	2.17	0.45
31:DA:142:A:C5'	31:DA:142(A):C:H5	2.30	0.45
31:DA:271(P):C:O3'	38:DI:42:SER:OG	2.34	0.45
31:DA:608:A:C6	31:DA:609:A:C6	3.04	0.45
31:DA:973:A:O4'	31:DA:1188:U:C6	2.70	0.45
31:DA:1221:C:H2'	31:DA:1221(A):C:H6	1.82	0.45
31:DA:1475:G:H5'	31:DA:1476:C:OP2	2.17	0.45
31:DA:1722:A:C2	31:DA:1740:G:H2'	2.52	0.45
31:DA:2540:C:C2'	31:DA:2541:A:H5'	2.47	0.45
31:DA:2849:U:H5'	31:DA:2867:G:H21	1.82	0.45
36:DG:18:GLU:HG2	36:DG:175:LEU:HD21	1.98	0.45
36:DG:63:ILE:HD13	36:DG:141:PHE:CE2	2.51	0.45
37:DH:126:PRO:HB2	37:DH:130:ARG:HH12	1.81	0.45
39:DN:78:TYR:N	39:DN:79:PRO:HD3	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:3:GLN:HG3	40:DO:4:PRO:HD2	1.99	0.45
44:DS:90:GLY:C	44:DS:92:TYR:H	2.19	0.45
45:DT:68:TYR:N	45:DT:68:TYR:CD2	2.84	0.45
46:DU:104:GLN:HB2	47:DV:43:GLU:CD	2.37	0.45
1:AA:28:G:C6	1:AA:29:G:C5	3.05	0.45
1:AA:195:A:H1'	1:AA:222:U:O2'	2.16	0.45
1:AA:601:C:H2'	1:AA:602:A:C8	2.52	0.45
1:AA:675:A:N6	1:AA:715:A:H61	2.15	0.45
1:AA:981:U:O5'	1:AA:981:U:H6	2.00	0.45
3:AC:16:ARG:HB2	3:AC:16:ARG:CZ	2.46	0.45
5:AE:78:HIS:HE1	5:AE:142:LEU:HD23	1.81	0.45
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.52	0.45
6:AF:54:LYS:O	6:AF:56:PRO:HD3	2.17	0.45
8:AH:80:ILE:HG22	8:AH:80:ILE:O	2.17	0.45
10:AJ:4:ILE:HG23	10:AJ:98:ILE:HG23	1.99	0.45
12:AL:92:ASP:C	12:AL:93:LEU:HD23	2.38	0.45
17:AQ:7:THR:HA	17:AQ:57:VAL:O	2.17	0.45
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.17	0.45
22:B0:16:SER:CB	31:BA:2262:U:OP2	2.64	0.45
24:B2:12:GLU:C	24:B2:14:ARG:N	2.69	0.45
28:B6:30:THR:HB	31:BA:2286:A:OP1	2.17	0.45
30:B8:39:LYS:O	30:B8:39:LYS:HG2	2.17	0.45
31:BA:287:C:H2'	31:BA:288:C:H6	1.82	0.45
31:BA:363(C):G:H2'	31:BA:363(D):G:H8	1.81	0.45
31:BA:384:U:H2'	31:BA:385:C:H6	1.82	0.45
31:BA:878:A:C6	31:BA:900:A:C8	3.05	0.45
31:BA:993:G:H1'	47:BV:91:TYR:CE1	2.52	0.45
31:BA:1491:G:O2'	33:BD:101:GLU:HB2	2.17	0.45
31:BA:1517:G:O2'	31:BA:1518:U:H5'	2.17	0.45
31:BA:1826:G:H4'	33:BD:242:ARG:CZ	2.47	0.45
31:BA:2753:A:HO2'	31:BA:2754:U:H6	1.59	0.45
31:BA:2870:C:H2'	31:BA:2871:C:C5'	2.47	0.45
31:BA:2870:C:C5'	43:BR:65:LEU:HD21	2.47	0.45
33:BD:33:LEU:HB3	33:BD:34:VAL:H	1.34	0.45
33:BD:267:SER:HA	33:BD:270:ILE:CD1	2.47	0.45
37:BH:153:LYS:HB2	37:BH:154:PRO:CD	2.47	0.45
39:BN:46:VAL:HG13	39:BN:48:MET:HG3	1.99	0.45
42:BQ:20:ALA:C	42:BQ:22:LYS:N	2.70	0.45
42:BQ:57:HIS:CE1	42:BQ:116:GLU:HB3	2.52	0.45
45:BT:50:ILE:HD11	45:BT:102:ILE:CD1	2.40	0.45
49:BX:73:ARG:H	49:BX:74:PRO:HD3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:195:A:H1'	1:CA:222:U:O2'	2.17	0.45
1:CA:741:G:H2'	1:CA:742:G:O4'	2.17	0.45
1:CA:1092:A:C2	1:CA:1183:A:C2	3.05	0.45
2:CB:19:HIS:CG	2:CB:20:GLU:H	2.35	0.45
3:CC:153:VAL:HG12	3:CC:154:SER:N	2.32	0.45
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.32	0.45
7:CG:101:LEU:O	7:CG:105:VAL:HG23	2.16	0.45
7:CG:150:ALA:HB2	11:CK:50:TYR:CE1	2.51	0.45
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.98	0.45
12:CL:20:LYS:HD3	12:CL:20:LYS:H	1.81	0.45
15:CO:18:PHE:O	15:CO:19:PRO:C	2.55	0.45
17:CQ:74:LEU:HD22	17:CQ:74:LEU:HA	1.74	0.45
20:CT:55:ILE:O	20:CT:58:LYS:N	2.50	0.45
23:D1:11:ARG:HG3	23:D1:61:ARG:O	2.17	0.45
24:D2:30:ARG:CZ	24:D2:30:ARG:HB3	2.47	0.45
30:D8:29:LYS:O	30:D8:30:ARG:C	2.55	0.45
31:DA:123:G:H2'	31:DA:124:G:O4'	2.17	0.45
31:DA:132:G:H1	31:DA:147:U:H3	1.65	0.45
31:DA:154:G:N1	31:DA:154(A):C:N4	2.62	0.45
31:DA:157:U:OP2	31:DA:157:U:H6	2.00	0.45
31:DA:287:C:H2'	31:DA:288:C:H6	1.82	0.45
31:DA:384:U:H2'	31:DA:385:C:H6	1.80	0.45
31:DA:455:C:HO2'	31:DA:472:A:H2	1.64	0.45
31:DA:530:G:C5	31:DA:2022:U:H5''	2.52	0.45
31:DA:855:G:C5	31:DA:856:C:C5	3.05	0.45
31:DA:1174:A:OP1	31:DA:1175:U:OP1	2.35	0.45
31:DA:1368:G:C2	31:DA:1369:G:C8	3.05	0.45
31:DA:1822:G:H8	31:DA:1822:G:C5'	2.16	0.45
31:DA:2273:A:H2'	31:DA:2274:A:C8	2.52	0.45
31:DA:2517:C:O2'	31:DA:2542:A:N1	2.40	0.45
31:DA:2630:G:C8	31:DA:2894:G:C2	3.05	0.45
32:DB:27:C:N4	32:DB:28:C:C4	2.85	0.45
34:DE:152:LYS:HG2	39:DN:78:TYR:CE2	2.49	0.45
39:DN:68:GLU:HA	39:DN:86:PRO:HB2	1.98	0.45
43:DR:3:HIS:O	43:DR:4:LEU:CB	2.65	0.45
49:DX:80:ILE:O	49:DX:81:VAL:CB	2.65	0.45
49:DX:93:GLU:O	49:DX:93:GLU:HG3	2.16	0.45
51:DZ:108:PRO:O	51:DZ:109:ALA:C	2.56	0.45
51:DZ:150:LEU:C	51:DZ:151:HIS:HD2	2.20	0.45
1:AA:292:G:N2	1:AA:309:G:C4	2.85	0.45
1:AA:432:A:N7	1:AA:433:C:C4	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:521:G:O2'	1:AA:522:C:H5'	2.17	0.45
1:AA:989:C:H1'	1:AA:1016:A:H2	1.82	0.45
1:AA:1217:C:OP1	14:AN:9:LYS:HD2	2.17	0.45
1:AA:1503:A:O2'	1:AA:1504:G:C5'	2.64	0.45
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.51	0.45
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.99	0.45
15:AO:17:ARG:CG	15:AO:26:GLU:HG3	2.47	0.45
15:AO:62:GLN:O	15:AO:65:ARG:HB2	2.17	0.45
22:B0:84:LEU:HD12	22:B0:84:LEU:N	2.31	0.45
23:B1:11:ARG:HB3	23:B1:12:PRO:CD	2.47	0.45
24:B2:32:LEU:C	24:B2:32:LEU:HD12	2.37	0.45
31:BA:108:U:O2	31:BA:109:G:C8	2.70	0.45
31:BA:491:G:H2'	31:BA:492:A:C8	2.51	0.45
31:BA:580:C:H2'	31:BA:581:C:C6	2.52	0.45
31:BA:607:U:N3	31:BA:621:A:H2	1.95	0.45
31:BA:814:C:C4	41:BP:27:HIS:NE2	2.85	0.45
31:BA:934:G:H2'	31:BA:935:C:C6	2.52	0.45
31:BA:1042:G:H3'	31:BA:1043:C:O4'	2.17	0.45
31:BA:1174:A:OP1	31:BA:1175:U:OP1	2.35	0.45
31:BA:1448:G:H1'	31:BA:1528:A:H61	1.79	0.45
31:BA:1450(A):C:C4	31:BA:1451:C:N4	2.84	0.45
31:BA:1642:G:H2'	31:BA:1643:G:O4'	2.17	0.45
31:BA:1742:G:C8	31:BA:1742:G:C3'	2.99	0.45
31:BA:1815:A:H8	31:BA:1815:A:OP1	2.00	0.45
31:BA:1891:G:C6	31:BA:1892:C:N3	2.85	0.45
31:BA:2494:G:C4	31:BA:2495:G:C8	3.04	0.45
31:BA:2621:A:O2'	34:BE:159:HIS:HB2	2.17	0.45
31:BA:2895:U:C5	31:BA:2896:C:C5	3.04	0.45
33:BD:25:THR:HB	33:BD:82:ILE:H	1.82	0.45
33:BD:43:ARG:HH11	33:BD:44:ASN:ND2	2.15	0.45
33:BD:70:TRP:CZ2	33:BD:150:LYS:HD3	2.52	0.45
36:BG:13:GLU:O	36:BG:13:GLU:HG3	2.16	0.45
39:BN:78:TYR:N	39:BN:79:PRO:CD	2.80	0.45
45:BT:121:ILE:O	45:BT:124:ASP:HB2	2.17	0.45
48:BW:37:ARG:HG2	48:BW:38:TYR:CE2	2.51	0.45
49:BX:80:ILE:O	49:BX:81:VAL:CB	2.61	0.45
51:BZ:39:VAL:CG2	51:BZ:44:PHE:HB2	2.46	0.45
1:CA:39:G:C2	1:CA:40:C:C6	3.05	0.45
1:CA:292:G:N2	1:CA:309:G:C4	2.85	0.45
1:CA:342:C:H2'	1:CA:343:U:O4'	2.17	0.45
1:CA:355:C:H5'	1:CA:389:A:OP2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:664:G:N2	1:CA:741:G:H1	2.14	0.45
1:CA:877:C:H5''	8:CH:88:LYS:CD	2.45	0.45
1:CA:1088:G:C6	1:CA:1089:G:C6	3.04	0.45
1:CA:1187:G:C6	1:CA:1188:A:C6	3.05	0.45
1:CA:1392:G:H22	1:CA:1502:A:H8	1.63	0.45
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.17	0.45
4:CD:41:GLY:O	4:CD:43:HIS:N	2.51	0.45
6:CF:19:LEU:HD11	6:CF:59:TYR:CD2	2.52	0.45
6:CF:19:LEU:HD11	6:CF:59:TYR:CG	2.51	0.45
8:CH:33:GLU:HG2	8:CH:59:LEU:HD11	1.99	0.45
11:CK:21:ILE:CD1	11:CK:82:VAL:HG13	2.46	0.45
12:CL:46:LYS:O	12:CL:47:LYS:C	2.55	0.45
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.99	0.45
16:CP:51:VAL:O	16:CP:51:VAL:HG12	2.15	0.45
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	1.99	0.45
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.17	0.45
24:D2:18:PRO:O	24:D2:19:VAL:C	2.56	0.45
28:D6:48:VAL:O	28:D6:48:VAL:CG2	2.65	0.45
30:D8:4:MET:HE1	31:DA:593:G:O4'	2.17	0.45
31:DA:142:A:N6	31:DA:1596:A:H5'	2.33	0.45
31:DA:143:G:H2'	31:DA:143(A):C:C6	2.52	0.45
31:DA:176:G:O2'	31:DA:177:G:H5'	2.16	0.45
31:DA:671:C:H2'	31:DA:672:C:H6	1.80	0.45
31:DA:1005:C:C2	31:DA:1143:A:C6	3.05	0.45
31:DA:1110:G:OP1	31:DA:1110:G:H4'	2.17	0.45
31:DA:1313:U:H2'	31:DA:1610:A:C2	2.52	0.45
31:DA:1417:C:H2'	31:DA:1418:G:H5'	1.98	0.45
31:DA:1605:C:O4'	31:DA:1610:A:C6	2.70	0.45
31:DA:1608:A:H1'	31:DA:1610:A:OP2	2.17	0.45
31:DA:1695:G:N2	31:DA:1696:G:C8	2.84	0.45
31:DA:2228:G:C5	31:DA:2229:C:C5	3.04	0.45
31:DA:2258:C:H4'	31:DA:2259:G:OP2	2.17	0.45
31:DA:2746:U:H4'	37:DH:138:LYS:HB3	1.98	0.45
33:DD:34:VAL:HG13	33:DD:34:VAL:O	2.17	0.45
34:DE:119:ARG:HD2	34:DE:120:TRP:CE2	2.51	0.45
35:DF:78:ILE:H	35:DF:78:ILE:CD1	2.21	0.45
38:DI:79:ILE:HA	38:DI:80:PRO:HD3	1.67	0.45
40:DO:12:ASP:C	40:DO:99:PHE:HE2	2.21	0.45
42:DQ:23:GLY:O	42:DQ:99:PRO:O	2.35	0.45
44:DS:42:ASP:C	44:DS:44:LYS:N	2.70	0.45
44:DS:89:ARG:HE	44:DS:90:GLY:N	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:45:PHE:CE2	45:DT:63:VAL:HG22	2.52	0.45
47:DV:27:ALA:O	47:DV:28:GLU:C	2.56	0.45
47:DV:72:VAL:CG1	47:DV:73:SER:N	2.74	0.45
48:DW:46:PHE:O	48:DW:50:VAL:HG12	2.17	0.45
50:DY:45:VAL:HG22	50:DY:62:GLU:CA	2.46	0.45
50:DY:76:CYS:O	50:DY:96:ILE:HD12	2.17	0.45
51:DZ:73:GLN:HG2	51:DZ:87:ASP:CG	2.37	0.45
51:DZ:135:GLU:O	51:DZ:136:PHE:HB3	2.16	0.45
1:AA:102:G:H2'	1:AA:103:C:C6	2.42	0.44
1:AA:176:C:H2'	1:AA:177:C:H6	1.77	0.44
1:AA:234:C:C2	1:AA:235:C:C5	3.06	0.44
1:AA:303:A:H2'	1:AA:304:U:O4'	2.17	0.44
1:AA:407:G:HO2'	4:AD:116:GLN:HG3	1.83	0.44
1:AA:620:C:C2	4:AD:135:LEU:HG	2.51	0.44
1:AA:764:C:H2'	1:AA:765:G:O5'	2.17	0.44
1:AA:929:G:H1	1:AA:1388:C:N4	2.07	0.44
1:AA:1158:C:O2	1:AA:1158:C:C2'	2.65	0.44
1:AA:1238:A:N6	1:AA:1299:A:N6	2.61	0.44
4:AD:196:LEU:HD12	4:AD:196:LEU:N	2.32	0.44
7:AG:111:ARG:CZ	7:AG:122:HIS:HB3	2.47	0.44
8:AH:10:LEU:N	8:AH:10:LEU:CD2	2.80	0.44
11:AK:21:ILE:CD1	11:AK:82:VAL:HG13	2.48	0.44
16:AP:9:PHE:CE2	16:AP:18:ARG:HB2	2.52	0.44
17:AQ:18:THR:OG1	17:AQ:69:LYS:NZ	2.46	0.44
23:B1:67:ILE:HD12	23:B1:68:PRO:HD2	1.99	0.44
24:B2:56:GLN:CD	24:B2:56:GLN:N	2.70	0.44
25:B3:52:HIS:CD2	32:BB:83:G:H4'	2.51	0.44
30:B8:39:LYS:O	30:B8:39:LYS:CG	2.65	0.44
31:BA:107:C:N3	31:BA:108:U:C5	2.85	0.44
31:BA:174:C:C2'	31:BA:175:G:H5''	2.47	0.44
31:BA:251:A:C5	31:BA:252:G:H1'	2.52	0.44
31:BA:478:A:C6	31:BA:480:A:C6	3.05	0.44
31:BA:839:U:H2'	31:BA:840:C:C6	2.52	0.44
31:BA:1049:C:H1'	31:BA:1113:U:O2'	2.17	0.44
31:BA:1107:G:C6	31:BA:1108:U:N3	2.85	0.44
31:BA:1478:G:O2'	31:BA:1558:A:H2	2.00	0.44
31:BA:1673:U:C4	34:BE:129:HIS:HD2	2.34	0.44
31:BA:1741:A:N7	31:BA:1742:G:N1	2.65	0.44
31:BA:1865:G:H5''	31:BA:1865:G:H8	1.83	0.44
31:BA:2023:G:C2	31:BA:2024:G:C8	3.05	0.44
31:BA:2552:U:C2	31:BA:2554:U:C5'	3.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2889:C:H2'	31:BA:2891:G:O4'	2.17	0.44
32:BB:1:U:C6	32:BB:2:C:C5	3.05	0.44
32:BB:8:U:O2'	44:BS:40:ILE:HD13	2.17	0.44
32:BB:33:G:C2	32:BB:50:G:C2	3.05	0.44
33:BD:108:PRO:HD2	33:BD:111:LEU:HG	2.00	0.44
33:BD:121:PRO:HB3	33:BD:135:PHE:CE1	2.52	0.44
33:BD:132:PRO:HG3	33:BD:190:TYR:CE1	2.53	0.44
38:BI:28:ASN:C	38:BI:32:PRO:HG2	2.37	0.44
38:BI:138:ILE:HG22	38:BI:139:GLN:H	1.82	0.44
42:BQ:8:LYS:CD	42:BQ:9:TYR:H	2.29	0.44
43:BR:2:ARG:CB	43:BR:5:LYS:HE3	2.46	0.44
49:BX:44:GLU:HB2	49:BX:49:VAL:O	2.17	0.44
50:BY:16:ALA:HA	50:BY:21:LYS:HD2	1.99	0.44
51:BZ:124:ILE:CG1	51:BZ:125:LEU:N	2.80	0.44
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.49	0.44
1:CA:376:G:N3	1:CA:389:A:C2	2.84	0.44
1:CA:451:A:C5	1:CA:481:G:C6	3.06	0.44
1:CA:473:G:C2	1:CA:474:G:C8	3.04	0.44
1:CA:509:A:C2	1:CA:510:A:C2	3.05	0.44
1:CA:552:U:H2'	1:CA:553:A:H5'	1.97	0.44
1:CA:718:G:H1'	11:CK:116:HIS:HA	1.99	0.44
1:CA:735:C:H6	1:CA:735:C:O5'	2.00	0.44
1:CA:1260:C:H4'	1:CA:1284:C:H5'	1.99	0.44
10:CJ:22:LYS:C	10:CJ:24:VAL:H	2.20	0.44
14:CN:13:THR:N	14:CN:14:PRO:CD	2.80	0.44
18:CR:25:THR:O	18:CR:26:LEU:HD23	2.17	0.44
23:D1:76:ARG:CB	23:D1:78:LYS:HE3	2.46	0.44
24:D2:47:ASN:C	24:D2:49:LYS:N	2.69	0.44
29:D7:19:ARG:HG2	29:D7:19:ARG:NH1	2.33	0.44
31:DA:732:C:O2'	31:DA:733:G:H5'	2.17	0.44
31:DA:768:G:C6	31:DA:769:G:C5	3.05	0.44
31:DA:810:U:O2	41:DP:33:ARG:HD3	2.16	0.44
31:DA:825:C:C6	31:DA:825:C:C3'	3.00	0.44
31:DA:892:G:C5	31:DA:893:C:C5	3.05	0.44
31:DA:1178:C:H2'	31:DA:1179:C:H6	1.81	0.44
31:DA:1336:A:H2'	31:DA:1337:G:C8	2.52	0.44
31:DA:1696:G:C3'	31:DA:1697:G:H5''	2.47	0.44
31:DA:1742:G:N7	31:DA:1743:C:C2	2.84	0.44
31:DA:1839:G:C8	31:DA:1839:G:C5'	2.99	0.44
31:DA:1952:A:C5	40:DO:22:ILE:HD11	2.51	0.44
31:DA:2019:A:C2'	31:DA:2020:A:O5'	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2287:A:N1	31:DA:2346:A:H2	2.15	0.44
31:DA:2621:A:O2'	34:DE:159:HIS:HB2	2.18	0.44
31:DA:2839:G:H5'	43:DR:46:GLY:HA2	1.98	0.44
34:DE:4:ILE:O	34:DE:4:ILE:HG23	2.17	0.44
35:DF:24:LEU:O	35:DF:25:PRO:C	2.56	0.44
36:DG:118:ARG:HB2	36:DG:181:ARG:CZ	2.48	0.44
43:DR:41:ALA:HB1	43:DR:114:VAL:CG2	2.46	0.44
44:DS:20:ARG:HA	44:DS:20:ARG:HD3	1.64	0.44
44:DS:97:ARG:HD2	44:DS:98:VAL:N	2.32	0.44
47:DV:79:VAL:HG23	47:DV:82:ARG:HD3	1.99	0.44
1:AA:435:C:N4	1:AA:436:C:H41	2.14	0.44
1:AA:450:G:OP1	16:AP:43:LYS:NZ	2.50	0.44
1:AA:458:C:H2'	1:AA:460:G:C8	2.52	0.44
1:AA:562:C:N4	1:AA:884:U:C6	2.85	0.44
1:AA:602:A:C2	1:AA:637:G:C2	3.05	0.44
1:AA:683:G:C6	1:AA:684:A:C6	3.05	0.44
1:AA:798:G:OP1	11:AK:122:LYS:NZ	2.50	0.44
1:AA:1210:C:H4'	1:AA:1214:C:C4	2.53	0.44
1:AA:1316:G:H1	19:AS:5:LEU:CD2	2.30	0.44
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.52	0.44
2:AB:74:LYS:C	2:AB:78:GLN:HG3	2.38	0.44
6:AF:6:VAL:C	6:AF:7:ASN:HD22	2.20	0.44
7:AG:37:ASN:HD21	9:AI:40:LEU:HD22	1.82	0.44
12:AL:25:PRO:O	12:AL:27:LEU:HD22	2.17	0.44
13:AM:52:GLU:O	13:AM:56:LEU:HB2	2.17	0.44
22:B0:14:ARG:HB2	22:B0:14:ARG:HE	1.44	0.44
30:B8:2:PRO:N	31:BA:591:C:O2	2.50	0.44
31:BA:49:A:C4'	31:BA:50:U:H5'	2.45	0.44
31:BA:154:G:H8	31:BA:154:G:O5'	2.01	0.44
31:BA:189:G:H2'	31:BA:205:G:N2	2.33	0.44
31:BA:528:A:C2	31:BA:2042:A:H2'	2.52	0.44
31:BA:705:A:H2'	31:BA:706:A:O4'	2.18	0.44
31:BA:769:G:O2'	31:BA:770:G:H5'	2.17	0.44
31:BA:814:C:N4	41:BP:27:HIS:NE2	2.64	0.44
31:BA:826:U:OP1	31:BA:2428:G:H3'	2.16	0.44
31:BA:996:A:O4'	46:BU:92:ARG:NH2	2.50	0.44
31:BA:1115:G:H2'	31:BA:1116:C:O4'	2.17	0.44
31:BA:1275:A:N3	31:BA:1276:A:H1'	2.32	0.44
31:BA:1816:G:H8	33:BD:62:TYR:CZ	2.34	0.44
31:BA:1857:G:H2'	31:BA:1858:G:O4'	2.17	0.44
31:BA:1899:G:C2'	31:BA:1900:A:OP2	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2334:G:H4'	31:BA:2335:A:OP2	2.16	0.44
31:BA:2543:G:H2'	31:BA:2544:G:C8	2.52	0.44
31:BA:2746:U:H4'	37:BH:138:LYS:HB3	1.99	0.44
32:BB:93:G:H2'	32:BB:94:C:C6	2.52	0.44
35:BF:41:LEU:HD23	35:BF:41:LEU:N	2.33	0.44
36:BG:96:ARG:HB2	36:BG:97:ASP:H	1.64	0.44
40:BO:87:ILE:HD13	40:BO:87:ILE:HA	1.58	0.44
41:BP:35:HIS:O	41:BP:36:LYS:CB	2.65	0.44
42:BQ:72:LYS:HB3	42:BQ:94:VAL:HG23	1.99	0.44
43:BR:8:ARG:HB3	43:BR:9:LYS:H	1.59	0.44
43:BR:9:LYS:O	43:BR:10:LEU:HD23	2.17	0.44
43:BR:34:ILE:HA	43:BR:34:ILE:HD12	1.60	0.44
43:BR:36:THR:HB	43:BR:37:THR:H	1.54	0.44
44:BS:101:LEU:O	44:BS:102:ALA:O	2.35	0.44
47:BV:79:VAL:HG23	47:BV:82:ARG:HD2	1.99	0.44
51:BZ:4:ARG:HD3	51:BZ:60:GLU:OE1	2.18	0.44
1:CA:267:C:OP1	17:CQ:67:LYS:HD2	2.16	0.44
1:CA:299:G:C6	1:CA:300:A:N1	2.86	0.44
1:CA:359:U:H2'	1:CA:360:A:H8	1.81	0.44
1:CA:411:A:OP1	4:CD:30:LYS:NZ	2.49	0.44
1:CA:562:C:H4'	1:CA:563:A:O5'	2.16	0.44
1:CA:564:C:H2'	1:CA:565:U:H5'	1.99	0.44
1:CA:615:C:H2'	1:CA:616:G:O4'	2.18	0.44
1:CA:989:C:H1'	1:CA:1016:A:H2	1.82	0.44
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.82	0.44
1:CA:1217:C:OP1	14:CN:9:LYS:HD2	2.17	0.44
2:CB:163:PHE:HD2	2:CB:185:ILE:CG1	2.30	0.44
4:CD:61:LYS:NZ	4:CD:62:GLN:NE2	2.66	0.44
8:CH:91:ARG:NH1	17:CQ:33:GLY:HA3	2.33	0.44
8:CH:100:ILE:HA	8:CH:101:PRO:HD3	1.83	0.44
12:CL:22:SER:O	12:CL:24:VAL:N	2.49	0.44
12:CL:102:ARG:CG	12:CL:102:ARG:NH1	2.77	0.44
23:D1:10:LYS:CG	23:D1:11:ARG:N	2.80	0.44
23:D1:13:ILE:HG21	23:D1:63:ALA:HB3	1.99	0.44
24:D2:29:LYS:HZ2	49:DX:9:LEU:HA	1.81	0.44
24:D2:30:ARG:HA	24:D2:33:MET:SD	2.58	0.44
25:D3:52:HIS:CD2	32:DB:83:G:H5''	2.52	0.44
31:DA:90:U:O2'	31:DA:92:A:C5'	2.66	0.44
31:DA:174:C:C2'	31:DA:175:G:H5''	2.47	0.44
31:DA:697:C:C2	31:DA:698:C:C5	3.05	0.44
31:DA:792:G:C3'	31:DA:793:A:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:816:C:H2'	31:DA:817:C:H6	1.82	0.44
31:DA:1042:G:H3'	31:DA:1043:C:O4'	2.17	0.44
31:DA:1049:C:O2	31:DA:1049:C:H2'	2.16	0.44
31:DA:1528(A):A:H2'	31:DA:1529:G:O4'	2.17	0.44
31:DA:1578:U:C2'	31:DA:1579:A:H5'	2.47	0.44
31:DA:1819:A:OP1	33:DD:158:ALA:HB2	2.17	0.44
31:DA:1857:G:H2'	31:DA:1858:G:O4'	2.17	0.44
31:DA:2287:A:H2	31:DA:2346:A:N1	2.13	0.44
31:DA:2452:C:N4	31:DA:2453:A:N6	2.65	0.44
31:DA:2552:U:C2	31:DA:2554:U:C5'	3.00	0.44
31:DA:2577:A:H5''	31:DA:2578:G:C5'	2.43	0.44
33:DD:25:THR:O	33:DD:27:THR:CB	2.65	0.44
33:DD:35:LYS:HD3	33:DD:64:ILE:N	2.32	0.44
33:DD:35:LYS:CA	33:DD:64:ILE:HG22	2.46	0.44
33:DD:69:ARG:NH2	33:DD:128:GLY:O	2.44	0.44
33:DD:267:SER:O	33:DD:268:ARG:CB	2.65	0.44
34:DE:65:GLY:HA2	34:DE:70:ALA:HB2	1.97	0.44
36:DG:55:LYS:NZ	36:DG:148:MET:O	2.50	0.44
37:DH:43:VAL:O	37:DH:43:VAL:CG2	2.62	0.44
37:DH:163:TYR:HD1	37:DH:163:TYR:H	1.64	0.44
38:DI:27:ARG:CG	38:DI:27:ARG:HH11	2.30	0.44
41:DP:48:PRO:CG	41:DP:49:ARG:H	2.22	0.44
42:DQ:70:PRO:CA	42:DQ:95:ALA:HB2	2.47	0.44
42:DQ:140:ALA:CB	51:DZ:53:ILE:HG13	2.31	0.44
44:DS:16:ASN:HB3	44:DS:20:ARG:HH21	1.82	0.44
44:DS:28:VAL:O	44:DS:89:ARG:CG	2.66	0.44
45:DT:16:ARG:H	45:DT:79:HIS:HD2	1.65	0.44
46:DU:95:LEU:HD22	47:DV:4:ILE:HD13	1.97	0.44
47:DV:66:ARG:HH11	47:DV:66:ARG:HG3	1.81	0.44
51:DZ:121:HIS:ND1	51:DZ:169:GLU:OE2	2.50	0.44
1:AA:66:G:H5'	1:AA:173:U:O4	2.17	0.44
1:AA:189(K):U:H2'	1:AA:189(L):G:H8	1.82	0.44
1:AA:255:G:H2'	1:AA:256:U:C6	2.53	0.44
1:AA:271:C:O2'	1:AA:272:C:H5'	2.17	0.44
1:AA:382:A:C2	1:AA:383:A:C5	3.06	0.44
1:AA:718:G:H1'	11:AK:116:HIS:HA	1.98	0.44
1:AA:1137:C:H3'	1:AA:1137:C:H6	1.82	0.44
1:AA:1289:A:H2'	1:AA:1290:G:O4'	2.18	0.44
1:AA:1496:C:H4'	31:BA:1920:C:O2'	2.17	0.44
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.71	0.44
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:118:LEU:HD11	2:AB:141:GLU:HG2	1.99	0.44
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.17	0.44
5:AE:11:ILE:HG22	5:AE:12:LEU:N	2.32	0.44
8:AH:25:ASP:HA	8:AH:59:LEU:O	2.17	0.44
10:AJ:50:ILE:N	10:AJ:50:ILE:HD13	2.33	0.44
11:AK:57:THR:HG23	11:AK:58:PRO:HD2	2.00	0.44
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.82	0.44
27:B5:56:LYS:O	27:B5:57:VAL:O	2.35	0.44
28:B6:33:LYS:HD3	28:B6:33:LYS:HA	1.71	0.44
31:BA:327:G:C2	31:BA:336:C:C2	3.05	0.44
31:BA:357:A:N3	31:BA:358:U:O2	2.50	0.44
31:BA:515:A:H1'	31:BA:581:C:H1'	1.99	0.44
31:BA:1108:U:C4	31:BA:1109:C:O2	2.71	0.44
31:BA:1241:A:H2'	31:BA:1242:A:O5'	2.17	0.44
31:BA:1484:G:N2	31:BA:1505:C:N4	2.62	0.44
31:BA:1510:G:H2'	31:BA:1511:C:C6	2.53	0.44
31:BA:1754:C:OP1	45:BT:96:ARG:NH1	2.50	0.44
31:BA:2099:U:O2	31:BA:2099:U:H2'	2.17	0.44
31:BA:2439:A:C8	31:BA:2439:A:C5'	3.00	0.44
32:BB:78:A:H2'	32:BB:79:C:O4'	2.18	0.44
33:BD:25:THR:O	33:BD:27:THR:CB	2.64	0.44
33:BD:27:THR:O	33:BD:28:GLU:HB2	2.17	0.44
33:BD:36:PRO:HA	33:BD:62:TYR:O	2.18	0.44
34:BE:44:TYR:O	34:BE:45:THR:HB	2.17	0.44
36:BG:13:GLU:O	36:BG:14:GLU:CB	2.65	0.44
36:BG:60:LEU:HA	36:BG:63:ILE:HG12	2.00	0.44
37:BH:44:VAL:O	37:BH:46:GLU:CD	2.55	0.44
37:BH:47:GLU:C	37:BH:49:VAL:H	2.21	0.44
38:BI:72:LEU:HD12	38:BI:138:ILE:CG2	2.36	0.44
39:BN:46:VAL:CG1	39:BN:48:MET:HG3	2.47	0.44
42:BQ:7:MET:O	42:BQ:10:ARG:NE	2.50	0.44
42:BQ:141:GLN:CD	51:BZ:72:ARG:HG2	2.38	0.44
43:BR:41:ALA:O	43:BR:44:LEU:N	2.49	0.44
46:BU:90:VAL:O	46:BU:91:ASP:C	2.55	0.44
49:BX:60:ARG:CG	49:BX:72:LYS:H	2.30	0.44
50:BY:8:LYS:HB2	50:BY:28:LYS:HZ3	1.83	0.44
1:CA:155:C:C2	1:CA:156:G:N7	2.86	0.44
1:CA:176:C:H2'	1:CA:177:C:H6	1.80	0.44
1:CA:552:U:C4'	12:CL:86:ARG:HG2	2.44	0.44
1:CA:935:A:H2'	1:CA:936:C:C6	2.52	0.44
1:CA:1077:G:C6	1:CA:1081:G:O6	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1116:C:N4	1:CA:1117:G:N7	2.66	0.44
1:CA:1169:A:C2'	1:CA:1170:A:H8	2.29	0.44
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.82	0.44
2:CB:187:LEU:HA	2:CB:201:ILE:O	2.18	0.44
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.52	0.44
4:CD:190:ASP:O	4:CD:191:ARG:C	2.55	0.44
5:CE:18:ARG:HE	5:CE:25:ARG:HB3	1.82	0.44
6:CF:19:LEU:HD21	6:CF:59:TYR:CE2	2.53	0.44
8:CH:10:LEU:HD23	8:CH:10:LEU:H	1.81	0.44
9:CI:118:LYS:HZ3	9:CI:118:LYS:HB3	1.82	0.44
15:CO:20:GLY:O	15:CO:21:ASP:HB3	2.16	0.44
16:CP:1:MET:HG2	16:CP:2:VAL:O	2.17	0.44
17:CQ:45:HIS:O	17:CQ:73:VAL:HG23	2.17	0.44
17:CQ:52:LYS:HD2	17:CQ:52:LYS:H	1.83	0.44
20:CT:73:HIS:O	20:CT:74:LYS:C	2.55	0.44
22:D0:11:ARG:O	22:D0:14:ARG:NH2	2.51	0.44
22:D0:51:VAL:N	22:D0:62:LEU:HD12	2.32	0.44
23:D1:12:PRO:HD2	23:D1:62:VAL:CG2	2.42	0.44
23:D1:18:ILE:HD13	31:DA:188:G:OP1	2.18	0.44
23:D1:26:ARG:HB2	23:D1:34:THR:HB	2.00	0.44
24:D2:53:LEU:HA	24:D2:56:GLN:NE2	2.33	0.44
27:D5:25:LEU:HD11	48:DW:19:LEU:HB3	2.00	0.44
27:D5:36:CYS:O	27:D5:38:ALA:N	2.44	0.44
30:D8:39:LYS:HE2	30:D8:39:LYS:O	2.18	0.44
31:DA:17:G:C6	31:DA:18:C:N4	2.86	0.44
31:DA:196:A:C5	31:DA:805:G:C6	3.05	0.44
31:DA:196:A:C4'	41:DP:46:LYS:HE2	2.47	0.44
31:DA:221:A:N6	31:DA:265:A:C8	2.85	0.44
31:DA:262:A:H2'	31:DA:263:C:O4'	2.17	0.44
31:DA:271(H):G:O6	31:DA:271(Q):G:O6	2.36	0.44
31:DA:320:A:OP2	35:DF:137:LYS:HE2	2.17	0.44
31:DA:357:A:N3	31:DA:358:U:O2	2.50	0.44
31:DA:745:G:P	34:DE:133:LYS:HE3	2.58	0.44
31:DA:778:G:C5	31:DA:779:U:C4	3.06	0.44
31:DA:1122:G:C2	31:DA:1123:C:C6	3.06	0.44
31:DA:1416:G:HO2'	31:DA:1417:C:H6	1.60	0.44
31:DA:1549:C:O2'	31:DA:1550:C:H5'	2.18	0.44
31:DA:1784:A:H4'	31:DA:1785:A:C5'	2.48	0.44
31:DA:1865:G:H5'	31:DA:1866:C:OP2	2.17	0.44
31:DA:1884:A:C2	31:DA:1885:A:C4	3.05	0.44
31:DA:1902:C:H4'	33:DD:244:ARG:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1956:U:C2'	31:DA:1957:C:H5'	2.47	0.44
31:DA:2296:U:H4'	31:DA:2297:C:OP1	2.16	0.44
31:DA:2468:G:C6	31:DA:2481:G:C4	3.05	0.44
31:DA:2555:U:C5	31:DA:2556:C:C2	3.05	0.44
33:DD:35:LYS:CG	33:DD:64:ILE:H	2.30	0.44
36:DG:6:ALA:HB3	36:DG:104:GLU:OE1	2.16	0.44
37:DH:41:MET:HG3	37:DH:53:GLU:O	2.18	0.44
37:DH:85:LYS:HZ3	37:DH:145:ALA:HA	1.82	0.44
39:DN:78:TYR:N	39:DN:79:PRO:CD	2.81	0.44
41:DP:85:LEU:HB3	41:DP:114:ILE:HD12	1.98	0.44
41:DP:97:PRO:O	41:DP:98:GLU:CB	2.46	0.44
44:DS:92:TYR:HB2	44:DS:97:ARG:HH22	1.82	0.44
45:DT:24:PRO:HA	45:DT:49:VAL:O	2.17	0.44
45:DT:28:VAL:O	45:DT:29:ARG:CD	2.65	0.44
45:DT:38:ASN:ND2	45:DT:38:ASN:C	2.71	0.44
46:DU:50:ARG:NH2	47:DV:75:PHE:CD2	2.85	0.44
46:DU:61:TRP:CE2	46:DU:94:ASN:HA	2.52	0.44
46:DU:83:LEU:C	46:DU:88:ILE:HD11	2.37	0.44
47:DV:1:MET:H1	47:DV:44:LYS:HD2	1.81	0.44
49:DX:38:GLU:N	49:DX:38:GLU:CD	2.69	0.44
51:DZ:44:PHE:C	51:DZ:44:PHE:CD1	2.90	0.44
51:DZ:54:HIS:ND1	51:DZ:101:PRO:HD3	2.32	0.44
1:AA:61:G:OP1	20:AT:10:LEU:HD11	2.18	0.44
1:AA:69:G:C2	1:AA:70:G:C8	3.06	0.44
1:AA:731:G:C6	1:AA:732:C:N4	2.86	0.44
1:AA:750:G:H21	15:AO:24:SER:H	1.65	0.44
1:AA:865:A:H2	1:AA:918:A:H4'	1.82	0.44
1:AA:930:C:C4	1:AA:931:C:C5	3.06	0.44
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.82	0.44
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.33	0.44
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.91	0.44
2:AB:163:PHE:HD2	2:AB:185:ILE:CG1	2.31	0.44
3:AC:165:THR:HG23	3:AC:165:THR:O	2.18	0.44
4:AD:43:HIS:CE1	4:AD:46:LYS:HZ2	2.35	0.44
4:AD:61:LYS:CA	4:AD:203:VAL:HG22	2.48	0.44
4:AD:159:ARG:O	4:AD:163:GLU:N	2.51	0.44
6:AF:81:ILE:O	6:AF:82:ARG:C	2.55	0.44
9:AI:21:PRO:HA	9:AI:58:ARG:O	2.16	0.44
11:AK:57:THR:CG2	11:AK:58:PRO:HD2	2.47	0.44
12:AL:46:LYS:CG	12:AL:47:LYS:N	2.80	0.44
16:AP:68:ASP:C	16:AP:70:ALA:H	2.20	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:28:GLY:C	23:B1:30:VAL:H	2.19	0.44
23:B1:41:ARG:NH2	31:BA:205:G:O6	2.50	0.44
24:B2:53:LEU:HA	24:B2:56:GLN:NE2	2.32	0.44
25:B3:39:ASP:OD1	25:B3:44:ARG:HG3	2.16	0.44
29:B7:15:THR:CG2	29:B7:16:HIS:CE1	3.01	0.44
29:B7:31:LEU:O	29:B7:32:LYS:C	2.54	0.44
31:BA:78:A:C6	31:BA:109:G:C6	3.05	0.44
31:BA:130:C:H2'	31:BA:131:G:H5''	1.99	0.44
31:BA:271(F):C:C4	31:BA:271(G):C:C5	3.06	0.44
31:BA:529:A:N6	31:BA:2041:U:C2	2.86	0.44
31:BA:782:A:H5'	31:BA:783:A:C2	2.53	0.44
31:BA:786:C:O2'	31:BA:787:U:H5'	2.17	0.44
31:BA:966:G:H2'	31:BA:967:C:C6	2.53	0.44
31:BA:993:G:N3	47:BV:91:TYR:HE1	2.16	0.44
31:BA:1497:U:O2	31:BA:1497:U:C2'	2.64	0.44
31:BA:1721:G:N1	31:BA:1739:U:OP2	2.51	0.44
31:BA:1948:G:H2'	31:BA:1949:G:C5'	2.47	0.44
31:BA:2006:C:O5'	31:BA:2006:C:H6	2.00	0.44
31:BA:2226:C:O5'	31:BA:2226:C:H6	2.01	0.44
31:BA:2306:C:OP2	31:BA:2307:G:C8	2.70	0.44
36:BG:135:LEU:HD23	36:BG:140:ILE:HD11	1.99	0.44
39:BN:121:LYS:HD2	39:BN:123:TYR:CE1	2.51	0.44
41:BP:131:SER:O	41:BP:132:LYS:C	2.55	0.44
45:BT:41:ARG:NH1	45:BT:43:GLN:HB2	2.32	0.44
47:BV:79:VAL:CG2	47:BV:82:ARG:HD2	2.48	0.44
49:BX:49:VAL:CG1	49:BX:87:GLN:HG2	2.47	0.44
49:BX:65:ARG:HA	49:BX:65:ARG:HE	1.82	0.44
49:BX:82:GLN:OE1	49:BX:83:VAL:HG22	2.18	0.44
1:CA:103:C:OP2	20:CT:14:LYS:HD3	2.18	0.44
1:CA:134:A:N6	16:CP:25:ARG:NH1	2.65	0.44
1:CA:253:U:H2'	1:CA:254:G:H8	1.82	0.44
1:CA:450:G:H1	1:CA:483:C:N4	2.14	0.44
1:CA:734:G:H2'	1:CA:735:C:C6	2.52	0.44
2:CB:68:ILE:HG13	2:CB:161:ALA:HB3	1.98	0.44
4:CD:22:LYS:HB2	4:CD:26:CYS:SG	2.56	0.44
6:CF:12:PRO:HB3	6:CF:58:GLY:N	2.32	0.44
6:CF:100:ASN:ND2	18:CR:23:LYS:HE3	2.32	0.44
16:CP:36:ILE:HG13	16:CP:36:ILE:O	2.18	0.44
28:D6:16:CYS:O	28:D6:17:LYS:CB	2.57	0.44
28:D6:46:HIS:ND1	31:DA:2371:G:O2'	2.49	0.44
31:DA:806:C:OP2	41:DP:39:LYS:CG	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:995:C:O2	39:DN:4:TYR:OH	2.34	0.44
31:DA:1368:G:N2	31:DA:1369:G:C4	2.85	0.44
31:DA:1548:C:O2'	31:DA:1549:C:H5'	2.18	0.44
31:DA:2409:G:H2'	31:DA:2410:G:O4'	2.17	0.44
31:DA:2741:A:H2'	31:DA:2742:C:O4'	2.16	0.44
32:DB:45:A:C2'	32:DB:46:A:H5'	2.48	0.44
33:DD:166:GLN:CA	33:DD:166:GLN:HE21	2.30	0.44
33:DD:267:SER:HA	33:DD:270:ILE:CD1	2.48	0.44
34:DE:101:ARG:HD3	34:DE:101:ARG:HA	1.82	0.44
34:DE:147:PRO:HB2	34:DE:149:ARG:HG2	1.98	0.44
35:DF:106:ARG:H	35:DF:106:ARG:HG2	1.53	0.44
36:DG:125:PHE:HE2	36:DG:173:LEU:HD12	1.80	0.44
37:DH:94:TYR:N	37:DH:94:TYR:CD1	2.84	0.44
39:DN:40:PRO:CA	46:DU:64:ARG:NH2	2.78	0.44
39:DN:65:LYS:NZ	39:DN:66:LYS:H	2.14	0.44
44:DS:24:LEU:HB3	44:DS:85:VAL:CG1	2.47	0.44
1:AA:664:G:N2	1:AA:741:G:H1	2.15	0.44
1:AA:939:G:H1'	1:AA:1375:A:C2	2.53	0.44
1:AA:1128:C:N3	1:AA:1139:G:C6	2.86	0.44
1:AA:1194:U:H4'	5:AE:22:GLY:HA2	1.99	0.44
1:AA:1320:C:H5'	19:AS:70:LYS:CG	2.48	0.44
1:AA:1409:C:H4'	31:BA:1915:U:O4	2.18	0.44
2:AB:19:HIS:CG	2:AB:20:GLU:N	2.85	0.44
4:AD:19:LEU:HB2	4:AD:21:LEU:HD23	1.98	0.44
5:AE:57:LYS:O	5:AE:61:TYR:CD2	2.70	0.44
5:AE:127:ASN:O	5:AE:131:ILE:HG12	2.18	0.44
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.99	0.44
10:AJ:24:VAL:O	10:AJ:28:ARG:HG3	2.18	0.44
11:AK:57:THR:HG22	11:AK:59:TYR:N	2.32	0.44
11:AK:91:ARG:O	11:AK:95:ILE:HG12	2.17	0.44
12:AL:60:LEU:HD13	12:AL:60:LEU:HA	1.80	0.44
14:AN:3:ARG:HB3	14:AN:3:ARG:NH1	2.32	0.44
18:AR:71:LYS:O	18:AR:72:ARG:C	2.55	0.44
23:B1:33:LYS:C	23:B1:34:THR:HG22	2.38	0.44
27:B5:34:PRO:HG3	31:BA:2885:C:O2'	2.18	0.44
27:B5:40:LYS:HE3	27:B5:49:CYS:SG	2.57	0.44
30:B8:30:ARG:NH2	41:BP:62:LEU:HB2	2.33	0.44
31:BA:176:G:O2'	31:BA:177:G:H5'	2.17	0.44
31:BA:614:U:O2	31:BA:614:U:O4'	2.35	0.44
31:BA:951:C:C2'	31:BA:952:G:H5'	2.48	0.44
31:BA:1667:G:H22	31:BA:1992:G:H5''	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1816:G:C8	33:BD:62:TYR:CZ	3.06	0.44
31:BA:2101:G:C6	31:BA:2102:U:C4	3.06	0.44
31:BA:2262:U:H4'	31:BA:2328:A:C2	2.53	0.44
31:BA:2347:C:H2'	31:BA:2348:U:C6	2.53	0.44
31:BA:2473:U:C4	31:BA:2474:C:C5	3.06	0.44
33:BD:83:GLU:HB2	33:BD:92:ILE:HD12	1.98	0.44
34:BE:28:ALA:HB3	34:BE:93:VAL:CG2	2.48	0.44
35:BF:157:VAL:HB	35:BF:194:MET:HB3	1.99	0.44
36:BG:19:LEU:HG	36:BG:175:LEU:CD1	2.47	0.44
36:BG:96:ARG:O	36:BG:99:MET:HB3	2.17	0.44
37:BH:99:VAL:O	37:BH:102:ALA:HB3	2.18	0.44
39:BN:78:TYR:CD1	39:BN:79:PRO:CB	3.00	0.44
40:BO:61:VAL:O	40:BO:84:ALA:HA	2.17	0.44
45:BT:33:LYS:HA	45:BT:33:LYS:HD3	1.47	0.44
46:BU:92:ARG:NH2	47:BV:11:GLN:H	2.14	0.44
49:BX:62:LYS:O	49:BX:62:LYS:HG3	2.17	0.44
50:BY:75:ILE:CD1	50:BY:79:CYS:C	2.80	0.44
1:CA:79:G:H1'	1:CA:80:G:O5'	2.18	0.44
1:CA:284:G:H2'	1:CA:285:G:H8	1.82	0.44
1:CA:356:A:C2	1:CA:368:U:O2	2.70	0.44
1:CA:414:A:H2'	1:CA:415:A:O4'	2.17	0.44
1:CA:577:G:C1'	1:CA:816:A:C4	3.01	0.44
1:CA:601:C:H2'	1:CA:602:A:C8	2.52	0.44
1:CA:881:G:P	12:CL:12:ARG:NH2	2.90	0.44
1:CA:948:C:C5	13:CM:106:ASN:ND2	2.85	0.44
1:CA:1157:A:N3	1:CA:1181:G:N3	2.65	0.44
1:CA:1245:A:C6	1:CA:1246:C:C4	3.06	0.44
1:CA:1289:A:H2'	1:CA:1290:G:O4'	2.17	0.44
3:CC:134:ILE:O	3:CC:138:VAL:HG23	2.18	0.44
5:CE:127:ASN:O	5:CE:131:ILE:HG12	2.17	0.44
7:CG:150:ALA:HA	11:CK:59:TYR:HB3	1.98	0.44
10:CJ:44:VAL:HG12	10:CJ:45:ARG:N	2.32	0.44
23:D1:21:ARG:HH12	31:DA:380:U:P	2.40	0.44
24:D2:48:HIS:ND1	24:D2:48:HIS:O	2.51	0.44
27:D5:30:LEU:O	27:D5:31:VAL:HG13	2.17	0.44
27:D5:31:VAL:HB	27:D5:32:PRO:HD2	1.99	0.44
30:D8:62:LEU:N	30:D8:63:PRO:CD	2.80	0.44
31:DA:39:C:H2'	31:DA:40:C:C6	2.52	0.44
31:DA:658:C:H2'	31:DA:659:C:C6	2.53	0.44
31:DA:750:A:C2	31:DA:753:C:C6	3.06	0.44
31:DA:1438:U:O2'	31:DA:1439:A:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1638:C:H5''	31:DA:2710:C:O2'	2.18	0.44
31:DA:1721:G:N1	31:DA:1739:U:OP2	2.50	0.44
31:DA:2016:U:H2'	31:DA:2017:U:H6	1.81	0.44
31:DA:2615:U:H2'	31:DA:2616:C:H6	1.82	0.44
31:DA:2664:G:H2'	31:DA:2665:A:O5'	2.16	0.44
31:DA:2690:C:OP2	43:DR:14:SER:HB3	2.18	0.44
31:DA:2729:G:H2'	31:DA:2730:C:C6	2.52	0.44
31:DA:2752:C:H2'	31:DA:2753:A:H5'	1.99	0.44
32:DB:74:U:C3'	32:DB:75:G:H5''	2.47	0.44
33:DD:223:GLY:HA2	33:DD:231:HIS:CD2	2.53	0.44
38:DI:138:ILE:HG22	38:DI:139:GLN:N	2.32	0.44
39:DN:75:TYR:CD2	39:DN:83:LYS:NZ	2.82	0.44
43:DR:38:VAL:HG12	43:DR:42:LYS:HD2	1.99	0.44
49:DX:31:HIS:CD2	49:DX:33:LYS:H	2.35	0.44
49:DX:41:ASN:O	49:DX:45:THR:CG2	2.66	0.44
1:AA:11:G:C6	1:AA:12:U:C4	3.05	0.44
1:AA:102:G:C6	1:AA:103:C:C4	3.05	0.44
1:AA:552:U:C4'	12:AL:86:ARG:HG2	2.45	0.44
1:AA:624:C:C4'	16:AP:10:GLY:HA2	2.36	0.44
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.18	0.44
1:AA:945:G:O6	1:AA:1337:G:C6	2.71	0.44
1:AA:977:A:C2'	1:AA:978:A:H5'	2.47	0.44
1:AA:977:A:HO2'	1:AA:981:U:H3	1.65	0.44
1:AA:1038:C:H2'	1:AA:1039:C:C6	2.53	0.44
1:AA:1058:G:C5	1:AA:1059:C:C4	3.05	0.44
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.52	0.44
1:AA:1348:U:H4'	9:AI:120:ARG:HH11	1.82	0.44
5:AE:143:ARG:NH1	8:AH:77:GLU:OE2	2.51	0.44
7:AG:124:LEU:O	7:AG:128:ALA:HB2	2.17	0.44
8:AH:44:PHE:HA	8:AH:79:VAL:CG1	2.46	0.44
11:AK:67:ASP:O	11:AK:71:LYS:HG3	2.18	0.44
20:AT:30:LYS:O	20:AT:30:LYS:HD2	2.18	0.44
28:B6:26:ASN:ND2	28:B6:32:ASN:OD1	2.51	0.44
31:BA:174:C:H2'	31:BA:175:G:H5''	1.98	0.44
31:BA:311:A:N3	31:BA:331:A:H3'	2.33	0.44
31:BA:325:G:O2'	31:BA:326:G:H5'	2.17	0.44
31:BA:848:G:C4	31:BA:933:A:H8	2.34	0.44
31:BA:854:G:H2'	31:BA:855:G:C8	2.52	0.44
31:BA:855:G:C6	31:BA:856:C:N4	2.86	0.44
31:BA:912:C:N3	31:BA:913:U:C5	2.86	0.44
31:BA:1342:A:H5'	31:BA:1398:C:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1639:U:O2'	31:BA:1640:C:H5''	2.16	0.44
31:BA:1796:U:H2'	31:BA:1797:C:H6	1.81	0.44
31:BA:2299:G:C6	31:BA:2318:G:C8	3.05	0.44
31:BA:2323:G:H2'	31:BA:2324:C:O4'	2.16	0.44
31:BA:2415:G:O3'	41:BP:66:GLY:HA3	2.17	0.44
31:BA:2584:U:H2'	31:BA:2585:U:C6	2.53	0.44
31:BA:2605:U:H2'	31:BA:2606:C:C6	2.53	0.44
31:BA:2610:C:C4'	31:BA:2611:U:OP2	2.64	0.44
31:BA:2893:G:H4'	31:BA:2894:G:H8	1.83	0.44
32:BB:117:G:H4'	44:BS:55:ALA:HB1	1.98	0.44
33:BD:241:PRO:O	33:BD:243:GLY:N	2.50	0.44
33:BD:253:GLN:HB3	33:BD:255:LYS:HE2	2.00	0.44
35:BF:65:TRP:O	35:BF:67:GLN:N	2.50	0.44
36:BG:67:LYS:HD2	36:BG:67:LYS:N	2.33	0.44
38:BI:114:LEU:O	38:BI:115:ALA:HB3	2.18	0.44
38:BI:124:GLY:N	38:BI:142:VAL:HG23	2.32	0.44
39:BN:65:LYS:O	39:BN:69:GLN:CB	2.66	0.44
41:BP:57:THR:HB	41:BP:59:LEU:N	2.32	0.44
41:BP:127:ALA:HB3	41:BP:130:PHE:CE2	2.53	0.44
43:BR:53:HIS:HA	43:BR:56:LYS:HB2	1.98	0.44
45:BT:24:PRO:HA	45:BT:49:VAL:O	2.18	0.44
46:BU:47:TYR:HA	46:BU:50:ARG:NH2	2.32	0.44
50:BY:46:LYS:HB3	50:BY:47:LYS:H	1.64	0.44
1:CA:564:C:C2'	1:CA:565:U:H5'	2.48	0.44
1:CA:691:G:H1'	1:CA:696:A:N6	2.31	0.44
1:CA:925:G:O4'	1:CA:1502:A:C5	2.71	0.44
1:CA:977:A:C2'	1:CA:978:A:H5'	2.47	0.44
1:CA:1058:G:C5	1:CA:1059:C:C4	3.06	0.44
1:CA:1316:G:H1	19:CS:5:LEU:CD2	2.31	0.44
5:CE:11:ILE:HG22	5:CE:12:LEU:N	2.32	0.44
11:CK:67:ASP:O	11:CK:71:LYS:HG3	2.17	0.44
11:CK:73:MET:SD	11:CK:103:LEU:HD22	2.57	0.44
12:CL:60:LEU:HD13	12:CL:60:LEU:HA	1.81	0.44
12:CL:87:GLY:H	12:CL:99:HIS:H	1.66	0.44
23:D1:85:LEU:HB3	23:D1:87:PRO:HD2	1.99	0.44
24:D2:15:LYS:CA	24:D2:18:PRO:HD2	2.46	0.44
29:D7:48:LYS:HD2	31:DA:125:G:N2	2.33	0.44
31:DA:108:U:O2	31:DA:109:G:C8	2.70	0.44
31:DA:271(M):G:H2'	31:DA:271(N):U:H5'	1.99	0.44
31:DA:287:C:N3	31:DA:288:C:C5	2.86	0.44
31:DA:287:C:C2'	31:DA:288:C:O5'	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:355:G:C2	31:DA:356:G:C8	3.06	0.44
31:DA:470:A:C2	31:DA:471:A:C4	3.05	0.44
31:DA:1024:G:OP2	31:DA:1025:G:H3'	2.17	0.44
31:DA:1247:A:OP1	35:DF:95:ARG:NH2	2.41	0.44
31:DA:1405:U:C2'	31:DA:1406:U:O5'	2.65	0.44
31:DA:2347:C:H2'	31:DA:2348:U:C6	2.52	0.44
32:DB:15:A:H2'	32:DB:16:G:OP1	2.17	0.44
32:DB:86:G:C2'	32:DB:87:G:C8	3.01	0.44
33:DD:66:ASP:OD1	33:DD:68:LYS:O	2.35	0.44
33:DD:182:LEU:O	33:DD:271:ILE:HD12	2.17	0.44
33:DD:253:GLN:HB3	33:DD:255:LYS:NZ	2.33	0.44
34:DE:116:VAL:HG13	34:DE:122:PHE:CD2	2.53	0.44
34:DE:134:ILE:H	34:DE:134:ILE:CD1	2.30	0.44
35:DF:66:PRO:O	35:DF:67:GLN:CB	2.46	0.44
37:DH:85:LYS:HE2	37:DH:145:ALA:H	1.82	0.44
37:DH:158:HIS:CE1	37:DH:170:ARG:N	2.85	0.44
38:DI:52:ARG:HE	38:DI:52:ARG:HB3	1.41	0.44
40:DO:106:LEU:HD23	40:DO:106:LEU:HA	1.72	0.44
42:DQ:22:LYS:HE2	42:DQ:22:LYS:CA	2.34	0.44
44:DS:26:LEU:HD22	44:DS:87:PHE:HE1	1.77	0.44
44:DS:88:ASP:CG	44:DS:89:ARG:N	2.70	0.44
47:DV:36:PRO:CD	47:DV:60:GLU:O	2.65	0.44
47:DV:94:LEU:HD23	47:DV:94:LEU:C	2.38	0.44
50:DY:83:THR:HG23	50:DY:94:LYS:HB2	2.00	0.44
51:DZ:157:LEU:HA	51:DZ:158:PRO:HD2	1.87	0.44
1:AA:392:G:O2'	1:AA:393:A:H5'	2.18	0.44
1:AA:791:G:C5	1:AA:792:A:N7	2.85	0.44
1:AA:824:C:H4'	8:AH:1:MET:H1	1.83	0.44
1:AA:1067:A:N3	1:AA:1068:G:N9	2.66	0.44
1:AA:1187:G:C6	1:AA:1188:A:C6	3.05	0.44
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.18	0.44
7:AG:12:LEU:HD13	7:AG:24:THR:OG1	2.17	0.44
11:AK:58:PRO:HA	11:AK:90:GLY:HA2	1.99	0.44
11:AK:99:GLN:C	11:AK:101:SER:H	2.20	0.44
12:AL:62:SER:C	12:AL:64:TYR:N	2.71	0.44
17:AQ:6:LEU:O	17:AQ:58:GLU:HA	2.18	0.44
20:AT:55:ILE:O	20:AT:56:MET:C	2.55	0.44
22:B0:26:TYR:O	22:B0:27:GLU:C	2.55	0.44
22:B0:41:ARG:CB	31:BA:2330:G:H1'	2.47	0.44
23:B1:11:ARG:CB	23:B1:12:PRO:CD	2.96	0.44
23:B1:26:ARG:CB	23:B1:34:THR:HB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:41:ARG:NH1	23:B1:41:ARG:CG	2.56	0.44
23:B1:87:PRO:CD	23:B1:88:LYS:N	2.77	0.44
24:B2:15:LYS:CA	24:B2:18:PRO:HD2	2.46	0.44
24:B2:38:GLN:HE21	24:B2:38:GLN:HB3	1.59	0.44
31:BA:90:U:O2	31:BA:90:U:C2'	2.50	0.44
31:BA:464:U:C2'	31:BA:465:G:H5'	2.47	0.44
31:BA:685:A:C8	31:BA:774:A:C6	3.06	0.44
31:BA:727:A:C2	33:BD:9:TYR:CD2	3.05	0.44
31:BA:860:U:C5	31:BA:917:A:N7	2.85	0.44
31:BA:1696:G:C3'	31:BA:1697:G:H5''	2.48	0.44
31:BA:1822:G:C8	31:BA:1822:G:C5'	2.95	0.44
31:BA:2324:C:H5''	31:BA:2325:G:H5'	2.00	0.44
32:BB:88:C:C4	32:BB:89:G:C6	3.06	0.44
33:BD:61:LEU:O	33:BD:63:ARG:NH1	2.51	0.44
33:BD:64:ILE:O	33:BD:64:ILE:CG1	2.65	0.44
35:BF:29:ASN:OD1	35:BF:29:ASN:C	2.56	0.44
36:BG:45:GLU:HB2	36:BG:47:LYS:CG	2.48	0.44
37:BH:85:LYS:HZ2	37:BH:133:VAL:CB	2.29	0.44
41:BP:78:PRO:HB2	41:BP:111:ARG:HE	1.83	0.44
47:BV:47:VAL:CG2	47:BV:49:THR:HB	2.47	0.44
49:BX:89:ILE:O	49:BX:89:ILE:HG23	2.18	0.44
1:CA:64:G:H4'	1:CA:65:U:H5''	1.99	0.44
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.82	0.44
1:CA:483:C:H3'	1:CA:484:G:H5''	1.99	0.44
1:CA:798:G:OP1	11:CK:122:LYS:NZ	2.50	0.44
1:CA:939:G:H1'	1:CA:1375:A:C2	2.53	0.44
1:CA:986:A:H1'	19:CS:54:GLY:O	2.17	0.44
1:CA:989:C:H1'	1:CA:1016:A:C2	2.53	0.44
1:CA:1250:A:C6	1:CA:1251:A:C6	3.06	0.44
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.18	0.44
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.91	0.44
3:CC:108:ASN:HD22	3:CC:111:LEU:HD12	1.83	0.44
4:CD:108:LEU:HG	4:CD:110:PHE:HE1	1.83	0.44
5:CE:72:GLN:O	5:CE:73:ASN:HB2	2.17	0.44
7:CG:18:TYR:CE2	7:CG:59:LEU:HB2	2.53	0.44
7:CG:149:ARG:HD3	11:CK:59:TYR:CE1	2.52	0.44
8:CH:1:MET:HE2	8:CH:1:MET:N	2.32	0.44
8:CH:80:ILE:O	8:CH:80:ILE:HG22	2.17	0.44
10:CJ:4:ILE:HG23	10:CJ:98:ILE:HG23	1.99	0.44
10:CJ:32:ALA:HB3	10:CJ:76:ASN:HB3	1.99	0.44
11:CK:23:ALA:HB3	11:CK:86:GLY:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:57:THR:HG23	11:CK:58:PRO:HD2	2.00	0.44
18:CR:44:LEU:O	18:CR:45:SER:C	2.56	0.44
20:CT:58:LYS:HE3	20:CT:62:LEU:HD12	1.98	0.44
20:CT:84:LEU:C	20:CT:84:LEU:HD13	2.38	0.44
30:D8:22:VAL:HB	30:D8:53:PRO:CB	2.47	0.44
30:D8:32:LEU:CB	30:D8:35:GLN:N	2.64	0.44
31:DA:237:C:C2'	31:DA:238:C:H5'	2.48	0.44
31:DA:271(M):G:N7	31:DA:271(O):C:N4	2.66	0.44
31:DA:526:A:N3	31:DA:2044:C:H1'	2.33	0.44
31:DA:536:A:H2'	31:DA:537:C:H6	1.82	0.44
31:DA:873:G:N2	31:DA:905:U:O2	2.51	0.44
31:DA:1015:G:H2'	31:DA:1016:G:H5'	2.00	0.44
31:DA:1356:G:C5	31:DA:1357:U:C5	3.06	0.44
31:DA:1754:C:OP1	45:DT:96:ARG:NH1	2.50	0.44
31:DA:2092:U:C5	31:DA:2226:C:OP2	2.71	0.44
31:DA:2200:C:O2	31:DA:2200:C:H2'	2.18	0.44
31:DA:2359:C:N4	31:DA:2360:A:C6	2.86	0.44
31:DA:2747:G:O6	31:DA:2755:C:H5''	2.18	0.44
33:DD:70:TRP:CZ2	33:DD:150:LYS:HD3	2.53	0.44
37:DH:43:VAL:CG1	37:DH:53:GLU:H	2.29	0.44
46:DU:8:VAL:HG11	46:DU:12:ARG:CZ	2.48	0.44
48:DW:37:ARG:HG2	48:DW:38:TYR:CE2	2.52	0.44
48:DW:54:ALA:CB	48:DW:107:LEU:HD22	2.48	0.44
1:AA:117:G:O2'	1:AA:118:U:H5'	2.18	0.44
1:AA:127:G:C2	1:AA:128:G:C8	3.06	0.44
1:AA:134:A:N6	16:AP:25:ARG:NH1	2.63	0.44
1:AA:165:C:H2'	1:AA:166:G:H8	1.82	0.44
1:AA:316:G:OP2	1:AA:351:G:O2'	2.35	0.44
1:AA:343:U:N3	1:AA:347:G:N1	2.65	0.44
1:AA:350:G:O2'	1:AA:351:G:H5'	2.18	0.44
1:AA:425:G:N2	1:AA:426:G:C1'	2.81	0.44
1:AA:499:A:H4'	1:AA:500:G:H5'	2.00	0.44
1:AA:635:G:O2'	1:AA:636:U:H5'	2.18	0.44
1:AA:1034:G:N2	1:AA:1035:A:N6	2.65	0.44
1:AA:1157:A:N3	1:AA:1181:G:N3	2.65	0.44
2:AB:28:PHE:HD2	2:AB:194:PRO:HD3	1.83	0.44
2:AB:44:LEU:O	2:AB:47:THR:N	2.51	0.44
3:AC:19:GLU:O	3:AC:40:ARG:NH2	2.49	0.44
5:AE:11:ILE:HB	5:AE:31:LEU:O	2.18	0.44
5:AE:128:PRO:O	5:AE:129:ILE:C	2.55	0.44
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:62:HIS:CE1	14:AN:61:TRP:CH2	3.06	0.44
10:AJ:84:GLN:O	10:AJ:88:LEU:CB	2.66	0.44
11:AK:23:ALA:HB3	11:AK:86:GLY:O	2.17	0.44
19:AS:9:VAL:O	19:AS:11:VAL:N	2.50	0.44
23:B1:78:LYS:HZ3	23:B1:93:GLU:HB2	1.82	0.44
24:B2:55:ARG:O	24:B2:55:ARG:CG	2.65	0.44
30:B8:4:MET:SD	30:B8:61:LEU:CD1	3.02	0.44
31:BA:21:A:O2'	31:BA:22:C:H5'	2.18	0.44
31:BA:225:A:C2'	31:BA:226:G:H5'	2.48	0.44
31:BA:606:U:H4'	31:BA:658:C:H4'	2.00	0.44
31:BA:693:C:H2'	31:BA:694:U:H6	1.82	0.44
31:BA:727:A:H2	33:BD:9:TYR:CD2	2.36	0.44
31:BA:1509(A):A:C4	31:BA:1509(B):A:C8	3.06	0.44
31:BA:1517:G:H2'	31:BA:1518:U:O4'	2.18	0.44
31:BA:1518:U:H2'	31:BA:1519:G:O4'	2.18	0.44
31:BA:1685:C:O2'	31:BA:1686:C:H5'	2.18	0.44
31:BA:2286:A:O2'	31:BA:2286:A:H8	1.97	0.44
31:BA:2422:A:C4'	31:BA:2423:U:OP1	2.63	0.44
32:BB:20:C:C2'	32:BB:21:G:H5'	2.35	0.44
33:BD:28:GLU:CB	33:BD:29:PRO:CD	2.95	0.44
37:BH:41:MET:HG3	37:BH:53:GLU:O	2.17	0.44
38:BI:99:GLU:O	38:BI:102:SER:HB3	2.18	0.44
39:BN:129:PRO:O	39:BN:130:HIS:CB	2.66	0.44
48:BW:54:ALA:CB	48:BW:107:LEU:HD22	2.48	0.44
50:BY:7:VAL:HB	50:BY:8:LYS:CD	2.48	0.44
50:BY:13:VAL:HG12	50:BY:73:ARG:O	2.18	0.44
1:CA:174:C:H6	1:CA:174:C:O5'	2.01	0.44
1:CA:193:C:H2'	1:CA:194:C:C6	2.53	0.44
1:CA:222:U:H2'	1:CA:223:U:C6	2.53	0.44
1:CA:243:A:C2	1:CA:246:A:C8	3.06	0.44
1:CA:330:C:C2'	1:CA:331:G:H5'	2.47	0.44
1:CA:343:U:N3	1:CA:347:G:N1	2.65	0.44
1:CA:457:C:H2'	1:CA:458:C:C6	2.51	0.44
1:CA:458:C:H2'	1:CA:460:G:C8	2.52	0.44
1:CA:556:C:O2'	1:CA:557:G:H5'	2.18	0.44
1:CA:563:A:C8	1:CA:567:G:O4'	2.71	0.44
1:CA:801:U:H2'	1:CA:802:A:H8	1.83	0.44
1:CA:933:G:O6	7:CG:3:ARG:NH2	2.51	0.44
1:CA:1055:A:N3	3:CC:156:ARG:NH1	2.63	0.44
3:CC:112:SER:O	3:CC:116:VAL:HG23	2.18	0.44
5:CE:11:ILE:HD12	5:CE:105:VAL:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:25:LYS:O	23:D1:26:ARG:CG	2.66	0.44
24:D2:12:GLU:C	24:D2:14:ARG:H	2.20	0.44
30:D8:61:LEU:HD23	30:D8:61:LEU:HA	1.79	0.44
31:DA:466:A:H2	31:DA:795:C:O2	2.01	0.44
31:DA:528:A:C2	31:DA:2043:C:C4'	2.99	0.44
31:DA:993:G:OP1	47:DV:75:PHE:CE2	2.70	0.44
31:DA:1374:G:H2'	31:DA:1375:C:C6	2.52	0.44
31:DA:1416:G:H4'	31:DA:1416:G:OP2	2.17	0.44
31:DA:1575:C:O2'	31:DA:1576:U:H5'	2.18	0.44
31:DA:1593:G:H2'	31:DA:1594:G:C8	2.53	0.44
31:DA:1686:C:H2'	31:DA:1687:G:H5'	1.99	0.44
31:DA:1694:C:O2'	31:DA:1695:G:C5	2.71	0.44
31:DA:2057:A:H2'	31:DA:2058:A:C8	2.52	0.44
31:DA:2712:U:O2'	31:DA:2712(A):A:P	2.76	0.44
32:DB:8:U:O2'	44:DS:40:ILE:HD13	2.18	0.44
33:DD:30:GLU:CG	33:DD:63:ARG:NH2	2.81	0.44
35:DF:84:VAL:C	35:DF:86:GLY:N	2.70	0.44
36:DG:91:ARG:HD2	36:DG:91:ARG:O	2.17	0.44
37:DH:84:SER:O	37:DH:85:LYS:HB3	2.17	0.44
37:DH:85:LYS:HZ3	37:DH:145:ALA:HB2	1.83	0.44
38:DI:83:ALA:HB3	38:DI:123:LEU:HD21	2.00	0.44
40:DO:112:MET:HA	40:DO:112:MET:CE	2.48	0.44
41:DP:100:LEU:HD12	41:DP:100:LEU:HA	1.71	0.44
43:DR:29:LEU:HA	43:DR:29:LEU:HD12	1.64	0.44
45:DT:34:VAL:O	45:DT:35:LYS:CB	2.65	0.44
47:DV:15:GLU:O	47:DV:98:GLU:CD	2.56	0.44
50:DY:45:VAL:HG21	50:DY:62:GLU:H	1.81	0.44
1:AA:24:U:O2'	1:AA:25:C:H5'	2.17	0.44
1:AA:64:G:H4'	1:AA:65:U:H5''	1.99	0.44
1:AA:386:C:C2'	1:AA:387:U:C5'	2.85	0.44
1:AA:602:A:C2	1:AA:603:U:C2	3.06	0.44
1:AA:1412:C:H42	1:AA:1488:G:H1	1.66	0.44
1:AA:1446:U:O2	1:AA:1456:G:O6	2.36	0.44
2:AB:16:HIS:CG	2:AB:213:LEU:HD13	2.53	0.44
3:AC:125:GLU:HA	3:AC:191:THR:CG2	2.46	0.44
5:AE:32:VAL:CG2	5:AE:58:ALA:HB1	2.48	0.44
7:AG:108:ALA:O	7:AG:111:ARG:HB2	2.18	0.44
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	2.00	0.44
15:AO:20:GLY:O	15:AO:21:ASP:HB3	2.18	0.44
18:AR:65:ILE:HG13	18:AR:65:ILE:H	1.59	0.44
20:AT:36:LEU:HD13	20:AT:36:LEU:HA	1.84	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:69:LYS:NZ	31:BA:372:G:OP2	2.36	0.44
30:B8:27:THR:OG1	31:BA:2361:A:O5'	2.36	0.44
31:BA:196:A:C4'	41:BP:46:LYS:HE2	2.48	0.44
31:BA:271(F):C:H2'	31:BA:271(G):C:C6	2.42	0.44
31:BA:372:G:HO2'	31:BA:373:U:P	2.41	0.44
31:BA:461:C:C2'	31:BA:462:C:H5'	2.48	0.44
31:BA:609:A:H2'	31:BA:610:G:O5'	2.18	0.44
31:BA:723:G:H2'	31:BA:724:U:O4'	2.17	0.44
31:BA:864:G:N2	31:BA:913:U:C2	2.85	0.44
31:BA:876:C:C4	31:BA:877:U:C4	3.06	0.44
31:BA:1309:G:H2'	31:BA:1310:G:H5'	2.00	0.44
31:BA:1416:G:O2'	31:BA:1417:C:H6	2.01	0.44
31:BA:1445(A):C:H2'	31:BA:1446:C:H6	1.83	0.44
31:BA:1464:C:O2'	31:BA:1528:A:H1'	2.17	0.44
31:BA:1783:A:C2	31:BA:2587:A:C4	3.05	0.44
31:BA:1891:G:C5	31:BA:1892:C:C4	3.06	0.44
31:BA:2019:A:C2'	31:BA:2020:A:O5'	2.66	0.44
31:BA:2065:C:H2'	31:BA:2066:C:H6	1.81	0.44
31:BA:2544:G:O2'	31:BA:2545:G:H5'	2.18	0.44
33:BD:35:LYS:CE	33:BD:65:ILE:HG22	2.48	0.44
33:BD:132:PRO:O	33:BD:136:ILE:CD1	2.66	0.44
35:BF:53:THR:C	35:BF:55:GLY:N	2.71	0.44
38:BI:5:LEU:HD21	38:BI:19:VAL:CG1	2.48	0.44
39:BN:19:GLU:CG	39:BN:20:GLY:N	2.78	0.44
39:BN:69:GLN:HE21	39:BN:69:GLN:HB3	1.54	0.44
41:BP:71:VAL:HG13	41:BP:72:PRO:CD	2.48	0.44
42:BQ:6:ARG:HD3	42:BQ:6:ARG:HA	1.81	0.44
43:BR:23:ASN:N	43:BR:23:ASN:HD22	2.16	0.44
45:BT:28:VAL:HG22	45:BT:46:GLU:CA	2.48	0.44
47:BV:79:VAL:HB	47:BV:80:GLN:H	1.67	0.44
51:BZ:67:LEU:N	51:BZ:67:LEU:CD1	2.81	0.44
1:CA:17:U:O2'	1:CA:1079:G:H1'	2.18	0.44
1:CA:93:G:N1	1:CA:96:U:C4	2.86	0.44
1:CA:143:A:N1	1:CA:220:G:O6	2.50	0.44
1:CA:801:U:H2'	1:CA:802:A:C8	2.52	0.44
1:CA:1386:G:N3	1:CA:1387:G:C8	2.86	0.44
4:CD:105:VAL:O	4:CD:105:VAL:CG1	2.66	0.44
8:CH:86:ILE:CB	8:CH:133:LEU:HD22	2.46	0.44
9:CI:50:LEU:HD22	9:CI:55:ALA:O	2.18	0.44
20:CT:53:LEU:H	20:CT:53:LEU:HG	1.60	0.44
23:D1:78:LYS:HZ3	23:D1:93:GLU:HB2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:26:ARG:CB	49:DX:5:TYR:HB3	2.48	0.44
24:D2:32:LEU:HD13	24:D2:32:LEU:HA	1.59	0.44
31:DA:271(P):C:C2'	31:DA:271(Q):G:C5'	2.95	0.44
31:DA:302:C:O2'	31:DA:303:U:H5'	2.18	0.44
31:DA:449:A:OP1	35:DF:84:VAL:O	2.36	0.44
31:DA:901:A:N3	31:DA:901:A:H2'	2.33	0.44
31:DA:951:C:HO2'	31:DA:952:G:H5'	1.82	0.44
31:DA:1445(A):C:C2	31:DA:1446:C:C5	3.06	0.44
31:DA:1741:A:C8	31:DA:1742:G:C2	3.06	0.44
31:DA:2094:G:O2'	31:DA:2095:C:H5'	2.16	0.44
31:DA:2711:A:OP1	31:DA:2712(A):A:P	2.76	0.44
34:DE:37:ARG:HD3	34:DE:44:TYR:CZ	2.52	0.44
34:DE:44:TYR:O	34:DE:45:THR:HB	2.18	0.44
34:DE:101:ARG:HD2	34:DE:169:ASN:HD22	1.83	0.44
36:DG:13:GLU:O	36:DG:14:GLU:CB	2.66	0.44
36:DG:128:ARG:O	36:DG:129:GLY:C	2.56	0.44
38:DI:99:GLU:O	38:DI:102:SER:HB3	2.17	0.44
40:DO:61:VAL:O	40:DO:84:ALA:HA	2.17	0.44
41:DP:65:ARG:C	41:DP:66:GLY:O	2.56	0.44
42:DQ:16:ARG:HG3	42:DQ:17:LEU:H	1.81	0.44
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CZ	2.53	0.44
43:DR:56:LYS:HE3	43:DR:94:TYR:CZ	2.53	0.44
44:DS:61:ASN:O	44:DS:65:VAL:HG23	2.17	0.44
45:DT:30:VAL:CG2	45:DT:31:SER:N	2.76	0.44
47:DV:47:VAL:CG2	47:DV:49:THR:HB	2.48	0.44
51:DZ:19:ARG:HH11	51:DZ:19:ARG:HG2	1.81	0.44
51:DZ:101:PRO:HA	51:DZ:123:ASP:HB3	2.00	0.44
51:DZ:150:LEU:C	51:DZ:151:HIS:CD2	2.90	0.44
1:AA:73:G:N2	1:AA:76:C:C2	2.86	0.43
1:AA:92:C:H2'	1:AA:93:G:H8	1.83	0.43
1:AA:102:G:C4	1:AA:103:C:C6	3.06	0.43
1:AA:112:G:N3	1:AA:112:G:H2'	2.32	0.43
1:AA:185:A:N6	1:AA:186:C:N4	2.66	0.43
1:AA:524:G:H8	1:AA:524:G:O5'	2.01	0.43
1:AA:840:C:H4'	1:AA:848:C:O2	2.17	0.43
1:AA:935:A:H2'	1:AA:936:C:C6	2.52	0.43
1:AA:1242:C:H5''	21:AU:10:ARG:HH12	1.83	0.43
1:AA:1367:C:N3	1:AA:1368:G:C8	2.86	0.43
2:AB:154:LEU:HD23	2:AB:154:LEU:H	1.82	0.43
5:AE:147:ASP:OD2	5:AE:147:ASP:N	2.51	0.43
6:AF:15:ASP:CG	6:AF:18:GLN:HE21	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:113:SER:C	8:AH:114:THR:HG22	2.37	0.43
10:AJ:51:ARG:HG3	10:AJ:60:ARG:C	2.38	0.43
15:AO:82:ILE:HG12	15:AO:87:ILE:CB	2.44	0.43
30:B8:14:VAL:CG1	30:B8:22:VAL:HG13	2.46	0.43
31:BA:284:U:H2'	31:BA:285:C:H6	1.82	0.43
31:BA:414:C:H4'	31:BA:1879:C:O2	2.17	0.43
31:BA:574:C:N3	34:BE:145:LYS:HE2	2.32	0.43
31:BA:631:A:OP1	41:BP:64:LYS:HE2	2.18	0.43
31:BA:658:C:H2'	31:BA:659:C:C6	2.53	0.43
31:BA:708:C:O2	31:BA:708:C:C2'	2.66	0.43
31:BA:950:G:C6	31:BA:951:C:C4	3.06	0.43
31:BA:1043:C:OP2	31:BA:1043:C:C6	2.71	0.43
31:BA:1139:G:O2'	31:BA:1143:A:N1	2.46	0.43
31:BA:1472:A:H2'	31:BA:1473:G:C5'	2.48	0.43
31:BA:1797:C:O2'	33:BD:259:THR:HB	2.18	0.43
31:BA:2689:U:H4'	31:BA:2690:C:H5'	2.00	0.43
32:BB:15:A:H1'	32:BB:110:G:C4	2.54	0.43
32:BB:15:A:H2'	32:BB:16:G:OP1	2.17	0.43
32:BB:45:A:H2'	32:BB:46:A:H5'	1.99	0.43
33:BD:186:HIS:CD2	33:BD:186:HIS:C	2.91	0.43
35:BF:24:LEU:O	35:BF:25:PRO:C	2.56	0.43
35:BF:101:LEU:HD12	35:BF:102:PRO:N	2.32	0.43
36:BG:128:ARG:O	36:BG:129:GLY:C	2.56	0.43
37:BH:85:LYS:HZ2	37:BH:133:VAL:CG2	2.30	0.43
39:BN:125:GLY:CA	39:BN:126:PRO:O	2.65	0.43
40:BO:104:ARG:NH1	45:BT:35:LYS:HD3	2.33	0.43
42:BQ:48:GLU:O	42:BQ:52:VAL:HG13	2.18	0.43
42:BQ:70:PRO:HA	42:BQ:95:ALA:HB2	2.00	0.43
42:BQ:141:GLN:C	51:BZ:70:LEU:HD13	2.39	0.43
44:BS:53:SER:C	44:BS:55:ALA:N	2.71	0.43
44:BS:80:LEU:HD12	44:BS:80:LEU:H	1.83	0.43
45:BT:90:GLN:HG2	45:BT:120:ARG:CZ	2.48	0.43
47:BV:19:LYS:HE2	47:BV:20:LEU:N	2.32	0.43
49:BX:59:VAL:HG22	49:BX:74:PRO:O	2.17	0.43
49:BX:65:ARG:NE	49:BX:66:LEU:N	2.66	0.43
1:CA:292:G:H1	1:CA:308:C:H42	1.66	0.43
1:CA:356:A:C2'	1:CA:357:G:O5'	2.66	0.43
1:CA:583:A:H2'	1:CA:584:G:O4'	2.18	0.43
1:CA:1173:G:C5	1:CA:1174:G:N7	2.86	0.43
2:CB:44:LEU:H	2:CB:44:LEU:CD1	2.23	0.43
2:CB:166:ASP:CB	2:CB:169:LYS:HB2	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:61:LYS:CA	4:CD:203:VAL:HG22	2.48	0.43
4:CD:68:TYR:HD1	4:CD:68:TYR:H	1.60	0.43
7:CG:37:ASN:HD21	9:CI:40:LEU:HD22	1.83	0.43
7:CG:79:ARG:NE	7:CG:84:ASN:HD21	2.16	0.43
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.18	0.43
12:CL:70:ILE:HG13	12:CL:100:ILE:HD12	2.00	0.43
13:CM:29:ARG:HA	13:CM:32:GLU:HB3	1.99	0.43
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.18	0.43
20:CT:29:LYS:O	20:CT:33:ILE:HG12	2.18	0.43
22:D0:20:ARG:HG3	31:DA:2356:C:H4'	2.00	0.43
22:D0:41:ARG:CB	31:DA:2330:G:H1'	2.48	0.43
23:D1:85:LEU:CB	23:D1:87:PRO:HD3	2.48	0.43
25:D3:6:VAL:CG1	25:D3:54:VAL:CG1	2.91	0.43
31:DA:8:A:H2'	31:DA:9:U:H5	1.77	0.43
31:DA:84:A:H5''	50:DY:9:LYS:CD	2.47	0.43
31:DA:511:U:C5	31:DA:512:G:C5	3.06	0.43
31:DA:775:G:C4	31:DA:794:G:C8	3.05	0.43
31:DA:945:A:C6	31:DA:2448:A:C4	3.06	0.43
31:DA:1034:G:H2'	31:DA:1035:U:O4'	2.17	0.43
31:DA:1115:G:H2'	31:DA:1116:C:O4'	2.17	0.43
31:DA:1364:G:H5''	31:DA:1365:A:OP2	2.17	0.43
31:DA:1450(A):C:C4	31:DA:1451:C:N4	2.86	0.43
31:DA:1509(A):A:C4	31:DA:1509(B):A:C8	3.05	0.43
31:DA:1510:G:H2'	31:DA:1511:C:C6	2.52	0.43
31:DA:2232:U:O2'	31:DA:2233:U:H5'	2.18	0.43
31:DA:2270:G:C2'	31:DA:2271:G:H5'	2.48	0.43
31:DA:2448:A:H4'	31:DA:2449:U:OP2	2.17	0.43
31:DA:2469:A:O2'	42:DQ:56:ARG:CG	2.60	0.43
31:DA:2579:C:H2'	31:DA:2580:U:O4'	2.18	0.43
31:DA:2885:C:H2'	31:DA:2886:G:O5'	2.18	0.43
32:DB:82:G:C2'	32:DB:83:G:C5'	2.90	0.43
32:DB:87:G:H3'	32:DB:88:C:C5'	2.44	0.43
33:DD:31:LYS:O	33:DD:31:LYS:HG3	2.17	0.43
33:DD:35:LYS:HG2	33:DD:64:ILE:H	1.79	0.43
33:DD:125:ILE:HG13	33:DD:137:PRO:CG	2.48	0.43
33:DD:186:HIS:CD2	33:DD:188:GLU:N	2.59	0.43
33:DD:231:HIS:ND1	33:DD:232:PRO:HD2	2.33	0.43
33:DD:249:PRO:HD2	33:DD:250:TRP:CZ3	2.52	0.43
34:DE:13:ARG:HA	34:DE:21:VAL:O	2.18	0.43
34:DE:77:ILE:CG2	34:DE:78:LEU:N	2.80	0.43
37:DH:85:LYS:NZ	37:DH:145:ALA:CA	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:9:LEU:HB2	38:DI:12:LEU:O	2.18	0.43
38:DI:99:GLU:HG3	38:DI:103:ARG:NH1	2.32	0.43
39:DN:30:ILE:O	39:DN:34:LEU:HD22	2.18	0.43
41:DP:107:LYS:C	41:DP:109:GLY:N	2.68	0.43
45:DT:41:ARG:NH1	45:DT:43:GLN:HB2	2.33	0.43
45:DT:78:LEU:O	45:DT:79:HIS:ND1	2.51	0.43
45:DT:121:ILE:O	45:DT:124:ASP:HB2	2.18	0.43
49:DX:60:ARG:CG	49:DX:72:LYS:H	2.31	0.43
50:DY:81:LYS:HD3	50:DY:97:ARG:CG	2.48	0.43
1:AA:22:G:H4'	1:AA:885:G:C8	2.53	0.43
1:AA:293:G:H4'	1:AA:609:A:N1	2.32	0.43
1:AA:418:C:N3	1:AA:426:G:C2	2.86	0.43
1:AA:540:G:H2'	1:AA:541:G:O4'	2.17	0.43
1:AA:669:U:C2	1:AA:670:G:C8	3.06	0.43
1:AA:921:U:H2'	1:AA:922:G:O4'	2.18	0.43
1:AA:1173:G:C5	1:AA:1174:G:N7	2.85	0.43
1:AA:1407:C:O2	31:BA:1912:A:C2	2.72	0.43
1:AA:1423:G:H5'	40:BO:49:ARG:NH2	2.20	0.43
5:AE:11:ILE:HD12	5:AE:105:VAL:HA	2.00	0.43
8:AH:91:ARG:NH1	17:AQ:33:GLY:HA3	2.33	0.43
9:AI:81:ILE:O	9:AI:85:LEU:HG	2.18	0.43
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.18	0.43
16:AP:39:TYR:CD1	16:AP:40:ASP:N	2.86	0.43
24:B2:45:SER:HA	24:B2:47:ASN:ND2	2.33	0.43
31:BA:90:U:O2'	31:BA:92:A:H5''	2.18	0.43
31:BA:284:U:H2'	31:BA:285:C:C6	2.53	0.43
31:BA:596:G:C5	31:BA:597:U:C5	3.06	0.43
31:BA:671:C:C6	31:BA:671:C:C5'	2.97	0.43
31:BA:768:G:C6	31:BA:769:G:C5	3.06	0.43
31:BA:917:A:H5'	31:BA:917:A:C8	2.53	0.43
31:BA:1504:C:O2'	31:BA:1505:C:C5'	2.66	0.43
31:BA:1810:A:H2'	31:BA:1811:G:O4'	2.17	0.43
31:BA:2094:G:O2'	31:BA:2095:C:H5'	2.16	0.43
34:BE:13:ARG:HA	34:BE:21:VAL:O	2.18	0.43
34:BE:203:LYS:HD2	34:BE:203:LYS:C	2.38	0.43
35:BF:106:ARG:H	35:BF:106:ARG:HG2	1.57	0.43
36:BG:127:GLY:O	36:BG:128:ARG:C	2.56	0.43
37:BH:117:PRO:HB3	37:BH:123:PHE:HD1	1.82	0.43
37:BH:148:ILE:O	37:BH:162:ILE:HD11	2.19	0.43
38:BI:38:LEU:O	38:BI:40:THR:HG23	2.19	0.43
38:BI:60:GLU:HA	38:BI:63:ALA:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:26:LYS:HE3	40:BO:37:ASP:OD1	2.18	0.43
41:BP:106:LEU:HA	41:BP:106:LEU:HD12	1.84	0.43
43:BR:74:LYS:O	43:BR:77:ARG:HB2	2.19	0.43
50:BY:81:LYS:HD3	50:BY:97:ARG:CG	2.47	0.43
51:BZ:121:HIS:HB2	51:BZ:171:ILE:HA	2.00	0.43
51:BZ:121:HIS:ND1	51:BZ:169:GLU:OE2	2.51	0.43
1:CA:51:A:H4'	1:CA:52:G:C5'	2.48	0.43
1:CA:60:A:H4'	1:CA:61:G:O5'	2.19	0.43
1:CA:119:A:N7	1:CA:288:A:C2	2.86	0.43
1:CA:273:A:N6	1:CA:274:A:N6	2.66	0.43
1:CA:292:G:N7	1:CA:293:G:H1'	2.33	0.43
1:CA:579:G:C5	1:CA:580:U:C4	3.06	0.43
1:CA:595:G:H1'	1:CA:596:C:H5	1.83	0.43
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.18	0.43
1:CA:1012:U:O5'	1:CA:1012:U:H6	2.00	0.43
1:CA:1169:A:C2'	1:CA:1170:A:C8	2.96	0.43
1:CA:1237:C:H42	1:CA:1337:G:H1	1.64	0.43
1:CA:1458:G:H2'	1:CA:1459:C:H6	1.84	0.43
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.33	0.43
2:CB:118:LEU:HD11	2:CB:141:GLU:HG2	1.99	0.43
2:CB:154:LEU:HD23	2:CB:154:LEU:H	1.83	0.43
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.18	0.43
8:CH:27:PRO:HA	8:CH:58:TYR:HA	1.99	0.43
15:CO:57:LEU:HD23	15:CO:57:LEU:HA	1.80	0.43
15:CO:62:GLN:O	15:CO:65:ARG:HB2	2.18	0.43
22:D0:14:ARG:HD2	31:DA:2280:G:O6	2.18	0.43
22:D0:65:GLY:HA2	22:D0:84:LEU:CD2	2.48	0.43
23:D1:11:ARG:CB	23:D1:12:PRO:CD	2.95	0.43
23:D1:63:ALA:O	23:D1:64:ALA:C	2.56	0.43
23:D1:64:ALA:O	23:D1:65:SER:HB3	2.17	0.43
24:D2:14:ARG:CD	24:D2:57:ILE:HB	2.48	0.43
30:D8:35:GLN:HE21	30:D8:35:GLN:HB3	1.55	0.43
31:DA:338:G:H2'	31:DA:339:U:C6	2.53	0.43
31:DA:465:G:C6	31:DA:466:A:N6	2.86	0.43
31:DA:540:C:H2'	31:DA:541:C:H6	1.83	0.43
31:DA:740:U:H2'	31:DA:741:G:H8	1.83	0.43
31:DA:749:C:C5	31:DA:1618:A:C6	3.06	0.43
31:DA:855:G:C6	31:DA:856:C:C4	3.06	0.43
31:DA:921:G:H2'	31:DA:922:U:C6	2.54	0.43
31:DA:1039:G:O2'	31:DA:1040:C:H5'	2.18	0.43
31:DA:1154:G:H8	31:DA:1154:G:O5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1175:U:H4'	31:DA:1176:G:H2'	2.00	0.43
31:DA:1411:C:O2'	31:DA:1412:A:H5'	2.17	0.43
31:DA:1805:U:O2	33:DD:50:THR:HB	2.18	0.43
31:DA:1810:A:H2'	31:DA:1811:G:O4'	2.18	0.43
31:DA:1897:G:H2'	31:DA:1898:U:O4'	2.18	0.43
31:DA:1992:G:C2	31:DA:1997:G:C5	3.06	0.43
31:DA:2387:U:H5''	31:DA:2388:A:OP2	2.17	0.43
31:DA:2391:G:O6	31:DA:2425:A:H8	2.00	0.43
33:DD:79:VAL:CG2	33:DD:111:LEU:HD11	2.48	0.43
37:DH:89:ILE:HB	37:DH:90:LYS:H	1.61	0.43
37:DH:157:TYR:CD1	37:DH:171:LEU:N	2.85	0.43
38:DI:124:GLY:N	38:DI:142:VAL:HG23	2.33	0.43
40:DO:6:THR:HG22	40:DO:7:TYR:N	2.33	0.43
41:DP:17:LYS:O	41:DP:19:VAL:HG23	2.18	0.43
42:DQ:27:VAL:HG23	51:DZ:81:ARG:HH22	1.84	0.43
43:DR:67:LEU:O	43:DR:70:LEU:O	2.36	0.43
47:DV:40:LEU:C	47:DV:40:LEU:CD1	2.86	0.43
48:DW:7:ALA:N	48:DW:103:ILE:O	2.45	0.43
1:AA:66:G:H4'	1:AA:173:U:C4	2.53	0.43
1:AA:262:A:N1	1:AA:263:A:C6	2.85	0.43
1:AA:321:A:N6	1:AA:329:A:OP2	2.52	0.43
1:AA:375:U:C4	1:AA:376:G:N7	2.87	0.43
1:AA:790:A:C6	1:AA:791:G:C6	3.06	0.43
1:AA:976:G:P	14:AN:32:SER:H	2.40	0.43
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.19	0.43
5:AE:71:LEU:HD11	5:AE:114:GLY:HA3	2.00	0.43
7:AG:145:ALA:O	7:AG:146:GLU:HB2	2.18	0.43
7:AG:149:ARG:HG2	7:AG:149:ARG:O	2.19	0.43
8:AH:36:LEU:HA	8:AH:36:LEU:HD23	1.80	0.43
11:AK:83:ILE:HA	11:AK:109:VAL:O	2.18	0.43
13:AM:76:ALA:HA	13:AM:79:LYS:HD2	2.00	0.43
14:AN:13:THR:N	14:AN:14:PRO:CD	2.81	0.43
17:AQ:8:GLY:HA3	17:AQ:22:LEU:O	2.18	0.43
30:B8:31:HIS:O	30:B8:33:ASN:N	2.51	0.43
31:BA:107:C:C4	31:BA:108:U:C5	3.05	0.43
31:BA:481:G:C4	31:BA:507:A:C2	3.07	0.43
31:BA:774:A:N1	31:BA:787:U:O2'	2.46	0.43
31:BA:783:A:C8	31:BA:783:A:C3'	3.01	0.43
31:BA:1721:G:N2	31:BA:1739:U:OP2	2.51	0.43
31:BA:1930:G:O2'	31:BA:1931:U:P	2.76	0.43
33:BD:17:THR:CG2	33:BD:205:VAL:N	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:65:ILE:HD11	33:BD:67:PHE:CZ	2.46	0.43
33:BD:159:ALA:C	33:BD:161:THR:H	2.22	0.43
38:BI:52:ARG:HE	38:BI:52:ARG:HB3	1.51	0.43
39:BN:75:TYR:N	39:BN:75:TYR:HD1	2.14	0.43
39:BN:82:LEU:H	39:BN:82:LEU:CD1	2.23	0.43
41:BP:96:THR:HG22	41:BP:126:VAL:HG23	2.00	0.43
46:BU:45:TYR:O	46:BU:49:HIS:CG	2.71	0.43
46:BU:74:LEU:N	46:BU:74:LEU:CD1	2.77	0.43
49:BX:34:ALA:N	49:BX:35:THR:HG22	2.34	0.43
50:BY:7:VAL:HB	50:BY:8:LYS:CE	2.48	0.43
1:CA:117:G:O2'	1:CA:118:U:H5'	2.18	0.43
1:CA:173:U:C6	1:CA:197:A:C2	3.07	0.43
1:CA:432:A:N7	1:CA:433:C:C4	2.85	0.43
1:CA:445:G:N3	1:CA:446:G:C8	2.86	0.43
1:CA:521:G:O2'	1:CA:522:C:H5'	2.18	0.43
1:CA:567:G:C2	1:CA:568:G:H1'	2.53	0.43
1:CA:721:G:N1	1:CA:733:A:C2	2.86	0.43
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.18	0.43
1:CA:883:C:C2'	1:CA:884:U:H5'	2.48	0.43
1:CA:928:G:C2	1:CA:1390:U:O2	2.71	0.43
1:CA:1038:C:H2'	1:CA:1039:C:C6	2.54	0.43
3:CC:127:ARG:HD2	3:CC:127:ARG:N	2.33	0.43
9:CI:5:TYR:CD2	9:CI:18:PHE:CE2	3.07	0.43
22:D0:47:PRO:HB3	22:D0:51:VAL:HG12	1.99	0.43
31:DA:637:A:OP1	41:DP:133:SER:HB3	2.18	0.43
31:DA:705:A:C2	31:DA:706:A:C4	3.06	0.43
31:DA:783:A:H3'	31:DA:783:A:C8	2.54	0.43
31:DA:807:U:C2'	31:DA:808:G:O5'	2.66	0.43
31:DA:1407:C:O2	31:DA:1407:C:C2'	2.65	0.43
31:DA:1476:C:C2'	31:DA:1477:A:O5'	2.66	0.43
31:DA:1495:A:H2'	31:DA:1496:A:C2	2.53	0.43
31:DA:1914:C:H2'	31:DA:1915:U:O4'	2.18	0.43
31:DA:2085:C:O2'	31:DA:2086:U:H5'	2.18	0.43
31:DA:2288:A:H8	31:DA:2288:A:O5'	2.01	0.43
31:DA:2291:U:O2'	31:DA:2374:C:O2	2.33	0.43
31:DA:2338:G:O2'	31:DA:2339:G:H5'	2.18	0.43
31:DA:2464:C:HO2'	31:DA:2465:C:P	2.39	0.43
31:DA:2659:G:H5''	31:DA:2659:G:H8	1.83	0.43
31:DA:2687:U:C4	31:DA:2688:U:C5	3.07	0.43
31:DA:2827:C:H2'	31:DA:2828:C:C6	2.53	0.43
32:DB:87:G:C2'	32:DB:88:C:H5''	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:88:C:C4	32:DB:89:G:C6	3.06	0.43
33:DD:209:ALA:O	33:DD:210:GLY:O	2.35	0.43
37:DH:83:TYR:CD1	37:DH:83:TYR:N	2.86	0.43
40:DO:87:ILE:HG23	40:DO:91:LEU:HA	2.01	0.43
45:DT:35:LYS:C	45:DT:37:GLY:N	2.71	0.43
47:DV:23:GLU:O	47:DV:24:LYS:C	2.55	0.43
50:DY:80:GLY:O	50:DY:81:LYS:CB	2.66	0.43
51:DZ:121:HIS:HB2	51:DZ:171:ILE:HA	2.00	0.43
1:AA:93:G:N1	1:AA:96:U:C4	2.87	0.43
1:AA:108:G:H5''	1:AA:109:A:C5'	2.46	0.43
1:AA:327:A:C5	1:AA:329:A:C5	3.05	0.43
1:AA:523:A:N6	12:AL:53:ARG:HH12	2.16	0.43
1:AA:575:G:HO2'	1:AA:821:G:H5'	1.83	0.43
1:AA:666:G:C6	1:AA:741:G:C5	3.06	0.43
1:AA:724:G:C2	1:AA:725:G:C8	3.05	0.43
1:AA:833:U:C2	1:AA:834:C:C5	3.07	0.43
1:AA:853:G:H2'	1:AA:854:G:C8	2.45	0.43
1:AA:881:G:P	12:AL:12:ARG:NH2	2.91	0.43
1:AA:989:C:H1'	1:AA:1016:A:C2	2.53	0.43
1:AA:995:C:H1'	14:AN:8:GLU:OE2	2.17	0.43
1:AA:1014:A:H2	1:AA:1219:U:O2	2.00	0.43
1:AA:1055:A:N3	3:AC:156:ARG:NH1	2.64	0.43
1:AA:1125:U:C2'	1:AA:1126:U:OP2	2.66	0.43
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.65	0.43
4:AD:90:GLY:O	4:AD:94:LEU:CD1	2.65	0.43
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.19	0.43
5:AE:114:GLY:O	5:AE:115:VAL:O	2.37	0.43
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.18	0.43
8:AH:104:ARG:CZ	8:AH:138:TRP:CH2	3.00	0.43
12:AL:46:LYS:CG	12:AL:47:LYS:H	2.22	0.43
12:AL:70:ILE:N	12:AL:70:ILE:HD12	2.32	0.43
17:AQ:74:LEU:HD22	17:AQ:74:LEU:HA	1.75	0.43
18:AR:71:LYS:O	18:AR:74:ARG:HB2	2.18	0.43
24:B2:30:ARG:CZ	24:B2:30:ARG:HB3	2.47	0.43
24:B2:32:LEU:HD21	31:BA:61:G:O2'	2.18	0.43
30:B8:8:LYS:HB3	30:B8:12:LYS:HE3	1.99	0.43
31:BA:225:A:H2'	31:BA:226:G:H5'	1.99	0.43
31:BA:721:C:C2	31:BA:722:A:C8	3.06	0.43
31:BA:848:G:C4	31:BA:933:A:C8	3.06	0.43
31:BA:870:A:C2	31:BA:908:C:C2	3.06	0.43
31:BA:902:C:O2'	31:BA:903:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:906:G:H2'	31:BA:907:U:O5'	2.18	0.43
31:BA:1771:C:H1'	31:BA:1786:A:C8	2.53	0.43
31:BA:1882:C:C5'	31:BA:1883:G:OP2	2.55	0.43
31:BA:2078:C:O2'	31:BA:2079:U:H5'	2.18	0.43
31:BA:2359:C:N4	31:BA:2360:A:C6	2.87	0.43
31:BA:2399:G:C6	31:BA:2400:G:C5	3.06	0.43
31:BA:2740:A:C6	31:BA:2764:A:C8	3.07	0.43
32:BB:92:C:H5''	51:BZ:79:ARG:HH22	1.84	0.43
35:BF:7:TYR:HB3	35:BF:16:GLY:CA	2.49	0.43
36:BG:63:ILE:HD13	36:BG:141:PHE:CZ	2.53	0.43
37:BH:126:PRO:HB2	37:BH:130:ARG:HH12	1.83	0.43
44:BS:66:ALA:HA	44:BS:69:VAL:HG12	2.01	0.43
45:BT:33:LYS:N	45:BT:33:LYS:HZ2	2.15	0.43
45:BT:34:VAL:O	45:BT:35:LYS:CB	2.65	0.43
47:BV:16:PRO:O	47:BV:98:GLU:OE2	2.37	0.43
50:BY:34:LYS:HE2	50:BY:34:LYS:HB3	1.74	0.43
50:BY:88:LYS:O	50:BY:89:PHE:CB	2.66	0.43
1:CA:60:A:P	1:CA:60:A:C8	3.07	0.43
1:CA:198:G:C2	1:CA:199:G:C8	3.06	0.43
1:CA:288:A:H2'	1:CA:289:G:H4'	2.00	0.43
1:CA:418:C:N3	1:CA:426:G:C2	2.87	0.43
1:CA:443:C:N3	1:CA:444:C:C5	2.86	0.43
1:CA:573:A:H2'	1:CA:574:A:C8	2.54	0.43
1:CA:612:C:C2'	1:CA:613:C:H5'	2.48	0.43
1:CA:642:A:C5	8:CH:115:SER:HA	2.53	0.43
1:CA:659:U:C2'	1:CA:660:G:C5'	2.95	0.43
1:CA:748:C:C4'	1:CA:749:C:O5'	2.58	0.43
1:CA:949:A:C6	1:CA:1233:G:C2	3.06	0.43
1:CA:1503:A:O2'	1:CA:1504:G:C5'	2.65	0.43
2:CB:105:PHE:C	2:CB:107:THR:H	2.21	0.43
3:CC:77:ILE:C	3:CC:83:ARG:HB3	2.39	0.43
4:CD:19:LEU:HB2	4:CD:21:LEU:HD23	2.00	0.43
4:CD:59:ARG:HA	4:CD:59:ARG:NE	2.34	0.43
7:CG:108:ALA:O	7:CG:111:ARG:HB2	2.19	0.43
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.17	0.43
9:CI:6:GLY:HA3	9:CI:84:ALA:HB2	2.00	0.43
20:CT:74:LYS:C	20:CT:76:ALA:H	2.22	0.43
23:D1:33:LYS:C	23:D1:34:THR:HG22	2.38	0.43
24:D2:14:ARG:CZ	24:D2:57:ILE:HG22	2.48	0.43
27:D5:20:ARG:HG2	27:D5:23:HIS:CD2	2.53	0.43
31:DA:27:G:C4	31:DA:512:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:271(F):C:C4	31:DA:271(G):C:C5	3.07	0.43
31:DA:444:C:C4'	35:DF:49:ALA:HB2	2.49	0.43
31:DA:463:G:N1	31:DA:467:G:C6	2.87	0.43
31:DA:860:U:C5	31:DA:917:A:N7	2.86	0.43
31:DA:1043:C:O2'	31:DA:1044:G:C8	2.58	0.43
31:DA:1899:G:C2'	31:DA:1900:A:OP2	2.66	0.43
31:DA:2078:C:O2'	31:DA:2079:U:H5'	2.19	0.43
31:DA:2400:G:C5	31:DA:2401:U:C5	3.06	0.43
31:DA:2635:C:C2'	31:DA:2636:U:O5'	2.66	0.43
31:DA:2787:C:O2	34:DE:61:ARG:NH1	2.50	0.43
31:DA:2821:A:H2'	31:DA:2822:G:H8	1.82	0.43
32:DB:75:G:H5'	32:DB:75:G:C8	2.42	0.43
36:DG:41:GLN:HG2	36:DG:155:MET:CB	2.38	0.43
36:DG:60:LEU:HA	36:DG:63:ILE:HG12	2.00	0.43
39:DN:30:ILE:CD1	39:DN:99:LEU:HD11	2.48	0.43
42:DQ:35:VAL:HG23	42:DQ:100:GLY:C	2.38	0.43
43:DR:56:LYS:HE2	43:DR:87:TYR:CB	2.49	0.43
48:DW:92:ARG:O	48:DW:93:ALA:HB3	2.17	0.43
50:DY:66:PRO:O	50:DY:67:LEU:CB	2.66	0.43
51:DZ:118:GLN:O	51:DZ:120:ILE:HG12	2.18	0.43
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.52	0.43
1:AA:136:C:N4	1:AA:227:G:H1	2.17	0.43
1:AA:397:A:H5''	1:AA:397:A:N3	2.34	0.43
1:AA:473:G:C2	1:AA:474:G:C8	3.07	0.43
1:AA:560:U:H4'	1:AA:561:U:O5'	2.16	0.43
1:AA:587:G:O2'	1:AA:588:G:OP2	2.32	0.43
1:AA:615:C:H2'	1:AA:616:G:O4'	2.18	0.43
1:AA:739:C:O2	1:AA:739:C:H2'	2.19	0.43
1:AA:986:A:H1'	19:AS:54:GLY:O	2.18	0.43
1:AA:1168:A:C6	1:AA:1169:A:C6	3.07	0.43
1:AA:1209:C:O2'	1:AA:1210:C:H5'	2.18	0.43
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.18	0.43
9:AI:5:TYR:CD2	9:AI:18:PHE:CE2	3.06	0.43
10:AJ:62:HIS:CE1	14:AN:61:TRP:HH2	2.36	0.43
13:AM:68:GLY:O	13:AM:70:LEU:N	2.51	0.43
15:AO:17:ARG:HG2	15:AO:26:GLU:HG3	1.99	0.43
17:AQ:50:LYS:HE3	17:AQ:51:TYR:HE1	1.82	0.43
20:AT:38:LYS:HA	20:AT:41:ILE:HD11	2.01	0.43
24:B2:14:ARG:NH1	24:B2:57:ILE:CG2	2.78	0.43
31:BA:64:A:O3'	49:BX:68:ARG:O	2.36	0.43
31:BA:271(S):G:C5	31:BA:271(T):C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1589:C:H2'	31:BA:1590:U:C6	2.53	0.43
31:BA:1638:C:H5''	31:BA:2710:C:O2'	2.18	0.43
31:BA:2402:C:C3'	31:BA:2403:C:H5'	2.48	0.43
31:BA:2437:U:H2'	31:BA:2438:U:C6	2.54	0.43
31:BA:2557:G:H2'	31:BA:2558:C:H6	1.83	0.43
31:BA:2624:G:H2'	31:BA:2625:G:H5'	2.01	0.43
31:BA:2663:G:C6	31:BA:2664:G:C5	3.06	0.43
31:BA:2788:C:O2'	31:BA:2809:A:N3	2.45	0.43
31:BA:2808:U:C4	31:BA:2809:A:N7	2.87	0.43
31:BA:2808:U:O2'	31:BA:2809:A:H5'	2.17	0.43
32:BB:46:A:C2'	32:BB:47:C:O5'	2.67	0.43
33:BD:62:TYR:CE1	33:BD:64:ILE:HA	2.53	0.43
36:BG:37:VAL:O	36:BG:94:LEU:HG	2.18	0.43
38:BI:128:LEU:HB3	38:BI:129:THR:H	1.57	0.43
43:BR:74:LYS:CD	43:BR:77:ARG:HH21	2.30	0.43
43:BR:83:ILE:O	43:BR:84:ALA:C	2.57	0.43
46:BU:88:ILE:HA	46:BU:90:VAL:HG23	2.01	0.43
47:BV:69:LYS:HB2	47:BV:93:GLU:OE2	2.18	0.43
50:BY:41:GLY:O	50:BY:42:VAL:C	2.56	0.43
50:BY:45:VAL:HG22	50:BY:62:GLU:CB	2.48	0.43
51:BZ:128:VAL:HG23	51:BZ:160:GLY:O	2.19	0.43
1:CA:374:A:C4	1:CA:375:U:C5	3.07	0.43
1:CA:600:C:O2'	1:CA:601:C:H5'	2.18	0.43
1:CA:665:A:H1'	1:CA:733:A:O4'	2.17	0.43
1:CA:930:C:C4	1:CA:931:C:C5	3.06	0.43
1:CA:1065:U:H4'	1:CA:1066:C:O5'	2.19	0.43
1:CA:1067:A:N3	1:CA:1068:G:N9	2.67	0.43
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.52	0.43
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.53	0.43
1:CA:1293:G:O2'	1:CA:1294:G:P	2.76	0.43
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.18	0.43
8:CH:38:ILE:O	8:CH:42:GLU:HB2	2.19	0.43
10:CJ:51:ARG:HG3	10:CJ:60:ARG:C	2.37	0.43
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.86	0.43
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.17	0.43
12:CL:62:SER:C	12:CL:64:TYR:N	2.71	0.43
13:CM:45:VAL:HA	13:CM:48:LEU:HD13	1.99	0.43
18:CR:40:LEU:O	18:CR:43:PHE:HB2	2.17	0.43
20:CT:100:ILE:HD12	20:CT:100:ILE:N	2.33	0.43
24:D2:49:LYS:HD3	31:DA:76:C:H5''	2.00	0.43
27:D5:31:VAL:O	27:D5:39:MET:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:38:GLY:C	30:D8:40:GLU:H	2.22	0.43
31:DA:225:A:H2'	31:DA:226:G:H5'	2.00	0.43
31:DA:1338:G:O2'	31:DA:1339:G:H5'	2.18	0.43
31:DA:1740:G:H4'	31:DA:1741:A:OP1	2.18	0.43
31:DA:1742:G:C8	31:DA:1742:G:C3'	3.01	0.43
31:DA:1826:G:H2'	31:DA:1827:C:C6	2.54	0.43
31:DA:1882:C:C5'	31:DA:1883:G:OP2	2.58	0.43
31:DA:2259:G:C2	31:DA:2282:G:C6	3.07	0.43
31:DA:2564:A:C6	31:DA:2565:A:C6	3.06	0.43
31:DA:2772:C:H2'	31:DA:2773:C:H6	1.83	0.43
33:DD:35:LYS:H	33:DD:64:ILE:CG2	2.30	0.43
35:DF:8:GLN:O	35:DF:8:GLN:HG3	2.17	0.43
38:DI:10:GLU:C	38:DI:12:LEU:H	2.21	0.43
39:DN:25:ARG:HH11	39:DN:25:ARG:CG	2.28	0.43
40:DO:2:ILE:N	40:DO:2:ILE:HD13	2.33	0.43
41:DP:48:PRO:CG	41:DP:49:ARG:N	2.81	0.43
42:DQ:36:ALA:O	42:DQ:100:GLY:N	2.50	0.43
43:DR:9:LYS:O	43:DR:10:LEU:CG	2.66	0.43
46:DU:61:TRP:CD2	46:DU:94:ASN:HA	2.54	0.43
46:DU:80:ILE:HD13	46:DU:80:ILE:HA	1.83	0.43
46:DU:92:ARG:NH2	47:DV:11:GLN:H	2.16	0.43
47:DV:62:LEU:HD12	47:DV:96:ILE:HD13	1.99	0.43
49:DX:60:ARG:HG2	49:DX:72:LYS:H	1.83	0.43
49:DX:65:ARG:O	49:DX:66:LEU:CB	2.66	0.43
49:DX:89:ILE:O	49:DX:89:ILE:CG2	2.65	0.43
50:DY:41:GLY:O	50:DY:43:ASN:OD1	2.37	0.43
51:DZ:42:VAL:HG13	51:DZ:43:GLU:H	1.84	0.43
1:AA:12:U:H4'	1:AA:526:C:O2'	2.18	0.43
1:AA:273:A:N6	1:AA:274:A:N6	2.67	0.43
1:AA:503:C:O2	1:AA:510:A:H2	2.02	0.43
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.18	0.43
3:AC:153:VAL:HG12	3:AC:154:SER:N	2.34	0.43
4:AD:62:GLN:NE2	4:AD:62:GLN:HA	2.33	0.43
10:AJ:22:LYS:C	10:AJ:24:VAL:H	2.21	0.43
14:AN:46:GLU:O	14:AN:50:LYS:HG3	2.18	0.43
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.97	0.43
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.33	0.43
26:B4:14:ILE:CB	36:BG:5:VAL:HG13	2.49	0.43
31:BA:388:G:O2'	31:BA:389:G:N7	2.46	0.43
31:BA:672:C:O2'	31:BA:673:C:H5'	2.19	0.43
31:BA:683:C:H6	31:BA:683:C:O5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:921:G:H2'	31:BA:922:U:C6	2.54	0.43
31:BA:1044:G:N1	31:BA:1112:G:O6	2.51	0.43
31:BA:1106:A:H2'	31:BA:1107:G:C8	2.54	0.43
31:BA:1436:G:H2'	31:BA:1437:C:O4'	2.19	0.43
31:BA:1667:G:H4'	31:BA:1668:A:OP1	2.18	0.43
31:BA:1689:A:H62	31:BA:1698:A:H2	1.66	0.43
31:BA:1946:U:H2'	31:BA:1947:C:H6	1.83	0.43
31:BA:2103:C:C2	31:BA:2187:G:N1	2.87	0.43
31:BA:2662:A:H5'	31:BA:2663:G:H1'	2.01	0.43
31:BA:2681:C:O2	31:BA:2681:C:H2'	2.19	0.43
34:BE:24:THR:HG23	34:BE:184:VAL:HG23	2.00	0.43
34:BE:34:VAL:O	34:BE:34:VAL:HG23	2.18	0.43
34:BE:119:ARG:HB3	34:BE:120:TRP:CD1	2.53	0.43
34:BE:147:PRO:HB2	34:BE:149:ARG:HG2	2.01	0.43
35:BF:7:TYR:HB3	35:BF:16:GLY:N	2.33	0.43
37:BH:46:GLU:O	37:BH:47:GLU:HB2	2.19	0.43
40:BO:1:MET:HB2	40:BO:32:TYR:HB3	2.00	0.43
1:CA:9:G:N3	1:CA:9:G:H2'	2.33	0.43
1:CA:69:G:N2	1:CA:70:G:C4	2.87	0.43
1:CA:148:G:C2	1:CA:149:A:N7	2.87	0.43
1:CA:234:C:C2	1:CA:235:C:C5	3.06	0.43
1:CA:537:G:OP1	12:CL:113:ARG:NH2	2.51	0.43
1:CA:764:C:C2'	1:CA:765:G:O5'	2.67	0.43
1:CA:824:C:H4'	8:CH:1:MET:H1	1.83	0.43
1:CA:855:G:C2	1:CA:856:C:C2	3.07	0.43
1:CA:995:C:H1'	14:CN:8:GLU:OE2	2.18	0.43
1:CA:1034:G:N2	1:CA:1035:A:N6	2.67	0.43
1:CA:1138:G:N1	1:CA:1140:C:C2	2.87	0.43
1:CA:1311:G:N2	1:CA:1327:C:C2	2.87	0.43
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.53	0.43
13:CM:68:GLY:O	13:CM:70:LEU:N	2.52	0.43
14:CN:12:ARG:C	14:CN:14:PRO:CD	2.87	0.43
19:CS:69:HIS:HB2	19:CS:74:PHE:CE2	2.51	0.43
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.19	0.43
24:D2:14:ARG:NH1	24:D2:57:ILE:CG2	2.79	0.43
26:D4:2:LYS:CB	32:DB:40:U:O4	2.66	0.43
30:D8:37:SER:HB2	30:D8:38:GLY:H	1.46	0.43
30:D8:51:ALA:CA	30:D8:53:PRO:HD2	2.48	0.43
31:DA:105:C:H2'	31:DA:106:C:H6	1.83	0.43
31:DA:154:G:H8	31:DA:154:G:O5'	2.01	0.43
31:DA:292:C:H2'	31:DA:293:U:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1028:A:N3	31:DA:2486:G:O2'	2.38	0.43
31:DA:1495:A:O4'	31:DA:1495:A:OP2	2.36	0.43
31:DA:1545:A:H2'	31:DA:1546:C:O5'	2.18	0.43
31:DA:1614:A:H62	48:DW:87:PRO:HA	1.83	0.43
31:DA:2408:U:H2'	31:DA:2409:G:C8	2.53	0.43
31:DA:2645:G:C3'	31:DA:2646:C:H5'	2.48	0.43
31:DA:2674:G:H2'	31:DA:2675:A:O4'	2.18	0.43
31:DA:2880:C:H1'	43:DR:92:GLY:O	2.18	0.43
34:DE:116:VAL:HG13	34:DE:122:PHE:CB	2.48	0.43
35:DF:64:ILE:HD12	35:DF:65:TRP:CE2	2.54	0.43
36:DG:111:LEU:N	36:DG:112:PRO:CD	2.82	0.43
38:DI:78:THR:OG1	38:DI:141:LYS:HD2	2.19	0.43
39:DN:45:ASN:N	39:DN:45:ASN:ND2	2.63	0.43
41:DP:127:ALA:HB3	41:DP:130:PHE:CE2	2.54	0.43
42:DQ:19:GLY:O	42:DQ:21:THR:N	2.48	0.43
42:DQ:141:GLN:CD	51:DZ:70:LEU:HB3	2.39	0.43
43:DR:23:ASN:N	43:DR:23:ASN:HD22	2.15	0.43
44:DS:54:LEU:HD22	44:DS:58:LEU:O	2.19	0.43
45:DT:109:GLU:HA	45:DT:112:ARG:HG2	1.99	0.43
46:DU:90:VAL:HG11	47:DV:40:LEU:HB3	2.01	0.43
47:DV:61:VAL:HG12	47:DV:99:ILE:HB	2.00	0.43
49:DX:76:ARG:HD2	49:DX:77:LYS:HB2	1.99	0.43
1:AA:148:G:C2	1:AA:149:A:N7	2.86	0.43
1:AA:318:G:N3	1:AA:319:G:C8	2.87	0.43
1:AA:356:A:C2'	1:AA:357:G:O5'	2.66	0.43
1:AA:414:A:H2'	1:AA:415:A:O4'	2.17	0.43
1:AA:539:A:H2'	1:AA:540:G:H8	1.79	0.43
1:AA:574:A:H5''	1:AA:575:G:OP2	2.19	0.43
1:AA:577:G:H1'	1:AA:816:A:N3	2.33	0.43
1:AA:625:G:H2'	1:AA:626:U:H6	1.83	0.43
1:AA:673:G:C2	1:AA:674:G:C6	3.06	0.43
1:AA:801:U:H2'	1:AA:802:A:C8	2.54	0.43
1:AA:949:A:C6	1:AA:1233:G:C2	3.07	0.43
1:AA:1138:G:N1	1:AA:1140:C:C2	2.86	0.43
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.53	0.43
1:AA:1260:C:H4'	1:AA:1284:C:H5'	2.00	0.43
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.58	0.43
1:AA:1347:G:O2'	1:AA:1348:U:P	2.77	0.43
1:AA:1386:G:C2	1:AA:1387:G:N7	2.86	0.43
2:AB:17:PHE:HD2	2:AB:17:PHE:H	1.66	0.43
2:AB:88:ALA:HB1	2:AB:222:ILE:HG21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.52	0.43
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.18	0.43
4:AD:96:LEU:N	4:AD:96:LEU:HD22	2.34	0.43
5:AE:110:LEU:HD12	5:AE:118:ILE:HG21	2.01	0.43
5:AE:132:ALA:O	5:AE:133:TYR:C	2.56	0.43
6:AF:8:ILE:HG22	6:AF:9:VAL:H	1.82	0.43
6:AF:100:ASN:ND2	18:AR:23:LYS:HE3	2.33	0.43
9:AI:17:VAL:HG22	9:AI:63:ILE:CG1	2.49	0.43
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.19	0.43
12:AL:53:ARG:HH11	12:AL:53:ARG:HG2	1.84	0.43
20:AT:100:ILE:O	20:AT:100:ILE:HG22	2.19	0.43
24:B2:47:ASN:ND2	24:B2:48:HIS:H	2.16	0.43
27:B5:41:PRO:O	27:B5:44:THR:OG1	2.35	0.43
30:B8:29:LYS:HB2	30:B8:44:LYS:HG2	1.99	0.43
30:B8:48:PHE:CD1	30:B8:48:PHE:N	2.85	0.43
31:BA:286:C:N4	31:BA:356:G:C6	2.87	0.43
31:BA:1131:G:OP1	39:BN:80:GLY:HA2	2.19	0.43
31:BA:1478:G:O2'	31:BA:1558:A:C2	2.72	0.43
31:BA:1673:U:C5	34:BE:129:HIS:CD2	3.07	0.43
31:BA:1884:A:C2	31:BA:1885:A:C4	3.06	0.43
31:BA:1900:A:N1	31:BA:1970:A:C6	2.87	0.43
31:BA:2094:G:OP1	38:BI:22:LYS:HD3	2.19	0.43
31:BA:2096:U:H3	31:BA:2193:G:H1	1.66	0.43
31:BA:2280:G:C2'	31:BA:2281:C:H5'	2.49	0.43
32:BB:93:G:H2'	32:BB:94:C:H6	1.84	0.43
36:BG:96:ARG:O	36:BG:97:ASP:C	2.56	0.43
36:BG:101:ILE:HG23	36:BG:102:PHE:N	2.33	0.43
40:BO:106:LEU:HA	40:BO:106:LEU:HD23	1.81	0.43
45:BT:15:VAL:O	45:BT:15:VAL:HG22	2.19	0.43
47:BV:1:MET:H1	47:BV:44:LYS:HD2	1.84	0.43
47:BV:5:VAL:HG22	47:BV:6:LYS:N	2.34	0.43
48:BW:111:HIS:CG	48:BW:112:GLY:N	2.84	0.43
49:BX:57:LEU:O	49:BX:76:ARG:N	2.44	0.43
49:BX:65:ARG:O	49:BX:66:LEU:HB3	2.18	0.43
49:BX:77:LYS:CD	49:BX:78:LYS:HG3	2.48	0.43
50:BY:39:VAL:CG1	50:BY:40:GLU:H	2.25	0.43
51:BZ:125:LEU:HD23	51:BZ:126:VAL:H	1.82	0.43
1:CA:272:C:H2'	1:CA:273:A:C8	2.54	0.43
1:CA:439:A:C4	1:CA:496:A:C2	3.07	0.43
1:CA:523:A:N1	12:CL:92:ASP:HB2	2.34	0.43
1:CA:579:G:C6	1:CA:580:U:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:929:G:H1	1:CA:1388:C:N4	2.06	0.43
1:CA:1054:C:OP1	1:CA:1197:G:OP2	2.36	0.43
1:CA:1209:C:O2'	1:CA:1210:C:H5'	2.18	0.43
4:CD:11:LEU:C	4:CD:13:ARG:N	2.69	0.43
6:CF:79:LEU:HD12	6:CF:88:VAL:HG11	2.00	0.43
7:CG:124:LEU:O	7:CG:128:ALA:HB2	2.18	0.43
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.39	0.43
15:CO:55:GLY:O	15:CO:56:LEU:C	2.57	0.43
16:CP:74:LEU:HB3	16:CP:79:VAL:HG11	2.01	0.43
20:CT:18:GLN:O	20:CT:19:SER:C	2.56	0.43
20:CT:89:ARG:C	20:CT:91:LEU:H	2.22	0.43
22:D0:47:PRO:HB2	22:D0:51:VAL:O	2.19	0.43
27:D5:42:PRO:HB2	27:D5:43:HIS:HD2	1.83	0.43
27:D5:56:LYS:O	27:D5:57:VAL:O	2.36	0.43
30:D8:4:MET:CE	31:DA:593:G:O4'	2.67	0.43
31:DA:250:G:C6	31:DA:251:A:C6	3.07	0.43
31:DA:354:G:C8	31:DA:354:G:H3'	2.53	0.43
31:DA:528:A:C2'	31:DA:529:A:C5'	2.95	0.43
31:DA:838:C:H2'	31:DA:839:U:H6	1.84	0.43
31:DA:867:C:C6	31:DA:868:U:C5	3.06	0.43
31:DA:1006:C:C2	31:DA:1138:G:N2	2.86	0.43
31:DA:1458:C:H4'	31:DA:1459:G:C4	2.54	0.43
31:DA:1891:G:C6	31:DA:1892:C:N3	2.86	0.43
31:DA:1902:C:O2'	33:DD:244:ARG:CB	2.65	0.43
31:DA:2087:G:H8	31:DA:2087:G:O5'	2.02	0.43
31:DA:2251:G:C8	31:DA:2450:A:H4'	2.54	0.43
31:DA:2583:G:H2'	31:DA:2584:U:O2	2.18	0.43
31:DA:2610:C:C4'	31:DA:2611:U:OP2	2.65	0.43
31:DA:2813:A:H2'	31:DA:2814:C:O4'	2.18	0.43
31:DA:2849:U:H5'	31:DA:2867:G:N2	2.33	0.43
32:DB:21:G:C6	32:DB:63:G:C6	3.07	0.43
32:DB:38:C:C1'	44:DS:95:HIS:HE2	2.32	0.43
34:DE:51:PHE:HD1	34:DE:52:LEU:HD12	1.83	0.43
36:DG:127:GLY:O	36:DG:128:ARG:C	2.57	0.43
37:DH:32:GLU:C	37:DH:33:LEU:HD23	2.38	0.43
38:DI:60:GLU:HA	38:DI:63:ALA:HB3	2.00	0.43
41:DP:39:LYS:HE3	41:DP:42:SER:CB	2.49	0.43
42:DQ:52:VAL:HA	42:DQ:55:VAL:CG1	2.46	0.43
46:DU:27:LEU:HA	46:DU:30:LYS:HB2	2.01	0.43
46:DU:83:LEU:HD13	46:DU:113:ALA:HB2	2.01	0.43
49:DX:27:THR:OG1	49:DX:77:LYS:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:148:ASP:HB2	51:DZ:149:SER:H	1.56	0.43
1:AA:155:C:C2	1:AA:156:G:N7	2.87	0.43
1:AA:451:A:C5	1:AA:481:G:C6	3.07	0.43
1:AA:1304:G:C6	1:AA:1305:G:N1	2.87	0.43
1:AA:1368:G:OP2	9:AI:112:LYS:CD	2.67	0.43
4:AD:8:VAL:O	4:AD:10:ARG:N	2.51	0.43
5:AE:15:ARG:CZ	5:AE:26:PHE:CE2	3.02	0.43
5:AE:32:VAL:CB	5:AE:58:ALA:HB1	2.48	0.43
7:AG:79:ARG:NE	7:AG:84:ASN:HD21	2.16	0.43
8:AH:97:VAL:HA	8:AH:100:ILE:HD11	2.01	0.43
9:AI:83:ARG:HH21	9:AI:102:LEU:CD2	2.32	0.43
12:AL:68:ALA:HA	12:AL:96:VAL:HG13	2.01	0.43
15:AO:39:LEU:O	15:AO:42:HIS:HB3	2.19	0.43
16:AP:39:TYR:CE1	16:AP:41:PRO:CA	3.02	0.43
17:AQ:5:VAL:CG1	17:AQ:6:LEU:N	2.82	0.43
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.33	0.43
19:AS:69:HIS:HB2	19:AS:74:PHE:CE2	2.51	0.43
20:AT:73:HIS:O	20:AT:74:LYS:C	2.57	0.43
24:B2:53:LEU:O	24:B2:54:LYS:HB2	2.19	0.43
31:BA:492:A:H2'	31:BA:493:G:O4'	2.19	0.43
31:BA:656:G:H2'	31:BA:657:U:O5'	2.19	0.43
31:BA:705:A:C2'	31:BA:706:A:H5'	2.49	0.43
31:BA:921:G:O2'	31:BA:922:U:H5'	2.19	0.43
31:BA:995:C:C2	39:BN:4:TYR:CZ	3.06	0.43
31:BA:1239:G:H2'	31:BA:1240:U:O4'	2.18	0.43
31:BA:1313:U:H5''	31:BA:1314:C:OP2	2.19	0.43
31:BA:1341:U:N3	49:BX:77:LYS:HE2	2.32	0.43
31:BA:1891:G:C6	31:BA:1892:C:C4	3.07	0.43
31:BA:1987:G:H2'	31:BA:1988:C:H6	1.83	0.43
31:BA:2031:A:OP1	31:BA:2031:A:H8	2.02	0.43
31:BA:2503:A:H4'	31:BA:2504:U:OP1	2.19	0.43
31:BA:2704:C:H2'	31:BA:2705:A:O4'	2.19	0.43
31:BA:2716:U:O2'	31:BA:2717:G:H5'	2.18	0.43
32:BB:15:A:H1'	32:BB:110:G:C8	2.53	0.43
33:BD:45:ASN:CG	33:BD:46:GLN:N	2.71	0.43
34:BE:51:PHE:HD1	34:BE:52:LEU:HD12	1.83	0.43
35:BF:9:ILE:HG12	35:BF:14:PRO:HA	2.01	0.43
35:BF:27:GLU:O	35:BF:112:MET:HE2	2.19	0.43
35:BF:96:ASP:OD1	35:BF:96:ASP:C	2.57	0.43
37:BH:94:TYR:N	37:BH:94:TYR:HD1	2.17	0.43
43:BR:56:LYS:HE3	43:BR:94:TYR:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:42:ILE:HD13	45:BT:83:ILE:CD1	2.47	0.43
47:BV:19:LYS:CG	47:BV:20:LEU:N	2.39	0.43
48:BW:95:ILE:O	48:BW:95:ILE:HG13	2.17	0.43
49:BX:29:TRP:CE3	49:BX:76:ARG:HB3	2.53	0.43
1:CA:262:A:C6	1:CA:263:A:N6	2.87	0.43
1:CA:437:U:H5''	4:CD:155:LEU:CD1	2.47	0.43
1:CA:623:C:C4	1:CA:624:C:C5	3.07	0.43
1:CA:625:G:H2'	1:CA:626:U:C6	2.54	0.43
1:CA:1125:U:C2'	1:CA:1126:U:OP2	2.66	0.43
1:CA:1168:A:C6	1:CA:1169:A:C6	3.07	0.43
2:CB:93:VAL:HG11	2:CB:97:TRP:HD1	1.84	0.43
2:CB:163:PHE:HD2	2:CB:185:ILE:HB	1.84	0.43
4:CD:135:LEU:O	4:CD:136:PRO:C	2.56	0.43
6:CF:89:MET:HG2	6:CF:89:MET:O	2.18	0.43
9:CI:81:ILE:O	9:CI:85:LEU:HG	2.18	0.43
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	2.00	0.43
16:CP:74:LEU:HD23	16:CP:74:LEU:HA	1.77	0.43
16:CP:82:GLN:N	16:CP:82:GLN:HE21	2.17	0.43
22:D0:72:ARG:NH2	22:D0:75:LEU:HD12	2.34	0.43
30:D8:22:VAL:HB	30:D8:53:PRO:HB2	2.01	0.43
30:D8:32:LEU:CA	30:D8:34:TRP:H	2.31	0.43
31:DA:623:G:H2'	31:DA:624:C:C6	2.54	0.43
31:DA:691:C:O2'	31:DA:692:C:H5'	2.18	0.43
31:DA:699:A:H2'	31:DA:700:G:O4'	2.18	0.43
31:DA:912:C:N3	31:DA:913:U:C5	2.86	0.43
31:DA:1106:A:H2'	31:DA:1107:G:C8	2.54	0.43
31:DA:1107:G:C6	31:DA:1108:U:N3	2.87	0.43
31:DA:1158:C:HO2'	31:DA:1159:U:C5'	2.27	0.43
31:DA:1379:A:HO2'	31:DA:1380:G:P	2.30	0.43
31:DA:1528:A:O2'	31:DA:1528(A):A:C8	2.63	0.43
31:DA:1686:C:C2'	31:DA:1687:G:H5'	2.48	0.43
31:DA:1884:A:C2	31:DA:1885:A:C8	3.07	0.43
31:DA:2101:G:C6	31:DA:2102:U:C4	3.06	0.43
31:DA:2274:A:C5	31:DA:2276:G:C8	3.06	0.43
31:DA:2304:G:H22	31:DA:2312:U:H3	1.65	0.43
31:DA:2334:G:H5'	44:DS:13:ARG:HB3	1.99	0.43
31:DA:2689:U:C4'	31:DA:2690:C:H5'	2.49	0.43
33:DD:25:THR:CG2	33:DD:82:ILE:N	2.82	0.43
34:DE:21:VAL:O	34:DE:23:VAL:HG22	2.19	0.43
35:DF:7:TYR:HB3	35:DF:16:GLY:N	2.34	0.43
35:DF:65:TRP:CZ3	35:DF:73:ALA:O	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:71:LEU:HD12	37:DH:71:LEU:HA	1.80	0.43
37:DH:89:ILE:HG13	37:DH:129:THR:O	2.19	0.43
39:DN:5:VAL:HA	39:DN:6:PRO:HD3	1.45	0.43
42:DQ:88:GLY:O	42:DQ:89:ASN:CB	2.66	0.43
44:DS:30:ARG:O	44:DS:30:ARG:HG3	2.18	0.43
47:DV:80:GLN:HA	47:DV:81:TYR:HA	1.73	0.43
50:DY:71:LYS:CB	50:DY:71:LYS:HZ3	2.29	0.43
1:AA:234:C:H2'	1:AA:235:C:C6	2.50	0.43
1:AA:342:C:H2'	1:AA:343:U:O4'	2.18	0.43
1:AA:543:C:N3	1:AA:544:G:N7	2.67	0.43
1:AA:556:C:O2'	1:AA:557:G:H5'	2.18	0.43
1:AA:563:A:C5	1:AA:567:G:C4	3.07	0.43
1:AA:644:G:C6	1:AA:645:C:C5	3.07	0.43
1:AA:1433:A:N1	1:AA:1434:A:C2	2.86	0.43
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.19	0.43
3:AC:155:GLY:O	3:AC:196:LEU:HD13	2.19	0.43
7:AG:25:ALA:O	7:AG:29:LYS:HG2	2.18	0.43
8:AH:102:ARG:N	8:AH:102:ARG:NE	2.61	0.43
10:AJ:48:THR:HG23	10:AJ:62:HIS:HB3	2.00	0.43
12:AL:93:LEU:O	12:AL:94:PRO:C	2.57	0.43
13:AM:60:VAL:HG12	13:AM:66:LEU:HD21	2.00	0.43
14:AN:15:LYS:HD3	14:AN:15:LYS:HA	1.85	0.43
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.18	0.43
20:AT:58:LYS:HE3	20:AT:62:LEU:HD12	2.00	0.43
23:B1:21:ARG:HH12	31:BA:380:U:P	2.42	0.43
25:B3:11:SER:HG	25:B3:13:ILE:HG12	1.84	0.43
26:B4:23:GLU:O	26:B4:24:THR:CB	2.66	0.43
30:B8:59:LYS:CD	41:BP:50:ARG:HB3	2.44	0.43
31:BA:64:A:O2'	31:BA:65:C:H5'	2.19	0.43
31:BA:444:C:H4'	35:BF:49:ALA:HB2	2.01	0.43
31:BA:610:G:H2'	31:BA:611:C:H6	1.83	0.43
31:BA:755:C:H2'	31:BA:756:C:H6	1.83	0.43
31:BA:1039:G:O2'	31:BA:1040:C:H5'	2.18	0.43
31:BA:1141:U:OP2	39:BN:63:THR:OG1	2.28	0.43
31:BA:1550:C:O2'	31:BA:1551:C:H5'	2.19	0.43
31:BA:1558:A:H1'	31:BA:1559:G:OP2	2.19	0.43
31:BA:1635:G:H2'	31:BA:1636:C:H6	1.84	0.43
31:BA:1803:A:C2	31:BA:1822:G:N3	2.87	0.43
31:BA:1819:A:OP1	33:BD:158:ALA:HB2	2.18	0.43
31:BA:1839:G:C8	31:BA:1839:G:C5'	3.02	0.43
31:BA:2287:A:C4	31:BA:2289:G:N7	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:74:U:C3'	32:BB:75:G:H5''	2.49	0.43
33:BD:28:GLU:CB	33:BD:29:PRO:HD3	2.48	0.43
33:BD:266:SER:O	33:BD:267:SER:HB2	2.17	0.43
34:BE:21:VAL:HA	34:BE:22:PRO:HD2	1.89	0.43
34:BE:56:PRO:C	34:BE:58:ARG:H	2.22	0.43
36:BG:139:LEU:HD23	36:BG:149:VAL:HG21	2.01	0.43
37:BH:83:TYR:CD1	37:BH:83:TYR:N	2.87	0.43
37:BH:158:HIS:CE1	37:BH:170:ARG:N	2.86	0.43
38:BI:9:LEU:HB2	38:BI:12:LEU:O	2.19	0.43
41:BP:101:VAL:O	41:BP:103:ALA:N	2.50	0.43
43:BR:116:LEU:HD23	43:BR:116:LEU:HA	1.74	0.43
44:BS:59:LYS:CE	44:BS:68:GLN:HE22	2.29	0.43
46:BU:65:ILE:CG1	46:BU:96:ALA:HB3	2.47	0.43
46:BU:84:LYS:C	46:BU:86:ALA:H	2.21	0.43
47:BV:62:LEU:HD12	47:BV:96:ILE:HD13	2.01	0.43
48:BW:80:PRO:O	48:BW:100:THR:HG22	2.18	0.43
50:BY:7:VAL:HG11	50:BY:8:LYS:HZ3	1.84	0.43
51:BZ:98:MET:HE3	51:BZ:99:TYR:O	2.19	0.43
1:CA:102:G:O2'	1:CA:151:A:N3	2.44	0.43
1:CA:327:A:C6	1:CA:329:A:C5	3.07	0.43
1:CA:563:A:C5	1:CA:567:G:C4	3.07	0.43
1:CA:644:G:C6	1:CA:645:C:C5	3.06	0.43
1:CA:769:G:H4'	1:CA:1513:A:H4'	2.01	0.43
1:CA:812:C:OP1	1:CA:903:G:H1'	2.19	0.43
1:CA:1099:G:H2'	1:CA:1099:G:N3	2.34	0.43
1:CA:1130:A:H1'	1:CA:1146:A:C2	2.53	0.43
1:CA:1271:G:OP1	1:CA:1314:C:H4'	2.19	0.43
1:CA:1378:C:N4	1:CA:1379:G:C2	2.87	0.43
3:CC:16:ARG:HB2	3:CC:16:ARG:CZ	2.49	0.43
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.76	0.43
8:CH:102:ARG:N	8:CH:102:ARG:NE	2.59	0.43
10:CJ:35:SER:OG	10:CJ:73:ASP:HB2	2.19	0.43
15:CO:2:PRO:HB2	15:CO:3:ILE:H	1.66	0.43
17:CQ:52:LYS:HE3	17:CQ:52:LYS:HB3	1.80	0.43
19:CS:9:VAL:O	19:CS:11:VAL:N	2.52	0.43
22:D0:70:GLN:O	22:D0:77:ARG:HA	2.19	0.43
23:D1:26:ARG:CB	23:D1:34:THR:HB	2.49	0.43
30:D8:43:GLN:O	30:D8:44:LYS:CD	2.66	0.43
31:DA:223:A:O2'	31:DA:420:C:O2	2.31	0.43
31:DA:243:U:C2'	31:DA:244:A:H5'	2.49	0.43
31:DA:271(N):U:C6	31:DA:271(N):U:OP1	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:329:G:OP2	50:DY:71:LYS:CE	2.67	0.43
31:DA:362:U:H3'	31:DA:362:U:C6	2.54	0.43
31:DA:449:A:H2'	31:DA:450:G:C5'	2.49	0.43
31:DA:656:G:C2'	31:DA:657:U:O5'	2.67	0.43
31:DA:733:G:H8	31:DA:733:G:O5'	2.01	0.43
31:DA:905:U:C2'	31:DA:906:G:H5'	2.49	0.43
31:DA:934:G:H2'	31:DA:935:C:H6	1.84	0.43
31:DA:1259:G:H2'	31:DA:1260:G:C8	2.54	0.43
31:DA:1404:C:H2'	31:DA:1404:C:O2	2.17	0.43
31:DA:1462:C:H2'	31:DA:1463:C:C6	2.54	0.43
31:DA:1628:G:H2'	31:DA:1629:U:H6	1.84	0.43
31:DA:1856:G:C2'	31:DA:1857:G:H5'	2.49	0.43
31:DA:1892:C:C2'	31:DA:1893:C:H5'	2.48	0.43
31:DA:2405:G:H4'	31:DA:2406:U:OP2	2.19	0.43
31:DA:2619:C:H2'	31:DA:2620:C:C6	2.53	0.43
31:DA:2648:C:H2'	31:DA:2649:U:H6	1.83	0.43
32:DB:33:G:C2'	32:DB:34:U:H5'	2.49	0.43
32:DB:46:A:C2'	32:DB:47:C:O5'	2.67	0.43
32:DB:75:G:C5'	32:DB:75:G:C8	2.98	0.43
33:DD:83:GLU:HB2	33:DD:92:ILE:HD12	1.98	0.43
33:DD:224:ALA:O	33:DD:225:ALA:CB	2.67	0.43
34:DE:101:ARG:HG3	34:DE:169:ASN:ND2	2.33	0.43
34:DE:114:ALA:HB3	34:DE:160:TYR:HB3	2.00	0.43
34:DE:203:LYS:HD2	34:DE:203:LYS:C	2.38	0.43
35:DF:132:VAL:CG2	35:DF:133:ASN:H	2.31	0.43
38:DI:27:ARG:HH11	38:DI:27:ARG:HG2	1.84	0.43
38:DI:35:LEU:O	38:DI:36:ALA:HB2	2.19	0.43
39:DN:121:LYS:HA	39:DN:121:LYS:HD3	1.80	0.43
41:DP:101:VAL:CG2	41:DP:107:LYS:HA	2.49	0.43
43:DR:9:LYS:O	43:DR:10:LEU:HD23	2.18	0.43
43:DR:52:ILE:HG12	43:DR:52:ILE:H	1.71	0.43
43:DR:92:GLY:HA2	43:DR:94:TYR:CZ	2.54	0.43
44:DS:90:GLY:C	44:DS:92:TYR:N	2.72	0.43
49:DX:28:PHE:CD1	49:DX:28:PHE:N	2.87	0.43
1:AA:333:G:O2'	1:AA:334:C:H5'	2.19	0.43
1:AA:356:A:C2	1:AA:368:U:O2	2.71	0.43
1:AA:738:C:C4	1:AA:739:C:C5	3.06	0.43
1:AA:754:C:H3'	1:AA:754:C:O2	2.19	0.43
1:AA:949:A:C2	1:AA:1233:G:N3	2.86	0.43
1:AA:1014:A:C2	19:AS:34:TRP:CE2	3.07	0.43
1:AA:1245:A:C6	1:AA:1246:C:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1423:G:H2'	1:AA:1424:C:H6	1.82	0.43
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.68	0.43
2:AB:238:LEU:O	2:AB:240:GLN:N	2.46	0.43
3:AC:77:ILE:C	3:AC:83:ARG:HB3	2.39	0.43
4:AD:63:LYS:HB2	4:AD:63:LYS:HE3	1.76	0.43
8:AH:109:ILE:HD11	8:AH:120:THR:CG2	2.49	0.43
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	2.01	0.43
9:AI:46:ALA:HA	9:AI:78:LYS:HZ1	1.84	0.43
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.82	0.43
11:AK:73:MET:SD	11:AK:103:LEU:HD22	2.59	0.43
12:AL:64:TYR:O	12:AL:65:GLU:HB2	2.19	0.43
15:AO:74:ASP:HA	15:AO:75:PRO:HD2	1.80	0.43
24:B2:37:PHE:CE2	24:B2:39:ALA:O	2.72	0.43
31:BA:511:U:C5	31:BA:512:G:C5	3.07	0.43
31:BA:893:C:H2'	31:BA:894:C:O5'	2.19	0.43
31:BA:971:C:H2'	31:BA:972:G:C5'	2.49	0.43
31:BA:981:A:C2	31:BA:2027:G:N3	2.87	0.43
31:BA:1902:C:H4'	33:BD:244:ARG:HA	2.00	0.43
31:BA:2506:U:H4'	31:BA:2507:C:OP1	2.17	0.43
31:BA:2510:C:H2'	31:BA:2511:U:O4'	2.19	0.43
31:BA:2635:C:C2'	31:BA:2636:U:O5'	2.66	0.43
31:BA:2785:C:H2'	31:BA:2786:U:O4'	2.19	0.43
32:BB:38:C:C1'	44:BS:95:HIS:HE2	2.31	0.43
33:BD:182:LEU:HA	33:BD:182:LEU:HD23	1.76	0.43
33:BD:205:VAL:O	33:BD:205:VAL:HG12	2.19	0.43
34:BE:116:VAL:HG13	34:BE:122:PHE:CB	2.49	0.43
37:BH:138:LYS:O	37:BH:140:LYS:N	2.52	0.43
38:BI:44:LEU:HA	38:BI:44:LEU:HD23	1.60	0.43
38:BI:132:PRO:C	38:BI:133:HIS:CD2	2.92	0.43
41:BP:121:LYS:HG3	41:BP:122:PRO:HD2	2.01	0.43
45:BT:29:ARG:HD2	45:BT:29:ARG:HA	1.49	0.43
46:BU:88:ILE:O	46:BU:89:GLU:C	2.57	0.43
49:BX:36:LYS:O	49:BX:38:GLU:N	2.52	0.43
50:BY:8:LYS:N	50:BY:8:LYS:CD	2.80	0.43
51:BZ:11:GLU:HB2	51:BZ:13:GLU:OE2	2.19	0.43
1:CA:159:G:C4	1:CA:161:A:OP2	2.71	0.43
1:CA:438:G:OP1	4:CD:125:HIS:HE1	2.02	0.43
1:CA:499:A:H4'	1:CA:500:G:H5'	2.01	0.43
1:CA:577:G:C2	1:CA:578:C:C6	3.07	0.43
1:CA:617:G:N1	1:CA:618:C:C4	2.87	0.43
1:CA:790:A:N6	1:CA:791:G:C6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:865:A:H2	1:CA:918:A:H4'	1.84	0.43
1:CA:914:A:C2'	1:CA:915:A:H5'	2.48	0.43
1:CA:966:G:H5''	1:CA:969:A:N7	2.33	0.43
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.18	0.43
1:CA:1348:U:H4'	9:CI:120:ARG:HH11	1.84	0.43
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.19	0.43
2:CB:163:PHE:CD2	2:CB:185:ILE:HG13	2.51	0.43
4:CD:65:ARG:HG3	4:CD:75:PHE:CD1	2.54	0.43
5:CE:110:LEU:HD12	5:CE:118:ILE:HG21	2.01	0.43
6:CF:15:ASP:CG	6:CF:18:GLN:HE21	2.22	0.43
6:CF:100:ASN:N	18:CR:23:LYS:HZ2	2.16	0.43
7:CG:25:ALA:O	7:CG:29:LYS:HG2	2.18	0.43
9:CI:48:GLU:H	9:CI:49:PRO:HD2	1.83	0.43
11:CK:11:LYS:HB3	11:CK:12:ARG:H	1.64	0.43
15:CO:39:LEU:O	15:CO:42:HIS:HB3	2.18	0.43
15:CO:54:ARG:HG2	15:CO:58:MET:CE	2.49	0.43
18:CR:63:GLN:OE1	18:CR:66:LEU:HD23	2.19	0.43
20:CT:46:GLU:CG	20:CT:48:LYS:HE2	2.49	0.43
20:CT:75:ASN:H	20:CT:75:ASN:HD22	1.66	0.43
30:D8:32:LEU:N	30:D8:32:LEU:CD1	2.77	0.43
31:DA:11:G:O2'	31:DA:12:U:H5'	2.19	0.43
31:DA:30:G:H2'	31:DA:31:C:C6	2.54	0.43
31:DA:325:G:O2'	31:DA:326:G:H5'	2.18	0.43
31:DA:363(C):G:H2'	31:DA:363(D):G:C8	2.54	0.43
31:DA:506:G:H4'	31:DA:509:C:O2	2.19	0.43
31:DA:901:A:H3'	31:DA:902:C:H6	1.82	0.43
31:DA:910:A:C6	31:DA:911:A:C6	3.07	0.43
31:DA:1221:C:H2'	31:DA:1221(A):C:C6	2.54	0.43
31:DA:1436:G:H2'	31:DA:1437:C:O4'	2.19	0.43
31:DA:1602:U:H3'	31:DA:1603:A:H5'	2.01	0.43
31:DA:1930:G:O2'	31:DA:1931:U:P	2.77	0.43
31:DA:2078:C:C4	31:DA:2079:U:C4	3.07	0.43
31:DA:2078:C:C2'	31:DA:2079:U:H5'	2.48	0.43
31:DA:2334:G:H4'	31:DA:2335:A:OP2	2.19	0.43
31:DA:2415:G:O3'	41:DP:66:GLY:HA3	2.18	0.43
31:DA:2808:U:H2'	31:DA:2809:A:O5'	2.18	0.43
33:DD:28:GLU:CB	33:DD:29:PRO:CD	2.97	0.43
33:DD:78:LYS:HE3	33:DD:78:LYS:HB2	1.84	0.43
33:DD:223:GLY:CA	33:DD:231:HIS:CD2	3.02	0.43
34:DE:11:MET:HB2	34:DE:23:VAL:O	2.19	0.43
35:DF:140:LEU:O	35:DF:141:ALA:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:153:LYS:CG	37:DH:154:PRO:N	2.79	0.43
38:DI:4:ILE:HD11	38:DI:44:LEU:HD23	2.01	0.43
38:DI:62:LYS:HE2	38:DI:134:PRO:HG2	2.00	0.43
39:DN:39:ARG:HG2	39:DN:41:ASP:HB2	2.00	0.43
39:DN:121:LYS:HD3	39:DN:122:VAL:N	2.34	0.43
42:DQ:31:ASP:O	42:DQ:133:ARG:O	2.36	0.43
45:DT:29:ARG:HG3	45:DT:30:VAL:H	1.84	0.43
49:DX:31:HIS:HD2	49:DX:33:LYS:N	2.16	0.43
50:DY:7:VAL:HB	50:DY:8:LYS:CD	2.49	0.43
50:DY:100:ALA:O	50:DY:101:LYS:HB2	2.18	0.43
1:AA:99:U:O2'	1:AA:100:C:H5'	2.19	0.42
1:AA:460:G:N2	1:AA:471:G:C8	2.87	0.42
1:AA:564:C:H2'	1:AA:565:U:H5'	2.01	0.42
1:AA:684:A:H2'	1:AA:685:G:H8	1.81	0.42
1:AA:827:U:O5'	1:AA:827:U:H6	2.01	0.42
1:AA:1293:G:O2'	1:AA:1294:G:P	2.77	0.42
1:AA:1311:G:N2	1:AA:1327:C:C2	2.86	0.42
3:AC:11:ARG:O	3:AC:13:GLY:N	2.52	0.42
6:AF:30:LEU:H	6:AF:30:LEU:HG	1.65	0.42
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	2.00	0.42
12:AL:21:LYS:N	12:AL:21:LYS:HD2	2.34	0.42
12:AL:119:LYS:HB2	12:AL:120:TYR:HD1	1.83	0.42
24:B2:44:LEU:HD13	24:B2:44:LEU:HA	1.54	0.42
28:B6:11:LEU:O	28:B6:23:THR:HA	2.19	0.42
30:B8:31:HIS:ND1	31:BA:2419:U:O4	2.51	0.42
31:BA:197:A:N6	31:BA:2430:A:H2'	2.34	0.42
31:BA:271(N):U:C6	31:BA:271(N):U:OP1	2.72	0.42
31:BA:324:A:N6	31:BA:338:G:O2'	2.50	0.42
31:BA:620:G:N3	31:BA:620:G:H5'	2.33	0.42
31:BA:774:A:H2	31:BA:787:U:HO2'	1.58	0.42
31:BA:901:A:H2'	31:BA:901:A:N3	2.34	0.42
31:BA:1003:G:N2	31:BA:1153:C:C2	2.87	0.42
31:BA:1161:C:H1'	47:BV:8:GLY:O	2.19	0.42
31:BA:1464:C:C2'	31:BA:1528:A:H8	2.30	0.42
31:BA:1686:C:C2'	31:BA:1687:G:H5'	2.48	0.42
31:BA:1686:C:H2'	31:BA:1687:G:H5'	1.99	0.42
31:BA:2747:G:O6	31:BA:2755:C:H5''	2.19	0.42
31:BA:2873:A:C2	43:BR:6:SER:HB2	2.53	0.42
33:BD:233:HIS:CD2	33:BD:233:HIS:N	2.85	0.42
34:BE:3:GLY:HA3	34:BE:81:ILE:CG1	2.49	0.42
35:BF:176:LEU:HD21	35:BF:180:GLY:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:111:LEU:N	36:BG:112:PRO:CD	2.81	0.42
37:BH:71:LEU:HD12	37:BH:71:LEU:HA	1.80	0.42
37:BH:83:TYR:HA	37:BH:135:GLY:O	2.19	0.42
38:BI:99:GLU:HG3	38:BI:103:ARG:NH1	2.34	0.42
44:BS:54:LEU:HD22	44:BS:58:LEU:O	2.19	0.42
44:BS:92:TYR:HB2	44:BS:97:ARG:HH22	1.84	0.42
46:BU:12:ARG:HA	46:BU:15:LYS:HG2	2.00	0.42
48:BW:82:LEU:HD12	48:BW:82:LEU:HA	1.76	0.42
49:BX:73:ARG:H	49:BX:74:PRO:CD	2.31	0.42
49:BX:89:ILE:O	49:BX:89:ILE:CG2	2.65	0.42
50:BY:45:VAL:CG1	50:BY:46:LYS:H	2.32	0.42
1:CA:81:U:H2'	1:CA:82:U:C5	2.54	0.42
1:CA:228:A:H2'	1:CA:229:U:O4'	2.19	0.42
1:CA:303:A:H2'	1:CA:304:U:O4'	2.19	0.42
1:CA:668:G:O2'	15:CO:46:HIS:HD2	2.02	0.42
1:CA:963:G:H1	1:CA:972:C:N4	2.17	0.42
1:CA:1015:A:N6	1:CA:1016:A:C6	2.86	0.42
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.59	0.42
1:CA:1347:G:O2'	1:CA:1348:U:P	2.77	0.42
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.19	0.42
5:CE:32:VAL:CG2	5:CE:58:ALA:HB1	2.48	0.42
9:CI:18:PHE:O	9:CI:61:ALA:HA	2.20	0.42
11:CK:69:ALA:HB1	11:CK:103:LEU:HD23	2.01	0.42
14:CN:3:ARG:NH1	14:CN:3:ARG:HB3	2.34	0.42
18:CR:53:ARG:HH21	18:CR:60:ALA:H	1.64	0.42
20:CT:53:LEU:HD21	20:CT:92:LEU:CD1	2.49	0.42
20:CT:84:LEU:HD13	20:CT:85:MET:N	2.34	0.42
28:D6:11:LEU:HD23	28:D6:26:ASN:H	1.83	0.42
31:DA:323:G:O2'	31:DA:1205:U:N3	2.42	0.42
31:DA:478:A:N1	31:DA:500:G:H4'	2.34	0.42
31:DA:492:A:H2'	31:DA:493:G:O4'	2.19	0.42
31:DA:528:A:N1	31:DA:2043:C:O5'	2.52	0.42
31:DA:855:G:H2'	31:DA:856:C:C6	2.53	0.42
31:DA:882:G:H8	31:DA:882:G:O5'	2.00	0.42
31:DA:953:A:N3	31:DA:954:G:C8	2.87	0.42
31:DA:1144:G:C6	31:DA:1145:C:N4	2.86	0.42
31:DA:1206:G:C6	31:DA:1207:C:C4	3.07	0.42
31:DA:1553:A:C6	31:DA:1555:G:C4	3.06	0.42
31:DA:1613:G:C2	31:DA:1619:G:C5	3.07	0.42
31:DA:2096:U:H3	31:DA:2193:G:H1	1.66	0.42
31:DA:2265:U:H4'	42:DQ:13:GLN:HE22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:15:A:H1'	32:DB:110:G:C4	2.53	0.42
34:DE:61:ARG:C	34:DE:63:LEU:H	2.23	0.42
35:DF:22:ALA:HA	35:DF:26:ALA:HA	2.00	0.42
37:DH:150:ALA:O	37:DH:151:ILE:C	2.58	0.42
38:DI:56:LYS:HA	38:DI:59:ALA:CB	2.45	0.42
39:DN:55:VAL:HG12	39:DN:125:GLY:HA3	2.01	0.42
42:DQ:74:TYR:O	42:DQ:89:ASN:N	2.48	0.42
42:DQ:141:GLN:CD	51:DZ:72:ARG:HG2	2.40	0.42
46:DU:92:ARG:O	46:DU:93:LYS:C	2.57	0.42
47:DV:66:ARG:NH2	47:DV:94:LEU:HD12	2.34	0.42
48:DW:2:GLU:OE1	48:DW:72:LYS:NZ	2.49	0.42
49:DX:36:LYS:HZ2	49:DX:39:ILE:N	2.16	0.42
50:DY:27:VAL:CB	50:DY:29:GLU:OE1	2.67	0.42
50:DY:45:VAL:HG13	50:DY:62:GLU:CG	2.49	0.42
51:DZ:4:ARG:HD3	51:DZ:60:GLU:OE1	2.19	0.42
51:DZ:38:TYR:CD1	51:DZ:38:TYR:O	2.72	0.42
1:AA:9:G:N3	1:AA:9:G:H2'	2.34	0.42
1:AA:60:A:C8	1:AA:60:A:OP2	2.72	0.42
1:AA:60:A:H4'	1:AA:61:G:O5'	2.19	0.42
1:AA:159:G:C4	1:AA:161:A:OP2	2.72	0.42
1:AA:267:C:OP1	17:AQ:67:LYS:HD2	2.19	0.42
1:AA:436:C:O2'	1:AA:437:U:P	2.77	0.42
1:AA:577:G:H2'	1:AA:578:C:H6	1.84	0.42
1:AA:644:G:H2'	1:AA:645:C:H5'	2.02	0.42
1:AA:801:U:H2'	1:AA:802:A:H8	1.84	0.42
1:AA:1346:A:C5'	9:AI:120:ARG:HH12	2.31	0.42
2:AB:190:THR:C	2:AB:192:SER:H	2.22	0.42
4:AD:36:ARG:C	4:AD:38:TYR:H	2.22	0.42
8:AH:27:PRO:HA	8:AH:58:TYR:HA	2.02	0.42
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	2.01	0.42
10:AJ:54:PHE:HZ	10:AJ:55:LYS:HZ2	1.62	0.42
11:AK:69:ALA:HB1	11:AK:103:LEU:HD23	2.01	0.42
13:AM:54:VAL:O	13:AM:58:GLU:HB2	2.20	0.42
18:AR:25:THR:HG22	18:AR:42:ARG:NH1	2.29	0.42
18:AR:44:LEU:O	18:AR:45:SER:C	2.57	0.42
22:B0:47:PRO:HB2	22:B0:51:VAL:O	2.19	0.42
26:B4:2:LYS:CB	32:BB:40:U:O4	2.67	0.42
30:B8:11:LYS:O	41:BP:65:ARG:HD2	2.19	0.42
31:BA:445:C:O2'	31:BA:446:G:H5'	2.19	0.42
31:BA:774:A:H2	31:BA:787:U:O2'	2.00	0.42
31:BA:981:A:H2	31:BA:2027:G:N3	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1465:G:N1	31:BA:1466:G:C5	2.88	0.42
31:BA:1495:A:H2'	31:BA:1496:A:C2	2.54	0.42
31:BA:1497:U:H5''	31:BA:1498:C:C5	2.55	0.42
31:BA:1545:A:H2'	31:BA:1546:C:O5'	2.18	0.42
31:BA:1799:G:N7	33:BD:179:SER:OG	2.45	0.42
31:BA:2031:A:OP1	31:BA:2031:A:O4'	2.37	0.42
31:BA:2328:A:H2'	31:BA:2329:G:H8	1.81	0.42
32:BB:2:C:H2'	32:BB:3:C:C6	2.54	0.42
33:BD:206:LEU:HD23	33:BD:206:LEU:HA	1.53	0.42
35:BF:65:TRP:HZ3	35:BF:73:ALA:O	2.02	0.42
41:BP:71:VAL:HG13	41:BP:72:PRO:N	2.34	0.42
46:BU:45:TYR:O	46:BU:49:HIS:HB2	2.19	0.42
47:BV:69:LYS:CB	47:BV:93:GLU:CD	2.87	0.42
47:BV:90:PRO:CD	47:BV:91:TYR:N	2.82	0.42
48:BW:4:LYS:CB	48:BW:106:ILE:HG22	2.35	0.42
50:BY:46:LYS:O	50:BY:47:LYS:CE	2.67	0.42
1:CA:192:U:H4'	20:CT:57:ARG:HD2	2.00	0.42
1:CA:274:A:H4'	1:CA:275:G:OP1	2.18	0.42
1:CA:328:C:H4'	1:CA:329:A:H5'	2.01	0.42
1:CA:373:A:O2'	1:CA:374:A:H5'	2.19	0.42
1:CA:541:G:H2'	1:CA:542:G:C8	2.54	0.42
1:CA:604:G:N7	1:CA:605:U:C5	2.87	0.42
1:CA:673:G:C2	1:CA:674:G:C6	3.06	0.42
1:CA:1057:G:C4	1:CA:1204:A:C2	3.07	0.42
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	2.01	0.42
1:CA:1371:G:OP1	9:CI:11:LYS:HG2	2.19	0.42
3:CC:165:THR:O	3:CC:165:THR:HG23	2.18	0.42
8:CH:9:MET:O	8:CH:12:ARG:HB2	2.19	0.42
9:CI:83:ARG:HH21	9:CI:102:LEU:CD2	2.32	0.42
10:CJ:50:ILE:HD13	10:CJ:50:ILE:N	2.34	0.42
11:CK:62:GLN:O	11:CK:63:LEU:C	2.57	0.42
18:CR:22:VAL:HG11	18:CR:42:ARG:O	2.20	0.42
20:CT:38:LYS:HA	20:CT:41:ILE:HD11	2.01	0.42
24:D2:41:ILE:CG2	24:D2:42:GLY:N	2.78	0.42
26:D4:19:GLY:O	26:D4:21:VAL:N	2.52	0.42
31:DA:140:G:N2	31:DA:1596:A:H4'	2.35	0.42
31:DA:363(D):G:C6	31:DA:363(E):U:O4	2.72	0.42
31:DA:1450(A):C:N4	31:DA:1451:C:H41	2.17	0.42
31:DA:1628:G:O2'	31:DA:1629:U:H5'	2.19	0.42
31:DA:2103:C:C2	31:DA:2187:G:N1	2.87	0.42
31:DA:2392:A:O4'	31:DA:2392:A:N3	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2416:C:N4	31:DA:2417:C:N4	2.67	0.42
31:DA:2422:A:C4'	31:DA:2423:U:OP1	2.66	0.42
31:DA:2452:C:N4	31:DA:2453:A:C6	2.87	0.42
31:DA:2592:G:N7	31:DA:2593:U:C5	2.87	0.42
31:DA:2631:G:H22	34:DE:61:ARG:HH12	1.63	0.42
33:DD:121:PRO:HB3	33:DD:135:PHE:CE1	2.54	0.42
33:DD:166:GLN:HE21	33:DD:166:GLN:HA	1.83	0.42
33:DD:210:GLY:HA2	33:DD:213:ARG:HB2	2.01	0.42
37:DH:47:GLU:C	37:DH:49:VAL:H	2.23	0.42
37:DH:85:LYS:HE2	37:DH:141:VAL:O	2.20	0.42
38:DI:88:ILE:HD11	38:DI:142:VAL:HB	2.00	0.42
41:DP:39:LYS:HD3	41:DP:40:SER:H	1.84	0.42
41:DP:45:LEU:HD22	41:DP:46:LYS:N	2.32	0.42
42:DQ:88:GLY:O	42:DQ:89:ASN:HB2	2.19	0.42
43:DR:51:LEU:HA	43:DR:51:LEU:HD23	1.74	0.42
45:DT:92:GLY:HA2	45:DT:114:LEU:HB3	2.01	0.42
47:DV:90:PRO:CD	47:DV:91:TYR:N	2.82	0.42
50:DY:13:VAL:HG11	50:DY:72:VAL:HB	2.01	0.42
1:AA:84:U:H6	1:AA:84:U:H3'	1.85	0.42
1:AA:272:C:H2'	1:AA:273:A:C8	2.54	0.42
1:AA:355:C:N3	1:AA:356:A:C8	2.87	0.42
1:AA:445:G:N3	1:AA:446:G:C8	2.87	0.42
1:AA:709:G:H2'	1:AA:710:G:C8	2.52	0.42
1:AA:832:C:N3	1:AA:855:G:C2	2.87	0.42
1:AA:973:G:C3'	1:AA:974:A:H5''	2.44	0.42
2:AB:29:ALA:C	2:AB:31:TYR:N	2.73	0.42
2:AB:88:ALA:CB	2:AB:219:VAL:HG13	2.44	0.42
3:AC:22:TRP:HE3	3:AC:23:TYR:O	2.02	0.42
3:AC:47:LEU:HD23	3:AC:52:LEU:HD13	2.00	0.42
3:AC:48:TYR:O	3:AC:51:GLY:N	2.51	0.42
3:AC:100:ALA:O	3:AC:101:LEU:HB2	2.18	0.42
3:AC:127:ARG:N	3:AC:127:ARG:HD2	2.34	0.42
4:AD:192:GLU:CD	4:AD:192:GLU:H	2.23	0.42
5:AE:18:ARG:HE	5:AE:25:ARG:HB3	1.84	0.42
8:AH:38:ILE:O	8:AH:42:GLU:HB2	2.18	0.42
9:AI:49:PRO:HA	9:AI:101:PHE:CE1	2.54	0.42
10:AJ:99:LYS:HD3	10:AJ:99:LYS:HA	1.91	0.42
11:AK:23:ALA:HB1	11:AK:88:GLY:HA3	2.00	0.42
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.34	0.42
15:AO:54:ARG:HG2	15:AO:58:MET:CE	2.49	0.42
18:AR:44:LEU:O	18:AR:45:SER:O	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:49:LYS:N	22:B0:80:HIS:ND1	2.65	0.42
24:B2:14:ARG:HE	24:B2:14:ARG:HB3	1.68	0.42
24:B2:26:ARG:CB	49:BX:5:TYR:HB3	2.49	0.42
24:B2:29:LYS:HZ2	49:BX:9:LEU:HA	1.83	0.42
26:B4:20:ASN:O	26:B4:24:THR:HA	2.19	0.42
27:B5:40:LYS:HZ1	27:B5:49:CYS:CB	2.31	0.42
30:B8:22:VAL:HB	30:B8:53:PRO:CB	2.49	0.42
30:B8:51:ALA:CA	30:B8:53:PRO:HD2	2.49	0.42
31:BA:358:U:C6	31:BA:358:U:C3'	3.02	0.42
31:BA:894:C:H2'	31:BA:895:U:H5'	2.00	0.42
31:BA:975:C:H4'	31:BA:975:C:OP2	2.20	0.42
31:BA:995:C:N3	46:BU:57:PHE:CZ	2.87	0.42
31:BA:1405:U:C2'	31:BA:1406:U:O5'	2.67	0.42
31:BA:1436:G:C3'	31:BA:1437:C:H5''	2.49	0.42
31:BA:1531:C:H5''	31:BA:1532:C:C6	2.50	0.42
31:BA:1678:G:C5'	31:BA:1678:G:H8	2.33	0.42
31:BA:2287:A:H2	31:BA:2346:A:N1	2.13	0.42
31:BA:2802:G:OP2	31:BA:2803:C:OP2	2.36	0.42
31:BA:2859:G:H8	31:BA:2859:G:O5'	2.01	0.42
32:BB:7:G:C2	32:BB:115:G:C2	3.07	0.42
33:BD:3:VAL:H	33:BD:20:ASP:HB2	1.83	0.42
33:BD:94:LEU:C	33:BD:94:LEU:HD22	2.39	0.42
34:BE:116:VAL:HG13	34:BE:122:PHE:CD2	2.55	0.42
35:BF:20:LEU:HD13	35:BF:203:GLN:NE2	2.34	0.42
36:BG:16:ARG:HB2	36:BG:17:PRO:CD	2.49	0.42
38:BI:75:LEU:HD11	38:BI:105:HIS:HE1	1.84	0.42
40:BO:22:ILE:HD13	40:BO:22:ILE:HA	1.57	0.42
41:BP:121:LYS:HE3	25:D3:2:PRO:HG3	2.02	0.42
42:BQ:31:ASP:O	42:BQ:133:ARG:O	2.36	0.42
46:BU:69:CYS:HB3	46:BU:106:PHE:CE2	2.54	0.42
46:BU:90:VAL:HG11	47:BV:40:LEU:HB3	2.01	0.42
47:BV:66:ARG:HD3	47:BV:67:GLY:C	2.39	0.42
49:BX:34:ALA:O	49:BX:36:LYS:N	2.52	0.42
1:CA:189:G:N1	1:CA:189(L):G:C6	2.86	0.42
1:CA:407:G:HO2'	4:CD:116:GLN:HG3	1.84	0.42
1:CA:508:C:OP1	4:CD:209:ARG:NH2	2.52	0.42
1:CA:518:C:H2'	1:CA:530:G:N3	2.34	0.42
1:CA:562:C:N4	1:CA:884:U:C6	2.87	0.42
1:CA:644:G:H2'	1:CA:645:C:H5'	2.02	0.42
1:CA:663:A:O3'	18:CR:64:ARG:NH2	2.52	0.42
1:CA:1085:U:C2	1:CA:1094:G:O6	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1446:U:HO2'	1:CA:1447:A:H8	1.54	0.42
2:CB:69:LEU:HB2	2:CB:159:PRO:HG2	2.01	0.42
5:CE:102:ALA:HB2	5:CE:120:THR:OG1	2.20	0.42
7:CG:26:PHE:CG	7:CG:62:PHE:HE1	2.38	0.42
8:CH:38:ILE:HD11	8:CH:118:VAL:O	2.19	0.42
8:CH:91:ARG:HH11	8:CH:91:ARG:CG	2.32	0.42
8:CH:109:ILE:HD11	8:CH:120:THR:CG2	2.49	0.42
18:CR:59:SER:H	18:CR:62:GLU:CD	2.22	0.42
20:CT:100:ILE:O	20:CT:102:GLY:N	2.52	0.42
24:D2:46:GLN:HE21	24:D2:47:ASN:HA	1.83	0.42
25:D3:49:LYS:HD2	31:DA:851:U:C5'	2.49	0.42
29:D7:48:LYS:N	29:D7:48:LYS:CD	2.82	0.42
31:DA:36:G:C5	31:DA:37:C:C5	3.08	0.42
31:DA:174:C:H2'	31:DA:174:C:O2	2.19	0.42
31:DA:265:A:H1'	31:DA:266:G:O4'	2.19	0.42
31:DA:271(F):C:C2	31:DA:271(G):C:C5	3.07	0.42
31:DA:322:A:C5	31:DA:340:A:C2	3.07	0.42
31:DA:575:A:OP2	31:DA:2055:C:N4	2.38	0.42
31:DA:643:A:C2	31:DA:644:A:C4	3.07	0.42
31:DA:712:G:N2	31:DA:720:C:C2	2.88	0.42
31:DA:801:G:N7	35:DF:53:THR:CG2	2.83	0.42
31:DA:1141:U:H4'	31:DA:1142(A):A:O4'	2.19	0.42
31:DA:1142(A):A:C4	31:DA:1144:G:N7	2.87	0.42
31:DA:1472:A:H2'	31:DA:1473:G:C5'	2.49	0.42
31:DA:1501:C:H2'	31:DA:1502:C:H6	1.84	0.42
31:DA:1904:G:H2'	31:DA:1905:C:O4'	2.20	0.42
31:DA:2102:U:C4	31:DA:2103:C:N4	2.87	0.42
32:DB:28:C:N3	32:DB:29:A:N7	2.68	0.42
33:DD:115:GLN:HG2	33:DD:116:GLN:O	2.19	0.42
34:DE:21:VAL:O	34:DE:21:VAL:CG2	2.67	0.42
34:DE:57:LYS:O	34:DE:59:VAL:N	2.50	0.42
35:DF:132:VAL:HG22	35:DF:133:ASN:H	1.84	0.42
41:DP:126:VAL:HA	41:DP:145:PRO:HB2	2.02	0.42
45:DT:33:LYS:O	45:DT:40:THR:O	2.37	0.42
45:DT:61:PHE:CZ	45:DT:76:PHE:HB2	2.53	0.42
48:DW:40:ASN:O	48:DW:41:LYS:HG2	2.19	0.42
49:DX:89:ILE:O	49:DX:89:ILE:HG23	2.20	0.42
50:DY:10:GLY:C	50:DY:27:VAL:HG22	2.40	0.42
1:AA:79:G:H1'	1:AA:80:G:O5'	2.20	0.42
1:AA:228:A:H2'	1:AA:229:U:O4'	2.18	0.42
1:AA:437:U:H5''	4:AD:155:LEU:CD1	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:673:G:N1	1:AA:674:G:C6	2.87	0.42
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.52	0.42
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.54	0.42
1:AA:1442(A):G:H8	45:BT:118:ARG:NH1	2.14	0.42
4:AD:64:LEU:O	4:AD:65:ARG:C	2.57	0.42
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.34	0.42
4:AD:108:LEU:HD12	4:AD:108:LEU:HA	1.87	0.42
6:AF:12:PRO:HG3	6:AF:55:ASP:HB3	2.01	0.42
9:AI:48:GLU:H	9:AI:49:PRO:HD2	1.83	0.42
14:AN:12:ARG:C	14:AN:14:PRO:CD	2.88	0.42
18:AR:22:VAL:HG11	18:AR:42:ARG:O	2.19	0.42
23:B1:47:GLN:O	23:B1:48:LYS:O	2.37	0.42
31:BA:90:U:O2'	31:BA:92:A:C5'	2.67	0.42
31:BA:108:U:C2	31:BA:109:G:C8	3.07	0.42
31:BA:917:A:H8	31:BA:917:A:C5'	2.32	0.42
31:BA:1126:A:H4'	31:BA:1127:A:O5'	2.19	0.42
31:BA:1142(A):A:C5	31:BA:1144:G:C5	3.07	0.42
31:BA:1173:G:H5'	31:BA:1174:A:P	2.59	0.42
31:BA:1313:U:O2	31:BA:1313:U:C2'	2.67	0.42
31:BA:1379:A:HO2'	31:BA:1380:G:P	2.26	0.42
31:BA:1528(A):A:H2'	31:BA:1529:G:O4'	2.19	0.42
31:BA:1649:G:C6	31:BA:2009:G:O6	2.73	0.42
31:BA:1951:U:O2	31:BA:1953:A:H8	2.01	0.42
31:BA:1979:C:H2'	31:BA:1980:G:H5'	2.02	0.42
31:BA:2291:U:H2'	31:BA:2292:C:C6	2.55	0.42
31:BA:2702:U:OP1	31:BA:2702:U:O4'	2.37	0.42
32:BB:60:C:N3	32:BB:61:G:N7	2.68	0.42
33:BD:218:ARG:HB3	33:BD:219:PRO:HD2	2.00	0.42
39:BN:18:ALA:O	39:BN:21:LYS:HB2	2.19	0.42
42:BQ:141:GLN:NE2	51:BZ:72:ARG:HG2	2.34	0.42
43:BR:101:ALA:O	43:BR:102:GLU:CB	2.68	0.42
49:BX:65:ARG:O	49:BX:66:LEU:CB	2.67	0.42
50:BY:75:ILE:HA	50:BY:75:ILE:HD13	1.47	0.42
1:CA:337:C:H2'	1:CA:338:A:C8	2.54	0.42
1:CA:438:G:H4'	4:CD:123:HIS:HD1	1.84	0.42
1:CA:675:A:H2'	1:CA:676:A:C8	2.54	0.42
1:CA:996:A:H2'	1:CA:997:U:C6	2.55	0.42
1:CA:1014:A:C2	1:CA:1219:U:O2	2.72	0.42
1:CA:1141:C:H3'	1:CA:1141:C:H6	1.85	0.42
1:CA:1478:C:C2	1:CA:1479:C:C5	3.07	0.42
2:CB:161:ALA:HB1	2:CB:185:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:106:VAL:HG12	3:CC:108:ASN:H	1.84	0.42
4:CD:78:LEU:O	4:CD:81:GLU:HB3	2.19	0.42
4:CD:173:TRP:HA	4:CD:187:ARG:NH1	2.34	0.42
8:CH:104:ARG:CZ	8:CH:138:TRP:CH2	3.02	0.42
8:CH:113:SER:C	8:CH:114:THR:HG22	2.39	0.42
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD11	2.02	0.42
11:CK:84:VAL:HG11	11:CK:95:ILE:HD11	2.00	0.42
12:CL:31:PRO:HB2	12:CL:32:PHE:CD2	2.55	0.42
13:CM:60:VAL:HG12	13:CM:66:LEU:HD21	2.01	0.42
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.20	0.42
25:D3:12:PRO:HA	25:D3:15:TYR:CD1	2.54	0.42
27:D5:2:ALA:N	31:DA:747:U:C2	2.88	0.42
28:D6:26:ASN:ND2	28:D6:32:ASN:OD1	2.52	0.42
31:DA:26:G:C6	31:DA:27:G:C6	3.08	0.42
31:DA:38:A:H2'	31:DA:39:C:C6	2.54	0.42
31:DA:580:C:H2'	31:DA:581:C:H6	1.82	0.42
31:DA:631:A:OP1	41:DP:64:LYS:HE2	2.19	0.42
31:DA:685:A:C8	31:DA:774:A:C6	3.07	0.42
31:DA:705:A:H2'	31:DA:706:A:O4'	2.19	0.42
31:DA:1275:A:N3	31:DA:1276:A:H1'	2.34	0.42
31:DA:1462:C:H2'	31:DA:1463:C:H6	1.85	0.42
31:DA:1654:A:H2'	31:DA:1655:A:H8	1.83	0.42
31:DA:1827:C:O2'	31:DA:1970:A:N3	2.42	0.42
31:DA:2192:G:C2	31:DA:2193:G:C8	3.08	0.42
31:DA:2280:G:O2'	31:DA:2388:A:N1	2.39	0.42
31:DA:2290:G:O2'	31:DA:2381:C:H1'	2.19	0.42
31:DA:2469:A:HO2'	42:DQ:56:ARG:HG2	1.82	0.42
33:DD:25:THR:CG2	33:DD:82:ILE:H	2.32	0.42
33:DD:27:THR:O	33:DD:28:GLU:HB2	2.19	0.42
33:DD:35:LYS:N	33:DD:64:ILE:CG2	2.83	0.42
36:DG:174:GLU:HG3	36:DG:180:PHE:CE1	2.55	0.42
38:DI:44:LEU:HD23	38:DI:44:LEU:HA	1.58	0.42
39:DN:16:ILE:O	39:DN:54:VAL:HA	2.19	0.42
39:DN:46:VAL:O	39:DN:47:ALA:HB3	2.19	0.42
40:DO:80:ASP:OD2	45:DT:64:ARG:NH2	2.53	0.42
41:DP:86:LYS:HB3	41:DP:118:GLY:HA3	2.00	0.42
42:DQ:141:GLN:NE2	51:DZ:72:ARG:HG2	2.34	0.42
49:DX:73:ARG:H	49:DX:74:PRO:HD3	1.84	0.42
50:DY:34:LYS:HB3	50:DY:34:LYS:HE2	1.75	0.42
50:DY:45:VAL:HG13	50:DY:46:LYS:H	1.84	0.42
50:DY:52:SER:HA	50:DY:53:PRO:HD3	1.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:55:A:C4	1:AA:56:U:C5	3.07	0.42
1:AA:66:G:C4'	1:AA:173:U:C5	2.97	0.42
1:AA:81:U:H2'	1:AA:82:U:C5	2.55	0.42
1:AA:270:A:C5	1:AA:271:C:C4	3.08	0.42
1:AA:292:G:H1	1:AA:308:C:H42	1.68	0.42
1:AA:359:U:O2'	1:AA:360:A:H5'	2.19	0.42
1:AA:383:A:OP1	1:AA:454:C:O2'	2.32	0.42
1:AA:450:G:N7	1:AA:481:G:C6	2.88	0.42
1:AA:741:G:H2'	1:AA:742:G:O4'	2.19	0.42
1:AA:763:G:C5	1:AA:764:C:C5	3.08	0.42
1:AA:874:G:C2'	1:AA:875:C:H5'	2.49	0.42
1:AA:926:G:C6	1:AA:1505:G:C6	3.07	0.42
1:AA:1090:U:C2	1:AA:1091:U:C6	3.07	0.42
1:AA:1116:C:N4	1:AA:1117:G:N7	2.66	0.42
1:AA:1272:G:C6	1:AA:1273:G:N7	2.87	0.42
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.20	0.42
1:AA:1409:C:OP1	31:BA:1916:A:H2	2.03	0.42
1:AA:1442(A):G:N2	45:BT:119:LYS:HA	2.35	0.42
1:AA:1499:A:H1'	1:AA:1520:G:H5'	2.00	0.42
2:AB:70:PHE:O	2:AB:92:TYR:HA	2.20	0.42
4:AD:18:LYS:C	4:AD:19:LEU:HG	2.39	0.42
6:AF:63:TYR:HB3	6:AF:65:VAL:HG12	2.02	0.42
7:AG:26:PHE:CG	7:AG:62:PHE:HE1	2.36	0.42
8:AH:9:MET:O	8:AH:12:ARG:HB2	2.19	0.42
8:AH:77:GLU:CG	8:AH:78:GLN:H	2.33	0.42
9:AI:18:PHE:O	9:AI:61:ALA:HA	2.19	0.42
10:AJ:7:LYS:HD3	10:AJ:71:LEU:HD11	2.01	0.42
12:AL:46:LYS:O	12:AL:47:LYS:C	2.58	0.42
14:AN:32:SER:O	14:AN:40:CYS:HA	2.20	0.42
16:AP:49:LEU:O	16:AP:50:LYS:HB2	2.19	0.42
17:AQ:62:SER:OG	17:AQ:72:ARG:HB2	2.19	0.42
18:AR:70:ILE:HG23	18:AR:79:LEU:HD13	2.01	0.42
23:B1:21:ARG:HD3	23:B1:21:ARG:C	2.40	0.42
27:B5:5:PRO:O	27:B5:6:VAL:HG23	2.19	0.42
30:B8:59:LYS:HB3	30:B8:59:LYS:HE3	1.64	0.42
31:BA:353:G:H2'	31:BA:354:G:O5'	2.19	0.42
31:BA:384:U:O2'	31:BA:385:C:H5'	2.20	0.42
31:BA:547:A:H2'	31:BA:547:A:N3	2.34	0.42
31:BA:868:U:C4	31:BA:869:G:N7	2.87	0.42
31:BA:1038:C:O2	31:BA:1038:C:H2'	2.19	0.42
31:BA:1175:U:H4'	31:BA:1176:G:H2'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1380:G:N2	31:BA:1570:A:C2	2.88	0.42
31:BA:1549:C:H2'	31:BA:1550:C:H6	1.83	0.42
31:BA:1694:C:O2'	31:BA:1695:G:C5	2.72	0.42
31:BA:1722:A:C6	31:BA:1741:A:C2	3.06	0.42
31:BA:1722:A:C2	31:BA:1740:G:H2'	2.55	0.42
31:BA:1884:A:C2	31:BA:1885:A:C8	3.06	0.42
31:BA:2664:G:H2'	31:BA:2665:A:O5'	2.19	0.42
31:BA:2801:A:O2'	31:BA:2895:U:C4'	2.62	0.42
32:BB:75:G:N3	51:BZ:85:HIS:CE1	2.87	0.42
33:BD:166:GLN:CA	33:BD:166:GLN:HE21	2.32	0.42
35:BF:53:THR:H	35:BF:56:GLU:HB2	1.83	0.42
35:BF:126:VAL:HG21	35:BF:129:PHE:CZ	2.55	0.42
35:BF:153:SER:HA	35:BF:172:TRP:O	2.19	0.42
35:BF:199:TRP:CZ3	35:BF:203:GLN:HG3	2.55	0.42
38:BI:77:LEU:O	38:BI:104:GLN:OE1	2.38	0.42
41:BP:16:ARG:NH1	41:BP:18:ARG:HG2	2.35	0.42
45:BT:35:LYS:O	45:BT:38:ASN:N	2.53	0.42
46:BU:12:ARG:O	46:BU:15:LYS:HG3	2.19	0.42
46:BU:92:ARG:HH22	47:BV:10:LYS:CA	2.31	0.42
47:BV:96:ILE:HG23	47:BV:97:LYS:H	1.85	0.42
47:BV:96:ILE:HG22	47:BV:97:LYS:N	2.35	0.42
1:CA:61:G:OP1	20:CT:10:LEU:HD11	2.19	0.42
1:CA:236:G:C5	1:CA:237:C:C5	3.07	0.42
1:CA:527:G:O2'	1:CA:528:C:H5'	2.19	0.42
1:CA:628:G:C2	1:CA:629:G:C4	3.07	0.42
1:CA:666:G:C6	1:CA:741:G:C5	3.07	0.42
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.19	0.42
1:CA:949:A:C2	1:CA:1233:G:N3	2.88	0.42
2:CB:93:VAL:HG11	2:CB:97:TRP:CD1	2.54	0.42
2:CB:204:ASN:HB3	2:CB:210:SER:HB3	2.01	0.42
6:CF:14:LEU:HD23	6:CF:14:LEU:HA	1.93	0.42
7:CG:49:ILE:HG22	7:CG:49:ILE:O	2.19	0.42
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.82	0.42
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.49	0.42
10:CJ:62:HIS:CE1	14:CN:61:TRP:HH2	2.36	0.42
11:CK:83:ILE:HA	11:CK:109:VAL:O	2.19	0.42
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.34	0.42
22:D0:72:ARG:HH21	22:D0:75:LEU:HD13	1.83	0.42
28:D6:11:LEU:HB2	28:D6:24:GLU:C	2.40	0.42
31:DA:225:A:C2'	31:DA:226:G:H5'	2.50	0.42
31:DA:672:C:H2'	31:DA:673:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:917:A:H2'	31:DA:918:A:O4'	2.19	0.42
31:DA:993:G:H1'	47:DV:91:TYR:HD1	1.82	0.42
31:DA:997:G:C2'	31:DA:998:C:H5'	2.49	0.42
31:DA:1794:U:O2'	31:DA:1795:C:H5'	2.19	0.42
31:DA:2563:U:O2	31:DA:2565:A:C8	2.72	0.42
31:DA:2648:C:H2'	31:DA:2649:U:C6	2.55	0.42
31:DA:2748:A:N6	31:DA:2749:A:C6	2.87	0.42
31:DA:2892:A:C8	31:DA:2892:A:H3'	2.54	0.42
32:DB:49:C:H2'	32:DB:50:G:H8	1.84	0.42
32:DB:66:A:C6	32:DB:109:C:C5	3.08	0.42
33:DD:16:MET:HG2	33:DD:211:ARG:HH21	1.84	0.42
33:DD:83:GLU:OE1	33:DD:104:TYR:CE2	2.73	0.42
34:DE:4:ILE:HG12	34:DE:28:ALA:HB1	2.01	0.42
35:DF:39:TRP:HA	35:DF:99:TYR:OH	2.20	0.42
36:DG:43:LEU:HD22	36:DG:43:LEU:N	2.34	0.42
36:DG:45:GLU:HB2	36:DG:47:LYS:CG	2.48	0.42
36:DG:107:LEU:HD23	36:DG:111:LEU:HD12	2.02	0.42
39:DN:69:GLN:HE21	39:DN:69:GLN:HB3	1.56	0.42
40:DO:108:GLU:H	40:DO:108:GLU:HG2	1.39	0.42
41:DP:18:ARG:HE	41:DP:18:ARG:HB3	1.70	0.42
41:DP:88:LEU:HA	41:DP:88:LEU:HD12	1.79	0.42
42:DQ:79:LEU:O	42:DQ:80:GLU:OE2	2.38	0.42
43:DR:12:ARG:HG3	43:DR:12:ARG:HH11	1.84	0.42
45:DT:100:TYR:O	45:DT:103:ARG:HG3	2.18	0.42
47:DV:43:GLU:HA	47:DV:48:GLY:CA	2.49	0.42
47:DV:47:VAL:CG1	47:DV:48:GLY:H	2.10	0.42
48:DW:75:TYR:CE2	48:DW:104:THR:HB	2.54	0.42
49:DX:8:ILE:H	49:DX:8:ILE:HD12	1.85	0.42
49:DX:11:PRO:HB2	49:DX:13:LEU:CD2	2.49	0.42
50:DY:37:VAL:HG23	50:DY:67:LEU:HB3	2.01	0.42
1:AA:261:U:C5	20:AT:79:ARG:CZ	3.02	0.42
1:AA:373:A:O2'	1:AA:374:A:H5'	2.20	0.42
1:AA:450:G:H1	1:AA:483:C:N4	2.17	0.42
1:AA:473:G:H2'	1:AA:474:G:C8	2.52	0.42
1:AA:564:C:N3	17:AQ:31:LEU:HD11	2.35	0.42
1:AA:567:G:C2	1:AA:568:G:H1'	2.54	0.42
1:AA:694:A:C2	1:AA:695:A:H1'	2.54	0.42
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.52	0.42
1:AA:1064:G:H1'	1:AA:1065:U:OP2	2.19	0.42
2:AB:23:ARG:HG2	2:AB:23:ARG:O	2.20	0.42
2:AB:98:LEU:HB2	2:AB:101:MET:HE2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:158:LEU:HD12	2:AB:158:LEU:N	2.33	0.42
4:AD:43:HIS:HB3	4:AD:46:LYS:HD2	2.02	0.42
5:AE:7:GLU:HB2	5:AE:35:GLY:O	2.19	0.42
5:AE:91:LEU:HD12	5:AE:120:THR:HG22	2.02	0.42
6:AF:19:LEU:HD21	6:AF:59:TYR:CE2	2.54	0.42
6:AF:55:ASP:HA	6:AF:56:PRO:HD2	1.95	0.42
12:AL:82:VAL:CG1	12:AL:83:VAL:N	2.77	0.42
20:AT:18:GLN:O	20:AT:19:SER:C	2.58	0.42
20:AT:53:LEU:HD21	20:AT:92:LEU:CD1	2.50	0.42
23:B1:26:ARG:HD3	23:B1:34:THR:HB	2.02	0.42
25:B3:11:SER:HA	25:B3:12:PRO:HD3	1.75	0.42
31:BA:123:G:H2'	31:BA:124:G:O4'	2.18	0.42
31:BA:271(F):C:C2	31:BA:271(G):C:C5	3.07	0.42
31:BA:271(P):C:C2'	31:BA:271(Q):G:C5'	2.97	0.42
31:BA:355:G:C2	31:BA:356:G:C8	3.07	0.42
31:BA:671:C:H2'	31:BA:672:C:H6	1.85	0.42
31:BA:878:A:N6	31:BA:900:A:C8	2.87	0.42
31:BA:1602:U:H3'	31:BA:1603:A:H5'	2.00	0.42
31:BA:1670:C:O2	34:BE:129:HIS:CE1	2.72	0.42
31:BA:1696:G:C6	31:BA:1697:G:C5	3.08	0.42
31:BA:2025:C:H2'	31:BA:2026:C:C6	2.54	0.42
31:BA:2192:G:C2	31:BA:2193:G:C8	3.07	0.42
31:BA:2290:G:O2'	31:BA:2381:C:H1'	2.20	0.42
31:BA:2555:U:C5	31:BA:2556:C:C2	3.07	0.42
31:BA:2558:C:C4	31:BA:2559:C:C5	3.07	0.42
31:BA:2694:G:C6	31:BA:2695:C:C4	3.08	0.42
31:BA:2789:C:C2'	31:BA:2790:A:OP2	2.67	0.42
32:BB:15:A:O2'	32:BB:110:G:C8	2.67	0.42
32:BB:44:G:C5'	32:BB:45:A:OP1	2.62	0.42
33:BD:125:ILE:HG13	33:BD:137:PRO:CG	2.49	0.42
34:BE:48:GLN:HE22	34:BE:64:LYS:HE2	1.84	0.42
34:BE:61:ARG:C	34:BE:63:LEU:H	2.22	0.42
35:BF:140:LEU:HD13	35:BF:140:LEU:HA	1.84	0.42
36:BG:68:PRO:HB2	36:BG:90:LEU:HG	2.00	0.42
38:BI:88:ILE:CD1	38:BI:123:LEU:HD23	2.50	0.42
39:BN:78:TYR:CD1	39:BN:79:PRO:CG	3.02	0.42
42:BQ:88:GLY:O	42:BQ:89:ASN:CB	2.66	0.42
46:BU:10:ARG:O	46:BU:11:ARG:C	2.56	0.42
46:BU:91:ASP:O	46:BU:92:ARG:CB	2.68	0.42
47:BV:45:THR:HG22	47:BV:45:THR:O	2.20	0.42
47:BV:72:VAL:O	47:BV:89:GLN:O	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:39:VAL:O	50:BY:40:GLU:CG	2.67	0.42
1:CA:386:C:C2'	1:CA:387:U:C5'	2.86	0.42
1:CA:406:G:C2	1:CA:407:G:C8	3.08	0.42
1:CA:617:G:C6	1:CA:618:C:C5	3.07	0.42
1:CA:617:G:N2	1:CA:618:C:C2	2.87	0.42
1:CA:620:C:C2	4:CD:135:LEU:HG	2.55	0.42
1:CA:673:G:C2	1:CA:674:G:C5	3.07	0.42
1:CA:719:C:H1'	18:CR:49:LYS:HB3	2.00	0.42
1:CA:840:C:H4'	1:CA:848:C:O2	2.19	0.42
1:CA:1064:G:H1'	1:CA:1065:U:OP2	2.19	0.42
1:CA:1066:C:H3'	1:CA:1067:A:C8	2.55	0.42
1:CA:1327:C:OP1	21:CU:20:LYS:HB3	2.19	0.42
2:CB:102:LEU:O	2:CB:105:PHE:HB2	2.20	0.42
3:CC:77:ILE:O	3:CC:83:ARG:HB3	2.19	0.42
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.93	0.42
5:CE:7:GLU:HB2	5:CE:35:GLY:O	2.19	0.42
5:CE:131:ILE:O	5:CE:134:ALA:HB3	2.20	0.42
6:CF:30:LEU:CB	6:CF:35:ALA:HB3	2.46	0.42
9:CI:77:ILE:O	9:CI:81:ILE:HG12	2.19	0.42
13:CM:76:ALA:HA	13:CM:79:LYS:HD2	2.01	0.42
17:CQ:22:LEU:HD12	17:CQ:40:LYS:O	2.20	0.42
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.42	0.42
20:CT:55:ILE:O	20:CT:56:MET:C	2.57	0.42
30:D8:2:PRO:O	30:D8:3:LYS:C	2.57	0.42
31:DA:286:C:N4	31:DA:356:G:C6	2.88	0.42
31:DA:413:C:O5'	31:DA:413:C:H6	2.03	0.42
31:DA:676:A:N1	31:DA:802:A:N1	2.68	0.42
31:DA:874:G:N2	31:DA:904:C:C2	2.87	0.42
31:DA:900:A:C4	31:DA:901:A:C8	3.07	0.42
31:DA:995:C:N3	46:DU:57:PHE:CZ	2.87	0.42
31:DA:1225:G:OP1	47:DV:88:ARG:CB	2.67	0.42
31:DA:1484:G:N2	31:DA:1505:C:N4	2.60	0.42
31:DA:1629:U:H2'	31:DA:1630:G:C8	2.55	0.42
31:DA:1722:A:C6	31:DA:1741:A:C2	3.08	0.42
31:DA:2345:G:N3	31:DA:2381:C:H2'	2.35	0.42
31:DA:2473:U:O2	31:DA:2473:U:H2'	2.19	0.42
33:DD:28:GLU:CB	33:DD:29:PRO:HD3	2.49	0.42
36:DG:88:ILE:HG22	36:DG:89:GLY:N	2.35	0.42
36:DG:92:VAL:HG22	36:DG:93:THR:N	2.34	0.42
36:DG:96:ARG:O	36:DG:99:MET:HB3	2.19	0.42
38:DI:13:GLY:O	38:DI:15:VAL:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:88:ILE:CD1	38:DI:123:LEU:HD23	2.48	0.42
38:DI:136:VAL:O	38:DI:136:VAL:HG22	2.19	0.42
40:DO:7:TYR:CE1	40:DO:20:MET:HB2	2.55	0.42
42:DQ:26:TYR:HD1	42:DQ:27:VAL:O	2.02	0.42
43:DR:18:LEU:HA	43:DR:18:LEU:HD23	1.80	0.42
51:DZ:5:LEU:HD23	51:DZ:5:LEU:HA	1.63	0.42
1:AA:836:G:C6	1:AA:851:G:C5	3.07	0.42
1:AA:1387:G:H2'	1:AA:1387:G:N3	2.35	0.42
2:AB:102:LEU:HD12	2:AB:102:LEU:N	2.34	0.42
2:AB:187:LEU:HA	2:AB:201:ILE:O	2.19	0.42
4:AD:144:ASP:O	4:AD:146:ILE:HD12	2.19	0.42
7:AG:87:VAL:HA	7:AG:88:PRO:HD3	1.94	0.42
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.35	0.42
9:AI:114:TYR:N	9:AI:114:TYR:HD2	2.13	0.42
11:AK:27:ASN:OD1	11:AK:28:THR:N	2.53	0.42
18:AR:53:ARG:HH21	18:AR:60:ALA:H	1.66	0.42
28:B6:44:ARG:O	28:B6:45:LYS:CG	2.60	0.42
30:B8:50:LEU:HD12	30:B8:51:ALA:H	1.83	0.42
31:BA:353:G:C2'	31:BA:354:G:O5'	2.67	0.42
31:BA:358:U:H3'	31:BA:358:U:C6	2.50	0.42
31:BA:375:C:H2'	31:BA:376:C:C6	2.55	0.42
31:BA:491:G:O2'	31:BA:492:A:H5'	2.19	0.42
31:BA:510:C:O2'	31:BA:511:U:H5'	2.19	0.42
31:BA:1404:C:O2	31:BA:1404:C:H2'	2.19	0.42
31:BA:1480:G:C6	31:BA:1481:U:N3	2.87	0.42
31:BA:1512:U:O2'	31:BA:1513:C:H5'	2.19	0.42
31:BA:1549:C:O2'	31:BA:1550:C:H5'	2.20	0.42
31:BA:1677:A:H2'	31:BA:1678:G:C8	2.53	0.42
31:BA:1892:C:C2'	31:BA:1893:C:H5'	2.50	0.42
31:BA:1973:G:C5	31:BA:1974:C:C5	3.07	0.42
31:BA:2078:C:C2'	31:BA:2079:U:H5'	2.49	0.42
31:BA:2411:A:N3	31:BA:2411:A:H2'	2.33	0.42
31:BA:2526:G:C6	31:BA:2527:C:C4	3.08	0.42
31:BA:2702:U:OP1	31:BA:2702:U:C2	2.73	0.42
32:BB:21:G:O6	32:BB:63:G:C4	2.73	0.42
32:BB:73:A:C4	32:BB:105:A:C2	3.07	0.42
34:BE:144:ARG:HB3	34:BE:145:LYS:H	1.43	0.42
35:BF:3:GLU:C	35:BF:24:LEU:HG	2.39	0.42
37:BH:41:MET:HE1	37:BH:55:PRO:HD3	2.02	0.42
37:BH:85:LYS:HZ3	37:BH:145:ALA:CB	2.33	0.42
39:BN:15:LEU:HD21	39:BN:55:VAL:CG2	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:42:ILE:HG22	42:BQ:47:ILE:HG13	2.01	0.42
43:BR:44:LEU:O	43:BR:45:ARG:C	2.56	0.42
44:BS:33:LYS:C	44:BS:34:HIS:HD2	2.23	0.42
44:BS:61:ASN:O	44:BS:65:VAL:HG23	2.19	0.42
45:BT:68:TYR:C	45:BT:70:VAL:H	2.22	0.42
45:BT:89:VAL:HB	45:BT:91:ARG:HG2	2.02	0.42
47:BV:62:LEU:HD22	47:BV:98:GLU:CB	2.35	0.42
51:BZ:76:LEU:HD23	51:BZ:76:LEU:HA	1.85	0.42
51:BZ:118:GLN:O	51:BZ:120:ILE:HG12	2.19	0.42
1:CA:24:U:O2'	1:CA:25:C:H5'	2.20	0.42
1:CA:73:G:N2	1:CA:76:C:C2	2.88	0.42
1:CA:282:A:H2'	1:CA:282:A:N3	2.35	0.42
1:CA:355:C:N3	1:CA:356:A:C8	2.88	0.42
1:CA:375:U:C4	1:CA:376:G:N7	2.88	0.42
1:CA:430:A:C2'	1:CA:431:A:H5'	2.50	0.42
1:CA:452:A:N7	1:CA:480:U:O4	2.53	0.42
1:CA:724:G:C2	1:CA:725:G:C8	3.07	0.42
1:CA:867:G:N2	1:CA:868:C:C2	2.88	0.42
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.54	0.42
1:CA:1392:G:H2'	1:CA:1393:U:H5'	2.01	0.42
1:CA:1446:U:O2'	1:CA:1447:A:H8	1.97	0.42
1:CA:1507:A:C2	1:CA:1508:G:C4	3.07	0.42
3:CC:100:ALA:O	3:CC:101:LEU:HB2	2.20	0.42
4:CD:33:MET:HE1	4:CD:37:PRO:HA	2.02	0.42
5:CE:100:VAL:HG13	5:CE:118:ILE:HG22	2.02	0.42
8:CH:113:SER:H	8:CH:134:ILE:CG1	2.31	0.42
9:CI:46:ALA:HA	9:CI:78:LYS:HZ1	1.85	0.42
10:CJ:62:HIS:CE1	14:CN:61:TRP:CH2	3.07	0.42
16:CP:49:LEU:O	16:CP:50:LYS:HB2	2.19	0.42
17:CQ:27:PHE:CE1	17:CQ:36:ILE:HD11	2.54	0.42
18:CR:65:ILE:HG13	18:CR:65:ILE:H	1.59	0.42
24:D2:32:LEU:C	24:D2:32:LEU:HD12	2.40	0.42
30:D8:35:GLN:HB3	31:DA:2420:C:OP1	2.19	0.42
31:DA:141:A:H2'	31:DA:1408:C:O2'	2.20	0.42
31:DA:494:G:H5''	31:DA:494:G:C8	2.52	0.42
31:DA:547:A:N3	31:DA:547:A:H2'	2.34	0.42
31:DA:780:G:N2	31:DA:783:A:H62	2.08	0.42
31:DA:827:U:O2	31:DA:2246:G:H4'	2.19	0.42
31:DA:921:G:C6	31:DA:922:U:C4	3.07	0.42
31:DA:979:G:H3'	31:DA:980:A:H5''	2.02	0.42
31:DA:1017:G:H2'	31:DA:1018:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1173:G:H5'	31:DA:1174:A:P	2.60	0.42
31:DA:1403:C:H2'	31:DA:1404:C:O4'	2.19	0.42
31:DA:1636:C:H2'	31:DA:1637:A:C8	2.54	0.42
31:DA:1648:C:C2'	31:DA:1649:G:O5'	2.68	0.42
31:DA:2189:U:H2'	31:DA:2190:G:O4'	2.20	0.42
31:DA:2411:A:N3	31:DA:2411:A:H2'	2.35	0.42
31:DA:2470:G:C6	31:DA:2471:C:C5	3.08	0.42
31:DA:2677:G:H2'	31:DA:2678:C:C6	2.55	0.42
32:DB:73:A:H2'	32:DB:73:A:N3	2.34	0.42
33:DD:10:THR:HB	33:DD:11:PRO:HD2	2.02	0.42
33:DD:35:LYS:HG2	33:DD:64:ILE:CA	2.50	0.42
33:DD:85:ASP:OD1	33:DD:86:PRO:HD2	2.20	0.42
33:DD:266:SER:O	33:DD:267:SER:HB2	2.20	0.42
34:DE:78:LEU:H	34:DE:78:LEU:HG	1.56	0.42
35:DF:53:THR:N	35:DF:56:GLU:HB2	2.33	0.42
35:DF:199:TRP:CZ3	35:DF:203:GLN:HG3	2.55	0.42
36:DG:16:ARG:HH11	36:DG:31:VAL:CG1	2.31	0.42
37:DH:85:LYS:HZ3	37:DH:145:ALA:CA	2.32	0.42
39:DN:93:THR:O	39:DN:94:HIS:C	2.57	0.42
41:DP:59:LEU:CA	41:DP:61:ARG:NH1	2.59	0.42
49:DX:8:ILE:N	49:DX:8:ILE:HD12	2.34	0.42
50:DY:53:PRO:O	50:DY:56:PRO:O	2.37	0.42
1:AA:156:G:C6	1:AA:166:G:N1	2.88	0.42
1:AA:191:G:N3	20:AT:103:GLY:O	2.53	0.42
1:AA:355:C:H5'	1:AA:389:A:OP2	2.19	0.42
1:AA:392:G:C4	1:AA:393:A:C8	3.07	0.42
1:AA:430:A:C2'	1:AA:431:A:H5'	2.50	0.42
1:AA:682:G:C6	1:AA:683:G:C5	3.08	0.42
1:AA:687:A:C2	1:AA:704:A:C6	3.07	0.42
1:AA:812:C:OP1	1:AA:903:G:H1'	2.20	0.42
1:AA:976:G:C8	1:AA:1362:C:N4	2.88	0.42
1:AA:1090:U:N3	1:AA:1091:U:C5	2.87	0.42
1:AA:1091:U:O2	1:AA:1091:U:H2'	2.19	0.42
1:AA:1099:G:N3	1:AA:1099:G:H2'	2.35	0.42
1:AA:1163:C:C2	1:AA:1174:G:N2	2.88	0.42
1:AA:1367:C:C4	1:AA:1368:G:N7	2.87	0.42
2:AB:8:LYS:HZ2	2:AB:217:ARG:HH11	1.67	0.42
2:AB:15:VAL:H	2:AB:16:HIS:HD1	1.66	0.42
3:AC:66:VAL:HG12	3:AC:66:VAL:O	2.19	0.42
3:AC:95:THR:HG22	3:AC:97:LYS:N	2.33	0.42
4:AD:108:LEU:HD21	4:AD:183:GLY:HA3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:180:GLY:O	4:AD:182:LYS:HG2	2.20	0.42
12:AL:35:GLY:O	12:AL:83:VAL:HG12	2.20	0.42
12:AL:70:ILE:HG13	12:AL:100:ILE:HD12	2.02	0.42
13:AM:16:ASP:N	13:AM:16:ASP:OD2	2.53	0.42
17:AQ:52:LYS:H	17:AQ:52:LYS:HD2	1.84	0.42
22:B0:71:ASP:O	22:B0:72:ARG:HG2	2.20	0.42
24:B2:32:LEU:HA	24:B2:32:LEU:HD13	1.61	0.42
27:B5:2:ALA:N	31:BA:747:U:C2	2.88	0.42
31:BA:394:A:C6	31:BA:395:U:C4	3.08	0.42
31:BA:417:C:O2	31:BA:417:C:H2'	2.20	0.42
31:BA:701:G:N2	31:BA:732:C:C2	2.88	0.42
31:BA:745:G:OP2	34:BE:133:LYS:HE3	2.20	0.42
31:BA:909:A:H2'	31:BA:912:C:H5	1.85	0.42
31:BA:1300:U:H2'	31:BA:1626:G:N2	2.35	0.42
31:BA:1801:G:H3'	31:BA:1802:A:H5'	2.01	0.42
31:BA:2471:C:C4	31:BA:2472:G:C5	3.08	0.42
31:BA:2821:A:H2'	31:BA:2822:G:H8	1.83	0.42
32:BB:86:G:H1	32:BB:91:C:N4	2.18	0.42
36:BG:111:LEU:HA	36:BG:114:ILE:CG1	2.49	0.42
37:BH:41:MET:O	37:BH:42:ARG:C	2.58	0.42
39:BN:128:HIS:O	39:BN:129:PRO:C	2.58	0.42
41:BP:88:LEU:HA	41:BP:88:LEU:HD12	1.76	0.42
41:BP:143:GLY:CA	41:BP:145:PRO:HD3	2.49	0.42
44:BS:90:GLY:C	44:BS:92:TYR:N	2.72	0.42
45:BT:100:TYR:O	45:BT:103:ARG:HG3	2.19	0.42
49:BX:27:THR:OG1	49:BX:77:LYS:HA	2.19	0.42
49:BX:28:PHE:N	49:BX:28:PHE:CD1	2.88	0.42
50:BY:8:LYS:CD	50:BY:28:LYS:HZ3	2.33	0.42
1:CA:112:G:C2	1:CA:113:G:C8	3.08	0.42
1:CA:270:A:C5	1:CA:271:C:C4	3.08	0.42
1:CA:340:U:H2'	1:CA:341:C:O4'	2.20	0.42
1:CA:503:C:H6	1:CA:503:C:O5'	2.02	0.42
1:CA:872:A:C2	1:CA:874:G:C6	3.07	0.42
1:CA:962:C:H2'	1:CA:963:G:O4'	2.20	0.42
1:CA:991:U:O4	1:CA:1212:U:O2'	2.25	0.42
1:CA:1071:C:O3'	5:CE:49:PRO:HG2	2.19	0.42
1:CA:1090:U:N3	1:CA:1091:U:C5	2.88	0.42
1:CA:1158:C:C2	1:CA:1160:G:N7	2.88	0.42
2:CB:158:LEU:HD12	2:CB:158:LEU:N	2.35	0.42
11:CK:48:ILE:HG22	11:CK:49:GLY:N	2.34	0.42
12:CL:69:TYR:HD2	12:CL:99:HIS:CD2	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:32:SER:O	14:CN:40:CYS:HA	2.19	0.42
16:CP:21:VAL:O	16:CP:33:ILE:HB	2.19	0.42
16:CP:39:TYR:CD1	16:CP:40:ASP:N	2.88	0.42
26:D4:15:ILE:O	26:D4:16:CYS:C	2.58	0.42
27:D5:25:LEU:HD12	48:DW:19:LEU:C	2.40	0.42
30:D8:60:LEU:HB3	30:D8:63:PRO:HG2	2.00	0.42
31:DA:9:U:C4	31:DA:2629:A:C6	3.07	0.42
31:DA:108:U:C2	31:DA:109:G:C8	3.07	0.42
31:DA:214:G:H21	31:DA:216:A:H1'	1.85	0.42
31:DA:243:U:O2'	31:DA:244:A:H5'	2.20	0.42
31:DA:292:C:H2'	31:DA:293:U:C6	2.55	0.42
31:DA:906:G:H2'	31:DA:907:U:O5'	2.20	0.42
31:DA:951:C:C2'	31:DA:952:G:H5'	2.50	0.42
31:DA:1131:G:C2	31:DA:1132:A:C4	3.08	0.42
31:DA:1291:C:C2	31:DA:1292:U:C5	3.08	0.42
31:DA:1420:U:HO2'	31:DA:1421:G:P	2.42	0.42
31:DA:1476:C:H2'	31:DA:1477:A:O5'	2.20	0.42
31:DA:1722:A:H2	31:DA:1740:G:H2'	1.85	0.42
31:DA:1980:G:H2'	31:DA:1980:G:O5'	2.19	0.42
31:DA:2070:G:H2'	31:DA:2071:A:H8	1.85	0.42
31:DA:2287:A:C4	31:DA:2289:G:N7	2.87	0.42
31:DA:2508:G:O2'	31:DA:2509:G:H5'	2.20	0.42
31:DA:2651:C:O2'	31:DA:2652:C:H5'	2.20	0.42
31:DA:2712:U:H1'	31:DA:2712(A):A:H8	1.81	0.42
31:DA:2821:A:C2	31:DA:2822:G:C4	3.08	0.42
33:DD:35:LYS:CD	33:DD:64:ILE:N	2.82	0.42
33:DD:85:ASP:HB2	33:DD:92:ILE:HG12	2.01	0.42
33:DD:159:ALA:C	33:DD:161:THR:H	2.22	0.42
34:DE:7:VAL:HA	34:DE:194:GLY:O	2.20	0.42
34:DE:8:LYS:HG2	34:DE:192:ASN:HD22	1.85	0.42
41:DP:95:VAL:CG1	41:DP:123:LEU:HD11	2.50	0.42
41:DP:95:VAL:CG2	41:DP:125:VAL:HB	2.47	0.42
42:DQ:86:GLY:C	42:DQ:88:GLY:N	2.72	0.42
45:DT:99:LEU:HB3	45:DT:101:PHE:CE1	2.54	0.42
47:DV:61:VAL:O	47:DV:99:ILE:N	2.37	0.42
49:DX:36:LYS:O	49:DX:39:ILE:HG23	2.20	0.42
50:DY:79:CYS:SG	50:DY:80:GLY:N	2.92	0.42
51:DZ:44:PHE:CZ	51:DZ:48:PHE:CD2	3.07	0.42
1:AA:25:C:H2'	1:AA:26:A:H8	1.84	0.42
1:AA:595:G:H1'	1:AA:596:C:H5	1.85	0.42
1:AA:627:G:O2'	1:AA:628:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:696:A:H1'	1:AA:786:G:O2'	2.19	0.42
1:AA:731:G:H2'	1:AA:732:C:C6	2.55	0.42
1:AA:1048:G:H4'	14:AN:2:ALA:N	2.34	0.42
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.55	0.42
2:AB:140:HIS:HA	2:AB:143:GLU:HG3	2.01	0.42
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	2.02	0.42
4:AD:105:VAL:O	4:AD:105:VAL:CG1	2.68	0.42
6:AF:14:LEU:HD23	6:AF:14:LEU:HA	1.94	0.42
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.34	0.42
17:AQ:14:LYS:HB2	17:AQ:14:LYS:NZ	2.34	0.42
18:AR:25:THR:O	18:AR:26:LEU:HD23	2.19	0.42
18:AR:59:SER:H	18:AR:62:GLU:CD	2.23	0.42
22:B0:25:ARG:HB2	22:B0:37:LEU:HD23	2.01	0.42
22:B0:82:ARG:HA	22:B0:83:PRO:HD2	1.89	0.42
27:B5:19:ARG:HH11	27:B5:19:ARG:HD2	1.67	0.42
27:B5:29:THR:O	27:B5:30:LEU:HD23	2.20	0.42
29:B7:48:LYS:N	29:B7:48:LYS:CD	2.82	0.42
31:BA:1158:C:O5'	31:BA:1158:C:H6	2.02	0.42
31:BA:1195:G:C2'	31:BA:1196:C:H5'	2.49	0.42
31:BA:1419:A:C8	31:BA:1421:G:C6	3.08	0.42
31:BA:1420:U:HO2'	31:BA:1421:G:P	2.43	0.42
31:BA:1866:C:O2	31:BA:1876:A:H1'	2.20	0.42
31:BA:2275:C:H5'	31:BA:2275:C:C6	2.54	0.42
31:BA:2292:C:C2'	31:BA:2293:C:H5'	2.50	0.42
31:BA:2476:A:C5	31:BA:2477:C:C5	3.08	0.42
32:BB:33:G:C2'	32:BB:34:U:H5'	2.50	0.42
33:BD:35:LYS:HZ3	33:BD:104:TYR:HD1	1.67	0.42
33:BD:131:LEU:HD12	33:BD:131:LEU:N	2.33	0.42
34:BE:48:GLN:HG3	34:BE:78:LEU:HB3	2.01	0.42
35:BF:60:SER:OG	35:BF:61:GLY:N	2.51	0.42
37:BH:89:ILE:CD1	37:BH:90:LYS:N	2.83	0.42
38:BI:9:LEU:N	38:BI:13:GLY:HA2	2.31	0.42
38:BI:56:LYS:HA	38:BI:59:ALA:CB	2.49	0.42
39:BN:55:VAL:HG12	39:BN:126:PRO:HA	2.02	0.42
39:BN:64:GLY:O	39:BN:65:LYS:HE2	2.19	0.42
50:BY:23:ARG:O	50:BY:24:VAL:HB	2.20	0.42
50:BY:46:LYS:O	50:BY:47:LYS:HE3	2.20	0.42
51:BZ:52:SER:OG	51:BZ:53:ILE:N	2.51	0.42
1:CA:382:A:N3	1:CA:383:A:C8	2.88	0.42
1:CA:718:G:C1'	11:CK:116:HIS:HA	2.50	0.42
1:CA:763:G:C5	1:CA:764:C:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:816:A:OP2	1:CA:1527:C:H5'	2.20	0.42
1:CA:978:A:C5'	1:CA:979:C:OP2	2.67	0.42
1:CA:1027:C:O5'	1:CA:1027:C:H6	2.03	0.42
1:CA:1086:U:H2'	1:CA:1087:G:C8	2.55	0.42
1:CA:1279:A:O2'	1:CA:1282:C:N4	2.53	0.42
1:CA:1465:C:C4	1:CA:1466:C:C4	3.08	0.42
6:CF:12:PRO:HG3	6:CF:55:ASP:HB3	2.02	0.42
7:CG:149:ARG:HG2	7:CG:149:ARG:O	2.20	0.42
8:CH:87:SER:HB2	8:CH:93:VAL:HB	2.02	0.42
11:CK:30:VAL:HG21	11:CK:65:ALA:HA	2.02	0.42
11:CK:69:ALA:O	11:CK:73:MET:HG2	2.20	0.42
11:CK:99:GLN:OE1	11:CK:105:VAL:HG11	2.20	0.42
12:CL:39:VAL:HG12	12:CL:40:VAL:N	2.35	0.42
17:CQ:22:LEU:HD12	17:CQ:23:VAL:H	1.83	0.42
22:D0:42:GLY:HA3	31:DA:2331:G:O4'	2.20	0.42
24:D2:33:MET:HG2	49:DX:11:PRO:CD	2.39	0.42
28:D6:40:CYS:SG	28:D6:45:LYS:CD	3.08	0.42
30:D8:4:MET:HE2	30:D8:4:MET:HB2	1.81	0.42
30:D8:52:LYS:O	30:D8:52:LYS:HG3	2.20	0.42
31:DA:719:C:C2	31:DA:720:C:C5	3.08	0.42
31:DA:754:C:O4'	31:DA:1618:A:H2	2.03	0.42
31:DA:950:G:C6	31:DA:951:C:C4	3.08	0.42
31:DA:1213:A:O2'	31:DA:1214:A:H5'	2.20	0.42
31:DA:1349:A:H2'	31:DA:1350:C:OP1	2.20	0.42
31:DA:1486:A:C2'	31:DA:1487:G:H5'	2.50	0.42
31:DA:1614:A:N6	48:DW:87:PRO:HA	2.35	0.42
31:DA:1876:A:H2'	31:DA:1877:A:C8	2.55	0.42
31:DA:2094:G:OP1	38:DI:22:LYS:HD3	2.20	0.42
31:DA:2263:C:H5'	31:DA:2263:C:C6	2.41	0.42
31:DA:2287:A:N1	31:DA:2346:A:C2	2.87	0.42
31:DA:2473:U:C4	31:DA:2474:C:C5	3.07	0.42
31:DA:2656:U:H2'	31:DA:2657:A:C5'	2.50	0.42
31:DA:2851:A:H2'	31:DA:2852:G:O4'	2.20	0.42
31:DA:2895:U:C5	31:DA:2896:C:C5	3.05	0.42
34:DE:2:LYS:HG2	34:DE:95:ILE:HG23	2.02	0.42
34:DE:3:GLY:HA3	34:DE:81:ILE:HG21	2.01	0.42
37:DH:46:GLU:O	37:DH:47:GLU:HB2	2.20	0.42
37:DH:94:TYR:N	37:DH:94:TYR:HD1	2.18	0.42
44:DS:101:LEU:O	44:DS:102:ALA:O	2.37	0.42
45:DT:27:THR:OG1	45:DT:28:VAL:N	2.53	0.42
45:DT:30:VAL:HG22	45:DT:84:GLN:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:65:LYS:O	45:DT:72:VAL:N	2.36	0.42
46:DU:12:ARG:HA	46:DU:15:LYS:HG2	2.01	0.42
49:DX:5:TYR:O	49:DX:7:VAL:N	2.52	0.42
49:DX:34:ALA:O	49:DX:35:THR:C	2.58	0.42
1:AA:69:G:N2	1:AA:70:G:C4	2.87	0.42
1:AA:328:C:H4'	1:AA:329:A:H5'	2.01	0.42
1:AA:414:A:C4	1:AA:415:A:C8	3.08	0.42
1:AA:523:A:N1	12:AL:92:ASP:HB2	2.35	0.42
1:AA:579:G:C6	1:AA:580:U:C4	3.08	0.42
1:AA:604:G:N7	1:AA:605:U:C5	2.88	0.42
1:AA:718:G:C1'	11:AK:116:HIS:HA	2.50	0.42
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.20	0.42
1:AA:923:A:H2'	1:AA:924:C:O4'	2.20	0.42
1:AA:1169:A:H2'	1:AA:1170:A:O4'	2.20	0.42
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.20	0.42
1:AA:1498:U:H1'	1:AA:1499:A:OP2	2.20	0.42
2:AB:193:ASP:HA	2:AB:194:PRO:HD2	1.84	0.42
3:AC:69:HIS:CD2	3:AC:69:HIS:N	2.87	0.42
6:AF:76:ALA:HB1	6:AF:80:ARG:NH2	2.33	0.42
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	2.02	0.42
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	2.01	0.42
12:AL:126:LYS:HD2	12:AL:127:GLU:H	1.84	0.42
22:B0:72:ARG:NH2	22:B0:75:LEU:HD12	2.35	0.42
23:B1:85:LEU:CB	23:B1:87:PRO:HD3	2.49	0.42
24:B2:25:VAL:HG13	24:B2:26:ARG:CD	2.37	0.42
30:B8:29:LYS:NZ	30:B8:44:LYS:HB2	2.35	0.42
30:B8:36:LYS:O	30:B8:37:SER:O	2.38	0.42
31:BA:154(A):C:O2	31:BA:154(A):C:O4'	2.38	0.42
31:BA:465:G:H2'	31:BA:466:A:C8	2.54	0.42
31:BA:708:C:N4	31:BA:723:G:H1	2.17	0.42
31:BA:814:C:H5	41:BP:27:HIS:CE1	2.36	0.42
31:BA:1317:A:H2'	31:BA:1318:C:H6	1.84	0.42
31:BA:1667:G:H1'	31:BA:1991:U:O4	2.20	0.42
31:BA:1783:A:N1	31:BA:2587:A:C4	2.88	0.42
31:BA:1902:C:H4'	33:BD:244:ARG:HB2	2.01	0.42
31:BA:1979:C:C2'	31:BA:1980:G:H5'	2.50	0.42
31:BA:2048:G:C6	31:BA:2049:G:C5	3.08	0.42
31:BA:2803:C:OP2	31:BA:2803:C:H3'	2.19	0.42
31:BA:2875:C:H4'	45:BT:5:ALA:HB2	2.01	0.42
35:BF:192:LEU:HD23	35:BF:193:VAL:H	1.84	0.42
36:BG:181:ARG:HE	36:BG:181:ARG:HB2	1.70	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:20:ALA:O	37:BH:21:PRO:C	2.59	0.42
38:BI:2:LYS:HD2	38:BI:20:ASP:HB3	2.02	0.42
41:BP:39:LYS:HE3	41:BP:42:SER:CB	2.50	0.42
41:BP:91:PHE:O	41:BP:91:PHE:CD2	2.73	0.42
42:BQ:76:LYS:N	42:BQ:88:GLY:HA2	2.34	0.42
43:BR:74:LYS:HD2	43:BR:77:ARG:NH2	2.34	0.42
43:BR:87:TYR:HE1	43:BR:117:VAL:HG12	1.84	0.42
45:BT:27:THR:O	45:BT:28:VAL:CG2	2.66	0.42
45:BT:98:LYS:HB3	45:BT:100:TYR:CE1	2.54	0.42
48:BW:2:GLU:CA	48:BW:64:MET:HE1	2.47	0.42
51:BZ:69:THR:HG22	51:BZ:90:VAL:CA	2.47	0.42
51:BZ:73:GLN:N	51:BZ:87:ASP:OD1	2.53	0.42
1:CA:92:C:H2'	1:CA:93:G:H8	1.82	0.42
1:CA:447:G:O6	1:CA:485:G:H1'	2.20	0.42
1:CA:538:G:OP2	12:CL:115:LYS:CG	2.68	0.42
1:CA:761:G:C5	1:CA:762:C:C5	3.08	0.42
1:CA:874:G:C2'	1:CA:875:C:H5'	2.50	0.42
2:CB:140:HIS:HA	2:CB:143:GLU:HG3	2.01	0.42
4:CD:79:PHE:CE1	4:CD:204:ILE:HA	2.55	0.42
4:CD:116:GLN:NE2	4:CD:157:LEU:HD21	2.35	0.42
4:CD:180:GLY:O	4:CD:182:LYS:HG2	2.20	0.42
5:CE:137:GLU:O	5:CE:141:GLN:HG3	2.19	0.42
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD21	2.02	0.42
10:CJ:51:ARG:H	10:CJ:60:ARG:HA	1.84	0.42
10:CJ:54:PHE:HZ	10:CJ:55:LYS:HZ2	1.67	0.42
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.20	0.42
17:CQ:99:SER:C	17:CQ:100:LYS:HD3	2.39	0.42
18:CR:71:LYS:O	18:CR:74:ARG:HB2	2.18	0.42
23:D1:94:LEU:CD2	23:D1:95:LEU:N	2.81	0.42
30:D8:3:LYS:HE3	31:DA:242:G:O5'	2.19	0.42
30:D8:27:THR:CA	41:DP:62:LEU:HD11	2.44	0.42
31:DA:755:C:H2'	31:DA:756:C:H6	1.84	0.42
31:DA:814:C:C5'	47:DV:86:GLY:HA3	2.50	0.42
31:DA:832:G:O2'	41:DP:52:GLU:HB3	2.19	0.42
31:DA:946:G:O2'	31:DA:947:G:H5'	2.19	0.42
31:DA:1439:A:C2	31:DA:1553:A:C5	3.08	0.42
31:DA:1973:G:C4	31:DA:1974:C:C5	3.08	0.42
31:DA:2262:U:H4'	31:DA:2328:A:C2	2.55	0.42
31:DA:2437:U:H2'	31:DA:2438:U:H6	1.84	0.42
33:DD:65:ILE:HD11	33:DD:67:PHE:CZ	2.48	0.42
34:DE:101:ARG:CB	34:DE:169:ASN:ND2	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:54:GLU:O	36:DG:57:ALA:HB3	2.20	0.42
36:DG:111:LEU:HA	36:DG:114:ILE:CG1	2.50	0.42
37:DH:33:LEU:HD11	37:DH:136:ILE:O	2.20	0.42
37:DH:85:LYS:HZ3	37:DH:145:ALA:CB	2.33	0.42
39:DN:46:VAL:HG13	39:DN:48:MET:HG3	2.01	0.42
39:DN:82:LEU:HD12	39:DN:82:LEU:N	2.18	0.42
40:DO:10:VAL:O	40:DO:10:VAL:CG2	2.64	0.42
40:DO:87:ILE:HD13	40:DO:87:ILE:HA	1.60	0.42
40:DO:104:ARG:NH1	45:DT:35:LYS:HD3	2.34	0.42
45:DT:28:VAL:HG13	45:DT:46:GLU:CB	2.48	0.42
45:DT:90:GLN:NE2	45:DT:124:ASP:OD2	2.53	0.42
46:DU:84:LYS:C	46:DU:86:ALA:H	2.23	0.42
48:DW:82:LEU:HA	48:DW:82:LEU:HD12	1.77	0.42
49:DX:52:VAL:HB	49:DX:80:ILE:CG2	2.50	0.42
50:DY:39:VAL:CG1	50:DY:40:GLU:H	2.25	0.42
50:DY:45:VAL:HG22	50:DY:62:GLU:N	2.34	0.42
50:DY:90:LEU:CD1	50:DY:91:GLU:HG2	2.50	0.42
51:DZ:11:GLU:HB2	51:DZ:13:GLU:OE2	2.20	0.42
51:DZ:151:HIS:CB	51:DZ:170:THR:HA	2.49	0.42
1:AA:69:G:N2	1:AA:70:G:C5	2.88	0.41
1:AA:253:U:H2'	1:AA:254:G:H8	1.84	0.41
1:AA:376:G:N3	1:AA:389:A:C2	2.87	0.41
1:AA:434:U:H2'	1:AA:435:C:C6	2.55	0.41
1:AA:579:G:C5	1:AA:580:U:C4	3.07	0.41
1:AA:785:G:H2'	1:AA:786:G:H5'	2.02	0.41
1:AA:963:G:H1	1:AA:972:C:N4	2.17	0.41
1:AA:1014:A:C2	1:AA:1219:U:O2	2.73	0.41
1:AA:1226:C:N4	13:AM:104:ARG:HB2	2.33	0.41
1:AA:1319:A:OP1	19:AS:10:PHE:CD1	2.73	0.41
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.55	0.41
1:AA:1442:G:HO2'	1:AA:1442(A):G:H5''	1.79	0.41
3:AC:106:VAL:HG12	3:AC:108:ASN:H	1.85	0.41
4:AD:60:GLU:O	4:AD:63:LYS:HB3	2.19	0.41
4:AD:108:LEU:HG	4:AD:110:PHE:HE1	1.85	0.41
11:AK:69:ALA:O	11:AK:73:MET:HG2	2.19	0.41
13:AM:72:ALA:O	13:AM:75:ALA:HB3	2.19	0.41
17:AQ:45:HIS:ND1	17:AQ:65:ILE:HG21	2.35	0.41
20:AT:75:ASN:CA	20:AT:78:ALA:HB3	2.49	0.41
20:AT:76:ALA:O	20:AT:77:ALA:C	2.58	0.41
23:B1:10:LYS:HG2	23:B1:11:ARG:H	1.84	0.41
24:B2:30:ARG:CG	24:B2:30:ARG:NH1	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B3:26:LEU:HD23	25:B3:26:LEU:HA	1.77	0.41
28:B6:19:ARG:HH12	31:BA:2400:G:H5'	1.84	0.41
29:B7:24:THR:O	29:B7:28:ARG:HG3	2.20	0.41
30:B8:25:MET:HB2	41:BP:62:LEU:HD21	2.00	0.41
30:B8:38:GLY:C	30:B8:40:GLU:H	2.22	0.41
31:BA:139(A):G:N1	49:BX:44:GLU:OE1	2.52	0.41
31:BA:262:A:H2'	31:BA:263:C:O4'	2.20	0.41
31:BA:271(M):G:H2'	31:BA:271(N):U:H5'	2.01	0.41
31:BA:301:G:H1'	31:BA:302:C:C6	2.55	0.41
31:BA:695:G:C4	31:BA:696:G:C8	3.08	0.41
31:BA:721:C:O2	31:BA:721:C:C2'	2.67	0.41
31:BA:966:G:C6	31:BA:967:C:N4	2.88	0.41
31:BA:1034:G:H2'	31:BA:1035:U:O4'	2.20	0.41
31:BA:1379:A:C2'	31:BA:1380:G:OP1	2.66	0.41
31:BA:1434:A:C2'	31:BA:1435:G:H5'	2.50	0.41
31:BA:1467:C:C2	31:BA:1526:G:N2	2.88	0.41
31:BA:1628:G:O2'	31:BA:1629:U:H5'	2.19	0.41
31:BA:1856:G:C2'	31:BA:1857:G:H5'	2.50	0.41
31:BA:1904:G:H2'	31:BA:1905:C:O4'	2.20	0.41
31:BA:2296:U:H4'	31:BA:2297:C:OP1	2.19	0.41
31:BA:2552:U:H2'	31:BA:2554:U:OP2	2.20	0.41
31:BA:2762:G:C5'	31:BA:2762:G:C8	3.02	0.41
31:BA:2870:C:O2'	31:BA:2871:C:H5'	2.20	0.41
32:BB:87:G:H2'	32:BB:88:C:H5''	2.01	0.41
34:BE:101:ARG:CB	34:BE:169:ASN:ND2	2.82	0.41
34:BE:179:GLU:O	34:BE:180:ASN:HB2	2.20	0.41
36:BG:7:LEU:CD2	36:BG:176:LEU:HD22	2.50	0.41
36:BG:107:LEU:HD23	36:BG:111:LEU:HD12	2.02	0.41
38:BI:42:SER:O	38:BI:43:ASN:C	2.58	0.41
39:BN:5:VAL:HA	39:BN:6:PRO:HD3	1.41	0.41
39:BN:22:THR:HA	39:BN:61:ARG:O	2.20	0.41
39:BN:42:TRP:CB	46:BU:64:ARG:NH1	2.69	0.41
39:BN:95:PRO:HG2	39:BN:96:GLU:OE2	2.20	0.41
40:BO:10:VAL:HG21	40:BO:16:ALA:C	2.38	0.41
41:BP:48:PRO:CG	41:BP:49:ARG:H	2.27	0.41
41:BP:103:ALA:O	41:BP:104:GLY:C	2.58	0.41
44:BS:59:LYS:NZ	44:BS:68:GLN:NE2	2.68	0.41
45:BT:16:ARG:HD3	45:BT:16:ARG:HA	1.52	0.41
47:BV:13:ARG:HH11	47:BV:13:ARG:HG2	1.85	0.41
49:BX:47:PHE:O	49:BX:48:LYS:C	2.58	0.41
49:BX:82:GLN:CD	49:BX:83:VAL:HG22	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:55:A:C4	1:CA:56:U:C5	3.08	0.41
1:CA:282:A:H5''	1:CA:283:C:OP2	2.20	0.41
1:CA:436:C:O2'	1:CA:437:U:P	2.78	0.41
1:CA:473:G:C2	1:CA:474:G:C5	3.07	0.41
1:CA:515:G:N2	1:CA:537:G:C4	2.88	0.41
1:CA:617:G:C2	1:CA:618:C:C6	3.08	0.41
1:CA:696:A:H1'	1:CA:786:G:O2'	2.20	0.41
1:CA:722:A:N6	1:CA:724:G:C2	2.88	0.41
1:CA:818:G:O2'	1:CA:820:U:H6	2.03	0.41
1:CA:832:C:N3	1:CA:855:G:C2	2.87	0.41
1:CA:872:A:C5	1:CA:874:G:C8	3.08	0.41
1:CA:1004:A:N7	1:CA:1036:G:O6	2.52	0.41
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.19	0.41
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.20	0.41
2:CB:41:ILE:HD12	2:CB:41:ILE:N	2.35	0.41
3:CC:11:ARG:O	3:CC:13:GLY:N	2.53	0.41
3:CC:36:ASP:OD2	3:CC:57:ILE:HG21	2.20	0.41
3:CC:122:GLU:O	3:CC:126:ARG:HG3	2.20	0.41
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.20	0.41
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.20	0.41
11:CK:73:MET:SD	11:CK:103:LEU:CD2	3.08	0.41
16:CP:64:ALA:O	16:CP:65:GLN:C	2.56	0.41
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.97	0.41
17:CQ:67:LYS:O	17:CQ:69:LYS:N	2.53	0.41
20:CT:89:ARG:NH2	20:CT:104:LEU:HD21	2.34	0.41
23:D1:13:ILE:HG12	23:D1:14:VAL:CA	2.50	0.41
24:D2:55:ARG:O	24:D2:55:ARG:CG	2.67	0.41
30:D8:29:LYS:HB2	30:D8:44:LYS:HG2	2.01	0.41
31:DA:271(S):G:C5	31:DA:271(T):C:C5	3.08	0.41
31:DA:894:C:H2'	31:DA:895:U:H5'	2.02	0.41
31:DA:928:G:H8	31:DA:928:G:O5'	2.02	0.41
31:DA:1444:G:O6	31:DA:1466:G:C6	2.73	0.41
31:DA:1517:G:C6	31:DA:1518:U:N3	2.88	0.41
31:DA:1635:G:H2'	31:DA:1636:C:C6	2.55	0.41
31:DA:1759:A:H4'	31:DA:2715:C:O4'	2.20	0.41
31:DA:1992:G:H8	31:DA:1992:G:OP1	2.03	0.41
31:DA:2270:G:H2'	31:DA:2271:G:H5'	2.02	0.41
31:DA:2308:G:O6	31:DA:2310:A:H2'	2.20	0.41
31:DA:2743:C:H2'	31:DA:2744:G:O4'	2.20	0.41
32:DB:40:U:C2'	32:DB:41:U:OP1	2.68	0.41
33:DD:35:LYS:HD2	33:DD:63:ARG:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HZ3	33:DD:104:TYR:HD1	1.65	0.41
34:DE:11:MET:HB3	34:DE:24:THR:HA	2.02	0.41
34:DE:34:VAL:HG23	34:DE:34:VAL:O	2.19	0.41
35:DF:68:LYS:HG2	35:DF:68:LYS:O	2.20	0.41
38:DI:15:VAL:C	38:DI:17:GLN:H	2.22	0.41
41:DP:113:LYS:HA	41:DP:129:ALA:O	2.20	0.41
42:DQ:70:PRO:HA	42:DQ:94:VAL:O	2.20	0.41
45:DT:27:THR:C	45:DT:28:VAL:HG23	2.39	0.41
47:DV:2:PHE:HB3	47:DV:3:ALA:H	1.12	0.41
47:DV:90:PRO:CD	47:DV:91:TYR:H	2.30	0.41
47:DV:96:ILE:HG23	47:DV:97:LYS:N	2.34	0.41
49:DX:25:LYS:HG3	49:DX:26:TYR:CD1	2.54	0.41
49:DX:60:ARG:HH21	49:DX:74:PRO:CG	2.33	0.41
50:DY:47:LYS:HE3	50:DY:47:LYS:HB3	1.35	0.41
50:DY:90:LEU:HG	50:DY:91:GLU:N	2.35	0.41
51:DZ:143:GLY:C	51:DZ:144:LEU:HD22	2.41	0.41
51:DZ:151:HIS:ND1	51:DZ:170:THR:HG22	2.35	0.41
1:AA:355:C:H2'	1:AA:356:A:C5'	2.50	0.41
1:AA:734:G:C2	1:AA:735:C:C2	3.07	0.41
1:AA:788:U:C2'	1:AA:789:U:H5'	2.51	0.41
1:AA:791:G:H2'	1:AA:792:A:H5'	2.01	0.41
1:AA:939:G:H5''	7:AG:102:ARG:HH22	1.83	0.41
2:AB:88:ALA:O	2:AB:90:MET:HG2	2.20	0.41
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.55	0.41
4:AD:14:ARG:HA	4:AD:39:PRO:CG	2.51	0.41
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.19	0.41
7:AG:146:GLU:CA	7:AG:149:ARG:HB2	2.43	0.41
8:AH:53:VAL:O	8:AH:53:VAL:HG12	2.20	0.41
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.21	0.41
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.58	0.41
12:AL:39:VAL:HG12	12:AL:40:VAL:N	2.35	0.41
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	2.20	0.41
17:AQ:22:LEU:HD12	17:AQ:40:LYS:O	2.19	0.41
20:AT:33:ILE:N	20:AT:33:ILE:HD13	2.35	0.41
24:B2:14:ARG:CZ	24:B2:57:ILE:HG22	2.46	0.41
28:B6:48:VAL:O	28:B6:48:VAL:CG2	2.67	0.41
29:B7:43:THR:O	29:B7:44:PRO:C	2.58	0.41
31:BA:128:C:H6	31:BA:128:C:C5'	2.27	0.41
31:BA:493:G:H2'	31:BA:494:G:H5''	2.02	0.41
31:BA:646:A:H2'	31:BA:647:G:O5'	2.20	0.41
31:BA:675:A:C8	31:BA:804:A:N1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:825:C:C6	31:BA:825:C:C3'	3.04	0.41
31:BA:995:C:O2	46:BU:57:PHE:CD2	2.73	0.41
31:BA:1168:G:O2'	31:BA:1169:G:H5'	2.20	0.41
31:BA:1486:A:C2'	31:BA:1487:G:H5'	2.49	0.41
31:BA:1914:C:H2'	31:BA:1915:U:O4'	2.19	0.41
31:BA:2093:G:OP2	38:BI:22:LYS:HG2	2.20	0.41
31:BA:2484:G:C2	31:BA:2485:G:C8	3.08	0.41
31:BA:2510:C:C4	31:BA:2511:U:C4	3.08	0.41
33:BD:11:PRO:C	33:BD:13:ARG:H	2.23	0.41
33:BD:237:GLU:HB3	33:BD:238:GLY:H	1.63	0.41
34:BE:47:VAL:HB	34:BE:49:LEU:CD2	2.50	0.41
34:BE:134:ILE:HD13	34:BE:134:ILE:N	2.32	0.41
36:BG:43:LEU:N	36:BG:43:LEU:HD22	2.35	0.41
36:BG:92:VAL:HG22	36:BG:93:THR:N	2.34	0.41
39:BN:25:ARG:NH1	39:BN:25:ARG:CG	2.81	0.41
44:BS:54:LEU:HD13	44:BS:57:LYS:O	2.20	0.41
46:BU:28:ARG:NH1	46:BU:38:THR:OG1	2.42	0.41
50:BY:79:CYS:O	50:BY:80:GLY:O	2.38	0.41
51:BZ:28:MET:HE2	51:BZ:59:LEU:HD12	2.00	0.41
1:CA:108:G:H5''	1:CA:109:A:C5'	2.46	0.41
1:CA:116:A:OP2	1:CA:116:A:C8	2.73	0.41
1:CA:450:G:OP1	16:CP:43:LYS:NZ	2.50	0.41
1:CA:563:A:C8	1:CA:567:G:C1'	3.03	0.41
1:CA:664:G:P	18:CR:64:ARG:HH21	2.42	0.41
1:CA:730:G:O2'	1:CA:766:A:H5'	2.20	0.41
1:CA:885:G:O2'	1:CA:914:A:N1	2.41	0.41
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.20	0.41
1:CA:1435:G:H2'	1:CA:1436:U:C5	2.52	0.41
2:CB:23:ARG:O	2:CB:23:ARG:HG2	2.20	0.41
2:CB:25:ASN:O	2:CB:27:LYS:N	2.53	0.41
2:CB:111:ARG:NH1	2:CB:111:ARG:CG	2.63	0.41
8:CH:77:GLU:CG	8:CH:78:GLN:H	2.33	0.41
10:CJ:48:THR:HG23	10:CJ:62:HIS:HB3	2.01	0.41
11:CK:31:THR:OG1	11:CK:42:TRP:HB3	2.20	0.41
11:CK:65:ALA:HB3	11:CK:97:ALA:CB	2.50	0.41
13:CM:54:VAL:O	13:CM:58:GLU:HB2	2.20	0.41
16:CP:8:ARG:O	16:CP:9:PHE:CD2	2.73	0.41
17:CQ:62:SER:OG	17:CQ:72:ARG:HB2	2.20	0.41
18:CR:66:LEU:HD11	18:CR:70:ILE:HD11	2.02	0.41
20:CT:24:LEU:C	20:CT:24:LEU:HD13	2.41	0.41
23:D1:26:ARG:HD3	23:D1:34:THR:HB	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:40:SER:O	24:D2:41:ILE:O	2.38	0.41
31:DA:196:A:O2'	31:DA:805:G:O6	2.28	0.41
31:DA:224:G:N7	31:DA:420:C:H4'	2.35	0.41
31:DA:252:G:O2'	31:DA:253:C:H5'	2.20	0.41
31:DA:414:C:H4'	31:DA:1879:C:O2	2.20	0.41
31:DA:565:C:H2'	31:DA:566:U:O4'	2.19	0.41
31:DA:769:G:C2'	31:DA:770:G:H5'	2.49	0.41
31:DA:770:G:N3	31:DA:1354:A:H2	2.18	0.41
31:DA:842:G:N2	31:DA:937:U:C2	2.88	0.41
31:DA:868:U:C4	31:DA:869:G:N7	2.88	0.41
31:DA:926:A:H5''	31:DA:926:A:H8	1.85	0.41
31:DA:945:A:C4	31:DA:2448:A:C2	3.07	0.41
31:DA:1106:A:O2'	31:DA:1107:G:O4'	2.31	0.41
31:DA:1288:U:O2	31:DA:1327:C:C2	2.73	0.41
31:DA:1324:G:C2	31:DA:1328:G:N1	2.89	0.41
31:DA:1478:G:C2	31:DA:1479:G:C8	3.07	0.41
31:DA:1891:G:C5	31:DA:1892:C:C4	3.08	0.41
31:DA:2446:G:N2	31:DA:2449:U:O2	2.52	0.41
31:DA:2592:G:C5	31:DA:2593:U:C5	3.08	0.41
31:DA:2758:A:C2	31:DA:2759:G:H1'	2.55	0.41
32:DB:41:U:H2'	32:DB:42:C:OP1	2.20	0.41
33:DD:13:ARG:HA	33:DD:16:MET:HE3	2.02	0.41
33:DD:33:LEU:O	33:DD:35:LYS:N	2.53	0.41
34:DE:1:MET:O	34:DE:2:LYS:C	2.59	0.41
35:DF:3:GLU:C	35:DF:24:LEU:HG	2.40	0.41
35:DF:20:LEU:HB3	35:DF:23:ASP:HB2	2.02	0.41
35:DF:31:HIS:O	35:DF:34:TRP:HB3	2.20	0.41
35:DF:165:ARG:HA	35:DF:168:ARG:HD3	2.03	0.41
36:DG:144:ILE:HD12	36:DG:144:ILE:HA	1.90	0.41
39:DN:75:TYR:CE2	39:DN:83:LYS:NZ	2.88	0.41
40:DO:75:SER:OG	40:DO:76:ALA:N	2.53	0.41
41:DP:115:LEU:HA	41:DP:134:ALA:CB	2.34	0.41
41:DP:131:SER:O	41:DP:132:LYS:C	2.58	0.41
43:DR:21:TYR:CZ	43:DR:43:GLU:HG2	2.55	0.41
44:DS:19:LYS:O	44:DS:19:LYS:CG	2.67	0.41
44:DS:28:VAL:HG21	44:DS:87:PHE:CZ	2.55	0.41
44:DS:29:PHE:CD2	44:DS:30:ARG:N	2.88	0.41
46:DU:84:LYS:HG3	46:DU:85:LYS:N	2.35	0.41
50:DY:23:ARG:O	50:DY:24:VAL:O	2.38	0.41
51:DZ:39:VAL:HG21	51:DZ:44:PHE:CD2	2.54	0.41
1:AA:201:C:N4	1:AA:203:U:N1	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:288:A:H2'	1:AA:289:G:H4'	2.01	0.41
1:AA:612:C:C2'	1:AA:613:C:H5'	2.50	0.41
1:AA:664:G:P	18:AR:64:ARG:HH21	2.43	0.41
1:AA:685:G:HO2'	1:AA:686:U:H5'	1.82	0.41
1:AA:734:G:C5	1:AA:735:C:C4	3.08	0.41
1:AA:1052:U:O4	1:AA:1200:C:C2	2.74	0.41
1:AA:1058:G:H1	1:AA:1199:U:H3	1.68	0.41
1:AA:1158:C:C2	1:AA:1160:G:N7	2.88	0.41
1:AA:1379:G:C6	1:AA:1380:U:O4	2.72	0.41
1:AA:1452:C:O4'	1:AA:1456:G:N1	2.53	0.41
2:AB:15:VAL:HG21	2:AB:209:ARG:HH21	1.84	0.41
2:AB:69:LEU:HB2	2:AB:159:PRO:HG2	2.02	0.41
4:AD:11:LEU:C	4:AD:13:ARG:N	2.71	0.41
4:AD:36:ARG:HG2	4:AD:38:TYR:OH	2.20	0.41
4:AD:79:PHE:CE1	4:AD:204:ILE:HA	2.55	0.41
6:AF:30:LEU:CB	6:AF:35:ALA:HB3	2.46	0.41
6:AF:67:MET:CB	6:AF:68:PRO:HD2	2.49	0.41
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.19	0.41
7:AG:18:TYR:CE2	7:AG:59:LEU:HB2	2.55	0.41
8:AH:86:ILE:CB	8:AH:133:LEU:HD22	2.48	0.41
9:AI:79:LEU:C	9:AI:79:LEU:HD13	2.41	0.41
10:AJ:35:SER:OG	10:AJ:73:ASP:HB2	2.20	0.41
17:AQ:50:LYS:HG3	17:AQ:51:TYR:CD1	2.55	0.41
18:AR:74:ARG:HE	18:AR:81:PHE:HA	1.85	0.41
20:AT:90:GLN:O	20:AT:93:GLU:OE2	2.38	0.41
21:AU:22:ARG:N	21:AU:23:PRO:HD3	2.35	0.41
23:B1:16:ASN:HB3	23:B1:46:LEU:HD11	1.99	0.41
23:B1:26:ARG:HB2	23:B1:34:THR:CA	2.48	0.41
25:B3:52:HIS:CD2	32:BB:83:G:H5''	2.55	0.41
28:B6:10:LEU:N	28:B6:10:LEU:HD22	2.35	0.41
31:BA:204:A:O3'	31:BA:205:G:H4'	2.20	0.41
31:BA:750:A:C2	31:BA:753:C:C6	3.08	0.41
31:BA:881:G:N2	31:BA:896:A:H62	2.18	0.41
31:BA:975(A):G:H1'	31:BA:990:A:C2	2.55	0.41
31:BA:1108:U:H2'	31:BA:1109:C:C5'	2.41	0.41
31:BA:1179:C:O2	31:BA:1179:C:H2'	2.20	0.41
31:BA:1221:C:H2'	31:BA:1221(A):C:H6	1.84	0.41
31:BA:1441:G:C2'	31:BA:1442:G:H5'	2.50	0.41
31:BA:1514:U:C2'	31:BA:1515:G:H5'	2.50	0.41
31:BA:1695:G:N2	31:BA:1696:G:C8	2.88	0.41
31:BA:1705:G:C6	31:BA:1706:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2340:G:O2'	31:BA:2341:G:H5'	2.20	0.41
31:BA:2584:U:H6	31:BA:2585:U:C6	2.38	0.41
31:BA:2842:G:O2'	31:BA:2843:G:H5'	2.20	0.41
34:BE:101:ARG:CG	34:BE:169:ASN:ND2	2.84	0.41
35:BF:140:LEU:O	35:BF:141:ALA:C	2.57	0.41
36:BG:41:GLN:HG2	36:BG:155:MET:CB	2.39	0.41
41:BP:14:LYS:H	41:BP:14:LYS:HG3	1.53	0.41
43:BR:59:ASP:OD2	43:BR:59:ASP:N	2.53	0.41
46:BU:88:ILE:C	46:BU:88:ILE:CD1	2.89	0.41
47:BV:71:LEU:HD13	47:BV:72:VAL:HG23	2.01	0.41
1:CA:156:G:C6	1:CA:166:G:N1	2.88	0.41
1:CA:329:A:C2	1:CA:332:G:C4	3.08	0.41
1:CA:444:C:C2	1:CA:445:G:C8	3.08	0.41
1:CA:623:C:N4	1:CA:624:C:N4	2.68	0.41
1:CA:666:G:C5	1:CA:741:G:C6	3.09	0.41
1:CA:667:G:C2	1:CA:740:U:O2	2.74	0.41
1:CA:954:G:H21	1:CA:1227:A:N6	2.03	0.41
1:CA:955:U:C1'	1:CA:1227:A:H61	2.23	0.41
1:CA:1026:G:H5'	1:CA:1027:C:OP2	2.20	0.41
1:CA:1048:G:H4'	14:CN:2:ALA:N	2.35	0.41
1:CA:1246:C:H2'	1:CA:1247:U:H6	1.85	0.41
4:CD:36:ARG:C	4:CD:38:TYR:H	2.23	0.41
4:CD:43:HIS:CE1	4:CD:46:LYS:HZ2	2.36	0.41
5:CE:26:PHE:O	5:CE:27:ARG:HB2	2.19	0.41
7:CG:92:SER:CB	7:CG:94:ARG:HH21	2.33	0.41
8:CH:114:THR:HB	8:CH:130:GLY:O	2.19	0.41
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.20	0.41
13:CM:34:LEU:HD13	13:CM:41:PRO:CG	2.42	0.41
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	2.20	0.41
26:D4:23:GLU:O	26:D4:24:THR:CB	2.68	0.41
27:D5:57:VAL:C	27:D5:58:LEU:HD12	2.40	0.41
28:D6:44:ARG:HB3	28:D6:45:LYS:H	1.56	0.41
31:DA:778:G:H2'	31:DA:779:U:C6	2.55	0.41
31:DA:1044:G:N1	31:DA:1112:G:O6	2.53	0.41
31:DA:1047:G:C8	31:DA:1110:G:C6	3.09	0.41
31:DA:1126:A:H4'	31:DA:1127:A:O5'	2.20	0.41
31:DA:1204:A:N6	31:DA:1240:U:H2'	2.34	0.41
31:DA:1816:G:H8	33:DD:62:TYR:CZ	2.38	0.41
31:DA:1833:U:C2	31:DA:1834:U:C6	3.08	0.41
31:DA:2584:U:H2'	31:DA:2585:U:C6	2.54	0.41
31:DA:2660:A:H5'	31:DA:2661:G:N2	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2801:A:H4'	31:DA:2801(A):A:O5'	2.21	0.41
31:DA:2834:G:N2	31:DA:2882:A:N6	2.69	0.41
32:DB:40:U:H1'	32:DB:45:A:H61	1.85	0.41
33:DD:35:LYS:CE	33:DD:65:ILE:HG22	2.50	0.41
34:DE:134:ILE:HD13	34:DE:134:ILE:N	2.33	0.41
35:DF:143:ALA:HB1	35:DF:148:LEU:HB2	2.01	0.41
39:DN:56:ASN:H	39:DN:125:GLY:N	2.18	0.41
40:DO:13:ASN:ND2	40:DO:97:ARG:N	2.64	0.41
40:DO:77:ILE:HG12	40:DO:78:ARG:N	2.34	0.41
41:DP:66:GLY:O	41:DP:67:MET:HB3	2.19	0.41
43:DR:34:ILE:HD12	43:DR:34:ILE:HA	1.65	0.41
45:DT:67:SER:O	45:DT:68:TYR:HB2	2.20	0.41
46:DU:92:ARG:HH22	47:DV:10:LYS:CA	2.33	0.41
47:DV:4:ILE:HA	47:DV:12:TYR:O	2.21	0.41
49:DX:65:ARG:NE	49:DX:65:ARG:CA	2.83	0.41
51:DZ:133:ILE:HA	51:DZ:134:PRO:HD2	1.90	0.41
1:AA:92:C:C3'	1:AA:93:G:H8	2.33	0.41
1:AA:340:U:H2'	1:AA:341:C:O4'	2.20	0.41
1:AA:541:G:H2'	1:AA:542:G:C8	2.55	0.41
1:AA:543:C:N3	1:AA:544:G:C8	2.88	0.41
1:AA:828:A:H5''	1:AA:859:A:N1	2.34	0.41
1:AA:832:C:O2'	1:AA:833:U:O5'	2.34	0.41
1:AA:1030(C):G:H2'	1:AA:1030(D):A:O4'	2.19	0.41
1:AA:1216:G:H5''	14:AN:5:ALA:HB2	2.02	0.41
1:AA:1371:G:OP1	9:AI:11:LYS:HG2	2.20	0.41
2:AB:19:HIS:CG	2:AB:20:GLU:H	2.37	0.41
2:AB:68:ILE:HG13	2:AB:161:ALA:HB3	2.03	0.41
18:AR:87:ARG:O	18:AR:87:ARG:HG2	2.21	0.41
20:AT:59:ALA:O	20:AT:62:LEU:N	2.54	0.41
27:B5:57:VAL:C	27:B5:58:LEU:CG	2.88	0.41
30:B8:4:MET:HE2	30:B8:4:MET:HB2	1.83	0.41
31:BA:271(F):C:N3	31:BA:271(G):C:C5	2.89	0.41
31:BA:271(L):U:H4'	31:BA:271(M):G:C6	2.53	0.41
31:BA:352:G:HO2'	31:BA:353:G:P	2.42	0.41
31:BA:557:U:O2'	31:BA:558:G:H5'	2.21	0.41
31:BA:587:C:C5	41:BP:33:ARG:CG	2.94	0.41
31:BA:752:A:O2'	31:BA:753:C:OP2	2.32	0.41
31:BA:775:G:C5	31:BA:794:G:C8	3.08	0.41
31:BA:1028:A:H61	31:BA:1125:G:H2'	1.86	0.41
31:BA:1276:A:C2	31:BA:1277:G:C8	3.09	0.41
31:BA:1312:U:OP2	49:BX:62:LYS:HE3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1349:A:N6	31:BA:1598:C:N4	2.68	0.41
31:BA:1384:A:H1'	31:BA:1405:U:O4'	2.20	0.41
31:BA:1416:G:OP2	31:BA:1416:G:H4'	2.20	0.41
31:BA:1449:A:O2'	31:BA:1530:C:H5	2.04	0.41
31:BA:1501:C:H2'	31:BA:1502:C:H6	1.85	0.41
31:BA:1843:C:H2'	31:BA:1844:C:C6	2.56	0.41
31:BA:2276:G:C2'	31:BA:2277:G:H5'	2.50	0.41
34:BE:31:CYS:SG	34:BE:51:PHE:HD2	2.43	0.41
34:BE:119:ARG:HD2	34:BE:120:TRP:CE2	2.55	0.41
35:BF:22:ALA:HA	35:BF:26:ALA:HA	2.02	0.41
37:BH:100:GLY:C	37:BH:102:ALA:H	2.22	0.41
37:BH:163:TYR:H	37:BH:163:TYR:HD1	1.69	0.41
38:BI:78:THR:OG1	38:BI:141:LYS:HD2	2.19	0.41
39:BN:131:GLN:CD	39:BN:134:ARG:CB	2.88	0.41
41:BP:65:ARG:C	41:BP:66:GLY:O	2.58	0.41
44:BS:106:ARG:HD2	44:BS:107:GLU:O	2.20	0.41
45:BT:56:GLY:C	45:BT:59:THR:HG22	2.41	0.41
46:BU:24:TYR:HB2	46:BU:29:SER:HB3	2.01	0.41
46:BU:69:CYS:O	46:BU:74:LEU:HD12	2.19	0.41
47:BV:28:GLU:CB	47:BV:29:PRO:HD3	2.51	0.41
49:BX:80:ILE:CG2	49:BX:81:VAL:N	2.82	0.41
50:BY:37:VAL:HG22	50:BY:67:LEU:HB3	2.01	0.41
51:BZ:42:VAL:HG13	51:BZ:43:GLU:H	1.85	0.41
1:CA:439:A:C5	1:CA:441:A:H1'	2.56	0.41
1:CA:665:A:C2	1:CA:732:C:C2	3.08	0.41
1:CA:833:U:C2	1:CA:834:C:C5	3.08	0.41
1:CA:976:G:C8	1:CA:1362:C:N4	2.89	0.41
1:CA:976:G:P	14:CN:32:SER:H	2.41	0.41
3:CC:22:TRP:HB2	3:CC:23:TYR:H	1.73	0.41
4:CD:90:GLY:O	4:CD:94:LEU:CD1	2.68	0.41
5:CE:7:GLU:O	5:CE:8:GLU:HB3	2.20	0.41
6:CF:55:ASP:HA	6:CF:56:PRO:HD2	1.95	0.41
13:CM:112:GLY:C	13:CM:113:PRO:HG2	2.40	0.41
15:CO:39:LEU:C	15:CO:39:LEU:HD13	2.41	0.41
19:CS:19:VAL:O	19:CS:19:VAL:HG12	2.20	0.41
20:CT:23:ARG:O	20:CT:27:LYS:HB2	2.20	0.41
27:D5:36:CYS:CB	27:D5:49:CYS:SG	3.09	0.41
30:D8:5:LYS:NZ	31:DA:253:C:OP2	2.48	0.41
31:DA:53:A:C8	31:DA:54:G:C8	3.09	0.41
31:DA:83:G:H22	31:DA:102:G:HO2'	1.62	0.41
31:DA:452:G:C2	31:DA:458:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:528:A:O2'	31:DA:529:A:H5'	2.20	0.41
31:DA:671:C:C6	31:DA:671:C:C5'	2.99	0.41
31:DA:893:C:H2'	31:DA:894:C:O5'	2.19	0.41
31:DA:958:U:C2'	31:DA:959:A:OP1	2.68	0.41
31:DA:1022:G:C5	31:DA:1140:C:C4	3.07	0.41
31:DA:1374:G:C6	31:DA:1375:C:C4	3.09	0.41
31:DA:1709:U:O2'	31:DA:2859:G:H1'	2.20	0.41
31:DA:2097:C:H2'	31:DA:2098:U:C6	2.56	0.41
31:DA:2099:U:O2	31:DA:2099:U:H2'	2.20	0.41
31:DA:2205:C:C2	31:DA:2220:G:N1	2.88	0.41
31:DA:2626:C:O2'	31:DA:2627:G:H5'	2.21	0.41
31:DA:2659:G:H8	31:DA:2659:G:C5'	2.33	0.41
31:DA:2668:G:O2'	31:DA:2669:G:H5'	2.20	0.41
31:DA:2784:C:H1'	34:DE:37:ARG:HH21	1.85	0.41
31:DA:2842:G:O2'	31:DA:2843:G:H5'	2.20	0.41
31:DA:2862:G:H2'	31:DA:2863:C:H6	1.85	0.41
32:DB:15:A:H1'	32:DB:110:G:C8	2.55	0.41
32:DB:87:G:H2'	32:DB:88:C:H5''	2.02	0.41
33:DD:79:VAL:HG21	33:DD:111:LEU:CD1	2.49	0.41
34:DE:1:MET:HB2	34:DE:84:PHE:HB2	2.03	0.41
34:DE:47:VAL:HB	34:DE:49:LEU:CD2	2.50	0.41
34:DE:51:PHE:CG	34:DE:52:LEU:N	2.88	0.41
35:DF:6:VAL:O	35:DF:124:LEU:HD12	2.20	0.41
35:DF:13:SER:HA	35:DF:14:PRO:HD3	1.84	0.41
37:DH:83:TYR:HA	37:DH:135:GLY:O	2.20	0.41
37:DH:156:ALA:C	37:DH:158:HIS:H	2.23	0.41
43:DR:74:LYS:HD2	43:DR:77:ARG:NH2	2.31	0.41
44:DS:106:ARG:HD2	44:DS:107:GLU:O	2.20	0.41
46:DU:83:LEU:HD12	46:DU:83:LEU:HA	1.76	0.41
47:DV:25:LEU:H	47:DV:94:LEU:HD12	1.82	0.41
47:DV:36:PRO:CG	47:DV:62:LEU:HD11	2.50	0.41
48:DW:55:ALA:O	48:DW:56:ALA:C	2.56	0.41
49:DX:57:LEU:O	49:DX:76:ARG:N	2.49	0.41
50:DY:35:TYR:CD2	50:DY:35:TYR:O	2.74	0.41
51:DZ:124:ILE:CG1	51:DZ:125:LEU:N	2.83	0.41
51:DZ:139:VAL:HG12	51:DZ:141:VAL:H	1.86	0.41
1:AA:445:G:C6	1:AA:490:G:C6	3.08	0.41
1:AA:509:A:C2	1:AA:510:A:C2	3.08	0.41
1:AA:563:A:C8	1:AA:567:G:O4'	2.73	0.41
1:AA:655:A:C2	1:AA:656:C:C2	3.08	0.41
1:AA:659:U:H2'	1:AA:659:U:O2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:831:U:O2'	1:AA:832:C:H5'	2.21	0.41
1:AA:996:A:H2'	1:AA:997:U:C6	2.56	0.41
1:AA:1015:A:N6	1:AA:1016:A:C6	2.89	0.41
1:AA:1134:G:N2	1:AA:1141:C:C2	2.88	0.41
1:AA:1322:C:H5'	13:AM:100:GLY:HA3	2.03	0.41
1:AA:1463:C:O2'	1:AA:1464:G:H5'	2.21	0.41
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.20	0.41
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.20	0.41
2:AB:93:VAL:HG11	2:AB:97:TRP:HD1	1.86	0.41
2:AB:96:ARG:O	2:AB:98:LEU:N	2.53	0.41
2:AB:142:LEU:HD23	2:AB:142:LEU:O	2.21	0.41
2:AB:163:PHE:HD2	2:AB:185:ILE:HB	1.84	0.41
4:AD:33:MET:HE1	4:AD:37:PRO:HA	2.02	0.41
4:AD:78:LEU:O	4:AD:81:GLU:HB3	2.20	0.41
6:AF:22:GLU:C	6:AF:24:GLU:N	2.73	0.41
9:AI:3:GLN:HB3	9:AI:20:ARG:NE	2.35	0.41
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.55	0.41
12:AL:31:PRO:HB2	12:AL:32:PHE:CD2	2.55	0.41
12:AL:38:THR:HG23	12:AL:39:VAL:HG23	2.01	0.41
18:AR:63:GLN:OE1	18:AR:66:LEU:HD23	2.20	0.41
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.97	0.41
23:B1:83:GLU:C	23:B1:85:LEU:H	2.23	0.41
31:BA:363(A):A:N3	31:BA:363(A):A:H2'	2.36	0.41
31:BA:753:C:O2'	31:BA:754:C:H5'	2.20	0.41
31:BA:828:U:H4'	31:BA:831:G:C2	2.55	0.41
31:BA:1557:C:H5''	31:BA:1558:A:OP2	2.20	0.41
31:BA:1910:G:O2'	31:BA:1911:U:H5'	2.20	0.41
31:BA:2189:U:H2'	31:BA:2190:G:O4'	2.21	0.41
31:BA:2563:U:O2	31:BA:2565:A:H8	2.03	0.41
31:BA:2729:G:H2'	31:BA:2730:C:C6	2.55	0.41
31:BA:2784:C:H1'	34:BE:37:ARG:HH21	1.85	0.41
32:BB:24:G:N7	32:BB:56:G:H2'	2.36	0.41
34:BE:56:PRO:C	34:BE:58:ARG:N	2.74	0.41
35:BF:18:ARG:CG	35:BF:19:GLU:N	2.75	0.41
36:BG:115:ARG:HB2	36:BG:116:ASP:H	1.70	0.41
37:BH:40:GLU:O	37:BH:41:MET:CB	2.68	0.41
39:BN:42:TRP:HA	39:BN:48:MET:CE	2.34	0.41
40:BO:107:ARG:HE	40:BO:107:ARG:HB2	1.69	0.41
41:BP:95:VAL:CG1	41:BP:123:LEU:HD11	2.51	0.41
42:BQ:35:VAL:CG1	42:BQ:130:LYS:HB3	2.41	0.41
42:BQ:78:PRO:C	42:BQ:79:LEU:HG	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:88:GLY:O	42:BQ:89:ASN:HB2	2.21	0.41
45:BT:24:PRO:HB3	45:BT:99:LEU:HD21	2.01	0.41
45:BT:107:ASP:CG	45:BT:109:GLU:H	2.24	0.41
47:BV:72:VAL:CG1	47:BV:73:SER:N	2.73	0.41
48:BW:57:ASN:O	48:BW:58:ALA:C	2.58	0.41
51:BZ:130:PRO:HA	51:BZ:133:ILE:CD1	2.49	0.41
1:CA:129:U:H5'	17:CQ:3:LYS:HZ1	1.86	0.41
1:CA:344:A:H4'	1:CA:345:C:OP2	2.20	0.41
1:CA:392:G:O2'	1:CA:393:A:H5'	2.21	0.41
1:CA:685:G:N2	1:CA:686:U:O4	2.53	0.41
1:CA:731:G:C6	1:CA:732:C:N4	2.89	0.41
1:CA:741:G:H2'	1:CA:742:G:C8	2.55	0.41
1:CA:972:C:H4'	10:CJ:57:LYS:CG	2.48	0.41
1:CA:1091:U:O2	1:CA:1093:A:C8	2.74	0.41
4:CD:109:GLY:C	4:CD:111:ALA:N	2.73	0.41
5:CE:31:LEU:CD1	5:CE:129:ILE:HA	2.50	0.41
5:CE:143:ARG:NH1	8:CH:77:GLU:OE2	2.53	0.41
7:CG:87:VAL:HG22	7:CG:154:TYR:HB2	2.02	0.41
8:CH:44:PHE:HD1	8:CH:79:VAL:HG12	1.84	0.41
10:CJ:94:VAL:CG1	10:CJ:95:GLU:N	2.83	0.41
14:CN:44:LEU:HD12	14:CN:44:LEU:C	2.40	0.41
14:CN:46:GLU:O	14:CN:50:LYS:HG3	2.20	0.41
15:CO:55:GLY:O	15:CO:58:MET:N	2.54	0.41
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	2.02	0.41
21:CU:22:ARG:N	21:CU:23:PRO:HD3	2.35	0.41
22:D0:27:GLU:HB3	31:DA:856:C:C1'	2.50	0.41
23:D1:8:SER:N	23:D1:46:LEU:CD1	2.83	0.41
26:D4:28:LYS:CB	36:DG:113:ARG:HH22	2.33	0.41
27:D5:13:LYS:O	27:D5:14:ALA:C	2.58	0.41
27:D5:47:PRO:C	27:D5:48:GLU:OE2	2.58	0.41
28:D6:19:ARG:HG3	28:D6:20:ASN:H	1.85	0.41
29:D7:10:ARG:HG3	31:DA:125:G:C6	2.56	0.41
31:DA:29:U:H2'	31:DA:30:G:C8	2.56	0.41
31:DA:145:G:C2'	31:DA:146:G:C5'	2.80	0.41
31:DA:329:G:H4'	31:DA:330:A:OP2	2.20	0.41
31:DA:362:U:C6	31:DA:362:U:C3'	3.04	0.41
31:DA:363(C):G:C2	31:DA:363(D):G:C4	3.09	0.41
31:DA:417:C:O2	31:DA:417:C:H2'	2.21	0.41
31:DA:614:U:O2	31:DA:614:U:O4'	2.37	0.41
31:DA:735:A:H3'	31:DA:736:C:H6	1.85	0.41
31:DA:880:G:N2	31:DA:898:C:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:909:A:H2'	31:DA:912:C:H5	1.84	0.41
31:DA:921:G:O2'	31:DA:922:U:H5'	2.21	0.41
31:DA:1417:C:O2'	31:DA:1418:G:H5'	2.20	0.41
31:DA:1531:C:H5''	31:DA:1532:C:C6	2.49	0.41
31:DA:1778:U:C4	31:DA:1784:A:C4	3.08	0.41
31:DA:2199:A:C8	31:DA:2200:C:C5	3.08	0.41
31:DA:2602:A:H4'	31:DA:2603:G:C5'	2.51	0.41
34:DE:28:ALA:HB3	34:DE:93:VAL:CG2	2.50	0.41
35:DF:1:MET:O	35:DF:2:LYS:O	2.39	0.41
35:DF:18:ARG:CG	35:DF:19:GLU:N	2.75	0.41
35:DF:153:SER:HA	35:DF:172:TRP:O	2.21	0.41
35:DF:158:THR:CG2	35:DF:160:ASN:H	2.24	0.41
38:DI:14:ASP:O	38:DI:17:GLN:HB2	2.21	0.41
38:DI:114:LEU:O	38:DI:115:ALA:HB3	2.21	0.41
40:DO:13:ASN:H	40:DO:13:ASN:HD22	1.67	0.41
41:DP:146:VAL:CG2	41:DP:147:LEU:N	2.78	0.41
42:DQ:104:PHE:HE1	42:DQ:125:LEU:HD11	1.85	0.41
46:DU:98:LEU:O	46:DU:101:ARG:O	2.39	0.41
1:AA:358:U:H2'	1:AA:359:U:C6	2.54	0.41
1:AA:443:C:N3	1:AA:444:C:C5	2.88	0.41
1:AA:761:G:C5	1:AA:762:C:C5	3.08	0.41
1:AA:962:C:H2'	1:AA:963:G:O4'	2.20	0.41
1:AA:972:C:H4'	10:AJ:57:LYS:CG	2.49	0.41
1:AA:1091:U:O2	1:AA:1093:A:C8	2.74	0.41
1:AA:1127:G:C2'	1:AA:1147:C:H42	2.34	0.41
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.36	0.41
1:AA:1334:G:OP2	1:AA:1334:G:C8	2.74	0.41
3:AC:188:LEU:O	3:AC:189:ALA:HB2	2.20	0.41
4:AD:109:GLY:C	4:AD:111:ALA:N	2.73	0.41
10:AJ:22:LYS:O	10:AJ:22:LYS:HD2	2.20	0.41
10:AJ:44:VAL:HG12	10:AJ:45:ARG:N	2.35	0.41
10:AJ:51:ARG:H	10:AJ:60:ARG:HA	1.84	0.41
10:AJ:62:HIS:O	10:AJ:62:HIS:HD2	2.03	0.41
12:AL:102:ARG:CG	12:AL:102:ARG:NH1	2.79	0.41
12:AL:115:LYS:HB3	12:AL:116:SER:H	1.75	0.41
14:AN:51:GLY:C	14:AN:53:LEU:N	2.74	0.41
16:AP:8:ARG:O	16:AP:9:PHE:CD2	2.74	0.41
20:AT:89:ARG:NH2	20:AT:104:LEU:HD21	2.33	0.41
22:B0:36:ILE:HG23	31:BA:2354:G:O2'	2.20	0.41
23:B1:11:ARG:CG	23:B1:61:ARG:O	2.68	0.41
23:B1:85:LEU:HB3	23:B1:87:PRO:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:32:C:O2'	31:BA:33:U:H5'	2.21	0.41
31:BA:271(A):A:C2	31:BA:272(D):G:N3	2.87	0.41
31:BA:354:G:C8	31:BA:354:G:C3'	3.04	0.41
31:BA:1047:G:OP1	31:BA:1047:G:H4'	2.20	0.41
31:BA:1047:G:C8	31:BA:1110:G:C6	3.09	0.41
31:BA:1157:G:H2'	31:BA:1158:C:H5'	2.01	0.41
31:BA:1264:G:H3'	31:BA:1265:A:H5''	2.02	0.41
31:BA:1444:G:O6	31:BA:1466:G:C6	2.73	0.41
31:BA:1470:G:C6	31:BA:1519:G:N7	2.89	0.41
31:BA:1956:U:H2'	31:BA:1957:C:H5'	2.02	0.41
31:BA:2097:C:H2'	31:BA:2098:U:C6	2.56	0.41
31:BA:2183:C:H2'	31:BA:2184:G:C8	2.55	0.41
31:BA:2579:C:H2'	31:BA:2580:U:O4'	2.20	0.41
33:BD:149:PRO:O	33:BD:150:LYS:HB2	2.20	0.41
34:BE:27:LEU:HD22	45:BT:1:MET:HE2	2.00	0.41
35:BF:160:ASN:ND2	35:BF:162:LEU:HB2	2.34	0.41
36:BG:108:ASN:O	36:BG:112:PRO:HG2	2.20	0.41
36:BG:144:ILE:HD12	36:BG:144:ILE:HA	1.91	0.41
37:BH:38:SER:HA	37:BH:39:PRO:HD3	1.87	0.41
38:BI:8:PRO:O	38:BI:9:LEU:HD23	2.20	0.41
40:BO:17:ARG:HA	40:BO:17:ARG:HD3	1.62	0.41
41:BP:16:ARG:HG3	41:BP:18:ARG:H	1.84	0.41
41:BP:85:LEU:N	41:BP:85:LEU:CD2	2.76	0.41
42:BQ:81:VAL:C	42:BQ:82:ARG:CG	2.88	0.41
42:BQ:85:LYS:HG3	42:BQ:86:GLY:H	1.85	0.41
43:BR:38:VAL:HG12	43:BR:42:LYS:HD2	2.02	0.41
46:BU:31:SER:C	46:BU:33:ARG:N	2.69	0.41
46:BU:34:LYS:HA	46:BU:34:LYS:HE3	2.03	0.41
49:BX:55:ASN:HB2	49:BX:78:LYS:HD2	2.03	0.41
49:BX:60:ARG:HG2	49:BX:72:LYS:H	1.85	0.41
50:BY:77:PRO:O	50:BY:78:ALA:CB	2.68	0.41
51:BZ:139:VAL:HG12	51:BZ:141:VAL:H	1.85	0.41
51:BZ:151:HIS:CB	51:BZ:170:THR:HA	2.50	0.41
1:CA:36:C:C2'	1:CA:37:U:H5'	2.51	0.41
1:CA:93:G:H2'	1:CA:96:U:C5'	2.50	0.41
1:CA:673:G:N1	1:CA:674:G:C6	2.88	0.41
1:CA:811:C:H4'	1:CA:900:A:N6	2.35	0.41
1:CA:945:G:N1	1:CA:1337:G:C2	2.88	0.41
1:CA:1030(C):G:H2'	1:CA:1030(D):A:O4'	2.20	0.41
1:CA:1334:G:OP2	1:CA:1334:G:C8	2.73	0.41
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1368:G:OP2	9:CI:112:LYS:CD	2.69	0.41
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.56	0.41
2:CB:83:MET:SD	2:CB:234:PRO:HG2	2.60	0.41
2:CB:111:ARG:HA	2:CB:114:ARG:HB3	2.03	0.41
3:CC:19:GLU:O	3:CC:40:ARG:NH2	2.53	0.41
3:CC:69:HIS:CD2	3:CC:69:HIS:N	2.87	0.41
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	2.03	0.41
6:CF:9:VAL:C	6:CF:10:LEU:HD12	2.41	0.41
9:CI:17:VAL:HG22	9:CI:63:ILE:CG1	2.50	0.41
10:CJ:22:LYS:O	10:CJ:22:LYS:HD2	2.21	0.41
12:CL:64:TYR:O	12:CL:65:GLU:HB2	2.21	0.41
12:CL:102:ARG:NH1	12:CL:102:ARG:HG3	2.35	0.41
17:CQ:33:GLY:O	17:CQ:34:LYS:O	2.39	0.41
29:D7:10:ARG:NH2	31:DA:1378:A:OP1	2.53	0.41
31:DA:245:G:C5	31:DA:246:C:C5	3.08	0.41
31:DA:576:U:O2'	31:DA:577:G:H5'	2.21	0.41
31:DA:975:C:OP2	31:DA:975:C:H4'	2.20	0.41
31:DA:1153:C:OP1	46:DU:76:TYR:OH	2.35	0.41
31:DA:1274:A:N3	31:DA:1297:C:H1'	2.36	0.41
31:DA:1502:C:H5''	31:DA:1502:C:C6	2.55	0.41
31:DA:1504:C:O2'	31:DA:1505:C:C5'	2.69	0.41
31:DA:1509(A):A:H2'	31:DA:1509(B):A:C8	2.43	0.41
31:DA:1677:A:C2'	31:DA:1678:G:O5'	2.68	0.41
31:DA:2226:C:O5'	31:DA:2226:C:H6	2.03	0.41
31:DA:2261:C:O2'	31:DA:2262:U:H5'	2.21	0.41
31:DA:2526:G:C6	31:DA:2527:C:C4	3.09	0.41
36:DG:38:VAL:HG22	36:DG:93:THR:HG23	2.02	0.41
39:DN:15:LEU:HD23	39:DN:53:VAL:HB	2.03	0.41
47:DV:19:LYS:HG2	47:DV:96:ILE:CG2	2.51	0.41
51:DZ:10:ARG:NH2	51:DZ:26:GLY:O	2.53	0.41
1:AA:17:U:H2'	1:AA:18:C:H6	1.77	0.41
1:AA:49:U:C2	1:AA:361:G:N2	2.89	0.41
1:AA:112:G:C2	1:AA:113:G:C8	3.09	0.41
1:AA:174:C:O5'	1:AA:174:C:H6	2.03	0.41
1:AA:193:C:O2'	1:AA:194:C:H5'	2.21	0.41
1:AA:236:G:C5	1:AA:237:C:C5	3.08	0.41
1:AA:274:A:H4'	1:AA:275:G:OP1	2.20	0.41
1:AA:318:G:C2	1:AA:319:G:C5	3.09	0.41
1:AA:508:C:OP1	4:AD:209:ARG:NH2	2.54	0.41
1:AA:628:G:C2	1:AA:629:G:C4	3.09	0.41
1:AA:639:G:O2'	1:AA:640:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:658:G:N3	1:AA:659:U:C6	2.89	0.41
1:AA:692:U:O2'	1:AA:694:A:N7	2.46	0.41
1:AA:1057:G:C4	1:AA:1204:A:C2	3.09	0.41
4:AD:8:VAL:CB	4:AD:21:LEU:HD12	2.35	0.41
4:AD:59:ARG:NE	4:AD:59:ARG:HA	2.36	0.41
4:AD:67:ILE:HG22	4:AD:68:TYR:HD1	1.85	0.41
4:AD:173:TRP:HA	4:AD:187:ARG:NH1	2.35	0.41
5:AE:7:GLU:HB3	5:AE:112:LEU:HD13	2.03	0.41
5:AE:77:PRO:HB2	5:AE:143:ARG:O	2.20	0.41
5:AE:102:ALA:HB2	5:AE:120:THR:OG1	2.20	0.41
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.50	0.41
11:AK:117:ASN:HD22	11:AK:117:ASN:HA	1.61	0.41
12:AL:102:ARG:NH1	12:AL:102:ARG:HG3	2.35	0.41
16:AP:82:GLN:N	16:AP:82:GLN:HE21	2.19	0.41
20:AT:13:LEU:H	20:AT:13:LEU:CD1	2.29	0.41
22:B0:43:THR:N	31:BA:2331:G:H4'	2.28	0.41
23:B1:30:VAL:O	23:B1:30:VAL:CG1	2.68	0.41
23:B1:37:ILE:HG23	31:BA:2080:G:O5'	2.21	0.41
27:B5:31:VAL:O	27:B5:39:MET:HA	2.20	0.41
31:BA:9:U:O2'	31:BA:10:G:P	2.79	0.41
31:BA:272(G):C:N4	31:BA:363(C):G:H1	2.19	0.41
31:BA:416:C:C2	31:BA:417:C:C6	3.09	0.41
31:BA:540:C:H2'	31:BA:541:C:C6	2.56	0.41
31:BA:543:C:C5	31:BA:547:A:N7	2.89	0.41
31:BA:908:C:O2'	31:BA:909:A:H5'	2.21	0.41
31:BA:910:A:C6	31:BA:911:A:C6	3.08	0.41
31:BA:1299:G:H5''	31:BA:1300:U:OP1	2.21	0.41
31:BA:1317:A:H2'	31:BA:1318:C:C6	2.56	0.41
31:BA:1509(A):A:H2'	31:BA:1509(B):A:C8	2.45	0.41
31:BA:1531:C:C3'	31:BA:1532:C:C5'	2.97	0.41
31:BA:1648:C:C2'	31:BA:1649:G:O5'	2.69	0.41
31:BA:2273:A:H2'	31:BA:2274:A:C8	2.56	0.41
31:BA:2274:A:O5'	31:BA:2275:C:OP2	2.38	0.41
31:BA:2304:G:H22	31:BA:2312:U:H3	1.68	0.41
31:BA:2334:G:H5'	44:BS:13:ARG:HB3	2.03	0.41
31:BA:2471:C:O2	31:BA:2471:C:H2'	2.19	0.41
33:BD:44:ASN:HB3	33:BD:48:ARG:C	2.41	0.41
36:BG:86:MET:O	36:BG:87:PRO:C	2.58	0.41
40:BO:68:GLU:HB3	40:BO:78:ARG:HH11	1.85	0.41
40:BO:75:SER:OG	40:BO:76:ALA:N	2.53	0.41
40:BO:77:ILE:HG12	40:BO:78:ARG:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:33:LYS:HA	44:BS:33:LYS:HD3	1.66	0.41
47:BV:23:GLU:O	47:BV:24:LYS:C	2.59	0.41
50:BY:31:LEU:HA	50:BY:31:LEU:HD13	1.54	0.41
50:BY:81:LYS:CE	50:BY:97:ARG:HG2	2.51	0.41
1:CA:66:G:C4'	1:CA:173:U:C5	3.00	0.41
1:CA:102:G:C6	1:CA:103:C:N4	2.89	0.41
1:CA:318:G:C2	1:CA:319:G:C5	3.09	0.41
1:CA:389:A:H2'	1:CA:390:C:C5'	2.50	0.41
1:CA:405:U:H5''	1:CA:406:G:O4'	2.21	0.41
1:CA:521:G:H4'	12:CL:73:GLU:HG2	2.02	0.41
1:CA:543:C:N3	1:CA:544:G:N7	2.69	0.41
1:CA:707:C:C2	1:CA:708:C:C5	3.09	0.41
1:CA:782:A:C8	1:CA:783:C:C5	3.09	0.41
1:CA:836:G:C6	1:CA:851:G:C5	3.08	0.41
1:CA:1191:A:H5''	3:CC:4:LYS:HZ2	1.86	0.41
1:CA:1298:C:H2'	7:CG:114:ARG:NH1	2.35	0.41
1:CA:1412:C:H42	1:CA:1488:G:H1	1.69	0.41
2:CB:190:THR:C	2:CB:192:SER:H	2.23	0.41
3:CC:186:PHE:CD1	3:CC:198:VAL:O	2.73	0.41
4:CD:23:GLY:O	4:CD:27:TYR:CD1	2.73	0.41
4:CD:79:PHE:CD1	4:CD:207:TYR:CD1	3.08	0.41
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.20	0.41
5:CE:107:ARG:O	5:CE:108:ALA:C	2.59	0.41
10:CJ:24:VAL:O	10:CJ:28:ARG:HG3	2.20	0.41
12:CL:38:THR:HG23	12:CL:39:VAL:N	2.36	0.41
16:CP:21:VAL:O	16:CP:21:VAL:HG23	2.21	0.41
18:CR:37:VAL:HG23	18:CR:38:GLU:H	1.86	0.41
23:D1:10:LYS:HG2	23:D1:11:ARG:H	1.86	0.41
23:D1:41:ARG:NH2	31:DA:205:G:O6	2.53	0.41
23:D1:44:PRO:HA	31:DA:2231:C:OP1	2.20	0.41
27:D5:57:VAL:C	27:D5:58:LEU:CG	2.89	0.41
29:D7:37:LYS:HE2	31:DA:469:G:O6	2.21	0.41
31:DA:61:G:H1	31:DA:94:C:N4	2.17	0.41
31:DA:271(F):C:N3	31:DA:271(G):C:C5	2.88	0.41
31:DA:614(C):A:C4	35:DF:180:GLY:CA	3.04	0.41
31:DA:664:C:H2'	31:DA:665:C:H6	1.85	0.41
31:DA:1336:A:O2'	31:DA:1337:G:H5'	2.21	0.41
31:DA:1416:G:O2'	31:DA:1417:C:C6	2.71	0.41
31:DA:1502:C:O2	31:DA:1502:C:C2'	2.69	0.41
31:DA:1812:A:C2	31:DA:1813:G:C5	3.09	0.41
31:DA:1858:G:H1'	31:DA:1884:A:H61	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1879:C:C2'	31:DA:1880:C:H5'	2.50	0.41
31:DA:2061:G:C2	31:DA:2063:C:C4	3.09	0.41
31:DA:2444:G:OP2	35:DF:68:LYS:HE2	2.20	0.41
31:DA:2689:U:H5''	31:DA:2690:C:H5'	2.01	0.41
33:DD:266:SER:O	33:DD:267:SER:OG	2.35	0.41
35:DF:50:SER:HB2	35:DF:94:PRO:HD3	2.02	0.41
35:DF:81:PRO:HB3	35:DF:87:GLY:O	2.21	0.41
37:DH:40:GLU:O	37:DH:41:MET:CB	2.69	0.41
37:DH:117:PRO:HB3	37:DH:123:PHE:HD1	1.85	0.41
37:DH:156:ALA:O	37:DH:157:TYR:C	2.58	0.41
39:DN:78:TYR:CD1	39:DN:79:PRO:CG	3.04	0.41
40:DO:1:MET:HB2	40:DO:32:TYR:HB3	2.03	0.41
41:DP:16:ARG:NH1	41:DP:18:ARG:HG2	2.36	0.41
41:DP:16:ARG:CZ	41:DP:16:ARG:CB	2.97	0.41
43:DR:74:LYS:CE	43:DR:77:ARG:HH21	2.33	0.41
46:DU:39:LEU:HD23	46:DU:39:LEU:HA	1.75	0.41
47:DV:21:ARG:CD	47:DV:21:ARG:H	2.33	0.41
51:DZ:28:MET:HG3	51:DZ:35:ARG:HB2	2.01	0.41
1:AA:560:U:H6	1:AA:560:U:H2'	1.60	0.41
1:AA:625:G:H2'	1:AA:626:U:C6	2.56	0.41
1:AA:741:G:H2'	1:AA:742:G:C8	2.56	0.41
1:AA:775:G:O2'	1:AA:776:G:H5'	2.21	0.41
1:AA:1141:C:H3'	1:AA:1141:C:H6	1.85	0.41
1:AA:1378:C:N4	1:AA:1379:G:C2	2.89	0.41
1:AA:1386:G:N3	1:AA:1387:G:C8	2.88	0.41
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.86	0.41
2:AB:93:VAL:HG11	2:AB:97:TRP:CD1	2.56	0.41
3:AC:36:ASP:OD2	3:AC:57:ILE:HG21	2.21	0.41
10:AJ:51:ARG:CG	10:AJ:61:GLU:HB2	2.50	0.41
12:AL:92:ASP:O	12:AL:93:LEU:HD23	2.21	0.41
16:AP:32:TYR:O	16:AP:32:TYR:HD2	2.02	0.41
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.20	0.41
25:B3:46:ASN:HD22	25:B3:46:ASN:HA	1.63	0.41
30:B8:58:ILE:CG2	41:BP:49:ARG:HD3	2.51	0.41
31:BA:442:G:O4'	35:BF:46:ARG:HD3	2.21	0.41
31:BA:900:A:C4	31:BA:901:A:C8	3.09	0.41
31:BA:1022:G:C5	31:BA:1140:C:N4	2.89	0.41
31:BA:1410:G:H1	31:BA:1592:C:N4	2.18	0.41
31:BA:1673:U:C5	34:BE:129:HIS:HD2	2.38	0.41
33:BD:83:GLU:OE1	33:BD:104:TYR:CE2	2.74	0.41
33:BD:183:ARG:HH11	33:BD:183:ARG:HG2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:21:VAL:O	34:BE:23:VAL:HG22	2.20	0.41
35:BF:142:TRP:CE3	35:BF:143:ALA:N	2.89	0.41
36:BG:15:VAL:HG13	36:BG:175:LEU:CD1	2.51	0.41
36:BG:116:ASP:O	36:BG:117:PHE:HB3	2.21	0.41
37:BH:89:ILE:HB	37:BH:90:LYS:H	1.60	0.41
37:BH:150:ALA:O	37:BH:151:ILE:C	2.59	0.41
38:BI:5:LEU:HA	38:BI:36:ALA:HB2	2.02	0.41
38:BI:45:LYS:O	38:BI:48:GLU:N	2.54	0.41
38:BI:132:PRO:HG2	38:BI:133:HIS:HD2	1.86	0.41
41:BP:114:ILE:HG13	41:BP:115:LEU:N	2.32	0.41
42:BQ:20:ALA:CB	42:BQ:98:LYS:HB3	2.51	0.41
44:BS:58:LEU:O	44:BS:59:LYS:O	2.37	0.41
45:BT:29:ARG:HG3	45:BT:30:VAL:H	1.85	0.41
45:BT:90:GLN:NE2	45:BT:124:ASP:OD2	2.54	0.41
47:BV:71:LEU:HD13	47:BV:72:VAL:HB	2.02	0.41
48:BW:55:ALA:O	48:BW:56:ALA:C	2.59	0.41
49:BX:5:TYR:O	49:BX:7:VAL:N	2.53	0.41
51:BZ:44:PHE:CD1	51:BZ:44:PHE:C	2.93	0.41
1:CA:11:G:C5	1:CA:12:U:C5	3.09	0.41
1:CA:66:G:O4'	1:CA:173:U:C4	2.74	0.41
1:CA:90:U:H6	1:CA:90:U:H3'	1.86	0.41
1:CA:102:G:C6	1:CA:103:C:C5	3.08	0.41
1:CA:185:A:N6	1:CA:186:C:N4	2.69	0.41
1:CA:234:C:H2'	1:CA:235:C:C6	2.54	0.41
1:CA:577:G:C2	1:CA:578:C:C5	3.08	0.41
1:CA:673:G:H5''	6:CF:87:ARG:CZ	2.51	0.41
1:CA:731:G:H2'	1:CA:732:C:C6	2.56	0.41
1:CA:1442(B):A:C2	45:DT:118:ARG:CZ	3.04	0.41
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	2.02	0.41
4:CD:56:VAL:HG12	4:CD:202:LEU:CD1	2.50	0.41
4:CD:206:PHE:CD2	4:CD:207:TYR:CE2	3.09	0.41
5:CE:11:ILE:HB	5:CE:31:LEU:O	2.21	0.41
5:CE:15:ARG:CZ	5:CE:26:PHE:CE2	3.04	0.41
5:CE:77:PRO:HB2	5:CE:143:ARG:O	2.21	0.41
8:CH:41:ARG:O	8:CH:41:ARG:HG2	2.21	0.41
8:CH:44:PHE:CD1	8:CH:79:VAL:HG12	2.56	0.41
10:CJ:49:VAL:HG22	14:CN:41:ARG:HB2	2.03	0.41
12:CL:38:THR:HG23	12:CL:39:VAL:HG23	2.02	0.41
14:CN:51:GLY:C	14:CN:53:LEU:N	2.73	0.41
18:CR:71:LYS:O	18:CR:72:ARG:C	2.59	0.41
20:CT:30:LYS:HD2	20:CT:30:LYS:C	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:33:ILE:N	20:CT:33:ILE:HD13	2.36	0.41
20:CT:61:SER:OG	20:CT:65:LYS:HE3	2.21	0.41
24:D2:41:ILE:CG1	31:DA:94(A):G:N2	2.83	0.41
25:D3:10:LYS:HB3	25:D3:53:LEU:HA	2.02	0.41
31:DA:83:G:N1	31:DA:102:G:H2'	2.33	0.41
31:DA:353:G:C2'	31:DA:354:G:O5'	2.69	0.41
31:DA:445:C:O2'	31:DA:446:G:H5'	2.21	0.41
31:DA:729:G:C5	33:DD:208:LYS:HB2	2.56	0.41
31:DA:973:A:H5'	31:DA:1188:U:H1'	2.02	0.41
31:DA:1028:A:H61	31:DA:1125:G:H2'	1.84	0.41
31:DA:1038:C:O2	31:DA:1038:C:H2'	2.21	0.41
31:DA:1179:C:O2	31:DA:1179:C:H2'	2.21	0.41
31:DA:1245:G:OP1	41:DP:16:ARG:CD	2.68	0.41
31:DA:1414:G:C6	31:DA:1415:U:C4	3.09	0.41
31:DA:1444:G:C2	31:DA:1548:C:N3	2.89	0.41
31:DA:1685:C:O2'	31:DA:1686:C:H5'	2.21	0.41
31:DA:1721:G:N2	31:DA:1739:U:OP2	2.54	0.41
31:DA:1741:A:N7	31:DA:1742:G:N1	2.69	0.41
31:DA:1946:U:C2	31:DA:1947:C:C5	3.09	0.41
31:DA:2093:G:N7	31:DA:2225:A:H2'	2.36	0.41
31:DA:2275:C:H5'	31:DA:2275:C:C6	2.55	0.41
31:DA:2280:G:H2'	31:DA:2281:C:H5'	2.03	0.41
31:DA:2721:A:H1'	31:DA:2873:A:O2'	2.20	0.41
32:DB:40:U:H1'	32:DB:45:A:N6	2.35	0.41
33:DD:5:LYS:N	33:DD:5:LYS:HD2	2.36	0.41
35:DF:7:TYR:HB3	35:DF:16:GLY:CA	2.51	0.41
35:DF:9:ILE:HG12	35:DF:14:PRO:HA	2.02	0.41
35:DF:176:LEU:HD21	35:DF:180:GLY:O	2.21	0.41
36:DG:60:LEU:HD22	36:DG:63:ILE:HG13	2.03	0.41
37:DH:158:HIS:NE2	37:DH:169:VAL:C	2.74	0.41
38:DI:88:ILE:HG13	38:DI:122:GLU:N	2.36	0.41
39:DN:91:LEU:HA	39:DN:95:PRO:HB3	2.02	0.41
41:DP:111:ARG:HG3	41:DP:128:HIS:CG	2.56	0.41
41:DP:114:ILE:HG13	41:DP:115:LEU:N	2.30	0.41
42:DQ:118:LEU:HD23	42:DQ:118:LEU:HA	1.77	0.41
43:DR:56:LYS:HE2	43:DR:87:TYR:HB3	2.03	0.41
48:DW:51:LEU:HD22	48:DW:51:LEU:O	2.20	0.41
49:DX:36:LYS:O	49:DX:38:GLU:N	2.54	0.41
50:DY:13:VAL:HG12	50:DY:73:ARG:O	2.20	0.41
1:AA:155:C:H2'	1:AA:156:G:H8	1.86	0.41
1:AA:349:A:C2'	1:AA:350:G:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:390:C:H6	1:AA:390:C:H3'	1.85	0.41
1:AA:438:G:OP1	4:AD:125:HIS:HE1	2.04	0.41
1:AA:473:G:C2	1:AA:474:G:C5	3.09	0.41
1:AA:533:A:C4'	1:AA:534:U:OP1	2.69	0.41
1:AA:689:C:O2'	1:AA:690:G:H5'	2.20	0.41
1:AA:950:U:H3'	13:AM:102:ARG:NH1	2.30	0.41
1:AA:987:G:N2	1:AA:1219:U:N3	2.69	0.41
1:AA:1064:G:C8	1:AA:1066:C:C2	3.09	0.41
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.56	0.41
1:AA:1084:G:OP1	1:AA:1086:U:C5	2.74	0.41
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.86	0.41
1:AA:1128:C:O2	1:AA:1130:A:N7	2.54	0.41
1:AA:1194:U:H4'	5:AE:22:GLY:CA	2.51	0.41
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.52	0.41
1:AA:1273:G:H3'	1:AA:1274:G:H8	1.86	0.41
1:AA:1302:U:C5	13:AM:17:VAL:HG21	2.56	0.41
1:AA:1392:G:H21	1:AA:1502:A:H8	1.68	0.41
1:AA:1502:A:C2	1:AA:1504:G:C2	3.09	0.41
2:AB:42:ILE:HG12	2:AB:43:ASP:N	2.36	0.41
2:AB:178:ARG:HG3	8:AH:72:PRO:HA	2.01	0.41
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	2.03	0.41
4:AD:76:ARG:HD2	4:AD:207:TYR:CE1	2.55	0.41
4:AD:111:ALA:HB2	4:AD:120:LEU:HD12	2.02	0.41
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.35	0.41
4:AD:141:ARG:HB3	4:AD:142:PRO:HD2	2.03	0.41
5:AE:63:ARG:HA	5:AE:66:MET:SD	2.60	0.41
5:AE:87:SER:HB3	5:AE:125:SER:O	2.20	0.41
7:AG:26:PHE:CG	7:AG:62:PHE:CE1	3.08	0.41
7:AG:92:SER:CB	7:AG:94:ARG:HH21	2.34	0.41
7:AG:103:TRP:HA	7:AG:106:GLN:HE21	1.84	0.41
8:AH:1:MET:HE2	8:AH:1:MET:N	2.33	0.41
8:AH:44:PHE:HD1	8:AH:79:VAL:HG12	1.85	0.41
9:AI:53:VAL:C	9:AI:54:ASP:HB2	2.41	0.41
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.20	0.41
9:AI:114:TYR:CE1	10:AJ:60:ARG:O	2.73	0.41
12:AL:69:TYR:HD2	12:AL:99:HIS:CD2	2.39	0.41
13:AM:40:ASN:HA	13:AM:41:PRO:HD3	1.79	0.41
15:AO:43:LEU:HD23	15:AO:43:LEU:HA	1.92	0.41
15:AO:67:LEU:CD2	15:AO:78:TYR:CE1	3.03	0.41
18:AR:79:LEU:HA	18:AR:80:PRO:HD3	1.91	0.41
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:89:ARG:HB2	20:AT:104:LEU:CD1	2.45	0.41
22:B0:14:ARG:HG2	31:BA:2279:G:O6	2.21	0.41
23:B1:18:ILE:HD13	31:BA:188:G:OP1	2.20	0.41
23:B1:67:ILE:N	23:B1:68:PRO:CD	2.84	0.41
24:B2:41:ILE:HG13	31:BA:94(A):G:H22	1.86	0.41
24:B2:49:LYS:HD3	31:BA:76:C:H5'	2.02	0.41
24:B2:59:ARG:HD2	24:B2:59:ARG:HA	1.87	0.41
26:B4:28:LYS:CB	36:BG:113:ARG:HH22	2.34	0.41
27:B5:42:PRO:CB	27:B5:43:HIS:HD2	2.34	0.41
31:BA:28:A:O2'	31:BA:583:G:H5'	2.21	0.41
31:BA:151:C:C2	31:BA:176:G:N2	2.89	0.41
31:BA:287:C:C2'	31:BA:288:C:O5'	2.68	0.41
31:BA:443:A:N7	35:BF:45:ARG:HG2	2.35	0.41
31:BA:466:A:H2	31:BA:795:C:O2	2.03	0.41
31:BA:506:G:O3'	31:BA:507:A:H8	2.03	0.41
31:BA:528:A:H3'	31:BA:528:A:H8	1.86	0.41
31:BA:565:C:H2'	31:BA:566:U:O4'	2.20	0.41
31:BA:716:A:C2'	31:BA:717:G:O5'	2.69	0.41
31:BA:833:U:H2'	31:BA:834:C:C6	2.56	0.41
31:BA:861:A:H2'	31:BA:862:G:O4'	2.20	0.41
31:BA:880:G:N2	31:BA:898:C:C4	2.89	0.41
31:BA:1175:U:C4'	31:BA:1176:G:H2'	2.51	0.41
31:BA:1245:G:OP1	41:BP:16:ARG:CD	2.69	0.41
31:BA:1313:U:H2'	31:BA:1610:A:C2	2.56	0.41
31:BA:1403:C:H2'	31:BA:1404:C:O4'	2.20	0.41
31:BA:1495:A:C5'	31:BA:1496:A:OP2	2.69	0.41
31:BA:1614:A:H62	48:BW:87:PRO:HA	1.86	0.41
31:BA:1636:C:H2'	31:BA:1637:A:C8	2.56	0.41
31:BA:1642:G:O2'	31:BA:1643:G:H5'	2.21	0.41
31:BA:1655:A:H1'	34:BE:113:PHE:CD2	2.56	0.41
31:BA:1709:U:O2'	31:BA:2859:G:H1'	2.20	0.41
31:BA:1740:G:H4'	31:BA:1741:A:OP1	2.17	0.41
31:BA:1879:C:C2'	31:BA:1880:C:H5'	2.51	0.41
31:BA:1956:U:C2'	31:BA:1957:C:H5'	2.51	0.41
31:BA:2208:A:O2'	31:BA:2219:G:C8	2.69	0.41
31:BA:2559:C:O2'	31:BA:2560:C:H5'	2.21	0.41
32:BB:45:A:C2'	32:BB:46:A:H5'	2.51	0.41
32:BB:102:A:H8	32:BB:102:A:OP2	2.04	0.41
33:BD:125:ILE:HG13	33:BD:137:PRO:HD3	2.03	0.41
33:BD:182:LEU:O	33:BD:271:ILE:HD12	2.21	0.41
34:BE:82:ARG:HG3	34:BE:83:ASP:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:154:VAL:HB	35:BF:173:VAL:HG22	2.03	0.41
36:BG:64:THR:HG23	36:BG:65:GLY:H	1.84	0.41
36:BG:89:GLY:O	36:BG:90:LEU:C	2.59	0.41
37:BH:61:HIS:O	37:BH:62:LYS:C	2.59	0.41
37:BH:115:VAL:HG11	37:BH:148:ILE:CD1	2.51	0.41
37:BH:157:TYR:O	37:BH:158:HIS:HB2	2.19	0.41
37:BH:158:HIS:CD2	37:BH:170:ARG:O	2.74	0.41
38:BI:27:ARG:CG	38:BI:27:ARG:NH1	2.84	0.41
38:BI:79:ILE:HG12	38:BI:140:LEU:HD11	2.03	0.41
39:BN:3:THR:O	39:BN:4:TYR:CG	2.74	0.41
39:BN:99:LEU:O	39:BN:103:VAL:HG23	2.21	0.41
39:BN:99:LEU:HA	39:BN:99:LEU:HD22	1.58	0.41
41:BP:126:VAL:HA	41:BP:145:PRO:HB2	2.02	0.41
41:BP:140:ALA:O	41:BP:141:ALA:HB3	2.21	0.41
42:BQ:36:ALA:O	42:BQ:100:GLY:N	2.52	0.41
42:BQ:137:TYR:CE2	51:BZ:74:VAL:O	2.72	0.41
43:BR:3:HIS:O	43:BR:4:LEU:CB	2.68	0.41
43:BR:51:LEU:HA	43:BR:51:LEU:HD23	1.74	0.41
44:BS:24:LEU:HD23	44:BS:24:LEU:HA	1.80	0.41
45:BT:30:VAL:HG22	45:BT:84:GLN:O	2.20	0.41
46:BU:46:ALA:O	46:BU:50:ARG:HB2	2.21	0.41
47:BV:4:ILE:HA	47:BV:12:TYR:O	2.20	0.41
47:BV:36:PRO:CG	47:BV:62:LEU:HD11	2.48	0.41
49:BX:24:GLY:HA3	49:BX:80:ILE:HG12	2.00	0.41
49:BX:60:ARG:HB2	49:BX:74:PRO:CD	2.48	0.41
50:BY:10:GLY:C	50:BY:27:VAL:HG22	2.42	0.41
50:BY:96:ILE:CG2	50:BY:97:ARG:N	2.81	0.41
50:BY:100:ALA:O	50:BY:101:LYS:HB2	2.21	0.41
1:CA:191:G:N3	20:CT:103:GLY:O	2.54	0.41
1:CA:236:G:C6	1:CA:237:C:C4	3.09	0.41
1:CA:293:G:H4'	1:CA:609:A:N1	2.36	0.41
1:CA:431:A:H2'	1:CA:432:A:O4'	2.21	0.41
1:CA:461:A:C5	1:CA:471:G:C6	3.09	0.41
1:CA:509:A:OP2	1:CA:509:A:H3'	2.21	0.41
1:CA:563:A:H2	12:CL:15:ARG:NH1	2.18	0.41
1:CA:579:G:H2'	1:CA:580:U:H6	1.85	0.41
1:CA:602:A:C2	1:CA:603:U:C2	3.09	0.41
1:CA:682:G:C6	1:CA:683:G:C5	3.08	0.41
1:CA:892:A:C6	1:CA:893:C:C4	3.08	0.41
1:CA:909:A:H2'	1:CA:910:C:O4'	2.21	0.41
1:CA:922:G:H1'	5:CE:19:MET:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:987:G:N2	1:CA:1219:U:N3	2.69	0.41
1:CA:1030(D):A:N7	1:CA:1031:G:N3	2.68	0.41
1:CA:1058:G:H1	1:CA:1199:U:H3	1.67	0.41
1:CA:1076:C:C2	1:CA:1082:G:N2	2.89	0.41
1:CA:1128:C:O2	1:CA:1130:A:N7	2.54	0.41
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.86	0.41
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.21	0.41
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.56	0.41
2:CB:12:GLU:H	2:CB:12:GLU:HG3	1.64	0.41
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.86	0.41
2:CB:69:LEU:HD11	2:CB:93:VAL:HG23	2.01	0.41
2:CB:70:PHE:O	2:CB:92:TYR:HA	2.21	0.41
2:CB:179:LYS:O	2:CB:179:LYS:HG2	2.20	0.41
3:CC:22:TRP:HE3	3:CC:23:TYR:O	2.03	0.41
3:CC:95:THR:HG22	3:CC:97:LYS:N	2.35	0.41
3:CC:159:GLY:HA2	3:CC:193:TYR:CD1	2.56	0.41
4:CD:2:GLY:O	4:CD:4:TYR:N	2.53	0.41
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.21	0.41
4:CD:60:GLU:O	4:CD:63:LYS:HB3	2.21	0.41
4:CD:141:ARG:HB3	4:CD:142:PRO:HD2	2.02	0.41
4:CD:155:LEU:O	4:CD:159:ARG:HG2	2.21	0.41
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.52	0.41
8:CH:10:LEU:N	8:CH:10:LEU:CD2	2.84	0.41
12:CL:55:VAL:HA	12:CL:70:ILE:HD13	2.02	0.41
13:CM:9:ILE:HD12	13:CM:9:ILE:N	2.35	0.41
16:CP:39:TYR:HD2	16:CP:73:LEU:HD13	1.84	0.41
16:CP:55:ARG:HA	16:CP:55:ARG:HE	1.85	0.41
16:CP:75:ARG:O	16:CP:77:ALA:N	2.48	0.41
18:CR:36:ASN:O	18:CR:39:VAL:HB	2.21	0.41
23:D1:66:HIS:O	23:D1:67:ILE:C	2.59	0.41
24:D2:37:PHE:HE2	24:D2:39:ALA:O	2.02	0.41
24:D2:44:LEU:HD13	24:D2:44:LEU:HA	1.57	0.41
26:D4:14:ILE:HA	36:DG:5:VAL:HG13	2.02	0.41
28:D6:26:ASN:HB3	28:D6:32:ASN:ND2	2.36	0.41
29:D7:12:ARG:HG3	31:DA:686:G:O6	2.21	0.41
31:DA:17:G:H2'	31:DA:18:C:H6	1.85	0.41
31:DA:69:C:O2	31:DA:69:C:H2'	2.21	0.41
31:DA:253:C:H2'	31:DA:254:G:O4'	2.20	0.41
31:DA:330:A:H2	31:DA:1210:A:HO2'	1.65	0.41
31:DA:529:A:N6	31:DA:2041:U:N3	2.61	0.41
31:DA:538:G:H2'	31:DA:539:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:552:G:C2'	31:DA:553:G:H5'	2.51	0.41
31:DA:609:A:H2'	31:DA:610:G:O5'	2.21	0.41
31:DA:633:A:H2'	31:DA:634:C:H5'	2.03	0.41
31:DA:738:G:C6	31:DA:739:G:C2	3.08	0.41
31:DA:744:G:H2'	31:DA:745:G:O5'	2.21	0.41
31:DA:855:G:C6	31:DA:856:C:N4	2.89	0.41
31:DA:958:U:HO2'	31:DA:959:A:P	2.42	0.41
31:DA:981:A:C2	31:DA:2027:G:N3	2.89	0.41
31:DA:994:C:O2'	31:DA:996:A:OP1	2.26	0.41
31:DA:1216:G:OP1	46:DU:8:VAL:HG22	2.21	0.41
31:DA:1227:G:C2'	31:DA:1228:G:H5'	2.51	0.41
31:DA:1341:U:O4	49:DX:16:LYS:HE2	2.21	0.41
31:DA:1405:U:C2	31:DA:1406:U:C5	3.08	0.41
31:DA:1416:G:O2'	31:DA:1417:C:OP2	2.39	0.41
31:DA:1493:C:O2	31:DA:1493:C:C2'	2.68	0.41
31:DA:1510:G:C2	31:DA:1511:C:C2	3.09	0.41
31:DA:1517:G:O2'	31:DA:1518:U:H5'	2.21	0.41
31:DA:1605:C:H1'	31:DA:1610:A:C4	2.56	0.41
31:DA:1719:G:O2'	31:DA:1720:U:H5'	2.20	0.41
31:DA:1850:G:C6	31:DA:1851:U:C4	3.09	0.41
31:DA:1926:U:H2'	31:DA:1928:A:OP2	2.20	0.41
31:DA:2036:C:H6	31:DA:2036:C:C5'	2.22	0.41
31:DA:2052:G:O4'	34:DE:142:GLY:HA3	2.21	0.41
31:DA:2070:G:H2'	31:DA:2071:A:C8	2.56	0.41
31:DA:2282:G:H4'	31:DA:2389:G:O2'	2.20	0.41
31:DA:2399:G:C6	31:DA:2400:G:C5	3.08	0.41
31:DA:2576:G:OP1	31:DA:2576:G:H3'	2.21	0.41
31:DA:2599:G:P	33:DD:236:GLY:H	2.44	0.41
31:DA:2615:U:H2'	31:DA:2616:C:C6	2.56	0.41
31:DA:2802:G:OP2	31:DA:2803:C:OP2	2.38	0.41
31:DA:2808:U:C4	31:DA:2809:A:N7	2.89	0.41
31:DA:2811:G:OP1	34:DE:60:ASN:HB3	2.21	0.41
31:DA:2893:G:H4'	31:DA:2894:G:H8	1.86	0.41
32:DB:38:C:C2	32:DB:39:A:C8	3.08	0.41
33:DD:198:ASN:C	33:DD:198:ASN:HD22	2.24	0.41
33:DD:248:SER:C	33:DD:250:TRP:N	2.73	0.41
36:DG:16:ARG:HB2	36:DG:17:PRO:CD	2.51	0.41
36:DG:63:ILE:HD13	36:DG:141:PHE:CZ	2.55	0.41
38:DI:77:LEU:O	38:DI:78:THR:O	2.38	0.41
39:DN:43:THR:HG22	39:DN:45:ASN:HD21	1.84	0.41
39:DN:46:VAL:CG1	39:DN:48:MET:HG3	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:48:GLU:O	42:DQ:52:VAL:CG1	2.69	0.41
42:DQ:69:PHE:CG	42:DQ:70:PRO:HD2	2.56	0.41
43:DR:41:ALA:C	43:DR:43:GLU:N	2.74	0.41
44:DS:53:SER:C	44:DS:55:ALA:N	2.74	0.41
44:DS:54:LEU:HD13	44:DS:57:LYS:O	2.21	0.41
45:DT:28:VAL:CG1	45:DT:46:GLU:HB2	2.51	0.41
45:DT:56:GLY:C	45:DT:59:THR:HG22	2.41	0.41
47:DV:2:PHE:O	47:DV:14:VAL:O	2.39	0.41
47:DV:25:LEU:CB	47:DV:94:LEU:HD13	2.47	0.41
47:DV:28:GLU:CB	47:DV:29:PRO:HD3	2.51	0.41
48:DW:62:HIS:O	48:DW:63:ASP:C	2.58	0.41
49:DX:18:TYR:O	49:DX:20:GLY:N	2.54	0.41
50:DY:8:LYS:HB2	50:DY:28:LYS:HZ3	1.86	0.41
50:DY:45:VAL:HG13	50:DY:62:GLU:OE2	2.21	0.41
50:DY:45:VAL:HG21	50:DY:62:GLU:N	2.35	0.41
1:AA:35:G:C2	1:AA:550:G:C2	3.09	0.41
1:AA:461:A:C5	1:AA:471:G:C6	3.08	0.41
1:AA:518:C:C2	1:AA:530:G:C6	3.09	0.41
1:AA:617:G:C6	1:AA:618:C:C5	3.09	0.41
1:AA:628:G:O2'	1:AA:629:G:H5'	2.21	0.41
1:AA:727:G:C6	1:AA:731:G:C6	3.09	0.41
1:AA:939:G:C5'	7:AG:102:ARG:HH22	2.34	0.41
1:AA:1010:G:N2	1:AA:1020:U:C2	2.88	0.41
1:AA:1027:C:O5'	1:AA:1027:C:H6	2.04	0.41
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.56	0.41
1:AA:1276:G:O2'	1:AA:1282:C:H1'	2.21	0.41
1:AA:1411:C:O2'	1:AA:1412:C:H5'	2.21	0.41
1:AA:1508:G:H2'	1:AA:1509:C:O4'	2.21	0.41
2:AB:22:LYS:HA	2:AB:22:LYS:HZ2	1.80	0.41
2:AB:52:GLU:HG2	2:AB:53:ARG:N	2.35	0.41
4:AD:28:SER:C	4:AD:30:LYS:H	2.24	0.41
4:AD:57:ARG:NH2	4:AD:205:GLU:OE2	2.54	0.41
9:AI:105:ASP:C	9:AI:107:ARG:H	2.24	0.41
10:AJ:40:LEU:HB2	10:AJ:41:PRO:CD	2.38	0.41
11:AK:38:ASN:HA	11:AK:39:PRO:HD3	1.88	0.41
11:AK:81:ASP:OD2	11:AK:106:LYS:HG2	2.21	0.41
16:AP:55:ARG:HA	16:AP:55:ARG:HE	1.86	0.41
17:AQ:65:ILE:HD12	17:AQ:65:ILE:N	2.35	0.41
23:B1:87:PRO:O	23:B1:91:LYS:N	2.28	0.41
25:B3:59:VAL:O	25:B3:59:VAL:HG12	2.20	0.41
28:B6:15:GLU:OE1	28:B6:18:ARG:CG	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:44:LYS:HD2	30:B8:44:LYS:N	2.36	0.41
31:BA:195:A:H61	31:BA:198:C:H3'	1.85	0.41
31:BA:271(E):U:C2	31:BA:271(F):C:C5	3.09	0.41
31:BA:577:G:O2'	31:BA:1254:A:OP1	2.36	0.41
31:BA:817:C:C2	31:BA:818:G:C8	3.09	0.41
31:BA:855:G:H2'	31:BA:856:C:C6	2.56	0.41
31:BA:1012:U:OP1	46:BU:75:ASN:OD1	2.38	0.41
31:BA:1234:U:O2'	31:BA:1235:G:H5'	2.21	0.41
31:BA:1269:A:H2'	31:BA:1270:C:C6	2.56	0.41
31:BA:1406:U:H2'	31:BA:1407:C:H6	1.86	0.41
31:BA:1445(A):C:C2	31:BA:1446:C:C5	3.09	0.41
31:BA:1476:C:C2'	31:BA:1477:A:O5'	2.67	0.41
31:BA:1476:C:H2'	31:BA:1477:A:O5'	2.21	0.41
31:BA:1485:G:N2	31:BA:1505:C:C5	2.89	0.41
31:BA:1677:A:C2'	31:BA:1678:G:O5'	2.69	0.41
31:BA:2070:G:C2	31:BA:2442:C:C2	3.09	0.41
31:BA:2103:C:O2	31:BA:2187:G:C2	2.74	0.41
31:BA:2236:C:C2'	31:BA:2237:G:H5'	2.51	0.41
31:BA:2287:A:N1	31:BA:2346:A:C2	2.89	0.41
31:BA:2409:G:C6	31:BA:2410:G:C5	3.09	0.41
31:BA:2721:A:H1'	31:BA:2873:A:O2'	2.21	0.41
33:BD:5:LYS:HD2	33:BD:5:LYS:N	2.36	0.41
33:BD:92:ILE:HD13	33:BD:104:TYR:CD2	2.55	0.41
33:BD:211:ARG:O	33:BD:215:LEU:HG	2.21	0.41
34:BE:21:VAL:O	34:BE:21:VAL:CG2	2.69	0.41
35:BF:29:ASN:O	35:BF:30:PRO:C	2.59	0.41
39:BN:65:LYS:O	39:BN:69:GLN:HB2	2.21	0.41
41:BP:88:LEU:C	41:BP:90:ARG:N	2.75	0.41
41:BP:91:PHE:HE2	41:BP:95:VAL:HG12	1.85	0.41
41:BP:95:VAL:CG2	41:BP:125:VAL:HB	2.47	0.41
42:BQ:110:THR:HG1	42:BQ:113:GLN:HG3	1.79	0.41
44:BS:58:LEU:HD12	44:BS:58:LEU:HA	1.79	0.41
46:BU:69:CYS:HG	46:BU:79:PHE:HD1	1.69	0.41
46:BU:95:LEU:HD22	47:BV:4:ILE:CD1	2.48	0.41
47:BV:69:LYS:C	47:BV:70:ILE:HG23	2.42	0.41
47:BV:75:PHE:CD1	47:BV:75:PHE:N	2.89	0.41
48:BW:8:ARG:HA	48:BW:102:HIS:HD2	1.85	0.41
50:BY:9:LYS:HB2	50:BY:10:GLY:H	1.73	0.41
50:BY:27:VAL:CB	50:BY:29:GLU:OE1	2.69	0.41
51:BZ:104:PHE:HA	51:BZ:139:VAL:HB	2.02	0.41
1:CA:340:U:O2'	1:CA:341:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:375:U:H5''	16:CP:6:LEU:HD22	2.02	0.41
1:CA:503:C:O2	1:CA:510:A:H2	2.04	0.41
1:CA:616:G:N2	1:CA:617:G:C8	2.89	0.41
1:CA:646:U:O5'	1:CA:646:U:H6	2.04	0.41
1:CA:707:C:O2	1:CA:707:C:H2'	2.21	0.41
1:CA:734:G:C2	1:CA:735:C:C2	3.09	0.41
1:CA:1226:C:N4	13:CM:104:ARG:HB2	2.34	0.41
1:CA:1379:G:C6	1:CA:1380:U:O4	2.74	0.41
1:CA:1474:G:H4'	31:DA:1701:A:N3	2.35	0.41
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	2.02	0.41
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.50	0.41
4:CD:38:TYR:HA	4:CD:39:PRO:HD3	1.93	0.41
5:CE:18:ARG:NE	5:CE:25:ARG:HB3	2.36	0.41
5:CE:127:ASN:O	5:CE:128:PRO:C	2.59	0.41
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.21	0.41
11:CK:41:THR:HG22	11:CK:42:TRP:H	1.84	0.41
11:CK:72:ALA:O	11:CK:77:MET:HB3	2.21	0.41
13:CM:16:ASP:N	13:CM:16:ASP:OD2	2.54	0.41
16:CP:32:TYR:O	16:CP:32:TYR:CD2	2.74	0.41
18:CR:74:ARG:HE	18:CR:81:PHE:HA	1.86	0.41
20:CT:59:ALA:O	20:CT:60:GLU:C	2.60	0.41
30:D8:39:LYS:O	30:D8:39:LYS:HG2	2.22	0.41
31:DA:142:A:C5'	31:DA:142(A):C:C5	3.04	0.41
31:DA:204:A:O3'	31:DA:205:G:H4'	2.21	0.41
31:DA:311:A:C2	31:DA:331:A:H3'	2.56	0.41
31:DA:359:A:H2'	31:DA:360:G:O4'	2.21	0.41
31:DA:528:A:C2	31:DA:2042:A:H2'	2.56	0.41
31:DA:637:A:OP1	41:DP:133:SER:CB	2.69	0.41
31:DA:745:G:H5''	31:DA:746:A:OP2	2.21	0.41
31:DA:768:G:C4	31:DA:769:G:C8	3.09	0.41
31:DA:1260:G:C6	31:DA:1261:C:C4	3.08	0.41
31:DA:2263:C:O2'	31:DA:2264:C:H5'	2.20	0.41
31:DA:2290:G:C2	31:DA:2343:C:O2	2.74	0.41
31:DA:2507:C:H5''	31:DA:2573:C:N4	2.36	0.41
31:DA:2580:U:O2	31:DA:2580:U:H2'	2.19	0.41
31:DA:2663:G:C6	31:DA:2664:G:C5	3.09	0.41
31:DA:2728:U:C2'	31:DA:2729:G:H5'	2.50	0.41
31:DA:2785:C:H2'	31:DA:2786:U:O4'	2.20	0.41
32:DB:39:A:H2'	32:DB:39:A:N3	2.35	0.41
32:DB:46:A:H2'	32:DB:47:C:O5'	2.22	0.41
32:DB:71:C:O2	32:DB:71:C:C2'	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:218:ARG:HB3	33:DD:219:PRO:HD2	2.03	0.41
35:DF:126:VAL:HG21	35:DF:129:PHE:CZ	2.56	0.41
36:DG:116:ASP:O	36:DG:117:PHE:HB3	2.21	0.41
38:DI:48:GLU:O	38:DI:52:ARG:HG2	2.21	0.41
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CG	2.49	0.41
45:DT:64:ARG:NH1	45:DT:103:ARG:HA	2.35	0.41
46:DU:34:LYS:HA	46:DU:34:LYS:HE3	2.03	0.41
47:DV:2:PHE:O	47:DV:3:ALA:HB3	2.21	0.41
51:DZ:56:VAL:HA	51:DZ:70:LEU:CD2	2.50	0.41
1:AA:70:G:H2'	1:AA:71:C:H6	1.86	0.40
1:AA:102:G:O2'	1:AA:151:A:N3	2.43	0.40
1:AA:117:G:C2'	1:AA:118:U:H5'	2.51	0.40
1:AA:286:G:C5	1:AA:287:U:C5	3.09	0.40
1:AA:673:G:C2	1:AA:674:G:C5	3.08	0.40
1:AA:719:C:C5	1:AA:720:C:C5	3.08	0.40
1:AA:722:A:N6	1:AA:724:G:C2	2.89	0.40
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.56	0.40
1:AA:1126:U:C2'	1:AA:1127:G:O5'	2.69	0.40
1:AA:1327:C:OP1	21:AU:20:LYS:HB3	2.20	0.40
2:AB:41:ILE:HD12	2:AB:41:ILE:N	2.36	0.40
4:AD:23:GLY:O	4:AD:27:TYR:CD1	2.73	0.40
4:AD:43:HIS:ND1	4:AD:46:LYS:NZ	2.59	0.40
4:AD:79:PHE:CD1	4:AD:207:TYR:CD1	3.09	0.40
6:AF:8:ILE:HD12	6:AF:26:ILE:HD13	2.03	0.40
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	2.03	0.40
12:AL:27:LEU:HG	12:AL:62:SER:OG	2.20	0.40
24:B2:18:PRO:C	24:B2:20:GLU:N	2.73	0.40
27:B5:46:CYS:O	27:B5:48:GLU:N	2.54	0.40
28:B6:19:ARG:CG	28:B6:20:ASN:H	2.29	0.40
30:B8:62:LEU:C	30:B8:64:TYR:H	2.24	0.40
31:BA:13:A:N1	31:BA:525:U:H2'	2.36	0.40
31:BA:42:G:H2'	31:BA:43:A:O4'	2.21	0.40
31:BA:154(A):C:H5	31:BA:171:G:H1	1.66	0.40
31:BA:271(M):G:N7	31:BA:271(O):C:N4	2.68	0.40
31:BA:271(P):C:C2'	31:BA:271(Q):G:O5'	2.69	0.40
31:BA:425:G:C2	31:BA:426:C:C6	3.09	0.40
31:BA:764:A:OP1	33:BD:208:LYS:HE2	2.22	0.40
31:BA:828:U:O2	31:BA:828:U:C2'	2.68	0.40
31:BA:1049:C:O2	31:BA:1050:A:C8	2.74	0.40
31:BA:1122:G:C2	31:BA:1123:C:C6	3.09	0.40
31:BA:1438:U:C2'	31:BA:1439:A:H5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1509(B):A:H2'	31:BA:1510:G:C8	2.56	0.40
31:BA:1578:U:C2'	31:BA:1579:A:H5'	2.52	0.40
31:BA:1655:A:H3'	31:BA:1656:C:C6	2.56	0.40
31:BA:1947:C:C2'	31:BA:1948:G:H5''	2.50	0.40
31:BA:2272:U:C5'	31:BA:2273:A:OP1	2.69	0.40
31:BA:2409:G:H2'	31:BA:2410:G:O4'	2.20	0.40
31:BA:2660:A:O2'	31:BA:2661:G:P	2.80	0.40
32:BB:8:U:H5'	32:BB:9:G:OP2	2.21	0.40
33:BD:30:GLU:CG	33:BD:63:ARG:NE	2.82	0.40
33:BD:254:THR:N	33:BD:255:LYS:HZ1	2.20	0.40
36:BG:71:THR:CG2	36:BG:72:ARG:N	2.81	0.40
36:BG:111:LEU:HB3	36:BG:117:PHE:CE1	2.55	0.40
38:BI:29:TYR:CD2	38:BI:30:LEU:HD23	2.51	0.40
41:BP:121:LYS:CD	25:D3:2:PRO:HD3	2.50	0.40
43:BR:52:ILE:H	43:BR:52:ILE:HG12	1.66	0.40
45:BT:67:SER:O	45:BT:68:TYR:HB2	2.21	0.40
50:BY:44:ILE:HD12	50:BY:44:ILE:N	2.27	0.40
51:BZ:14:LYS:HB2	51:BZ:17:ALA:HB3	2.02	0.40
51:BZ:150:LEU:HA	51:BZ:151:HIS:HD2	1.85	0.40
1:CA:84:U:H3'	1:CA:84:U:H6	1.85	0.40
1:CA:323:U:O3'	20:CT:22:ARG:HD3	2.21	0.40
1:CA:350:G:O2'	1:CA:351:G:H5'	2.21	0.40
1:CA:425:G:O3'	4:CD:45:GLN:NE2	2.54	0.40
1:CA:658:G:N3	1:CA:659:U:C6	2.89	0.40
1:CA:727:G:C6	1:CA:731:G:C6	3.10	0.40
1:CA:734:G:C6	1:CA:735:C:C4	3.09	0.40
1:CA:837:G:C2	1:CA:850:U:O2	2.74	0.40
1:CA:922:G:H2'	1:CA:923:A:C8	2.56	0.40
1:CA:977:A:HO2'	1:CA:981:U:H3	1.69	0.40
1:CA:1280:A:O4'	10:CJ:41:PRO:HG3	2.21	0.40
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.22	0.40
4:CD:192:GLU:CD	4:CD:192:GLU:H	2.23	0.40
8:CH:97:VAL:HA	8:CH:100:ILE:HD11	2.03	0.40
9:CI:4:TYR:HA	9:CI:88:TYR:CE1	2.56	0.40
9:CI:83:ARG:HH21	9:CI:102:LEU:HD23	1.86	0.40
17:CQ:8:GLY:HA3	17:CQ:22:LEU:O	2.21	0.40
17:CQ:65:ILE:HD12	17:CQ:65:ILE:N	2.36	0.40
20:CT:16:HIS:O	20:CT:19:SER:N	2.54	0.40
23:D1:83:GLU:C	23:D1:85:LEU:H	2.25	0.40
28:D6:28:ARG:HA	28:D6:32:ASN:ND2	2.21	0.40
28:D6:44:ARG:O	28:D6:45:LYS:CG	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:460:A:C2	31:DA:470:A:C4	3.09	0.40
31:DA:879:G:H1	31:DA:898:C:H42	1.69	0.40
31:DA:995:C:C2	39:DN:4:TYR:CZ	3.08	0.40
31:DA:1175:U:C4'	31:DA:1176:G:H2'	2.51	0.40
31:DA:1346:G:C5	31:DA:1347:G:N7	2.89	0.40
31:DA:1379:A:C2'	31:DA:1380:G:OP1	2.69	0.40
31:DA:1462:C:H4'	31:DA:2703:C:H5'	2.02	0.40
31:DA:1553:A:C5	31:DA:1555:G:C5	3.09	0.40
31:DA:1667:G:H1'	31:DA:1991:U:O4	2.21	0.40
31:DA:1747:G:H2'	31:DA:1747(A):G:H8	1.86	0.40
31:DA:2106:G:H1'	31:DA:2184:G:H22	1.85	0.40
31:DA:2197:U:C5	31:DA:2224:G:C6	3.09	0.40
31:DA:2395:C:H2'	31:DA:2396:G:O4'	2.21	0.40
31:DA:2599:G:O2'	31:DA:2600:A:H5'	2.20	0.40
31:DA:2603:G:C5	31:DA:2604:U:C5	3.09	0.40
31:DA:2632:A:O2'	34:DE:61:ARG:NH2	2.54	0.40
32:DB:66:A:C4	32:DB:109:C:N4	2.89	0.40
33:DD:44:ASN:HB3	33:DD:49:ILE:N	2.36	0.40
33:DD:69:ARG:HH12	33:DD:117:VAL:HG13	1.86	0.40
34:DE:37:ARG:O	34:DE:45:THR:N	2.48	0.40
35:DF:70:THR:CG2	35:DF:72:ARG:HB2	2.51	0.40
35:DF:127:GLU:OE1	35:DF:127:GLU:HA	2.12	0.40
36:DG:60:LEU:O	36:DG:63:ILE:HG13	2.21	0.40
36:DG:73:ALA:O	36:DG:85:GLY:HA2	2.21	0.40
37:DH:54:ARG:HB3	37:DH:65:HIS:HD2	1.83	0.40
39:DN:128:HIS:HE1	39:DN:134:ARG:HH11	1.70	0.40
40:DO:9:GLU:HA	40:DO:9:GLU:OE1	2.21	0.40
43:DR:8:ARG:HB3	43:DR:9:LYS:H	1.57	0.40
43:DR:44:LEU:HD22	43:DR:48:VAL:HG23	2.02	0.40
45:DT:29:ARG:CG	45:DT:85:LYS:HA	2.51	0.40
45:DT:68:TYR:O	45:DT:70:VAL:N	2.54	0.40
47:DV:45:THR:HG22	47:DV:45:THR:O	2.21	0.40
47:DV:75:PHE:CD1	47:DV:75:PHE:N	2.89	0.40
49:DX:18:TYR:C	49:DX:20:GLY:N	2.72	0.40
50:DY:68:HIS:N	50:DY:71:LYS:NZ	2.68	0.40
51:DZ:30:ASN:OD1	51:DZ:90:VAL:HB	2.21	0.40
1:AA:149:A:N3	1:AA:150:C:C6	2.89	0.40
1:AA:152:A:C8	1:AA:153:C:C5	3.10	0.40
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.48	0.40
1:AA:581:G:N2	1:AA:582:U:C4	2.90	0.40
1:AA:698:G:C6	1:AA:699:C:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.57	0.40
1:AA:1410:G:C6	1:AA:1411:C:C4	3.09	0.40
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.56	0.40
2:AB:69:LEU:HD11	2:AB:93:VAL:HG23	2.02	0.40
2:AB:102:LEU:O	2:AB:105:PHE:HB2	2.21	0.40
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.51	0.40
5:AE:12:LEU:O	5:AE:12:LEU:HD13	2.21	0.40
6:AF:48:LEU:HD22	18:AR:77:GLY:HA3	2.03	0.40
8:AH:26:VAL:O	8:AH:26:VAL:HG22	2.19	0.40
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.50	0.40
11:AK:31:THR:OG1	11:AK:42:TRP:HB3	2.21	0.40
14:AN:44:LEU:HD12	14:AN:44:LEU:C	2.40	0.40
17:AQ:76:LEU:HD12	17:AQ:77:VAL:N	2.36	0.40
18:AR:40:LEU:O	18:AR:43:PHE:HB2	2.20	0.40
30:B8:30:ARG:HA	30:B8:30:ARG:HD3	1.93	0.40
30:B8:32:LEU:HB3	30:B8:35:GLN:H	1.78	0.40
31:BA:84:A:C5'	50:BY:9:LYS:HD3	2.51	0.40
31:BA:142:A:C5'	31:BA:142(A):C:H5	2.35	0.40
31:BA:272(J):C:N4	31:BA:363(A):A:N6	2.65	0.40
31:BA:844:C:O2'	31:BA:845:G:H5'	2.21	0.40
31:BA:866:A:N1	31:BA:914:C:C5	2.89	0.40
31:BA:901:A:H3'	31:BA:902:C:H6	1.86	0.40
31:BA:917:A:H2'	31:BA:918:A:O4'	2.20	0.40
31:BA:950:G:C5	31:BA:951:C:C4	3.10	0.40
31:BA:979:G:H3'	31:BA:980:A:H5''	2.03	0.40
31:BA:1412:A:O2'	31:BA:1413:G:H5'	2.21	0.40
31:BA:1416:G:O2'	31:BA:1417:C:OP2	2.39	0.40
31:BA:1464:C:O2'	31:BA:1528:A:C8	2.51	0.40
31:BA:1994:C:O2'	31:BA:1995:U:H5'	2.20	0.40
31:BA:2540:C:C2'	31:BA:2541:A:H5'	2.51	0.40
31:BA:2583:G:H2'	31:BA:2584:U:O2	2.21	0.40
31:BA:2762:G:H8	31:BA:2762:G:H5'	1.86	0.40
31:BA:2813:A:H2'	31:BA:2814:C:O4'	2.21	0.40
33:BD:31:LYS:O	33:BD:31:LYS:HG3	2.20	0.40
33:BD:92:ILE:HD13	33:BD:104:TYR:CE2	2.56	0.40
34:BE:37:ARG:O	34:BE:45:THR:N	2.46	0.40
34:BE:55:ASN:H	34:BE:72:VAL:HG11	1.86	0.40
38:BI:62:LYS:HE2	38:BI:134:PRO:HG3	2.01	0.40
39:BN:128:HIS:HE1	39:BN:134:ARG:HH11	1.69	0.40
41:BP:62:LEU:HD23	41:BP:62:LEU:O	2.21	0.40
43:BR:23:ASN:N	43:BR:23:ASN:ND2	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:14:VAL:O	44:BS:15:ARG:C	2.60	0.40
46:BU:108:GLU:O	46:BU:111:GLU:N	2.54	0.40
47:BV:94:LEU:HD23	47:BV:94:LEU:C	2.42	0.40
50:BY:47:LYS:CD	50:BY:47:LYS:N	2.85	0.40
51:BZ:161:VAL:O	51:BZ:161:VAL:HG12	2.21	0.40
1:CA:145:G:N2	1:CA:146:G:H1'	2.37	0.40
1:CA:193:C:O2'	1:CA:194:C:H5'	2.21	0.40
1:CA:828:A:H5''	1:CA:859:A:N1	2.36	0.40
1:CA:1090:U:C2	1:CA:1091:U:C6	3.09	0.40
1:CA:1163:C:C2	1:CA:1174:G:N2	2.89	0.40
1:CA:1272:G:C6	1:CA:1273:G:C5	3.09	0.40
2:CB:142:LEU:HD23	2:CB:142:LEU:O	2.22	0.40
3:CC:27:LYS:NZ	3:CC:27:LYS:HA	2.36	0.40
3:CC:125:GLU:CD	3:CC:189:ALA:HA	2.41	0.40
4:CD:108:LEU:HD21	4:CD:183:GLY:HA3	2.03	0.40
6:CF:15:ASP:HB2	6:CF:16:GLN:H	1.58	0.40
7:CG:124:LEU:HD23	7:CG:124:LEU:HA	1.82	0.40
9:CI:105:ASP:C	9:CI:107:ARG:H	2.24	0.40
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.60	0.40
16:CP:26:ARG:HD2	16:CP:31:LYS:O	2.21	0.40
17:CQ:14:LYS:NZ	17:CQ:14:LYS:HB2	2.36	0.40
19:CS:29:ARG:HB2	19:CS:48:THR:H	1.86	0.40
31:DA:9:U:O2'	31:DA:10:G:P	2.79	0.40
31:DA:271(J):C:C3'	31:DA:271(K):U:H5''	2.51	0.40
31:DA:479:A:HO2'	31:DA:481:G:H8	1.67	0.40
31:DA:573:G:O6	31:DA:2030:A:H3'	2.21	0.40
31:DA:590:A:H2'	31:DA:591:C:C6	2.57	0.40
31:DA:1043:C:OP2	31:DA:1043:C:H6	2.04	0.40
31:DA:1252:G:OP1	31:DA:1252:G:H8	2.04	0.40
31:DA:1373:A:C6	31:DA:1374:G:C4	3.09	0.40
31:DA:1553:A:C5	31:DA:1555:G:C4	3.09	0.40
31:DA:1809:A:C6	31:DA:1810:A:N1	2.89	0.40
31:DA:1899:G:O2'	31:DA:1900:A:H5''	2.20	0.40
31:DA:1995:U:H3'	31:DA:1996:C:H2'	2.03	0.40
31:DA:2031:A:C6	31:DA:2498:C:H1'	2.56	0.40
31:DA:2223:G:OP1	33:DD:172:TYR:OH	2.30	0.40
31:DA:2246:G:H1'	31:DA:2426:A:C2	2.56	0.40
55:DA:3330:ERY:H312	55:DA:3330:ERY:H2	1.88	0.40
33:DD:25:THR:HG22	33:DD:82:ILE:C	2.42	0.40
33:DD:155:LEU:HD23	33:DD:177:LEU:HD22	2.02	0.40
33:DD:213:ARG:HA	33:DD:213:ARG:HD2	1.61	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:53:PRO:HB2	34:DE:54:GLN:H	1.42	0.40
34:DE:111:ARG:NH1	43:DR:2:ARG:NH2	2.50	0.40
35:DF:126:VAL:HB	35:DF:127:GLU:H	1.73	0.40
36:DG:67:LYS:HD2	36:DG:67:LYS:N	2.36	0.40
37:DH:103:LEU:HG	37:DH:104:GLU:N	2.37	0.40
37:DH:105:LEU:HD22	37:DH:105:LEU:N	2.33	0.40
41:DP:98:GLU:H	41:DP:101:VAL:HG12	1.86	0.40
42:DQ:48:GLU:O	42:DQ:52:VAL:HG13	2.21	0.40
42:DQ:133:ARG:O	42:DQ:134:ARG:HB2	2.21	0.40
44:DS:59:LYS:CE	44:DS:68:GLN:HE22	2.33	0.40
48:DW:107:LEU:HD12	48:DW:107:LEU:HA	1.70	0.40
50:DY:88:LYS:O	50:DY:89:PHE:CB	2.68	0.40
1:AA:78:G:H22	1:AA:91:C:H42	1.69	0.40
1:AA:127:G:H4'	17:AQ:2:PRO:HD2	2.03	0.40
1:AA:234:C:O2	1:AA:235:C:C6	2.75	0.40
1:AA:330:C:C2'	1:AA:331:G:H5'	2.51	0.40
1:AA:515:G:C2'	1:AA:516:U:H5'	2.52	0.40
1:AA:655:A:C2	1:AA:754:C:N4	2.89	0.40
1:AA:734:G:H2'	1:AA:735:C:C6	2.57	0.40
1:AA:764:C:C2'	1:AA:765:G:O5'	2.69	0.40
1:AA:827:U:C4	1:AA:870:U:C4	3.09	0.40
1:AA:1006:C:N4	1:AA:1024:G:H21	2.19	0.40
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.69	0.40
1:AA:1063:C:C5	1:AA:1064:G:C4	3.08	0.40
1:AA:1207:G:C2	1:AA:1208:C:C2	3.09	0.40
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.21	0.40
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.51	0.40
2:AB:161:ALA:HB1	2:AB:185:ILE:HD11	2.03	0.40
3:AC:125:GLU:CD	3:AC:189:ALA:HA	2.42	0.40
4:AD:78:LEU:HD23	4:AD:78:LEU:HA	1.89	0.40
5:AE:67:VAL:HG22	5:AE:68:GLU:N	2.36	0.40
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	2.03	0.40
9:AI:99:LEU:O	9:AI:100:GLY:C	2.60	0.40
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.84	0.40
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.56	0.40
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.86	0.40
18:AR:45:SER:N	18:AR:51:LEU:HD21	2.36	0.40
22:B0:27:GLU:HB3	31:BA:856:C:C1'	2.51	0.40
25:B3:46:ASN:ND2	31:BA:851:U:C4'	2.84	0.40
27:B5:7:PRO:HA	31:BA:2615:U:N1	2.37	0.40
30:B8:4:MET:HE1	31:BA:593:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:4:MET:CE	31:BA:593:G:O4'	2.70	0.40
31:BA:526:A:N3	31:BA:2044:C:H1'	2.36	0.40
31:BA:858:U:O2	31:BA:2268:A:H2'	2.21	0.40
31:BA:1397:U:O2'	31:BA:1398:C:P	2.80	0.40
31:BA:1794:U:O2'	31:BA:1795:C:H5'	2.20	0.40
31:BA:1899:G:O2'	31:BA:1900:A:H5''	2.22	0.40
31:BA:2406:U:O5'	31:BA:2406:U:H2'	2.21	0.40
31:BA:2542:A:H8	31:BA:2544:G:O6	2.05	0.40
31:BA:2772:C:H2'	31:BA:2773:C:C6	2.56	0.40
32:BB:65:C:N4	32:BB:109:C:C2	2.90	0.40
33:BD:186:HIS:CD2	33:BD:188:GLU:N	2.63	0.40
33:BD:246:PRO:O	33:BD:254:THR:HG22	2.21	0.40
35:BF:20:LEU:HB3	35:BF:23:ASP:HB2	2.03	0.40
36:BG:88:ILE:HG22	36:BG:89:GLY:N	2.36	0.40
37:BH:20:ALA:HB1	37:BH:21:PRO:CD	2.44	0.40
37:BH:100:GLY:C	37:BH:102:ALA:N	2.73	0.40
37:BH:158:HIS:NE2	37:BH:169:VAL:C	2.74	0.40
41:BP:33:ARG:O	41:BP:35:HIS:O	2.40	0.40
41:BP:91:PHE:CE2	41:BP:95:VAL:HG12	2.57	0.40
41:BP:97:PRO:O	41:BP:98:GLU:CB	2.49	0.40
41:BP:125:VAL:O	41:BP:145:PRO:HD2	2.22	0.40
45:BT:51:ARG:HG3	45:BT:98:LYS:HG3	2.04	0.40
45:BT:51:ARG:HD2	45:BT:62:THR:CG2	2.52	0.40
47:BV:4:ILE:O	47:BV:4:ILE:HG22	2.21	0.40
1:CA:66:G:H5'	1:CA:173:U:O4	2.21	0.40
1:CA:708:C:O2'	1:CA:709:G:H5'	2.20	0.40
1:CA:779:C:O2'	1:CA:780:A:H5'	2.21	0.40
1:CA:970:C:N4	9:CI:128:ARG:OXT	2.52	0.40
1:CA:1099:G:C5	1:CA:1100:C:C4	3.09	0.40
1:CA:1169:A:H2'	1:CA:1170:A:O4'	2.21	0.40
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.84	0.40
1:CA:1407:C:O5'	1:CA:1407:C:H6	2.03	0.40
2:CB:29:ALA:C	2:CB:31:TYR:N	2.74	0.40
2:CB:32:ILE:HA	2:CB:42:ILE:HA	2.03	0.40
2:CB:96:ARG:O	2:CB:98:LEU:N	2.55	0.40
2:CB:178:ARG:HG3	8:CH:72:PRO:HA	2.03	0.40
5:CE:33:VAL:HG12	5:CE:34:VAL:H	1.85	0.40
9:CI:3:GLN:HB3	9:CI:20:ARG:NE	2.36	0.40
10:CJ:51:ARG:CG	10:CJ:61:GLU:HB2	2.51	0.40
12:CL:22:SER:C	12:CL:24:VAL:N	2.74	0.40
13:CM:36:LYS:HB2	13:CM:59:TYR:CZ	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:50:LYS:HE3	17:CQ:51:TYR:HE1	1.86	0.40
17:CQ:67:LYS:CA	17:CQ:70:ARG:HH12	2.28	0.40
18:CR:25:THR:HG22	18:CR:25:THR:O	2.22	0.40
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.87	0.40
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.22	0.40
20:CT:89:ARG:HH21	20:CT:104:LEU:CD2	2.34	0.40
23:D1:47:GLN:O	23:D1:48:LYS:O	2.40	0.40
28:D6:37:ARG:HB3	31:DA:2344:U:O2'	2.21	0.40
31:DA:139(A):G:C2	49:DX:44:GLU:OE1	2.74	0.40
31:DA:353:G:H2'	31:DA:354:G:O5'	2.21	0.40
31:DA:475:U:C4	31:DA:481:G:O6	2.75	0.40
31:DA:528:A:C8	31:DA:528:A:C3'	3.04	0.40
31:DA:774:A:H2	31:DA:787:U:O2'	1.99	0.40
31:DA:844:C:O2'	31:DA:845:G:H5'	2.22	0.40
31:DA:862:G:H2'	31:DA:863:A:O4'	2.21	0.40
31:DA:911:A:C4	42:DQ:9:TYR:OH	2.67	0.40
31:DA:917:A:H5'	31:DA:917:A:C8	2.57	0.40
31:DA:987:G:H2'	31:DA:988:A:O4'	2.21	0.40
31:DA:1112:G:N2	31:DA:1113:U:O2	2.54	0.40
31:DA:1573:G:H2'	31:DA:1574:C:H5'	2.04	0.40
31:DA:1696:G:C5	31:DA:1697:G:N7	2.89	0.40
31:DA:1833:U:H2'	31:DA:1834:U:O4'	2.22	0.40
31:DA:1891:G:C6	31:DA:1892:C:C4	3.08	0.40
31:DA:2309:A:N3	31:DA:2310:A:C2	2.84	0.40
31:DA:2406:U:N3	41:DP:72:PRO:HG2	2.36	0.40
31:DA:2510:C:H2'	31:DA:2511:U:O4'	2.21	0.40
31:DA:2600:A:C6	31:DA:2601:C:N4	2.90	0.40
33:DD:61:LEU:HD13	33:DD:61:LEU:HA	1.78	0.40
34:DE:56:PRO:C	34:DE:58:ARG:H	2.25	0.40
36:DG:6:ALA:O	36:DG:10:LYS:HG3	2.21	0.40
36:DG:148:MET:HA	36:DG:148:MET:CE	2.51	0.40
37:DH:54:ARG:CB	37:DH:65:HIS:HD2	2.34	0.40
37:DH:117:PRO:HA	37:DH:118:PRO:HD2	2.01	0.40
37:DH:145:ALA:O	37:DH:148:ILE:N	2.55	0.40
39:DN:125:GLY:CA	39:DN:126:PRO:O	2.66	0.40
39:DN:129:PRO:O	39:DN:130:HIS:CB	2.69	0.40
41:DP:32:THR:HG21	41:DP:37:GLY:HA2	2.03	0.40
42:DQ:8:LYS:CD	42:DQ:9:TYR:H	2.34	0.40
42:DQ:17:LEU:HD21	42:DQ:41:TRP:HE1	1.87	0.40
45:DT:31:SER:OG	45:DT:43:GLN:N	2.54	0.40
47:DV:16:PRO:O	47:DV:98:GLU:OE2	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:50:PRO:HB2	47:DV:51:VAL:H	1.57	0.40
49:DX:82:GLN:CD	49:DX:83:VAL:HG22	2.42	0.40
50:DY:72:VAL:C	50:DY:73:ARG:HG3	2.41	0.40
51:DZ:5:LEU:HD12	51:DZ:47:VAL:CG2	2.51	0.40
1:AA:106:C:H2'	1:AA:107:G:C8	2.56	0.40
1:AA:173:U:C6	1:AA:197:A:C2	3.09	0.40
1:AA:189:G:O6	1:AA:189(L):G:O6	2.39	0.40
1:AA:340:U:O2'	1:AA:341:C:H5'	2.21	0.40
1:AA:501:C:O4'	1:AA:548:G:N2	2.55	0.40
1:AA:758:G:H4'	1:AA:880:C:H4'	2.03	0.40
1:AA:855:G:C2	1:AA:856:C:C2	3.09	0.40
1:AA:1004:A:N7	1:AA:1036:G:O6	2.54	0.40
1:AA:1187:G:C2	1:AA:1188:A:C4	3.10	0.40
1:AA:1422:G:H4'	40:BO:49:ARG:HH12	1.85	0.40
1:AA:1442:G:N7	1:AA:1442(B):A:C2	2.89	0.40
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.21	0.40
2:AB:160:ASP:O	2:AB:183:PRO:HD2	2.21	0.40
5:AE:31:LEU:CD1	5:AE:129:ILE:HA	2.52	0.40
6:AF:89:MET:HG2	6:AF:89:MET:O	2.21	0.40
9:AI:63:ILE:HG22	9:AI:64:THR:N	2.37	0.40
14:AN:41:ARG:HG3	14:AN:42:ILE:N	2.36	0.40
16:AP:39:TYR:HE1	16:AP:41:PRO:HA	1.85	0.40
18:AR:41:LYS:C	18:AR:43:PHE:H	2.25	0.40
19:AS:10:PHE:HZ	19:AS:70:LYS:HE2	1.87	0.40
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	2.04	0.40
20:AT:100:ILE:O	20:AT:102:GLY:N	2.55	0.40
26:B4:19:GLY:O	26:B4:21:VAL:N	2.53	0.40
28:B6:22:ALA:HB2	28:B6:39:TYR:CZ	2.55	0.40
31:BA:250:G:C6	31:BA:251:A:C6	3.10	0.40
31:BA:271(J):C:C3'	31:BA:271(K):U:H5''	2.51	0.40
31:BA:271(T):C:O2	31:BA:271(T):C:C2'	2.69	0.40
31:BA:301:G:C6	31:BA:317:G:C6	3.10	0.40
31:BA:363(C):G:H2'	31:BA:363(D):G:C8	2.55	0.40
31:BA:631:A:HO2'	41:BP:67:MET:HB3	1.87	0.40
31:BA:692:C:O2'	31:BA:693:C:H5'	2.21	0.40
31:BA:751:A:C5'	48:BW:90:ARG:HA	2.44	0.40
31:BA:879:G:H1	31:BA:898:C:H42	1.69	0.40
31:BA:943:U:O2'	31:BA:944:G:H5'	2.21	0.40
31:BA:1444:G:C2	31:BA:1548:C:C2	3.09	0.40
31:BA:1458:C:H4'	31:BA:1459:G:C4	2.57	0.40
31:BA:1487:G:C2'	31:BA:1488:G:O5'	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1741:A:C5	31:BA:1742:G:N2	2.89	0.40
31:BA:2057:A:H2'	31:BA:2058:A:C8	2.56	0.40
31:BA:2094:G:H5'	38:BI:25:TYR:CD2	2.57	0.40
31:BA:2205:C:C2	31:BA:2220:G:N1	2.90	0.40
31:BA:2400:G:C5	31:BA:2401:U:C5	3.10	0.40
31:BA:2473:U:O2	31:BA:2473:U:H2'	2.21	0.40
31:BA:2602:A:H4'	31:BA:2603:G:C5'	2.52	0.40
31:BA:2603:G:C5	31:BA:2604:U:C5	3.10	0.40
31:BA:2808:U:C2'	31:BA:2809:A:O5'	2.69	0.40
32:BB:40:U:H1'	32:BB:45:A:H61	1.87	0.40
32:BB:40:U:H1'	32:BB:45:A:N6	2.35	0.40
32:BB:46:A:H2'	32:BB:47:C:O5'	2.21	0.40
33:BD:232:PRO:HG2	33:BD:248:SER:O	2.21	0.40
35:BF:50:SER:HB2	35:BF:94:PRO:HD3	2.03	0.40
35:BF:132:VAL:C	35:BF:134:GLY:H	2.25	0.40
35:BF:203:GLN:O	35:BF:206:ILE:O	2.39	0.40
36:BG:60:LEU:HD22	36:BG:63:ILE:HG13	2.03	0.40
38:BI:62:LYS:HE2	38:BI:134:PRO:HG2	2.03	0.40
40:BO:47:ILE:HG23	40:BO:48:PRO:HD2	2.04	0.40
42:BQ:141:GLN:N	51:BZ:53:ILE:HB	2.37	0.40
44:BS:89:ARG:HE	44:BS:90:GLY:N	2.17	0.40
45:BT:99:LEU:HB3	45:BT:101:PHE:CE1	2.57	0.40
50:BY:96:ILE:CG2	50:BY:99:CYS:SG	3.00	0.40
1:CA:15:G:H4'	5:CE:24:ARG:HH12	1.87	0.40
1:CA:36:C:O2'	1:CA:37:U:H5'	2.21	0.40
1:CA:92:C:C3'	1:CA:93:G:H8	2.34	0.40
1:CA:136:C:N4	1:CA:227:G:H1	2.20	0.40
1:CA:149:A:O2'	1:CA:150:C:H6	2.04	0.40
1:CA:185:A:C6	1:CA:186:C:N4	2.89	0.40
1:CA:451:A:N7	1:CA:481:G:N1	2.70	0.40
1:CA:460:G:N2	1:CA:471:G:C8	2.89	0.40
1:CA:615:C:C2	1:CA:616:G:C8	3.10	0.40
1:CA:626:U:N3	1:CA:627:G:N7	2.69	0.40
1:CA:775:G:O2'	1:CA:776:G:H5'	2.22	0.40
1:CA:994:A:N3	1:CA:994:A:H2'	2.37	0.40
1:CA:1350:A:OP1	9:CI:121:ARG:HG3	2.21	0.40
1:CA:1367:C:N3	1:CA:1368:G:C8	2.90	0.40
2:CB:15:VAL:H	2:CB:16:HIS:HD1	1.67	0.40
3:CC:188:LEU:O	3:CC:189:ALA:HB2	2.20	0.40
4:CD:172:PRO:O	4:CD:187:ARG:NH2	2.51	0.40
4:CD:206:PHE:HD2	4:CD:207:TYR:CD2	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:6:PHE:HB2	5:CE:34:VAL:HG13	2.02	0.40
5:CE:78:HIS:HE1	5:CE:142:LEU:HD23	1.81	0.40
6:CF:40:VAL:O	6:CF:40:VAL:HG13	2.22	0.40
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.21	0.40
7:CG:103:TRP:HA	7:CG:106:GLN:HE21	1.86	0.40
12:CL:21:LYS:N	12:CL:21:LYS:HD2	2.36	0.40
12:CL:27:LEU:HG	12:CL:62:SER:OG	2.21	0.40
13:CM:79:LYS:O	13:CM:82:MET:HB3	2.22	0.40
17:CQ:29:HIS:HA	17:CQ:30:PRO:HD2	1.78	0.40
22:D0:24:LYS:HG3	22:D0:36:ILE:HD11	2.04	0.40
28:D6:11:LEU:O	28:D6:23:THR:HA	2.22	0.40
31:DA:251:A:C5	31:DA:252:G:H1'	2.56	0.40
31:DA:281:G:H21	31:DA:358:U:H5	1.69	0.40
31:DA:577:G:O5'	31:DA:577:G:H8	2.05	0.40
31:DA:610:G:H2'	31:DA:611:C:C6	2.57	0.40
31:DA:622:G:O2'	31:DA:623:G:H5'	2.21	0.40
31:DA:714:U:O2	31:DA:716:A:C8	2.74	0.40
31:DA:902:C:O2'	31:DA:903:C:H5'	2.22	0.40
31:DA:996:A:N6	31:DA:1160:G:C6	2.90	0.40
31:DA:1170:G:OP2	31:DA:1170:G:H8	2.04	0.40
31:DA:1349:A:N6	31:DA:1598:C:N4	2.69	0.40
31:DA:1421:G:C2	31:DA:1422:G:C8	3.10	0.40
31:DA:1445(A):C:N3	31:DA:1446:C:C5	2.90	0.40
31:DA:1655:A:C4	31:DA:1656:C:C6	3.09	0.40
31:DA:1815:A:OP1	31:DA:1815:A:H8	2.05	0.40
31:DA:1821:A:C2'	31:DA:1822:G:C5'	2.84	0.40
31:DA:2402:C:C2'	31:DA:2403:C:H5'	2.50	0.40
33:DD:4:LYS:HB2	33:DD:18:VAL:CG1	2.51	0.40
33:DD:30:GLU:CD	33:DD:63:ARG:NE	2.74	0.40
33:DD:35:LYS:NZ	33:DD:104:TYR:HD1	2.19	0.40
33:DD:44:ASN:HB3	33:DD:48:ARG:C	2.42	0.40
33:DD:246:PRO:HG2	33:DD:255:LYS:HG2	2.03	0.40
35:DF:36:VAL:O	35:DF:39:TRP:HB3	2.21	0.40
36:DG:108:ASN:O	36:DG:112:PRO:HG2	2.21	0.40
37:DH:38:SER:HA	37:DH:39:PRO:HD3	1.87	0.40
38:DI:116:LEU:HD21	38:DI:119:PRO:HA	2.02	0.40
39:DN:15:LEU:HD22	39:DN:16:ILE:N	2.35	0.40
43:DR:111:LEU:HD23	43:DR:111:LEU:HA	1.91	0.40
44:DS:59:LYS:NZ	44:DS:68:GLN:NE2	2.70	0.40
50:DY:6:HIS:ND1	50:DY:6:HIS:N	2.68	0.40
50:DY:31:LEU:N	50:DY:31:LEU:HD22	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:45:VAL:CG1	50:DY:62:GLU:OE2	2.69	0.40
50:DY:80:GLY:O	50:DY:81:LYS:HB2	2.22	0.40
1:AA:11:G:C5	1:AA:12:U:C5	3.09	0.40
1:AA:51:A:C6	1:AA:353:A:C2	3.09	0.40
1:AA:282:A:N3	1:AA:282:A:H2'	2.37	0.40
1:AA:357:G:C2	1:AA:358:U:C5	3.09	0.40
1:AA:391:G:C6	1:AA:392:G:C5	3.09	0.40
1:AA:638:G:O2'	1:AA:639:G:H5'	2.22	0.40
1:AA:830:G:H2'	1:AA:831:U:C6	2.51	0.40
1:AA:992:U:H4'	1:AA:993:G:O5'	2.22	0.40
1:AA:1063:C:OP2	1:AA:1064:G:O2'	2.39	0.40
1:AA:1446:U:O2'	1:AA:1447:A:H8	1.97	0.40
1:AA:1493:A:H5''	1:AA:1494:G:OP2	2.21	0.40
2:AB:47:THR:O	2:AB:51:LEU:N	2.49	0.40
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.85	0.40
9:AI:104:ARG:O	9:AI:104:ARG:HG2	2.21	0.40
10:AJ:82:ILE:O	10:AJ:82:ILE:HG22	2.22	0.40
13:AM:36:LYS:HB2	13:AM:59:TYR:CZ	2.56	0.40
15:AO:18:PHE:O	15:AO:19:PRO:C	2.58	0.40
15:AO:18:PHE:CE1	15:AO:21:ASP:HB2	2.57	0.40
17:AQ:50:LYS:HE3	17:AQ:51:TYR:CE1	2.56	0.40
20:AT:100:ILE:HD12	20:AT:100:ILE:N	2.36	0.40
23:B1:65:SER:N	23:B1:67:ILE:HD11	2.36	0.40
24:B2:40:SER:HB2	31:BA:61:G:H1'	2.03	0.40
25:B3:12:PRO:HA	25:B3:15:TYR:HD1	1.86	0.40
26:B4:14:ILE:HA	36:BG:5:VAL:HG13	2.03	0.40
26:B4:15:ILE:O	26:B4:16:CYS:C	2.59	0.40
26:B4:17:GLY:C	26:B4:19:GLY:H	2.25	0.40
27:B5:49:CYS:O	27:B5:50:GLY:C	2.60	0.40
28:B6:19:ARG:NH1	28:B6:19:ARG:HB3	2.37	0.40
31:BA:28:A:C5	31:BA:29:U:C5	3.09	0.40
31:BA:243:U:C2'	31:BA:244:A:H5'	2.51	0.40
31:BA:422:A:C6	31:BA:423:A:C6	3.09	0.40
31:BA:1216:G:OP1	46:BU:8:VAL:HG22	2.22	0.40
31:BA:1276:A:O2'	43:BR:16:HIS:CE1	2.72	0.40
31:BA:1465:G:C2	31:BA:1466:G:C4	3.09	0.40
31:BA:1952:A:C5	40:BO:22:ILE:CD1	3.04	0.40
31:BA:1952:A:C6	40:BO:22:ILE:CD1	3.04	0.40
31:BA:2205:C:O2	31:BA:2220:G:N1	2.54	0.40
31:BA:2259:G:C2	31:BA:2282:G:C6	3.09	0.40
31:BA:2619:C:H2'	31:BA:2620:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:65:ILE:HD13	33:BD:65:ILE:O	2.21	0.40
33:BD:118:VAL:CG2	33:BD:119:ALA:N	2.81	0.40
33:BD:238:GLY:O	33:BD:239:ARG:HB2	2.21	0.40
34:BE:1:MET:O	34:BE:2:LYS:C	2.59	0.40
34:BE:76:ARG:CG	34:BE:195:LEU:HD22	2.50	0.40
34:BE:77:ILE:CG2	34:BE:78:LEU:N	2.85	0.40
35:BF:52:LYS:HG2	35:BF:56:GLU:HB3	2.03	0.40
35:BF:143:ALA:HB1	35:BF:148:LEU:HB2	2.03	0.40
35:BF:165:ARG:HA	35:BF:168:ARG:HD3	2.04	0.40
36:BG:60:LEU:O	36:BG:63:ILE:HG13	2.21	0.40
38:BI:13:GLY:O	38:BI:15:VAL:N	2.54	0.40
38:BI:56:LYS:HZ2	38:BI:57:ARG:N	2.20	0.40
41:BP:51:PHE:HB3	41:BP:52:GLU:HG2	2.03	0.40
42:BQ:54:MET:HB3	42:BQ:64:ILE:HD11	2.04	0.40
46:BU:22:LYS:HA	46:BU:22:LYS:HD3	1.81	0.40
47:BV:73:SER:OG	47:BV:75:PHE:HE1	2.00	0.40
48:BW:27:LYS:O	48:BW:28:SER:C	2.60	0.40
49:BX:38:GLU:N	49:BX:38:GLU:CD	2.70	0.40
50:BY:71:LYS:HZ3	50:BY:71:LYS:CB	2.31	0.40
51:BZ:28:MET:HG3	51:BZ:35:ARG:HB2	2.02	0.40
51:BZ:120:ILE:HG22	51:BZ:120:ILE:O	2.21	0.40
1:CA:262:A:N6	1:CA:263:A:N6	2.69	0.40
1:CA:271:C:O2'	1:CA:272:C:H5'	2.21	0.40
1:CA:358:U:H2'	1:CA:359:U:C6	2.56	0.40
1:CA:456:C:H2'	1:CA:457:C:C6	2.57	0.40
1:CA:580:U:H2'	1:CA:581:G:O4'	2.22	0.40
1:CA:698:G:C6	1:CA:699:C:C4	3.09	0.40
1:CA:945:G:O6	1:CA:1337:G:C6	2.75	0.40
1:CA:1064:G:C8	1:CA:1066:C:C2	3.10	0.40
1:CA:1091:U:O2	1:CA:1091:U:H2'	2.21	0.40
1:CA:1500:A:OP2	1:CA:1505:G:OP1	2.39	0.40
2:CB:174:VAL:O	2:CB:178:ARG:HB2	2.21	0.40
4:CD:4:TYR:HE2	4:CD:7:PRO:O	2.05	0.40
4:CD:203:VAL:O	4:CD:204:ILE:C	2.59	0.40
5:CE:87:SER:HB3	5:CE:131:ILE:HD13	2.03	0.40
9:CI:49:PRO:HA	9:CI:101:PHE:CE1	2.56	0.40
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.21	0.40
23:D1:19:GLN:CD	23:D1:44:PRO:CB	2.89	0.40
23:D1:37:ILE:HG23	31:DA:2080:G:O5'	2.22	0.40
30:D8:16:ILE:CD1	30:D8:57:ARG:HG2	2.52	0.40
30:D8:51:ALA:C	30:D8:53:PRO:HD2	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:336:C:H5''	50:DY:7:VAL:CG1	2.51	0.40
31:DA:415:A:H2'	31:DA:416:C:C6	2.57	0.40
31:DA:428:A:OP2	31:DA:428:A:H8	2.04	0.40
31:DA:604:G:C6	31:DA:605:C:C4	3.10	0.40
31:DA:764:A:OP1	33:DD:208:LYS:HE2	2.21	0.40
31:DA:814:C:O2'	31:DA:815:C:H5'	2.21	0.40
31:DA:826:U:H2'	31:DA:828:U:O4'	2.21	0.40
31:DA:861:A:H2'	31:DA:862:G:O4'	2.21	0.40
31:DA:942:G:C6	31:DA:943:U:C4	3.09	0.40
31:DA:1157:G:N1	31:DA:1158:C:C4	2.90	0.40
31:DA:1410:G:H1	31:DA:1592:C:N4	2.19	0.40
31:DA:1465:G:C2	31:DA:1466:G:C8	3.10	0.40
31:DA:1480:G:C6	31:DA:1481:U:N3	2.90	0.40
31:DA:1487:G:C2'	31:DA:1488:G:O5'	2.69	0.40
31:DA:1623:G:C2	31:DA:1624:G:C8	3.10	0.40
31:DA:2205:C:O2	31:DA:2220:G:N1	2.54	0.40
31:DA:2400:G:C6	31:DA:2401:U:C4	3.09	0.40
31:DA:2702:U:OP1	31:DA:2702:U:C2	2.74	0.40
31:DA:2813:A:C6	31:DA:2814:C:C4	3.08	0.40
31:DA:2889:C:H2'	31:DA:2891:G:O4'	2.21	0.40
32:DB:92:C:H5''	51:DZ:79:ARG:HH22	1.86	0.40
33:DD:70:TRP:CZ3	33:DD:146:GLU:OE2	2.72	0.40
35:DF:53:THR:C	35:DF:55:GLY:N	2.74	0.40
35:DF:115:ALA:O	35:DF:116:ASP:C	2.60	0.40
35:DF:132:VAL:O	35:DF:134:GLY:N	2.55	0.40
37:DH:86:GLU:HA	37:DH:132:ARG:HA	2.04	0.40
38:DI:105:HIS:CD2	38:DI:105:HIS:N	2.89	0.40
45:DT:51:ARG:HG3	45:DT:98:LYS:HG3	2.04	0.40
45:DT:58:ASN:HD22	45:DT:59:THR:N	2.20	0.40
45:DT:91:ARG:HB2	45:DT:92:GLY:H	1.49	0.40
46:DU:24:TYR:HB2	46:DU:29:SER:HB3	2.04	0.40
49:DX:40:LYS:C	49:DX:42:ALA:N	2.74	0.40
49:DX:77:LYS:CD	49:DX:78:LYS:HG3	2.50	0.40
50:DY:16:ALA:HA	50:DY:21:LYS:HD2	2.03	0.40
50:DY:27:VAL:HG12	50:DY:29:GLU:N	2.13	0.40
50:DY:76:CYS:HB3	50:DY:96:ILE:HD11	2.04	0.40
50:DY:77:PRO:O	50:DY:78:ALA:CB	2.68	0.40
51:DZ:158:PRO:O	51:DZ:161:VAL:HB	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	233/256 (91%)	165 (71%)	51 (22%)	17 (7%)	1	5
2	CB	233/256 (91%)	165 (71%)	51 (22%)	17 (7%)	1	5
3	AC	205/239 (86%)	156 (76%)	35 (17%)	14 (7%)	1	6
3	CC	205/239 (86%)	156 (76%)	35 (17%)	14 (7%)	1	6
4	AD	206/209 (99%)	128 (62%)	59 (29%)	19 (9%)	1	3
4	CD	206/209 (99%)	128 (62%)	59 (29%)	19 (9%)	1	3
5	AE	149/160 (93%)	106 (71%)	31 (21%)	12 (8%)	1	4
5	CE	149/160 (93%)	104 (70%)	33 (22%)	12 (8%)	1	4
6	AF	99/101 (98%)	76 (77%)	18 (18%)	5 (5%)	2	12
6	CF	99/101 (98%)	77 (78%)	17 (17%)	5 (5%)	2	12
7	AG	153/156 (98%)	132 (86%)	17 (11%)	4 (3%)	5	27
7	CG	153/156 (98%)	132 (86%)	17 (11%)	4 (3%)	5	27
8	AH	136/138 (99%)	105 (77%)	24 (18%)	7 (5%)	2	12
8	CH	136/138 (99%)	106 (78%)	23 (17%)	7 (5%)	2	12
9	AI	123/128 (96%)	93 (76%)	21 (17%)	9 (7%)	1	5
9	CI	123/128 (96%)	93 (76%)	21 (17%)	9 (7%)	1	5
10	AJ	97/105 (92%)	80 (82%)	13 (13%)	4 (4%)	3	16
10	CJ	97/105 (92%)	80 (82%)	13 (13%)	4 (4%)	3	16
11	AK	117/129 (91%)	92 (79%)	20 (17%)	5 (4%)	2	15
11	CK	117/129 (91%)	94 (80%)	18 (15%)	5 (4%)	2	15
12	AL	123/135 (91%)	85 (69%)	24 (20%)	14 (11%)	0	2
12	CL	123/135 (91%)	86 (70%)	23 (19%)	14 (11%)	0	2
13	AM	107/126 (85%)	85 (79%)	17 (16%)	5 (5%)	2	14
13	CM	107/126 (85%)	84 (78%)	18 (17%)	5 (5%)	2	14
14	AN	58/61 (95%)	51 (88%)	5 (9%)	2 (3%)	3	20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	58/61 (95%)	50 (86%)	6 (10%)	2 (3%)	3	20
15	AO	86/89 (97%)	68 (79%)	15 (17%)	3 (4%)	3	20
15	CO	86/89 (97%)	67 (78%)	16 (19%)	3 (4%)	3	20
16	AP	82/88 (93%)	49 (60%)	23 (28%)	10 (12%)	0	1
16	CP	82/88 (93%)	48 (58%)	24 (29%)	10 (12%)	0	1
17	AQ	98/105 (93%)	77 (79%)	15 (15%)	6 (6%)	1	8
17	CQ	98/105 (93%)	76 (78%)	16 (16%)	6 (6%)	1	8
18	AR	68/88 (77%)	43 (63%)	21 (31%)	4 (6%)	1	9
18	CR	68/88 (77%)	40 (59%)	22 (32%)	6 (9%)	1	3
19	AS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	1	3
19	CS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	1	3
20	AT	97/106 (92%)	64 (66%)	25 (26%)	8 (8%)	1	4
20	CT	97/106 (92%)	61 (63%)	29 (30%)	7 (7%)	1	5
21	AU	23/27 (85%)	18 (78%)	4 (17%)	1 (4%)	2	15
21	CU	23/27 (85%)	18 (78%)	4 (17%)	1 (4%)	2	15
22	B0	83/85 (98%)	68 (82%)	11 (13%)	4 (5%)	2	13
22	D0	83/85 (98%)	70 (84%)	9 (11%)	4 (5%)	2	13
23	B1	87/98 (89%)	52 (60%)	17 (20%)	18 (21%)	0	0
23	D1	87/98 (89%)	52 (60%)	18 (21%)	17 (20%)	0	0
24	B2	49/72 (68%)	22 (45%)	17 (35%)	10 (20%)	0	0
24	D2	49/72 (68%)	24 (49%)	13 (26%)	12 (24%)	0	0
25	B3	58/60 (97%)	50 (86%)	6 (10%)	2 (3%)	3	20
25	D3	58/60 (97%)	51 (88%)	4 (7%)	3 (5%)	2	12
26	B4	30/71 (42%)	4 (13%)	11 (37%)	15 (50%)	0	0
26	D4	30/71 (42%)	4 (13%)	11 (37%)	15 (50%)	0	0
27	B5	57/60 (95%)	41 (72%)	7 (12%)	9 (16%)	0	1
27	D5	57/60 (95%)	42 (74%)	6 (10%)	9 (16%)	0	1
28	B6	41/54 (76%)	21 (51%)	7 (17%)	13 (32%)	0	0
28	D6	41/54 (76%)	21 (51%)	7 (17%)	13 (32%)	0	0
29	B7	47/49 (96%)	43 (92%)	4 (8%)	0	100	100
29	D7	47/49 (96%)	44 (94%)	3 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	B8	62/65 (95%)	42 (68%)	8 (13%)	12 (19%)	0	0
30	D8	62/65 (95%)	44 (71%)	6 (10%)	12 (19%)	0	0
33	BD	270/276 (98%)	217 (80%)	40 (15%)	13 (5%)	2	13
33	DD	270/276 (98%)	214 (79%)	42 (16%)	14 (5%)	2	12
34	BE	203/206 (98%)	153 (75%)	28 (14%)	22 (11%)	0	2
34	DE	203/206 (98%)	151 (74%)	29 (14%)	23 (11%)	0	2
35	BF	206/210 (98%)	155 (75%)	37 (18%)	14 (7%)	1	6
35	DF	206/210 (98%)	151 (73%)	42 (20%)	13 (6%)	1	7
36	BG	177/182 (97%)	123 (70%)	35 (20%)	19 (11%)	0	2
36	DG	177/182 (97%)	125 (71%)	32 (18%)	20 (11%)	0	2
37	BH	158/180 (88%)	103 (65%)	28 (18%)	27 (17%)	0	0
37	DH	158/180 (88%)	103 (65%)	30 (19%)	25 (16%)	0	1
38	BI	144/148 (97%)	89 (62%)	38 (26%)	17 (12%)	0	1
38	DI	144/148 (97%)	89 (62%)	39 (27%)	16 (11%)	0	2
39	BN	137/140 (98%)	96 (70%)	25 (18%)	16 (12%)	0	1
39	DN	137/140 (98%)	94 (69%)	26 (19%)	17 (12%)	0	1
40	BO	120/122 (98%)	107 (89%)	10 (8%)	3 (2%)	5	28
40	DO	120/122 (98%)	103 (86%)	15 (12%)	2 (2%)	9	39
41	BP	144/150 (96%)	80 (56%)	23 (16%)	41 (28%)	0	0
41	DP	144/150 (96%)	80 (56%)	24 (17%)	40 (28%)	0	0
42	BQ	134/141 (95%)	95 (71%)	23 (17%)	16 (12%)	0	1
42	DQ	134/141 (95%)	94 (70%)	25 (19%)	15 (11%)	0	2
43	BR	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	4
43	DR	115/118 (98%)	84 (73%)	21 (18%)	10 (9%)	1	3
44	BS	97/112 (87%)	54 (56%)	19 (20%)	24 (25%)	0	0
44	DS	97/112 (87%)	53 (55%)	21 (22%)	23 (24%)	0	0
45	BT	130/146 (89%)	93 (72%)	20 (15%)	17 (13%)	0	1
45	DT	130/146 (89%)	92 (71%)	22 (17%)	16 (12%)	0	1
46	BU	115/118 (98%)	90 (78%)	17 (15%)	8 (7%)	1	6
46	DU	115/118 (98%)	85 (74%)	22 (19%)	8 (7%)	1	6
47	BV	99/101 (98%)	57 (58%)	15 (15%)	27 (27%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DV	99/101 (98%)	56 (57%)	15 (15%)	28 (28%)	0	0
48	BW	111/113 (98%)	88 (79%)	14 (13%)	9 (8%)	1	4
48	DW	111/113 (98%)	85 (77%)	18 (16%)	8 (7%)	1	5
49	BX	91/96 (95%)	52 (57%)	16 (18%)	23 (25%)	0	0
49	DX	91/96 (95%)	50 (55%)	18 (20%)	23 (25%)	0	0
50	BY	99/110 (90%)	49 (50%)	21 (21%)	29 (29%)	0	0
50	DY	99/110 (90%)	47 (48%)	23 (23%)	29 (29%)	0	0
51	BZ	175/206 (85%)	115 (66%)	44 (25%)	16 (9%)	1	3
51	DZ	175/206 (85%)	115 (66%)	41 (23%)	19 (11%)	0	2
All	All	11152/12056 (92%)	7925 (71%)	2047 (18%)	1180 (11%)	0	2

All (1180) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	154	LEU
2	AB	165	VAL
2	AB	194	PRO
2	AB	195	ASP
3	AC	47	LEU
3	AC	189	ALA
4	AD	3	ARG
4	AD	13	ARG
4	AD	14	ARG
4	AD	44	GLY
4	AD	129	ASN
4	AD	163	GLU
5	AE	37	ARG
5	AE	115	VAL
6	AF	15	ASP
6	AF	40	VAL
6	AF	81	ILE
7	AG	33	ASP
8	AH	2	LEU
8	AH	54	ASP
9	AI	124	GLN
9	AI	125	TYR
10	AJ	59	SER
12	AL	27	LEU

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Mol	Chain	Res	Type
12	AL	47	LYS
12	AL	65	GLU
12	AL	91	LYS
12	AL	115	LYS
13	AM	12	ASN
13	AM	83	ASP
13	AM	106	ASN
17	AQ	34	LYS
18	AR	20	ALA
18	AR	45	SER
19	AS	28	LYS
20	AT	11	SER
20	AT	74	LYS
22	B0	5	LYS
22	B0	14	ARG
22	B0	44	ARG
23	B1	10	LYS
23	B1	11	ARG
23	B1	14	VAL
23	B1	26	ARG
23	B1	33	LYS
23	B1	48	LYS
23	B1	65	SER
23	B1	81	LYS
23	B1	83	GLU
23	B1	86	SER
23	B1	94	LEU
24	B2	16	LEU
24	B2	32	LEU
24	B2	35	LEU
24	B2	41	ILE
24	B2	52	ASP
26	B4	6	HIS
26	B4	7	PRO
26	B4	10	VAL
26	B4	11	PRO
26	B4	23	GLU
26	B4	25	TYR
26	B4	27	THR
26	B4	29	PRO
27	B5	4	HIS
27	B5	32	PRO

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Mol	Chain	Res	Type
27	B5	33	CYS
27	B5	47	PRO
27	B5	49	CYS
28	B6	17	LYS
28	B6	20	ASN
28	B6	31	PRO
28	B6	33	LYS
28	B6	49	HIS
30	B8	30	ARG
30	B8	35	GLN
30	B8	36	LYS
30	B8	37	SER
30	B8	52	LYS
33	BD	26	LYS
33	BD	28	GLU
33	BD	33	LEU
33	BD	159	ALA
33	BD	225	ALA
33	BD	267	SER
34	BE	2	LYS
34	BE	4	ILE
34	BE	53	PRO
34	BE	54	GLN
34	BE	57	LYS
34	BE	77	ILE
34	BE	82	ARG
34	BE	88	GLY
34	BE	90	THR
34	BE	93	VAL
34	BE	118	LYS
34	BE	129	HIS
35	BF	2	LYS
35	BF	89	VAL
36	BG	14	GLU
36	BG	47	LYS
36	BG	82	LEU
36	BG	86	MET
36	BG	87	PRO
36	BG	90	LEU
36	BG	96	ARG
36	BG	153	ARG
37	BH	13	LYS

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Mol	Chain	Res	Type
37	BH	41	MET
37	BH	89	ILE
37	BH	90	LYS
37	BH	126	PRO
37	BH	138	LYS
37	BH	153	LYS
37	BH	154	PRO
37	BH	155	SER
37	BH	156	ALA
37	BH	157	TYR
37	BH	165	ALA
37	BH	170	ARG
38	BI	93	THR
38	BI	133	HIS
39	BN	58	ASP
39	BN	74	ARG
39	BN	78	TYR
39	BN	79	PRO
39	BN	96	GLU
39	BN	130	HIS
40	BO	48	PRO
41	BP	6	LEU
41	BP	11	GLY
41	BP	14	LYS
41	BP	15	ARG
41	BP	18	ARG
41	BP	34	GLY
41	BP	35	HIS
41	BP	47	ASP
41	BP	48	PRO
41	BP	52	GLU
41	BP	56	SER
41	BP	57	THR
41	BP	58	THR
41	BP	65	ARG
41	BP	106	LEU
41	BP	107	LYS
41	BP	141	ALA
41	BP	146	VAL
41	BP	147	LEU
42	BQ	8	LYS
42	BQ	21	THR

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Mol	Chain	Res	Type
42	BQ	25	ASP
42	BQ	30	GLY
42	BQ	79	LEU
42	BQ	134	ARG
43	BR	4	LEU
43	BR	5	LYS
43	BR	8	ARG
43	BR	88	ARG
43	BR	117	VAL
44	BS	17	ARG
44	BS	57	LYS
44	BS	59	LYS
44	BS	67	ARG
44	BS	89	ARG
44	BS	92	TYR
44	BS	102	ALA
45	BT	13	ARG
45	BT	18	ASP
45	BT	24	PRO
45	BT	26	ASP
45	BT	30	VAL
45	BT	35	LYS
45	BT	58	ASN
45	BT	80	SER
45	BT	94	ALA
45	BT	107	ASP
45	BT	129	ARG
46	BU	32	PHE
46	BU	90	VAL
47	BV	23	GLU
47	BV	44	LYS
47	BV	47	VAL
47	BV	51	VAL
47	BV	52	VAL
47	BV	69	LYS
47	BV	73	SER
47	BV	80	GLN
47	BV	86	GLY
47	BV	90	PRO
48	BW	11	ARG
48	BW	58	ALA
49	BX	6	ASP

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Mol	Chain	Res	Type
49	BX	25	LYS
49	BX	34	ALA
49	BX	35	THR
49	BX	36	LYS
49	BX	60	ARG
49	BX	77	LYS
49	BX	84	ALA
49	BX	86	GLY
49	BX	89	ILE
50	BY	3	VAL
50	BY	7	VAL
50	BY	17	SER
50	BY	30	VAL
50	BY	38	ILE
50	BY	42	VAL
50	BY	48	ALA
50	BY	55	TYR
50	BY	56	PRO
50	BY	62	GLU
50	BY	77	PRO
50	BY	78	ALA
50	BY	98	VAL
50	BY	99	CYS
51	BZ	8	TYR
51	BZ	56	VAL
51	BZ	65	GLN
51	BZ	101	PRO
51	BZ	111	VAL
51	BZ	152	ALA
51	BZ	168	GLU
2	CB	15	VAL
2	CB	154	LEU
2	CB	165	VAL
2	CB	194	PRO
2	CB	195	ASP
3	CC	47	LEU
3	CC	189	ALA
4	CD	3	ARG
4	CD	13	ARG
4	CD	14	ARG
4	CD	44	GLY
4	CD	129	ASN

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Mol	Chain	Res	Type
4	CD	163	GLU
5	CE	37	ARG
6	CF	15	ASP
6	CF	40	VAL
6	CF	81	ILE
7	CG	7	ALA
7	CG	33	ASP
8	CH	54	ASP
9	CI	124	GLN
9	CI	125	TYR
10	CJ	59	SER
12	CL	27	LEU
12	CL	47	LYS
12	CL	65	GLU
12	CL	91	LYS
12	CL	115	LYS
13	CM	12	ASN
13	CM	83	ASP
13	CM	106	ASN
17	CQ	34	LYS
18	CR	20	ALA
18	CR	45	SER
19	CS	28	LYS
20	CT	11	SER
20	CT	74	LYS
22	D0	5	LYS
22	D0	14	ARG
22	D0	44	ARG
23	D1	10	LYS
23	D1	11	ARG
23	D1	14	VAL
23	D1	26	ARG
23	D1	48	LYS
23	D1	65	SER
23	D1	81	LYS
23	D1	83	GLU
23	D1	86	SER
23	D1	94	LEU
24	D2	16	LEU
24	D2	32	LEU
24	D2	35	LEU
24	D2	41	ILE

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Mol	Chain	Res	Type
24	D2	52	ASP
26	D4	6	HIS
26	D4	7	PRO
26	D4	10	VAL
26	D4	11	PRO
26	D4	23	GLU
26	D4	25	TYR
26	D4	27	THR
26	D4	29	PRO
27	D5	4	HIS
27	D5	32	PRO
27	D5	33	CYS
27	D5	47	PRO
27	D5	49	CYS
28	D6	17	LYS
28	D6	20	ASN
28	D6	31	PRO
28	D6	33	LYS
28	D6	49	HIS
30	D8	30	ARG
30	D8	35	GLN
30	D8	36	LYS
30	D8	37	SER
30	D8	52	LYS
33	DD	26	LYS
33	DD	28	GLU
33	DD	33	LEU
33	DD	159	ALA
33	DD	225	ALA
34	DE	2	LYS
34	DE	4	ILE
34	DE	54	GLN
34	DE	77	ILE
34	DE	82	ARG
34	DE	88	GLY
34	DE	90	THR
34	DE	93	VAL
34	DE	118	LYS
34	DE	129	HIS
35	DF	2	LYS
35	DF	89	VAL
36	DG	14	GLU

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Mol	Chain	Res	Type
36	DG	47	LYS
36	DG	82	LEU
36	DG	86	MET
36	DG	87	PRO
36	DG	90	LEU
36	DG	96	ARG
36	DG	153	ARG
37	DH	13	LYS
37	DH	41	MET
37	DH	89	ILE
37	DH	90	LYS
37	DH	126	PRO
37	DH	138	LYS
37	DH	153	LYS
37	DH	154	PRO
37	DH	155	SER
37	DH	157	TYR
37	DH	165	ALA
37	DH	170	ARG
38	DI	78	THR
38	DI	93	THR
38	DI	133	HIS
39	DN	58	ASP
39	DN	68	GLU
39	DN	74	ARG
39	DN	78	TYR
39	DN	79	PRO
39	DN	96	GLU
39	DN	130	HIS
40	DO	48	PRO
41	DP	6	LEU
41	DP	11	GLY
41	DP	14	LYS
41	DP	15	ARG
41	DP	17	LYS
41	DP	18	ARG
41	DP	34	GLY
41	DP	35	HIS
41	DP	36	LYS
41	DP	42	SER
41	DP	47	ASP
41	DP	52	GLU

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Mol	Chain	Res	Type
41	DP	56	SER
41	DP	57	THR
41	DP	58	THR
41	DP	65	ARG
41	DP	103	ALA
41	DP	106	LEU
41	DP	107	LYS
41	DP	141	ALA
41	DP	146	VAL
41	DP	147	LEU
42	DQ	8	LYS
42	DQ	21	THR
42	DQ	25	ASP
42	DQ	30	GLY
42	DQ	79	LEU
43	DR	4	LEU
43	DR	5	LYS
43	DR	8	ARG
43	DR	88	ARG
43	DR	117	VAL
44	DS	17	ARG
44	DS	57	LYS
44	DS	59	LYS
44	DS	67	ARG
44	DS	89	ARG
44	DS	90	GLY
44	DS	92	TYR
44	DS	102	ALA
45	DT	13	ARG
45	DT	18	ASP
45	DT	24	PRO
45	DT	26	ASP
45	DT	30	VAL
45	DT	35	LYS
45	DT	58	ASN
45	DT	80	SER
45	DT	94	ALA
45	DT	107	ASP
45	DT	129	ARG
46	DU	32	PHE
46	DU	90	VAL
47	DV	23	GLU

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Mol	Chain	Res	Type
47	DV	44	LYS
47	DV	47	VAL
47	DV	51	VAL
47	DV	73	SER
47	DV	80	GLN
47	DV	86	GLY
47	DV	90	PRO
48	DW	11	ARG
49	DX	6	ASP
49	DX	25	LYS
49	DX	34	ALA
49	DX	35	THR
49	DX	36	LYS
49	DX	60	ARG
49	DX	77	LYS
49	DX	84	ALA
49	DX	86	GLY
49	DX	89	ILE
50	DY	3	VAL
50	DY	7	VAL
50	DY	17	SER
50	DY	30	VAL
50	DY	38	ILE
50	DY	42	VAL
50	DY	48	ALA
50	DY	55	TYR
50	DY	56	PRO
50	DY	62	GLU
50	DY	77	PRO
50	DY	78	ALA
50	DY	98	VAL
50	DY	99	CYS
51	DZ	8	TYR
51	DZ	56	VAL
51	DZ	65	GLN
51	DZ	101	PRO
51	DZ	111	VAL
51	DZ	152	ALA
51	DZ	168	GLU
2	AB	18	GLY
2	AB	24	TRP
2	AB	52	GLU

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Mol	Chain	Res	Type
2	AB	97	TRP
2	AB	239	VAL
3	AC	12	LEU
3	AC	101	LEU
3	AC	145	GLY
3	AC	156	ARG
4	AD	10	ARG
4	AD	42	GLN
4	AD	47	ARG
4	AD	60	GLU
4	AD	110	PHE
5	AE	72	GLN
5	AE	146	ALA
7	AG	7	ALA
7	AG	131	LYS
9	AI	23	ASN
9	AI	100	GLY
9	AI	117	HIS
11	AK	48	ILE
12	AL	28	LYS
12	AL	64	TYR
12	AL	83	VAL
13	AM	100	GLY
14	AN	16	PHE
16	AP	11	SER
16	AP	28	ARG
17	AQ	49	GLU
17	AQ	61	GLU
19	AS	10	PHE
19	AS	29	ARG
19	AS	80	TYR
20	AT	95	ALA
20	AT	101	GLY
23	B1	27	GLU
23	B1	49	VAL
23	B1	64	ALA
23	B1	79	GLY
24	B2	42	GLY
24	B2	49	LYS
24	B2	51	ARG
25	B3	13	ILE
26	B4	9	LEU

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Mol	Chain	Res	Type
26	B4	16	CYS
26	B4	20	ASN
27	B5	48	GLU
27	B5	52	TYR
27	B5	57	VAL
28	B6	19	ARG
28	B6	23	THR
28	B6	29	ASN
28	B6	43	CYS
28	B6	52	VAL
30	B8	3	LYS
30	B8	32	LEU
30	B8	51	ALA
30	B8	64	TYR
33	BD	3	VAL
33	BD	34	VAL
33	BD	156	ALA
33	BD	210	GLY
33	BD	239	ARG
33	BD	241	PRO
34	BE	17	ASP
34	BE	60	ASN
34	BE	71	GLY
34	BE	72	VAL
35	BF	14	PRO
35	BF	21	ALA
35	BF	66	PRO
35	BF	127	GLU
36	BG	30	GLU
37	BH	44	VAL
37	BH	47	GLU
37	BH	84	SER
37	BH	92	ILE
37	BH	93	GLY
37	BH	98	LEU
38	BI	13	GLY
38	BI	30	LEU
38	BI	42	SER
38	BI	78	THR
38	BI	120	ILE
38	BI	128	LEU
38	BI	145	VAL

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Mol	Chain	Res	Type
39	BN	57	ALA
39	BN	68	GLU
39	BN	95	PRO
40	BO	5	GLN
41	BP	17	LYS
41	BP	31	ALA
41	BP	36	LYS
41	BP	42	SER
41	BP	49	ARG
41	BP	66	GLY
41	BP	98	GLU
41	BP	103	ALA
41	BP	104	GLY
41	BP	108	LYS
42	BQ	19	GLY
42	BQ	83	MET
43	BR	107	ASP
44	BS	14	VAL
44	BS	45	GLY
44	BS	58	LEU
44	BS	85	VAL
44	BS	90	GLY
44	BS	94	TYR
44	BS	96	GLY
44	BS	100	ALA
45	BT	28	VAL
45	BT	83	ILE
46	BU	91	ASP
46	BU	92	ARG
47	BV	28	GLU
47	BV	41	GLY
47	BV	50	PRO
47	BV	53	GLU
47	BV	54	GLY
47	BV	55	ALA
47	BV	68	LYS
47	BV	70	ILE
47	BV	72	VAL
47	BV	91	TYR
48	BW	56	ALA
48	BW	63	ASP
48	BW	65	LEU

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Mol	Chain	Res	Type
49	BX	41	ASN
49	BX	59	VAL
49	BX	72	LYS
49	BX	74	PRO
50	BY	80	GLY
50	BY	81	LYS
50	BY	90	LEU
51	BZ	80	ARG
51	BZ	81	ARG
51	BZ	119	GLU
2	CB	18	GLY
2	CB	24	TRP
2	CB	52	GLU
2	CB	97	TRP
2	CB	239	VAL
3	CC	4	LYS
3	CC	12	LEU
3	CC	145	GLY
3	CC	156	ARG
4	CD	5	ILE
4	CD	42	GLN
4	CD	47	ARG
4	CD	60	GLU
4	CD	110	PHE
5	CE	72	GLN
5	CE	115	VAL
5	CE	146	ALA
7	CG	131	LYS
8	CH	2	LEU
9	CI	23	ASN
9	CI	100	GLY
9	CI	117	HIS
11	CK	48	ILE
12	CL	28	LYS
12	CL	64	TYR
12	CL	83	VAL
12	CL	106	ASP
13	CM	100	GLY
14	CN	16	PHE
17	CQ	49	GLU
17	CQ	61	GLU
19	CS	10	PHE

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Mol	Chain	Res	Type
19	CS	29	ARG
19	CS	80	TYR
20	CT	95	ALA
20	CT	101	GLY
23	D1	27	GLU
23	D1	33	LYS
23	D1	49	VAL
23	D1	64	ALA
23	D1	79	GLY
24	D2	42	GLY
24	D2	49	LYS
25	D3	13	ILE
26	D4	9	LEU
26	D4	16	CYS
26	D4	20	ASN
26	D4	31	ILE
27	D5	37	LYS
27	D5	48	GLU
27	D5	52	TYR
27	D5	57	VAL
28	D6	19	ARG
28	D6	23	THR
28	D6	52	VAL
30	D8	32	LEU
30	D8	51	ALA
30	D8	64	TYR
33	DD	3	VAL
33	DD	156	ALA
33	DD	241	PRO
33	DD	242	ARG
33	DD	267	SER
34	DE	17	ASP
34	DE	53	PRO
34	DE	57	LYS
34	DE	71	GLY
34	DE	72	VAL
34	DE	131	ALA
35	DF	7	TYR
35	DF	14	PRO
35	DF	21	ALA
35	DF	66	PRO
35	DF	127	GLU

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Mol	Chain	Res	Type
36	DG	30	GLU
36	DG	115	ARG
37	DH	44	VAL
37	DH	84	SER
37	DH	92	ILE
37	DH	93	GLY
37	DH	98	LEU
37	DH	156	ALA
38	DI	13	GLY
38	DI	30	LEU
38	DI	42	SER
38	DI	89	TYR
38	DI	120	ILE
38	DI	128	LEU
38	DI	145	VAL
39	DN	57	ALA
39	DN	95	PRO
40	DO	5	GLN
41	DP	31	ALA
41	DP	32	THR
41	DP	48	PRO
41	DP	49	ARG
41	DP	66	GLY
41	DP	98	GLU
41	DP	104	GLY
41	DP	108	LYS
42	DQ	19	GLY
42	DQ	83	MET
42	DQ	134	ARG
43	DR	107	ASP
43	DR	116	LEU
44	DS	14	VAL
44	DS	45	GLY
44	DS	58	LEU
44	DS	77	ALA
44	DS	85	VAL
44	DS	94	TYR
44	DS	96	GLY
44	DS	100	ALA
45	DT	28	VAL
45	DT	83	ILE
46	DU	89	GLU

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Mol	Chain	Res	Type
46	DU	91	ASP
46	DU	92	ARG
47	DV	28	GLU
47	DV	41	GLY
47	DV	50	PRO
47	DV	52	VAL
47	DV	53	GLU
47	DV	54	GLY
47	DV	55	ALA
47	DV	68	LYS
47	DV	69	LYS
47	DV	70	ILE
47	DV	72	VAL
47	DV	91	TYR
48	DW	56	ALA
48	DW	58	ALA
48	DW	63	ASP
49	DX	37	THR
49	DX	41	ASN
49	DX	59	VAL
49	DX	72	LYS
49	DX	81	VAL
50	DY	24	VAL
50	DY	80	GLY
50	DY	90	LEU
51	DZ	80	ARG
51	DZ	81	ARG
51	DZ	119	GLU
51	DZ	142	SER
2	AB	26	PRO
2	AB	106	LYS
2	AB	204	ASN
3	AC	4	LYS
4	AD	4	TYR
4	AD	5	ILE
4	AD	189	PRO
6	AF	39	LYS
6	AF	96	PRO
8	AH	63	LEU
9	AI	25	LYS
10	AJ	36	GLY
12	AL	18	VAL

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Mol	Chain	Res	Type
12	AL	23	LYS
12	AL	63	GLY
12	AL	106	ASP
13	AM	21	TYR
14	AN	52	GLN
16	AP	17	TYR
16	AP	76	GLN
17	AQ	3	LYS
17	AQ	4	LYS
19	AS	27	GLU
20	AT	49	ALA
20	AT	97	ALA
21	AU	25	LYS
24	B2	40	SER
25	B3	2	PRO
26	B4	3	GLU
26	B4	24	THR
26	B4	30	GLU
26	B4	31	ILE
27	B5	37	LYS
28	B6	18	ARG
28	B6	28	ARG
30	B8	31	HIS
33	BD	242	ARG
34	BE	58	ARG
34	BE	131	ALA
35	BF	7	TYR
35	BF	11	VAL
35	BF	25	PRO
35	BF	133	ASN
36	BG	21	ARG
36	BG	43	LEU
36	BG	115	ARG
36	BG	128	ARG
37	BH	117	PRO
37	BH	151	ILE
37	BH	159	GLU
38	BI	14	ASP
38	BI	89	TYR
38	BI	134	PRO
39	BN	127	ASP
39	BN	129	PRO

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Mol	Chain	Res	Type
41	BP	23	PRO
41	BP	32	THR
41	BP	40	SER
41	BP	89	ALA
41	BP	102	ARG
41	BP	110	TYR
42	BQ	11	LYS
42	BQ	15	GLY
42	BQ	89	ASN
42	BQ	136	ALA
43	BR	116	LEU
44	BS	15	ARG
44	BS	23	ARG
44	BS	77	ALA
45	BT	115	ARG
46	BU	89	GLU
46	BU	109	LEU
47	BV	3	ALA
48	BW	59	VAL
49	BX	24	GLY
49	BX	37	THR
49	BX	71	GLY
49	BX	73	ARG
49	BX	81	VAL
50	BY	24	VAL
50	BY	29	GLU
50	BY	39	VAL
50	BY	66	PRO
51	BZ	52	SER
51	BZ	142	SER
51	BZ	166	SER
2	CB	26	PRO
2	CB	106	LYS
3	CC	100	ALA
3	CC	101	LEU
4	CD	4	TYR
4	CD	7	PRO
4	CD	10	ARG
4	CD	189	PRO
6	CF	39	LYS
6	CF	96	PRO
8	CH	63	LEU

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Mol	Chain	Res	Type
9	CI	25	LYS
10	CJ	36	GLY
11	CK	100	ALA
12	CL	63	GLY
13	CM	21	TYR
14	CN	52	GLN
16	CP	17	TYR
16	CP	28	ARG
16	CP	76	GLN
17	CQ	3	LYS
17	CQ	4	LYS
19	CS	27	GLU
20	CT	97	ALA
21	CU	25	LYS
24	D2	40	SER
24	D2	51	ARG
25	D3	2	PRO
26	D4	3	GLU
26	D4	24	THR
26	D4	30	GLU
28	D6	18	ARG
28	D6	28	ARG
28	D6	29	ASN
28	D6	43	CYS
30	D8	3	LYS
30	D8	25	MET
30	D8	31	HIS
30	D8	38	GLY
33	DD	34	VAL
34	DE	60	ASN
34	DE	76	ARG
35	DF	11	VAL
35	DF	25	PRO
36	DG	21	ARG
36	DG	43	LEU
37	DH	47	GLU
37	DH	117	PRO
37	DH	159	GLU
38	DI	14	ASP
38	DI	134	PRO
39	DN	127	ASP
39	DN	129	PRO

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Mol	Chain	Res	Type
41	DP	23	PRO
41	DP	89	ALA
41	DP	102	ARG
41	DP	110	TYR
42	DQ	11	LYS
42	DQ	20	ALA
42	DQ	51	ARG
42	DQ	89	ASN
42	DQ	136	ALA
44	DS	15	ARG
45	DT	115	ARG
47	DV	3	ALA
47	DV	19	LYS
47	DV	71	LEU
47	DV	74	LYS
48	DW	65	LEU
49	DX	24	GLY
49	DX	71	GLY
49	DX	73	ARG
49	DX	74	PRO
49	DX	88	LYS
50	DY	29	GLU
50	DY	39	VAL
50	DY	66	PRO
50	DY	81	LYS
51	DZ	52	SER
51	DZ	64	GLY
51	DZ	166	SER
2	AB	130	ARG
2	AB	240	GLN
3	AC	100	ALA
4	AD	7	PRO
4	AD	24	GLU
5	AE	71	LEU
5	AE	129	ILE
5	AE	132	ALA
8	AH	68	ARG
10	AJ	23	ILE
11	AK	100	ALA
11	AK	106	LYS
12	AL	51	ALA
15	AO	73	GLU

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Mol	Chain	Res	Type
15	AO	88	ARG
16	AP	16	HIS
16	AP	39	TYR
19	AS	30	LEU
20	AT	84	LEU
23	B1	28	GLY
28	B6	44	ARG
30	B8	38	GLY
34	BE	76	ARG
34	BE	89	ASP
35	BF	9	ILE
35	BF	10	PRO
35	BF	67	GLN
36	BG	81	LYS
37	BH	21	PRO
37	BH	81	GLU
38	BI	53	ALA
38	BI	85	GLU
39	BN	83	LYS
41	BP	109	GLY
42	BQ	51	ARG
44	BS	13	ARG
44	BS	24	LEU
44	BS	53	SER
44	BS	103	GLU
45	BT	41	ARG
45	BT	55	ASN
45	BT	59	THR
47	BV	15	GLU
47	BV	19	LYS
47	BV	71	LEU
47	BV	74	LYS
49	BX	4	ALA
49	BX	88	LYS
50	BY	21	LYS
50	BY	67	LEU
51	BZ	64	GLY
2	CB	84	GLU
2	CB	130	ARG
2	CB	240	GLN
3	CC	15	THR
10	CJ	23	ILE

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Mol	Chain	Res	Type
11	CK	106	LYS
12	CL	18	VAL
12	CL	23	LYS
12	CL	51	ALA
15	CO	88	ARG
16	CP	11	SER
16	CP	16	HIS
16	CP	39	TYR
16	CP	69	THR
19	CS	30	LEU
20	CT	49	ALA
23	D1	28	GLY
23	D1	82	LEU
33	DD	210	GLY
34	DE	58	ARG
34	DE	89	ASP
35	DF	9	ILE
35	DF	10	PRO
36	DG	81	LYS
36	DG	128	ARG
37	DH	21	PRO
37	DH	81	GLU
38	DI	85	GLU
41	DP	33	ARG
41	DP	40	SER
41	DP	109	GLY
43	DR	12	ARG
44	DS	23	ARG
44	DS	24	LEU
44	DS	53	SER
44	DS	103	GLU
46	DU	109	LEU
47	DV	15	GLU
48	DW	6	ILE
48	DW	57	ASN
49	DX	4	ALA
49	DX	19	ALA
49	DX	68	ARG
50	DY	21	LYS
50	DY	37	VAL
2	AB	229	VAL
3	AC	15	THR

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Mol	Chain	Res	Type
3	AC	60	ALA
3	AC	61	ALA
4	AD	181	MET
5	AE	8	GLU
5	AE	77	PRO
8	AH	86	ILE
9	AI	97	LYS
12	AL	19	ARG
16	AP	69	THR
18	AR	87	ARG
20	AT	98	PRO
22	B0	83	PRO
23	B1	82	LEU
24	B2	33	MET
34	BE	132	HIS
35	BF	24	LEU
36	BG	117	PHE
36	BG	129	GLY
36	BG	130	ASN
36	BG	140	ILE
37	BH	85	LYS
37	BH	139	GLN
39	BN	134	ARG
40	BO	29	ASN
41	BP	37	GLY
42	BQ	7	MET
42	BQ	20	ALA
43	BR	12	ARG
44	BS	54	LEU
46	BU	85	LYS
46	BU	102	GLU
47	BV	79	VAL
48	BW	6	ILE
48	BW	57	ASN
48	BW	93	ALA
50	BY	27	VAL
50	BY	37	VAL
50	BY	53	PRO
51	BZ	41	LEU
51	BZ	136	PHE
2	CB	204	ASN
2	CB	229	VAL

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Mol	Chain	Res	Type
3	CC	60	ALA
3	CC	61	ALA
4	CD	17	VAL
4	CD	24	GLU
4	CD	181	MET
5	CE	77	PRO
5	CE	129	ILE
5	CE	132	ALA
5	CE	140	ARG
8	CH	68	ARG
8	CH	86	ILE
9	CI	97	LYS
11	CK	62	GLN
12	CL	19	ARG
15	CO	73	GLU
18	CR	78	LEU
18	CR	87	ARG
20	CT	98	PRO
24	D2	33	MET
24	D2	45	SER
24	D2	48	HIS
34	DE	144	ARG
34	DE	201	THR
35	DF	24	LEU
36	DG	117	PHE
36	DG	130	ASN
36	DG	140	ILE
37	DH	151	ILE
39	DN	4	TYR
39	DN	83	LYS
44	DS	13	ARG
45	DT	41	ARG
47	DV	79	VAL
50	DY	53	PRO
50	DY	67	LEU
51	DZ	41	LEU
51	DZ	136	PHE
2	AB	191	ASP
4	AD	17	VAL
5	AE	133	TYR
9	AI	24	GLY
9	AI	123	PRO

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Mol	Chain	Res	Type
11	AK	62	GLN
16	AP	41	PRO
19	AS	5	LEU
30	B8	25	MET
37	BH	158	HIS
39	BN	94	HIS
41	BP	38	GLN
41	BP	140	ALA
43	BR	106	GLY
44	BS	98	VAL
49	BX	68	ARG
49	BX	69	TYR
50	BY	40	GLU
5	CE	71	LEU
9	CI	24	GLY
9	CI	123	PRO
11	CK	105	VAL
15	CO	38	ARG
16	CP	41	PRO
18	CR	57	GLY
19	CS	5	LEU
22	D0	83	PRO
28	D6	44	ARG
33	DD	239	ARG
36	DG	22	ARG
37	DH	85	LYS
39	DN	94	HIS
41	DP	38	GLN
43	DR	42	LYS
45	DT	59	THR
46	DU	85	LYS
47	DV	64	HIS
50	DY	26	LYS
50	DY	27	VAL
51	DZ	6	LYS
5	AE	148	VAL
8	AH	51	VAL
16	AP	15	PRO
36	BG	68	PRO
38	BI	34	GLY
39	BN	80	GLY
41	BP	24	GLY

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Mol	Chain	Res	Type
42	BQ	90	VAL
5	CE	128	PRO
8	CH	51	VAL
36	DG	129	GLY
38	DI	34	GLY
39	DN	80	GLY
39	DN	134	ARG
42	DQ	90	VAL
43	DR	106	GLY
3	AC	108	ASN
5	AE	128	PRO
10	AJ	91	PRO
11	AK	105	VAL
17	AQ	80	GLY
18	AR	57	GLY
39	BN	77	GLY
47	BV	22	VAL
50	BY	31	LEU
50	BY	96	ILE
3	CC	108	ASN
5	CE	148	VAL
8	CH	118	VAL
10	CJ	91	PRO
17	CQ	80	GLY
36	DG	68	PRO
50	DY	31	LEU
4	AD	56	VAL
8	AH	118	VAL
23	B1	22	GLY
41	BP	144	GLU
4	CD	56	VAL
7	CG	14	PRO
16	CP	15	PRO
18	CR	22	VAL
34	DE	56	PRO
38	DI	111	PRO
41	DP	24	GLY
46	DU	102	GLU
47	DV	22	VAL
50	DY	18	GLY
51	DZ	47	VAL
3	AC	66	VAL

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Mol	Chain	Res	Type
3	AC	81	GLY
7	AG	14	PRO
15	AO	19	PRO
16	AP	66	PRO
38	BI	111	PRO
5	CE	49	PRO
16	CP	66	PRO
35	DF	84	VAL
41	DP	144	GLU
42	DQ	15	GLY
44	DS	98	VAL
48	DW	59	VAL
51	DZ	39	VAL
34	BE	61	ARG
3	CC	66	VAL
3	CC	81	GLY
25	D3	59	VAL
33	DD	35	LYS
39	DN	77	GLY
38	DI	132	PRO
38	BI	132	PRO

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	202/220 (92%)	178 (88%)	24 (12%)	5 22
2	CB	202/220 (92%)	178 (88%)	24 (12%)	5 22
3	AC	160/188 (85%)	153 (96%)	7 (4%)	28 65
3	CC	160/188 (85%)	153 (96%)	7 (4%)	28 65
4	AD	180/181 (99%)	150 (83%)	30 (17%)	2 11
4	CD	180/181 (99%)	153 (85%)	27 (15%)	3 14
5	AE	115/122 (94%)	97 (84%)	18 (16%)	2 13
5	CE	115/122 (94%)	97 (84%)	18 (16%)	2 13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	AF	90/90 (100%)	80 (89%)	10 (11%)	6	25
6	CF	90/90 (100%)	79 (88%)	11 (12%)	5	21
7	AG	126/127 (99%)	123 (98%)	3 (2%)	49	79
7	CG	126/127 (99%)	122 (97%)	4 (3%)	39	74
8	AH	119/119 (100%)	110 (92%)	9 (8%)	13	43
8	CH	119/119 (100%)	110 (92%)	9 (8%)	13	43
9	AI	98/99 (99%)	88 (90%)	10 (10%)	7	28
9	CI	98/99 (99%)	89 (91%)	9 (9%)	9	34
10	AJ	88/92 (96%)	78 (89%)	10 (11%)	5	24
10	CJ	88/92 (96%)	78 (89%)	10 (11%)	5	24
11	AK	90/99 (91%)	84 (93%)	6 (7%)	16	49
11	CK	90/99 (91%)	84 (93%)	6 (7%)	16	49
12	AL	104/111 (94%)	93 (89%)	11 (11%)	6	26
12	CL	104/111 (94%)	92 (88%)	12 (12%)	5	24
13	AM	93/101 (92%)	87 (94%)	6 (6%)	17	50
13	CM	93/101 (92%)	88 (95%)	5 (5%)	22	57
14	AN	49/50 (98%)	46 (94%)	3 (6%)	18	53
14	CN	49/50 (98%)	46 (94%)	3 (6%)	18	53
15	AO	79/80 (99%)	71 (90%)	8 (10%)	7	29
15	CO	79/80 (99%)	71 (90%)	8 (10%)	7	29
16	AP	72/74 (97%)	57 (79%)	15 (21%)	1	5
16	CP	72/74 (97%)	57 (79%)	15 (21%)	1	5
17	AQ	94/97 (97%)	89 (95%)	5 (5%)	22	58
17	CQ	94/97 (97%)	89 (95%)	5 (5%)	22	58
18	AR	61/77 (79%)	56 (92%)	5 (8%)	11	39
18	CR	61/77 (79%)	57 (93%)	4 (7%)	16	49
19	AS	69/80 (86%)	62 (90%)	7 (10%)	7	29
19	CS	69/80 (86%)	62 (90%)	7 (10%)	7	29
20	AT	76/82 (93%)	65 (86%)	11 (14%)	3	15
20	CT	76/82 (93%)	65 (86%)	11 (14%)	3	15
21	AU	19/22 (86%)	19 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	CU	19/22 (86%)	19 (100%)	0	100	100
22	B0	61/67 (91%)	53 (87%)	8 (13%)	4	18
22	D0	61/67 (91%)	53 (87%)	8 (13%)	4	18
23	B1	73/83 (88%)	53 (73%)	20 (27%)	0	2
23	D1	73/83 (88%)	55 (75%)	18 (25%)	0	3
24	B2	46/67 (69%)	26 (56%)	20 (44%)	0	0
24	D2	46/67 (69%)	27 (59%)	19 (41%)	0	0
25	B3	51/52 (98%)	48 (94%)	3 (6%)	19	54
25	D3	51/52 (98%)	48 (94%)	3 (6%)	19	54
27	B5	51/52 (98%)	38 (74%)	13 (26%)	0	3
27	D5	51/52 (98%)	38 (74%)	13 (26%)	0	3
28	B6	43/52 (83%)	25 (58%)	18 (42%)	0	0
28	D6	43/52 (83%)	26 (60%)	17 (40%)	0	0
29	B7	41/42 (98%)	33 (80%)	8 (20%)	1	7
29	D7	41/42 (98%)	33 (80%)	8 (20%)	1	7
30	B8	53/55 (96%)	42 (79%)	11 (21%)	1	5
30	D8	53/55 (96%)	43 (81%)	10 (19%)	1	8
33	BD	213/218 (98%)	168 (79%)	45 (21%)	1	5
33	DD	213/218 (98%)	169 (79%)	44 (21%)	1	6
34	BE	165/166 (99%)	125 (76%)	40 (24%)	0	3
34	DE	165/166 (99%)	126 (76%)	39 (24%)	1	3
35	BF	165/166 (99%)	127 (77%)	38 (23%)	1	4
35	DF	165/166 (99%)	129 (78%)	36 (22%)	1	5
36	BG	155/156 (99%)	136 (88%)	19 (12%)	4	21
36	DG	155/156 (99%)	135 (87%)	20 (13%)	4	19
37	BH	132/148 (89%)	107 (81%)	25 (19%)	1	8
37	DH	132/148 (89%)	108 (82%)	24 (18%)	1	9
38	BI	122/124 (98%)	105 (86%)	17 (14%)	3	16
38	DI	122/124 (98%)	105 (86%)	17 (14%)	3	16
39	BN	117/119 (98%)	78 (67%)	39 (33%)	0	1
39	DN	117/119 (98%)	78 (67%)	39 (33%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
40	BO	100/100 (100%)	85 (85%)	15 (15%)	3	14
40	DO	100/100 (100%)	85 (85%)	15 (15%)	3	14
41	BP	112/116 (97%)	73 (65%)	39 (35%)	0	1
41	DP	112/116 (97%)	71 (63%)	41 (37%)	0	1
42	BQ	106/111 (96%)	80 (76%)	26 (24%)	0	3
42	DQ	106/111 (96%)	81 (76%)	25 (24%)	1	3
43	BR	100/101 (99%)	72 (72%)	28 (28%)	0	2
43	DR	100/101 (99%)	73 (73%)	27 (27%)	0	2
44	BS	77/88 (88%)	52 (68%)	25 (32%)	0	1
44	DS	77/88 (88%)	52 (68%)	25 (32%)	0	1
45	BT	116/127 (91%)	86 (74%)	30 (26%)	0	2
45	DT	116/127 (91%)	88 (76%)	28 (24%)	0	3
46	BU	92/94 (98%)	76 (83%)	16 (17%)	2	10
46	DU	92/94 (98%)	75 (82%)	17 (18%)	1	8
47	BV	82/82 (100%)	53 (65%)	29 (35%)	0	1
47	DV	82/82 (100%)	54 (66%)	28 (34%)	0	1
48	BW	91/92 (99%)	76 (84%)	15 (16%)	2	11
48	DW	91/92 (99%)	76 (84%)	15 (16%)	2	11
49	BX	74/78 (95%)	55 (74%)	19 (26%)	0	3
49	DX	74/78 (95%)	54 (73%)	20 (27%)	0	2
50	BY	84/91 (92%)	58 (69%)	26 (31%)	0	1
50	DY	84/91 (92%)	58 (69%)	26 (31%)	0	1
51	BZ	155/179 (87%)	131 (84%)	24 (16%)	2	13
51	DZ	155/179 (87%)	131 (84%)	24 (16%)	2	13
All	All	9322/9874 (94%)	7707 (83%)	1615 (17%)	2	10

All (1615) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LEU
2	AB	15	VAL
2	AB	17	PHE
2	AB	22	LYS
2	AB	24	TRP

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Mol	Chain	Res	Type
2	AB	36	ARG
2	AB	42	ILE
2	AB	69	LEU
2	AB	111	ARG
2	AB	130	ARG
2	AB	137	ARG
2	AB	145	LEU
2	AB	164	VAL
2	AB	165	VAL
2	AB	172	ILE
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	189	ASP
2	AB	193	ASP
2	AB	205	ASP
2	AB	206	ASP
2	AB	215	LEU
2	AB	221	LEU
3	AC	5	ILE
3	AC	12	LEU
3	AC	16	ARG
3	AC	27	LYS
3	AC	104	GLN
3	AC	127	ARG
3	AC	131	ARG
4	AD	3	ARG
4	AD	8	VAL
4	AD	9	CYS
4	AD	11	LEU
4	AD	12	CYS
4	AD	15	GLU
4	AD	19	LEU
4	AD	21	LEU
4	AD	24	GLU
4	AD	25	ARG
4	AD	45	GLN
4	AD	58	LEU
4	AD	64	LEU
4	AD	68	TYR
4	AD	94	LEU
4	AD	98	GLU

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Mol	Chain	Res	Type
4	AD	110	PHE
4	AD	119	GLN
4	AD	122	ARG
4	AD	127	THR
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	158	ILE
4	AD	170	VAL
4	AD	194	LEU
4	AD	196	LEU
4	AD	204	ILE
4	AD	209	ARG
5	AE	12	LEU
5	AE	20	GLN
5	AE	25	ARG
5	AE	31	LEU
5	AE	41	VAL
5	AE	55	VAL
5	AE	73	ASN
5	AE	76	ILE
5	AE	78	HIS
5	AE	79	GLU
5	AE	87	SER
5	AE	91	LEU
5	AE	98	THR
5	AE	101	ILE
5	AE	110	LEU
5	AE	115	VAL
5	AE	143	ARG
5	AE	147	ASP
6	AF	7	ASN
6	AF	18	GLN
6	AF	23	LYS
6	AF	45	LEU
6	AF	46	ARG
6	AF	55	ASP
6	AF	63	TYR
6	AF	65	VAL
6	AF	83	ASP
6	AF	98	LEU

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Mol	Chain	Res	Type
7	AG	79	ARG
7	AG	136	LYS
7	AG	137	LYS
8	AH	1	MET
8	AH	10	LEU
8	AH	25	ASP
8	AH	41	ARG
8	AH	52	ASP
8	AH	95	VAL
8	AH	102	ARG
8	AH	114	THR
8	AH	127	LEU
9	AI	10	ARG
9	AI	95	LYS
9	AI	99	LEU
9	AI	102	LEU
9	AI	112	LYS
9	AI	113	LYS
9	AI	114	TYR
9	AI	121	ARG
9	AI	125	TYR
9	AI	128	ARG
10	AJ	12	ASP
10	AJ	22	LYS
10	AJ	45	ARG
10	AJ	47	PHE
10	AJ	50	ILE
10	AJ	57	LYS
10	AJ	62	HIS
10	AJ	74	ILE
10	AJ	80	LYS
10	AJ	96	ILE
11	AK	29	ILE
11	AK	47	VAL
11	AK	92	GLU
11	AK	107	SER
11	AK	125	PHE
11	AK	127	LYS
12	AL	20	LYS
12	AL	41	ARG
12	AL	42	THR
12	AL	52	LEU

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Mol	Chain	Res	Type
12	AL	53	ARG
12	AL	62	SER
12	AL	66	VAL
12	AL	67	THR
12	AL	89	ARG
12	AL	102	ARG
12	AL	116	SER
13	AM	48	LEU
13	AM	66	LEU
13	AM	70	LEU
13	AM	82	MET
13	AM	93	ARG
13	AM	108	ARG
14	AN	18	VAL
14	AN	42	ILE
14	AN	44	LEU
15	AO	3	ILE
15	AO	17	ARG
15	AO	24	SER
15	AO	31	LEU
15	AO	41	GLU
15	AO	65	ARG
15	AO	66	LEU
15	AO	82	ILE
16	AP	2	VAL
16	AP	8	ARG
16	AP	11	SER
16	AP	16	HIS
16	AP	20	VAL
16	AP	22	THR
16	AP	27	LYS
16	AP	28	ARG
16	AP	32	TYR
16	AP	39	TYR
16	AP	43	LYS
16	AP	48	TRP
16	AP	69	THR
16	AP	79	VAL
16	AP	82	GLN
17	AQ	52	LYS
17	AQ	57	VAL
17	AQ	60	ILE

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Mol	Chain	Res	Type
17	AQ	63	ARG
17	AQ	68	ARG
18	AR	32	ARG
18	AR	47	THR
18	AR	53	ARG
18	AR	70	ILE
18	AR	87	ARG
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	22	LEU
19	AS	27	GLU
19	AS	44	MET
19	AS	49	ILE
20	AT	9	ASN
20	AT	26	ASN
20	AT	27	LYS
20	AT	30	LYS
20	AT	41	ILE
20	AT	56	MET
20	AT	57	ARG
20	AT	62	LEU
20	AT	74	LYS
20	AT	75	ASN
20	AT	93	GLU
22	B0	11	ARG
22	B0	14	ARG
22	B0	20	ARG
22	B0	25	ARG
22	B0	36	ILE
22	B0	70	GLN
22	B0	72	ARG
22	B0	84	LEU
23	B1	12	PRO
23	B1	13	ILE
23	B1	14	VAL
23	B1	21	ARG
23	B1	25	LYS
23	B1	26	ARG
23	B1	34	THR
23	B1	37	ILE
23	B1	41	ARG

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Mol	Chain	Res	Type
23	B1	42	GLN
23	B1	46	LEU
23	B1	47	GLN
23	B1	48	LYS
23	B1	53	VAL
23	B1	62	VAL
23	B1	65	SER
23	B1	67	ILE
23	B1	86	SER
23	B1	89	GLU
23	B1	94	LEU
24	B2	12	GLU
24	B2	14	ARG
24	B2	22	GLU
24	B2	26	ARG
24	B2	28	LYS
24	B2	30	ARG
24	B2	31	GLU
24	B2	32	LEU
24	B2	33	MET
24	B2	35	LEU
24	B2	36	ARG
24	B2	44	LEU
24	B2	45	SER
24	B2	46	GLN
24	B2	47	ASN
24	B2	50	ILE
24	B2	51	ARG
24	B2	53	LEU
24	B2	56	GLN
24	B2	59	ARG
25	B3	8	LEU
25	B3	35	ARG
25	B3	58	VAL
27	B5	3	LYS
27	B5	4	HIS
27	B5	6	VAL
27	B5	11	THR
27	B5	16	ARG
27	B5	26	THR
27	B5	29	THR
27	B5	40	LYS

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Mol	Chain	Res	Type
27	B5	44	THR
27	B5	49	CYS
27	B5	55	ARG
27	B5	56	LYS
27	B5	58	LEU
28	B6	9	LEU
28	B6	10	LEU
28	B6	14	THR
28	B6	18	ARG
28	B6	19	ARG
28	B6	24	GLU
28	B6	30	THR
28	B6	35	GLU
28	B6	37	ARG
28	B6	41	PRO
28	B6	42	TRP
28	B6	43	CYS
28	B6	44	ARG
28	B6	46	HIS
28	B6	47	THR
28	B6	48	VAL
28	B6	51	GLU
28	B6	52	VAL
29	B7	1	MET
29	B7	8	ASN
29	B7	9	ARG
29	B7	10	ARG
29	B7	24	THR
29	B7	32	LYS
29	B7	41	ARG
29	B7	48	LYS
30	B8	4	MET
30	B8	6	THR
30	B8	13	ARG
30	B8	23	VAL
30	B8	32	LEU
30	B8	39	LYS
30	B8	44	LYS
30	B8	47	LYS
30	B8	49	VAL
30	B8	56	GLU
30	B8	62	LEU

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Mol	Chain	Res	Type
33	BD	5	LYS
33	BD	13	ARG
33	BD	17	THR
33	BD	26	LYS
33	BD	31	LYS
33	BD	43	ARG
33	BD	44	ASN
33	BD	46	GLN
33	BD	61	LEU
33	BD	64	ILE
33	BD	65	ILE
33	BD	71	ASP
33	BD	73	VAL
33	BD	88	ARG
33	BD	89	SER
33	BD	94	LEU
33	BD	95	LEU
33	BD	98	VAL
33	BD	103	ARG
33	BD	105	ILE
33	BD	106	ILE
33	BD	111	LEU
33	BD	112	GLN
33	BD	116	GLN
33	BD	117	VAL
33	BD	127	VAL
33	BD	142	VAL
33	BD	161	THR
33	BD	166	GLN
33	BD	168	ARG
33	BD	173	VAL
33	BD	192	THR
33	BD	198	ASN
33	BD	211	ARG
33	BD	212	SER
33	BD	217	ARG
33	BD	221	VAL
33	BD	229	VAL
33	BD	242	ARG
33	BD	254	THR
33	BD	255	LYS
33	BD	257	LEU

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Mol	Chain	Res	Type
33	BD	259	THR
33	BD	265	PRO
33	BD	271	ILE
34	BE	1	MET
34	BE	7	VAL
34	BE	12	THR
34	BE	21	VAL
34	BE	23	VAL
34	BE	24	THR
34	BE	33	VAL
34	BE	34	VAL
34	BE	47	VAL
34	BE	52	LEU
34	BE	60	ASN
34	BE	63	LEU
34	BE	66	HIS
34	BE	67	PHE
34	BE	69	LYS
34	BE	73	GLU
34	BE	75	VAL
34	BE	76	ARG
34	BE	77	ILE
34	BE	79	ARG
34	BE	82	ARG
34	BE	111	ARG
34	BE	116	VAL
34	BE	118	LYS
34	BE	119	ARG
34	BE	133	LYS
34	BE	134	ILE
34	BE	144	ARG
34	BE	152	LYS
34	BE	154	LYS
34	BE	160	TYR
34	BE	163	GLU
34	BE	169	ASN
34	BE	171	GLU
34	BE	175	VAL
34	BE	181	LEU
34	BE	197	ILE
34	BE	199	ARG
34	BE	202	LYS

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Mol	Chain	Res	Type
34	BE	203	LYS
35	BF	7	TYR
35	BF	20	LEU
35	BF	23	ASP
35	BF	28	ILE
35	BF	33	LEU
35	BF	38	ARG
35	BF	41	LEU
35	BF	46	ARG
35	BF	48	THR
35	BF	50	SER
35	BF	53	THR
35	BF	56	GLU
35	BF	57	VAL
35	BF	66	PRO
35	BF	74	ARG
35	BF	78	ILE
35	BF	82	ILE
35	BF	106	ARG
35	BF	112	MET
35	BF	116	ASP
35	BF	127	GLU
35	BF	137	LYS
35	BF	140	LEU
35	BF	160	ASN
35	BF	162	LEU
35	BF	164	ARG
35	BF	165	ARG
35	BF	168	ARG
35	BF	170	LEU
35	BF	175	THR
35	BF	183	VAL
35	BF	192	LEU
35	BF	194	MET
35	BF	197	ASP
35	BF	199	TRP
35	BF	201	VAL
35	BF	204	ASN
35	BF	206	ILE
36	BG	7	LEU
36	BG	16	ARG
36	BG	22	ARG

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Mol	Chain	Res	Type
36	BG	28	VAL
36	BG	34	LEU
36	BG	35	GLU
36	BG	39	ILE
36	BG	49	ASP
36	BG	58	GLN
36	BG	60	LEU
36	BG	63	ILE
36	BG	67	LYS
36	BG	80	PHE
36	BG	125	PHE
36	BG	143	GLU
36	BG	155	MET
36	BG	161	THR
36	BG	166	ASP
36	BG	174	GLU
37	BH	34	GLU
37	BH	41	MET
37	BH	46	GLU
37	BH	53	GLU
37	BH	70	THR
37	BH	71	LEU
37	BH	83	TYR
37	BH	95	ARG
37	BH	103	LEU
37	BH	105	LEU
37	BH	110	SER
37	BH	111	HIS
37	BH	122	THR
37	BH	134	SER
37	BH	136	ILE
37	BH	137	ASP
37	BH	141	VAL
37	BH	143	GLN
37	BH	149	ARG
37	BH	152	ARG
37	BH	153	LYS
37	BH	157	TYR
37	BH	159	GLU
37	BH	163	TYR
37	BH	170	ARG
38	BI	1	MET

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Mol	Chain	Res	Type
38	BI	12	LEU
38	BI	20	ASP
38	BI	22	LYS
38	BI	38	LEU
38	BI	40	THR
38	BI	51	ILE
38	BI	56	LYS
38	BI	58	LEU
38	BI	82	ARG
38	BI	88	ILE
38	BI	101	LEU
38	BI	109	ILE
38	BI	122	GLU
38	BI	129	THR
38	BI	142	VAL
38	BI	144	VAL
39	BN	2	LYS
39	BN	4	TYR
39	BN	5	VAL
39	BN	14	VAL
39	BN	16	ILE
39	BN	19	GLU
39	BN	23	LEU
39	BN	25	ARG
39	BN	28	THR
39	BN	33	LEU
39	BN	34	LEU
39	BN	37	LYS
39	BN	41	ASP
39	BN	45	ASN
39	BN	46	VAL
39	BN	48	MET
39	BN	55	VAL
39	BN	58	ASP
39	BN	60	ILE
39	BN	62	VAL
39	BN	63	THR
39	BN	65	LYS
39	BN	67	LEU
39	BN	69	GLN
39	BN	75	TYR
39	BN	78	TYR

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Mol	Chain	Res	Type
39	BN	82	LEU
39	BN	84	LYS
39	BN	85	ILE
39	BN	87	LEU
39	BN	98	VAL
39	BN	99	LEU
39	BN	112	LEU
39	BN	119	ARG
39	BN	120	LEU
39	BN	121	LYS
39	BN	130	HIS
39	BN	134	ARG
39	BN	138	LEU
40	BO	3	GLN
40	BO	8	LEU
40	BO	13	ASN
40	BO	22	ILE
40	BO	24	VAL
40	BO	28	SER
40	BO	47	ILE
40	BO	52	VAL
40	BO	63	VAL
40	BO	75	SER
40	BO	87	ILE
40	BO	88	ASN
40	BO	104	ARG
40	BO	108	GLU
40	BO	112	MET
41	BP	13	ASN
41	BP	16	ARG
41	BP	17	LYS
41	BP	18	ARG
41	BP	19	VAL
41	BP	21	ARG
41	BP	32	THR
41	BP	33	ARG
41	BP	39	LYS
41	BP	40	SER
41	BP	45	LEU
41	BP	47	ASP
41	BP	52	GLU
41	BP	55	ARG

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Mol	Chain	Res	Type
41	BP	57	THR
41	BP	59	LEU
41	BP	61	ARG
41	BP	62	LEU
41	BP	65	ARG
41	BP	67	MET
41	BP	70	GLN
41	BP	75	ILE
41	BP	77	ARG
41	BP	85	LEU
41	BP	100	LEU
41	BP	101	VAL
41	BP	102	ARG
41	BP	110	TYR
41	BP	111	ARG
41	BP	112	LEU
41	BP	114	ILE
41	BP	115	LEU
41	BP	123	LEU
41	BP	125	VAL
41	BP	135	LEU
41	BP	138	LEU
41	BP	144	GLU
41	BP	147	LEU
41	BP	148	LEU
42	BQ	6	ARG
42	BQ	9	TYR
42	BQ	13	GLN
42	BQ	18	LYS
42	BQ	22	LYS
42	BQ	27	VAL
42	BQ	29	PHE
42	BQ	35	VAL
42	BQ	45	GLN
42	BQ	52	VAL
42	BQ	54	MET
42	BQ	55	VAL
42	BQ	58	PHE
42	BQ	63	LYS
42	BQ	80	GLU
42	BQ	81	VAL
42	BQ	82	ARG

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Mol	Chain	Res	Type
42	BQ	87	LYS
42	BQ	91	GLU
42	BQ	103	MET
42	BQ	109	VAL
42	BQ	115	MET
42	BQ	127	ILE
42	BQ	132	VAL
42	BQ	139	GLU
42	BQ	141	GLN
43	BR	2	ARG
43	BR	5	LYS
43	BR	6	SER
43	BR	8	ARG
43	BR	15	SER
43	BR	16	HIS
43	BR	18	LEU
43	BR	28	LEU
43	BR	29	LEU
43	BR	30	THR
43	BR	36	THR
43	BR	44	LEU
43	BR	45	ARG
43	BR	53	HIS
43	BR	60	LEU
43	BR	65	LEU
43	BR	67	LEU
43	BR	71	GLN
43	BR	74	LYS
43	BR	75	LEU
43	BR	79	LEU
43	BR	99	LYS
43	BR	100	LEU
43	BR	103	ARG
43	BR	104	ARG
43	BR	115	GLU
43	BR	117	VAL
43	BR	118	GLU
44	BS	11	LYS
44	BS	15	ARG
44	BS	17	ARG
44	BS	30	ARG
44	BS	33	LYS

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Mol	Chain	Res	Type
44	BS	36	TYR
44	BS	48	LEU
44	BS	50	SER
44	BS	54	LEU
44	BS	56	LEU
44	BS	58	LEU
44	BS	61	ASN
44	BS	69	VAL
44	BS	73	LEU
44	BS	80	LEU
44	BS	83	LYS
44	BS	84	GLN
44	BS	85	VAL
44	BS	89	ARG
44	BS	92	TYR
44	BS	93	LYS
44	BS	95	HIS
44	BS	97	ARG
44	BS	98	VAL
44	BS	106	ARG
45	BT	3	ARG
45	BT	11	GLU
45	BT	13	ARG
45	BT	15	VAL
45	BT	16	ARG
45	BT	17	THR
45	BT	18	ASP
45	BT	24	PRO
45	BT	29	ARG
45	BT	32	TYR
45	BT	33	LYS
45	BT	38	ASN
45	BT	41	ARG
45	BT	53	ARG
45	BT	58	ASN
45	BT	59	THR
45	BT	62	THR
45	BT	63	VAL
45	BT	64	ARG
45	BT	65	LYS
45	BT	77	PRO
45	BT	82	LEU

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Mol	Chain	Res	Type
45	BT	88	ILE
45	BT	96	ARG
45	BT	98	LYS
45	BT	99	LEU
45	BT	108	ARG
45	BT	112	ARG
45	BT	115	ARG
45	BT	128	GLU
46	BU	8	VAL
46	BU	34	LYS
46	BU	55	ARG
46	BU	56	ASP
46	BU	64	ARG
46	BU	70	ARG
46	BU	74	LEU
46	BU	77	SER
46	BU	83	LEU
46	BU	88	ILE
46	BU	89	GLU
46	BU	92	ARG
46	BU	93	LYS
46	BU	95	LEU
46	BU	97	ASP
46	BU	102	GLU
47	BV	2	PHE
47	BV	7	THR
47	BV	14	VAL
47	BV	15	GLU
47	BV	18	LEU
47	BV	19	LYS
47	BV	21	ARG
47	BV	22	VAL
47	BV	23	GLU
47	BV	28	GLU
47	BV	32	THR
47	BV	35	LEU
47	BV	37	VAL
47	BV	38	LEU
47	BV	40	LEU
47	BV	56	SER
47	BV	62	LEU
47	BV	66	ARG

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Mol	Chain	Res	Type
47	BV	71	LEU
47	BV	78	LYS
47	BV	80	GLN
47	BV	82	ARG
47	BV	83	ARG
47	BV	88	ARG
47	BV	89	GLN
47	BV	92	THR
47	BV	93	GLU
47	BV	98	GLU
47	BV	100	ARG
48	BW	4	LYS
48	BW	11	ARG
48	BW	17	VAL
48	BW	19	LEU
48	BW	20	VAL
48	BW	23	LEU
48	BW	33	ARG
48	BW	50	VAL
48	BW	51	LEU
48	BW	64	MET
48	BW	69	LEU
48	BW	82	LEU
48	BW	96	ILE
48	BW	106	ILE
48	BW	107	LEU
49	BX	3	THR
49	BX	12	VAL
49	BX	15	GLU
49	BX	25	LYS
49	BX	27	THR
49	BX	30	VAL
49	BX	33	LYS
49	BX	35	THR
49	BX	36	LYS
49	BX	38	GLU
49	BX	39	ILE
49	BX	45	THR
49	BX	49	VAL
49	BX	55	ASN
49	BX	60	ARG
49	BX	65	ARG

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Mol	Chain	Res	Type
49	BX	76	ARG
49	BX	78	LYS
49	BX	88	LYS
50	BY	2	ARG
50	BY	6	HIS
50	BY	7	VAL
50	BY	8	LYS
50	BY	13	VAL
50	BY	38	ILE
50	BY	42	VAL
50	BY	46	LYS
50	BY	47	LYS
50	BY	49	VAL
50	BY	55	TYR
50	BY	60	PHE
50	BY	62	GLU
50	BY	66	PRO
50	BY	70	SER
50	BY	71	LYS
50	BY	75	ILE
50	BY	76	CYS
50	BY	81	LYS
50	BY	86	ARG
50	BY	89	PHE
50	BY	90	LEU
50	BY	94	LYS
50	BY	96	ILE
50	BY	97	ARG
50	BY	99	CYS
51	BZ	6	LYS
51	BZ	19	ARG
51	BZ	27	VAL
51	BZ	42	VAL
51	BZ	53	ILE
51	BZ	72	ARG
51	BZ	73	GLN
51	BZ	79	ARG
51	BZ	81	ARG
51	BZ	86	VAL
51	BZ	87	ASP
51	BZ	93	ASP
51	BZ	97	GLU

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Mol	Chain	Res	Type
51	BZ	98	MET
51	BZ	117	LEU
51	BZ	121	HIS
51	BZ	124	ILE
51	BZ	128	VAL
51	BZ	140	ASP
51	BZ	150	LEU
51	BZ	151	HIS
51	BZ	153	SER
51	BZ	166	SER
51	BZ	171	ILE
2	CB	10	LEU
2	CB	15	VAL
2	CB	17	PHE
2	CB	22	LYS
2	CB	24	TRP
2	CB	36	ARG
2	CB	42	ILE
2	CB	69	LEU
2	CB	111	ARG
2	CB	130	ARG
2	CB	137	ARG
2	CB	145	LEU
2	CB	164	VAL
2	CB	165	VAL
2	CB	172	ILE
2	CB	178	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	189	ASP
2	CB	193	ASP
2	CB	205	ASP
2	CB	206	ASP
2	CB	215	LEU
2	CB	221	LEU
3	CC	5	ILE
3	CC	12	LEU
3	CC	16	ARG
3	CC	27	LYS
3	CC	104	GLN
3	CC	127	ARG
3	CC	131	ARG

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Mol	Chain	Res	Type
4	CD	3	ARG
4	CD	8	VAL
4	CD	9	CYS
4	CD	11	LEU
4	CD	15	GLU
4	CD	19	LEU
4	CD	21	LEU
4	CD	24	GLU
4	CD	25	ARG
4	CD	45	GLN
4	CD	58	LEU
4	CD	64	LEU
4	CD	68	TYR
4	CD	94	LEU
4	CD	119	GLN
4	CD	122	ARG
4	CD	127	THR
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR
4	CD	158	ILE
4	CD	170	VAL
4	CD	194	LEU
4	CD	196	LEU
4	CD	204	ILE
4	CD	209	ARG
5	CE	12	LEU
5	CE	20	GLN
5	CE	25	ARG
5	CE	31	LEU
5	CE	41	VAL
5	CE	55	VAL
5	CE	73	ASN
5	CE	76	ILE
5	CE	78	HIS
5	CE	79	GLU
5	CE	87	SER
5	CE	91	LEU
5	CE	98	THR
5	CE	101	ILE
5	CE	110	LEU

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Mol	Chain	Res	Type
5	CE	115	VAL
5	CE	143	ARG
5	CE	147	ASP
6	CF	7	ASN
6	CF	18	GLN
6	CF	21	LEU
6	CF	23	LYS
6	CF	45	LEU
6	CF	46	ARG
6	CF	55	ASP
6	CF	63	TYR
6	CF	65	VAL
6	CF	83	ASP
6	CF	98	LEU
7	CG	79	ARG
7	CG	120	ILE
7	CG	136	LYS
7	CG	137	LYS
8	CH	1	MET
8	CH	10	LEU
8	CH	25	ASP
8	CH	41	ARG
8	CH	52	ASP
8	CH	95	VAL
8	CH	102	ARG
8	CH	114	THR
8	CH	127	LEU
9	CI	10	ARG
9	CI	95	LYS
9	CI	99	LEU
9	CI	102	LEU
9	CI	113	LYS
9	CI	114	TYR
9	CI	121	ARG
9	CI	125	TYR
9	CI	128	ARG
10	CJ	12	ASP
10	CJ	22	LYS
10	CJ	45	ARG
10	CJ	47	PHE
10	CJ	50	ILE
10	CJ	57	LYS

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Mol	Chain	Res	Type
10	CJ	62	HIS
10	CJ	74	ILE
10	CJ	80	LYS
10	CJ	96	ILE
11	CK	29	ILE
11	CK	47	VAL
11	CK	92	GLU
11	CK	107	SER
11	CK	125	PHE
11	CK	127	LYS
12	CL	20	LYS
12	CL	41	ARG
12	CL	42	THR
12	CL	52	LEU
12	CL	53	ARG
12	CL	62	SER
12	CL	66	VAL
12	CL	85	ILE
12	CL	89	ARG
12	CL	92	ASP
12	CL	102	ARG
12	CL	116	SER
13	CM	48	LEU
13	CM	66	LEU
13	CM	70	LEU
13	CM	93	ARG
13	CM	108	ARG
14	CN	18	VAL
14	CN	42	ILE
14	CN	44	LEU
15	CO	3	ILE
15	CO	17	ARG
15	CO	24	SER
15	CO	31	LEU
15	CO	41	GLU
15	CO	65	ARG
15	CO	66	LEU
15	CO	82	ILE
16	CP	2	VAL
16	CP	8	ARG
16	CP	11	SER
16	CP	16	HIS

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Mol	Chain	Res	Type
16	CP	20	VAL
16	CP	22	THR
16	CP	27	LYS
16	CP	28	ARG
16	CP	32	TYR
16	CP	39	TYR
16	CP	43	LYS
16	CP	48	TRP
16	CP	69	THR
16	CP	79	VAL
16	CP	82	GLN
17	CQ	52	LYS
17	CQ	57	VAL
17	CQ	60	ILE
17	CQ	63	ARG
17	CQ	68	ARG
18	CR	47	THR
18	CR	53	ARG
18	CR	70	ILE
18	CR	87	ARG
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	22	LEU
19	CS	27	GLU
19	CS	44	MET
19	CS	49	ILE
20	CT	9	ASN
20	CT	26	ASN
20	CT	27	LYS
20	CT	30	LYS
20	CT	41	ILE
20	CT	56	MET
20	CT	57	ARG
20	CT	62	LEU
20	CT	74	LYS
20	CT	75	ASN
20	CT	93	GLU
22	D0	11	ARG
22	D0	14	ARG
22	D0	20	ARG
22	D0	25	ARG

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Mol	Chain	Res	Type
22	D0	36	ILE
22	D0	70	GLN
22	D0	72	ARG
22	D0	84	LEU
23	D1	12	PRO
23	D1	13	ILE
23	D1	14	VAL
23	D1	21	ARG
23	D1	25	LYS
23	D1	26	ARG
23	D1	34	THR
23	D1	37	ILE
23	D1	41	ARG
23	D1	42	GLN
23	D1	46	LEU
23	D1	48	LYS
23	D1	56	GLN
23	D1	62	VAL
23	D1	65	SER
23	D1	67	ILE
23	D1	89	GLU
23	D1	94	LEU
24	D2	12	GLU
24	D2	14	ARG
24	D2	22	GLU
24	D2	26	ARG
24	D2	30	ARG
24	D2	31	GLU
24	D2	32	LEU
24	D2	33	MET
24	D2	35	LEU
24	D2	36	ARG
24	D2	44	LEU
24	D2	45	SER
24	D2	46	GLN
24	D2	47	ASN
24	D2	50	ILE
24	D2	51	ARG
24	D2	53	LEU
24	D2	56	GLN
24	D2	59	ARG
25	D3	8	LEU

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Mol	Chain	Res	Type
25	D3	35	ARG
25	D3	58	VAL
27	D5	3	LYS
27	D5	4	HIS
27	D5	6	VAL
27	D5	11	THR
27	D5	16	ARG
27	D5	26	THR
27	D5	29	THR
27	D5	40	LYS
27	D5	44	THR
27	D5	49	CYS
27	D5	55	ARG
27	D5	56	LYS
27	D5	58	LEU
28	D6	9	LEU
28	D6	10	LEU
28	D6	14	THR
28	D6	18	ARG
28	D6	19	ARG
28	D6	24	GLU
28	D6	30	THR
28	D6	35	GLU
28	D6	37	ARG
28	D6	42	TRP
28	D6	43	CYS
28	D6	44	ARG
28	D6	46	HIS
28	D6	47	THR
28	D6	48	VAL
28	D6	51	GLU
28	D6	52	VAL
29	D7	1	MET
29	D7	8	ASN
29	D7	9	ARG
29	D7	10	ARG
29	D7	24	THR
29	D7	32	LYS
29	D7	41	ARG
29	D7	48	LYS
30	D8	4	MET
30	D8	6	THR

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Mol	Chain	Res	Type
30	D8	13	ARG
30	D8	23	VAL
30	D8	32	LEU
30	D8	39	LYS
30	D8	44	LYS
30	D8	47	LYS
30	D8	49	VAL
30	D8	56	GLU
33	DD	5	LYS
33	DD	13	ARG
33	DD	17	THR
33	DD	26	LYS
33	DD	31	LYS
33	DD	43	ARG
33	DD	44	ASN
33	DD	46	GLN
33	DD	61	LEU
33	DD	64	ILE
33	DD	65	ILE
33	DD	71	ASP
33	DD	73	VAL
33	DD	88	ARG
33	DD	89	SER
33	DD	94	LEU
33	DD	95	LEU
33	DD	98	VAL
33	DD	103	ARG
33	DD	105	ILE
33	DD	106	ILE
33	DD	111	LEU
33	DD	112	GLN
33	DD	116	GLN
33	DD	117	VAL
33	DD	127	VAL
33	DD	142	VAL
33	DD	161	THR
33	DD	165	ILE
33	DD	166	GLN
33	DD	173	VAL
33	DD	192	THR
33	DD	198	ASN
33	DD	211	ARG

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Mol	Chain	Res	Type
33	DD	212	SER
33	DD	217	ARG
33	DD	221	VAL
33	DD	229	VAL
33	DD	242	ARG
33	DD	254	THR
33	DD	255	LYS
33	DD	257	LEU
33	DD	259	THR
33	DD	271	ILE
34	DE	1	MET
34	DE	7	VAL
34	DE	12	THR
34	DE	21	VAL
34	DE	23	VAL
34	DE	24	THR
34	DE	33	VAL
34	DE	47	VAL
34	DE	52	LEU
34	DE	60	ASN
34	DE	63	LEU
34	DE	66	HIS
34	DE	67	PHE
34	DE	69	LYS
34	DE	73	GLU
34	DE	75	VAL
34	DE	76	ARG
34	DE	77	ILE
34	DE	79	ARG
34	DE	82	ARG
34	DE	111	ARG
34	DE	116	VAL
34	DE	118	LYS
34	DE	119	ARG
34	DE	133	LYS
34	DE	134	ILE
34	DE	144	ARG
34	DE	152	LYS
34	DE	154	LYS
34	DE	160	TYR
34	DE	163	GLU
34	DE	169	ASN

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Mol	Chain	Res	Type
34	DE	170	LEU
34	DE	171	GLU
34	DE	175	VAL
34	DE	181	LEU
34	DE	197	ILE
34	DE	202	LYS
34	DE	203	LYS
35	DF	7	TYR
35	DF	20	LEU
35	DF	23	ASP
35	DF	28	ILE
35	DF	33	LEU
35	DF	38	ARG
35	DF	41	LEU
35	DF	46	ARG
35	DF	48	THR
35	DF	50	SER
35	DF	53	THR
35	DF	56	GLU
35	DF	57	VAL
35	DF	74	ARG
35	DF	78	ILE
35	DF	106	ARG
35	DF	112	MET
35	DF	116	ASP
35	DF	127	GLU
35	DF	137	LYS
35	DF	140	LEU
35	DF	160	ASN
35	DF	162	LEU
35	DF	164	ARG
35	DF	165	ARG
35	DF	168	ARG
35	DF	170	LEU
35	DF	175	THR
35	DF	183	VAL
35	DF	192	LEU
35	DF	194	MET
35	DF	197	ASP
35	DF	199	TRP
35	DF	201	VAL
35	DF	204	ASN

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Mol	Chain	Res	Type
35	DF	206	ILE
36	DG	7	LEU
36	DG	16	ARG
36	DG	22	ARG
36	DG	28	VAL
36	DG	34	LEU
36	DG	35	GLU
36	DG	39	ILE
36	DG	45	GLU
36	DG	49	ASP
36	DG	58	GLN
36	DG	60	LEU
36	DG	63	ILE
36	DG	67	LYS
36	DG	80	PHE
36	DG	125	PHE
36	DG	143	GLU
36	DG	155	MET
36	DG	161	THR
36	DG	166	ASP
36	DG	174	GLU
37	DH	34	GLU
37	DH	41	MET
37	DH	46	GLU
37	DH	53	GLU
37	DH	71	LEU
37	DH	83	TYR
37	DH	95	ARG
37	DH	103	LEU
37	DH	105	LEU
37	DH	110	SER
37	DH	111	HIS
37	DH	122	THR
37	DH	134	SER
37	DH	136	ILE
37	DH	137	ASP
37	DH	141	VAL
37	DH	143	GLN
37	DH	149	ARG
37	DH	152	ARG
37	DH	153	LYS
37	DH	157	TYR

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Mol	Chain	Res	Type
37	DH	159	GLU
37	DH	163	TYR
37	DH	170	ARG
38	DI	1	MET
38	DI	12	LEU
38	DI	20	ASP
38	DI	22	LYS
38	DI	38	LEU
38	DI	40	THR
38	DI	51	ILE
38	DI	56	LYS
38	DI	58	LEU
38	DI	82	ARG
38	DI	88	ILE
38	DI	101	LEU
38	DI	109	ILE
38	DI	122	GLU
38	DI	129	THR
38	DI	142	VAL
38	DI	144	VAL
39	DN	2	LYS
39	DN	4	TYR
39	DN	5	VAL
39	DN	14	VAL
39	DN	16	ILE
39	DN	19	GLU
39	DN	23	LEU
39	DN	25	ARG
39	DN	28	THR
39	DN	33	LEU
39	DN	34	LEU
39	DN	37	LYS
39	DN	41	ASP
39	DN	45	ASN
39	DN	46	VAL
39	DN	48	MET
39	DN	55	VAL
39	DN	58	ASP
39	DN	60	ILE
39	DN	62	VAL
39	DN	63	THR
39	DN	65	LYS

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Mol	Chain	Res	Type
39	DN	67	LEU
39	DN	69	GLN
39	DN	75	TYR
39	DN	78	TYR
39	DN	82	LEU
39	DN	84	LYS
39	DN	85	ILE
39	DN	87	LEU
39	DN	98	VAL
39	DN	99	LEU
39	DN	112	LEU
39	DN	119	ARG
39	DN	120	LEU
39	DN	121	LYS
39	DN	130	HIS
39	DN	134	ARG
39	DN	138	LEU
40	DO	3	GLN
40	DO	8	LEU
40	DO	13	ASN
40	DO	22	ILE
40	DO	24	VAL
40	DO	28	SER
40	DO	47	ILE
40	DO	52	VAL
40	DO	63	VAL
40	DO	75	SER
40	DO	87	ILE
40	DO	88	ASN
40	DO	104	ARG
40	DO	108	GLU
40	DO	112	MET
41	DP	13	ASN
41	DP	15	ARG
41	DP	16	ARG
41	DP	17	LYS
41	DP	18	ARG
41	DP	19	VAL
41	DP	21	ARG
41	DP	32	THR
41	DP	33	ARG
41	DP	39	LYS

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Mol	Chain	Res	Type
41	DP	40	SER
41	DP	45	LEU
41	DP	47	ASP
41	DP	52	GLU
41	DP	55	ARG
41	DP	57	THR
41	DP	59	LEU
41	DP	61	ARG
41	DP	62	LEU
41	DP	65	ARG
41	DP	67	MET
41	DP	70	GLN
41	DP	75	ILE
41	DP	77	ARG
41	DP	85	LEU
41	DP	95	VAL
41	DP	100	LEU
41	DP	101	VAL
41	DP	102	ARG
41	DP	110	TYR
41	DP	111	ARG
41	DP	112	LEU
41	DP	114	ILE
41	DP	115	LEU
41	DP	123	LEU
41	DP	125	VAL
41	DP	135	LEU
41	DP	138	LEU
41	DP	144	GLU
41	DP	147	LEU
41	DP	148	LEU
42	DQ	6	ARG
42	DQ	9	TYR
42	DQ	13	GLN
42	DQ	18	LYS
42	DQ	22	LYS
42	DQ	27	VAL
42	DQ	29	PHE
42	DQ	35	VAL
42	DQ	45	GLN
42	DQ	52	VAL
42	DQ	54	MET

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Mol	Chain	Res	Type
42	DQ	55	VAL
42	DQ	63	LYS
42	DQ	80	GLU
42	DQ	81	VAL
42	DQ	82	ARG
42	DQ	91	GLU
42	DQ	103	MET
42	DQ	106	VAL
42	DQ	109	VAL
42	DQ	115	MET
42	DQ	127	ILE
42	DQ	132	VAL
42	DQ	139	GLU
42	DQ	141	GLN
43	DR	2	ARG
43	DR	5	LYS
43	DR	6	SER
43	DR	8	ARG
43	DR	16	HIS
43	DR	18	LEU
43	DR	28	LEU
43	DR	29	LEU
43	DR	30	THR
43	DR	36	THR
43	DR	44	LEU
43	DR	45	ARG
43	DR	56	LYS
43	DR	60	LEU
43	DR	65	LEU
43	DR	67	LEU
43	DR	71	GLN
43	DR	74	LYS
43	DR	75	LEU
43	DR	79	LEU
43	DR	99	LYS
43	DR	100	LEU
43	DR	103	ARG
43	DR	104	ARG
43	DR	115	GLU
43	DR	117	VAL
43	DR	118	GLU
44	DS	11	LYS

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Mol	Chain	Res	Type
44	DS	15	ARG
44	DS	17	ARG
44	DS	30	ARG
44	DS	33	LYS
44	DS	36	TYR
44	DS	48	LEU
44	DS	50	SER
44	DS	54	LEU
44	DS	56	LEU
44	DS	58	LEU
44	DS	61	ASN
44	DS	69	VAL
44	DS	73	LEU
44	DS	80	LEU
44	DS	83	LYS
44	DS	84	GLN
44	DS	85	VAL
44	DS	89	ARG
44	DS	92	TYR
44	DS	93	LYS
44	DS	95	HIS
44	DS	97	ARG
44	DS	98	VAL
44	DS	106	ARG
45	DT	3	ARG
45	DT	13	ARG
45	DT	15	VAL
45	DT	16	ARG
45	DT	17	THR
45	DT	18	ASP
45	DT	24	PRO
45	DT	29	ARG
45	DT	32	TYR
45	DT	33	LYS
45	DT	38	ASN
45	DT	41	ARG
45	DT	53	ARG
45	DT	58	ASN
45	DT	59	THR
45	DT	62	THR
45	DT	63	VAL
45	DT	64	ARG

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Mol	Chain	Res	Type
45	DT	65	LYS
45	DT	82	LEU
45	DT	88	ILE
45	DT	96	ARG
45	DT	98	LYS
45	DT	99	LEU
45	DT	108	ARG
45	DT	112	ARG
45	DT	115	ARG
45	DT	128	GLU
46	DU	8	VAL
46	DU	27	LEU
46	DU	34	LYS
46	DU	55	ARG
46	DU	56	ASP
46	DU	64	ARG
46	DU	70	ARG
46	DU	74	LEU
46	DU	77	SER
46	DU	83	LEU
46	DU	88	ILE
46	DU	89	GLU
46	DU	90	VAL
46	DU	92	ARG
46	DU	93	LYS
46	DU	97	ASP
46	DU	102	GLU
47	DV	2	PHE
47	DV	14	VAL
47	DV	15	GLU
47	DV	18	LEU
47	DV	19	LYS
47	DV	21	ARG
47	DV	22	VAL
47	DV	23	GLU
47	DV	28	GLU
47	DV	32	THR
47	DV	35	LEU
47	DV	37	VAL
47	DV	38	LEU
47	DV	40	LEU
47	DV	56	SER

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Mol	Chain	Res	Type
47	DV	62	LEU
47	DV	66	ARG
47	DV	71	LEU
47	DV	78	LYS
47	DV	80	GLN
47	DV	82	ARG
47	DV	83	ARG
47	DV	88	ARG
47	DV	89	GLN
47	DV	92	THR
47	DV	93	GLU
47	DV	98	GLU
47	DV	100	ARG
48	DW	4	LYS
48	DW	11	ARG
48	DW	17	VAL
48	DW	19	LEU
48	DW	20	VAL
48	DW	23	LEU
48	DW	33	ARG
48	DW	50	VAL
48	DW	51	LEU
48	DW	64	MET
48	DW	69	LEU
48	DW	82	LEU
48	DW	96	ILE
48	DW	106	ILE
48	DW	107	LEU
49	DX	3	THR
49	DX	12	VAL
49	DX	15	GLU
49	DX	21	PHE
49	DX	25	LYS
49	DX	27	THR
49	DX	30	VAL
49	DX	33	LYS
49	DX	35	THR
49	DX	36	LYS
49	DX	38	GLU
49	DX	39	ILE
49	DX	45	THR
49	DX	49	VAL

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Mol	Chain	Res	Type
49	DX	55	ASN
49	DX	60	ARG
49	DX	65	ARG
49	DX	76	ARG
49	DX	78	LYS
49	DX	88	LYS
50	DY	2	ARG
50	DY	6	HIS
50	DY	7	VAL
50	DY	8	LYS
50	DY	13	VAL
50	DY	38	ILE
50	DY	42	VAL
50	DY	46	LYS
50	DY	47	LYS
50	DY	49	VAL
50	DY	55	TYR
50	DY	60	PHE
50	DY	62	GLU
50	DY	66	PRO
50	DY	70	SER
50	DY	71	LYS
50	DY	75	ILE
50	DY	76	CYS
50	DY	81	LYS
50	DY	86	ARG
50	DY	89	PHE
50	DY	90	LEU
50	DY	94	LYS
50	DY	96	ILE
50	DY	97	ARG
50	DY	99	CYS
51	DZ	6	LYS
51	DZ	19	ARG
51	DZ	27	VAL
51	DZ	42	VAL
51	DZ	53	ILE
51	DZ	72	ARG
51	DZ	73	GLN
51	DZ	79	ARG
51	DZ	81	ARG
51	DZ	86	VAL

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Mol	Chain	Res	Type
51	DZ	87	ASP
51	DZ	93	ASP
51	DZ	97	GLU
51	DZ	98	MET
51	DZ	117	LEU
51	DZ	121	HIS
51	DZ	124	ILE
51	DZ	128	VAL
51	DZ	140	ASP
51	DZ	150	LEU
51	DZ	151	HIS
51	DZ	153	SER
51	DZ	166	SER
51	DZ	171	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (291) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS
2	AB	40	HIS
2	AB	135	GLN
2	AB	146	GLN
2	AB	204	ASN
3	AC	3	ASN
3	AC	6	HIS
3	AC	28	GLN
3	AC	37	GLN
3	AC	69	HIS
3	AC	118	GLN
3	AC	170	GLN
4	AD	62	GLN
4	AD	77	ASN
4	AD	123	HIS
4	AD	129	ASN
5	AE	20	GLN
5	AE	78	HIS
6	AF	7	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	64	GLN
6	AF	100	ASN
7	AG	13	GLN

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Mol	Chain	Res	Type
7	AG	37	ASN
7	AG	84	ASN
7	AG	97	GLN
7	AG	106	GLN
8	AH	82	HIS
9	AI	117	HIS
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	78	ASN
11	AK	117	ASN
12	AL	8	ASN
12	AL	49	ASN
12	AL	75	HIS
13	AM	77	ASN
15	AO	37	ASN
15	AO	46	HIS
16	AP	13	HIS
16	AP	76	GLN
16	AP	82	GLN
17	AQ	16	GLN
19	AS	53	ASN
20	AT	26	ASN
20	AT	75	ASN
22	B0	29	GLN
23	B1	19	GLN
23	B1	66	HIS
24	B2	38	GLN
24	B2	46	GLN
24	B2	47	ASN
24	B2	56	GLN
25	B3	19	GLN
25	B3	46	ASN
25	B3	52	HIS
27	B5	4	HIS
27	B5	43	HIS
28	B6	20	ASN
28	B6	26	ASN
28	B6	32	ASN
29	B7	8	ASN
29	B7	36	GLN
30	B8	35	GLN
33	BD	58	HIS

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Mol	Chain	Res	Type
33	BD	96	HIS
33	BD	126	GLN
33	BD	143	HIS
33	BD	164	GLN
33	BD	166	GLN
33	BD	186	HIS
33	BD	198	ASN
34	BE	48	GLN
34	BE	54	GLN
34	BE	55	ASN
34	BE	66	HIS
34	BE	85	ASN
34	BE	129	HIS
34	BE	132	HIS
34	BE	169	ASN
34	BE	192	ASN
35	BF	69	HIS
35	BF	75	HIS
35	BF	160	ASN
35	BF	169	ASN
36	BG	40	ASN
36	BG	58	GLN
36	BG	66	GLN
37	BH	65	HIS
37	BH	143	GLN
37	BH	147	ASN
37	BH	158	HIS
38	BI	43	ASN
38	BI	104	GLN
38	BI	105	HIS
38	BI	133	HIS
39	BN	45	ASN
39	BN	69	GLN
39	BN	130	HIS
40	BO	3	GLN
40	BO	13	ASN
40	BO	82	ASN
40	BO	89	ASN
41	BP	13	ASN
41	BP	81	GLN
41	BP	128	HIS
42	BQ	13	GLN

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Mol	Chain	Res	Type
42	BQ	141	GLN
43	BR	13	HIS
43	BR	16	HIS
43	BR	23	ASN
43	BR	24	GLN
43	BR	53	HIS
43	BR	71	GLN
43	BR	91	GLN
44	BS	34	HIS
44	BS	61	ASN
44	BS	68	GLN
45	BT	38	ASN
45	BT	43	GLN
45	BT	58	ASN
45	BT	90	GLN
46	BU	49	HIS
46	BU	75	ASN
46	BU	94	ASN
47	BV	11	GLN
47	BV	64	HIS
47	BV	87	HIS
47	BV	89	GLN
48	BW	34	ASN
48	BW	57	ASN
48	BW	61	ASN
48	BW	62	HIS
48	BW	102	HIS
48	BW	111	HIS
49	BX	31	HIS
49	BX	41	ASN
49	BX	55	ASN
49	BX	87	GLN
51	BZ	30	ASN
51	BZ	54	HIS
51	BZ	55	HIS
51	BZ	151	HIS
2	CB	19	HIS
2	CB	40	HIS
2	CB	135	GLN
2	CB	146	GLN
2	CB	204	ASN
3	CC	3	ASN

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Mol	Chain	Res	Type
3	CC	6	HIS
3	CC	28	GLN
3	CC	37	GLN
3	CC	69	HIS
3	CC	118	GLN
3	CC	170	GLN
4	CD	62	GLN
4	CD	77	ASN
4	CD	123	HIS
4	CD	129	ASN
5	CE	20	GLN
5	CE	72	GLN
5	CE	78	HIS
6	CF	7	ASN
6	CF	18	GLN
6	CF	27	GLN
6	CF	64	GLN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
7	CG	84	ASN
7	CG	97	GLN
7	CG	106	GLN
7	CG	153	HIS
8	CH	82	HIS
9	CI	117	HIS
9	CI	124	GLN
10	CJ	13	HIS
10	CJ	78	ASN
11	CK	38	ASN
11	CK	117	ASN
12	CL	8	ASN
12	CL	49	ASN
12	CL	75	HIS
13	CM	77	ASN
15	CO	37	ASN
15	CO	46	HIS
16	CP	13	HIS
16	CP	76	GLN
16	CP	82	GLN
17	CQ	16	GLN
19	CS	53	ASN

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Mol	Chain	Res	Type
20	CT	26	ASN
20	CT	75	ASN
22	D0	29	GLN
23	D1	19	GLN
23	D1	66	HIS
24	D2	38	GLN
24	D2	46	GLN
24	D2	47	ASN
24	D2	56	GLN
25	D3	19	GLN
25	D3	46	ASN
25	D3	52	HIS
27	D5	4	HIS
27	D5	43	HIS
28	D6	20	ASN
28	D6	26	ASN
28	D6	32	ASN
29	D7	8	ASN
29	D7	36	GLN
30	D8	35	GLN
33	DD	58	HIS
33	DD	96	HIS
33	DD	126	GLN
33	DD	143	HIS
33	DD	164	GLN
33	DD	166	GLN
33	DD	186	HIS
33	DD	198	ASN
34	DE	48	GLN
34	DE	54	GLN
34	DE	55	ASN
34	DE	60	ASN
34	DE	66	HIS
34	DE	85	ASN
34	DE	129	HIS
34	DE	132	HIS
34	DE	169	ASN
34	DE	192	ASN
35	DF	69	HIS
35	DF	75	HIS
35	DF	160	ASN
35	DF	169	ASN

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Mol	Chain	Res	Type
36	DG	40	ASN
36	DG	66	GLN
36	DG	108	ASN
37	DH	65	HIS
37	DH	147	ASN
37	DH	158	HIS
38	DI	43	ASN
38	DI	104	GLN
38	DI	133	HIS
39	DN	45	ASN
39	DN	69	GLN
39	DN	130	HIS
40	DO	3	GLN
40	DO	13	ASN
40	DO	82	ASN
40	DO	89	ASN
41	DP	13	ASN
41	DP	81	GLN
41	DP	128	HIS
42	DQ	12	GLN
42	DQ	13	GLN
42	DQ	141	GLN
43	DR	13	HIS
43	DR	16	HIS
43	DR	23	ASN
43	DR	24	GLN
43	DR	53	HIS
43	DR	71	GLN
43	DR	91	GLN
44	DS	34	HIS
44	DS	61	ASN
44	DS	68	GLN
45	DT	38	ASN
45	DT	43	GLN
45	DT	58	ASN
45	DT	90	GLN
46	DU	49	HIS
46	DU	75	ASN
46	DU	94	ASN
47	DV	11	GLN
47	DV	64	HIS
47	DV	87	HIS

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Mol	Chain	Res	Type
47	DV	89	GLN
48	DW	34	ASN
48	DW	57	ASN
48	DW	61	ASN
48	DW	62	HIS
48	DW	102	HIS
48	DW	111	HIS
49	DX	31	HIS
49	DX	41	ASN
49	DX	55	ASN
49	DX	87	GLN
51	DZ	30	ASN
51	DZ	54	HIS
51	DZ	55	HIS
51	DZ	151	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	283 (18%)	29 (1%)
1	CA	1503/1522 (98%)	280 (18%)	29 (1%)
31	BA	2723/2787 (97%)	723 (26%)	73 (2%)
31	DA	2723/2787 (97%)	726 (26%)	70 (2%)
32	BB	118/122 (96%)	35 (29%)	1 (0%)
32	DB	118/122 (96%)	34 (28%)	1 (0%)
All	All	8688/8862 (98%)	2081 (23%)	203 (2%)

All (2081) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	61	G
1	AA	80	G
1	AA	81	U
1	AA	90	U

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Mol	Chain	Res	Type
1	AA	91	C
1	AA	97	G
1	AA	98	G
1	AA	101	A
1	AA	108	G
1	AA	115	G
1	AA	116	A
1	AA	119	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	138	G
1	AA	144	G
1	AA	147	G
1	AA	150	C
1	AA	152	A
1	AA	163	C
1	AA	168	G
1	AA	172	A
1	AA	173	U
1	AA	181	G
1	AA	182	U
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	189(J)	G
1	AA	195	A
1	AA	197	A
1	AA	199	G
1	AA	201	C
1	AA	202	U
1	AA	203	U
1	AA	216	G
1	AA	220	G
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	281	G
1	AA	289	G

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Mol	Chain	Res	Type
1	AA	296	U
1	AA	297	G
1	AA	298	A
1	AA	301	G
1	AA	306	G
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	343	U
1	AA	345	C
1	AA	351	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	357	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	384	G
1	AA	388	G
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	418	C
1	AA	419	C
1	AA	422	C
1	AA	424	G
1	AA	427	U
1	AA	429	U
1	AA	430	A
1	AA	435	C
1	AA	437	U
1	AA	439	A
1	AA	442	C
1	AA	448	A
1	AA	452	A
1	AA	461	A
1	AA	472	A

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Mol	Chain	Res	Type
1	AA	484	G
1	AA	485	G
1	AA	487	A
1	AA	496	A
1	AA	498	U
1	AA	499	A
1	AA	505	G
1	AA	508	C
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	513	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	547	A
1	AA	559	A
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	588	G
1	AA	596	C
1	AA	616	G
1	AA	623	C
1	AA	630	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	671	G
1	AA	674	G
1	AA	687	A
1	AA	688	G
1	AA	693	G
1	AA	724	G
1	AA	725	G

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Mol	Chain	Res	Type
1	AA	731	G
1	AA	748	C
1	AA	749	C
1	AA	753	A
1	AA	754	C
1	AA	755	G
1	AA	760	G
1	AA	765	G
1	AA	766	A
1	AA	777	A
1	AA	782	A
1	AA	786	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	818	G
1	AA	827	U
1	AA	828	A
1	AA	833	U
1	AA	836	G
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	864	A
1	AA	869	G
1	AA	870	U
1	AA	872	A
1	AA	902	G
1	AA	914	A
1	AA	916	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C

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Mol	Chain	Res	Type
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1005	A
1	AA	1026	G
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1081	G
1	AA	1095	U
1	AA	1101	A
1	AA	1103	C
1	AA	1113	C
1	AA	1117	G
1	AA	1118	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G

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Mol	Chain	Res	Type
1	AA	1204	A
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1310	G
1	AA	1312	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1332	A
1	AA	1334	G
1	AA	1335	C
1	AA	1338	G
1	AA	1347	G
1	AA	1363	C
1	AA	1364	U
1	AA	1370	G
1	AA	1388	C
1	AA	1397	C
1	AA	1416	G
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G

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Mol	Chain	Res	Type
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
31	BA	10	G
31	BA	12	U
31	BA	15	G
31	BA	34	C
31	BA	35	G
31	BA	36	G
31	BA	45	C
31	BA	49	A
31	BA	50	U
31	BA	51	G
31	BA	55	G
31	BA	61	G
31	BA	64	A
31	BA	71	A
31	BA	72	U
31	BA	74	A
31	BA	75	G
31	BA	84	A
31	BA	90	U
31	BA	92	A
31	BA	94	C
31	BA	95	G

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Mol	Chain	Res	Type
31	BA	100	G
31	BA	102	G
31	BA	103	A
31	BA	105	C
31	BA	117	G
31	BA	118	A
31	BA	119	A
31	BA	120	U
31	BA	125	G
31	BA	129	C
31	BA	131	G
31	BA	137	C
31	BA	139(A)	G
31	BA	142	A
31	BA	142(A)	C
31	BA	146	G
31	BA	154(A)	C
31	BA	157	U
31	BA	158	U
31	BA	171	G
31	BA	173	G
31	BA	174	C
31	BA	175	G
31	BA	182	A
31	BA	188	G
31	BA	196	A
31	BA	197	A
31	BA	199	A
31	BA	204	A
31	BA	205	G
31	BA	214	G
31	BA	215	G
31	BA	216	A
31	BA	221	A
31	BA	222	A
31	BA	225	A
31	BA	228	A
31	BA	229	A
31	BA	233	A
31	BA	248	G
31	BA	250	G
31	BA	252	G

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Mol	Chain	Res	Type
31	BA	266	G
31	BA	271(J)	C
31	BA	271(K)	U
31	BA	271(L)	U
31	BA	271(M)	G
31	BA	271(N)	U
31	BA	271(O)	C
31	BA	271(P)	C
31	BA	271(R)	G
31	BA	271(U)	G
31	BA	272	G
31	BA	272(B)	G
31	BA	272(H)	C
31	BA	272(I)	U
31	BA	272(J)	C
31	BA	274	G
31	BA	275	G
31	BA	279	C
31	BA	281	G
31	BA	286	C
31	BA	287	C
31	BA	298	G
31	BA	299	A
31	BA	310	A
31	BA	311	A
31	BA	324	A
31	BA	329	G
31	BA	330	A
31	BA	332	A
31	BA	346	A
31	BA	347	A
31	BA	350	U
31	BA	352	G
31	BA	353	G
31	BA	362	U
31	BA	363(B)	G
31	BA	363(C)	G
31	BA	363(D)	G
31	BA	363(E)	U
31	BA	363(F)	A
31	BA	370	G
31	BA	372	G

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Mol	Chain	Res	Type
31	BA	386	G
31	BA	389	G
31	BA	405	U
31	BA	406	G
31	BA	407	G
31	BA	411	G
31	BA	412	A
31	BA	418	G
31	BA	428	A
31	BA	444	C
31	BA	448	U
31	BA	454	A
31	BA	456	C
31	BA	457	A
31	BA	462	C
31	BA	463	G
31	BA	466	A
31	BA	469	G
31	BA	470	A
31	BA	472	A
31	BA	473	G
31	BA	474	G
31	BA	475	U
31	BA	479	A
31	BA	481	G
31	BA	494	G
31	BA	505	A
31	BA	508	G
31	BA	509	C
31	BA	511	U
31	BA	512	G
31	BA	528	A
31	BA	530	G
31	BA	531	C
31	BA	532	A
31	BA	533	G
31	BA	542	C
31	BA	543	C
31	BA	547	A
31	BA	548	A
31	BA	549	G
31	BA	563	G

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Mol	Chain	Res	Type
31	BA	571	A
31	BA	573	G
31	BA	575	A
31	BA	586	A
31	BA	587	C
31	BA	588	U
31	BA	602	G
31	BA	603	A
31	BA	604	G
31	BA	607	U
31	BA	610	G
31	BA	614(B)	G
31	BA	615	G
31	BA	618	C
31	BA	619	G
31	BA	622	G
31	BA	627	A
31	BA	637	A
31	BA	643	A
31	BA	644	A
31	BA	645	C
31	BA	646	A
31	BA	647	G
31	BA	650	C
31	BA	651	G
31	BA	652	C
31	BA	656	G
31	BA	657	U
31	BA	667	U
31	BA	669	G
31	BA	670	A
31	BA	671	C
31	BA	686	G
31	BA	701	G
31	BA	708	C
31	BA	721	C
31	BA	722	A
31	BA	730	C
31	BA	745	G
31	BA	746	A
31	BA	747	U
31	BA	752	A

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Mol	Chain	Res	Type
31	BA	753	C
31	BA	762	U
31	BA	765	G
31	BA	768	G
31	BA	775	G
31	BA	776	G
31	BA	782	A
31	BA	784	A
31	BA	785	G
31	BA	787	U
31	BA	789	A
31	BA	790	C
31	BA	791	C
31	BA	792	G
31	BA	805	G
31	BA	808	G
31	BA	812	C
31	BA	819	A
31	BA	824	A
31	BA	826	U
31	BA	827	U
31	BA	830	G
31	BA	831	G
31	BA	832	G
31	BA	856	C
31	BA	859	G
31	BA	861	A
31	BA	865	C
31	BA	866	A
31	BA	872	A
31	BA	878	A
31	BA	883	G
31	BA	884	C
31	BA	892	G
31	BA	894	C
31	BA	896	A
31	BA	897	C
31	BA	898	C
31	BA	899	A
31	BA	900	A
31	BA	901	A
31	BA	910	A

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Mol	Chain	Res	Type
31	BA	917	A
31	BA	918	A
31	BA	919	G
31	BA	923	C
31	BA	926	A
31	BA	932	G
31	BA	934	G
31	BA	938	G
31	BA	941	A
31	BA	945	A
31	BA	946	G
31	BA	958	U
31	BA	959	A
31	BA	961	C
31	BA	974	G
31	BA	975	C
31	BA	975(A)	G
31	BA	983	A
31	BA	990	A
31	BA	991	C
31	BA	996	A
31	BA	997	G
31	BA	1005	C
31	BA	1010	A
31	BA	1011	G
31	BA	1012	U
31	BA	1013	C
31	BA	1016	G
31	BA	1020	A
31	BA	1022	G
31	BA	1023	U
31	BA	1025	G
31	BA	1026	U
31	BA	1033	U
31	BA	1038	C
31	BA	1039	G
31	BA	1041	C
31	BA	1042	G
31	BA	1043	C
31	BA	1044	G
31	BA	1045	A
31	BA	1047	G

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Mol	Chain	Res	Type
31	BA	1048	A
31	BA	1049	C
31	BA	1051	G
31	BA	1052	C
31	BA	1053	C
31	BA	1106	A
31	BA	1107	G
31	BA	1110	G
31	BA	1112	G
31	BA	1113	U
31	BA	1114	G
31	BA	1115	G
31	BA	1117	G
31	BA	1126	A
31	BA	1129	A
31	BA	1130	U
31	BA	1135	C
31	BA	1136	G
31	BA	1139	G
31	BA	1142	U
31	BA	1155	A
31	BA	1156	A
31	BA	1159	U
31	BA	1169	G
31	BA	1171	G
31	BA	1173	G
31	BA	1174	A
31	BA	1175	U
31	BA	1176	G
31	BA	1177	A
31	BA	1178	C
31	BA	1179	C
31	BA	1180	C
31	BA	1183	G
31	BA	1195	G
31	BA	1210	A
31	BA	1211	U
31	BA	1213	A
31	BA	1220	A
31	BA	1221	C
31	BA	1240	U
31	BA	1251	C

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Mol	Chain	Res	Type
31	BA	1252	G
31	BA	1253	A
31	BA	1255	U
31	BA	1256	G
31	BA	1265	A
31	BA	1271	G
31	BA	1272	A
31	BA	1273	U
31	BA	1284	A
31	BA	1287	A
31	BA	1298	C
31	BA	1300	U
31	BA	1301	A
31	BA	1309	G
31	BA	1311	G
31	BA	1313	U
31	BA	1314	C
31	BA	1321	A
31	BA	1341	U
31	BA	1345	C
31	BA	1349	A
31	BA	1359	A
31	BA	1360	A
31	BA	1364	G
31	BA	1365	A
31	BA	1368	G
31	BA	1378	A
31	BA	1379	A
31	BA	1380	G
31	BA	1384	A
31	BA	1385	G
31	BA	1386	C
31	BA	1388	G
31	BA	1395	A
31	BA	1397	U
31	BA	1398	C
31	BA	1406	U
31	BA	1407	C
31	BA	1416	G
31	BA	1417	C
31	BA	1419	A
31	BA	1420	U

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Mol	Chain	Res	Type
31	BA	1421	G
31	BA	1428	C
31	BA	1436	G
31	BA	1437	C
31	BA	1445	A
31	BA	1448	G
31	BA	1449	A
31	BA	1450	G
31	BA	1455	G
31	BA	1458	C
31	BA	1459	G
31	BA	1460	A
31	BA	1461	G
31	BA	1462	C
31	BA	1466	G
31	BA	1467	C
31	BA	1471	A
31	BA	1472	A
31	BA	1474	C
31	BA	1475	G
31	BA	1476	C
31	BA	1477	A
31	BA	1479	G
31	BA	1481	U
31	BA	1482	G
31	BA	1485	G
31	BA	1488	G
31	BA	1490	A
31	BA	1491	G
31	BA	1493	C
31	BA	1494	A
31	BA	1495	A
31	BA	1497	U
31	BA	1498	C
31	BA	1501	C
31	BA	1502	C
31	BA	1503	U
31	BA	1505	C
31	BA	1508	A
31	BA	1509	C
31	BA	1509(A)	A
31	BA	1511	C

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Mol	Chain	Res	Type
31	BA	1512	U
31	BA	1513	C
31	BA	1515	G
31	BA	1520	G
31	BA	1526	G
31	BA	1528	A
31	BA	1528(A)	A
31	BA	1529	G
31	BA	1530	C
31	BA	1531	C
31	BA	1532	C
31	BA	1533	G
31	BA	1543	C
31	BA	1545	A
31	BA	1546	C
31	BA	1558	A
31	BA	1559	G
31	BA	1566	A
31	BA	1569	A
31	BA	1578	U
31	BA	1580	A
31	BA	1581	G
31	BA	1584	C
31	BA	1586	A
31	BA	1588	C
31	BA	1591	G
31	BA	1593	G
31	BA	1594	G
31	BA	1597	A
31	BA	1598	C
31	BA	1603	A
31	BA	1608	A
31	BA	1609	A
31	BA	1610	A
31	BA	1617	C
31	BA	1618	A
31	BA	1625	C
31	BA	1635	G
31	BA	1640	C
31	BA	1648	C
31	BA	1652	A
31	BA	1653	G

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Mol	Chain	Res	Type
31	BA	1654	A
31	BA	1655	A
31	BA	1674	G
31	BA	1694	C
31	BA	1695	G
31	BA	1696	G
31	BA	1697	G
31	BA	1698	A
31	BA	1700	A
31	BA	1701	A
31	BA	1703	G
31	BA	1721	G
31	BA	1722	A
31	BA	1739	U
31	BA	1741	A
31	BA	1742	G
31	BA	1744	C
31	BA	1746	G
31	BA	1749	A
31	BA	1756	G
31	BA	1763	G
31	BA	1764	G
31	BA	1773	A
31	BA	1780	A
31	BA	1781	C
31	BA	1782	C
31	BA	1791	A
31	BA	1799	G
31	BA	1800	C
31	BA	1801	G
31	BA	1813	G
31	BA	1816	G
31	BA	1820	U
31	BA	1822	G
31	BA	1827	C
31	BA	1828	G
31	BA	1829	A
31	BA	1835	G
31	BA	1838	C
31	BA	1840	G
31	BA	1847	A
31	BA	1858	G

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Mol	Chain	Res	Type
31	BA	1865	G
31	BA	1866	C
31	BA	1877	A
31	BA	1878	G
31	BA	1882	C
31	BA	1885	A
31	BA	1889	A
31	BA	1900	A
31	BA	1902	C
31	BA	1903	G
31	BA	1906	G
31	BA	1913	A
31	BA	1914	C
31	BA	1929	G
31	BA	1930	G
31	BA	1934	C
31	BA	1935	G
31	BA	1936	A
31	BA	1938	A
31	BA	1948	G
31	BA	1955	U
31	BA	1962	C
31	BA	1963	U
31	BA	1964	G
31	BA	1967	C
31	BA	1969	A
31	BA	1970	A
31	BA	1971	A
31	BA	1972	A
31	BA	1982	C
31	BA	1992	G
31	BA	1993	U
31	BA	1997	G
31	BA	2018	G
31	BA	2020	A
31	BA	2021	C
31	BA	2023	G
31	BA	2030	A
31	BA	2031	A
31	BA	2033	A
31	BA	2036	C
31	BA	2039	C

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Mol	Chain	Res	Type
31	BA	2043	C
31	BA	2055	C
31	BA	2056	G
31	BA	2060	A
31	BA	2061	G
31	BA	2062	A
31	BA	2069	G
31	BA	2071	A
31	BA	2095	C
31	BA	2099	U
31	BA	2100	G
31	BA	2103	C
31	BA	2104	G
31	BA	2187	G
31	BA	2190	G
31	BA	2191	G
31	BA	2192	G
31	BA	2193	G
31	BA	2197	U
31	BA	2198	A
31	BA	2199	A
31	BA	2200	C
31	BA	2201	C
31	BA	2203	U
31	BA	2206	G
31	BA	2207	G
31	BA	2208	A
31	BA	2218	U
31	BA	2219	G
31	BA	2225	A
31	BA	2226	C
31	BA	2238	G
31	BA	2263	C
31	BA	2268	A
31	BA	2272	U
31	BA	2273	A
31	BA	2275	C
31	BA	2280	G
31	BA	2283	C
31	BA	2287	A
31	BA	2288	A
31	BA	2289	G

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Mol	Chain	Res	Type
31	BA	2298	A
31	BA	2303	G
31	BA	2305	A
31	BA	2307	G
31	BA	2308	G
31	BA	2309	A
31	BA	2311	A
31	BA	2316	C
31	BA	2318	G
31	BA	2319	G
31	BA	2320	A
31	BA	2321	G
31	BA	2324	C
31	BA	2325	G
31	BA	2327	A
31	BA	2334	G
31	BA	2336	A
31	BA	2340	G
31	BA	2342	C
31	BA	2346	A
31	BA	2347	C
31	BA	2350	C
31	BA	2360	A
31	BA	2361	A
31	BA	2372	G
31	BA	2377	A
31	BA	2383	G
31	BA	2385	C
31	BA	2387	U
31	BA	2388	A
31	BA	2402	C
31	BA	2403	C
31	BA	2404	C
31	BA	2405	G
31	BA	2406	U
31	BA	2410	G
31	BA	2422	A
31	BA	2423	U
31	BA	2425	A
31	BA	2427	C
31	BA	2429	G
31	BA	2430	A

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Mol	Chain	Res	Type
31	BA	2431	U
31	BA	2435	A
31	BA	2439	A
31	BA	2440	C
31	BA	2441	C
31	BA	2448	A
31	BA	2449	U
31	BA	2464	C
31	BA	2465	C
31	BA	2468	G
31	BA	2469	A
31	BA	2470	G
31	BA	2471	C
31	BA	2476	A
31	BA	2477	C
31	BA	2478	A
31	BA	2487	G
31	BA	2489	G
31	BA	2492	U
31	BA	2502	G
31	BA	2505	G
31	BA	2506	U
31	BA	2507	C
31	BA	2518	A
31	BA	2520	C
31	BA	2524	G
31	BA	2525	G
31	BA	2529	G
31	BA	2535	G
31	BA	2543	G
31	BA	2554	U
31	BA	2564	A
31	BA	2566	A
31	BA	2567	G
31	BA	2569	G
31	BA	2582	G
31	BA	2585	U
31	BA	2586	C
31	BA	2601	C
31	BA	2602	A
31	BA	2603	G
31	BA	2604	U

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Mol	Chain	Res	Type
31	BA	2609	U
31	BA	2611	U
31	BA	2612	C
31	BA	2613	U
31	BA	2615	U
31	BA	2630	G
31	BA	2637	U
31	BA	2638	G
31	BA	2654	A
31	BA	2655	G
31	BA	2656	U
31	BA	2657	A
31	BA	2658	C
31	BA	2659	G
31	BA	2660	A
31	BA	2661	G
31	BA	2662	A
31	BA	2663	G
31	BA	2673	G
31	BA	2682	U
31	BA	2688	U
31	BA	2690	C
31	BA	2702	U
31	BA	2703	C
31	BA	2707	G
31	BA	2712	U
31	BA	2712(A)	A
31	BA	2713	A
31	BA	2714	G
31	BA	2726	U
31	BA	2731	G
31	BA	2733	A
31	BA	2752	C
31	BA	2753	A
31	BA	2754	U
31	BA	2755	C
31	BA	2757	A
31	BA	2758	A
31	BA	2762	G
31	BA	2764	A
31	BA	2765	A
31	BA	2766	G

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Mol	Chain	Res	Type
31	BA	2778	A
31	BA	2779	U
31	BA	2781	A
31	BA	2789	C
31	BA	2790	A
31	BA	2791	C
31	BA	2794	C
31	BA	2795	G
31	BA	2801(A)	A
31	BA	2802	G
31	BA	2803	C
31	BA	2807	G
31	BA	2808	U
31	BA	2818	G
31	BA	2820	A
31	BA	2821	A
31	BA	2833	G
31	BA	2835	A
31	BA	2836	U
31	BA	2844	G
31	BA	2847	U
31	BA	2849	U
31	BA	2860	A
31	BA	2872	G
31	BA	2880	C
31	BA	2892	A
31	BA	2894	G
31	BA	2895	U
31	BA	2897	U
32	BB	8	U
32	BB	9	G
32	BB	12	C
32	BB	15	A
32	BB	20	C
32	BB	22	U
32	BB	27	C
32	BB	33	G
32	BB	40	U
32	BB	41	U
32	BB	42	C
32	BB	43	C
32	BB	44	G

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Mol	Chain	Res	Type
32	BB	45	A
32	BB	46	A
32	BB	47	C
32	BB	52	A
32	BB	53	A
32	BB	56	G
32	BB	63	G
32	BB	64	C
32	BB	73	A
32	BB	74	U
32	BB	75	G
32	BB	81	G
32	BB	85	G
32	BB	87	G
32	BB	88	C
32	BB	89	G
32	BB	90	A
32	BB	91	C
32	BB	102	A
32	BB	106	G
32	BB	110	G
32	BB	118	G
1	CA	9	G
1	CA	32	A
1	CA	39	G
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	61	G
1	CA	80	G
1	CA	81	U
1	CA	90	U
1	CA	91	C
1	CA	97	G
1	CA	98	G
1	CA	101	A
1	CA	108	G
1	CA	115	G
1	CA	116	A
1	CA	119	A
1	CA	120	A
1	CA	121	C

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Mol	Chain	Res	Type
1	CA	131	C
1	CA	138	G
1	CA	144	G
1	CA	147	G
1	CA	150	C
1	CA	163	C
1	CA	168	G
1	CA	172	A
1	CA	173	U
1	CA	181	G
1	CA	182	U
1	CA	189(G)	G
1	CA	189(H)	G
1	CA	189(J)	G
1	CA	195	A
1	CA	197	A
1	CA	199	G
1	CA	201	C
1	CA	202	U
1	CA	203	U
1	CA	216	G
1	CA	220	G
1	CA	243	A
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	281	G
1	CA	289	G
1	CA	296	U
1	CA	297	G
1	CA	298	A
1	CA	301	G
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	343	U
1	CA	345	C
1	CA	351	G
1	CA	352	C

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Mol	Chain	Res	Type
1	CA	353	A
1	CA	354	G
1	CA	357	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	384	G
1	CA	388	G
1	CA	390	C
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	418	C
1	CA	419	C
1	CA	422	C
1	CA	424	G
1	CA	427	U
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	437	U
1	CA	439	A
1	CA	442	C
1	CA	448	A
1	CA	452	A
1	CA	461	A
1	CA	472	A
1	CA	484	G
1	CA	485	G
1	CA	487	A
1	CA	496	A
1	CA	498	U
1	CA	499	A
1	CA	505	G
1	CA	508	C
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	513	C

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Mol	Chain	Res	Type
1	CA	518	C
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	547	A
1	CA	559	A
1	CA	561	U
1	CA	562	C
1	CA	563	A
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	588	G
1	CA	596	C
1	CA	616	G
1	CA	623	C
1	CA	630	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	671	G
1	CA	674	G
1	CA	687	A
1	CA	688	G
1	CA	693	G
1	CA	724	G
1	CA	725	G
1	CA	731	G
1	CA	748	C
1	CA	749	C
1	CA	753	A
1	CA	754	C
1	CA	755	G
1	CA	760	G
1	CA	765	G
1	CA	766	A
1	CA	777	A
1	CA	782	A
1	CA	786	G

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Mol	Chain	Res	Type
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	815	A
1	CA	817	C
1	CA	818	G
1	CA	827	U
1	CA	828	A
1	CA	833	U
1	CA	836	G
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	864	A
1	CA	870	U
1	CA	872	A
1	CA	902	G
1	CA	914	A
1	CA	916	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1005	A
1	CA	1026	G
1	CA	1050	G

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Mol	Chain	Res	Type
1	CA	1053	G
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A
1	CA	1068	G
1	CA	1081	G
1	CA	1095	U
1	CA	1101	A
1	CA	1103	C
1	CA	1113	C
1	CA	1117	G
1	CA	1118	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1196	U
1	CA	1197	G
1	CA	1202	G
1	CA	1204	A
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1225	A
1	CA	1227	A
1	CA	1238	A
1	CA	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1280	A

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Mol	Chain	Res	Type
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A
1	CA	1294	G
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1310	G
1	CA	1312	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1332	A
1	CA	1335	C
1	CA	1338	G
1	CA	1347	G
1	CA	1363	C
1	CA	1364	U
1	CA	1370	G
1	CA	1388	C
1	CA	1397	C
1	CA	1416	G
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1457	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A
1	CA	1502	A

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Mol	Chain	Res	Type
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
31	DA	10	G
31	DA	12	U
31	DA	15	G
31	DA	34	C
31	DA	35	G
31	DA	36	G
31	DA	45	C
31	DA	49	A
31	DA	50	U
31	DA	51	G
31	DA	55	G
31	DA	61	G
31	DA	64	A
31	DA	69	C
31	DA	70	G
31	DA	71	A
31	DA	72	U
31	DA	74	A
31	DA	75	G
31	DA	84	A
31	DA	90	U
31	DA	92	A
31	DA	94	C
31	DA	95	G
31	DA	100	G
31	DA	102	G
31	DA	103	A
31	DA	117	G
31	DA	118	A
31	DA	119	A
31	DA	120	U
31	DA	125	G
31	DA	129	C
31	DA	131	G

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Mol	Chain	Res	Type
31	DA	137	C
31	DA	139(A)	G
31	DA	142	A
31	DA	142(A)	C
31	DA	146	G
31	DA	147	U
31	DA	154(A)	C
31	DA	157	U
31	DA	158	U
31	DA	171	G
31	DA	173	G
31	DA	174	C
31	DA	175	G
31	DA	182	A
31	DA	188	G
31	DA	196	A
31	DA	197	A
31	DA	199	A
31	DA	204	A
31	DA	205	G
31	DA	214	G
31	DA	215	G
31	DA	216	A
31	DA	221	A
31	DA	222	A
31	DA	225	A
31	DA	228	A
31	DA	229	A
31	DA	233	A
31	DA	248	G
31	DA	250	G
31	DA	252	G
31	DA	266	G
31	DA	271(J)	C
31	DA	271(K)	U
31	DA	271(L)	U
31	DA	271(M)	G
31	DA	271(N)	U
31	DA	271(O)	C
31	DA	271(P)	C
31	DA	271(R)	G
31	DA	271(U)	G

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Mol	Chain	Res	Type
31	DA	272	G
31	DA	272(B)	G
31	DA	272(H)	C
31	DA	272(I)	U
31	DA	272(J)	C
31	DA	274	G
31	DA	275	G
31	DA	279	C
31	DA	281	G
31	DA	286	C
31	DA	287	C
31	DA	298	G
31	DA	299	A
31	DA	310	A
31	DA	311	A
31	DA	324	A
31	DA	329	G
31	DA	330	A
31	DA	332	A
31	DA	346	A
31	DA	347	A
31	DA	352	G
31	DA	353	G
31	DA	362	U
31	DA	363(B)	G
31	DA	363(C)	G
31	DA	363(D)	G
31	DA	363(E)	U
31	DA	363(F)	A
31	DA	370	G
31	DA	372	G
31	DA	386	G
31	DA	389	G
31	DA	405	U
31	DA	406	G
31	DA	407	G
31	DA	411	G
31	DA	412	A
31	DA	416	C
31	DA	418	G
31	DA	428	A
31	DA	444	C

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Mol	Chain	Res	Type
31	DA	448	U
31	DA	454	A
31	DA	456	C
31	DA	457	A
31	DA	466	A
31	DA	469	G
31	DA	470	A
31	DA	472	A
31	DA	473	G
31	DA	474	G
31	DA	475	U
31	DA	479	A
31	DA	481	G
31	DA	494	G
31	DA	496	G
31	DA	505	A
31	DA	508	G
31	DA	509	C
31	DA	511	U
31	DA	512	G
31	DA	528	A
31	DA	530	G
31	DA	531	C
31	DA	532	A
31	DA	533	G
31	DA	542	C
31	DA	543	C
31	DA	547	A
31	DA	548	A
31	DA	549	G
31	DA	563	G
31	DA	571	A
31	DA	573	G
31	DA	575	A
31	DA	586	A
31	DA	587	C
31	DA	588	U
31	DA	602	G
31	DA	603	A
31	DA	604	G
31	DA	607	U
31	DA	610	G

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Mol	Chain	Res	Type
31	DA	614(B)	G
31	DA	615	G
31	DA	618	C
31	DA	619	G
31	DA	622	G
31	DA	627	A
31	DA	637	A
31	DA	643	A
31	DA	644	A
31	DA	645	C
31	DA	646	A
31	DA	647	G
31	DA	650	C
31	DA	651	G
31	DA	652	C
31	DA	656	G
31	DA	657	U
31	DA	667	U
31	DA	669	G
31	DA	670	A
31	DA	671	C
31	DA	686	G
31	DA	701	G
31	DA	708	C
31	DA	721	C
31	DA	722	A
31	DA	730	C
31	DA	745	G
31	DA	752	A
31	DA	753	C
31	DA	762	U
31	DA	765	G
31	DA	768	G
31	DA	775	G
31	DA	776	G
31	DA	782	A
31	DA	784	A
31	DA	785	G
31	DA	787	U
31	DA	789	A
31	DA	790	C
31	DA	791	C

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Mol	Chain	Res	Type
31	DA	792	G
31	DA	805	G
31	DA	812	C
31	DA	819	A
31	DA	824	A
31	DA	826	U
31	DA	827	U
31	DA	830	G
31	DA	831	G
31	DA	856	C
31	DA	859	G
31	DA	861	A
31	DA	865	C
31	DA	866	A
31	DA	872	A
31	DA	878	A
31	DA	883	G
31	DA	884	C
31	DA	892	G
31	DA	894	C
31	DA	896	A
31	DA	897	C
31	DA	898	C
31	DA	899	A
31	DA	901	A
31	DA	910	A
31	DA	917	A
31	DA	918	A
31	DA	919	G
31	DA	923	C
31	DA	926	A
31	DA	932	G
31	DA	938	G
31	DA	941	A
31	DA	945	A
31	DA	946	G
31	DA	958	U
31	DA	959	A
31	DA	961	C
31	DA	974	G
31	DA	975	C
31	DA	975(A)	G

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Mol	Chain	Res	Type
31	DA	983	A
31	DA	990	A
31	DA	991	C
31	DA	996	A
31	DA	997	G
31	DA	1005	C
31	DA	1010	A
31	DA	1011	G
31	DA	1012	U
31	DA	1013	C
31	DA	1016	G
31	DA	1020	A
31	DA	1022	G
31	DA	1023	U
31	DA	1025	G
31	DA	1026	U
31	DA	1033	U
31	DA	1038	C
31	DA	1039	G
31	DA	1041	C
31	DA	1042	G
31	DA	1043	C
31	DA	1044	G
31	DA	1045	A
31	DA	1047	G
31	DA	1048	A
31	DA	1049	C
31	DA	1051	G
31	DA	1052	C
31	DA	1053	C
31	DA	1106	A
31	DA	1107	G
31	DA	1110	G
31	DA	1112	G
31	DA	1113	U
31	DA	1114	G
31	DA	1115	G
31	DA	1117	G
31	DA	1126	A
31	DA	1129	A
31	DA	1130	U
31	DA	1135	C

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Mol	Chain	Res	Type
31	DA	1136	G
31	DA	1139	G
31	DA	1142	U
31	DA	1155	A
31	DA	1156	A
31	DA	1159	U
31	DA	1169	G
31	DA	1171	G
31	DA	1173	G
31	DA	1174	A
31	DA	1175	U
31	DA	1176	G
31	DA	1177	A
31	DA	1178	C
31	DA	1179	C
31	DA	1180	C
31	DA	1183	G
31	DA	1195	G
31	DA	1210	A
31	DA	1211	U
31	DA	1213	A
31	DA	1220	A
31	DA	1221	C
31	DA	1230	C
31	DA	1240	U
31	DA	1242	A
31	DA	1251	C
31	DA	1252	G
31	DA	1253	A
31	DA	1255	U
31	DA	1256	G
31	DA	1265	A
31	DA	1271	G
31	DA	1272	A
31	DA	1273	U
31	DA	1284	A
31	DA	1287	A
31	DA	1298	C
31	DA	1300	U
31	DA	1301	A
31	DA	1309	G
31	DA	1311	G

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Mol	Chain	Res	Type
31	DA	1313	U
31	DA	1314	C
31	DA	1321	A
31	DA	1329	U
31	DA	1332	G
31	DA	1341	U
31	DA	1345	C
31	DA	1349	A
31	DA	1359	A
31	DA	1360	A
31	DA	1364	G
31	DA	1365	A
31	DA	1368	G
31	DA	1378	A
31	DA	1379	A
31	DA	1380	G
31	DA	1384	A
31	DA	1385	G
31	DA	1386	C
31	DA	1388	G
31	DA	1395	A
31	DA	1397	U
31	DA	1398	C
31	DA	1406	U
31	DA	1407	C
31	DA	1416	G
31	DA	1417	C
31	DA	1419	A
31	DA	1420	U
31	DA	1421	G
31	DA	1427	A
31	DA	1428	C
31	DA	1436	G
31	DA	1437	C
31	DA	1445	A
31	DA	1448	G
31	DA	1449	A
31	DA	1450	G
31	DA	1455	G
31	DA	1458	C
31	DA	1459	G
31	DA	1460	A

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Mol	Chain	Res	Type
31	DA	1461	G
31	DA	1462	C
31	DA	1466	G
31	DA	1467	C
31	DA	1471	A
31	DA	1472	A
31	DA	1474	C
31	DA	1475	G
31	DA	1476	C
31	DA	1477	A
31	DA	1479	G
31	DA	1480	G
31	DA	1481	U
31	DA	1482	G
31	DA	1485	G
31	DA	1487	G
31	DA	1488	G
31	DA	1490	A
31	DA	1491	G
31	DA	1493	C
31	DA	1494	A
31	DA	1495	A
31	DA	1497	U
31	DA	1498	C
31	DA	1501	C
31	DA	1502	C
31	DA	1503	U
31	DA	1505	C
31	DA	1508	A
31	DA	1509	C
31	DA	1509(A)	A
31	DA	1511	C
31	DA	1512	U
31	DA	1513	C
31	DA	1515	G
31	DA	1520	G
31	DA	1526	G
31	DA	1528	A
31	DA	1528(A)	A
31	DA	1529	G
31	DA	1530	C
31	DA	1531	C

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Mol	Chain	Res	Type
31	DA	1532	C
31	DA	1533	G
31	DA	1543	C
31	DA	1545	A
31	DA	1546	C
31	DA	1558	A
31	DA	1559	G
31	DA	1566	A
31	DA	1569	A
31	DA	1578	U
31	DA	1579	A
31	DA	1580	A
31	DA	1581	G
31	DA	1584	C
31	DA	1586	A
31	DA	1588	C
31	DA	1591	G
31	DA	1593	G
31	DA	1594	G
31	DA	1597	A
31	DA	1598	C
31	DA	1603	A
31	DA	1608	A
31	DA	1609	A
31	DA	1617	C
31	DA	1618	A
31	DA	1625	C
31	DA	1635	G
31	DA	1640	C
31	DA	1648	C
31	DA	1652	A
31	DA	1653	G
31	DA	1654	A
31	DA	1655	A
31	DA	1674	G
31	DA	1678	G
31	DA	1694	C
31	DA	1695	G
31	DA	1696	G
31	DA	1697	G
31	DA	1698	A
31	DA	1700	A

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Mol	Chain	Res	Type
31	DA	1701	A
31	DA	1703	G
31	DA	1721	G
31	DA	1722	A
31	DA	1739	U
31	DA	1741	A
31	DA	1742	G
31	DA	1744	C
31	DA	1746	G
31	DA	1749	A
31	DA	1756	G
31	DA	1763	G
31	DA	1764	G
31	DA	1773	A
31	DA	1780	A
31	DA	1781	C
31	DA	1782	C
31	DA	1791	A
31	DA	1799	G
31	DA	1800	C
31	DA	1801	G
31	DA	1813	G
31	DA	1816	G
31	DA	1820	U
31	DA	1822	G
31	DA	1827	C
31	DA	1828	G
31	DA	1829	A
31	DA	1835	G
31	DA	1838	C
31	DA	1840	G
31	DA	1847	A
31	DA	1858	G
31	DA	1865	G
31	DA	1866	C
31	DA	1877	A
31	DA	1878	G
31	DA	1882	C
31	DA	1885	A
31	DA	1889	A
31	DA	1900	A
31	DA	1902	C

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Mol	Chain	Res	Type
31	DA	1903	G
31	DA	1906	G
31	DA	1913	A
31	DA	1914	C
31	DA	1915	U
31	DA	1929	G
31	DA	1930	G
31	DA	1934	C
31	DA	1935	G
31	DA	1936	A
31	DA	1938	A
31	DA	1948	G
31	DA	1955	U
31	DA	1962	C
31	DA	1963	U
31	DA	1964	G
31	DA	1967	C
31	DA	1969	A
31	DA	1970	A
31	DA	1971	A
31	DA	1972	A
31	DA	1982	C
31	DA	1992	G
31	DA	1993	U
31	DA	1997	G
31	DA	2018	G
31	DA	2020	A
31	DA	2021	C
31	DA	2023	G
31	DA	2030	A
31	DA	2031	A
31	DA	2033	A
31	DA	2036	C
31	DA	2039	C
31	DA	2043	C
31	DA	2055	C
31	DA	2056	G
31	DA	2058	A
31	DA	2060	A
31	DA	2061	G
31	DA	2062	A
31	DA	2069	G

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Mol	Chain	Res	Type
31	DA	2071	A
31	DA	2095	C
31	DA	2100	G
31	DA	2103	C
31	DA	2104	G
31	DA	2187	G
31	DA	2190	G
31	DA	2191	G
31	DA	2192	G
31	DA	2193	G
31	DA	2198	A
31	DA	2199	A
31	DA	2200	C
31	DA	2203	U
31	DA	2206	G
31	DA	2207	G
31	DA	2208	A
31	DA	2218	U
31	DA	2219	G
31	DA	2225	A
31	DA	2226	C
31	DA	2238	G
31	DA	2263	C
31	DA	2268	A
31	DA	2272	U
31	DA	2273	A
31	DA	2275	C
31	DA	2278	A
31	DA	2280	G
31	DA	2283	C
31	DA	2287	A
31	DA	2288	A
31	DA	2289	G
31	DA	2298	A
31	DA	2303	G
31	DA	2305	A
31	DA	2307	G
31	DA	2308	G
31	DA	2309	A
31	DA	2311	A
31	DA	2316	C
31	DA	2318	G

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Mol	Chain	Res	Type
31	DA	2319	G
31	DA	2320	A
31	DA	2321	G
31	DA	2324	C
31	DA	2325	G
31	DA	2327	A
31	DA	2334	G
31	DA	2336	A
31	DA	2340	G
31	DA	2342	C
31	DA	2347	C
31	DA	2350	C
31	DA	2360	A
31	DA	2361	A
31	DA	2372	G
31	DA	2383	G
31	DA	2385	C
31	DA	2387	U
31	DA	2388	A
31	DA	2393	A
31	DA	2402	C
31	DA	2403	C
31	DA	2404	C
31	DA	2405	G
31	DA	2406	U
31	DA	2410	G
31	DA	2422	A
31	DA	2423	U
31	DA	2425	A
31	DA	2427	C
31	DA	2429	G
31	DA	2430	A
31	DA	2431	U
31	DA	2435	A
31	DA	2439	A
31	DA	2440	C
31	DA	2441	C
31	DA	2448	A
31	DA	2449	U
31	DA	2464	C
31	DA	2465	C
31	DA	2468	G

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Mol	Chain	Res	Type
31	DA	2469	A
31	DA	2470	G
31	DA	2471	C
31	DA	2475	C
31	DA	2476	A
31	DA	2477	C
31	DA	2478	A
31	DA	2487	G
31	DA	2489	G
31	DA	2492	U
31	DA	2497	A
31	DA	2502	G
31	DA	2505	G
31	DA	2506	U
31	DA	2507	C
31	DA	2510	C
31	DA	2518	A
31	DA	2520	C
31	DA	2524	G
31	DA	2525	G
31	DA	2529	G
31	DA	2535	G
31	DA	2543	G
31	DA	2554	U
31	DA	2564	A
31	DA	2566	A
31	DA	2567	G
31	DA	2569	G
31	DA	2582	G
31	DA	2585	U
31	DA	2586	C
31	DA	2601	C
31	DA	2602	A
31	DA	2603	G
31	DA	2604	U
31	DA	2608	G
31	DA	2609	U
31	DA	2610	C
31	DA	2611	U
31	DA	2612	C
31	DA	2613	U
31	DA	2615	U

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Mol	Chain	Res	Type
31	DA	2630	G
31	DA	2637	U
31	DA	2638	G
31	DA	2654	A
31	DA	2655	G
31	DA	2656	U
31	DA	2657	A
31	DA	2658	C
31	DA	2659	G
31	DA	2660	A
31	DA	2661	G
31	DA	2662	A
31	DA	2663	G
31	DA	2673	G
31	DA	2682	U
31	DA	2690	C
31	DA	2701	C
31	DA	2702	U
31	DA	2703	C
31	DA	2707	G
31	DA	2712	U
31	DA	2712(A)	A
31	DA	2713	A
31	DA	2714	G
31	DA	2726	U
31	DA	2731	G
31	DA	2733	A
31	DA	2752	C
31	DA	2753	A
31	DA	2754	U
31	DA	2757	A
31	DA	2758	A
31	DA	2762	G
31	DA	2764	A
31	DA	2765	A
31	DA	2766	G
31	DA	2778	A
31	DA	2779	U
31	DA	2781	A
31	DA	2789	C
31	DA	2790	A
31	DA	2791	C

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Mol	Chain	Res	Type
31	DA	2794	C
31	DA	2795	G
31	DA	2801(A)	A
31	DA	2802	G
31	DA	2803	C
31	DA	2807	G
31	DA	2808	U
31	DA	2818	G
31	DA	2820	A
31	DA	2821	A
31	DA	2833	G
31	DA	2835	A
31	DA	2849	U
31	DA	2860	A
31	DA	2872	G
31	DA	2880	C
31	DA	2892	A
31	DA	2894	G
31	DA	2895	U
31	DA	2897	U
32	DB	8	U
32	DB	9	G
32	DB	12	C
32	DB	15	A
32	DB	20	C
32	DB	22	U
32	DB	27	C
32	DB	33	G
32	DB	40	U
32	DB	41	U
32	DB	42	C
32	DB	43	C
32	DB	44	G
32	DB	45	A
32	DB	46	A
32	DB	47	C
32	DB	52	A
32	DB	53	A
32	DB	56	G
32	DB	63	G
32	DB	64	C
32	DB	73	A

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Mol	Chain	Res	Type
32	DB	74	U
32	DB	75	G
32	DB	85	G
32	DB	87	G
32	DB	88	C
32	DB	89	G
32	DB	90	A
32	DB	91	C
32	DB	102	A
32	DB	106	G
32	DB	110	G
32	DB	118	G

All (203) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	60	A
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	328	C
1	AA	353	A
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	687	A
1	AA	748	C
1	AA	913	A
1	AA	991	U
1	AA	992	U
1	AA	1049	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A

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Mol	Chain	Res	Type
1	AA	1285	A
1	AA	1498	U
1	AA	1504	G
31	BA	34	C
31	BA	49	A
31	BA	50	U
31	BA	71	A
31	BA	128	C
31	BA	249	C
31	BA	272	G
31	BA	331	A
31	BA	352	G
31	BA	363(E)	U
31	BA	472	A
31	BA	474	G
31	BA	542	C
31	BA	587	C
31	BA	603	A
31	BA	651	G
31	BA	669	G
31	BA	671	C
31	BA	685	A
31	BA	746	A
31	BA	752	A
31	BA	764	A
31	BA	774	A
31	BA	790	C
31	BA	827	U
31	BA	958	U
31	BA	974	G
31	BA	1022	G
31	BA	1112	G
31	BA	1176	G
31	BA	1210	A
31	BA	1250	G
31	BA	1300	U
31	BA	1378	A
31	BA	1379	A
31	BA	1397	U
31	BA	1419	A
31	BA	1427	A
31	BA	1459	G

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Mol	Chain	Res	Type
31	BA	1494	A
31	BA	1508	A
31	BA	1544	A
31	BA	1558	A
31	BA	1608	A
31	BA	1617	C
31	BA	1652	A
31	BA	1653	G
31	BA	1694	C
31	BA	1697	G
31	BA	1740	G
31	BA	1819	A
31	BA	1934	C
31	BA	1962	C
31	BA	1970	A
31	BA	1992	G
31	BA	2225	A
31	BA	2405	G
31	BA	2406	U
31	BA	2422	A
31	BA	2439	A
31	BA	2542	A
31	BA	2610	C
31	BA	2660	A
31	BA	2661	G
31	BA	2662	A
31	BA	2689	U
31	BA	2712	U
31	BA	2726	U
31	BA	2756	U
31	BA	2796	U
31	BA	2849	U
31	BA	2859	G
31	BA	2873	A
32	BB	109	C
1	CA	60	A
1	CA	79	G
1	CA	115	G
1	CA	119	A
1	CA	243	A
1	CA	250	A
1	CA	266	G

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Mol	Chain	Res	Type
1	CA	328	C
1	CA	353	A
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	509	A
1	CA	533	A
1	CA	560	U
1	CA	687	A
1	CA	748	C
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1049	U
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1285	A
1	CA	1498	U
1	CA	1504	G
31	DA	34	C
31	DA	49	A
31	DA	50	U
31	DA	71	A
31	DA	128	C
31	DA	249	C
31	DA	272	G
31	DA	331	A
31	DA	352	G
31	DA	363(E)	U
31	DA	472	A
31	DA	474	G
31	DA	542	C
31	DA	587	C
31	DA	603	A
31	DA	651	G
31	DA	669	G
31	DA	671	C
31	DA	685	A
31	DA	746	A

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Mol	Chain	Res	Type
31	DA	752	A
31	DA	764	A
31	DA	774	A
31	DA	790	C
31	DA	827	U
31	DA	958	U
31	DA	1022	G
31	DA	1112	G
31	DA	1176	G
31	DA	1210	A
31	DA	1250	G
31	DA	1300	U
31	DA	1378	A
31	DA	1379	A
31	DA	1397	U
31	DA	1419	A
31	DA	1427	A
31	DA	1459	G
31	DA	1494	A
31	DA	1504	C
31	DA	1508	A
31	DA	1544	A
31	DA	1558	A
31	DA	1608	A
31	DA	1617	C
31	DA	1652	A
31	DA	1653	G
31	DA	1694	C
31	DA	1697	G
31	DA	1740	G
31	DA	1819	A
31	DA	1934	C
31	DA	1962	C
31	DA	1970	A
31	DA	1992	G
31	DA	2225	A
31	DA	2405	G
31	DA	2422	A
31	DA	2439	A
31	DA	2542	A
31	DA	2610	C
31	DA	2660	A

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Mol	Chain	Res	Type
31	DA	2661	G
31	DA	2662	A
31	DA	2689	U
31	DA	2726	U
31	DA	2756	U
31	DA	2796	U
31	DA	2859	G
31	DA	2873	A
32	DB	109	C

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 838 ligands modelled in this entry, 836 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
55	ERY	BA	3364	-	53,53,53	1.23	5 (9%)	82,82,82	0.98	5 (6%)
55	ERY	DA	3330	-	53,53,53	1.23	5 (9%)	82,82,82	0.98	5 (6%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	ERY	BA	3364	-	-	4/72/107/107	0/3/3/3
55	ERY	DA	3330	-	-	4/72/107/107	0/3/3/3

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BA	3364	ERY	C6-C5	3.26	1.61	1.55
55	DA	3330	ERY	C6-C5	3.24	1.61	1.55
55	BA	3364	ERY	C7-C6	2.47	1.58	1.54
55	DA	3330	ERY	C7-C6	2.44	1.58	1.54
55	DA	3330	ERY	O2-C13	2.18	1.50	1.46
55	BA	3364	ERY	O2-C13	2.17	1.50	1.46
55	BA	3364	ERY	C2-C3	2.14	1.60	1.55
55	DA	3330	ERY	C2-C3	2.14	1.60	1.55
55	BA	3364	ERY	O4-C18	2.03	1.49	1.44
55	DA	3330	ERY	O4-C18	2.02	1.49	1.44

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	DA	3330	ERY	C3-C2-C1	-2.61	104.69	110.01
55	BA	3364	ERY	C3-C2-C1	-2.60	104.70	110.01
55	DA	3330	ERY	C25-C24-C23	-2.44	106.45	109.97
55	BA	3364	ERY	C25-C24-C23	-2.43	106.46	109.97
55	DA	3330	ERY	C6-C5-C4	-2.16	111.00	114.05
55	BA	3364	ERY	C6-C5-C4	-2.14	111.03	114.05
55	BA	3364	ERY	O5-C16-C17	2.12	106.95	103.81
55	DA	3330	ERY	O5-C16-C17	2.12	106.95	103.81
55	DA	3330	ERY	O13-C12-C35	-2.02	103.62	107.78
55	BA	3364	ERY	O13-C12-C35	-2.01	103.64	107.78

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	BA	3364	ERY	O9-C22-O7-C5
55	DA	3330	ERY	O9-C22-O7-C5
55	BA	3364	ERY	O7-C5-C6-C7
55	DA	3330	ERY	O7-C5-C6-C7
55	BA	3364	ERY	C23-C22-O7-C5
55	DA	3330	ERY	C23-C22-O7-C5
55	BA	3364	ERY	C25-C24-N1-C29

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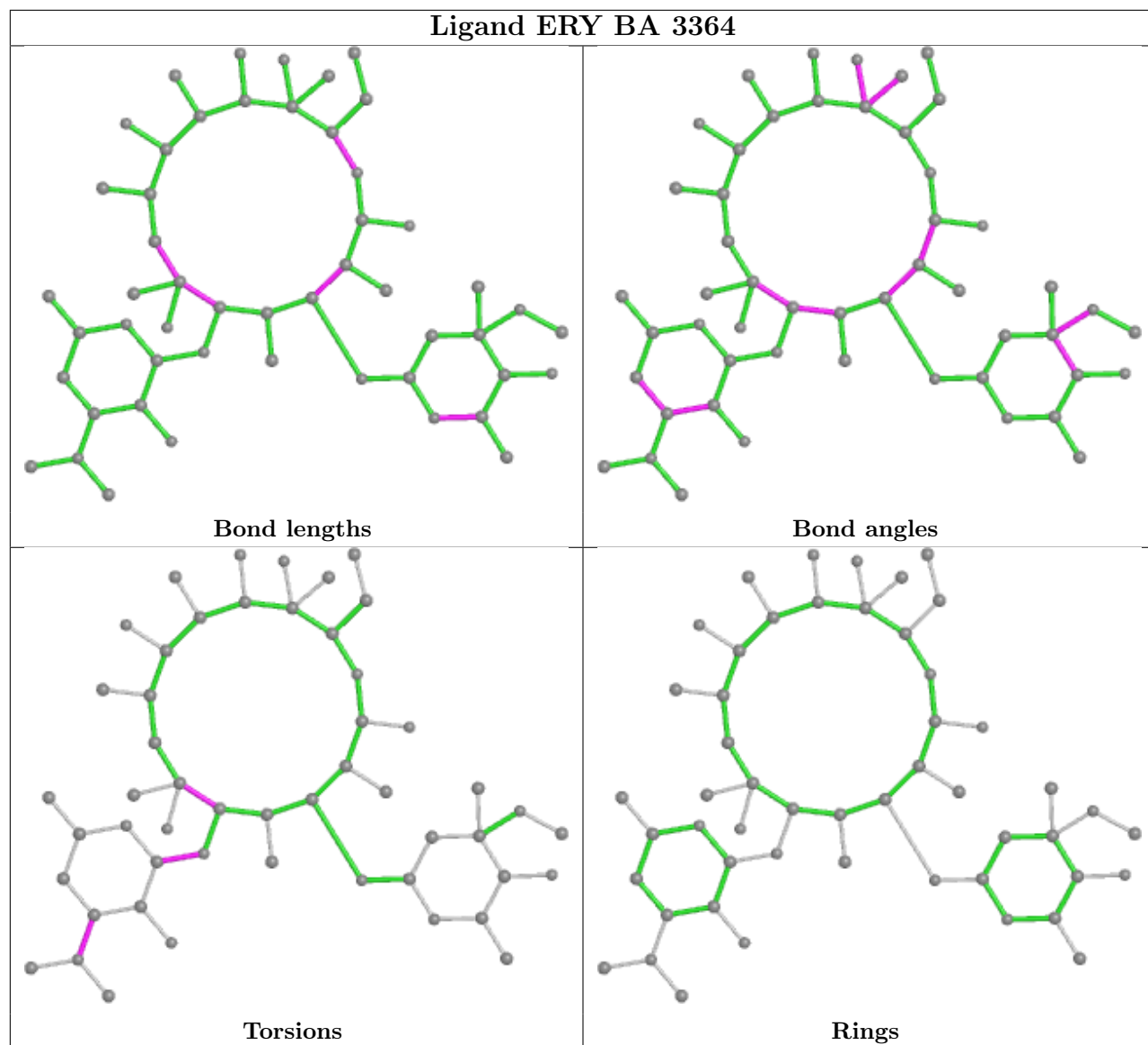
Mol	Chain	Res	Type	Atoms
55	DA	3330	ERY	C25-C24-N1-C29

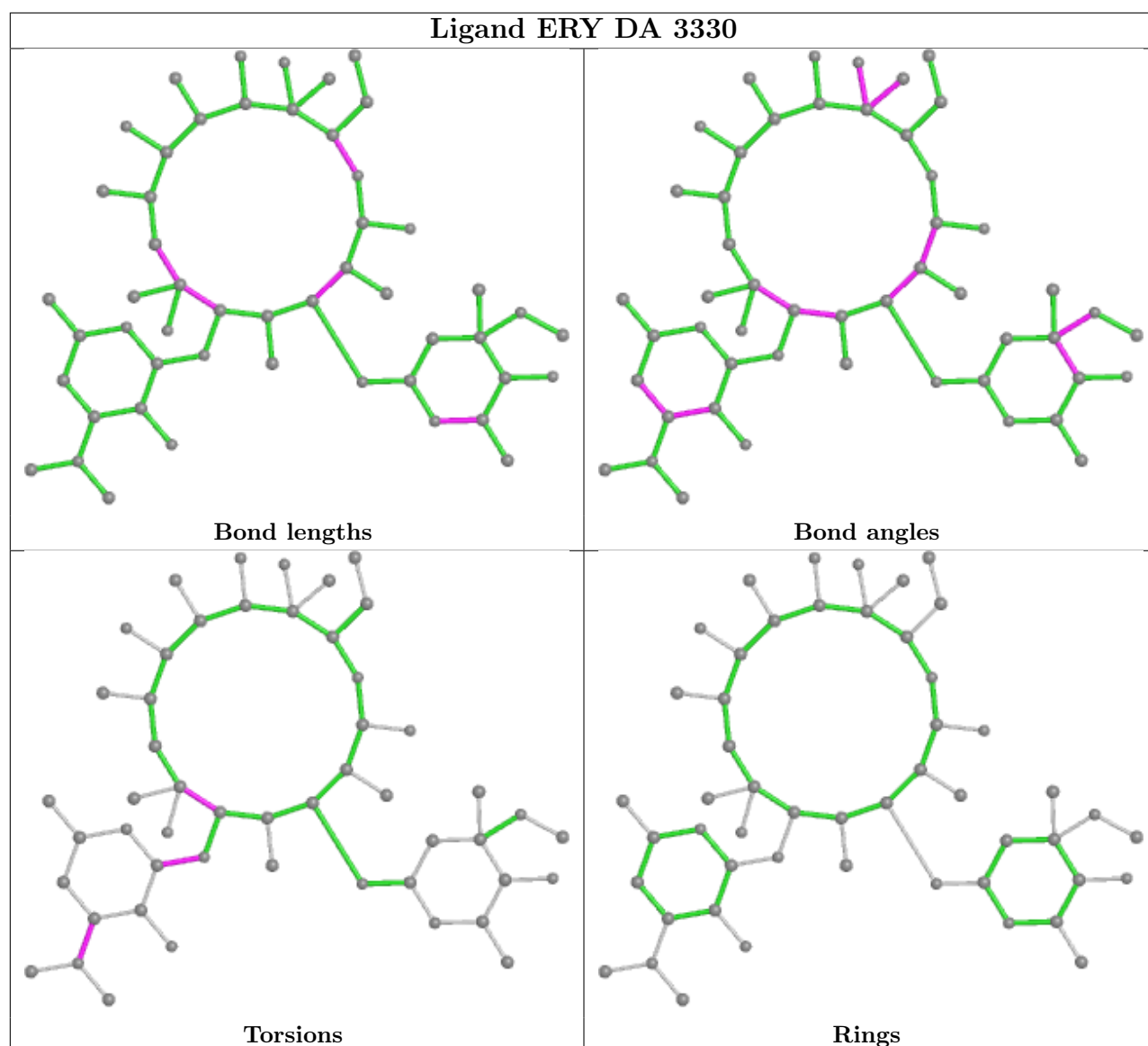
There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	BA	3364	ERY	1	0
55	DA	3330	ERY	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [\(i\)](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
13	CM	3
13	AM	3
36	DG	1
36	BG	1

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Mol	Chain	Number of breaks
28	B6	1
28	D6	1
9	AI	1
9	CI	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	CM	69:GLU	C	70:LEU	N	5.58
1	AM	69:GLU	C	70:LEU	N	5.57
1	DG	112:PRO	C	113:ARG	N	4.82
1	BG	112:PRO	C	113:ARG	N	4.80
1	CM	97:PRO	C	98:VAL	N	4.38
1	AM	97:PRO	C	98:VAL	N	4.37
1	B6	46:HIS	C	47:THR	N	3.94
1	D6	46:HIS	C	47:THR	N	3.92
1	CM	112:GLY	C	113:PRO	N	3.74
1	AM	112:GLY	C	113:PRO	N	3.73
1	AI	53:VAL	C	54:ASP	N	3.24
1	CI	53:VAL	C	54:ASP	N	3.23

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled '#RSRZ > 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q < 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1504/1522 (98%)	1.15	305 (20%) 1 0	46, 116, 201, 202	0
1	CA	1504/1522 (98%)	1.11	300 (19%) 1 0	50, 115, 201, 203	0
2	AB	235/256 (91%)	1.22	64 (27%) 0 0	99, 157, 195, 200	0
2	CB	235/256 (91%)	1.57	77 (32%) 0 0	99, 162, 195, 201	0
3	AC	207/239 (86%)	1.17	47 (22%) 0 0	108, 163, 190, 198	0
3	CC	207/239 (86%)	1.86	75 (36%) 0 0	110, 168, 192, 198	0
4	AD	208/209 (99%)	0.55	21 (10%) 7 2	65, 126, 175, 189	0
4	CD	208/209 (99%)	0.48	17 (8%) 11 3	66, 124, 173, 191	0
5	AE	151/160 (94%)	0.37	15 (9%) 7 2	65, 111, 162, 199	0
5	CE	151/160 (94%)	0.81	21 (13%) 2 1	72, 115, 172, 198	0
6	AF	101/101 (100%)	0.35	5 (4%) 28 10	82, 123, 173, 192	0
6	CF	101/101 (100%)	0.56	16 (15%) 2 1	84, 130, 177, 196	0
7	AG	155/156 (99%)	1.83	65 (41%) 0 0	126, 177, 196, 201	0
7	CG	155/156 (99%)	2.26	73 (47%) 0 0	122, 177, 196, 200	0
8	AH	138/138 (100%)	0.10	4 (2%) 51 23	78, 113, 157, 171	0
8	CH	138/138 (100%)	0.14	2 (1%) 75 49	79, 115, 162, 171	0
9	AI	127/128 (99%)	2.65	71 (55%) 0 0	132, 189, 200, 201	0
9	CI	127/128 (99%)	2.90	74 (58%) 0 0	131, 190, 200, 202	0
10	AJ	99/105 (94%)	3.50	69 (69%) 0 0	119, 178, 199, 200	0
10	CJ	99/105 (94%)	3.97	76 (76%) 0 0	116, 182, 200, 201	0
11	AK	119/129 (92%)	0.74	23 (19%) 1 0	63, 113, 163, 199	0
11	CK	119/129 (92%)	0.94	21 (17%) 1 0	64, 116, 165, 199	0
12	AL	125/135 (92%)	0.66	15 (12%) 4 1	59, 98, 164, 201	0
12	CL	125/135 (92%)	0.71	16 (12%) 3 1	58, 99, 167, 201	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	115/126 (91%)	3.05	64 (55%) 0 0	157, 191, 200, 201	0
13	CM	115/126 (91%)	2.33	56 (48%) 0 0	152, 189, 199, 201	0
14	AN	60/61 (98%)	1.99	22 (36%) 0 0	112, 172, 197, 199	0
14	CN	60/61 (98%)	1.74	16 (26%) 0 0	112, 171, 197, 199	0
15	AO	88/89 (98%)	0.30	6 (6%) 17 5	70, 105, 160, 169	0
15	CO	88/89 (98%)	0.37	5 (5%) 23 8	71, 107, 162, 171	0
16	AP	84/88 (95%)	1.23	24 (28%) 0 0	82, 109, 170, 187	0
16	CP	84/88 (95%)	1.10	23 (27%) 0 0	80, 107, 165, 183	0
17	AQ	100/105 (95%)	0.51	9 (9%) 9 3	71, 104, 154, 185	0
17	CQ	100/105 (95%)	0.28	7 (7%) 16 5	74, 103, 154, 190	0
18	AR	70/88 (79%)	0.92	7 (10%) 7 2	80, 116, 173, 182	0
18	CR	70/88 (79%)	1.36	20 (28%) 0 0	83, 124, 175, 185	0
19	AS	79/93 (84%)	3.31	58 (73%) 0 0	127, 192, 200, 200	0
19	CS	79/93 (84%)	3.42	53 (67%) 0 0	131, 190, 200, 201	0
20	AT	99/106 (93%)	0.58	10 (10%) 7 2	75, 115, 162, 186	0
20	CT	99/106 (93%)	0.48	10 (10%) 7 2	74, 115, 160, 189	0
21	AU	25/27 (92%)	5.05	21 (84%) 0 0	144, 182, 197, 199	0
21	CU	25/27 (92%)	3.57	17 (68%) 0 0	139, 173, 194, 197	0
22	B0	85/85 (100%)	0.56	9 (10%) 6 2	39, 60, 177, 193	0
22	D0	85/85 (100%)	0.69	8 (9%) 8 3	44, 65, 177, 193	0
23	B1	89/98 (90%)	0.19	2 (2%) 62 33	39, 64, 143, 170	0
23	D1	89/98 (90%)	0.16	5 (5%) 24 8	41, 66, 144, 183	0
24	B2	51/72 (70%)	0.72	3 (5%) 22 7	47, 85, 185, 196	0
24	D2	51/72 (70%)	0.45	4 (7%) 13 4	53, 92, 191, 198	0
25	B3	60/60 (100%)	0.08	2 (3%) 46 20	36, 59, 135, 186	0
25	D3	60/60 (100%)	0.30	4 (6%) 17 5	42, 66, 141, 182	0
26	B4	32/71 (45%)	-0.22	0 100 100	133, 155, 186, 193	0
26	D4	32/71 (45%)	0.46	5 (15%) 2 1	143, 169, 187, 197	0
27	B5	58/60 (96%)	0.46	5 (8%) 10 3	20, 47, 177, 199	0
27	D5	58/60 (96%)	0.17	7 (12%) 4 1	23, 50, 176, 199	0
28	B6	45/54 (83%)	1.07	8 (17%) 1 0	41, 74, 129, 184	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	D6	45/54 (83%)	0.91	11 (24%) 0 0	44, 77, 143, 178	0
29	B7	49/49 (100%)	0.11	4 (8%) 11 3	26, 33, 119, 175	0
29	D7	49/49 (100%)	0.17	3 (6%) 21 7	26, 35, 126, 174	0
30	B8	64/65 (98%)	0.42	4 (6%) 20 6	33, 54, 148, 179	0
30	D8	64/65 (98%)	0.09	2 (3%) 49 21	36, 58, 148, 180	0
31	BA	2725/2787 (97%)	0.30	90 (3%) 46 20	25, 47, 144, 203	0
31	DA	2725/2787 (97%)	0.20	141 (5%) 27 10	25, 52, 155, 202	0
32	BB	119/122 (97%)	0.59	5 (4%) 36 14	44, 92, 137, 191	0
32	DB	119/122 (97%)	1.08	31 (26%) 0 0	51, 101, 165, 190	0
33	BD	272/276 (98%)	-0.15	4 (1%) 73 46	25, 49, 105, 183	0
33	DD	272/276 (98%)	-0.24	3 (1%) 80 56	23, 53, 109, 172	0
34	BE	205/206 (99%)	0.06	7 (3%) 45 19	26, 54, 140, 193	0
34	DE	205/206 (99%)	-0.02	5 (2%) 59 30	30, 58, 146, 193	0
35	BF	208/210 (99%)	0.37	15 (7%) 15 4	21, 65, 175, 198	0
35	DF	208/210 (99%)	0.27	17 (8%) 11 3	27, 68, 175, 199	0
36	BG	181/182 (99%)	1.04	36 (19%) 1 0	95, 145, 191, 201	0
36	DG	181/182 (99%)	2.41	91 (50%) 0 0	104, 162, 195, 202	0
37	BH	160/180 (88%)	0.50	12 (7%) 14 4	62, 103, 161, 193	0
37	DH	160/180 (88%)	1.25	46 (28%) 0 0	68, 117, 171, 193	0
38	BI	146/148 (98%)	0.52	17 (11%) 4 1	56, 144, 191, 200	0
38	DI	146/148 (98%)	2.88	65 (44%) 0 0	52, 164, 194, 201	0
39	BN	139/140 (99%)	0.13	6 (4%) 35 13	35, 63, 136, 190	0
39	DN	139/140 (99%)	-0.16	3 (2%) 62 33	41, 69, 144, 191	0
40	BO	122/122 (100%)	-0.18	0 100 100	34, 57, 109, 141	0
40	DO	122/122 (100%)	-0.43	0 100 100	37, 59, 116, 146	0
41	BP	146/150 (97%)	0.56	12 (8%) 11 3	23, 83, 151, 201	0
41	DP	146/150 (97%)	0.52	19 (13%) 3 1	25, 88, 155, 201	0
42	BQ	136/141 (96%)	0.54	9 (6%) 18 5	38, 68, 149, 195	0
42	DQ	136/141 (96%)	0.41	13 (9%) 8 2	43, 74, 146, 195	0
43	BR	117/118 (99%)	-0.18	1 (0%) 84 63	29, 45, 120, 144	0
43	DR	117/118 (99%)	-0.30	1 (0%) 84 63	31, 51, 125, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BS	99/112 (88%)	0.47	6 (6%) 21 7	49, 98, 144, 184	0
44	DS	99/112 (88%)	0.91	21 (21%) 0 0	59, 105, 160, 188	0
45	BT	132/146 (90%)	0.29	7 (5%) 26 10	43, 76, 154, 194	0
45	DT	132/146 (90%)	0.27	14 (10%) 6 2	47, 79, 162, 197	0
46	BU	117/118 (99%)	0.14	3 (2%) 56 27	29, 51, 121, 190	0
46	DU	117/118 (99%)	0.27	16 (13%) 3 1	35, 58, 130, 192	0
47	BV	101/101 (100%)	0.85	10 (9%) 7 2	32, 98, 188, 199	0
47	DV	101/101 (100%)	0.75	12 (11%) 4 1	39, 105, 189, 199	0
48	BW	113/113 (100%)	-0.28	0 100 100	27, 39, 106, 171	0
48	DW	113/113 (100%)	-0.44	1 (0%) 84 63	28, 43, 109, 180	0
49	BX	93/96 (96%)	0.25	3 (3%) 47 20	37, 63, 144, 187	0
49	DX	93/96 (96%)	0.05	1 (1%) 80 56	40, 66, 144, 186	0
50	BY	101/110 (91%)	0.94	13 (12%) 3 1	44, 92, 194, 201	0
50	DY	101/110 (91%)	0.70	18 (17%) 1 0	53, 99, 192, 201	0
51	BZ	177/206 (85%)	0.16	4 (2%) 60 31	58, 103, 152, 180	0
51	DZ	177/206 (85%)	0.69	25 (14%) 2 1	63, 110, 156, 188	0
All	All	20062/20918 (95%)	0.70	2789 (13%) 2 1	20, 90, 194, 203	0

All (2789) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	AA	88	A	18.5
1	AA	89	C	17.8
35	BF	208	GLY	17.7
42	BQ	140	ALA	17.0
34	DE	205	ALA	17.0
1	CA	1149	C	16.7
31	DA	2802	G	15.6
42	DQ	140	ALA	14.8
2	CB	7	VAL	14.3
10	CJ	67	THR	14.2
38	DI	143	SER	14.1
38	DI	91	SER	14.1
13	AM	25	ILE	14.1
3	CC	159	GLY	14.0
31	DA	652	C	14.0

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Mol	Chain	Res	Type	RSRZ
42	DQ	141	GLN	14.0
42	BQ	141	GLN	13.9
38	DI	100	ALA	13.9
10	CJ	17	ASP	13.8
1	CA	84	U	13.6
13	AM	24	GLY	13.5
38	DI	119	PRO	13.5
21	AU	5	ASP	13.2
19	CS	79	THR	12.9
10	CJ	10	GLY	12.7
31	BA	897	C	12.3
1	AA	90	U	12.2
38	DI	109	ILE	11.7
35	BF	207	GLY	11.6
25	D3	60	GLU	11.5
1	CA	345	C	11.5
50	BY	51	VAL	11.4
3	CC	160	ALA	11.4
35	DF	12	LEU	11.3
38	DI	120	ILE	11.3
10	AJ	39	PRO	11.0
12	CL	129	ALA	10.9
10	CJ	16	LEU	10.8
36	BG	87	PRO	10.8
9	CI	124	GLN	10.8
35	BF	12	LEU	10.8
10	AJ	38	ILE	10.7
38	DI	81	VAL	10.7
7	CG	5	ARG	10.7
36	BG	88	ILE	10.7
38	DI	121	LYS	10.7
31	DA	897	C	10.5
31	BA	2104	G	10.5
1	CA	1027	C	10.4
1	CA	1026	G	10.4
3	CC	208	ILE	10.4
38	DI	68	LEU	10.4
13	AM	3	ARG	10.3
2	AB	7	VAL	10.3
31	DA	2104	G	10.3
35	DF	208	GLY	10.3
10	CJ	27	ALA	10.2

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Mol	Chain	Res	Type	RSRZ
9	AI	81	ILE	10.0
9	CI	127	LYS	10.0
13	AM	7	VAL	10.0
45	DT	39	ARG	10.0
38	DI	74	ASN	10.0
22	B0	85	ALA	10.0
27	B5	59	GLU	9.9
42	DQ	24	GLY	9.9
38	BI	90	GLY	9.9
38	DI	86	THR	9.8
1	CA	83	U	9.8
11	CK	12	ARG	9.8
51	DZ	113	ALA	9.8
19	CS	80	TYR	9.8
9	CI	126	SER	9.8
38	DI	89	TYR	9.7
38	DI	111	PRO	9.7
35	DF	207	GLY	9.7
21	CU	5	ASP	9.5
1	CA	1001	A	9.5
9	AI	2	GLU	9.5
1	AA	1001(A)	G	9.4
12	AL	129	ALA	9.4
1	AA	91	C	9.4
9	AI	85	LEU	9.4
27	D5	58	LEU	9.4
1	CA	1024	G	9.3
14	CN	60	SER	9.3
1	AA	1260	C	9.3
31	BA	652	C	9.3
1	CA	1141	C	9.3
50	DY	52	SER	9.3
1	CA	344	A	9.2
19	CS	25	LYS	9.2
14	CN	61	TRP	9.2
31	DA	2803	C	9.2
22	B0	6	GLY	9.2
31	BA	2101	G	9.1
21	AU	4	GLY	9.1
1	CA	82	U	9.1
1	AA	84	U	9.1
38	DI	118	LYS	9.1

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Mol	Chain	Res	Type	RSRZ
7	CG	80	VAL	9.1
10	AJ	35	SER	9.1
19	AS	56	GLN	9.0
10	AJ	5	ARG	9.0
38	DI	61	ARG	9.0
1	AA	1002	G	9.0
14	AN	60	SER	9.0
1	CA	1033	G	8.8
47	DV	28	GLU	8.8
35	BF	24	LEU	8.8
3	AC	195	VAL	8.7
7	CG	4	ARG	8.7
3	CC	155	GLY	8.7
7	AG	4	ARG	8.7
34	DE	204	ALA	8.7
1	CA	1025	U	8.7
11	CK	89	ALA	8.6
36	DG	108	ASN	8.6
13	AM	6	GLY	8.6
42	BQ	24	GLY	8.6
10	CJ	70	ARG	8.6
3	AC	193	TYR	8.6
1	CA	1034	G	8.5
45	BT	39	ARG	8.5
13	AM	4	ILE	8.5
1	AA	1139	G	8.5
9	AI	96	LEU	8.5
36	DG	157	ILE	8.5
10	CJ	19	SER	8.5
1	CA	1001(A)	G	8.5
19	CS	71	LEU	8.5
21	CU	8	THR	8.5
11	CK	11	LYS	8.4
3	AC	155	GLY	8.4
31	BA	2802	G	8.4
1	CA	88	A	8.4
14	AN	14	PRO	8.4
3	CC	158	GLY	8.4
13	AM	8	GLU	8.3
1	CA	1140	C	8.3
12	AL	128	ALA	8.3
38	DI	88	ILE	8.2

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Mol	Chain	Res	Type	RSRZ
9	AI	126	SER	8.2
19	CS	27	GLU	8.2
10	CJ	99	LYS	8.2
9	CI	18	PHE	8.2
2	CB	231	GLU	8.2
1	AA	1036	G	8.2
10	CJ	20	ALA	8.2
14	CN	2	ALA	8.2
2	CB	14	GLY	8.1
50	BY	59	GLY	8.1
36	DG	182	LYS	8.1
9	CI	17	VAL	8.1
1	CA	1150	U	8.1
9	AI	3	GLN	8.1
1	AA	79	G	8.1
7	CG	82	GLY	8.1
9	CI	128	ARG	8.1
10	CJ	18	ALA	8.1
18	AR	88	LYS	8.1
1	CA	1028	C	8.1
13	AM	64	TRP	8.1
21	AU	2	GLY	8.0
2	CB	232	PRO	8.0
24	D2	35	LEU	8.0
31	DA	1052	C	8.0
10	AJ	37	PRO	7.9
19	AS	38	SER	7.9
22	D0	3	HIS	7.9
19	CS	68	GLY	7.9
7	AG	5	ARG	7.9
10	CJ	100	THR	7.9
27	B5	60	VAL	7.9
7	AG	3	ARG	7.9
19	AS	53	ASN	7.8
21	AU	21	TYR	7.8
38	DI	97	ILE	7.8
10	CJ	68	HIS	7.8
9	CI	92	TYR	7.7
9	CI	85	LEU	7.7
19	CS	26	GLY	7.7
1	AA	1001	A	7.6
1	CA	1023	G	7.6

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Mol	Chain	Res	Type	RSRZ
13	CM	42	ALA	7.6
13	CM	8	GLU	7.6
10	AJ	94	VAL	7.5
50	DY	51	VAL	7.5
1	AA	1030(B)	C	7.5
19	AS	57	HIS	7.5
10	AJ	86	MET	7.5
19	CS	76	PRO	7.5
35	BF	133	ASN	7.5
10	CJ	91	PRO	7.5
13	CM	7	VAL	7.5
9	AI	89	ASN	7.5
10	CJ	69	ASN	7.5
46	DU	118	GLY	7.4
13	CM	84	ILE	7.4
31	BA	2796	U	7.4
19	AS	5	LEU	7.4
38	DI	65	ALA	7.4
2	CB	15	VAL	7.4
35	DF	11	VAL	7.4
31	DA	2106	G	7.4
36	DG	155	MET	7.4
7	CG	41	ARG	7.4
36	DG	142	PRO	7.3
1	AA	78	G	7.3
3	AC	159	GLY	7.3
2	CB	19	HIS	7.3
9	CI	63	ILE	7.3
38	DI	146	ALA	7.3
11	CK	13	GLN	7.2
21	AU	12	LYS	7.2
16	CP	48	TRP	7.2
36	DG	29	TRP	7.2
9	CI	3	GLN	7.2
36	DG	176	LEU	7.2
1	AA	1030(C)	G	7.2
19	CS	69	HIS	7.2
2	AB	234	PRO	7.2
9	AI	128	ARG	7.2
19	AS	33	THR	7.1
2	CB	209	ARG	7.1
1	AA	1267	C	7.1

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Mol	Chain	Res	Type	RSRZ
45	BT	2	ASN	7.1
11	CK	90	GLY	7.1
21	AU	17	THR	7.1
1	CA	961	U	7.1
47	BV	46	VAL	7.1
9	CI	7	THR	7.1
10	AJ	85	LEU	7.0
31	BA	2795	G	7.0
1	AA	1138	G	7.0
22	D0	85	ALA	7.0
1	CA	1240	U	7.0
7	AG	17	VAL	7.0
9	AI	8	GLY	7.0
1	AA	80	G	6.9
1	AA	1182	G	6.9
50	DY	59	GLY	6.9
1	AA	1286	A	6.9
19	CS	49	ILE	6.9
22	D0	4	LYS	6.9
7	CG	2	ALA	6.9
36	DG	35	GLU	6.9
12	CL	127	GLU	6.9
7	CG	81	GLY	6.9
32	BB	88	C	6.9
1	CA	89	C	6.9
1	AA	1235	U	6.9
31	DA	1531	C	6.9
13	CM	116	THR	6.9
10	CJ	34	VAL	6.8
14	AN	18	VAL	6.8
10	AJ	70	ARG	6.8
14	CN	8	GLU	6.8
13	AM	66	LEU	6.8
32	DB	58	A	6.8
4	CD	42	GLN	6.8
31	BA	1174	A	6.8
31	DA	2801(A)	A	6.8
1	CA	1030(A)	G	6.8
31	DA	2105	C	6.8
35	DF	1	MET	6.8
38	DI	123	LEU	6.8
19	AS	69	HIS	6.8

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Mol	Chain	Res	Type	RSRZ
13	AM	69	GLU	6.8
9	CI	89	ASN	6.8
38	DI	90	GLY	6.8
31	BA	2189	U	6.7
1	AA	985	C	6.7
1	AA	984	C	6.7
22	D0	1	MET	6.7
21	CU	26	LYS	6.7
1	AA	999	C	6.7
36	DG	88	ILE	6.7
7	AG	18	TYR	6.7
7	AG	103	TRP	6.7
3	CC	207	VAL	6.7
10	AJ	10	GLY	6.6
50	BY	52	SER	6.6
36	DG	41	GLN	6.6
2	CB	11	LEU	6.6
31	BA	2103	C	6.6
36	DG	136	ARG	6.6
13	CM	5	ALA	6.6
13	AM	9	ILE	6.6
31	BA	275	G	6.6
1	CA	1032	G	6.6
9	CI	84	ALA	6.6
36	DG	135	LEU	6.6
1	AA	1128	C	6.6
9	CI	21	PRO	6.6
31	BA	1509	C	6.6
1	CA	1139	G	6.5
36	DG	107	LEU	6.5
3	AC	192	THR	6.5
1	AA	1026	G	6.5
21	CU	11	GLY	6.5
36	DG	134	GLY	6.5
38	DI	87	LYS	6.5
1	AA	1020	U	6.5
1	CA	1029	C	6.4
10	AJ	25	GLU	6.4
21	AU	8	THR	6.4
21	AU	7	ARG	6.4
10	AJ	17	ASP	6.4
1	CA	1030(B)	C	6.4

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Mol	Chain	Res	Type	RSRZ
31	DA	2793	G	6.4
7	CG	42	ILE	6.4
46	BU	118	GLY	6.4
1	AA	1024	G	6.4
36	DG	172	LEU	6.4
19	CS	52	TYR	6.4
3	CC	108	ASN	6.3
35	DF	25	PRO	6.3
31	BA	1531	C	6.3
10	CJ	59	SER	6.3
13	CM	107	ALA	6.3
14	AN	16	PHE	6.3
19	AS	74	PHE	6.3
3	CC	156	ARG	6.3
1	AA	1129	C	6.3
16	AP	11	SER	6.3
21	AU	3	LYS	6.3
31	BA	2105	C	6.3
9	AI	84	ALA	6.3
25	B3	60	GLU	6.3
38	DI	69	LYS	6.3
1	AA	1131	G	6.2
1	AA	1222	G	6.2
1	AA	1127	G	6.2
31	BA	363(F)	A	6.2
44	DS	56	LEU	6.2
10	AJ	4	ILE	6.2
19	AS	40	ILE	6.2
44	DS	31	SER	6.2
1	CA	1129	C	6.2
1	AA	1025	U	6.2
19	CS	5	LEU	6.2
9	CI	90	PRO	6.2
21	AU	18	TYR	6.2
38	DI	125	GLU	6.2
1	CA	1235	U	6.2
1	CA	1286	A	6.2
1	AA	933	G	6.2
1	CA	1260	C	6.2
38	DI	122	GLU	6.2
1	AA	1034	G	6.2
50	DY	50	ARG	6.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1030	C	6.2
27	D5	59	GLU	6.1
13	AM	96	LEU	6.1
21	CU	2	GLY	6.1
9	CI	5	TYR	6.1
34	BE	205	ALA	6.1
2	CB	233	SER	6.1
13	AM	63	THR	6.1
10	AJ	71	LEU	6.1
1	CA	1005	A	6.1
1	CA	1442(A)	G	6.1
13	AM	62	ASN	6.1
38	DI	73	GLU	6.1
1	CA	1261	A	6.1
13	AM	59	TYR	6.1
3	CC	191	THR	6.1
23	B1	96	LYS	6.1
37	DH	44	VAL	6.1
1	CA	1220	G	6.0
7	CG	113	GLU	6.0
31	DA	879	G	6.0
2	CB	10	LEU	6.0
47	DV	68	LYS	6.0
38	DI	66	GLU	6.0
13	CM	50	GLU	6.0
38	DI	76	THR	6.0
2	AB	213	LEU	6.0
1	AA	93	G	6.0
1	CA	1007	C	6.0
1	AA	1003	G	6.0
2	CB	236	TYR	6.0
38	DI	144	VAL	6.0
35	DF	24	LEU	6.0
13	AM	2	ALA	6.0
31	DA	1174	A	5.9
31	DA	2792	G	6.0
1	AA	1092	A	5.9
13	CM	51	ALA	5.9
19	AS	39	THR	5.9
9	CI	62	TYR	5.9
47	DV	45	THR	5.9
1	CA	1131	G	5.9

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Mol	Chain	Res	Type	RSRZ
2	AB	134	GLU	5.9
10	CJ	101	VAL	5.9
36	BG	50	ALA	5.9
2	AB	212	GLN	5.9
10	CJ	85	LEU	5.9
38	DI	70	GLU	5.8
12	AL	61	THR	5.8
10	AJ	27	ALA	5.8
1	CA	1338	G	5.8
7	CG	33	ASP	5.8
10	CJ	22	LYS	5.8
13	AM	29	ARG	5.8
10	AJ	36	GLY	5.8
36	DG	133	LEU	5.8
9	AI	82	ALA	5.8
10	AJ	16	LEU	5.8
1	AA	1029	C	5.8
31	BA	2801	A	5.8
31	DA	280	C	5.8
47	BV	68	LYS	5.8
1	CA	1030(C)	G	5.8
42	BQ	91	GLU	5.8
1	AA	92	C	5.8
1	AA	1028	C	5.8
2	AB	11	LEU	5.8
2	CB	37	ASN	5.8
31	DA	1913	A	5.8
1	CA	1223	C	5.7
32	DB	59	A	5.7
31	DA	271(L)	U	5.7
31	DA	883	G	5.7
38	DI	117	GLU	5.7
20	AT	104	LEU	5.7
21	AU	26	LYS	5.7
9	AI	87	GLN	5.7
2	AB	228	GLY	5.7
36	DG	33	ARG	5.7
37	BH	42	ARG	5.7
1	AA	1031	G	5.7
1	AA	1035	A	5.7
2	AB	133	LYS	5.7
4	AD	42	GLN	5.7

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Mol	Chain	Res	Type	RSRZ
38	DI	64	GLU	5.7
3	CC	65	ALA	5.7
31	DA	1509	C	5.7
1	CA	80	G	5.7
10	CJ	26	ALA	5.6
36	BG	73	ALA	5.6
31	DA	271(K)	U	5.6
7	AG	112	PRO	5.6
9	AI	125	TYR	5.6
37	DH	30	LYS	5.6
3	AC	160	ALA	5.6
39	BN	1	MET	5.6
35	BF	11	VAL	5.6
28	B6	34	LEU	5.6
1	AA	959	A	5.6
19	AS	59	PRO	5.6
3	CC	23	TYR	5.6
10	CJ	66	ARG	5.6
37	DH	158	HIS	5.6
10	AJ	40	LEU	5.5
31	DA	2796	U	5.5
38	DI	115	ALA	5.5
9	AI	47	LEU	5.5
3	CC	157	ILE	5.5
13	AM	26	GLY	5.5
38	DI	72	LEU	5.5
38	DI	58	LEU	5.5
1	CA	1278	U	5.5
10	AJ	72	VAL	5.5
36	DG	63	ILE	5.5
1	AA	345	C	5.5
50	BY	49	VAL	5.4
3	CC	194	GLY	5.4
18	AR	31	LEU	5.4
1	CA	1006	C	5.4
31	DA	2795	G	5.4
10	AJ	73	ASP	5.4
13	AM	116	THR	5.4
1	AA	1174	G	5.4
42	DQ	139	GLU	5.4
1	AA	344	A	5.4
1	AA	1223	C	5.4

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Mol	Chain	Res	Type	RSRZ
28	B6	42	TRP	5.4
1	CA	1022	G	5.4
19	AS	49	ILE	5.4
1	AA	1236	A	5.4
19	CS	75	ALA	5.4
25	B3	1	MET	5.4
9	AI	92	TYR	5.4
10	AJ	23	ILE	5.4
2	CB	237	ALA	5.4
32	BB	89	G	5.4
13	AM	98	VAL	5.3
20	CT	103	GLY	5.3
19	CS	81	ARG	5.3
1	AA	1000	U	5.3
34	DE	69	LYS	5.3
2	CB	208	ILE	5.3
9	AI	99	LEU	5.3
2	CB	234	PRO	5.3
7	CG	39	ALA	5.3
36	DG	65	GLY	5.3
8	AH	116	LYS	5.3
1	AA	1033	G	5.3
19	CS	82	GLY	5.3
10	AJ	91	PRO	5.3
36	DG	2	PRO	5.3
1	CA	970	C	5.3
1	AA	958	A	5.3
2	CB	80	ILE	5.3
11	AK	11	LYS	5.3
36	DG	8	LYS	5.3
32	DB	5	C	5.3
10	AJ	100	THR	5.3
1	CA	944	G	5.3
1	CA	1021	G	5.3
1	AA	1326	C	5.2
21	AU	11	GLY	5.2
31	BA	1914	C	5.2
2	CB	240	GLN	5.2
15	AO	88	ARG	5.2
1	CA	1148	U	5.2
31	BA	2799	C	5.2
19	CS	4	SER	5.2

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Mol	Chain	Res	Type	RSRZ
3	AC	156	ARG	5.2
2	CB	210	SER	5.2
7	CG	32	ARG	5.2
13	CM	2	ALA	5.2
1	CA	1295	G	5.2
45	DT	2	ASN	5.2
36	DG	39	ILE	5.2
25	D3	1	MET	5.2
19	CS	77	THR	5.2
19	AS	58	VAL	5.2
7	CG	99	LEU	5.2
9	CI	96	LEU	5.2
28	D6	42	TRP	5.2
10	CJ	15	THR	5.2
38	DI	132	PRO	5.1
9	CI	87	GLN	5.1
1	AA	957	U	5.1
1	AA	1149	C	5.1
3	CC	183	ASP	5.1
10	CJ	98	ILE	5.1
33	BD	26	LYS	5.1
37	DH	97	ARG	5.1
1	CA	1042	G	5.1
9	CI	125	TYR	5.1
9	AI	90	PRO	5.1
47	BV	28	GLU	5.1
38	DI	124	GLY	5.1
37	DH	25	LYS	5.1
7	CG	123	GLU	5.1
1	AA	1148	U	5.1
19	AS	71	LEU	5.1
19	CS	48	THR	5.1
10	CJ	5	ARG	5.1
2	CB	115	LEU	5.1
19	AS	60	VAL	5.1
10	CJ	87	THR	5.1
3	CC	87	LEU	5.1
1	AA	1261	A	5.1
1	AA	1266	G	5.1
7	CG	40	ALA	5.1
7	CG	79	ARG	5.1
10	CJ	3	LYS	5.1

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Mol	Chain	Res	Type	RSRZ
10	CJ	8	LEU	5.0
10	CJ	23	ILE	5.0
9	CI	54	ASP	5.0
1	AA	1327	C	5.0
10	AJ	26	ALA	5.0
1	CA	1036	G	5.0
37	DH	32	GLU	5.0
2	CB	13	ALA	5.0
51	BZ	113	ALA	5.0
31	DA	1053	C	5.0
10	CJ	73	ASP	5.0
2	CB	41	ILE	5.0
13	AM	32	GLU	5.0
37	BH	44	VAL	5.0
10	CJ	74	ILE	5.0
1	AA	1257	U	5.0
7	AG	42	ILE	5.0
12	AL	127	GLU	5.0
13	CM	39	ILE	5.0
1	CA	1068	G	5.0
13	AM	87	TYR	5.0
31	DA	880	G	5.0
31	DA	2103	C	5.0
18	CR	19	LYS	5.0
1	AA	1032	G	5.0
19	CS	57	HIS	5.0
10	AJ	89	ASP	5.0
22	D0	2	ALA	5.0
9	CI	93	ARG	5.0
1	CA	1092	A	5.0
10	AJ	8	LEU	4.9
31	DA	1532	C	4.9
3	CC	192	THR	4.9
42	DQ	91	GLU	4.9
7	CG	27	ILE	4.9
7	AG	6	ARG	4.9
1	AA	77	G	4.9
3	CC	58	GLU	4.9
13	AM	23	TYR	4.9
19	CS	10	PHE	4.9
1	CA	1031	G	4.9
36	BG	139	LEU	4.9

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Mol	Chain	Res	Type	RSRZ
9	AI	51	ARG	4.9
1	AA	1274	G	4.9
38	DI	126	TYR	4.9
5	CE	31	LEU	4.9
9	CI	111	ARG	4.9
14	AN	61	TRP	4.9
36	DG	34	LEU	4.9
1	AA	1030(D)	A	4.9
36	DG	159	VAL	4.9
14	AN	19	ARG	4.9
1	AA	1224	G	4.9
2	AB	232	PRO	4.9
10	CJ	33	GLN	4.9
14	AN	17	LYS	4.9
22	B0	7	LEU	4.9
3	AC	65	ALA	4.9
10	AJ	69	ASN	4.9
1	CA	90	U	4.9
1	CA	1156	G	4.8
13	AM	91	ARG	4.8
31	BA	1913	A	4.8
51	DZ	164	ALA	4.8
13	AM	36	LYS	4.8
13	AM	58	GLU	4.8
1	CA	1224	G	4.8
9	AI	88	TYR	4.8
9	CI	123	PRO	4.8
31	BA	2102	U	4.8
31	DA	275	G	4.8
1	AA	949	A	4.8
50	DY	86	ARG	4.8
7	AG	26	PHE	4.8
7	CG	34	GLY	4.8
18	CR	46	GLU	4.8
38	DI	57	ARG	4.8
1	AA	1137	C	4.8
19	AS	29	ARG	4.8
32	BB	87	G	4.8
1	AA	1023	G	4.8
13	CM	63	THR	4.8
12	CL	128	ALA	4.8
25	D3	2	PRO	4.8

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Mol	Chain	Res	Type	RSRZ
9	CI	65	VAL	4.8
1	CA	1183	A	4.8
9	AI	15	ALA	4.8
31	DA	279	C	4.8
41	BP	150	ALA	4.8
17	AQ	27	PHE	4.7
1	CA	1030(D)	A	4.7
5	CE	33	VAL	4.7
9	CI	53	VAL	4.7
47	DV	46	VAL	4.7
31	BA	1053	C	4.7
1	AA	1312	G	4.7
9	AI	77	ILE	4.7
10	AJ	98	ILE	4.7
19	CS	53	ASN	4.7
36	BG	2	PRO	4.7
1	CA	1035	A	4.7
35	DF	13	SER	4.7
10	CJ	45	ARG	4.7
36	DG	173	LEU	4.7
22	B0	1	MET	4.7
36	BG	182	LYS	4.7
31	DA	884	C	4.7
31	DA	2804	C	4.7
32	DB	3	C	4.7
1	AA	947	G	4.7
10	AJ	24	VAL	4.7
22	D0	9	SER	4.7
36	DG	138	GLN	4.7
1	AA	70	G	4.7
36	DG	131	TYR	4.7
1	AA	1206	G	4.7
3	CC	206	GLU	4.7
31	DA	1533	G	4.7
31	DA	1048	A	4.7
36	DG	100	TRP	4.7
41	DP	116	GLY	4.7
9	AI	46	ALA	4.6
7	CG	6	ARG	4.6
35	DF	10	PRO	4.6
1	CA	1128	C	4.6
1	AA	983	A	4.6

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Mol	Chain	Res	Type	RSRZ
1	CA	1182	G	4.6
7	CG	119	ARG	4.6
11	CK	42	TRP	4.6
3	AC	207	VAL	4.6
3	CC	76	VAL	4.6
7	CG	16	LEU	4.6
36	DG	171	ALA	4.6
36	DG	132	ASN	4.6
9	AI	9	ARG	4.6
35	BF	25	PRO	4.6
13	AM	60	VAL	4.6
45	DT	36	GLU	4.6
6	CF	101	ALA	4.6
13	CM	26	GLY	4.6
37	DH	59	ARG	4.6
1	CA	540	G	4.6
38	DI	101	LEU	4.6
31	BA	2106	G	4.6
31	DA	1114	G	4.6
37	DH	34	GLU	4.6
14	AN	15	LYS	4.6
13	CM	64	TRP	4.6
3	CC	39	ILE	4.5
1	AA	1243	C	4.5
19	AS	25	LYS	4.5
47	BV	47	VAL	4.5
31	DA	878	A	4.5
3	AC	107	GLN	4.5
21	AU	6	ARG	4.5
13	AM	102	ARG	4.5
20	AT	69	GLY	4.5
3	AC	196	LEU	4.5
12	CL	28	LYS	4.5
31	DA	1106	A	4.5
38	DI	112	LYS	4.5
7	CG	154	TYR	4.5
50	BY	28	LYS	4.5
1	AA	1353	G	4.5
1	CA	1004	A	4.5
7	AG	31	MET	4.5
51	BZ	112	ARG	4.5
1	AA	1130	A	4.5

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Mol	Chain	Res	Type	RSRZ
1	AA	1037	C	4.5
7	CG	104	LEU	4.5
3	CC	195	VAL	4.5
20	CT	9	ASN	4.5
37	DH	111	HIS	4.5
1	AA	979	C	4.5
1	AA	1006	C	4.5
10	CJ	86	MET	4.4
7	AG	30	ILE	4.4
9	AI	100	GLY	4.4
38	DI	84	GLY	4.4
1	CA	1138	G	4.4
1	CA	1142	G	4.4
31	DA	2833	G	4.4
21	CU	7	ARG	4.4
2	AB	230	VAL	4.4
2	CB	81	VAL	4.4
10	CJ	72	VAL	4.4
1	AA	1046	A	4.4
7	CG	31	MET	4.4
31	BA	878	A	4.4
7	CG	114	ARG	4.4
1	CA	1041	A	4.4
4	AD	3	ARG	4.4
1	AA	1018	C	4.4
1	CA	1389	C	4.4
10	AJ	99	LYS	4.4
14	AN	8	GLU	4.4
19	AS	27	GLU	4.4
13	CM	4	ILE	4.4
21	AU	22	ARG	4.4
5	CE	11	ILE	4.4
1	AA	950	U	4.4
24	D2	43	GLN	4.4
46	DU	77	SER	4.4
1	AA	1093	A	4.4
20	CT	104	LEU	4.4
21	CU	25	LYS	4.4
1	AA	71	C	4.4
9	CI	20	ARG	4.4
17	CQ	101	ARG	4.4
2	AB	231	GLU	4.4

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Mol	Chain	Res	Type	RSRZ
13	AM	72	ALA	4.4
21	CU	10	ARG	4.3
2	CB	133	LYS	4.3
10	CJ	13	HIS	4.3
42	DQ	90	VAL	4.3
20	AT	106	ALA	4.3
2	AB	19	HIS	4.3
44	DS	34	HIS	4.3
1	CA	1214	C	4.3
18	CR	34	TYR	4.3
35	BF	13	SER	4.3
9	CI	97	LYS	4.3
44	DS	55	ALA	4.3
1	AA	1231	G	4.3
27	D5	60	VAL	4.3
50	DY	28	LYS	4.3
7	CG	103	TRP	4.3
2	CB	214	ILE	4.3
36	DG	160	VAL	4.3
21	CU	21	TYR	4.3
36	BG	86	MET	4.3
41	DP	118	GLY	4.3
10	AJ	41	PRO	4.3
19	AS	36	ARG	4.3
34	BE	204	ALA	4.3
1	AA	1234	C	4.3
31	BA	352	G	4.3
9	CI	88	TYR	4.3
31	BA	1532	C	4.3
31	DA	1909	C	4.3
7	AG	32	ARG	4.3
3	CC	200	ALA	4.3
1	AA	1005	A	4.3
35	BF	14	PRO	4.3
7	AG	99	LEU	4.3
21	AU	14	TRP	4.3
1	AA	1141	C	4.3
31	BA	2188	C	4.3
7	CG	26	PHE	4.3
31	DA	1051	G	4.3
7	CG	37	ASN	4.3
1	AA	1125	U	4.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1146	A	4.3
7	CG	130	GLY	4.3
31	BA	1052	C	4.3
17	AQ	78	GLU	4.3
1	AA	1175	G	4.3
1	AA	1159	U	4.2
10	AJ	77	PRO	4.2
10	CJ	71	LEU	4.2
1	CA	929	G	4.2
1	CA	953	G	4.2
2	AB	28	PHE	4.2
3	AC	102	ASN	4.2
9	AI	86	VAL	4.2
9	AI	101	PHE	4.2
10	AJ	20	ALA	4.2
13	CM	62	ASN	4.2
1	CA	1130	A	4.2
7	AG	76	ARG	4.2
44	DS	54	LEU	4.2
1	CA	428	G	4.2
1	CA	1086	U	4.2
31	DA	271(M)	G	4.2
2	CB	163	PHE	4.2
1	CA	1243	C	4.2
24	B2	35	LEU	4.2
47	BV	45	THR	4.2
1	CA	1293	G	4.2
31	BA	879	G	4.2
10	CJ	14	LYS	4.2
31	DA	2402	C	4.2
31	BA	892	G	4.2
32	DB	4	C	4.2
13	AM	33	ALA	4.2
10	CJ	89	ASP	4.2
36	DG	7	LEU	4.2
3	AC	64	VAL	4.2
10	AJ	74	ILE	4.2
46	DU	88	ILE	4.2
31	DA	1113	U	4.2
36	DG	168	GLU	4.2
10	CJ	92	THR	4.2
31	DA	2101	G	4.2

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Mol	Chain	Res	Type	RSRZ
32	BB	90	A	4.2
7	CG	36	LYS	4.2
14	CN	35	ARG	4.2
36	DG	165	THR	4.2
1	AA	1447	A	4.2
1	AA	1313	U	4.2
12	AL	71	PRO	4.2
13	AM	65	LYS	4.2
2	CB	17	PHE	4.2
36	DG	80	PHE	4.2
32	DB	27	C	4.1
7	AG	134	ALA	4.1
13	CM	60	VAL	4.1
2	CB	128	GLU	4.1
37	BH	158	HIS	4.1
1	CA	1049	U	4.1
1	CA	1257	U	4.1
1	AA	1147	C	4.1
2	AB	137	ARG	4.1
2	CB	36	ARG	4.1
1	CA	1392	G	4.1
7	AG	7	ALA	4.1
19	AS	37	ARG	4.1
10	CJ	6	ILE	4.1
38	DI	108	THR	4.1
36	BG	146	TYR	4.1
36	DG	77	ILE	4.1
1	CA	984	C	4.1
7	CG	3	ARG	4.1
31	DA	2102	U	4.1
41	DP	121	LYS	4.1
21	CU	3	LYS	4.1
1	CA	1002	G	4.1
2	AB	148	TYR	4.1
7	AG	33	ASP	4.1
36	DG	32	PRO	4.1
7	CG	116	ALA	4.1
50	DY	48	ALA	4.1
1	CA	427	U	4.1
37	DH	60	ARG	4.1
38	BI	61	ARG	4.1
3	CC	60	ALA	4.1

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Mol	Chain	Res	Type	RSRZ
2	CB	18	GLY	4.1
42	DQ	23	GLY	4.1
10	AJ	19	SER	4.1
13	AM	67	GLU	4.1
14	AN	2	ALA	4.1
51	DZ	97	GLU	4.1
14	AN	7	ILE	4.1
16	AP	35	LYS	4.0
38	DI	131	LYS	4.0
2	CB	212	GLN	4.0
3	AC	2	GLY	4.0
13	CM	56	LEU	4.0
1	AA	1140	C	4.0
1	CA	1294	G	4.0
3	CC	44	GLU	4.0
13	AM	56	LEU	4.0
1	AA	1119	C	4.0
32	DB	117	G	4.0
19	AS	30	LEU	4.0
37	DH	58	GLU	4.0
7	CG	48	LYS	4.0
1	CA	1287	A	4.0
1	AA	993	G	4.0
31	DA	281	G	4.0
31	DA	882	G	4.0
9	AI	12	GLU	4.0
13	AM	85	GLY	4.0
19	AS	4	SER	4.0
36	DG	38	VAL	4.0
2	CB	21	ARG	4.0
9	AI	64	THR	4.0
34	BE	17	ASP	4.0
38	DI	85	GLU	4.0
2	AB	36	ARG	4.0
13	CM	15	VAL	4.0
3	CC	104	GLN	4.0
1	AA	1370	G	4.0
9	CI	70	LYS	4.0
19	AS	28	LYS	4.0
19	AS	51	VAL	4.0
1	CA	1096	C	4.0
32	DB	88	C	4.0

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Mol	Chain	Res	Type	RSRZ
13	AM	22	ILE	4.0
4	AD	201	GLN	4.0
7	AG	37	ASN	4.0
31	DA	2310	A	4.0
1	AA	1233	G	4.0
1	CA	1186	G	4.0
1	AA	418	C	4.0
3	CC	91	LEU	4.0
1	CA	1172	C	4.0
1	CA	1395	C	4.0
6	CF	7	ASN	4.0
7	AG	91	VAL	4.0
13	AM	84	ILE	4.0
13	CM	43	THR	4.0
31	BA	1508	A	4.0
38	DI	129	THR	4.0
16	CP	39	TYR	3.9
2	AB	14	GLY	3.9
1	AA	998	G	3.9
19	AS	22	LEU	3.9
1	CA	1262	C	3.9
21	AU	23	PRO	3.9
16	AP	18	ARG	3.9
19	CS	24	ALA	3.9
1	AA	1132	C	3.9
1	CA	79	G	3.9
14	AN	33	VAL	3.9
3	CC	205	GLY	3.9
42	BQ	23	GLY	3.9
2	AB	214	ILE	3.9
3	AC	3	ASN	3.9
6	CF	67	MET	3.9
16	AP	19	ILE	3.9
13	CM	69	GLU	3.9
16	CP	40	ASP	3.9
19	AS	21	GLU	3.9
36	DG	163	ALA	3.9
7	AG	71	PRO	3.9
1	CA	1312	G	3.9
42	DQ	21	THR	3.9
37	DH	159	GLU	3.9
1	CA	1390	U	3.9

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Mol	Chain	Res	Type	RSRZ
3	CC	102	ASN	3.9
18	CR	88	LYS	3.9
14	AN	13	THR	3.9
36	DG	137	GLU	3.9
45	DT	92	GLY	3.9
1	CA	1160	G	3.9
3	CC	77	ILE	3.9
2	CB	207	ALA	3.9
3	CC	189	ALA	3.9
2	CB	230	VAL	3.9
9	AI	16	ARG	3.9
36	BG	72	ARG	3.9
10	AJ	62	HIS	3.9
22	B0	5	LYS	3.9
32	DB	118	G	3.9
1	AA	1212	U	3.8
37	DH	94	TYR	3.8
2	CB	216	SER	3.8
13	CM	102	ARG	3.8
31	BA	2801(A)	A	3.8
31	DA	899	A	3.8
19	AS	26	GLY	3.8
1	AA	223	U	3.8
1	AA	1030(A)	G	3.8
1	AA	1124	G	3.8
1	AA	1220	G	3.8
38	DI	60	GLU	3.8
1	AA	994	A	3.8
1	AA	955	U	3.8
39	BN	129	PRO	3.8
1	AA	1241	G	3.8
1	CA	1174	G	3.8
5	CE	43	LEU	3.8
14	AN	59	ALA	3.8
47	BV	55	ALA	3.8
13	CM	16	ASP	3.8
13	CM	55	ARG	3.8
36	DG	16	ARG	3.8
37	DH	36	PRO	3.8
1	AA	951	G	3.8
1	CA	1207	G	3.8
2	AB	217	ARG	3.8

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Mol	Chain	Res	Type	RSRZ
16	AP	14	ASN	3.8
11	CK	109	VAL	3.8
36	BG	43	LEU	3.8
1	AA	1041	A	3.8
7	AG	2	ALA	3.8
9	CI	61	ALA	3.8
19	CS	78	ARG	3.8
31	DA	2794	C	3.8
13	CM	106	ASN	3.8
46	DU	75	ASN	3.8
2	AB	101	MET	3.8
3	AC	87	LEU	3.8
36	DG	158	ALA	3.8
1	AA	195	A	3.8
10	CJ	96	ILE	3.8
1	CA	841	U	3.8
2	AB	31	TYR	3.8
19	CS	55	LYS	3.8
38	DI	145	VAL	3.8
2	CB	99	GLY	3.8
29	D7	48	LYS	3.8
38	BI	73	GLU	3.8
1	CA	346	G	3.8
31	DA	1044	G	3.8
17	AQ	73	VAL	3.8
11	AK	42	TRP	3.8
35	DF	133	ASN	3.8
31	DA	2799	C	3.8
10	CJ	65	LEU	3.8
13	CM	9	ILE	3.8
1	AA	427	U	3.8
10	AJ	101	VAL	3.8
7	AG	52	GLU	3.8
7	AG	113	GLU	3.8
21	CU	14	TRP	3.8
31	BA	882	G	3.8
46	DU	80	ILE	3.8
19	CS	67	VAL	3.8
19	CS	8	GLY	3.7
21	AU	19	GLY	3.7
46	DU	91	ASP	3.7
2	AB	10	LEU	3.7

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Mol	Chain	Res	Type	RSRZ
1	AA	630	G	3.7
1	AA	1380	U	3.7
36	BG	49	ASP	3.7
38	DI	96	ASP	3.7
19	CS	9	VAL	3.7
1	CA	983	A	3.7
1	AA	932	C	3.7
1	AA	980	C	3.7
22	D0	5	LYS	3.7
9	CI	2	GLU	3.7
44	DS	52	SER	3.7
1	CA	1050	G	3.7
1	CA	1097	C	3.7
1	CA	1266	G	3.7
1	CA	1136	U	3.7
31	DA	1108	U	3.7
9	CI	115	GLY	3.7
3	CC	43	LEU	3.7
13	AM	47	ASP	3.7
1	CA	1447	A	3.7
19	AS	19	VAL	3.7
31	DA	1112	G	3.7
11	AK	12	ARG	3.7
36	DG	25	TYR	3.7
35	BF	23	ASP	3.7
1	AA	956	U	3.7
31	DA	229	A	3.7
32	DB	90	A	3.7
16	CP	73	LEU	3.7
29	D7	49	ARG	3.7
36	BG	152	LEU	3.7
1	AA	1271	G	3.7
1	AA	1272	G	3.7
2	AB	42	ILE	3.7
9	AI	110	GLU	3.7
9	CI	60	ASP	3.7
49	BX	91	ALA	3.7
50	BY	48	ALA	3.7
42	BQ	139	GLU	3.7
18	AR	40	LEU	3.7
9	AI	41	VAL	3.7
4	CD	152	SER	3.7

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Mol	Chain	Res	Type	RSRZ
9	CI	64	THR	3.7
31	DA	2660	A	3.7
50	BY	102	CYS	3.7
39	DN	1	MET	3.7
36	DG	169	ALA	3.7
31	DA	11	G	3.7
18	CR	48	GLY	3.7
1	CA	1248	A	3.7
10	CJ	97	GLU	3.7
19	CS	30	LEU	3.6
3	CC	53	ALA	3.6
1	AA	1287	A	3.6
1	CA	1326	C	3.6
7	AG	44	TYR	3.6
51	DZ	143	GLY	3.6
7	AG	12	LEU	3.6
19	AS	77	THR	3.6
1	AA	220	G	3.6
1	CA	1370	G	3.6
20	AT	105	SER	3.6
7	AG	80	VAL	3.6
3	CC	72	LYS	3.6
17	CQ	14	LYS	3.6
33	DD	26	LYS	3.6
1	AA	1044	A	3.6
27	B5	58	LEU	3.6
3	CC	59	ARG	3.6
7	CG	117	ALA	3.6
9	AI	83	ARG	3.6
31	DA	362	U	3.6
1	AA	1120	G	3.6
36	DG	72	ARG	3.6
50	DY	92	ASN	3.6
1	CA	1164	G	3.6
1	CA	1173	G	3.6
2	CB	39	ILE	3.6
1	CA	1492	A	3.6
13	AM	10	PRO	3.6
18	CR	85	LEU	3.6
37	DH	42	ARG	3.6
44	BS	54	LEU	3.6
19	AS	55	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
3	CC	100	ALA	3.6
37	DH	24	VAL	3.6
1	AA	369	C	3.6
9	AI	19	LEU	3.6
16	CP	49	LEU	3.6
31	DA	1910	G	3.6
45	DT	40	THR	3.6
1	CA	1393	U	3.6
10	AJ	64	GLU	3.6
46	DU	89	GLU	3.6
9	AI	111	ARG	3.6
19	AS	78	ARG	3.6
9	CI	19	LEU	3.6
36	DG	27	ASN	3.6
19	AS	12	ASP	3.6
1	AA	961	U	3.6
1	CA	1353	G	3.6
2	CB	16	HIS	3.6
10	CJ	4	ILE	3.6
13	AM	97	PRO	3.6
22	D0	6	GLY	3.6
3	AC	82	GLU	3.6
12	AL	113	ARG	3.6
1	AA	1116	C	3.6
27	B5	2	ALA	3.6
18	CR	87	ARG	3.6
7	AG	47	CYS	3.6
41	DP	85	LEU	3.6
1	CA	952	U	3.6
1	CA	994	A	3.6
19	CS	40	ILE	3.6
31	DA	1466	G	3.6
37	DH	19	VAL	3.6
9	CI	27	THR	3.6
10	CJ	30	SER	3.6
19	AS	15	LEU	3.6
22	B0	9	SER	3.6
2	CB	33	TYR	3.6
3	AC	127	ARG	3.5
16	AP	81	ARG	3.5
1	AA	1342	C	3.5
1	CA	1236	A	3.5

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Mol	Chain	Res	Type	RSRZ
2	AB	39	ILE	3.5
37	DH	52	VAL	3.5
1	AA	1021	G	3.5
3	CC	64	VAL	3.5
3	CC	82	GLU	3.5
31	DA	2189	U	3.5
1	CA	1202	G	3.5
7	CG	17	VAL	3.5
36	DG	19	LEU	3.5
13	CM	12	ASN	3.5
38	BI	83	ALA	3.5
9	CI	91	ASP	3.5
32	DB	28	C	3.5
10	AJ	95	GLU	3.5
1	CA	1020	U	3.5
7	AG	81	GLY	3.5
31	DA	2805	G	3.5
36	DG	156	ASP	3.5
19	CS	36	ARG	3.5
36	DG	162	THR	3.5
32	DB	57	A	3.5
9	AI	62	TYR	3.5
45	BT	36	GLU	3.5
1	AA	1265	G	3.5
2	AB	190	THR	3.5
10	AJ	6	ILE	3.5
13	CM	49	THR	3.5
42	BQ	21	THR	3.5
10	AJ	21	GLN	3.5
29	B7	47	ARG	3.5
14	CN	25	VAL	3.5
13	AM	103	THR	3.5
4	CD	7	PRO	3.5
13	CM	10	PRO	3.5
31	DA	1034	G	3.5
1	AA	946	A	3.5
15	AO	81	LEU	3.5
36	BG	34	LEU	3.5
20	AT	103	GLY	3.5
1	AA	953	G	3.5
1	AA	1173	G	3.5
31	BA	1048	A	3.5

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Mol	Chain	Res	Type	RSRZ
10	AJ	33	GLN	3.5
37	BH	156	ALA	3.5
4	CD	29	PRO	3.5
16	AP	59	TRP	3.5
4	CD	3	ARG	3.5
32	DB	26	A	3.5
19	AS	35	SER	3.5
7	CG	30	ILE	3.5
10	AJ	28	ARG	3.5
13	AM	71	ARG	3.5
7	AG	133	GLY	3.5
29	B7	48	LYS	3.5
44	DS	57	LYS	3.5
1	AA	970	C	3.4
16	CP	47	ASP	3.4
1	AA	81	U	3.4
1	CA	1003	G	3.4
1	CA	1175	G	3.4
1	CA	1232	U	3.4
31	BA	271(K)	U	3.4
50	DY	55	TYR	3.4
19	CS	70	LYS	3.4
9	CI	22	GLY	3.4
34	DE	54	GLN	3.4
31	BA	271(L)	U	3.4
50	DY	61	ILE	3.4
1	AA	1275	A	3.4
1	CA	1094	G	3.4
31	DA	2100	G	3.4
10	AJ	83	GLU	3.4
4	AD	45	GLN	3.4
7	AG	36	LYS	3.4
13	AM	74	VAL	3.4
16	CP	17	TYR	3.4
36	DG	103	LEU	3.4
1	AA	1027	C	3.4
1	CA	160	A	3.4
7	CG	83	ALA	3.4
44	DS	33	LYS	3.4
1	AA	1300	G	3.4
3	CC	47	LEU	3.4
31	BA	883	G	3.4

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Mol	Chain	Res	Type	RSRZ
2	CB	211	ILE	3.4
10	CJ	28	ARG	3.4
36	DG	96	ARG	3.4
5	CE	21	ALA	3.4
1	AA	1019	C	3.4
1	CA	924	C	3.4
28	B6	17	LYS	3.4
1	AA	927	G	3.4
1	AA	1368	G	3.4
1	CA	1222	G	3.4
9	AI	107	ARG	3.4
45	DT	132	LYS	3.4
1	CA	1137	C	3.4
13	CM	52	GLU	3.4
5	AE	130	ASN	3.4
20	AT	9	ASN	3.4
1	AA	969	A	3.4
1	AA	1318	A	3.4
3	AC	101	LEU	3.4
7	CG	35	LYS	3.4
14	AN	23	ARG	3.4
19	CS	56	GLN	3.4
37	DH	101	ARG	3.4
1	AA	97	G	3.4
1	CA	1305	G	3.4
2	CB	101	MET	3.4
9	CI	98	PRO	3.4
25	D3	39	ASP	3.4
31	BA	884	C	3.4
4	CD	32	ALA	3.4
7	CG	108	ALA	3.4
13	AM	30	ALA	3.4
19	AS	41	VAL	3.4
3	AC	194	GLY	3.4
3	CC	90	GLU	3.4
47	DV	53	GLU	3.4
1	CA	950	U	3.4
27	D5	2	ALA	3.4
31	BA	2402	C	3.4
1	AA	1157	A	3.4
9	AI	78	LYS	3.4
41	BP	139	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
2	AB	118	LEU	3.4
11	AK	19	ALA	3.4
19	AS	75	ALA	3.4
18	AR	29	PHE	3.4
36	BG	80	PHE	3.4
7	CG	68	ASN	3.4
10	AJ	78	ASN	3.4
9	CI	102	LEU	3.3
38	DI	128	LEU	3.3
1	AA	935	A	3.3
1	AA	1213	A	3.3
31	DA	900	A	3.3
9	CI	36	TYR	3.3
12	AL	28	LYS	3.3
41	BP	144	GLU	3.3
1	AA	1354	C	3.3
1	CA	1098	C	3.3
1	CA	1296	C	3.3
1	AA	976	G	3.3
19	CS	74	PHE	3.3
41	DP	150	ALA	3.3
3	CC	190	ARG	3.3
4	AD	36	ARG	3.3
28	D6	20	ASN	3.3
2	CB	215	LEU	3.3
7	AG	77	SER	3.3
51	DZ	96	VAL	3.3
2	AB	13	ALA	3.3
16	AP	17	TYR	3.3
1	AA	1295	G	3.3
22	B0	3	HIS	3.3
3	AC	189	ALA	3.3
3	CC	21	ARG	3.3
9	AI	93	ARG	3.3
1	AA	1115	C	3.3
5	CE	42	GLY	3.3
10	AJ	34	VAL	3.3
1	CA	698	G	3.3
12	CL	111	LYS	3.3
21	CU	9	ARG	3.3
1	AA	1248	A	3.3
10	CJ	38	ILE	3.3

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Mol	Chain	Res	Type	RSRZ
37	DH	156	ALA	3.3
19	CS	45	VAL	3.3
1	AA	83	U	3.3
1	AA	1126	U	3.3
1	CA	81	U	3.3
3	AC	69	HIS	3.3
2	AB	187	LEU	3.3
7	AG	53	LYS	3.3
7	CG	118	VAL	3.3
19	AS	45	VAL	3.3
1	AA	417	C	3.3
31	BA	2477	C	3.3
13	CM	72	ALA	3.3
3	AC	184	TYR	3.3
1	CA	959	A	3.3
31	DA	1046	A	3.3
31	DA	1107	G	3.3
31	DA	1465	G	3.3
10	CJ	32	ALA	3.3
19	AS	61	TYR	3.3
20	CT	101	GLY	3.3
2	CB	76	GLN	3.3
19	CS	60	VAL	3.3
8	AH	55	GLY	3.3
9	AI	80	GLY	3.3
31	DA	2311	A	3.3
1	CA	1221	G	3.3
2	AB	233	SER	3.3
9	AI	7	THR	3.3
24	D2	38	GLN	3.3
13	CM	13	LYS	3.3
36	DG	167	GLU	3.3
2	CB	213	LEU	3.3
7	AG	101	LEU	3.3
10	CJ	90	LEU	3.3
31	BA	2310	A	3.3
7	AG	35	LYS	3.3
31	DA	7	G	3.3
41	BP	107	LYS	3.3
18	CR	82	THR	3.3
16	AP	39	TYR	3.3
44	DS	36	TYR	3.3

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Mol	Chain	Res	Type	RSRZ
50	BY	88	LYS	3.3
1	CA	1212	U	3.2
1	CA	1219	U	3.2
31	DA	895	U	3.2
1	CA	1218	C	3.2
3	CC	111	LEU	3.2
9	CI	86	VAL	3.2
9	CI	95	LYS	3.2
44	DS	49	VAL	3.2
4	CD	69	GLY	3.2
6	CF	8	ILE	3.2
36	DG	152	LEU	3.2
1	CA	1249	C	3.2
6	AF	90	VAL	3.2
29	B7	49	ARG	3.2
5	CE	78	HIS	3.2
9	CI	41	VAL	3.2
36	BG	137	GLU	3.2
5	AE	154	GLY	3.2
12	AL	52	LEU	3.2
14	CN	59	ALA	3.2
13	AM	49	THR	3.2
1	AA	965	A	3.2
28	D6	39	TYR	3.2
1	AA	971	G	3.2
38	BI	70	GLU	3.2
1	AA	1229	A	3.2
1	CA	1093	A	3.2
1	CA	1229	A	3.2
49	DX	26	TYR	3.2
1	CA	1163	C	3.2
31	BA	2794	C	3.2
39	BN	68	GLU	3.2
16	AP	75	ARG	3.2
23	D1	26	ARG	3.2
1	AA	96	U	3.2
1	AA	1160	G	3.2
1	AA	1240	U	3.2
1	CA	570	G	3.2
1	CA	1143	G	3.2
2	AB	16	HIS	3.2
1	CA	1146	A	3.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1349	A	3.2
9	CI	109	VAL	3.2
45	BT	132	LYS	3.2
1	AA	1045	C	3.2
31	BA	1530	C	3.2
21	CU	4	GLY	3.2
16	AP	29	ASP	3.2
37	DH	29	PRO	3.2
1	AA	1305	G	3.2
1	CA	928	G	3.2
7	AG	79	ARG	3.2
10	CJ	43	ARG	3.2
31	DA	2207	G	3.2
19	CS	39	THR	3.2
36	BG	145	THR	3.2
13	AM	61	GLU	3.2
21	AU	24	ARG	3.2
38	DI	127	VAL	3.2
31	BA	1108	U	3.2
1	CA	951	G	3.2
7	CG	29	LYS	3.2
19	AS	62	ILE	3.2
2	AB	96	ARG	3.2
2	AB	237	ALA	3.2
13	CM	75	ALA	3.2
37	DH	57	ASP	3.2
1	CA	194	C	3.2
1	CA	1045	C	3.2
1	CA	1244	C	3.2
2	AB	12	GLU	3.2
31	DA	271(J)	C	3.2
31	DA	2791	C	3.2
3	AC	63	ASN	3.2
5	CE	6	PHE	3.2
11	AK	26	ASN	3.2
9	AI	17	VAL	3.2
1	CA	927	G	3.2
1	CA	958	A	3.2
1	CA	963	G	3.2
1	CA	1230	C	3.1
10	CJ	77	PRO	3.1
19	AS	32	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
50	DY	87	LYS	3.1
3	CC	85	ARG	3.1
3	AC	180	ALA	3.1
6	CF	65	VAL	3.1
47	DV	5	VAL	3.1
51	DZ	70	LEU	3.1
1	AA	218	C	3.1
1	CA	1087	G	3.1
28	D6	44	ARG	3.1
32	DB	60	C	3.1
38	BI	89	TYR	3.1
3	CC	101	LEU	3.1
3	CC	164	ARG	3.1
11	AK	98	LEU	3.1
17	CQ	25	ARG	3.1
16	AP	9	PHE	3.1
36	DG	180	PHE	3.1
1	AA	1221	G	3.1
1	CA	1302	U	3.1
37	BH	116	GLU	3.1
2	CB	148	TYR	3.1
10	CJ	84	GLN	3.1
31	DA	1914	C	3.1
32	DB	31	C	3.1
7	CG	78	ARG	3.1
9	AI	56	LEU	3.1
19	CS	63	THR	3.1
37	DH	108	GLY	3.1
36	DG	109	VAL	3.1
1	AA	992	U	3.1
1	CA	532	A	3.1
10	CJ	21	GLN	3.1
10	AJ	76	ASN	3.1
10	CJ	75	ILE	3.1
31	BA	2308	G	3.1
31	BA	2833	G	3.1
34	DE	17	ASP	3.1
36	DG	23	PHE	3.1
3	CC	204	LEU	3.1
1	CA	1066	C	3.1
9	CI	71	SER	3.1
1	AA	1283	G	3.1

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Mol	Chain	Res	Type	RSRZ
2	CB	31	TYR	3.1
1	AA	1091	U	3.1
1	AA	1232	U	3.1
10	AJ	30	SER	3.1
47	DV	47	VAL	3.1
1	AA	964	A	3.1
37	DH	106	THR	3.1
7	CG	38	LEU	3.1
9	AI	94	ALA	3.1
35	BF	128	ALA	3.1
9	CI	4	TYR	3.1
1	AA	1047	G	3.1
5	CE	45	PHE	3.1
31	BA	2100	G	3.1
11	AK	30	VAL	3.1
36	DG	86	MET	3.1
42	BQ	135	ASP	3.1
7	AG	16	LEU	3.1
11	AK	21	ILE	3.1
1	AA	944	G	3.1
20	CT	99	LEU	3.1
2	AB	144	ARG	3.1
1	CA	539	A	3.1
9	AI	95	LYS	3.1
50	DY	49	VAL	3.1
7	CG	25	ALA	3.1
12	CL	51	ALA	3.1
19	CS	59	PRO	3.1
21	CU	6	ARG	3.1
1	AA	841	U	3.1
1	AA	1056	U	3.1
31	DA	2893	G	3.1
36	BG	35	GLU	3.1
17	AQ	80	GLY	3.0
19	AS	18	LYS	3.0
13	AM	35	GLU	3.0
1	AA	1043	C	3.0
3	CC	81	GLY	3.0
10	CJ	54	PHE	3.0
37	DH	27	LYS	3.0
42	DQ	89	ASN	3.0
1	CA	957	U	3.0

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Mol	Chain	Res	Type	RSRZ
3	AC	15	THR	3.0
4	CD	10	ARG	3.0
7	CG	115	ARG	3.0
36	DG	75	LYS	3.0
1	CA	1265	G	3.0
9	AI	21	PRO	3.0
31	DA	352	G	3.0
7	AG	51	GLN	3.0
10	CJ	40	LEU	3.0
3	AC	39	ILE	3.0
37	BH	45	VAL	3.0
1	AA	1013	G	3.0
1	CA	922	G	3.0
1	CA	933	G	3.0
3	AC	91	LEU	3.0
1	AA	1252	A	3.0
1	CA	1115	C	3.0
31	DA	1032	A	3.0
9	CI	15	ALA	3.0
2	AB	140	HIS	3.0
7	CG	49	ILE	3.0
9	CI	26	VAL	3.0
13	CM	83	ASP	3.0
30	B8	34	TRP	3.0
36	DG	26	GLN	3.0
10	CJ	76	ASN	3.0
7	CG	62	PHE	3.0
31	DA	2477	C	3.0
1	CA	1151	A	3.0
1	CA	1256	A	3.0
6	CF	91	VAL	3.0
10	CJ	55	LYS	3.0
41	DP	123	LEU	3.0
9	AI	5	TYR	3.0
9	CI	12	GLU	3.0
11	AK	94	ALA	3.0
31	BA	11	G	3.0
31	DA	271(I)	G	3.0
31	DA	1527	G	3.0
37	DH	112	PRO	3.0
13	CM	24	GLY	3.0
11	CK	32	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
11	CK	31	THR	3.0
31	DA	1908	C	3.0
1	AA	1329	A	3.0
7	AG	156	TRP	3.0
4	CD	6	GLY	3.0
13	CM	67	GLU	3.0
19	AS	54	GLY	3.0
19	AS	79	THR	3.0
9	AI	123	PRO	3.0
1	CA	1369	C	3.0
10	AJ	32	ALA	3.0
11	CK	94	ALA	3.0
31	DA	1043	C	3.0
3	AC	66	VAL	3.0
7	AG	141	VAL	3.0
12	CL	112	ASP	3.0
19	CS	41	VAL	3.0
32	DB	105	A	3.0
36	BG	108	ASN	3.0
36	DG	94	LEU	3.0
31	BA	2186	G	3.0
19	AS	8	GLY	3.0
2	AB	41	ILE	3.0
13	CM	76	ALA	3.0
19	CS	50	ALA	3.0
1	CA	962	C	3.0
3	CC	162	GLN	3.0
1	CA	1283	G	2.9
13	CM	100	GLY	2.9
9	CI	16	ARG	2.9
31	DA	272(B)	G	2.9
31	DA	1115	G	2.9
7	CG	91	VAL	2.9
17	AQ	53	LEU	2.9
36	BG	74	LYS	2.9
36	BG	75	LYS	2.9
49	BX	26	TYR	2.9
1	AA	1158	C	2.9
31	DA	1152	C	2.9
37	DH	109	PHE	2.9
3	CC	88	ARG	2.9
10	CJ	41	PRO	2.9

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Mol	Chain	Res	Type	RSRZ
11	AK	28	THR	2.9
14	AN	28	GLY	2.9
14	CN	11	LYS	2.9
38	DI	62	LYS	2.9
1	CA	1121	U	2.9
31	DA	312	G	2.9
7	AG	8	GLU	2.9
35	BF	1	MET	2.9
50	BY	50	ARG	2.9
2	AB	75	LYS	2.9
3	CC	124	ILE	2.9
21	AU	13	ILE	2.9
31	DA	876	C	2.9
1	CA	1319	A	2.9
3	CC	22	TRP	2.9
7	CG	22	LEU	2.9
13	CM	87	TYR	2.9
22	B0	2	ALA	2.9
16	AP	48	TRP	2.9
31	DA	2892	A	2.9
13	AM	57	ARG	2.9
1	CA	1127	G	2.9
1	CA	1144	G	2.9
7	AG	92	SER	2.9
9	CI	74	ILE	2.9
16	AP	7	ALA	2.9
19	AS	47	HIS	2.9
19	CS	31	ILE	2.9
19	CS	62	ILE	2.9
39	DN	129	PRO	2.9
31	DA	1049	C	2.9
2	CB	220	ASP	2.9
7	AG	29	LYS	2.9
38	BI	127	VAL	2.9
9	AI	114	TYR	2.9
1	CA	144	G	2.9
45	DT	93	ARG	2.9
7	AG	73	MET	2.9
3	CC	196	LEU	2.9
36	DG	28	VAL	2.9
38	BI	128	LEU	2.9
3	CC	184	TYR	2.9

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Mol	Chain	Res	Type	RSRZ
36	DG	104	GLU	2.9
1	CA	1008	C	2.9
1	CA	1217	C	2.9
9	AI	57	GLY	2.9
32	DB	56	G	2.9
37	DH	48	GLY	2.9
1	AA	1390	U	2.9
1	CA	1275	A	2.9
14	AN	20	ALA	2.9
39	BN	18	ALA	2.9
2	AB	38	GLY	2.9
50	DY	58	GLY	2.9
13	CM	17	VAL	2.9
1	AA	1363	C	2.9
31	DA	1467	C	2.9
1	CA	993	G	2.9
37	DH	83	TYR	2.9
31	DA	363(F)	A	2.9
38	BI	131	LYS	2.9
44	DS	80	LEU	2.9
3	CC	71	ALA	2.9
27	D5	53	ALA	2.9
12	AL	114	LYS	2.9
1	CA	1268	A	2.9
11	CK	108	ILE	2.9
7	AG	100	ALA	2.9
10	CJ	11	PHE	2.9
13	AM	51	ALA	2.9
41	DP	92	GLU	2.9
3	AC	181	ASN	2.9
10	AJ	15	THR	2.9
1	AA	426	G	2.9
1	AA	1207	G	2.9
2	CB	92	TYR	2.9
31	DA	1494	A	2.9
10	CJ	12	ASP	2.9
35	DF	2	LYS	2.9
50	DY	56	PRO	2.9
2	CB	235	SER	2.8
3	AC	144	SER	2.8
3	AC	128	PHE	2.8
7	CG	84	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
2	CB	96	ARG	2.8
18	CR	47	THR	2.8
31	BA	1547	C	2.8
1	AA	532	A	2.8
1	AA	1280	A	2.8
1	CA	541	G	2.8
1	AA	1317	C	2.8
1	AA	1389	C	2.8
1	CA	960	U	2.8
1	CA	1200	C	2.8
1	AA	1289	A	2.8
1	CA	1503	A	2.8
2	CB	70	PHE	2.8
13	CM	57	ARG	2.8
18	CR	80	PRO	2.8
2	CB	241	GLU	2.8
31	BA	1107	G	2.8
39	DN	68	GLU	2.8
36	DG	64	THR	2.8
1	AA	1008	C	2.8
1	AA	1230	C	2.8
14	CN	29	ARG	2.8
11	CK	117	ASN	2.8
13	AM	115	LYS	2.8
18	AR	82	THR	2.8
13	CM	54	VAL	2.8
31	DA	1915	U	2.8
47	DV	96	ILE	2.8
36	DG	87	PRO	2.8
2	CB	143	GLU	2.8
37	DH	61	HIS	2.8
3	AC	179	ARG	2.8
15	CO	88	ARG	2.8
12	CL	32	PHE	2.8
46	DU	90	VAL	2.8
1	AA	354	G	2.8
1	AA	1311	G	2.8
16	CP	41	PRO	2.8
31	DA	2811	G	2.8
32	DB	1	U	2.8
3	CC	107	GLN	2.8
31	DA	898	C	2.8

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Mol	Chain	Res	Type	RSRZ
36	DG	76	SER	2.8
11	AK	83	ILE	2.8
46	DU	79	PHE	2.8
51	DZ	146	ILE	2.8
1	AA	1360	A	2.8
2	CB	116	GLU	2.8
13	AM	107	ALA	2.8
19	CS	29	ARG	2.8
24	B2	48	HIS	2.8
35	DF	128	ALA	2.8
38	DI	94	ALA	2.8
1	AA	428	G	2.8
1	AA	1310	G	2.8
1	AA	1347	G	2.8
10	AJ	46	ARG	2.8
10	AJ	81	THR	2.8
41	DP	119	GLU	2.8
1	AA	1503	A	2.8
1	CA	1285	A	2.8
1	CA	956	U	2.8
16	CP	6	LEU	2.8
38	BI	65	ALA	2.8
3	CC	74	GLY	2.8
7	AG	50	ILE	2.8
41	DP	91	PHE	2.8
1	AA	194	C	2.8
1	CA	945	G	2.8
1	CA	1117	G	2.8
2	CB	132	LYS	2.8
4	AD	152	SER	2.8
11	CK	129	SER	2.8
13	AM	40	ASN	2.8
46	DU	78	THR	2.8
37	DH	33	LEU	2.8
9	AI	30	GLY	2.8
1	CA	943	U	2.8
6	AF	94	GLN	2.8
6	CF	89	MET	2.8
19	AS	43	GLU	2.8
37	BH	41	MET	2.8
9	CI	29	ASN	2.8
3	CC	95	THR	2.8

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Mol	Chain	Res	Type	RSRZ
1	AA	1011	G	2.8
32	DB	116	G	2.8
31	BA	362	U	2.8
1	CA	195	A	2.8
1	CA	1019	C	2.8
1	CA	1043	C	2.8
10	AJ	11	PHE	2.8
13	CM	53	VAL	2.8
1	AA	1446	U	2.7
51	DZ	98	MET	2.7
2	CB	154	LEU	2.7
9	AI	127	LYS	2.7
2	AB	136	VAL	2.7
28	B6	20	ASN	2.7
36	DG	178	PHE	2.7
41	DP	84	ASN	2.7
3	CC	165	THR	2.7
9	CI	81	ILE	2.7
13	CM	41	PRO	2.7
36	BG	144	ILE	2.7
41	DP	144	GLU	2.7
1	AA	1218	C	2.7
1	AA	1362	C	2.7
31	DA	1505	C	2.7
2	CB	153	ARG	2.7
44	BS	11	LYS	2.7
1	AA	945	G	2.7
1	AA	954	G	2.7
1	CA	925	G	2.7
3	CC	177	THR	2.7
31	BA	896	A	2.7
6	CF	61	LEU	2.7
2	AB	227	GLY	2.7
14	AN	30	ALA	2.7
17	CQ	73	VAL	2.7
51	DZ	130	PRO	2.7
1	AA	540	G	2.7
1	AA	1017	G	2.7
3	AC	183	ASP	2.7
6	CF	39	LYS	2.7
9	AI	76	ALA	2.7
35	BF	21	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
45	BT	92	GLY	2.7
1	AA	76	C	2.7
1	AA	1114	C	2.7
38	BI	74	ASN	2.7
10	CJ	31	GLY	2.7
31	DA	896	A	2.7
31	DA	2308	G	2.7
2	AB	32	ILE	2.7
18	CR	50	ILE	2.7
1	CA	1267	C	2.7
19	CS	38	SER	2.7
28	D6	41	PRO	2.7
4	CD	41	GLY	2.7
9	CI	105	ASP	2.7
37	DH	123	PHE	2.7
2	CB	137	ARG	2.7
10	AJ	80	LYS	2.7
14	CN	4	LYS	2.7
9	AI	124	GLN	2.7
37	DH	16	SER	2.7
1	AA	1150	U	2.7
1	AA	1264	C	2.7
12	AL	74	GLY	2.7
16	CP	43	LYS	2.7
19	CS	72	GLY	2.7
31	BA	271(J)	C	2.7
6	CF	90	VAL	2.7
2	AB	201	ILE	2.7
7	CG	44	TYR	2.7
11	AK	61	ALA	2.7
16	CP	19	ILE	2.7
31	DA	901	A	2.7
2	AB	229	VAL	2.7
2	CB	38	GLY	2.7
9	AI	20	ARG	2.7
15	CO	23	GLY	2.7
31	DA	361	G	2.7
5	AE	155	GLU	2.7
7	CG	134	ALA	2.7
13	CM	35	GLU	2.7
23	D1	27	GLU	2.7
35	DF	199	TRP	2.7

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Mol	Chain	Res	Type	RSRZ
36	DG	90	LEU	2.7
3	CC	2	GLY	2.7
10	CJ	94	VAL	2.7
33	BD	236	GLY	2.7
2	AB	236	TYR	2.7
5	AE	89	ILE	2.7
9	AI	122	ALA	2.7
13	CM	66	LEU	2.7
31	DA	1530	C	2.7
32	DB	23	G	2.7
32	DB	62	C	2.7
14	AN	29	ARG	2.7
16	CP	72	ARG	2.7
37	DH	43	VAL	2.7
37	DH	110	SER	2.7
1	CA	141	A	2.7
1	CA	1040	U	2.7
1	CA	1252	A	2.7
9	AI	23	ASN	2.7
9	AI	50	LEU	2.7
14	CN	19	ARG	2.7
32	DB	24	G	2.7
37	DH	107	VAL	2.7
4	CD	43	HIS	2.7
36	DG	73	ALA	2.7
2	AB	98	LEU	2.6
36	DG	62	LEU	2.6
1	AA	982	U	2.6
1	CA	974	A	2.6
1	CA	1159	U	2.6
51	DZ	170	THR	2.6
3	CC	78	GLY	2.6
5	CE	109	ILE	2.6
11	CK	39	PRO	2.6
2	CB	109	SER	2.6
19	CS	34	TRP	2.6
11	CK	27	ASN	2.6
24	D2	37	PHE	2.6
15	AO	23	GLY	2.6
4	AD	200	GLU	2.6
7	CG	112	PRO	2.6
9	CI	9	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
9	CI	107	ARG	2.6
10	CJ	9	ARG	2.6
10	CJ	37	PRO	2.6
1	CA	1277	C	2.6
9	AI	18	PHE	2.6
11	AK	43	SER	2.6
7	CG	28	ASN	2.6
18	CR	22	VAL	2.6
36	DG	36	LYS	2.6
5	CE	75	THR	2.6
38	BI	132	PRO	2.6
16	AP	80	PHE	2.6
36	DG	141	PHE	2.6
1	CA	1234	C	2.6
35	BF	134	GLY	2.6
36	DG	92	VAL	2.6
42	DQ	92	GLY	2.6
10	AJ	65	LEU	2.6
19	AS	48	THR	2.6
36	DG	43	LEU	2.6
1	CA	1017	G	2.6
26	D4	18	CYS	2.6
31	BA	1533	G	2.6
31	BA	2793	G	2.6
36	DG	17	PRO	2.6
3	AC	158	GLY	2.6
7	AG	74	GLU	2.6
8	CH	30	ARG	2.6
16	CP	51	VAL	2.6
19	AS	68	GLY	2.6
31	BA	1916	A	2.6
37	DH	35	VAL	2.6
45	DT	34	VAL	2.6
1	AA	188	C	2.6
1	AA	1030	C	2.6
28	B6	39	TYR	2.6
1	CA	991	U	2.6
2	AB	17	PHE	2.6
31	DA	271(N)	U	2.6
1	CA	1185	G	2.6
7	CG	132	GLY	2.6
31	BA	1173	G	2.6

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Mol	Chain	Res	Type	RSRZ
31	DA	875	G	2.6
7	AG	78	ARG	2.6
10	AJ	67	THR	2.6
14	CN	12	ARG	2.6
1	CA	1085	U	2.6
37	BH	47	GLU	2.6
1	CA	93	G	2.6
10	CJ	48	THR	2.6
13	AM	52	GLU	2.6
7	CG	137	LYS	2.6
13	AM	48	LEU	2.6
7	AG	96	GLN	2.6
36	BG	136	ARG	2.6
1	CA	348	G	2.6
4	CD	21	LEU	2.6
9	CI	50	LEU	2.6
31	BA	898	C	2.6
43	DR	33	ARG	2.6
47	BV	96	ILE	2.6
2	CB	112	VAL	2.6
44	DS	81	GLY	2.6
10	CJ	29	ARG	2.6
2	AB	211	ILE	2.6
1	AA	162	A	2.6
1	AA	1186	G	2.6
1	AA	1316	G	2.6
1	CA	15	G	2.6
1	CA	731	G	2.6
31	DA	1922	G	2.6
1	AA	624	C	2.6
1	CA	992	U	2.6
13	CM	59	TYR	2.6
9	CI	83	ARG	2.6
29	D7	47	ARG	2.6
17	AQ	98	LEU	2.6
41	DP	122	PRO	2.6
11	AK	31	THR	2.6
18	CR	56	THR	2.6
16	AP	12	LYS	2.5
19	AS	70	LYS	2.5
41	BP	119	GLU	2.5
46	DU	76	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
1	CA	16	A	2.5
1	CA	417	C	2.5
31	DA	1033	U	2.5
11	AK	129	SER	2.5
2	CB	51	LEU	2.5
38	DI	137	PRO	2.5
18	CR	49	LYS	2.5
2	CB	12	GLU	2.5
3	AC	100	ALA	2.5
44	DS	37	ALA	2.5
1	AA	472	A	2.5
1	CA	979	C	2.5
1	CA	1180	A	2.5
32	DB	29	A	2.5
1	CA	1206	G	2.5
7	AG	120	ILE	2.5
41	BP	121	LYS	2.5
31	DA	892	G	2.5
31	DA	1154	G	2.5
28	D6	40	CYS	2.5
45	DT	123	GLN	2.5
50	DY	98	VAL	2.5
21	CU	12	LYS	2.5
37	DH	105	LEU	2.5
41	DP	88	LEU	2.5
44	DS	50	SER	2.5
1	AA	1183	A	2.5
36	DG	112	PRO	2.5
1	CA	1132	C	2.5
6	CF	4	TYR	2.5
7	CG	139	GLU	2.5
10	CJ	83	GLU	2.5
31	DA	272(J)	C	2.5
16	AP	38	TYR	2.5
18	CR	83	GLU	2.5
42	DQ	80	GLU	2.5
7	AG	23	VAL	2.5
28	B6	23	THR	2.5
31	DA	1525	G	2.5
51	DZ	88	PHE	2.5
1	CA	982	U	2.5
19	CS	51	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
39	BN	131	GLN	2.5
1	AA	390	C	2.5
1	AA	488	C	2.5
28	D6	13	CYS	2.5
1	CA	1184	G	2.5
36	BG	39	ILE	2.5
2	AB	33	TYR	2.5
7	AG	136	LYS	2.5
10	AJ	68	HIS	2.5
12	CL	99	HIS	2.5
31	BA	157	U	2.5
42	BQ	90	VAL	2.5
3	CC	181	ASN	2.5
45	DT	38	ASN	2.5
7	AG	27	ILE	2.5
31	DA	2801	A	2.5
10	AJ	7	LYS	2.5
1	AA	1181	G	2.5
1	CA	987	G	2.5
3	AC	154	SER	2.5
3	CC	193	TYR	2.5
9	AI	22	GLY	2.5
10	AJ	79	ARG	2.5
31	BA	881	G	2.5
44	DS	30	ARG	2.5
46	DU	109	LEU	2.5
10	AJ	87	THR	2.5
16	CP	9	PHE	2.5
1	AA	948	C	2.5
1	AA	1270	C	2.5
32	DB	6	C	2.5
9	CI	114	TYR	2.5
33	BD	268	ARG	2.5
44	DS	51	ALA	2.5
1	AA	1351	U	2.5
1	CA	426	G	2.5
31	DA	2302	G	2.5
47	DV	24	LYS	2.5
38	BI	67	ARG	2.5
1	AA	1161	C	2.5
1	AA	1332	A	2.5
2	AB	202	PRO	2.5

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Mol	Chain	Res	Type	RSRZ
31	BA	279	C	2.5
31	BA	900	A	2.5
9	CI	78	LYS	2.5
23	D1	78	LYS	2.5
3	AC	182	ILE	2.5
5	AE	109	ILE	2.5
36	DG	161	THR	2.5
37	DH	95	ARG	2.5
1	CA	1124	G	2.5
1	CA	1216	G	2.5
31	DA	1042	G	2.5
44	DS	72	ALA	2.5
34	BE	69	LYS	2.5
1	CA	418	C	2.5
1	CA	1162	C	2.5
1	CA	1322	C	2.5
31	BA	1546	C	2.5
3	AC	58	GLU	2.5
31	BA	2660	A	2.5
31	DA	1876	A	2.5
31	DA	2629	A	2.5
19	CS	44	MET	2.5
37	DH	46	GLU	2.5
2	AB	215	LEU	2.5
3	CC	103	VAL	2.5
4	CD	155	LEU	2.5
26	D4	10	VAL	2.5
30	B8	32	LEU	2.5
36	BG	89	GLY	2.5
37	BH	83	TYR	2.5
1	AA	1171	G	2.5
2	AB	80	ILE	2.5
7	AG	140	ASP	2.5
7	CG	64	GLN	2.5
2	CB	40	HIS	2.5
13	AM	99	ARG	2.5
31	BA	1176	G	2.5
31	DA	274	G	2.5
1	CA	218	C	2.4
1	CA	980	C	2.4
1	CA	1158	C	2.4
1	CA	1327	C	2.4

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Mol	Chain	Res	Type	RSRZ
1	CA	1354	C	2.4
31	DA	1547	C	2.4
11	AK	82	VAL	2.4
11	CK	80	VAL	2.4
13	CM	40	ASN	2.4
33	DD	236	GLY	2.4
43	BR	11	ASN	2.4
51	DZ	132	ASN	2.4
13	AM	104	ARG	2.4
16	CP	42	ARG	2.4
16	CP	76	GLN	2.4
38	BI	135	GLU	2.4
1	CA	292	G	2.4
1	CA	1271	G	2.4
4	AD	8	VAL	2.4
9	AI	109	VAL	2.4
11	CK	98	LEU	2.4
31	BA	271(M)	G	2.4
38	DI	107	VAL	2.4
50	BY	27	VAL	2.4
31	BA	2803	C	2.4
2	CB	105	PHE	2.4
1	CA	1091	U	2.4
20	CT	8	ARG	2.4
3	CC	109	PRO	2.4
36	BG	66	GLN	2.4
5	CE	19	MET	2.4
13	AM	13	LYS	2.4
19	AS	50	ALA	2.4
45	DT	115	ARG	2.4
1	AA	1314	C	2.4
1	AA	1335	C	2.4
1	CA	1108	G	2.4
1	CA	1231	G	2.4
19	AS	63	THR	2.4
1	AA	1363(A)	A	2.4
16	CP	15	PRO	2.4
2	CB	83	MET	2.4
6	AF	99	ALA	2.4
7	CG	85	TYR	2.4
46	BU	117	GLN	2.4
1	AA	1328	C	2.4

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Mol	Chain	Res	Type	RSRZ
1	AA	1369	C	2.4
1	CA	1263	C	2.4
6	AF	48	LEU	2.4
27	D5	55	ARG	2.4
37	DH	41	MET	2.4
1	CA	1347	G	2.4
31	BA	1912	A	2.4
38	BI	120	ILE	2.4
38	DI	79	ILE	2.4
3	AC	106	VAL	2.4
19	CS	33	THR	2.4
36	DG	93	THR	2.4
4	AD	6	GLY	2.4
36	DG	179	PRO	2.4
1	AA	952	U	2.4
1	CA	931	C	2.4
31	BA	12	U	2.4
45	BT	32	TYR	2.4
51	DZ	179	ASP	2.4
31	DA	330	A	2.4
31	DA	1528	A	2.4
3	CC	57	ILE	2.4
11	AK	29	ILE	2.4
31	DA	1526	G	2.4
3	CC	179	ARG	2.4
24	B2	43	GLN	2.4
7	CG	105	VAL	2.4
7	CG	153	HIS	2.4
9	CI	13	ALA	2.4
16	CP	29	ASP	2.4
1	CA	1147	C	2.4
3	AC	126	ARG	2.4
19	AS	11	VAL	2.4
1	AA	1331	G	2.4
1	CA	347	G	2.4
1	CA	988	G	2.4
11	AK	27	ASN	2.4
36	BG	51	ARG	2.4
37	BH	101	ARG	2.4
1	AA	1330	U	2.4
1	CA	1391	U	2.4
1	AA	1051	C	2.4

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Mol	Chain	Res	Type	RSRZ
31	DA	2183	C	2.4
44	DS	48	LEU	2.4
4	AD	23	GLY	2.4
50	DY	91	GLU	2.4
1	AA	98	G	2.4
1	AA	1190	G	2.4
1	CA	1047	G	2.4
31	DA	919	G	2.4
32	DB	87	G	2.4
37	BH	65	HIS	2.4
1	CA	1321	C	2.4
10	CJ	42	THR	2.4
20	CT	106	ALA	2.4
31	DA	1508	A	2.4
20	AT	72	LEU	2.4
6	CF	40	VAL	2.4
17	AQ	77	VAL	2.4
1	AA	1276	G	2.4
1	CA	920	U	2.4
1	CA	1401	G	2.4
5	CE	20	GLN	2.4
10	AJ	59	SER	2.4
30	B8	37	SER	2.4
31	BA	1915	U	2.4
31	DA	1921	G	2.4
4	AD	184	LYS	2.4
47	DV	6	LYS	2.4
50	BY	91	GLU	2.4
32	DB	2	C	2.4
35	DF	7	TYR	2.4
5	AE	85	GLY	2.3
36	DG	44	GLY	2.3
1	CA	723	U	2.3
19	CS	21	GLU	2.3
19	CS	28	LYS	2.3
2	AB	121	LEU	2.3
2	AB	222	ILE	2.3
11	AK	60	ALA	2.3
27	B5	53	ALA	2.3
1	AA	219	C	2.3
4	CD	35	ARG	2.3
7	AG	84	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
3	AC	197	GLY	2.3
10	AJ	93	GLY	2.3
11	AK	17	GLY	2.3
34	BE	59	VAL	2.3
2	AB	95	GLN	2.3
11	AK	81	ASP	2.3
14	CN	58	LYS	2.3
31	DA	311	A	2.3
31	DA	1111	A	2.3
31	DA	1916	A	2.3
4	CD	131	ARG	2.3
10	CJ	88	LEU	2.3
18	AR	79	LEU	2.3
35	DF	14	PRO	2.3
20	AT	87	LYS	2.3
31	BA	1051	G	2.3
32	DB	89	G	2.3
51	DZ	114	GLY	2.3
1	AA	1352	C	2.3
7	AG	123	GLU	2.3
1	AA	986	A	2.3
1	AA	1319	A	2.3
1	CA	923	A	2.3
4	AD	4	TYR	2.3
1	AA	1136	U	2.3
1	AA	1393	U	2.3
7	AG	58	PRO	2.3
3	CC	80	GLY	2.3
36	DG	125	PHE	2.3
7	CG	96	GLN	2.3
41	DP	94	GLU	2.3
9	CI	51	ARG	2.3
3	CC	201	TYR	2.3
5	AE	17	ALA	2.3
31	BA	1112	G	2.3
44	DS	32	LEU	2.3
51	DZ	90	VAL	2.3
1	AA	1123	A	2.3
1	CA	697	U	2.3
5	AE	35	GLY	2.3
41	BP	104	GLY	2.3
10	CJ	61	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
16	CP	13	HIS	2.3
41	DP	149	GLU	2.3
7	CG	97	GLN	2.3
46	BU	75	ASN	2.3
51	DZ	87	ASP	2.3
1	AA	201	C	2.3
1	CA	419	C	2.3
31	DA	1166	C	2.3
1	AA	64	G	2.3
31	BA	919	G	2.3
36	BG	112	PRO	2.3
10	AJ	29	ARG	2.3
10	AJ	66	ARG	2.3
19	CS	43	GLU	2.3
21	CU	22	ARG	2.3
1	AA	171	A	2.3
1	CA	1502	A	2.3
3	CC	3	ASN	2.3
7	AG	106	GLN	2.3
13	AM	19	LEU	2.3
15	AO	22	THR	2.3
11	AK	84	VAL	2.3
13	CM	85	GLY	2.3
7	AG	72	ARG	2.3
1	AA	1208	C	2.3
1	CA	366	C	2.3
1	CA	990	C	2.3
2	AB	210	SER	2.3
13	AM	114	ARG	2.3
51	DZ	4	ARG	2.3
13	AM	46	LYS	2.3
31	DA	334	C	2.3
50	DY	88	LYS	2.3
1	AA	191	G	2.3
1	AA	1308	U	2.3
1	AA	151	A	2.3
2	AB	165	VAL	2.3
2	CB	34	ALA	2.3
6	CF	35	ALA	2.3
12	AL	64	TYR	2.3
28	B6	21	TYR	2.3
11	CK	82	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
6	CF	3	ARG	2.3
4	AD	179	GLU	2.3
36	BG	105	LYS	2.3
44	DS	103	GLU	2.3
1	AA	470	C	2.3
2	AB	76	GLN	2.3
6	AF	98	LEU	2.3
2	CB	97	TRP	2.3
7	CG	120	ILE	2.3
7	AG	69	VAL	2.3
16	AP	58	TYR	2.3
33	BD	34	VAL	2.3
46	DU	113	ALA	2.3
38	DI	93	THR	2.3
1	AA	1009	G	2.3
1	CA	410	G	2.3
1	CA	538	G	2.3
1	CA	964	A	2.3
1	CA	1233	G	2.3
10	CJ	64	GLU	2.3
17	CQ	100	LYS	2.3
5	AE	19	MET	2.3
9	CI	99	LEU	2.3
26	D4	31	ILE	2.3
38	DI	133	HIS	2.3
9	CI	94	ALA	2.3
50	BY	2	ARG	2.3
12	CL	74	GLY	2.3
17	AQ	14	LYS	2.3
31	BA	1467	C	2.3
1	CA	976	G	2.3
5	AE	129	ILE	2.3
10	AJ	45	ARG	2.3
10	AJ	96	ILE	2.3
2	AB	188	ALA	2.3
5	CE	34	VAL	2.3
9	AI	33	PHE	2.3
33	DD	154	LYS	2.3
16	AP	10	GLY	2.3
23	D1	79	GLY	2.3
1	AA	1040	U	2.3
1	AA	1121	U	2.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1395	C	2.3
1	CA	921	U	2.3
5	CE	120	THR	2.3
31	DA	816	C	2.3
31	DA	877	U	2.3
31	DA	2666	C	2.3
32	DB	114	C	2.3
7	CG	71	PRO	2.3
13	AM	100	GLY	2.2
5	AE	43	LEU	2.2
18	CR	31	LEU	2.2
31	BA	1578	U	2.2
36	DG	118	ARG	2.2
44	BS	89	ARG	2.2
1	AA	419	C	2.2
1	AA	1259	C	2.2
2	AB	207	ALA	2.2
2	CB	150	SER	2.2
9	CI	80	GLY	2.2
36	BG	46	ALA	2.2
1	AA	1055	A	2.2
1	CA	969	A	2.2
38	DI	82	ARG	2.2
39	BN	134	ARG	2.2
3	AC	67	THR	2.2
31	BA	1709	U	2.2
1	AA	1378	C	2.2
9	AI	6	GLY	2.2
9	CI	6	GLY	2.2
20	CT	102	GLY	2.2
46	DU	117	GLN	2.2
7	CG	101	LEU	2.2
36	BG	94	LEU	2.2
1	CA	1374	A	2.2
31	BA	1046	A	2.2
31	BA	1494	A	2.2
36	BG	71	THR	2.2
51	DZ	69	THR	2.2
1	AA	1057	G	2.2
10	AJ	43	ARG	2.2
13	CM	38	GLY	2.2
15	AO	89	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
19	AS	52	TYR	2.2
19	AS	80	TYR	2.2
31	DA	354	G	2.2
37	DH	18	GLU	2.2
41	DP	110	TYR	2.2
44	BS	36	TYR	2.2
2	CB	187	LEU	2.2
4	AD	208	SER	2.2
4	AD	70	ILE	2.2
5	CE	90	VAL	2.2
13	CM	25	ILE	2.2
36	BG	63	ILE	2.2
5	CE	130	ASN	2.2
20	CT	64	ASP	2.2
1	CA	1170	A	2.2
1	CA	1213	A	2.2
3	CC	117	ALA	2.2
15	CO	6	GLU	2.2
19	AS	72	GLY	2.2
28	D6	23	THR	2.2
50	DY	54	LYS	2.2
1	AA	541	G	2.2
1	CA	1442	G	2.2
4	AD	175	SER	2.2
31	BA	1525	G	2.2
1	CA	930	C	2.2
2	AB	15	VAL	2.2
20	CT	88	VAL	2.2
7	CG	18	TYR	2.2
16	AP	70	ALA	2.2
37	BH	139	GLN	2.2
1	CA	609	A	2.2
1	CA	949	A	2.2
31	DA	2809	A	2.2
36	DG	3	LEU	2.2
51	BZ	144	LEU	2.2
2	CB	53	ARG	2.2
2	CB	217	ARG	2.2
3	CC	79	ARG	2.2
8	AH	30	ARG	2.2
12	CL	33	ARG	2.2
12	CL	113	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
13	CM	65	LYS	2.2
15	AO	82	ILE	2.2
51	DZ	112	ARG	2.2
13	CM	32	GLU	2.2
1	CA	1190	G	2.2
31	BA	281	G	2.2
31	DA	317	G	2.2
41	BP	120	ALA	2.2
9	CI	23	ASN	2.2
7	AG	137	LYS	2.2
17	AQ	99	SER	2.2
31	DA	2810	A	2.2
1	AA	699	C	2.2
1	CA	1069	C	2.2
2	CB	44	LEU	2.2
32	DB	30	C	2.2
38	DI	104	GLN	2.2
46	DU	74	LEU	2.2
1	AA	1022	G	2.2
16	CP	80	PHE	2.2
31	BA	2184	G	2.2
34	BE	76	ARG	2.2
1	AA	82	U	2.2
1	AA	921	U	2.2
36	BG	59	GLU	2.2
41	BP	118	GLY	2.2
1	AA	1350	A	2.2
7	CG	76	ARG	2.2
9	AI	104	ARG	2.2
38	BI	35	LEU	2.2
10	AJ	3	LYS	2.2
12	CL	114	LYS	2.2
18	CR	29	PHE	2.2
7	CG	156	TRP	2.2
1	AA	113	G	2.2
1	AA	631	G	2.2
1	CA	1276	G	2.2
1	AA	960	U	2.2
1	CA	1095	U	2.2
5	CE	9	LYS	2.2
12	AL	54	LYS	2.2
45	DT	118	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1191	A	2.2
16	AP	41	PRO	2.2
36	DG	122	PRO	2.2
7	AG	139	GLU	2.2
12	CL	43	VAL	2.2
2	CB	113	HIS	2.2
1	CA	1126	U	2.2
1	CA	1355	G	2.2
51	DZ	89	PHE	2.2
9	AI	32	ASP	2.2
12	AL	43	VAL	2.2
1	AA	1333	A	2.2
11	AK	91	ARG	2.2
31	DA	1847	A	2.2
41	DP	135	LEU	2.1
1	AA	1038	C	2.1
1	AA	1263	C	2.1
11	CK	100	ALA	2.1
32	BB	5	C	2.1
35	DF	115	ALA	2.1
13	CM	68	GLY	2.1
51	DZ	156	LYS	2.1
1	AA	1306	A	2.1
9	CI	117	HIS	2.1
16	AP	16	HIS	2.1
51	DZ	34	ASN	2.1
5	AE	132	ALA	2.1
16	CP	7	ALA	2.1
4	CD	115	ARG	2.1
9	AI	74	ILE	2.1
21	AU	15	ARG	2.1
41	DP	117	GLU	2.1
1	CA	1083	U	2.1
1	CA	1205	U	2.1
3	CC	188	LEU	2.1
9	AI	13	ALA	2.1
11	CK	28	THR	2.1
14	CN	13	THR	2.1
36	DG	11	TYR	2.1
1	AA	1294	G	2.1
1	CA	66	G	2.1
9	AI	37	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
36	DG	145	THR	2.1
2	CB	32	ILE	2.1
9	CI	14	VAL	2.1
14	CN	42	ILE	2.1
2	CB	202	PRO	2.1
26	D4	11	PRO	2.1
30	D8	37	SER	2.1
1	CA	1051	C	2.1
2	AB	37	ASN	2.1
10	CJ	46	ARG	2.1
2	CB	35	GLU	2.1
19	AS	17	GLU	2.1
21	CU	13	ILE	2.1
47	BV	60	GLU	2.1
1	AA	353	A	2.1
1	CA	814	A	2.1
1	CA	1009	G	2.1
15	CO	20	GLY	2.1
19	AS	44	MET	2.1
37	DH	93	GLY	2.1
16	AP	40	ASP	2.1
1	AA	1103	C	2.1
1	CA	470	C	2.1
3	AC	105	GLU	2.1
45	BT	40	THR	2.1
3	AC	104	GLN	2.1
5	AE	77	PRO	2.1
26	D4	7	PRO	2.1
1	AA	1004	A	2.1
4	AD	38	TYR	2.1
31	BA	1445	A	2.1
1	AA	204	U	2.1
1	CA	786	G	2.1
1	CA	1258	G	2.1
1	CA	1368	G	2.1
19	CS	47	HIS	2.1
31	BA	508	G	2.1
31	DA	1878	G	2.1
31	DA	2894	G	2.1
1	CA	1378	C	2.1
9	AI	108	VAL	2.1
31	BA	1049	C	2.1

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Mol	Chain	Res	Type	RSRZ
37	DH	99	VAL	2.1
2	AB	111	ARG	2.1
10	AJ	90	LEU	2.1
14	AN	12	ARG	2.1
4	CD	4	TYR	2.1
7	CG	43	PHE	2.1
41	BP	122	PRO	2.1
13	AM	53	VAL	2.1
27	D5	57	VAL	2.1
1	CA	223	U	2.1
31	DA	2897	U	2.1
1	AA	928	G	2.1
1	CA	199	G	2.1
1	CA	1171	G	2.1
12	CL	29	GLY	2.1
32	DB	51	G	2.1
36	DG	170	ARG	2.1
36	DG	177	GLY	2.1
42	DQ	87	LYS	2.1
31	DA	318	C	2.1
12	AL	26	ALA	2.1
35	BF	7	TYR	2.1
5	CE	7	GLU	2.1
13	AM	73	GLU	2.1
45	DT	11	GLU	2.1
2	AB	209	ARG	2.1
3	AC	157	ILE	2.1
5	CE	121	LYS	2.1
28	D6	46	HIS	2.1
1	AA	393	A	2.1
1	AA	1302	U	2.1
41	BP	99	LEU	2.1
1	AA	324	G	2.1
1	AA	391	G	2.1
1	AA	460	G	2.1
1	AA	1309	G	2.1
1	CA	1303	C	2.1
31	BA	1110	G	2.1
36	DG	30	GLU	2.1
41	BP	149	GLU	2.1
47	DV	60	GLU	2.1
8	AH	115	SER	2.1

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Mol	Chain	Res	Type	RSRZ
9	CI	10	ARG	2.1
12	CL	100	ILE	2.1
18	CR	86	VAL	2.1
38	BI	121	LYS	2.1
38	DI	113	ARG	2.1
48	DW	113	LYS	2.1
8	CH	130	GLY	2.1
9	CI	69	GLY	2.1
51	DZ	55	HIS	2.1
5	CE	16	THR	2.1
4	AD	10	ARG	2.1
10	CJ	39	PRO	2.1
14	AN	34	TYR	2.1
22	B0	4	LYS	2.1
35	DF	19	GLU	2.1
38	DI	80	PRO	2.1
1	AA	1228	C	2.1
1	CA	1336	C	2.1
6	CF	88	VAL	2.1
3	CC	49	SER	2.1
1	AA	1343	G	2.1
1	CA	954	G	2.1
9	AI	115	GLY	2.1
10	CJ	35	SER	2.1
2	CB	24	TRP	2.1
7	AG	20	ASP	2.1
7	AG	110	GLN	2.1
14	AN	58	LYS	2.1
1	AA	65	U	2.1
1	CA	1000	U	2.1
1	CA	1065	U	2.1
36	BG	92	VAL	2.1
23	B1	80	LEU	2.1
37	DH	31	GLY	2.1
1	CA	1314	C	2.1
11	CK	110	ASP	2.1
31	BA	1577	C	2.1
3	AC	172	ARG	2.0
31	BA	1466	G	2.0
7	CG	100	ALA	2.0
13	AM	43	THR	2.0
36	DG	40	ASN	2.0

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Mol	Chain	Res	Type	RSRZ
9	AI	63	ILE	2.0
19	AS	20	LEU	2.0
44	DS	35	ILE	2.0
1	AA	1225	A	2.0
1	CA	1280	A	2.0
10	CJ	80	LYS	2.0
13	CM	79	LYS	2.0
13	AM	101	GLN	2.0
16	CP	11	SER	2.0
18	CR	63	GLN	2.0
44	BS	52	SER	2.0
1	CA	1119	C	2.0
5	AE	122	GLU	2.0
41	DP	120	ALA	2.0
20	AT	53	LEU	2.0
49	BX	3	THR	2.0
1	CA	1373	G	2.0
31	DA	1940	U	2.0
4	AD	35	ARG	2.0
21	AU	10	ARG	2.0
47	BV	66	ARG	2.0
51	BZ	80	ARG	2.0
17	CQ	24	GLU	2.0
15	CO	60	VAL	2.0
16	AP	20	VAL	2.0
29	B7	46	VAL	2.0
30	B8	64	TYR	2.0
31	BA	918	A	2.0
1	CA	701	C	2.0
4	AD	135	LEU	2.0
17	CQ	98	LEU	2.0
5	AE	127	ASN	2.0
7	AG	41	ARG	2.0
13	CM	114	ARG	2.0
28	B6	44	ARG	2.0
28	D6	26	ASN	2.0
42	DQ	88	GLY	2.0
50	BY	86	ARG	2.0
1	AA	473	G	2.0
1	AA	698	G	2.0
1	CA	1081	G	2.0
1	CA	1273	G	2.0

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Mol	Chain	Res	Type	RSRZ
6	CF	94	GLN	2.0
3	CC	154	SER	2.0
30	D8	31	HIS	2.0
31	BA	2207	G	2.0
36	DG	12	TYR	2.0
45	DT	117	ASP	2.0
18	CR	21	LYS	2.0
20	AT	65	LYS	2.0
51	DZ	37	VAL	2.0
1	AA	16	A	2.0
1	AA	1268	A	2.0
14	CN	3	ARG	2.0
34	BE	61	ARG	2.0
36	BG	44	GLY	2.0
36	DG	154	GLY	2.0
1	AA	435	C	2.0
1	CA	1366	C	2.0
4	AD	93	PHE	2.0
7	CG	109	ASN	2.0
38	DI	1	MET	2.0
44	BS	107	GLU	2.0
51	DZ	94	GLU	2.0
1	AA	434	U	2.0
2	AB	219	VAL	2.0
9	CI	32	ASP	2.0
46	DU	110	VAL	2.0
28	D6	50	ARG	2.0
47	DV	62	LEU	2.0
31	BA	1740	G	2.0
47	BV	75	PHE	2.0
18	AR	19	LYS	2.0
23	D1	34	THR	2.0
31	DA	1877	A	2.0
32	DB	52	A	2.0
1	AA	67	C	2.0
1	AA	217	C	2.0
1	AA	1237	C	2.0
1	AA	1403	C	2.0
38	DI	54	GLN	2.0
9	AI	44	VAL	2.0
12	AL	120	TYR	2.0
16	CP	18	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
37	DH	17	VAL	2.0
38	DI	140	LEU	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q<0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	DA	3324	1/1	0.42	0.46	69,69,69,69	0
52	MG	DA	3162	1/1	0.47	0.40	51,51,51,51	0
52	MG	AA	1645	1/1	0.62	0.57	75,75,75,75	0
52	MG	BA	3358	1/1	0.62	0.58	80,80,80,80	0
52	MG	DA	3276	1/1	0.63	0.47	65,65,65,65	0
52	MG	DA	3246	1/1	0.64	0.20	67,67,67,67	0
52	MG	BA	3319	1/1	0.65	0.42	64,64,64,64	0
52	MG	AA	1635	1/1	0.67	0.17	69,69,69,69	0
52	MG	DA	3205	1/1	0.69	0.51	62,62,62,62	0
52	MG	BA	3206	1/1	0.70	0.98	57,57,57,57	0
52	MG	CA	1613	1/1	0.71	0.55	68,68,68,68	0
52	MG	AA	1650	1/1	0.71	0.35	60,60,60,60	0
52	MG	AA	1642	1/1	0.71	0.46	73,73,73,73	0
52	MG	CA	1628	1/1	0.72	0.51	73,73,73,73	0
52	MG	BA	3257	1/1	0.72	0.25	23,23,23,23	0
52	MG	BA	3208	1/1	0.73	0.36	41,41,41,41	0
52	MG	DA	3144	1/1	0.74	0.34	48,48,48,48	0
52	MG	DA	3247	1/1	0.74	0.44	76,76,76,76	0
52	MG	AA	1634	1/1	0.74	0.56	55,55,55,55	0
52	MG	DA	3291	1/1	0.74	0.44	62,62,62,62	0
52	MG	DA	3304	1/1	0.74	0.15	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	CA	1649	1/1	0.74	0.19	63,63,63,63	0
52	MG	DA	3328	1/1	0.74	0.22	81,81,81,81	0
52	MG	BA	3327	1/1	0.75	0.53	48,48,48,48	0
52	MG	AA	1613	1/1	0.75	0.22	76,76,76,76	0
52	MG	DA	3264	1/1	0.75	0.53	58,58,58,58	0
52	MG	DA	3231	1/1	0.75	0.49	58,58,58,58	0
52	MG	BA	3248	1/1	0.76	0.38	46,46,46,46	0
52	MG	AA	1644	1/1	0.76	0.36	87,87,87,87	0
52	MG	CA	1604	1/1	0.76	0.21	88,88,88,88	0
52	MG	DA	3309	1/1	0.76	0.66	62,62,62,62	0
52	MG	BA	3245	1/1	0.76	0.45	56,56,56,56	0
52	MG	DA	3170	1/1	0.76	0.33	61,61,61,61	0
52	MG	DA	3278	1/1	0.77	1.25	74,74,74,74	0
52	MG	BA	3304	1/1	0.77	0.58	55,55,55,55	0
52	MG	CA	1630	1/1	0.77	0.53	73,73,73,73	0
52	MG	DA	3261	1/1	0.77	0.22	63,63,63,63	0
52	MG	DA	3316	1/1	0.77	0.71	60,60,60,60	0
52	MG	BA	3151	1/1	0.77	0.48	54,54,54,54	0
52	MG	BA	3074	1/1	0.77	0.60	60,60,60,60	0
52	MG	DA	3306	1/1	0.78	0.20	69,69,69,69	0
52	MG	BA	3330	1/1	0.78	0.29	72,72,72,72	0
52	MG	DA	3280	1/1	0.78	0.67	64,64,64,64	0
52	MG	DA	3069	1/1	0.78	0.28	65,65,65,65	0
52	MG	CA	1635	1/1	0.78	0.45	77,77,77,77	0
52	MG	BA	3175	1/1	0.79	0.40	62,62,62,62	0
52	MG	DA	3191	1/1	0.79	0.55	45,45,45,45	0
52	MG	AA	1651	1/1	0.80	0.70	57,57,57,57	0
52	MG	BA	3154	1/1	0.80	0.40	79,79,79,79	0
52	MG	DA	3105	1/1	0.80	0.20	43,43,43,43	0
52	MG	CA	1646	1/1	0.80	0.33	59,59,59,59	0
52	MG	DA	3223	1/1	0.80	0.18	41,41,41,41	0
52	MG	BA	3238	1/1	0.81	0.22	40,40,40,40	0
52	MG	BA	3273	1/1	0.81	0.41	42,42,42,42	0
52	MG	BA	3140	1/1	0.81	0.17	46,46,46,46	0
52	MG	DA	3199	1/1	0.81	0.18	37,37,37,37	0
52	MG	BA	3361	1/1	0.81	0.09	60,60,60,60	0
52	MG	D3	101	1/1	0.81	0.65	52,52,52,52	0
52	MG	BA	3311	1/1	0.81	1.02	62,62,62,62	0
52	MG	DA	3090	1/1	0.81	0.29	34,34,34,34	0
52	MG	BA	3317	1/1	0.81	0.39	45,45,45,45	0
52	MG	DA	3252	1/1	0.81	0.50	54,54,54,54	0
52	MG	AA	1611	1/1	0.81	0.15	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
52	MG	CA	1637	1/1	0.82	0.42	61,61,61,61	0
52	MG	AA	1653	1/1	0.82	0.08	61,61,61,61	0
52	MG	BA	3342	1/1	0.82	0.30	38,38,38,38	0
52	MG	AA	1628	1/1	0.82	0.51	70,70,70,70	0
52	MG	DA	3005	1/1	0.82	0.16	63,63,63,63	0
52	MG	DA	3300	1/1	0.82	0.88	64,64,64,64	0
52	MG	CA	1638	1/1	0.83	0.32	61,61,61,61	0
52	MG	DA	3040	1/1	0.83	0.78	50,50,50,50	0
52	MG	DA	3283	1/1	0.83	0.58	67,67,67,67	0
52	MG	DA	3243	1/1	0.83	0.14	41,41,41,41	0
52	MG	DA	3298	1/1	0.83	0.17	46,46,46,46	0
52	MG	DA	3163	1/1	0.83	0.53	59,59,59,59	0
52	MG	DA	3301	1/1	0.83	0.74	54,54,54,54	0
52	MG	DA	3166	1/1	0.83	0.43	54,54,54,54	0
52	MG	DA	3047	1/1	0.83	0.45	36,36,36,36	0
52	MG	AA	1624	1/1	0.83	0.43	58,58,58,58	0
52	MG	BA	3265	1/1	0.83	0.26	41,41,41,41	0
52	MG	DA	3320	1/1	0.83	0.67	68,68,68,68	0
52	MG	CA	1602	1/1	0.83	0.67	55,55,55,55	0
52	MG	DA	3325	1/1	0.83	0.50	67,67,67,67	0
52	MG	DA	3277	1/1	0.83	0.43	76,76,76,76	0
52	MG	DF	301	1/1	0.83	0.34	57,57,57,57	0
52	MG	DA	3220	1/1	0.84	0.51	40,40,40,40	0
52	MG	DA	3141	1/1	0.84	0.81	70,70,70,70	0
52	MG	DA	3143	1/1	0.84	0.28	32,32,32,32	0
52	MG	BA	3336	1/1	0.84	0.79	69,69,69,69	0
52	MG	BA	3239	1/1	0.84	0.32	50,50,50,50	0
52	MG	AA	1621	1/1	0.84	0.47	50,50,50,50	0
52	MG	DA	3305	1/1	0.84	0.23	83,83,83,83	0
52	MG	AA	1604	1/1	0.84	0.31	73,73,73,73	0
52	MG	BA	3083	1/1	0.84	0.38	35,35,35,35	0
52	MG	AA	1638	1/1	0.84	0.28	67,67,67,67	0
52	MG	DA	3267	1/1	0.84	0.34	49,49,49,49	0
52	MG	AA	1607	1/1	0.84	0.54	58,58,58,58	0
52	MG	DA	3123	1/1	0.84	0.19	57,57,57,57	0
52	MG	DA	3208	1/1	0.84	0.27	57,57,57,57	0
52	MG	DA	3219	1/1	0.84	0.64	57,57,57,57	0
52	MG	DA	3206	1/1	0.85	0.57	38,38,38,38	0
52	MG	DA	3279	1/1	0.85	0.29	59,59,59,59	0
52	MG	BA	3341	1/1	0.85	0.12	70,70,70,70	0
52	MG	BA	3321	1/1	0.85	0.28	48,48,48,48	0
52	MG	BA	3344	1/1	0.85	0.44	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	DA	3294	1/1	0.85	0.52	65,65,65,65	0
52	MG	DA	3131	1/1	0.85	0.17	82,82,82,82	0
52	MG	BA	3345	1/1	0.85	0.32	48,48,48,48	0
52	MG	BA	3350	1/1	0.85	0.21	65,65,65,65	0
52	MG	BA	3352	1/1	0.85	0.55	62,62,62,62	0
52	MG	BA	3357	1/1	0.85	0.28	71,71,71,71	0
52	MG	AA	1609	1/1	0.85	0.39	50,50,50,50	0
52	MG	DA	3260	1/1	0.85	0.24	65,65,65,65	0
52	MG	BA	3360	1/1	0.85	0.09	64,64,64,64	0
52	MG	DA	3262	1/1	0.85	0.21	57,57,57,57	0
52	MG	BA	3328	1/1	0.85	0.46	56,56,56,56	0
52	MG	BB	204	1/1	0.85	0.39	43,43,43,43	0
52	MG	BA	3297	1/1	0.85	0.40	37,37,37,37	0
52	MG	BA	3235	1/1	0.85	0.47	34,34,34,34	0
52	MG	DQ	201	1/1	0.85	0.24	46,46,46,46	0
52	MG	DA	3178	1/1	0.86	0.33	58,58,58,58	0
52	MG	DA	3116	1/1	0.86	0.28	62,62,62,62	0
52	MG	BA	3254	1/1	0.86	0.35	55,55,55,55	0
52	MG	DA	3130	1/1	0.86	0.26	59,59,59,59	0
52	MG	BA	3097	1/1	0.86	0.48	54,54,54,54	0
52	MG	BA	3332	1/1	0.86	0.43	40,40,40,40	0
52	MG	DA	3212	1/1	0.86	0.35	38,38,38,38	0
52	MG	DA	3268	1/1	0.86	0.39	52,52,52,52	0
52	MG	DA	3271	1/1	0.86	0.50	61,61,61,61	0
52	MG	BA	3312	1/1	0.86	0.10	40,40,40,40	0
52	MG	DA	3318	1/1	0.86	0.10	45,45,45,45	0
52	MG	BA	3130	1/1	0.86	0.45	55,55,55,55	0
52	MG	BA	3183	1/1	0.86	0.27	54,54,54,54	0
52	MG	BA	3281	1/1	0.86	0.88	61,61,61,61	0
52	MG	DA	3092	1/1	0.86	0.53	40,40,40,40	0
52	MG	BA	3236	1/1	0.86	0.37	25,25,25,25	0
52	MG	DA	3289	1/1	0.86	0.71	65,65,65,65	0
52	MG	BA	3187	1/1	0.87	0.41	48,48,48,48	0
52	MG	DA	3189	1/1	0.87	0.56	42,42,42,42	0
52	MG	DA	3190	1/1	0.87	0.54	43,43,43,43	0
52	MG	BA	3270	1/1	0.87	0.11	66,66,66,66	0
52	MG	BA	3152	1/1	0.87	0.13	55,55,55,55	0
52	MG	BA	3042	1/1	0.87	0.35	14,14,14,14	0
52	MG	BA	3233	1/1	0.87	0.20	21,21,21,21	0
52	MG	BA	3298	1/1	0.87	0.43	59,59,59,59	0
52	MG	D7	101	1/1	0.87	0.28	38,38,38,38	0
52	MG	CA	1608	1/1	0.87	0.37	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
52	MG	AA	1612	1/1	0.87	0.65	70,70,70,70	0
52	MG	CA	1624	1/1	0.87	0.28	55,55,55,55	0
52	MG	DA	3323	1/1	0.87	0.10	57,57,57,57	0
52	MG	DA	3229	1/1	0.87	0.34	52,52,52,52	0
52	MG	BA	3355	1/1	0.87	0.26	64,64,64,64	0
52	MG	DA	3085	1/1	0.87	0.12	22,22,22,22	0
52	MG	DA	3284	1/1	0.87	0.81	51,51,51,51	0
52	MG	BA	3112	1/1	0.87	0.20	38,38,38,38	0
52	MG	BA	3165	1/1	0.88	0.18	44,44,44,44	0
52	MG	BA	3174	1/1	0.88	0.36	40,40,40,40	0
52	MG	BA	3021	1/1	0.88	0.41	22,22,22,22	0
52	MG	BA	3362	1/1	0.88	0.10	70,70,70,70	0
52	MG	BA	3179	1/1	0.88	0.52	41,41,41,41	0
52	MG	BP	203	1/1	0.88	0.72	55,55,55,55	0
52	MG	AA	1616	1/1	0.88	0.26	76,76,76,76	0
52	MG	BA	3114	1/1	0.88	0.36	37,37,37,37	0
52	MG	BA	3202	1/1	0.88	0.12	54,54,54,54	0
52	MG	BA	3271	1/1	0.88	0.44	38,38,38,38	0
52	MG	DA	3240	1/1	0.88	0.43	42,42,42,42	0
52	MG	BA	3049	1/1	0.88	0.42	33,33,33,33	0
52	MG	BA	3054	1/1	0.88	0.20	47,47,47,47	0
52	MG	BA	3285	1/1	0.88	0.40	59,59,59,59	0
52	MG	BA	3288	1/1	0.88	0.27	65,65,65,65	0
52	MG	BA	3289	1/1	0.88	0.23	37,37,37,37	0
52	MG	BA	3056	1/1	0.88	0.14	24,24,24,24	0
52	MG	DA	3319	1/1	0.88	0.18	40,40,40,40	0
52	MG	AA	1646	1/1	0.88	0.23	51,51,51,51	0
52	MG	BA	3353	1/1	0.88	0.30	26,26,26,26	0
52	MG	AA	1648	1/1	0.88	0.19	82,82,82,82	0
52	MG	BA	3356	1/1	0.88	0.37	60,60,60,60	0
52	MG	BA	3159	1/1	0.88	0.59	43,43,43,43	0
52	MG	DA	3016	1/1	0.88	0.60	31,31,31,31	0
52	MG	DA	3193	1/1	0.88	0.24	46,46,46,46	0
52	MG	CA	1636	1/1	0.89	1.11	76,76,76,76	0
52	MG	DA	3153	1/1	0.89	0.47	54,54,54,54	0
52	MG	DA	3159	1/1	0.89	0.49	48,48,48,48	0
52	MG	BA	3139	1/1	0.89	0.50	60,60,60,60	0
52	MG	BA	3313	1/1	0.89	0.31	38,38,38,38	0
52	MG	DA	3270	1/1	0.89	0.33	44,44,44,44	0
52	MG	DA	3164	1/1	0.89	0.24	49,49,49,49	0
52	MG	CA	1643	1/1	0.89	0.57	57,57,57,57	0
52	MG	BA	3314	1/1	0.89	0.35	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
52	MG	BA	3026	1/1	0.89	0.34	48,48,48,48	0
52	MG	BA	3195	1/1	0.89	0.38	31,31,31,31	0
52	MG	BA	3037	1/1	0.89	0.55	22,22,22,22	0
52	MG	BA	3085	1/1	0.89	0.14	8,8,8,8	0
52	MG	BA	3090	1/1	0.89	0.45	18,18,18,18	0
52	MG	DA	3286	1/1	0.89	0.41	47,47,47,47	0
52	MG	DA	3026	1/1	0.89	0.36	66,66,66,66	0
52	MG	BA	3093	1/1	0.89	0.44	37,37,37,37	0
52	MG	BA	3164	1/1	0.89	0.26	30,30,30,30	0
52	MG	BA	3286	1/1	0.89	0.38	30,30,30,30	0
52	MG	DA	3083	1/1	0.89	0.50	38,38,38,38	0
52	MG	DA	3213	1/1	0.89	0.35	30,30,30,30	0
52	MG	AA	1643	1/1	0.89	0.65	59,59,59,59	0
52	MG	CA	1607	1/1	0.89	0.52	58,58,58,58	0
52	MG	AA	1652	1/1	0.89	0.42	66,66,66,66	0
52	MG	DA	3307	1/1	0.89	0.28	41,41,41,41	0
52	MG	CA	1610	1/1	0.89	0.16	90,90,90,90	0
52	MG	DA	3311	1/1	0.89	0.20	45,45,45,45	0
52	MG	AA	1608	1/1	0.89	0.32	80,80,80,80	0
52	MG	DA	3232	1/1	0.89	0.22	50,50,50,50	0
52	MG	DA	3236	1/1	0.89	0.61	43,43,43,43	0
52	MG	DA	3237	1/1	0.89	0.13	46,46,46,46	0
52	MG	BA	3178	1/1	0.89	0.40	30,30,30,30	0
52	MG	DA	3125	1/1	0.89	0.12	45,45,45,45	0
52	MG	CA	1625	1/1	0.89	0.22	54,54,54,54	0
52	MG	BA	3346	1/1	0.89	0.24	60,60,60,60	0
52	MG	DB	201	1/1	0.89	0.46	58,58,58,58	0
52	MG	AA	1615	1/1	0.89	0.29	49,49,49,49	0
52	MG	BA	3249	1/1	0.89	0.66	63,63,63,63	0
52	MG	D0	101	1/1	0.90	0.14	46,46,46,46	0
52	MG	BA	3290	1/1	0.90	0.18	46,46,46,46	0
52	MG	D5	101	1/1	0.90	0.44	35,35,35,35	0
52	MG	BA	3166	1/1	0.90	0.29	47,47,47,47	0
52	MG	DA	3001	1/1	0.90	0.32	56,56,56,56	0
52	MG	DA	3273	1/1	0.90	0.93	52,52,52,52	0
52	MG	AA	1617	1/1	0.90	0.33	57,57,57,57	0
52	MG	BA	3302	1/1	0.90	0.39	46,46,46,46	0
52	MG	BA	3263	1/1	0.90	0.29	26,26,26,26	0
52	MG	BA	3305	1/1	0.90	0.29	43,43,43,43	0
52	MG	DA	3043	1/1	0.90	0.22	42,42,42,42	0
52	MG	DA	3194	1/1	0.90	0.36	47,47,47,47	0
52	MG	DA	3046	1/1	0.90	0.44	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	CA	1612	1/1	0.90	0.21	68,68,68,68	0
52	MG	DA	3048	1/1	0.90	0.41	35,35,35,35	0
52	MG	BA	3264	1/1	0.90	0.14	48,48,48,48	0
52	MG	DA	3209	1/1	0.90	0.97	58,58,58,58	0
52	MG	CA	1620	1/1	0.90	0.29	58,58,58,58	0
52	MG	CA	1621	1/1	0.90	0.36	54,54,54,54	0
52	MG	DA	3089	1/1	0.90	0.46	29,29,29,29	0
52	MG	DA	3302	1/1	0.90	0.39	64,64,64,64	0
52	MG	AA	1654	1/1	0.90	0.25	69,69,69,69	0
52	MG	DA	3222	1/1	0.90	0.57	44,44,44,44	0
52	MG	BA	3001	1/1	0.90	0.41	46,46,46,46	0
52	MG	CA	1626	1/1	0.90	0.35	65,65,65,65	0
52	MG	CA	1627	1/1	0.90	0.64	75,75,75,75	0
52	MG	BA	3003	1/1	0.90	0.89	52,52,52,52	0
52	MG	DA	3313	1/1	0.90	0.28	66,66,66,66	0
52	MG	BA	3126	1/1	0.90	0.31	33,33,33,33	0
52	MG	BA	3162	1/1	0.90	0.52	60,60,60,60	0
52	MG	DA	3239	1/1	0.90	0.27	29,29,29,29	0
52	MG	BA	3088	1/1	0.90	0.47	34,34,34,34	0
52	MG	DA	3136	1/1	0.90	0.42	33,33,33,33	0
52	MG	BA	3325	1/1	0.90	0.69	58,58,58,58	0
52	MG	BA	3196	1/1	0.90	0.20	30,30,30,30	0
52	MG	AA	1630	1/1	0.90	0.51	51,51,51,51	0
52	MG	DA	3147	1/1	0.90	0.43	30,30,30,30	0
52	MG	BA	3251	1/1	0.90	0.10	40,40,40,40	0
52	MG	BA	3331	1/1	0.90	0.30	49,49,49,49	0
53	ZN	AN	101	1/1	0.90	0.15	157,157,157,157	0
52	MG	DA	3065	1/1	0.91	0.22	39,39,39,39	0
52	MG	BA	3147	1/1	0.91	0.60	37,37,37,37	0
52	MG	BA	3268	1/1	0.91	0.43	39,39,39,39	0
52	MG	BA	3303	1/1	0.91	0.20	65,65,65,65	0
52	MG	AA	1606	1/1	0.91	0.43	89,89,89,89	0
52	MG	DA	3275	1/1	0.91	0.39	60,60,60,60	0
52	MG	BA	3069	1/1	0.91	0.36	45,45,45,45	0
52	MG	BF	301	1/1	0.91	0.23	51,51,51,51	0
52	MG	CA	1639	1/1	0.91	1.02	70,70,70,70	0
52	MG	DA	3207	1/1	0.91	0.28	56,56,56,56	0
52	MG	DA	3109	1/1	0.91	0.34	42,42,42,42	0
52	MG	DA	3282	1/1	0.91	0.15	48,48,48,48	0
52	MG	BA	3310	1/1	0.91	0.45	59,59,59,59	0
52	MG	DA	3210	1/1	0.91	0.20	43,43,43,43	0
52	MG	DA	3120	1/1	0.91	0.30	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
52	MG	DA	3288	1/1	0.91	0.36	51,51,51,51	0
52	MG	DA	3122	1/1	0.91	0.28	48,48,48,48	0
52	MG	DA	3214	1/1	0.91	0.37	48,48,48,48	0
52	MG	CA	1601	1/1	0.91	0.17	72,72,72,72	0
52	MG	BA	3128	1/1	0.91	0.30	39,39,39,39	0
52	MG	AA	1639	1/1	0.91	0.27	49,49,49,49	0
52	MG	BA	3053	1/1	0.91	0.48	27,27,27,27	0
52	MG	DA	3224	1/1	0.91	0.45	54,54,54,54	0
52	MG	BA	3211	1/1	0.91	0.28	34,34,34,34	0
52	MG	DA	3137	1/1	0.91	0.42	31,31,31,31	0
52	MG	BA	3347	1/1	0.91	0.17	43,43,43,43	0
52	MG	DA	3233	1/1	0.91	0.57	52,52,52,52	0
52	MG	BA	3348	1/1	0.91	0.35	38,38,38,38	0
52	MG	BA	3349	1/1	0.91	0.39	33,33,33,33	0
52	MG	CA	1614	1/1	0.91	0.12	71,71,71,71	0
52	MG	DA	3017	1/1	0.91	0.34	34,34,34,34	0
52	MG	DA	3242	1/1	0.91	0.21	53,53,53,53	0
52	MG	DA	3021	1/1	0.91	0.30	48,48,48,48	0
52	MG	BA	3214	1/1	0.91	0.12	12,12,12,12	0
52	MG	BA	3318	1/1	0.91	0.51	40,40,40,40	0
52	MG	DA	3249	1/1	0.91	0.31	51,51,51,51	0
52	MG	BA	3223	1/1	0.91	0.25	41,41,41,41	0
52	MG	DA	3255	1/1	0.91	0.20	50,50,50,50	0
52	MG	BA	3181	1/1	0.91	0.43	35,35,35,35	0
52	MG	BA	3291	1/1	0.91	0.19	38,38,38,38	0
52	MG	AA	1610	1/1	0.91	0.17	41,41,41,41	0
52	MG	DX	101	1/1	0.91	0.34	63,63,63,63	0
52	MG	DA	3185	1/1	0.91	0.59	53,53,53,53	0
53	ZN	CN	101	1/1	0.91	0.18	139,139,139,139	0
54	K	DA	3329	1/1	0.91	0.18	55,55,55,55	0
52	MG	BA	3338	1/1	0.92	0.53	50,50,50,50	0
52	MG	DA	3002	1/1	0.92	0.48	29,29,29,29	0
52	MG	DA	3258	1/1	0.92	0.23	52,52,52,52	0
52	MG	DA	3152	1/1	0.92	0.33	30,30,30,30	0
52	MG	BA	3258	1/1	0.92	0.39	30,30,30,30	0
52	MG	DA	3154	1/1	0.92	0.18	49,49,49,49	0
52	MG	DA	3157	1/1	0.92	0.60	52,52,52,52	0
52	MG	DA	3158	1/1	0.92	0.14	53,53,53,53	0
52	MG	DA	3014	1/1	0.92	0.40	56,56,56,56	0
52	MG	BA	3231	1/1	0.92	0.24	35,35,35,35	0
52	MG	BA	3135	1/1	0.92	0.43	28,28,28,28	0
52	MG	BA	3104	1/1	0.92	0.54	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	BA	3188	1/1	0.92	0.17	57,57,57,57	0
52	MG	BA	3269	1/1	0.92	0.36	43,43,43,43	0
52	MG	BA	3237	1/1	0.92	0.62	40,40,40,40	0
52	MG	BA	3105	1/1	0.92	0.59	34,34,34,34	0
52	MG	CA	1622	1/1	0.92	0.39	51,51,51,51	0
52	MG	BA	3059	1/1	0.92	0.28	26,26,26,26	0
52	MG	DA	3061	1/1	0.92	0.29	36,36,36,36	0
52	MG	BA	3274	1/1	0.92	0.46	36,36,36,36	0
52	MG	BA	3315	1/1	0.92	0.94	52,52,52,52	0
52	MG	DA	3197	1/1	0.92	0.51	46,46,46,46	0
52	MG	DA	3074	1/1	0.92	0.54	55,55,55,55	0
52	MG	DA	3080	1/1	0.92	0.75	46,46,46,46	0
52	MG	DA	3081	1/1	0.92	0.78	48,48,48,48	0
52	MG	DA	3293	1/1	0.92	0.48	62,62,62,62	0
52	MG	BA	3276	1/1	0.92	0.31	17,17,17,17	0
52	MG	DA	3295	1/1	0.92	0.13	46,46,46,46	0
52	MG	BA	3242	1/1	0.92	0.51	44,44,44,44	0
52	MG	BA	3282	1/1	0.92	0.36	55,55,55,55	0
52	MG	CA	1632	1/1	0.92	0.29	63,63,63,63	0
52	MG	BA	3061	1/1	0.92	0.32	27,27,27,27	0
52	MG	DA	3101	1/1	0.92	0.14	28,28,28,28	0
52	MG	BA	3246	1/1	0.92	0.58	46,46,46,46	0
52	MG	DA	3107	1/1	0.92	0.41	30,30,30,30	0
52	MG	AA	1640	1/1	0.92	0.42	67,67,67,67	0
52	MG	DA	3308	1/1	0.92	0.22	36,36,36,36	0
52	MG	DA	3221	1/1	0.92	0.54	40,40,40,40	0
52	MG	DA	3110	1/1	0.92	0.61	45,45,45,45	0
52	MG	DA	3312	1/1	0.92	0.23	55,55,55,55	0
52	MG	DA	3112	1/1	0.92	0.28	30,30,30,30	0
52	MG	BA	3176	1/1	0.92	0.39	45,45,45,45	0
52	MG	DA	3117	1/1	0.92	0.26	45,45,45,45	0
52	MG	DA	3230	1/1	0.92	0.32	57,57,57,57	0
52	MG	BB	201	1/1	0.92	0.49	35,35,35,35	0
52	MG	AA	1629	1/1	0.92	0.22	41,41,41,41	0
52	MG	CA	1644	1/1	0.92	0.40	62,62,62,62	0
52	MG	BB	205	1/1	0.92	0.12	64,64,64,64	0
52	MG	DA	3327	1/1	0.92	0.15	60,60,60,60	0
52	MG	DA	3127	1/1	0.92	0.27	38,38,38,38	0
52	MG	CA	1648	1/1	0.92	0.79	70,70,70,70	0
52	MG	DB	202	1/1	0.92	0.39	51,51,51,51	0
52	MG	DB	203	1/1	0.92	0.38	46,46,46,46	0
52	MG	BA	3155	1/1	0.92	0.23	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
52	MG	DA	3133	1/1	0.92	0.68	42,42,42,42	0
52	MG	DU	201	1/1	0.92	0.21	60,60,60,60	0
52	MG	BA	3294	1/1	0.92	0.13	38,38,38,38	0
52	MG	BX	101	1/1	0.92	0.24	38,38,38,38	0
52	MG	BA	3333	1/1	0.92	0.15	51,51,51,51	0
52	MG	BA	3034	1/1	0.92	0.34	61,61,61,61	0
52	MG	DA	3004	1/1	0.93	0.36	29,29,29,29	0
52	MG	CA	1605	1/1	0.93	0.20	84,84,84,84	0
52	MG	DA	3248	1/1	0.93	0.32	82,82,82,82	0
52	MG	DA	3012	1/1	0.93	0.40	25,25,25,25	0
52	MG	CA	1606	1/1	0.93	0.59	44,44,44,44	0
52	MG	DA	3015	1/1	0.93	0.32	39,39,39,39	0
52	MG	DA	3257	1/1	0.93	0.46	38,38,38,38	0
52	MG	BA	3334	1/1	0.93	0.30	24,24,24,24	0
52	MG	BA	3244	1/1	0.93	0.23	60,60,60,60	0
52	MG	CA	1609	1/1	0.93	0.11	34,34,34,34	0
52	MG	BA	3197	1/1	0.93	0.56	47,47,47,47	0
52	MG	BA	3201	1/1	0.93	0.78	51,51,51,51	0
52	MG	DA	3266	1/1	0.93	0.18	74,74,74,74	0
52	MG	BA	3293	1/1	0.93	0.37	36,36,36,36	0
52	MG	DA	3161	1/1	0.93	0.67	57,57,57,57	0
52	MG	BA	3064	1/1	0.93	0.42	52,52,52,52	0
52	MG	CA	1615	1/1	0.93	0.37	69,69,69,69	0
52	MG	CA	1616	1/1	0.93	0.49	67,67,67,67	0
52	MG	DA	3165	1/1	0.93	0.46	35,35,35,35	0
52	MG	DA	3049	1/1	0.93	0.49	42,42,42,42	0
52	MG	DA	3167	1/1	0.93	0.17	44,44,44,44	0
52	MG	DA	3168	1/1	0.93	0.36	35,35,35,35	0
52	MG	DA	3051	1/1	0.93	0.45	36,36,36,36	0
52	MG	DA	3172	1/1	0.93	0.42	56,56,56,56	0
52	MG	DA	3057	1/1	0.93	0.30	35,35,35,35	0
52	MG	DA	3182	1/1	0.93	0.13	39,39,39,39	0
52	MG	CA	1619	1/1	0.93	0.47	47,47,47,47	0
52	MG	DA	3064	1/1	0.93	0.46	47,47,47,47	0
52	MG	BA	3138	1/1	0.93	0.53	34,34,34,34	0
52	MG	BA	3111	1/1	0.93	0.21	17,17,17,17	0
52	MG	DA	3290	1/1	0.93	0.24	46,46,46,46	0
52	MG	BA	3300	1/1	0.93	0.54	48,48,48,48	0
52	MG	BA	3253	1/1	0.93	0.74	42,42,42,42	0
52	MG	BA	3004	1/1	0.93	0.43	28,28,28,28	0
52	MG	BA	3146	1/1	0.93	0.33	37,37,37,37	0
52	MG	DA	3297	1/1	0.93	0.24	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	DA	3200	1/1	0.93	0.42	46,46,46,46	0
52	MG	DA	3202	1/1	0.93	0.30	64,64,64,64	0
52	MG	BA	3217	1/1	0.93	0.21	38,38,38,38	0
52	MG	BA	3218	1/1	0.93	0.49	27,27,27,27	0
52	MG	BA	3220	1/1	0.93	0.28	46,46,46,46	0
52	MG	BA	3071	1/1	0.93	0.48	33,33,33,33	0
52	MG	DA	3095	1/1	0.93	0.22	39,39,39,39	0
52	MG	CA	1634	1/1	0.93	0.19	63,63,63,63	0
52	MG	DA	3103	1/1	0.93	0.69	32,32,32,32	0
52	MG	BA	3225	1/1	0.93	0.12	20,20,20,20	0
52	MG	DA	3310	1/1	0.93	0.58	56,56,56,56	0
52	MG	BA	3228	1/1	0.93	0.29	21,21,21,21	0
52	MG	DA	3218	1/1	0.93	0.29	41,41,41,41	0
52	MG	DA	3108	1/1	0.93	0.39	30,30,30,30	0
52	MG	BA	3150	1/1	0.93	0.32	40,40,40,40	0
52	MG	BA	3115	1/1	0.93	0.10	49,49,49,49	0
52	MG	BA	3117	1/1	0.93	0.15	42,42,42,42	0
52	MG	AA	1641	1/1	0.93	0.24	57,57,57,57	0
52	MG	DA	3321	1/1	0.93	0.13	34,34,34,34	0
52	MG	BA	3127	1/1	0.93	0.55	39,39,39,39	0
52	MG	DA	3225	1/1	0.93	0.14	51,51,51,51	0
52	MG	BA	3278	1/1	0.93	0.24	39,39,39,39	0
52	MG	DA	3326	1/1	0.93	0.30	52,52,52,52	0
52	MG	BA	3158	1/1	0.93	0.39	30,30,30,30	0
52	MG	BA	3075	1/1	0.93	0.41	44,44,44,44	0
52	MG	DA	3124	1/1	0.93	0.19	42,42,42,42	0
52	MG	BR	201	1/1	0.93	0.48	24,24,24,24	0
52	MG	DA	3126	1/1	0.93	0.30	42,42,42,42	0
52	MG	BA	3283	1/1	0.93	0.23	33,33,33,33	0
52	MG	BA	3240	1/1	0.93	0.13	42,42,42,42	0
52	MG	BA	3048	1/1	0.93	0.47	23,23,23,23	0
52	MG	CA	1603	1/1	0.93	0.36	44,44,44,44	0
52	MG	BA	3243	1/1	0.93	0.32	57,57,57,57	0
52	MG	DA	3244	1/1	0.93	0.22	32,32,32,32	0
52	MG	DA	3245	1/1	0.93	0.25	38,38,38,38	0
55	ERY	BA	3364	51/51	0.93	0.39	94,94,94,94	0
55	ERY	DA	3330	51/51	0.93	0.33	94,94,94,94	0
52	MG	DA	3037	1/1	0.94	0.70	35,35,35,35	0
52	MG	DA	3150	1/1	0.94	0.71	72,72,72,72	0
52	MG	DA	3250	1/1	0.94	0.52	41,41,41,41	0
52	MG	DA	3251	1/1	0.94	0.17	57,57,57,57	0
52	MG	DA	3151	1/1	0.94	0.60	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	DA	3253	1/1	0.94	0.17	58,58,58,58	0
52	MG	DA	3254	1/1	0.94	0.17	68,68,68,68	0
52	MG	DA	3038	1/1	0.94	0.51	26,26,26,26	0
52	MG	DA	3256	1/1	0.94	0.41	82,82,82,82	0
52	MG	DA	3039	1/1	0.94	0.64	53,53,53,53	0
52	MG	BA	3259	1/1	0.94	0.31	23,23,23,23	0
52	MG	DA	3156	1/1	0.94	0.18	39,39,39,39	0
52	MG	BA	3039	1/1	0.94	0.51	32,32,32,32	0
52	MG	BA	3307	1/1	0.94	0.42	44,44,44,44	0
52	MG	BA	3308	1/1	0.94	0.19	41,41,41,41	0
52	MG	B0	101	1/1	0.94	0.18	37,37,37,37	0
52	MG	BA	3170	1/1	0.94	0.68	31,31,31,31	0
52	MG	B5	101	1/1	0.94	0.44	40,40,40,40	0
52	MG	DA	3054	1/1	0.94	0.28	43,43,43,43	0
52	MG	BA	3227	1/1	0.94	0.54	37,37,37,37	0
52	MG	B5	102	1/1	0.94	0.42	56,56,56,56	0
52	MG	DA	3274	1/1	0.94	0.11	36,36,36,36	0
52	MG	CA	1629	1/1	0.94	0.17	67,67,67,67	0
52	MG	BA	3229	1/1	0.94	0.73	45,45,45,45	0
52	MG	DA	3169	1/1	0.94	0.23	35,35,35,35	0
52	MG	DA	3067	1/1	0.94	0.38	49,49,49,49	0
52	MG	BA	3316	1/1	0.94	0.33	31,31,31,31	0
52	MG	DA	3174	1/1	0.94	0.14	67,67,67,67	0
52	MG	DA	3175	1/1	0.94	0.29	44,44,44,44	0
52	MG	DA	3177	1/1	0.94	0.33	34,34,34,34	0
52	MG	CA	1633	1/1	0.94	0.55	48,48,48,48	0
52	MG	DA	3285	1/1	0.94	0.12	49,49,49,49	0
52	MG	DA	3181	1/1	0.94	0.45	44,44,44,44	0
52	MG	BA	3089	1/1	0.94	0.30	12,12,12,12	0
52	MG	BA	3051	1/1	0.94	0.36	17,17,17,17	0
52	MG	DA	3188	1/1	0.94	0.30	44,44,44,44	0
52	MG	DA	3082	1/1	0.94	0.34	47,47,47,47	0
52	MG	DA	3292	1/1	0.94	0.18	54,54,54,54	0
52	MG	AA	1605	1/1	0.94	0.30	69,69,69,69	0
52	MG	BA	3142	1/1	0.94	0.60	33,33,33,33	0
52	MG	BA	3144	1/1	0.94	0.59	37,37,37,37	0
52	MG	BP	201	1/1	0.94	0.54	39,39,39,39	0
52	MG	CA	1640	1/1	0.94	0.25	42,42,42,42	0
52	MG	DA	3299	1/1	0.94	0.39	57,57,57,57	0
52	MG	CA	1642	1/1	0.94	0.32	55,55,55,55	0
52	MG	DA	3097	1/1	0.94	0.25	33,33,33,33	0
52	MG	DA	3100	1/1	0.94	0.35	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	DA	3204	1/1	0.94	0.47	53,53,53,53	0
52	MG	BP	202	1/1	0.94	0.21	0,0,0,0	0
52	MG	DA	3102	1/1	0.94	0.63	36,36,36,36	0
52	MG	BA	3326	1/1	0.94	0.54	37,37,37,37	0
52	MG	CA	1645	1/1	0.94	0.88	64,64,64,64	0
52	MG	DA	3106	1/1	0.94	0.76	63,63,63,63	0
52	MG	BQ	202	1/1	0.94	0.25	38,38,38,38	0
52	MG	CA	1647	1/1	0.94	0.38	66,66,66,66	0
52	MG	BA	3185	1/1	0.94	0.26	46,46,46,46	0
52	MG	AA	1631	1/1	0.94	0.67	70,70,70,70	0
52	MG	BA	3329	1/1	0.94	0.29	32,32,32,32	0
52	MG	DA	3114	1/1	0.94	0.27	47,47,47,47	0
52	MG	BA	3101	1/1	0.94	0.49	43,43,43,43	0
52	MG	AA	1632	1/1	0.94	0.63	68,68,68,68	0
52	MG	AA	1603	1/1	0.94	0.31	45,45,45,45	0
52	MG	BA	3110	1/1	0.94	0.47	36,36,36,36	0
52	MG	BA	3200	1/1	0.94	0.55	36,36,36,36	0
52	MG	BA	3022	1/1	0.94	0.20	37,37,37,37	0
52	MG	BA	3337	1/1	0.94	0.72	47,47,47,47	0
52	MG	AA	1619	1/1	0.94	0.36	49,49,49,49	0
52	MG	BA	3068	1/1	0.94	0.53	35,35,35,35	0
52	MG	DA	3128	1/1	0.94	0.29	47,47,47,47	0
52	MG	BA	3032	1/1	0.94	0.38	28,28,28,28	0
52	MG	BA	3160	1/1	0.94	0.77	62,62,62,62	0
52	MG	AA	1637	1/1	0.94	0.57	53,53,53,53	0
52	MG	DP	201	1/1	0.94	0.32	27,27,27,27	0
52	MG	DA	3018	1/1	0.94	0.24	23,23,23,23	0
52	MG	BA	3215	1/1	0.94	0.58	41,41,41,41	0
52	MG	DA	3138	1/1	0.94	0.48	47,47,47,47	0
53	ZN	AD	301	1/1	0.94	0.28	120,120,120,120	0
52	MG	AA	1620	1/1	0.94	0.59	51,51,51,51	0
52	MG	DA	3142	1/1	0.94	0.55	37,37,37,37	0
52	MG	DA	3031	1/1	0.94	0.08	62,62,62,62	0
52	MG	DA	3032	1/1	0.94	0.42	25,25,25,25	0
52	MG	DA	3146	1/1	0.94	0.43	52,52,52,52	0
52	MG	DA	3013	1/1	0.95	0.50	18,18,18,18	0
52	MG	BA	3077	1/1	0.95	0.18	21,21,21,21	0
52	MG	BA	3261	1/1	0.95	0.08	27,27,27,27	0
52	MG	BA	3081	1/1	0.95	0.41	23,23,23,23	0
52	MG	BA	3082	1/1	0.95	0.35	33,33,33,33	0
52	MG	CA	1617	1/1	0.95	0.50	54,54,54,54	0
52	MG	DA	3198	1/1	0.95	0.19	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	DA	3119	1/1	0.95	0.21	50,50,50,50	0
52	MG	BA	3230	1/1	0.95	0.09	21,21,21,21	0
52	MG	DA	3022	1/1	0.95	0.37	39,39,39,39	0
52	MG	BA	3002	1/1	0.95	0.45	28,28,28,28	0
52	MG	DA	3281	1/1	0.95	0.61	51,51,51,51	0
52	MG	BA	3192	1/1	0.95	0.25	37,37,37,37	0
52	MG	BA	3234	1/1	0.95	0.56	53,53,53,53	0
52	MG	BA	3157	1/1	0.95	0.49	22,22,22,22	0
52	MG	BA	3354	1/1	0.95	0.27	34,34,34,34	0
52	MG	BA	3120	1/1	0.95	0.22	45,45,45,45	0
52	MG	AA	1618	1/1	0.95	0.11	59,59,59,59	0
52	MG	BA	3275	1/1	0.95	0.36	40,40,40,40	0
52	MG	BA	3058	1/1	0.95	0.30	35,35,35,35	0
52	MG	DA	3135	1/1	0.95	0.38	29,29,29,29	0
52	MG	BA	3359	1/1	0.95	0.27	52,52,52,52	0
52	MG	BA	3161	1/1	0.95	0.31	43,43,43,43	0
52	MG	BA	3279	1/1	0.95	0.29	37,37,37,37	0
52	MG	DA	3139	1/1	0.95	0.52	44,44,44,44	0
52	MG	BA	3280	1/1	0.95	0.21	33,33,33,33	0
52	MG	BA	3320	1/1	0.95	0.48	50,50,50,50	0
52	MG	DA	3056	1/1	0.95	0.22	14,14,14,14	0
52	MG	BB	202	1/1	0.95	0.34	26,26,26,26	0
52	MG	DA	3226	1/1	0.95	0.23	40,40,40,40	0
52	MG	DA	3227	1/1	0.95	0.63	42,42,42,42	0
52	MG	DA	3228	1/1	0.95	0.12	52,52,52,52	0
52	MG	AA	1614	1/1	0.95	0.40	49,49,49,49	0
52	MG	DA	3063	1/1	0.95	0.41	44,44,44,44	0
52	MG	BA	3323	1/1	0.95	0.20	32,32,32,32	0
52	MG	BD	301	1/1	0.95	0.36	25,25,25,25	0
52	MG	BA	3013	1/1	0.95	0.43	24,24,24,24	0
52	MG	BA	3062	1/1	0.95	0.10	19,19,19,19	0
52	MG	BA	3041	1/1	0.95	0.30	24,24,24,24	0
52	MG	DA	3075	1/1	0.95	0.37	36,36,36,36	0
52	MG	BA	3098	1/1	0.95	0.23	39,39,39,39	0
52	MG	DA	3315	1/1	0.95	0.40	48,48,48,48	0
52	MG	DA	3241	1/1	0.95	0.43	36,36,36,36	0
52	MG	BA	3287	1/1	0.95	0.33	44,44,44,44	0
52	MG	BA	3099	1/1	0.95	0.26	21,21,21,21	0
52	MG	BA	3247	1/1	0.95	0.32	31,31,31,31	0
52	MG	AA	1627	1/1	0.95	0.19	51,51,51,51	0
52	MG	DA	3322	1/1	0.95	0.43	48,48,48,48	0
52	MG	DA	3088	1/1	0.95	0.35	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	AA	1602	1/1	0.95	0.59	41,41,41,41	0
52	MG	CA	1650	1/1	0.95	0.25	58,58,58,58	0
52	MG	AA	1647	1/1	0.95	0.38	62,62,62,62	0
52	MG	DA	3094	1/1	0.95	0.56	34,34,34,34	0
52	MG	BA	3335	1/1	0.95	0.17	44,44,44,44	0
52	MG	BA	3221	1/1	0.95	0.54	29,29,29,29	0
52	MG	DA	3098	1/1	0.95	0.33	28,28,28,28	0
52	MG	DA	3099	1/1	0.95	0.51	42,42,42,42	0
52	MG	BA	3296	1/1	0.95	0.22	43,43,43,43	0
52	MG	BA	3222	1/1	0.95	0.38	32,32,32,32	0
52	MG	BA	3340	1/1	0.95	0.34	45,45,45,45	0
52	MG	DR	201	1/1	0.95	0.44	37,37,37,37	0
52	MG	BA	3029	1/1	0.95	0.24	16,16,16,16	0
52	MG	DA	3259	1/1	0.95	0.28	49,49,49,49	0
52	MG	DA	3179	1/1	0.95	0.72	39,39,39,39	0
52	MG	BA	3031	1/1	0.95	0.32	50,50,50,50	0
52	MG	DA	3007	1/1	0.95	0.28	53,53,53,53	0
52	MG	DA	3009	1/1	0.95	0.40	49,49,49,49	0
52	MG	DA	3186	1/1	0.95	0.66	45,45,45,45	0
52	MG	BA	3343	1/1	0.95	0.24	44,44,44,44	0
52	MG	DA	3079	1/1	0.96	0.23	41,41,41,41	0
52	MG	BA	3182	1/1	0.96	0.32	43,43,43,43	0
52	MG	BB	207	1/1	0.96	0.26	62,62,62,62	0
52	MG	BA	3109	1/1	0.96	0.40	31,31,31,31	0
52	MG	BE	301	1/1	0.96	0.41	25,25,25,25	0
52	MG	BA	3322	1/1	0.96	0.31	50,50,50,50	0
52	MG	DA	3086	1/1	0.96	0.18	25,25,25,25	0
52	MG	DA	3087	1/1	0.96	0.21	34,34,34,34	0
52	MG	AA	1622	1/1	0.96	0.64	63,63,63,63	0
52	MG	DA	3173	1/1	0.96	0.44	41,41,41,41	0
52	MG	BA	3324	1/1	0.96	0.40	40,40,40,40	0
52	MG	BA	3277	1/1	0.96	0.18	41,41,41,41	0
52	MG	DA	3176	1/1	0.96	0.44	44,44,44,44	0
52	MG	DA	3091	1/1	0.96	0.46	31,31,31,31	0
52	MG	BA	3232	1/1	0.96	0.15	4,4,4,4	0
52	MG	DA	3093	1/1	0.96	0.53	48,48,48,48	0
52	MG	BA	3149	1/1	0.96	0.27	19,19,19,19	0
52	MG	BA	3046	1/1	0.96	0.31	28,28,28,28	0
52	MG	DA	3183	1/1	0.96	0.57	56,56,56,56	0
52	MG	DA	3096	1/1	0.96	0.26	45,45,45,45	0
52	MG	BA	3190	1/1	0.96	0.38	23,23,23,23	0
52	MG	BA	3191	1/1	0.96	0.32	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	BA	3030	1/1	0.96	0.22	15,15,15,15	0
52	MG	BA	3086	1/1	0.96	0.25	24,24,24,24	0
52	MG	BA	3067	1/1	0.96	0.54	28,28,28,28	0
52	MG	DA	3006	1/1	0.96	0.54	30,30,30,30	0
52	MG	BA	3116	1/1	0.96	0.18	55,55,55,55	0
52	MG	BA	3199	1/1	0.96	0.30	20,20,20,20	0
52	MG	BA	3009	1/1	0.96	0.39	27,27,27,27	0
52	MG	AA	1625	1/1	0.96	0.40	41,41,41,41	0
52	MG	BA	3121	1/1	0.96	0.44	38,38,38,38	0
52	MG	CA	1611	1/1	0.96	0.42	65,65,65,65	0
52	MG	DA	3203	1/1	0.96	0.51	39,39,39,39	0
52	MG	BA	3339	1/1	0.96	0.08	53,53,53,53	0
52	MG	BA	3292	1/1	0.96	0.56	56,56,56,56	0
52	MG	DA	3296	1/1	0.96	0.44	55,55,55,55	0
52	MG	BA	3203	1/1	0.96	0.38	46,46,46,46	0
52	MG	BA	3123	1/1	0.96	0.39	39,39,39,39	0
52	MG	BA	3207	1/1	0.96	0.35	27,27,27,27	0
52	MG	BA	3015	1/1	0.96	0.29	33,33,33,33	0
52	MG	DA	3027	1/1	0.96	0.51	34,34,34,34	0
52	MG	DA	3121	1/1	0.96	0.80	44,44,44,44	0
52	MG	DA	3303	1/1	0.96	0.13	47,47,47,47	0
52	MG	DA	3028	1/1	0.96	0.36	36,36,36,36	0
52	MG	BA	3210	1/1	0.96	0.34	33,33,33,33	0
52	MG	BA	3095	1/1	0.96	0.38	33,33,33,33	0
52	MG	DA	3033	1/1	0.96	0.28	43,43,43,43	0
52	MG	DA	3035	1/1	0.96	0.36	32,32,32,32	0
52	MG	BA	3212	1/1	0.96	0.52	26,26,26,26	0
52	MG	BA	3255	1/1	0.96	0.10	24,24,24,24	0
52	MG	DA	3129	1/1	0.96	0.16	54,54,54,54	0
52	MG	CA	1623	1/1	0.96	0.26	62,62,62,62	0
52	MG	AA	1636	1/1	0.96	0.28	44,44,44,44	0
52	MG	DA	3041	1/1	0.96	0.30	31,31,31,31	0
52	MG	DA	3134	1/1	0.96	0.19	67,67,67,67	0
52	MG	BA	3038	1/1	0.96	0.43	14,14,14,14	0
52	MG	DA	3045	1/1	0.96	0.39	29,29,29,29	0
52	MG	BA	3351	1/1	0.96	0.28	39,39,39,39	0
52	MG	BA	3306	1/1	0.96	0.33	52,52,52,52	0
52	MG	BA	3131	1/1	0.96	0.32	21,21,21,21	0
52	MG	DA	3140	1/1	0.96	0.41	52,52,52,52	0
52	MG	BA	3260	1/1	0.96	0.28	37,37,37,37	0
52	MG	BA	3309	1/1	0.96	0.29	55,55,55,55	0
52	MG	DA	3238	1/1	0.96	0.08	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	DA	3052	1/1	0.96	0.44	40,40,40,40	0
52	MG	CA	1631	1/1	0.96	0.09	73,73,73,73	0
52	MG	DA	3145	1/1	0.96	0.20	59,59,59,59	0
52	MG	BA	3168	1/1	0.96	0.24	28,28,28,28	0
52	MG	BA	3076	1/1	0.96	0.23	21,21,21,21	0
52	MG	DE	301	1/1	0.96	0.29	23,23,23,23	0
52	MG	DA	3058	1/1	0.96	0.35	48,48,48,48	0
52	MG	AA	1649	1/1	0.96	0.68	62,62,62,62	0
52	MG	BA	3102	1/1	0.96	0.37	23,23,23,23	0
52	MG	BA	3267	1/1	0.96	0.48	37,37,37,37	0
52	MG	BA	3080	1/1	0.96	0.59	17,17,17,17	0
52	MG	DA	3155	1/1	0.96	0.37	30,30,30,30	0
52	MG	BA	3224	1/1	0.96	0.48	30,30,30,30	0
52	MG	BA	3141	1/1	0.96	0.48	32,32,32,32	0
52	MG	DA	3072	1/1	0.96	0.73	58,58,58,58	0
52	MG	AA	1633	1/1	0.96	0.06	39,39,39,39	0
52	MG	BA	3108	1/1	0.96	0.53	42,42,42,42	0
52	MG	DA	3077	1/1	0.96	0.19	33,33,33,33	0
52	MG	BA	3052	1/1	0.97	0.42	24,24,24,24	0
52	MG	BA	3153	1/1	0.97	0.32	47,47,47,47	0
52	MG	DA	3029	1/1	0.97	0.39	45,45,45,45	0
52	MG	DA	3180	1/1	0.97	0.59	45,45,45,45	0
52	MG	BA	3011	1/1	0.97	0.48	19,19,19,19	0
52	MG	BA	3113	1/1	0.97	0.49	33,33,33,33	0
52	MG	BA	3250	1/1	0.97	0.20	37,37,37,37	0
52	MG	DA	3184	1/1	0.97	0.33	57,57,57,57	0
52	MG	BA	3204	1/1	0.97	0.59	43,43,43,43	0
52	MG	DA	3111	1/1	0.97	0.47	31,31,31,31	0
52	MG	DA	3272	1/1	0.97	0.37	42,42,42,42	0
52	MG	BA	3252	1/1	0.97	0.40	30,30,30,30	0
52	MG	DA	3113	1/1	0.97	0.28	52,52,52,52	0
52	MG	BA	3205	1/1	0.97	0.61	43,43,43,43	0
52	MG	AA	1601	1/1	0.97	0.16	59,59,59,59	0
52	MG	B1	101	1/1	0.97	0.33	35,35,35,35	0
52	MG	DA	3118	1/1	0.97	0.37	35,35,35,35	0
52	MG	DA	3195	1/1	0.97	0.42	42,42,42,42	0
52	MG	DA	3196	1/1	0.97	0.44	45,45,45,45	0
52	MG	BA	3256	1/1	0.97	0.12	39,39,39,39	0
52	MG	BA	3084	1/1	0.97	0.43	21,21,21,21	0
52	MG	BA	3033	1/1	0.97	0.20	27,27,27,27	0
52	MG	BA	3118	1/1	0.97	0.48	40,40,40,40	0
52	MG	DA	3201	1/1	0.97	0.36	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	BA	3119	1/1	0.97	0.30	32,32,32,32	0
52	MG	DA	3287	1/1	0.97	0.25	40,40,40,40	0
52	MG	BA	3163	1/1	0.97	0.37	31,31,31,31	0
52	MG	BA	3016	1/1	0.97	0.43	21,21,21,21	0
52	MG	BA	3216	1/1	0.97	0.31	26,26,26,26	0
52	MG	BB	203	1/1	0.97	0.06	41,41,41,41	0
52	MG	BA	3060	1/1	0.97	0.34	27,27,27,27	0
52	MG	DA	3055	1/1	0.97	0.26	30,30,30,30	0
52	MG	BA	3266	1/1	0.97	0.23	48,48,48,48	0
52	MG	BB	206	1/1	0.97	0.59	50,50,50,50	0
52	MG	DA	3211	1/1	0.97	0.32	35,35,35,35	0
52	MG	BA	3122	1/1	0.97	0.33	35,35,35,35	0
52	MG	DA	3059	1/1	0.97	0.40	26,26,26,26	0
52	MG	DA	3060	1/1	0.97	0.30	38,38,38,38	0
52	MG	DA	3215	1/1	0.97	0.21	37,37,37,37	0
52	MG	DA	3217	1/1	0.97	0.27	23,23,23,23	0
52	MG	BA	3219	1/1	0.97	0.55	25,25,25,25	0
52	MG	BA	3036	1/1	0.97	0.51	19,19,19,19	0
52	MG	BA	3169	1/1	0.97	0.59	38,38,38,38	0
52	MG	BA	3017	1/1	0.97	0.41	32,32,32,32	0
52	MG	DA	3066	1/1	0.97	0.41	40,40,40,40	0
52	MG	BA	3091	1/1	0.97	0.17	20,20,20,20	0
52	MG	DA	3068	1/1	0.97	0.61	56,56,56,56	0
52	MG	BA	3063	1/1	0.97	0.34	36,36,36,36	0
52	MG	DA	3070	1/1	0.97	0.26	28,28,28,28	0
52	MG	DA	3071	1/1	0.97	0.42	35,35,35,35	0
52	MG	BQ	201	1/1	0.97	0.19	19,19,19,19	0
52	MG	BA	3129	1/1	0.97	0.09	35,35,35,35	0
52	MG	DA	3314	1/1	0.97	0.06	58,58,58,58	0
52	MG	DA	3148	1/1	0.97	0.45	41,41,41,41	0
52	MG	BA	3226	1/1	0.97	0.41	14,14,14,14	0
52	MG	BA	3094	1/1	0.97	0.61	31,31,31,31	0
52	MG	BA	3018	1/1	0.97	0.29	20,20,20,20	0
52	MG	DA	3234	1/1	0.97	0.16	46,46,46,46	0
52	MG	DA	3235	1/1	0.97	0.40	40,40,40,40	0
52	MG	BA	3019	1/1	0.97	0.52	19,19,19,19	0
52	MG	BA	3020	1/1	0.97	0.30	18,18,18,18	0
52	MG	BA	3006	1/1	0.97	0.54	30,30,30,30	0
52	MG	BA	3184	1/1	0.97	0.22	44,44,44,44	0
52	MG	BA	3045	1/1	0.97	0.40	21,21,21,21	0
52	MG	BA	3284	1/1	0.97	0.23	25,25,25,25	0
52	MG	DA	3008	1/1	0.97	0.39	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	BA	3072	1/1	0.97	0.55	39,39,39,39	0
52	MG	DA	3010	1/1	0.97	0.42	51,51,51,51	0
52	MG	BA	3103	1/1	0.97	0.27	24,24,24,24	0
52	MG	BA	3189	1/1	0.97	0.51	36,36,36,36	0
52	MG	BA	3143	1/1	0.97	0.46	28,28,28,28	0
52	MG	BA	3073	1/1	0.97	0.33	20,20,20,20	0
52	MG	BA	3007	1/1	0.97	0.49	28,28,28,28	0
52	MG	BA	3106	1/1	0.97	0.24	18,18,18,18	0
52	MG	BA	3008	1/1	0.97	0.36	24,24,24,24	0
52	MG	DA	3020	1/1	0.97	0.48	35,35,35,35	0
52	MG	DA	3171	1/1	0.97	0.56	39,39,39,39	0
52	MG	BA	3027	1/1	0.97	0.38	19,19,19,19	0
53	ZN	CD	301	1/1	0.97	0.27	116,116,116,116	0
52	MG	BA	3198	1/1	0.97	0.44	36,36,36,36	0
54	K	BA	3363	1/1	0.97	0.15	43,43,43,43	0
52	MG	DA	3023	1/1	0.97	0.53	38,38,38,38	0
52	MG	DA	3025	1/1	0.97	0.35	44,44,44,44	0
52	MG	AA	1623	1/1	0.97	0.33	37,37,37,37	0
52	MG	DA	3216	1/1	0.98	0.42	31,31,31,31	0
52	MG	BU	201	1/1	0.98	0.34	31,31,31,31	0
52	MG	BA	3035	1/1	0.98	0.38	26,26,26,26	0
52	MG	BA	3124	1/1	0.98	0.44	10,10,10,10	0
52	MG	DA	3042	1/1	0.98	0.37	37,37,37,37	0
52	MG	BA	3299	1/1	0.98	0.47	38,38,38,38	0
52	MG	DA	3160	1/1	0.98	0.52	33,33,33,33	0
52	MG	DA	3044	1/1	0.98	0.39	32,32,32,32	0
52	MG	BA	3125	1/1	0.98	0.18	18,18,18,18	0
52	MG	BA	3301	1/1	0.98	0.26	41,41,41,41	0
52	MG	DA	3104	1/1	0.98	0.36	36,36,36,36	0
52	MG	BA	3186	1/1	0.98	0.46	38,38,38,38	0
52	MG	BA	3005	1/1	0.98	0.26	24,24,24,24	0
52	MG	BA	3262	1/1	0.98	0.18	25,25,25,25	0
52	MG	BA	3107	1/1	0.98	0.18	28,28,28,28	0
52	MG	BA	3014	1/1	0.98	0.41	29,29,29,29	0
52	MG	BA	3156	1/1	0.98	0.51	26,26,26,26	0
52	MG	BA	3070	1/1	0.98	0.29	9,9,9,9	0
52	MG	BA	3028	1/1	0.98	0.36	22,22,22,22	0
52	MG	DA	3003	1/1	0.98	0.71	41,41,41,41	0
52	MG	BA	3193	1/1	0.98	0.56	33,33,33,33	0
52	MG	BA	3194	1/1	0.98	0.66	47,47,47,47	0
52	MG	BA	3010	1/1	0.98	0.44	33,33,33,33	0
52	MG	BA	3132	1/1	0.98	0.29	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	DA	3062	1/1	0.98	0.10	24,24,24,24	0
52	MG	BA	3272	1/1	0.98	0.34	28,28,28,28	0
52	MG	BA	3134	1/1	0.98	0.17	36,36,36,36	0
52	MG	BA	3092	1/1	0.98	0.34	9,9,9,9	0
52	MG	DA	3011	1/1	0.98	0.53	30,30,30,30	0
52	MG	BA	3136	1/1	0.98	0.24	28,28,28,28	0
52	MG	BA	3137	1/1	0.98	0.40	10,10,10,10	0
52	MG	BA	3040	1/1	0.98	0.60	37,37,37,37	0
52	MG	BA	3057	1/1	0.98	0.21	24,24,24,24	0
52	MG	DA	3187	1/1	0.98	0.11	54,54,54,54	0
52	MG	BA	3167	1/1	0.98	0.48	31,31,31,31	0
52	MG	BA	3241	1/1	0.98	0.34	26,26,26,26	0
52	MG	DA	3317	1/1	0.98	0.39	42,42,42,42	0
52	MG	DA	3073	1/1	0.98	0.40	31,31,31,31	0
52	MG	AA	1626	1/1	0.98	0.33	46,46,46,46	0
52	MG	DA	3192	1/1	0.98	0.32	29,29,29,29	0
52	MG	DA	3132	1/1	0.98	0.43	25,25,25,25	0
52	MG	BA	3012	1/1	0.98	0.39	23,23,23,23	0
52	MG	DA	3076	1/1	0.98	0.28	29,29,29,29	0
52	MG	BA	3043	1/1	0.98	0.20	31,31,31,31	0
52	MG	DA	3078	1/1	0.98	0.41	37,37,37,37	0
52	MG	BA	3171	1/1	0.98	0.58	32,32,32,32	0
52	MG	BA	3172	1/1	0.98	0.22	52,52,52,52	0
52	MG	BA	3209	1/1	0.98	0.49	31,31,31,31	0
52	MG	DA	3263	1/1	0.98	0.17	45,45,45,45	0
52	MG	BA	3173	1/1	0.98	0.39	31,31,31,31	0
52	MG	DA	3265	1/1	0.98	0.48	47,47,47,47	0
52	MG	BA	3044	1/1	0.98	0.38	14,14,14,14	0
52	MG	DA	3084	1/1	0.98	0.50	38,38,38,38	0
52	MG	BA	3023	1/1	0.98	0.50	35,35,35,35	0
52	MG	DA	3269	1/1	0.98	0.47	39,39,39,39	0
52	MG	BA	3145	1/1	0.98	0.45	33,33,33,33	0
52	MG	DA	3030	1/1	0.98	0.33	32,32,32,32	0
52	MG	BA	3024	1/1	0.98	0.31	28,28,28,28	0
52	MG	BA	3025	1/1	0.98	0.24	29,29,29,29	0
52	MG	BA	3180	1/1	0.98	0.11	48,48,48,48	0
52	MG	DA	3149	1/1	0.98	0.35	29,29,29,29	0
52	MG	DA	3034	1/1	0.98	0.40	51,51,51,51	0
52	MG	BA	3148	1/1	0.98	0.46	26,26,26,26	0
52	MG	DA	3036	1/1	0.98	0.59	29,29,29,29	0
52	MG	CA	1641	1/1	0.98	0.24	52,52,52,52	0
52	MG	BA	3066	1/1	0.98	0.39	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
52	MG	BA	3050	1/1	0.99	0.35	27,27,27,27	0
52	MG	BA	3096	1/1	0.99	0.48	19,19,19,19	0
52	MG	BA	3133	1/1	0.99	0.23	37,37,37,37	0
52	MG	BA	3055	1/1	0.99	0.32	16,16,16,16	0
52	MG	DA	3050	1/1	0.99	0.35	39,39,39,39	0
52	MG	BA	3065	1/1	0.99	0.28	26,26,26,26	0
52	MG	DA	3019	1/1	0.99	0.55	21,21,21,21	0
52	MG	DA	3053	1/1	0.99	0.34	27,27,27,27	0
52	MG	BA	3078	1/1	0.99	0.48	30,30,30,30	0
52	MG	CA	1618	1/1	0.99	0.49	65,65,65,65	0
52	MG	BA	3177	1/1	0.99	0.28	38,38,38,38	0
52	MG	BA	3295	1/1	0.99	0.42	34,34,34,34	0
52	MG	DA	3024	1/1	0.99	0.33	35,35,35,35	0
52	MG	BA	3100	1/1	0.99	0.35	28,28,28,28	0
52	MG	BA	3079	1/1	0.99	0.16	17,17,17,17	0
52	MG	DA	3115	1/1	0.99	0.40	44,44,44,44	0
52	MG	BA	3213	1/1	0.99	0.16	20,20,20,20	0
52	MG	BA	3047	1/1	0.99	0.56	28,28,28,28	0
52	MG	BA	3087	1/1	0.99	0.25	18,18,18,18	0

6.5 Other polymers [i](#)

There are no such residues in this entry.