Full wwPDB X-ray Structure Validation Report (i)

Sep 14, 2023 – 11:26 AM EDT

PDB ID	:	4V5Y
Title	:	Crystal structure of the bacterial ribosome from Escherichia coli in complex with paromomycin and ribosome recycling factor (RRF).
Authors	:	Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on	:	2007-06-19
Resolution	:	4.45 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 (i) 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 (i)) were used in the production of this report:

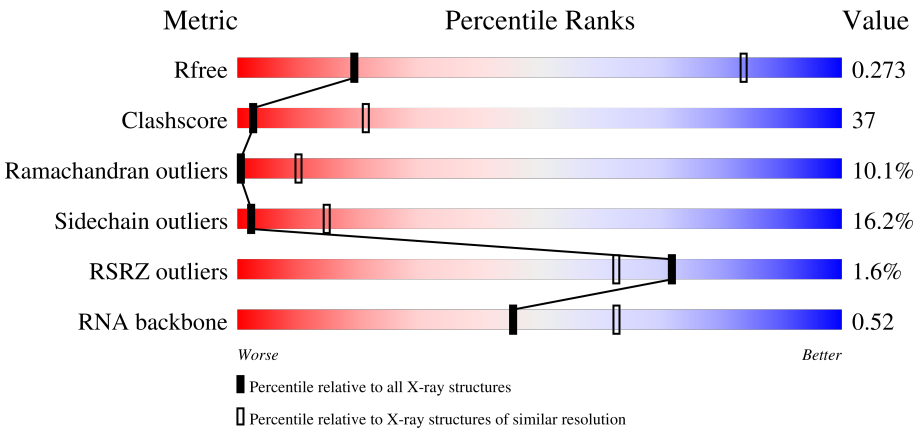
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & 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 4.45 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	1051 (5.12-3.80)
Clashscore	141614	1119 (5.12-3.80)
Ramachandran outliers	138981	1065 (5.12-3.80)
Sidechain outliers	138945	1047 (5.12-3.80)
RSRZ outliers	127900	1099 (5.20-3.70)
RNA backbone	3102	1060 (5.90-3.00)

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 <=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	1542	.% 23% 64% 12% •
1	CA	1542	.% 24% 63% 11% •
2	AC	232	2% 28% 47% 13% 11%

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Mol	Chain	Length	Quality of chain
2	CC	232	%, 30%, 45%, 13%, 11%
3	AD	205	%, 28%, 59%, 12%
3	CD	205	28%, 59%, 13%
4	AE	166	34%, 48%, 7%, 10%
4	CE	166	%, 35%, 47%, 8%, 10%
5	AF	135	%, 18%, 44%, 11%, 26%
5	CF	135	19%, 41%, 13%, 26%
6	AG	178	2%, 22%, 53%, 8%, 16%
6	CG	178	3%, 25%, 52%, 8%, 15%
7	AH	129	2%, 38%, 53%, 9%
7	CH	129	2%, 38%, 54%, 8%
8	AI	129	3%, 22%, 63%, 14%
8	CI	129	%, 24%, 60%, 15%
9	AJ	103	4%, 24%, 55%, 16%, 5%
9	CJ	103	5%, 26%, 52%, 17%, 5%
10	AK	128	26%, 53%, 12%, 9%
10	CK	128	2%, 27%, 52%, 12%, 9%
11	AL	123	%, 40%, 50%, 9%
11	CL	123	39%, 49%, 11%
12	AM	117	3%, 24%, 58%, 15%
12	CM	117	3%, 23%, 58%, 15%
13	AN	100	8%, 20%, 54%, 22%
13	CN	100	5%, 21%, 53%, 22%
14	AO	89	42%, 48%, 9%
14	CO	89	39%, 48%, 11%

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Mol	Chain	Length	Quality of chain
15	AP	82	4% 38% 55% 7%
15	CP	82	6% 35% 55% 7%
16	AQ	83	39% 47% 11%
16	CQ	83	35% 51% 12%
17	AR	74	% 24% 47% 26%
17	CR	74	3% 23% 49% 26%
18	AS	91	4% 19% 54% 13% 13%
18	CS	91	% 21% 53% 12% 12%
19	AT	86	36% 53% 8%
19	CT	86	% 38% 51% 8%
20	AB	240	2% 23% 52% 15% 9%
20	CB	240	4% 22% 52% 16% 9%
21	AU	70	% 19% 34% 17% 27%
21	CU	70	3% 17% 36% 17% 27%
22	BA	120	19% 62% 14%
22	DA	120	2% 20% 62% 13%
23	BB	2904	% 23% 63% 11%
23	DB	2904	22% 63% 12%
24	BI	141	6% 35% 60% 5%
24	DI	141	9% 33% 60% 7%
25	BC	272	25% 54% 19%
25	DC	272	25% 54% 18%
26	BD	209	3% 26% 54% 18%
26	DD	209	25% 55% 17%
27	BK	123	% 31% 41% 22%

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Mol	Chain	Length	Quality of chain
27	DK	123	27% 44% 24%
28	BP	114	25% 58% 13%
28	DP	114	25% 59% 12%
29	BE	201	% 22% 63% 14%
29	DE	201	25% 59% 15%
30	BY	58	28% 53% 17%
30	DY	58	2% 28% 53% 17%
31	B0	56	38% 43% 18%
31	D0	56	30% 50% 18%
32	B4	38	32% 32% 42% 26%
32	D4	38	34% 26% 47% 26%
33	B1	54	9% 20% 63% 7% 7%
33	D1	54	28% 56% 9% 7%
34	B3	64	23% 66% 11%
34	D3	64	23% 64% 12%
35	BV	94	28% 62% 10%
35	DV	94	27% 64% 9%
36	B2	46	41% 48% 11%
36	D2	46	33% 59% 9%
37	BL	144	% 22% 58% 19%
37	DL	144	22% 58% 18%
38	BM	136	% 25% 57% 15%
38	DM	136	% 25% 57% 17%
39	BX	63	8% 14% 59% 27%
39	DX	63	3% 14% 60% 25%

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Mol	Chain	Length	Quality of chain
40	BH	149	8% 19% 45% 27% 9%
40	DH	149	3% 24% 56% 14% 5%
41	BJ	142	% 20% 63% 14%
41	DJ	142	20% 62% 16%
42	BN	127	18% 62% 13% 6%
42	DN	127	17% 62% 15% 6%
43	BO	117	8% 26% 58% 14%
43	DO	117	10% 26% 58% 15%
44	BQ	117	26% 57% 14%
44	DQ	117	2% 24% 60% 13%
45	BS	110	24% 58% 16%
45	DS	110	24% 58% 16%
46	BU	103	4% 17% 56% 22%
46	DU	103	20% 53% 22%
47	BF	178	22% 53% 21%
47	DF	178	% 20% 54% 22%
48	BG	176	% 23% 54% 20%
48	DG	176	3% 24% 55% 19%
49	BR	103	18% 62% 17%
49	DR	103	20% 60% 17%
50	BT	100	2% 18% 53% 18% 7%
50	DT	100	% 17% 55% 18% 7%
51	BZ	78	4% 15% 63% 17%
51	DZ	78	% 17% 62% 17%
52	BW	84	5% 14% 44% 32% 6%

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Mol	Chain	Length	Quality of chain
52	DW	84	2% 17% 40% 33% 6%
53	B6	185	17% 27% 51% 22%
53	D6	185	5% 29% 55% 15%

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
54	MG	AA	1608	-	-	-	X
54	MG	AA	1626	-	-	-	X
54	MG	AA	1632	-	-	-	X
54	MG	AA	1639	-	-	-	X
54	MG	AA	1657	-	-	-	X
54	MG	AA	1659	-	-	-	X
54	MG	CA	1608	-	-	-	X
54	MG	CA	1657	-	-	-	X
54	MG	CE	201	-	-	-	X
54	MG	DB	3052	-	-	-	X
55	PAR	BB	3111	-	-	-	X

2 Entry composition (i)

There are 57 unique types of molecules in this entry. The entry contains 287128 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	1530	32831	14642	6024	10635	1530	0	0	0
1	CA	1530	32831	14642	6024	10635	1530	0	0	0

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	AC	206	1624	1028	305	288	3	0	0	0
2	CC	206	1624	1028	305	288	3	0	0	0

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	AD	205	1643	1026	315	298	4	0	0	0
3	CD	205	1643	1026	315	298	4	0	0	0

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	AE	150	1105	687	211	201	6	0	0	0
4	CE	150	1105	687	211	201	6	0	0	0

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	AF	100	817	515	148	148	6	0	0	0
5	CF	100	817	515	148	148	6	0	0	0

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	AG	150	1174	730	226	214	4	0	0	0
6	CG	152	1196	745	230	217	4	0	0	0

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	AH	129	979	616	173	184	6	0	0	0
7	CH	129	979	616	173	184	6	0	0	0

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	AI	127	1022	634	206	179	3	0	0	0
8	CI	127	1022	634	206	179	3	0	0	0

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	AJ	98	786	493	150	142	1	0	0	0
9	CJ	98	786	493	150	142	1	0	0	0

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	AK	117	877	540	174	160	3	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	CK	117	877	540	174	160	3	0	0	0

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	AL	123	955	590	196	165	4	0	0	0
11	CL	123	955	590	196	165	4	0	0	0

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	AM	114	883	546	178	156	3	0	0	0
12	CM	113	876	541	177	155	3	0	0	0

- Molecule 13 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	AN	96	774	483	160	128	3	0	0	0
13	CN	96	774	483	160	128	3	0	0	0

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	AO	88	714	439	144	130	1	0	0	0
14	CO	88	714	439	144	130	1	0	0	0

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	AP	82	649	406	128	114	1	0	0	0
15	CP	80	638	400	126	111	1	0	0	0

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
16	AQ	80	648	411	121	113	3	0	0	0
16	CQ	81	657	417	122	115	3	0	0	0

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
17	AR	55	455	288	86	81	0	0	0
17	CR	55	455	288	86	81	0	0	0

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
18	AS	79	637	408	120	107	2	0	0	0
18	CS	80	644	413	121	108	2	0	0	0

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
19	AT	85	665	411	137	114	3	0	0	0
19	CT	85	665	411	137	114	3	0	0	0

- Molecule 20 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
20	AB	218	1704	1081	305	311	7	0	0	0
20	CB	218	1704	1081	305	311	7	0	0	0

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
21	AU	51	425	265	86	73	1	0	0	0
21	CU	51	425	265	86	73	1	0	0	0

- Molecule 22 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
22	BA	117	2507	1116	459	815	117	0	0	0
22	DA	117	2507	1116	459	815	117	0	0	0

- Molecule 23 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
23	BB	2841	60995	27210	11229	19715	2841	0	0	0
23	DB	2841	60995	27210	11229	19715	2841	0	0	0

- Molecule 24 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
24	BI	141	1032	651	179	196	6	0	0	0
24	DI	141	1032	651	179	196	6	0	0	0

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
25	BC	271	2082	1288	423	364	7	0	0	0
25	DC	271	2082	1288	423	364	7	0	0	0

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
26	BD	209	1565	979	288	294	4	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
26	DD	209	1565	979	288	294	4	0	0	0

- Molecule 27 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	BK	121	930	582	179	164	5	0	0	0
27	DK	121	930	582	179	164	5	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	BP	114	917	574	179	163	1	0	0	0
28	DP	114	917	574	179	163	1	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	BE	201	1552	974	283	290	5	0	0	0
29	DE	201	1552	974	283	290	5	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	BY	58	449	281	87	79	2	0	0	0
30	DY	58	449	281	87	79	2	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	B0	56	444	269	94	80	1	0	0	0
31	D0	56	444	269	94	80	1	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	B4	38	302	185	65	48	4	0	0	0
32	D4	38	302	185	65	48	4	0	0	0

- Molecule 33 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
33	B1	50	409	263	75	71	0	0	0
33	D1	50	409	263	75	71	0	0	0

- Molecule 34 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
34	B3	64	504	323	105	74	2	0	0	0
34	D3	64	504	323	105	74	2	0	0	0

- Molecule 35 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	BV	94	753	479	137	134	3	0	0	0
35	DV	94	753	479	137	134	3	0	0	0

- Molecule 36 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
36	B2	46	377	228	90	57	2	0	0	0
36	D2	46	377	228	90	57	2	0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
37	BL	143	1045	649	206	189	1	0	0	0
37	DL	143	1045	649	206	189	1	0	0	0

- Molecule 38 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
38	BM	136	1074	686	205	177	6	0	0	0
38	DM	136	1074	686	205	177	6	0	0	0

- Molecule 39 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
39	BX	63	509	313	99	95	2	0	0	0
39	DX	63	509	313	99	95	2	0	0	0

- Molecule 40 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
40	BH	149	1111	699	197	214	1	0	0	0
40	DH	149	1111	699	197	214	1	0	0	0

- Molecule 41 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
41	BJ	142	1129	714	212	199	4	0	0	0
41	DJ	142	1129	714	212	199	4	0	0	0

- Molecule 42 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
42	BN	120	960	593	196	166	5	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
42	DN	120	960	593	196	166	5	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
43	BO	116	892	552	178	162	0	0	0
43	DO	116	892	552	178	162	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
44	BQ	117	947	604	192	151	0	0	0
44	DQ	117	947	604	192	151	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	BS	110	857	532	166	156	3	0	0	0
45	DS	110	857	532	166	156	3	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
46	BU	102	779	492	146	141	0	0	0
46	DU	102	779	492	146	141	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	BF	178	1420	905	251	258	6	0	0	0
47	DF	178	1420	905	251	258	6	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
48	BG	176	1323	832	243	246	2	0	0	0
48	DG	176	1323	832	243	246	2	0	0	0

- Molecule 49 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
49	BR	103	816	516	153	145	2	0	0	0
49	DR	103	816	516	153	145	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
50	BT	93	738	466	139	131	2	0	0	0
50	DT	93	738	466	139	131	2	0	0	0

- Molecule 51 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
51	BZ	77	625	388	129	106	2	0	0	0
51	DZ	77	625	388	129	106	2	0	0	0

- Molecule 52 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
52	BW	79	596	367	120	108	1	0	0	0
52	DW	79	596	367	120	108	1	0	0	0

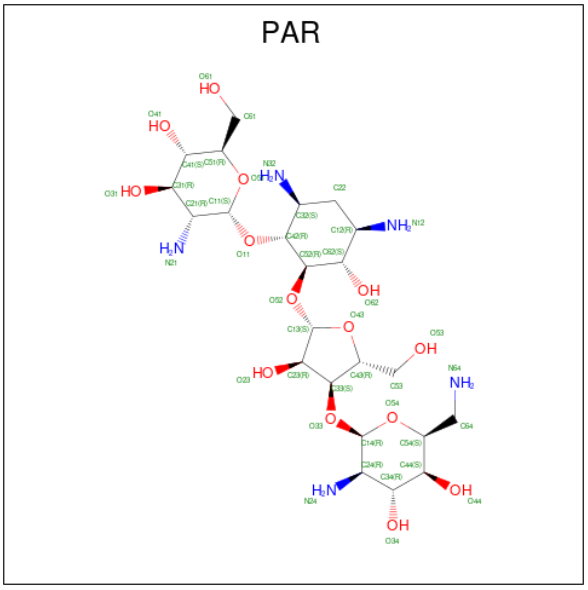
- Molecule 53 is a protein called 50S ribosomal protein RRF.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
53	B6	185	1478	924	270	282	2	0	0	0
			Total	C	N	O	S			
53	D6	185	1478	924	270	282	2	0	0	0

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Mg		
54	AA	60	60	60	0	0
			Total	Mg		
54	BB	110	110	110	0	0
			Total	Mg		
54	CA	61	61	61	0	0
			Total	Mg		
54	CE	1	1	1	0	0
			Total	Mg		
54	DB	111	111	111	0	0

- Molecule 55 is PAROMOMYCIN (three-letter code: PAR) (formula: $C_{23}H_{45}N_5O_{14}$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
55	AA	1	42	23	5	14	0	0
			Total	C	N	O		
55	BB	1	42	23	5	14	0	0
			Total	C	N	O		
55	CA	1	42	23	5	14	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
55	DB	1	42	23	5	14	0	0

- Molecule 56 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
56	B4	1	1	1	0	0
			Total	Zn		
56	D4	1	1	1	0	0

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
57	AA	291	291	291	0	0
			Total	O		
57	AL	3	3	3	0	0
			Total	O		
57	AN	4	4	4	0	0
			Total	O		
57	AT	2	2	2	0	0
			Total	O		
57	BB	495	495	495	0	0
			Total	O		
57	BC	6	6	6	0	0
			Total	O		
57	BD	1	1	1	0	0
			Total	O		
57	BE	2	2	2	0	0
			Total	O		
57	BL	1	1	1	0	0
			Total	O		
57	BT	1	1	1	0	0
			Total	O		
57	CA	296	296	296	0	0
			Total	O		
57	CE	3	3	3	0	0
			Total	O		
57	CL	4	4	4	0	0
			Total	O		
57	CN	4	4	4	0	0

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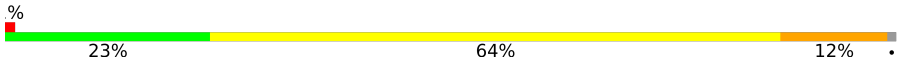
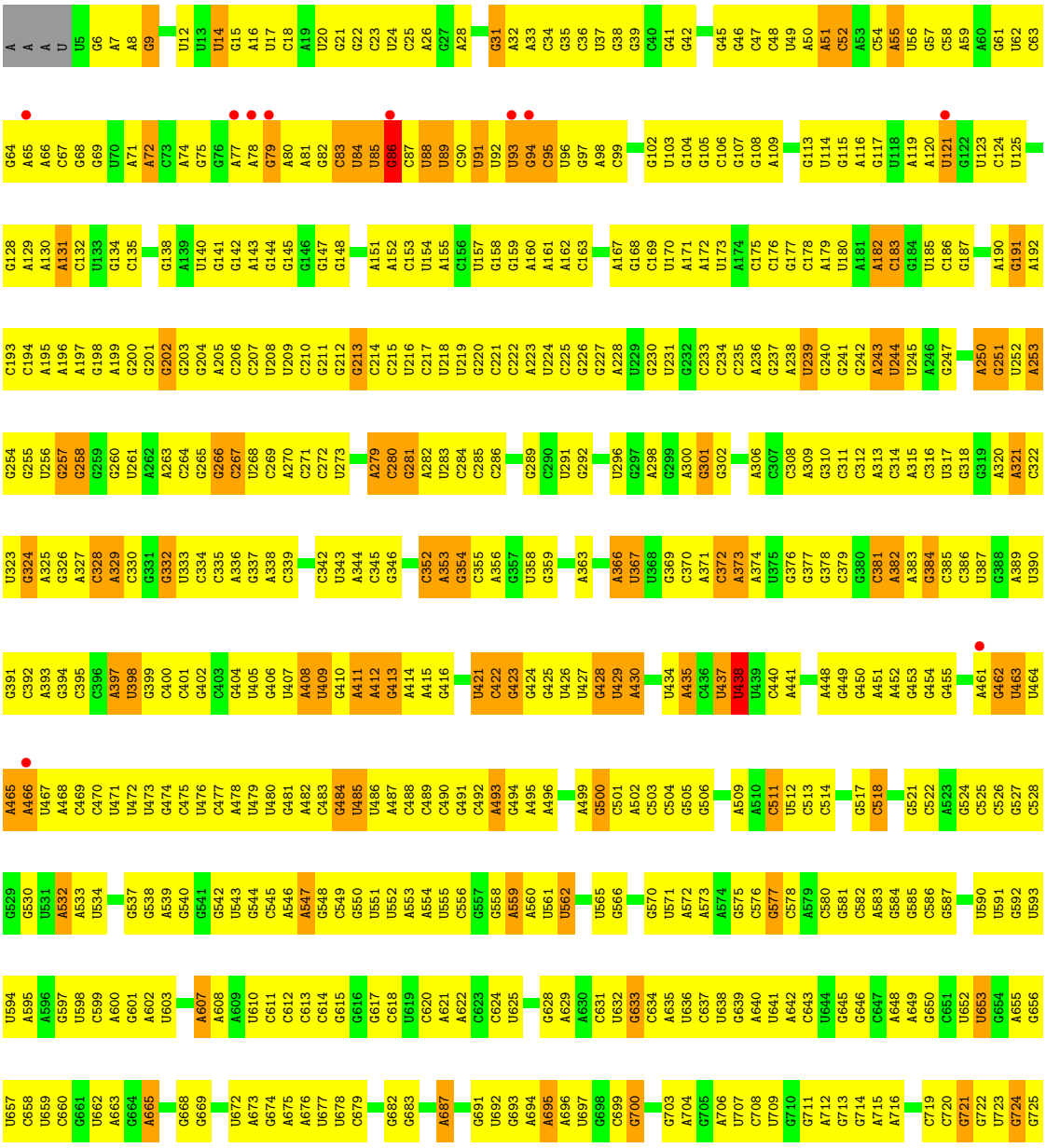
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	CP	1	Total O 1 1	0	0
57	CT	1	Total O 1 1	0	0
57	DB	502	Total O 502 502	0	0
57	DC	4	Total O 4 4	0	0
57	DD	1	Total O 1 1	0	0
57	DE	1	Total O 1 1	0	0
57	DL	2	Total O 2 2	0	0
57	DQ	1	Total O 1 1	0	0
57	DR	1	Total O 1 1	0	0

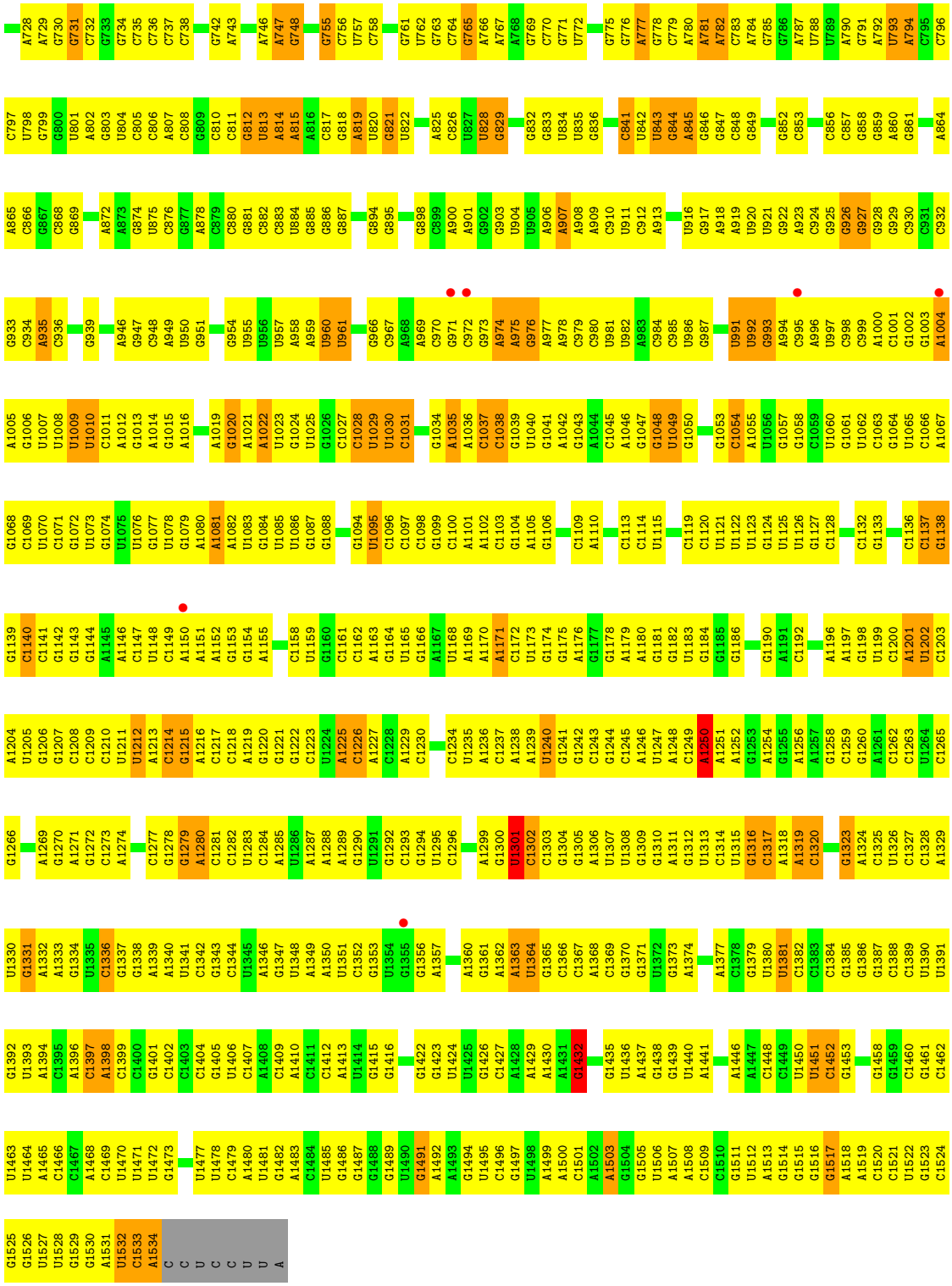
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 16S rRNA

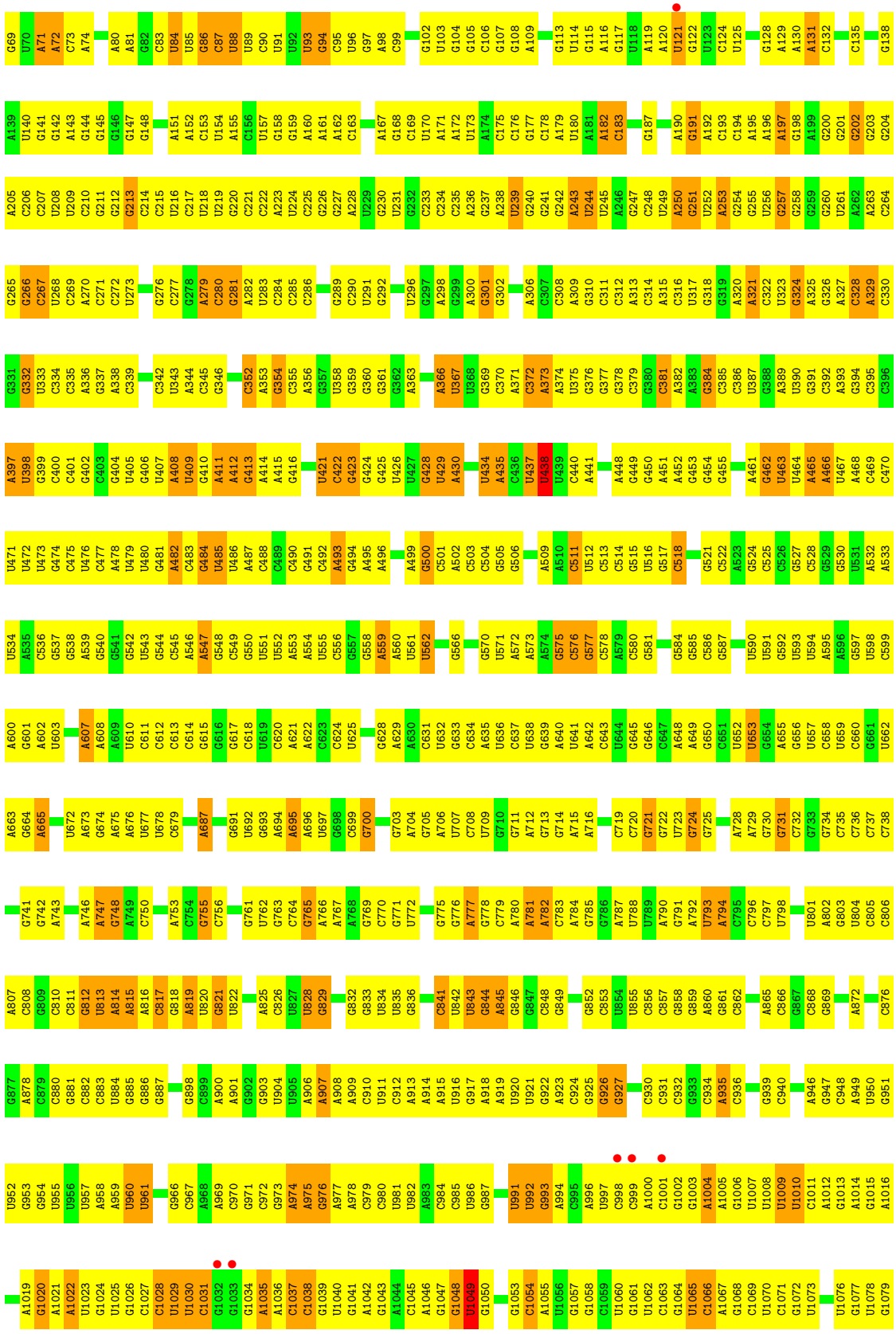
Chain AA: 

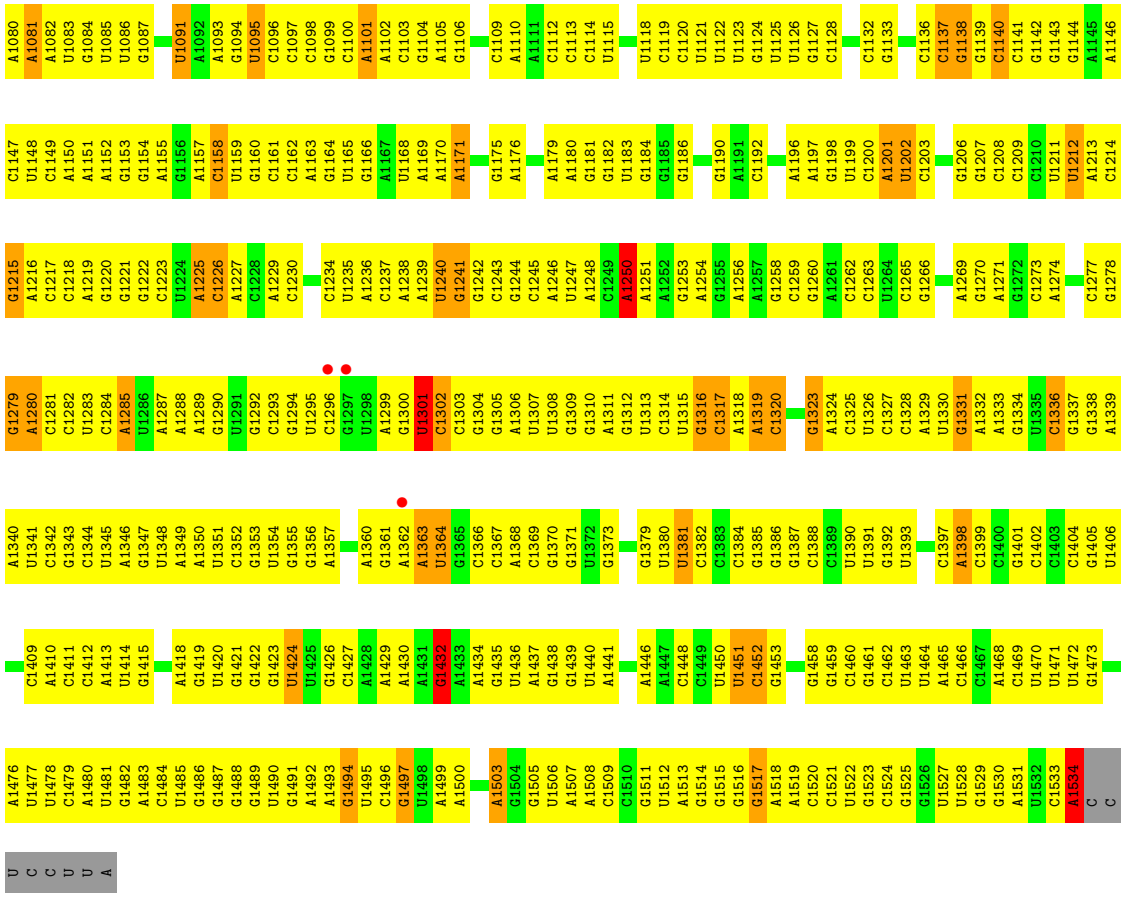




• Molecule 1: 16S rRNA

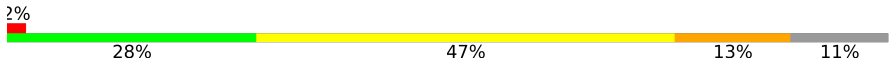
Chain CA:

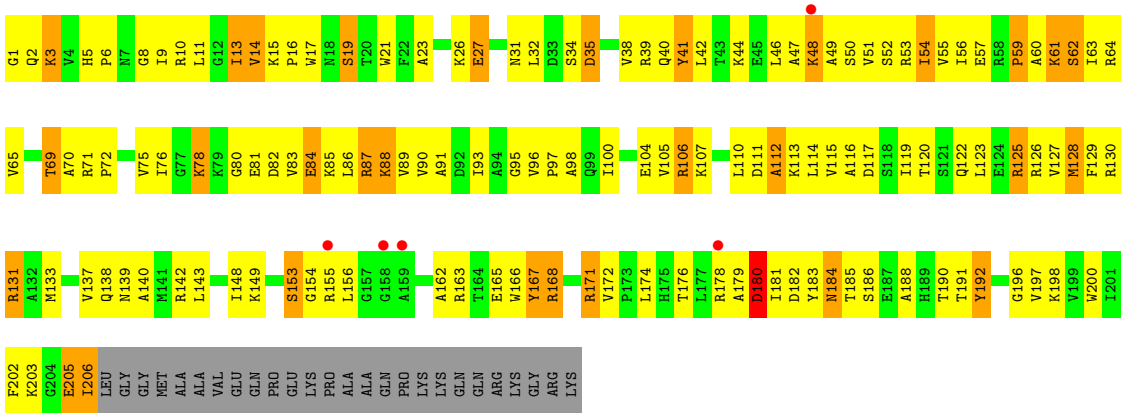

A1019 G1020 A1021 A1022 U1023 G1024 U1025 G1026 C1027 C1028 U1029 U1030 C1031 G1032 G1033 G1034 A1035 A1036 C1037 C1038 G1039 U1040 G1041 A1042 G1043 A1044 C1045 A1046 G1047 G1048 U1049 G1050 G1053 C1054 A1055 U1056 G1057 G1058 C1059 U1060 G1061 U1062 C1063 G1064 U1065 C1066 A1067 G1068 C1069 U1070 C1071 G1072 U1073 U1076 G1077 U1078 G1079
U952 G953 G954 U955 U956 U957 A958 A959 U960 U961 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 A978 C979 C980 U981 U982 A983 C984 C985 U986 G987 U991 U992 G993 A994 G995 A996 U997 C998 C999 A1000 C1001 G1002 G1003 A1004 A1005 G1006 U1007 U1008 U1009 U1010 C1011 A1012 G1013 A1014 G1015 A1016
G877 A878 C879 C880 G881 C882 C883 U884 G885 G886 G887 G898 C899 A900 A901 G902 G903 U904 U905 A906 A907 A908 A909 C910 U911 C912 A913 A914 A915 U916 G917 A918 A919 U920 G921 G922 A923 C924 G925 G926 G927 C930 C931 C932 G933 C934 A935 C936 G939 C940 A946 G947 C948 A949 U950 G951
A807 C808 G809 C810 C811 G812 U813 A814 A815 A816 C817 G818 A819 U820 G821 U822 A825 C826 U827 U828 G829 G832 G833 U834 U835 G836 C841 U842 U843 G844 A845 G846 G847 C848 G849 G852 C853 U854 U855 C856 C857 G858 G859 A860 G861 C862 A865 C866 G867 C868 G869 A872 C876
G741 G742 A743 A746 A747 G748 A749 C750 A753 C754 G755 C756 G761 U762 G763 C764 G765 A766 A767 A768 G769 C770 G771 U772 G775 G776 A777 G778 C779 A780 A781 A782 C783 A784 G785 G786 A787 U788 U789 A790 G791 A792 U793 A794 C795 C796 C797 U798 U801 A802 G803 U804 C805 C806
A663 G664 A665 U672 A673 G674 A675 A676 U677 U678 G679 A687 G691 U692 G693 A694 A695 A696 U697 G698 G699 G700 G703 A704 G705 A706 U707 C708 U709 G710 G711 A712 G713 G714 A715 A716 C719 C720 G721 G722 U723 G724 G725 A728 A729 G730 G731 C732 G733 G734 C735 C736 C737 C738
A600 G601 A602 U603 A607 A608 A609 U610 C611 C612 C613 C614 G615 G616 G617 C618 U619 C620 A621 A622 C623 C624 U625 G628 A629 A630 C631 U632 G633 C634 A635 U636 C637 U638 G639 A640 U641 A642 C643 U644 G645 G646 C647 A648 A649 G650 C651 U652 U653 G654 A655 G656 U657 C658 U659 C660 G661 U662
U534 A535 C536 G537 G538 A539 G540 G541 G542 U543 G544 C545 A546 A547 G548 C549 G550 U551 U552 A553 A554 U555 C556 G557 G558 A559 A560 U561 U562 G566 G570 U571 A572 A573 A574 G575 G576 G577 C578 A579 C580 G581 G584 G585 C586 G587 U590 U591 G592 U593 U594 A595 A596 G597 U598 C599
U471 U472 U473 G474 C475 U476 C477 A478 U479 U480 G481 A482 C483 G484 U485 U486 A487 C488 C489 C490 G491 C492 A493 G494 A495 A496 A499 G500 C501 A502 C503 C504 G505 G506 A509 U510 C511 U512 C513 C514 G515 U516 G517 C518 G521 C522 A523 G524 C525 C526 G527 C528 G529 G530 U531 A532 A533
A397 U398 G399 C400 C401 G402 C403 G404 U405 G406 U407 A408 U409 G410 A411 A412 G413 A414 A415 G416 U421 C422 G423 G424 G425 U426 U427 G428 U429 A430 U434 A435 C436 U437 U438 U439 C440 A441 A448 G449 G450 A451 A452 G453 G454 G455 A461 G462 U463 U464 A465 A466 U467 A468 C469 C470
G331 G332 U333 C334 C335 A336 G337 A338 C339 C342 U343 A344 G345 G346 C352 A353 G354 C355 A356 G357 U358 G359 G360 G361 G362 A363 A366 U367 U368 G369 C370 A371 C372 A373 A374 U375 G376 G377 G378 G379 G380 C381 A382 A383 G384 C385 C386 U387 G388 A389 U390 G391 C392 A393 G394 C395 G396
G265 G266 C267 U268 C269 A270 C271 C272 U273 G276 C277 G278 A279 C280 G281 A282 U283 C284 C285 C286 G289 C290 U291 G292 U296 G297 A298 G299 A300 G301 G302 A306 C307 C308 A309 G310 C311 C312 A313 C314 A315 C316 U317 G318 G319 A320 A321 C322 U323 G324 A325 G326 A327 C328 A329 C330
A205 C206 C207 U208 U209 C210 G211 G212 G213 C214 C215 U216 C217 U218 U219 G220 C221 C222 A223 U224 C225 G226 G227 A228 U229 G230 U231 G232 C233 C234 C235 A236 G237 A238 U239 G240 G241 G242 A243 U244 U245 A246 G247 C248 U249 A250 G251 U252 A253 G254 G255 U256 G257 G258 G259 G260 U261 A262 A263 C264
A139 U140 G141 G142 A143 G144 G145 G146 G147 G148 A151 A152 C153 U154 A155 C156 U157 G158 G159 A160 A161 A162 C163 A167 G168 C169 U170 A171 A172 U173 A174 C175 C176 G177 C178 A179 U180 A181 A182 C183 G187 A190 G191 A192 C193 C194 A195 A196 A197 G198 A199 G200 G201 G202 G203 G204
G69 U70 A71 A72 C73 A74 A80 A81 G82 C83 U84 U85 G86 C87 U88 U89 C90 U91 U92 U93 G94 C95 U96 G97 A98 C99 G102 U103 G104 G105 C106 G107 G108 A109 G113 U114 G115 A116 G117 U118 A119 A120 U121 G122 U123 C124 U125 G128 A129 A130 A131 C132 C135 G138



• Molecule 2: 30S ribosomal protein S3

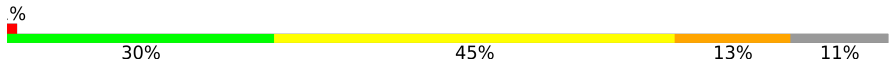
Chain AC:

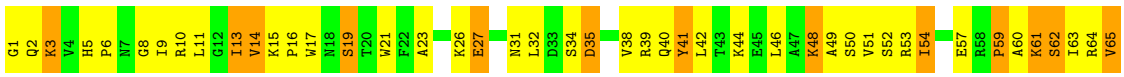


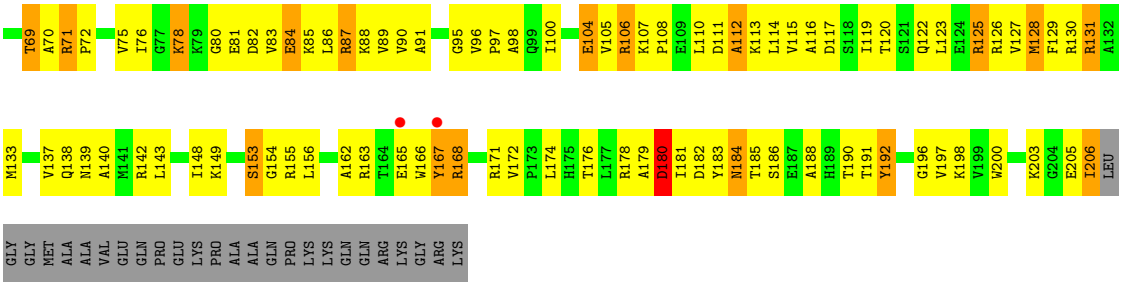


• Molecule 2: 30S ribosomal protein S3

Chain CC:

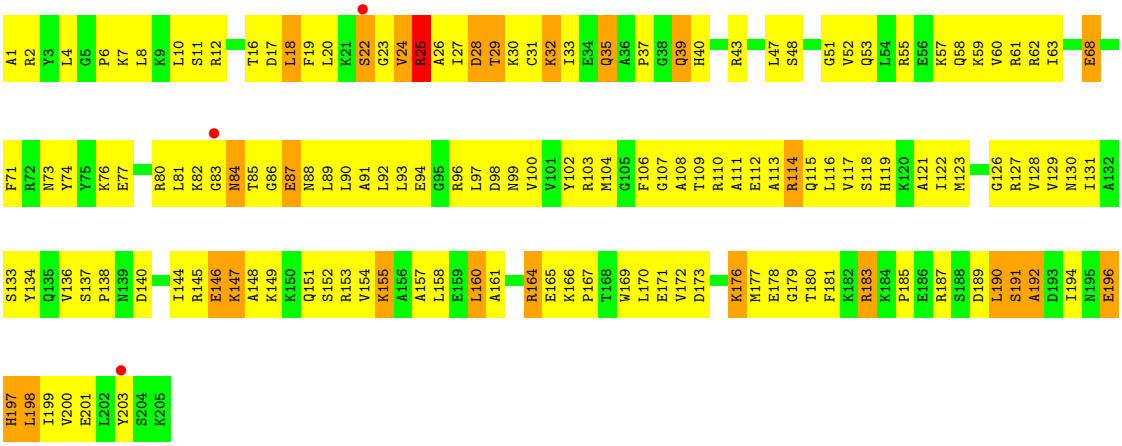






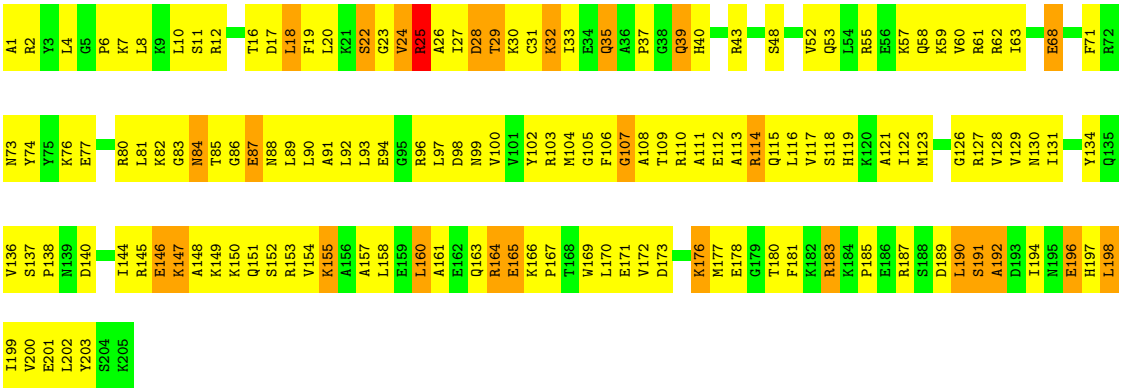
- Molecule 3: 30S ribosomal protein S4

Chain AD:



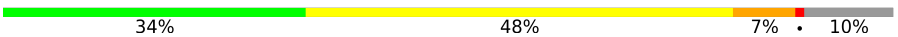
- Molecule 3: 30S ribosomal protein S4

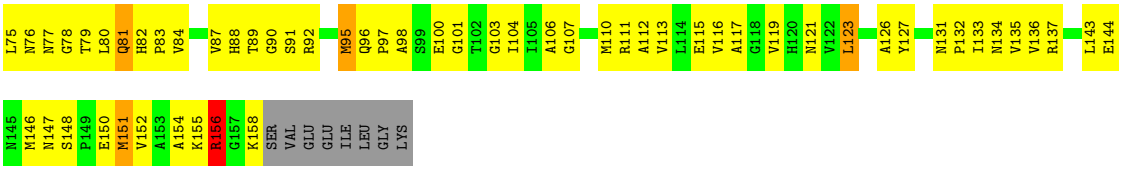
Chain CD:



- Molecule 4: 30S ribosomal protein S5

Chain AE:





• Molecule 4: 30S ribosomal protein S5

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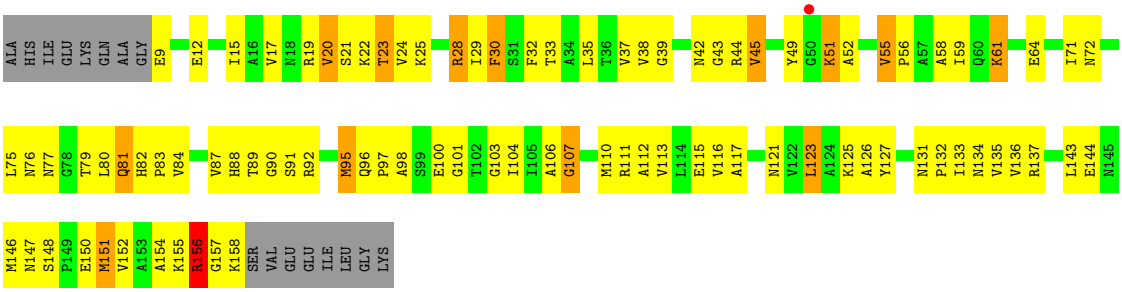
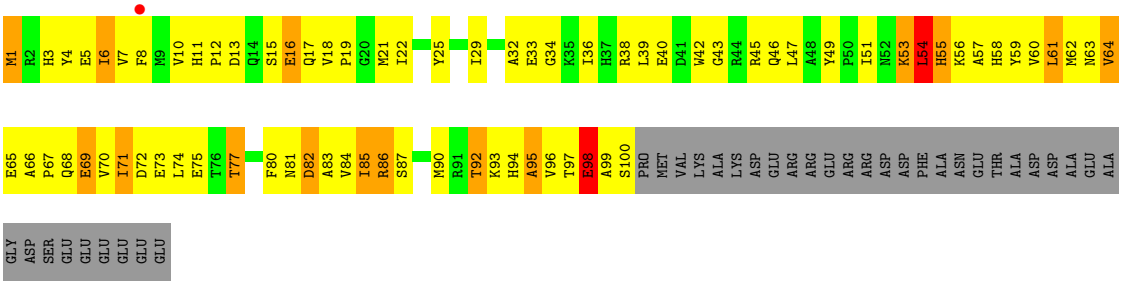


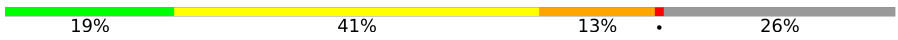
• Molecule 5: 30S ribosomal protein S6

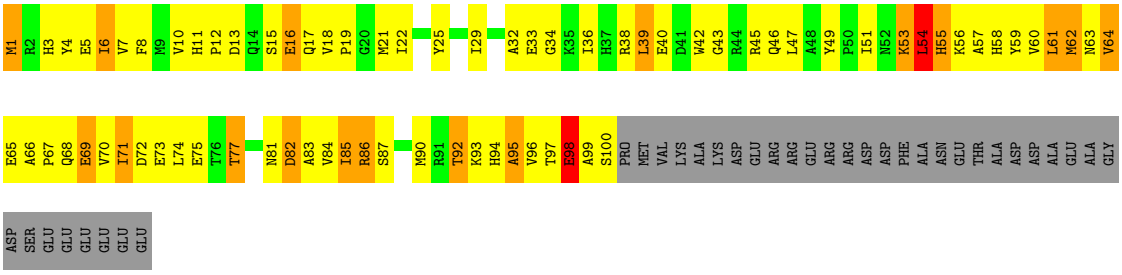
Chain AF:



• Molecule 5: 30S ribosomal protein S6

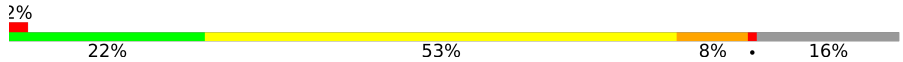
Chain CF:

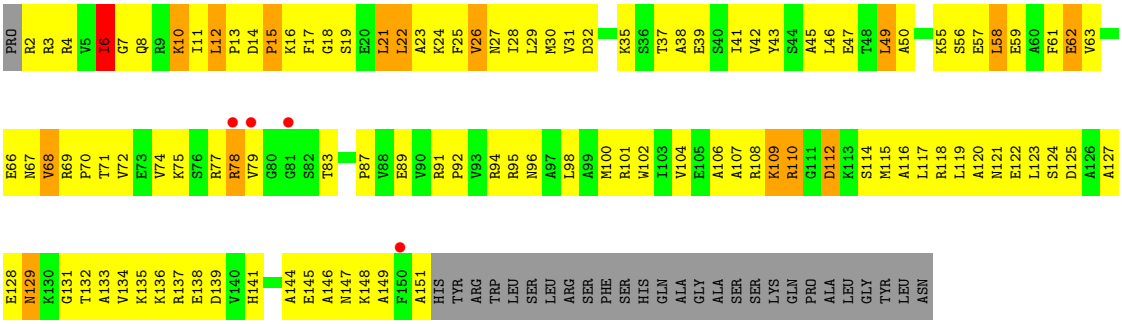




• Molecule 6: 30S ribosomal protein S7

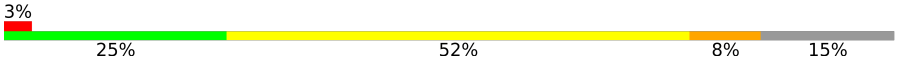
Chain AG:

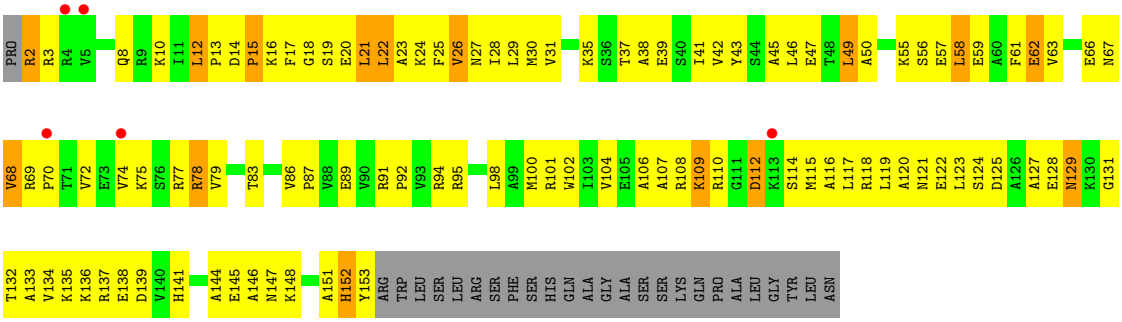




- Molecule 6: 30S ribosomal protein S7

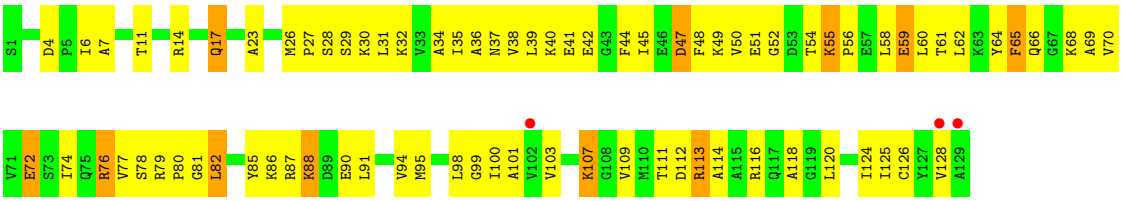
Chain CG:





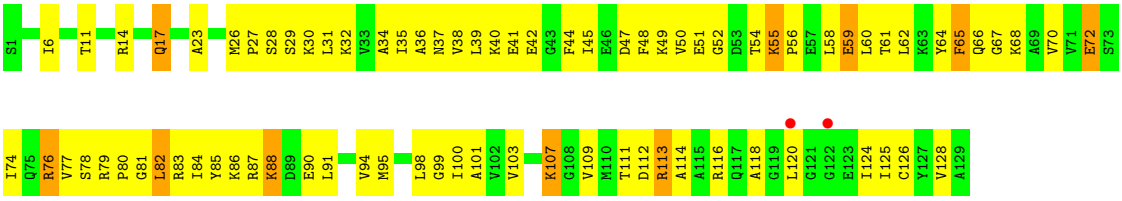
- Molecule 7: 30S ribosomal protein S8

Chain AH:



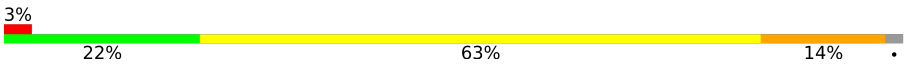
- Molecule 7: 30S ribosomal protein S8

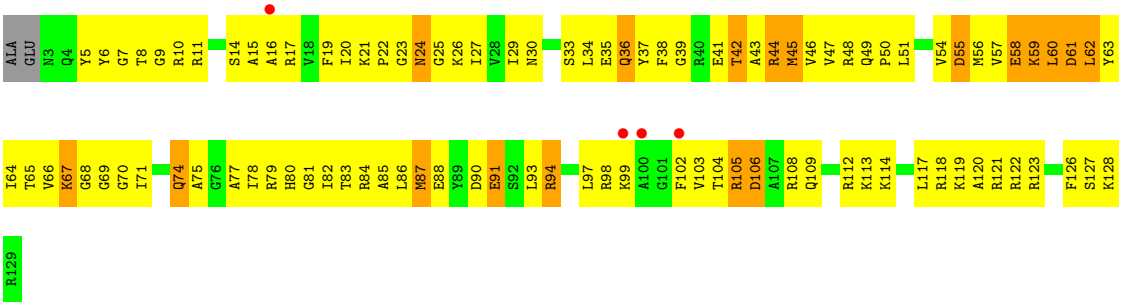
Chain CH:



- Molecule 8: 30S ribosomal protein S9

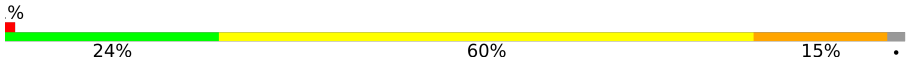
Chain AI:

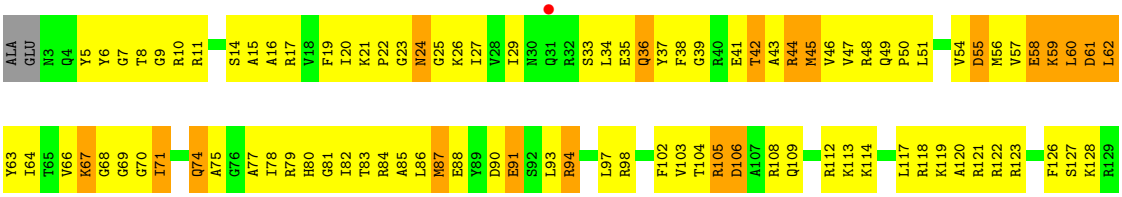




- Molecule 8: 30S ribosomal protein S9

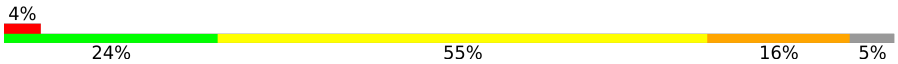
Chain CI:

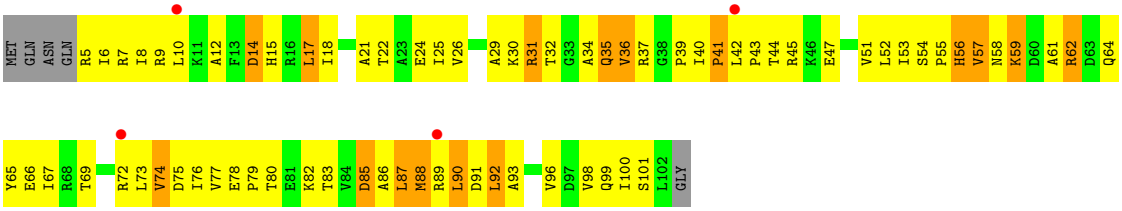




- Molecule 9: 30S ribosomal protein S10

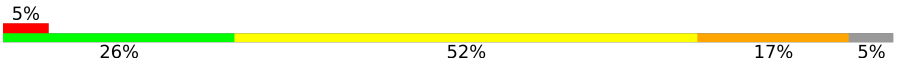
Chain AJ:

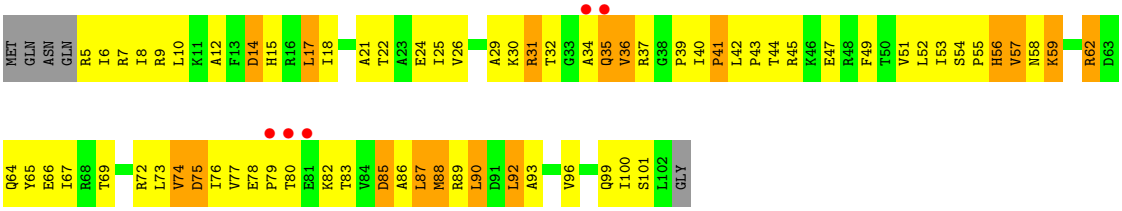




- Molecule 9: 30S ribosomal protein S10

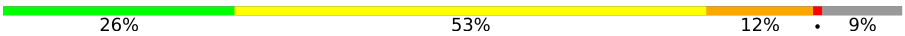
Chain CJ:

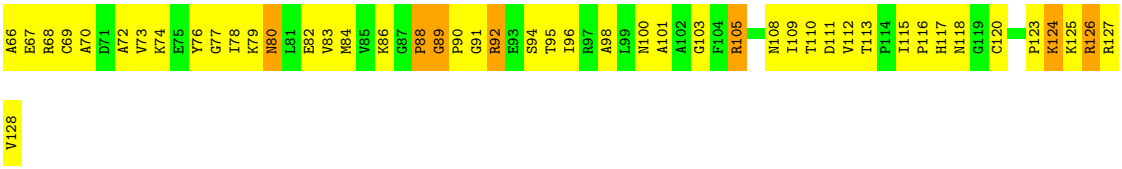




- Molecule 10: 30S ribosomal protein S11

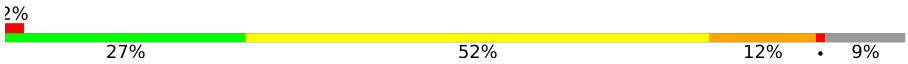
Chain AK:

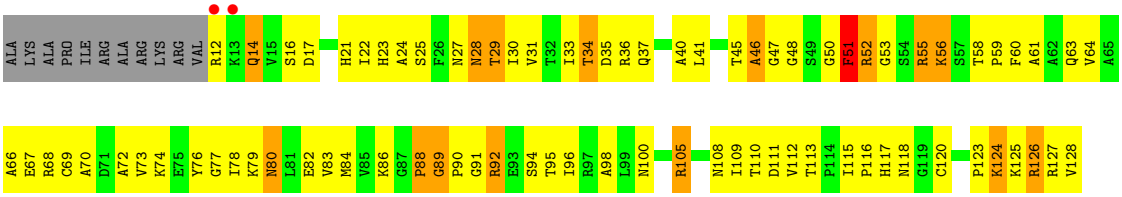




• Molecule 10: 30S ribosomal protein S11

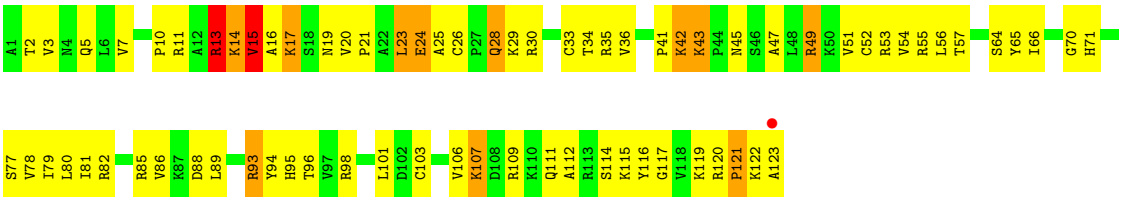
Chain CK:





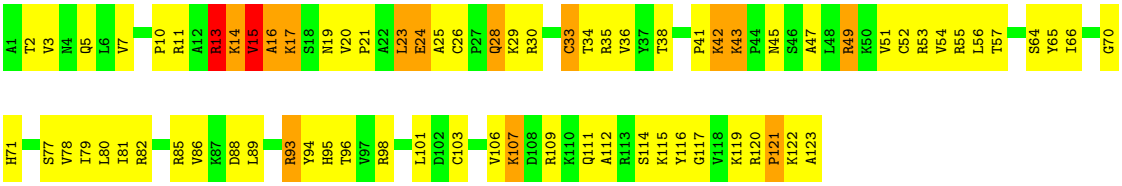
• Molecule 11: 30S ribosomal protein S12

Chain AL:



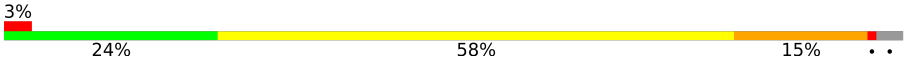
• Molecule 11: 30S ribosomal protein S12

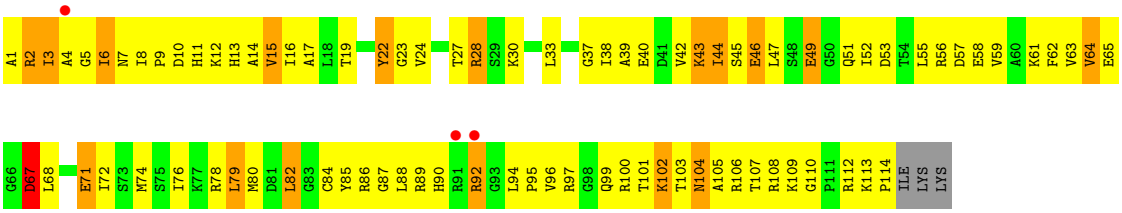
Chain CL:



• Molecule 12: 30S ribosomal protein S13

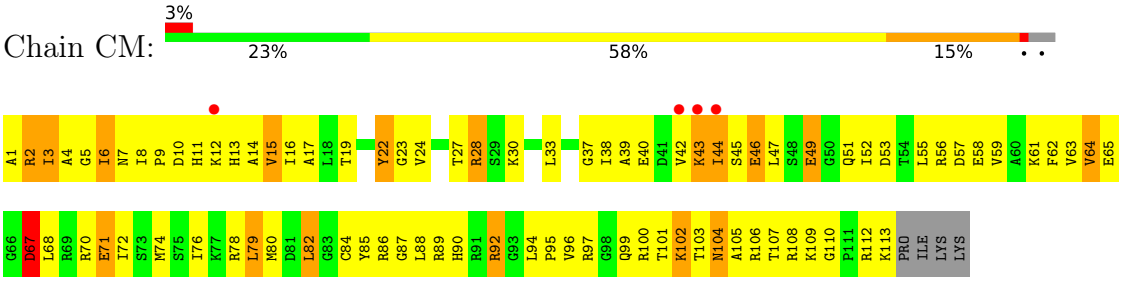
Chain AM:





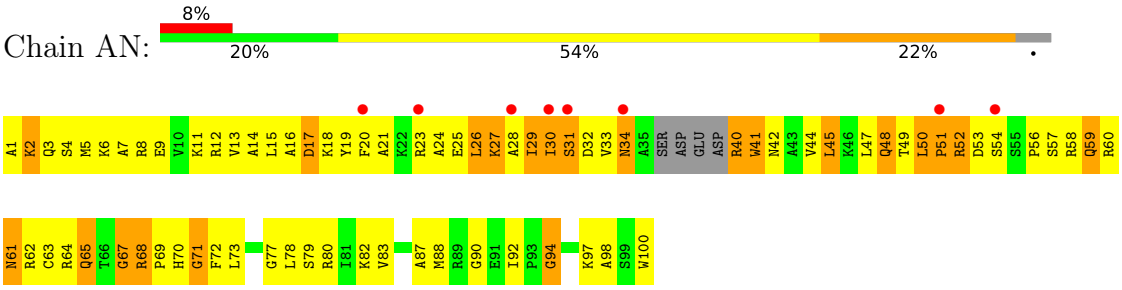
• Molecule 12: 30S ribosomal protein S13

Chain CM:



- Molecule 13: 30S ribosomal protein S14

Chain AN:

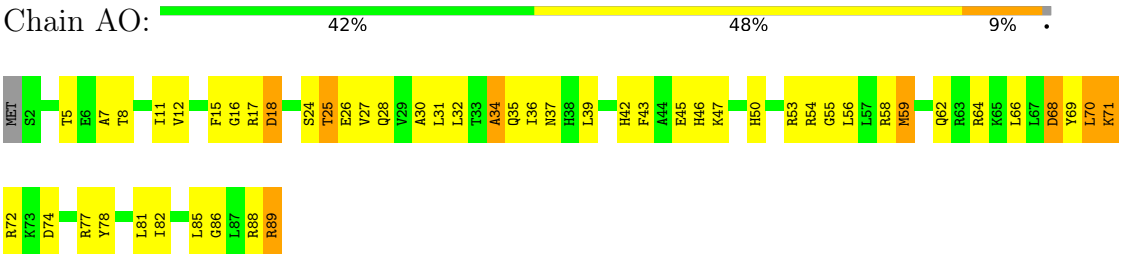


- Molecule 13: 30S ribosomal protein S14

Chain CN:

- Molecule 14: 30S ribosomal protein S15

Chain AO:

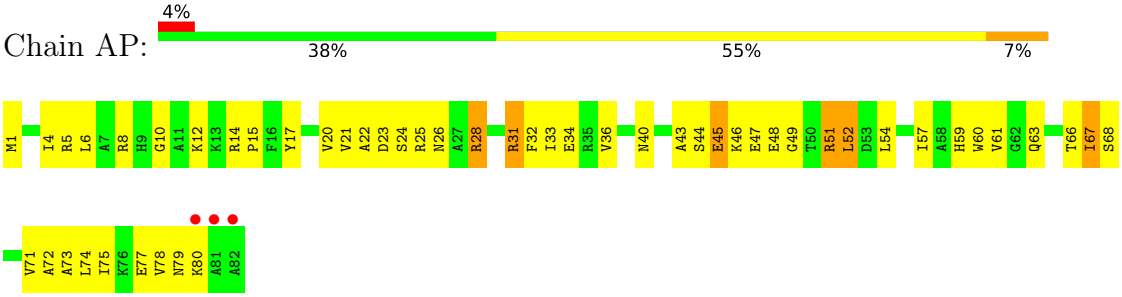


- Molecule 14: 30S ribosomal protein S15

Chain CO:

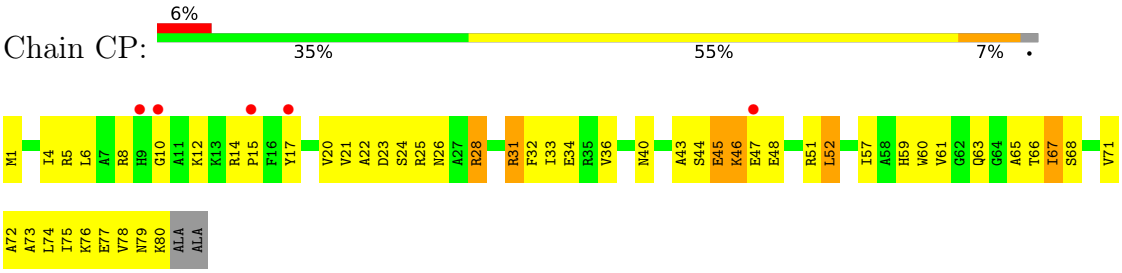
• Molecule 15: 30S ribosomal protein S16

Chain AP:



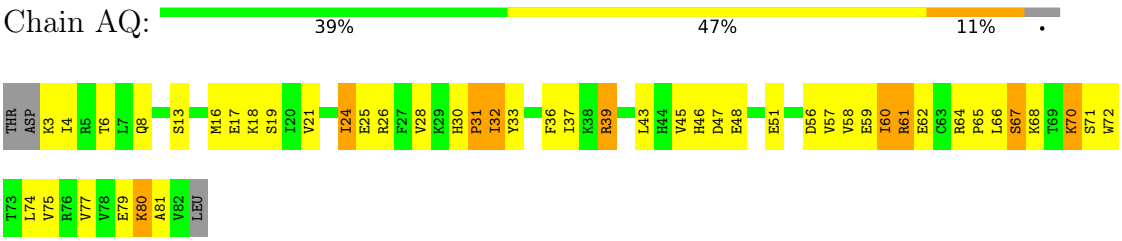
• Molecule 15: 30S ribosomal protein S16

Chain CP:



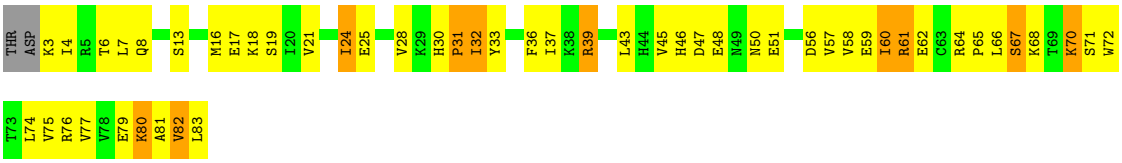
• Molecule 16: 30S ribosomal protein S17

Chain AQ:



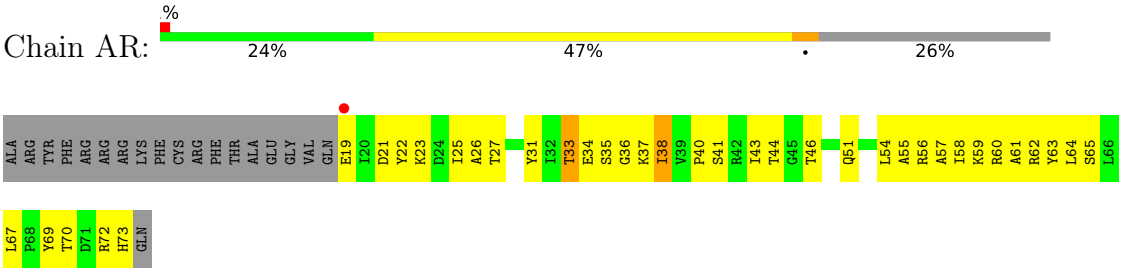
• Molecule 16: 30S ribosomal protein S17

Chain CQ:



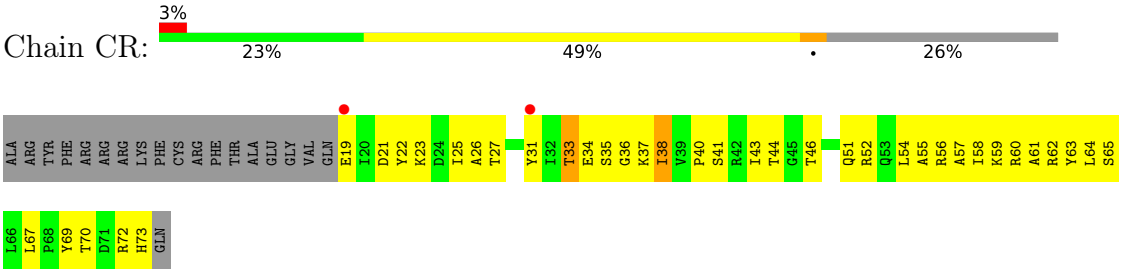
• Molecule 17: 30S ribosomal protein S18

Chain AR:



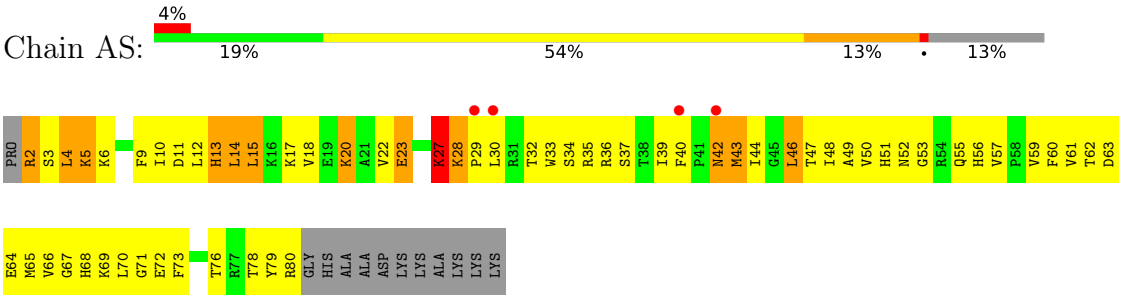
• Molecule 17: 30S ribosomal protein S18

Chain CR:



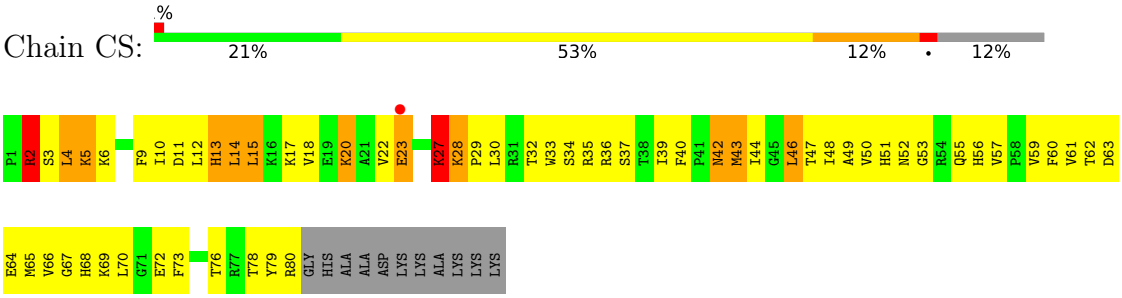
• Molecule 18: 30S ribosomal protein S19

Chain AS:



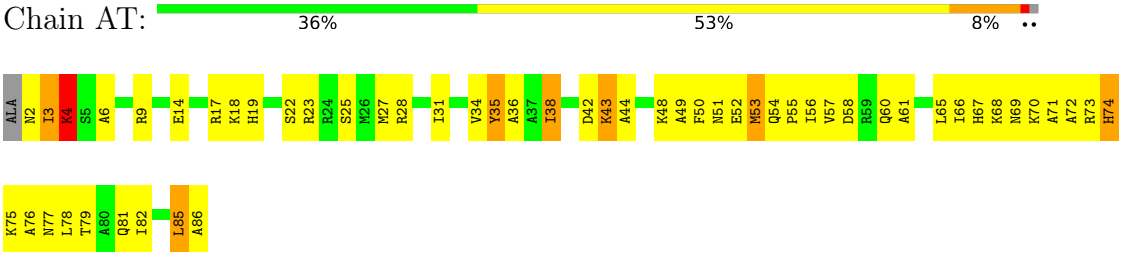
• Molecule 18: 30S ribosomal protein S19

Chain CS:



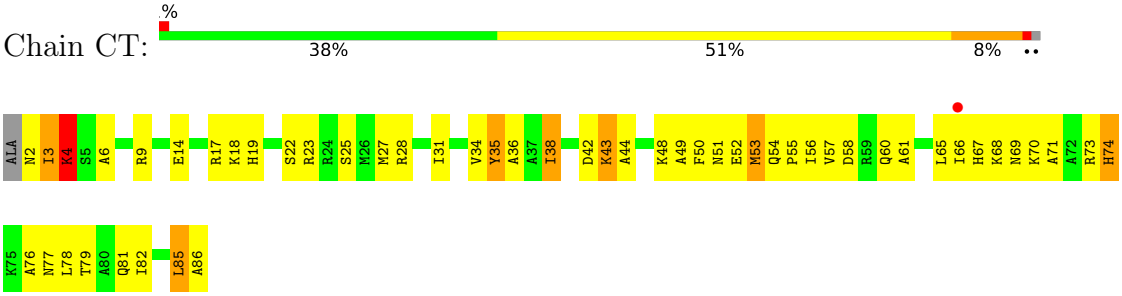
• Molecule 19: 30S ribosomal protein S20

Chain AT:



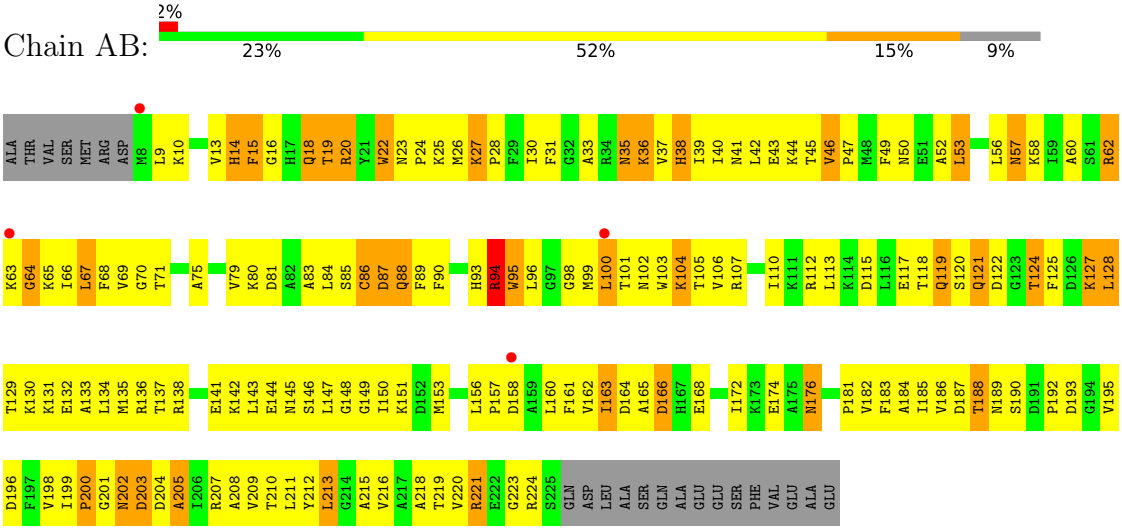
• Molecule 19: 30S ribosomal protein S20

Chain CT:



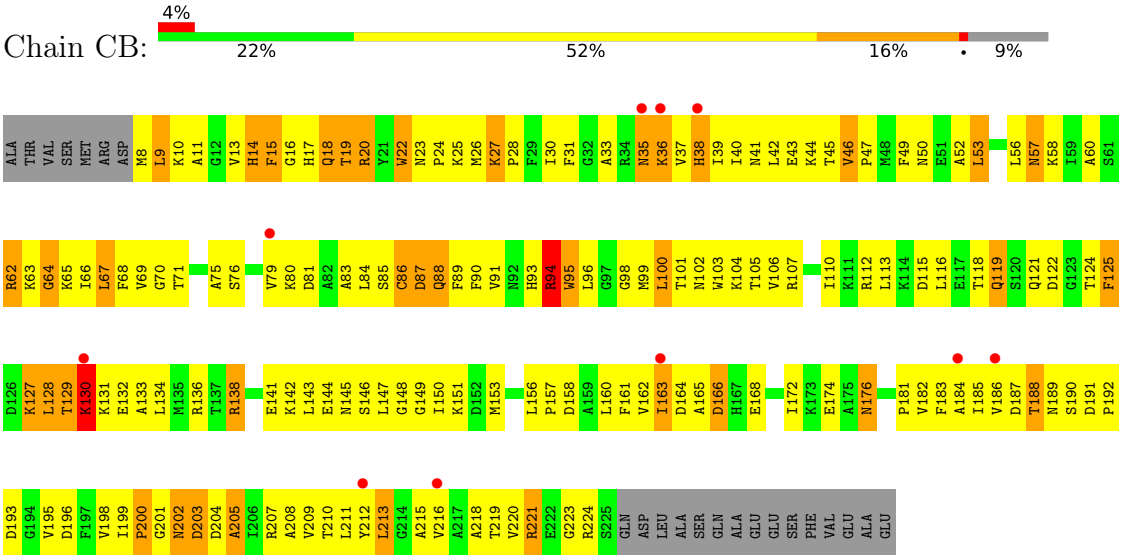
• Molecule 20: 30S ribosomal protein S2

Chain AB:



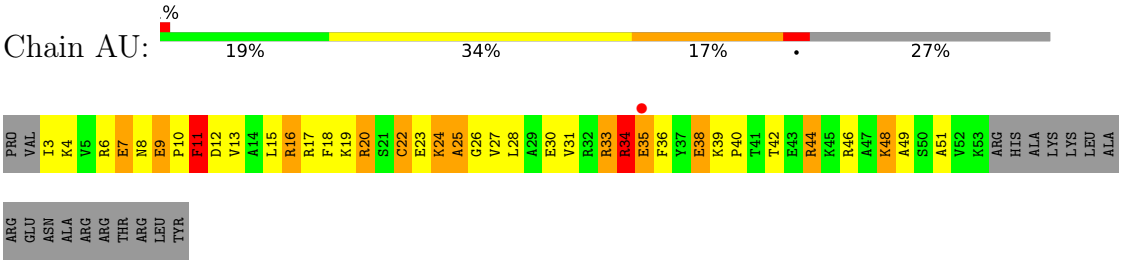
• Molecule 20: 30S ribosomal protein S2

Chain CB:



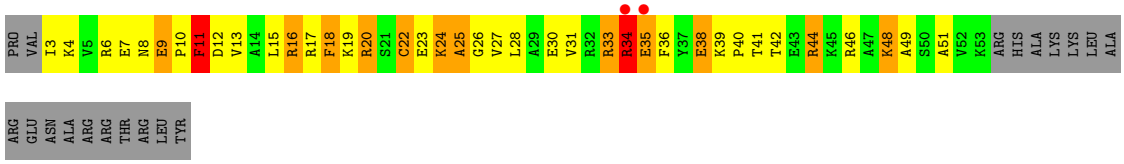
• Molecule 21: 30S ribosomal protein S21

Chain AU:



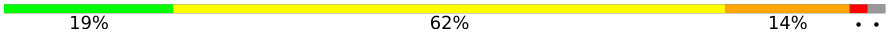
• Molecule 21: 30S ribosomal protein S21

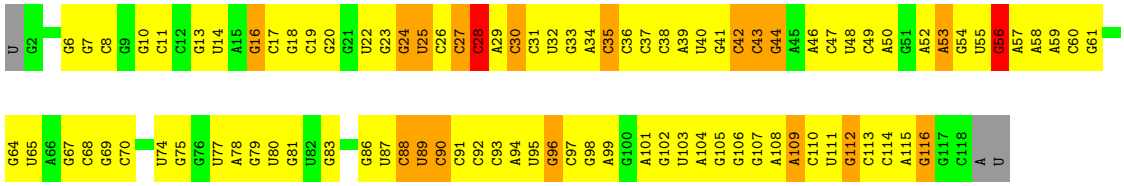
Chain CU:



• Molecule 22: 5S rRNA

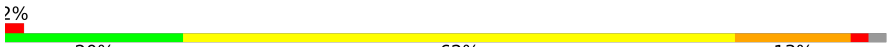
Chain BA:

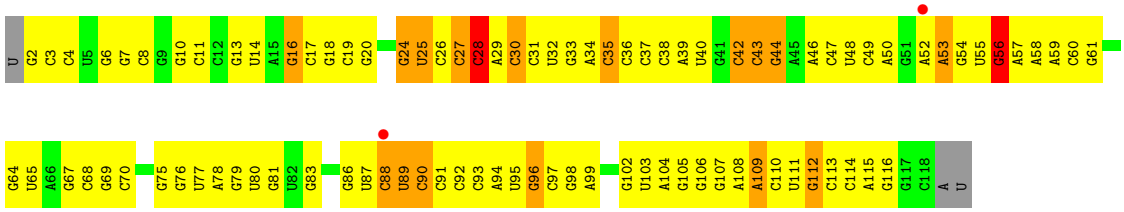




• Molecule 22: 5S rRNA

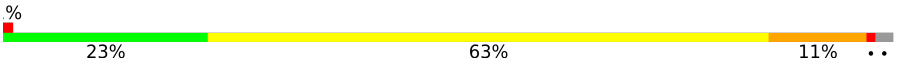
Chain DA:

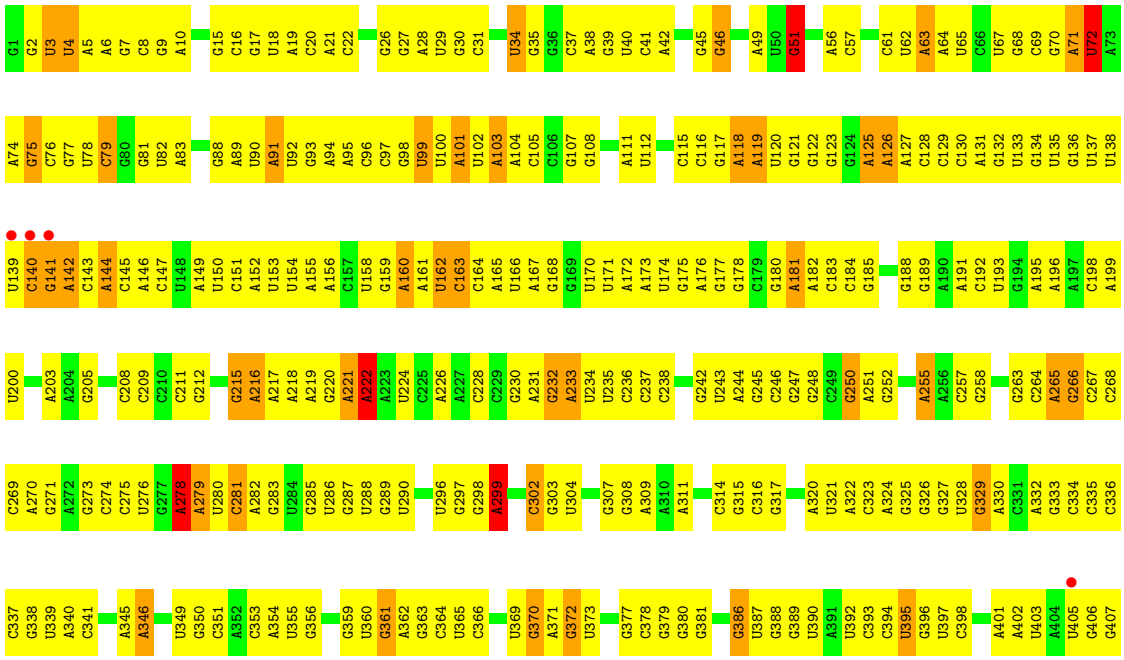


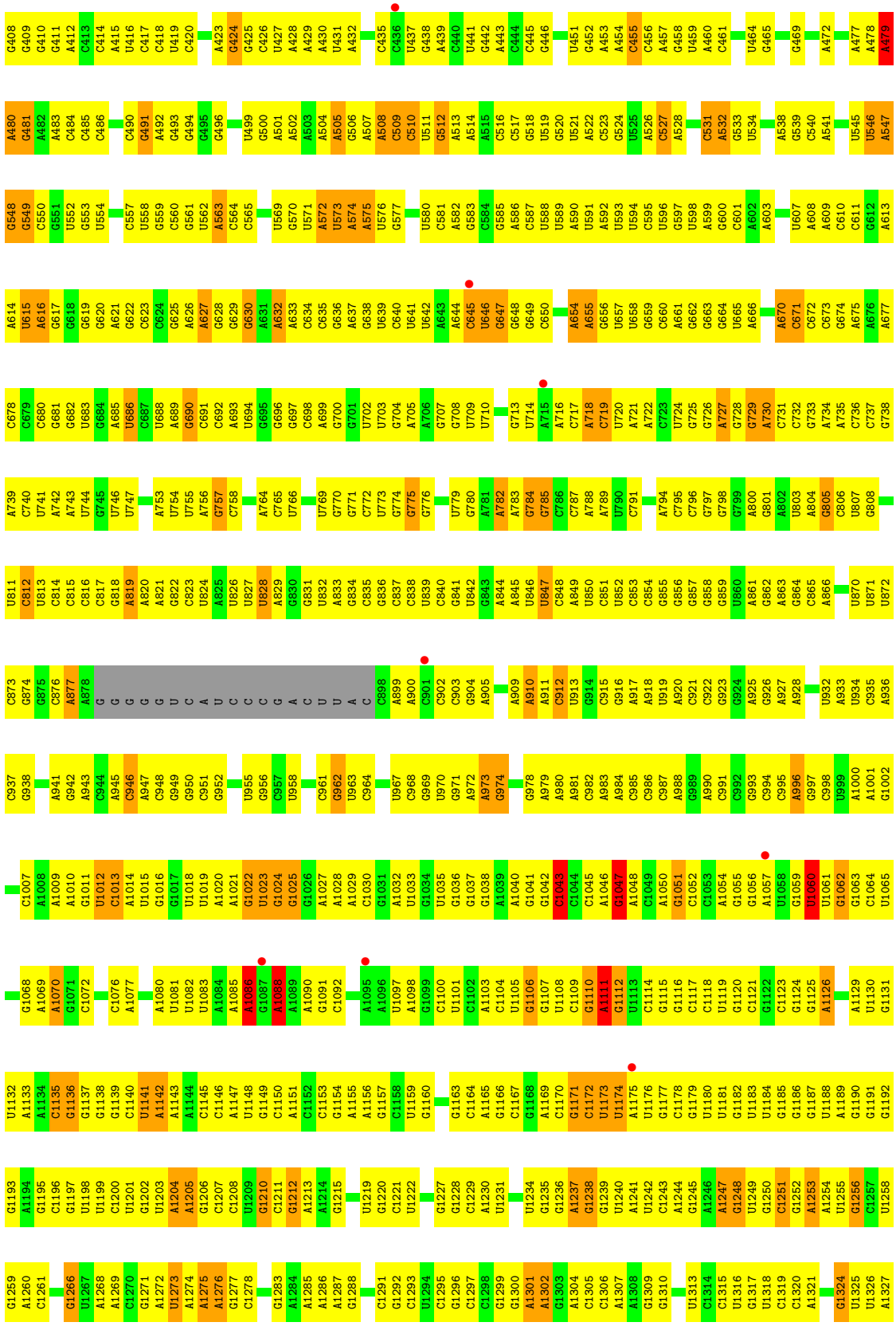


• Molecule 23: 23S rRNA

Chain BB:



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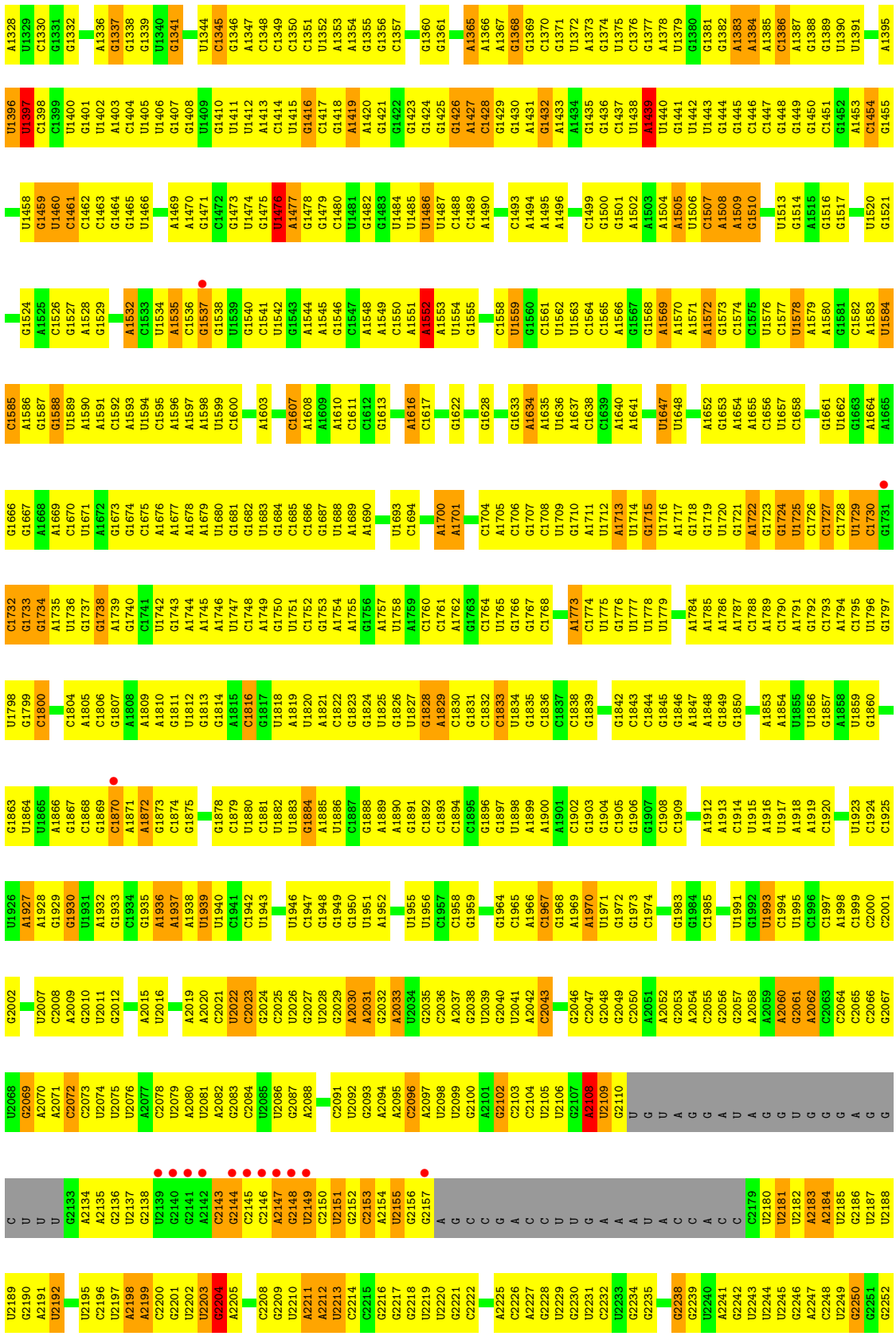
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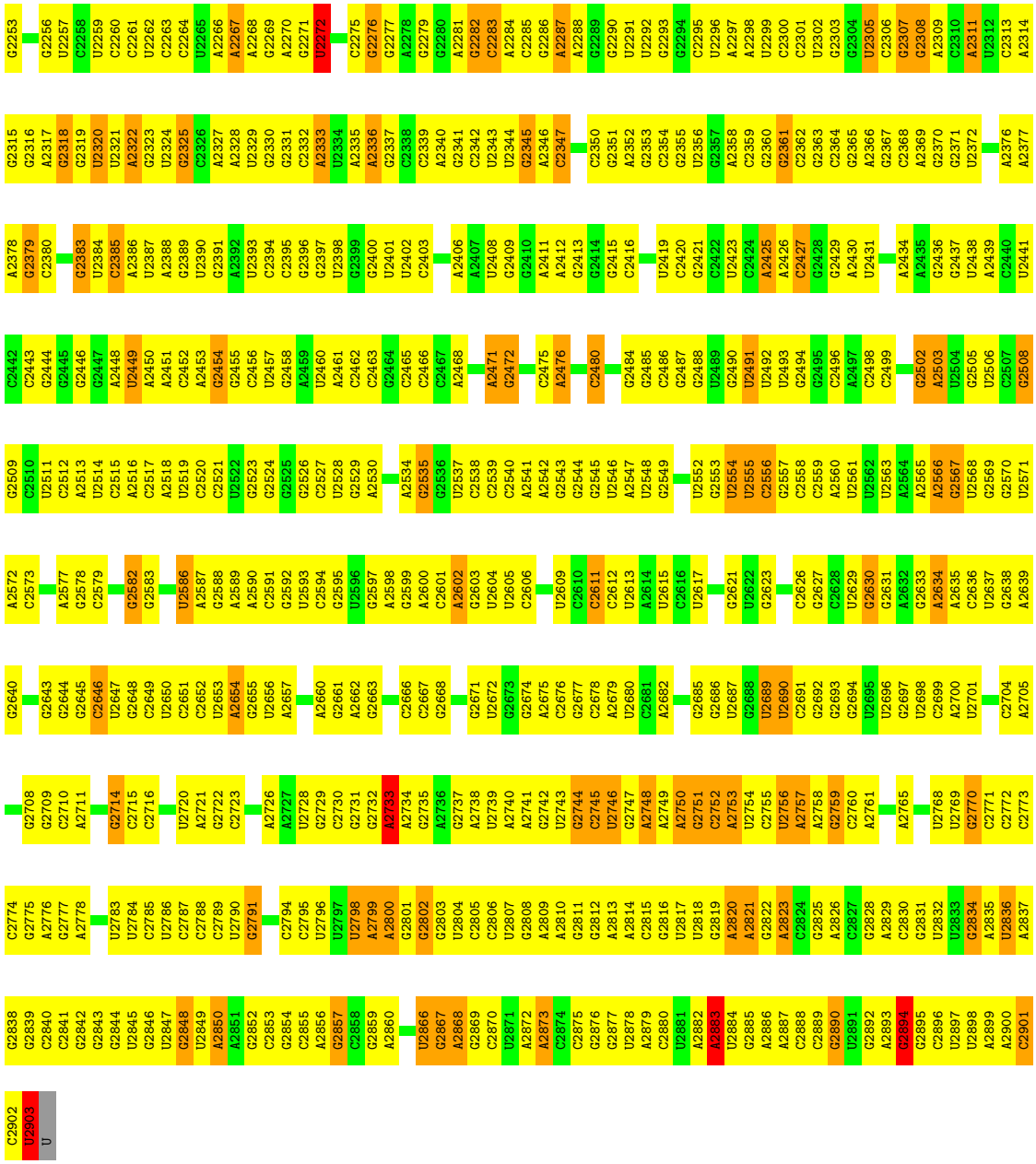

• Molecule 23: 23S rRNA

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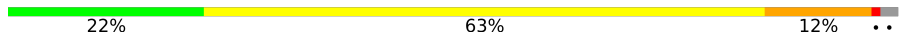

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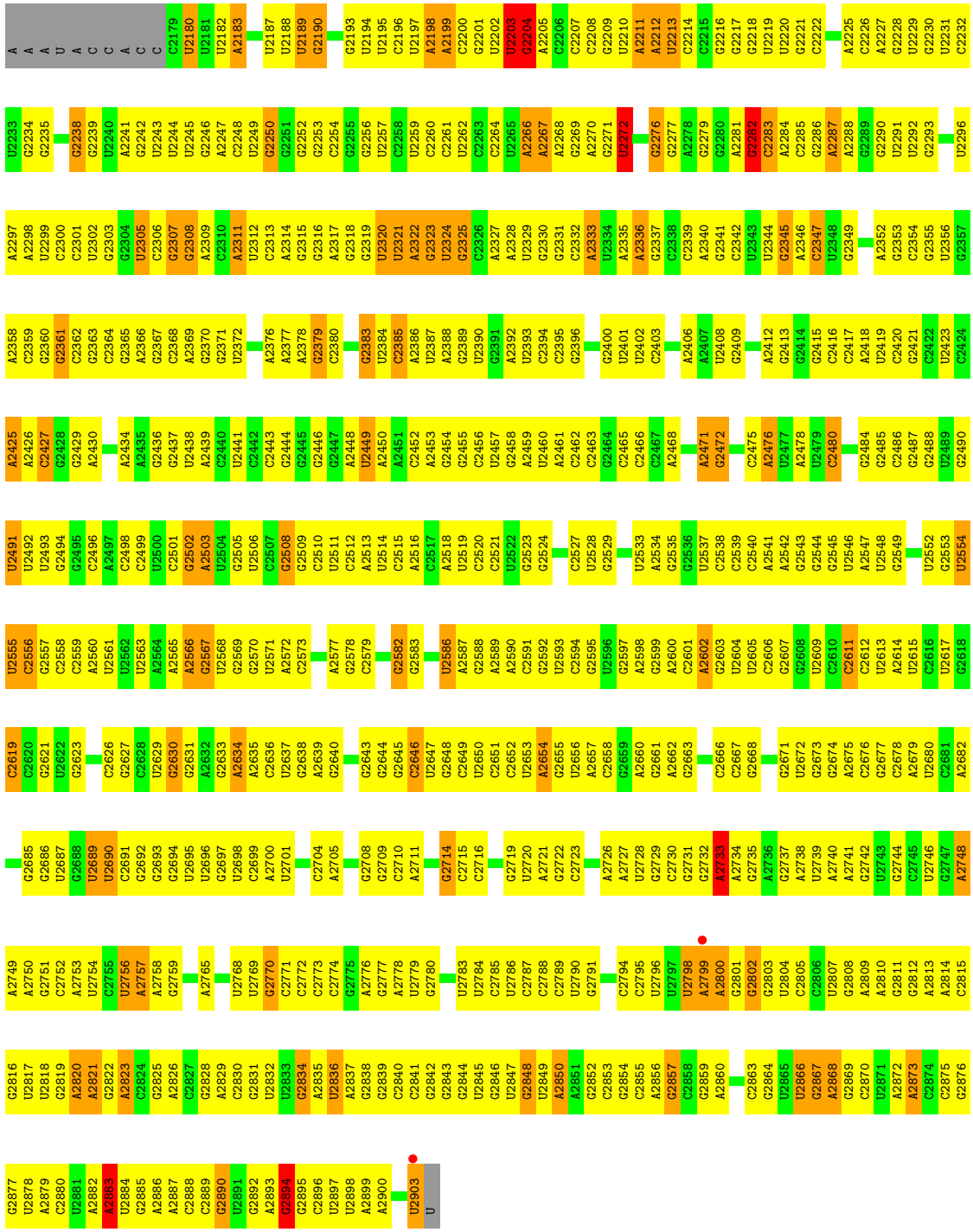
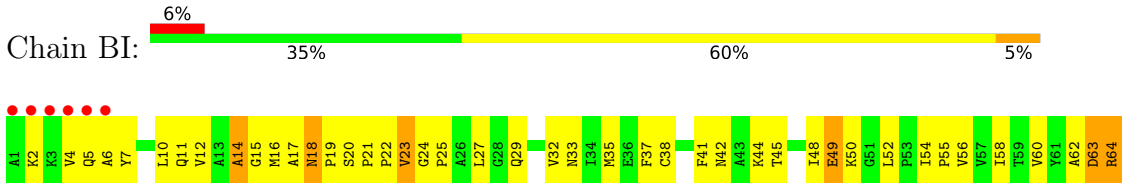
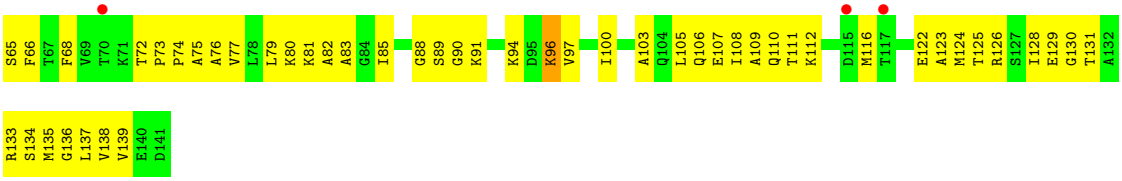


• Molecule 24: 50S ribosomal protein L11

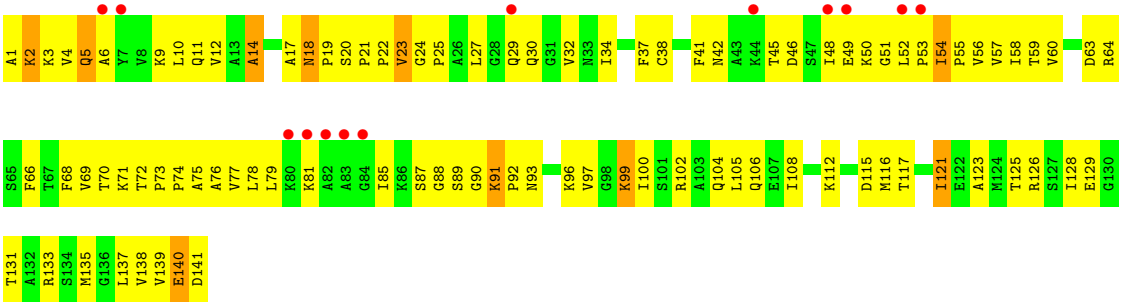
Chain BI:





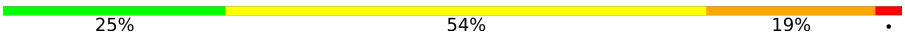
• Molecule 24: 50S ribosomal protein L11

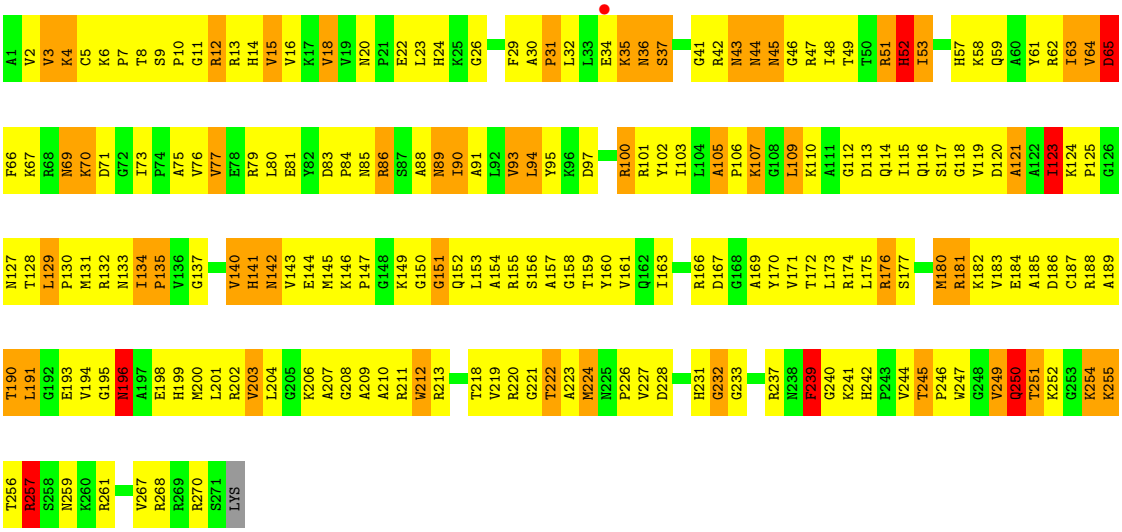
Chain DI:



• Molecule 25: 50S ribosomal protein L2

Chain BC:





• Molecule 25: 50S ribosomal protein L2

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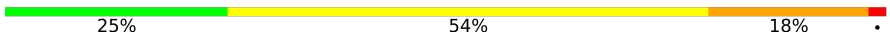

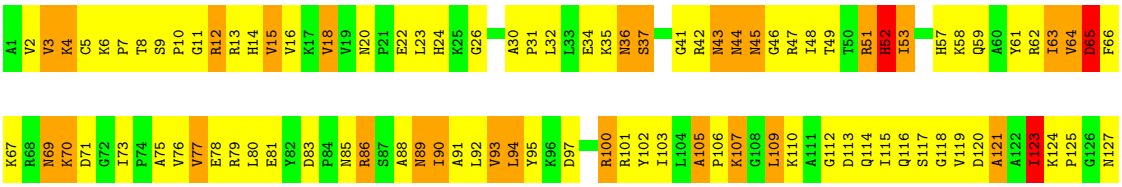

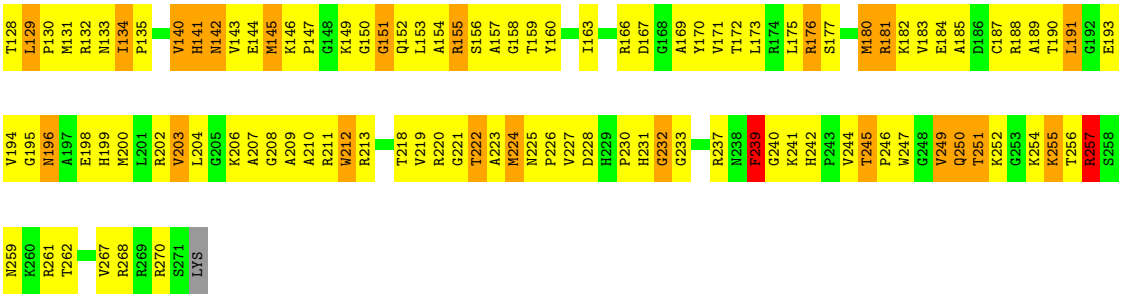

• Molecule 26: 50S ribosomal protein L3

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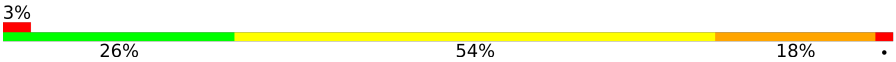
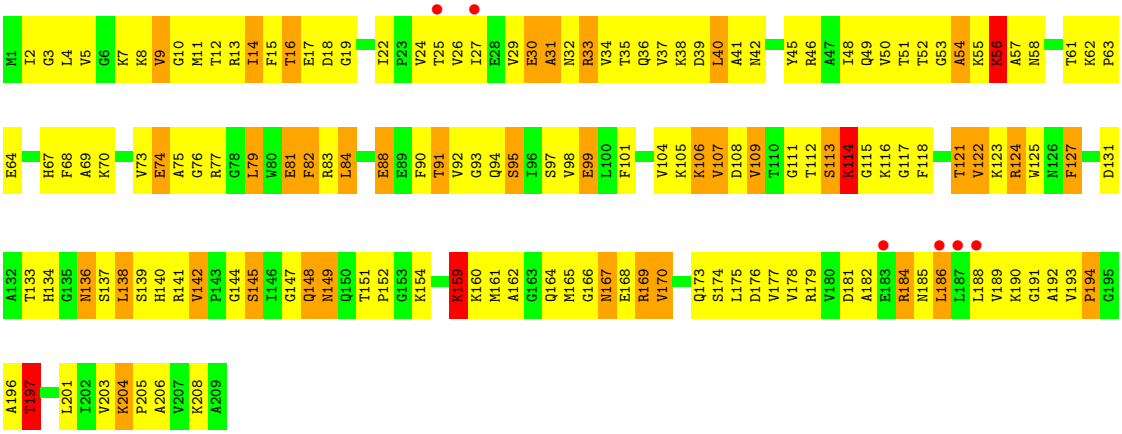
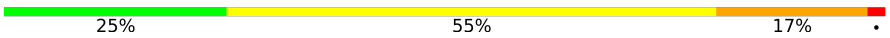
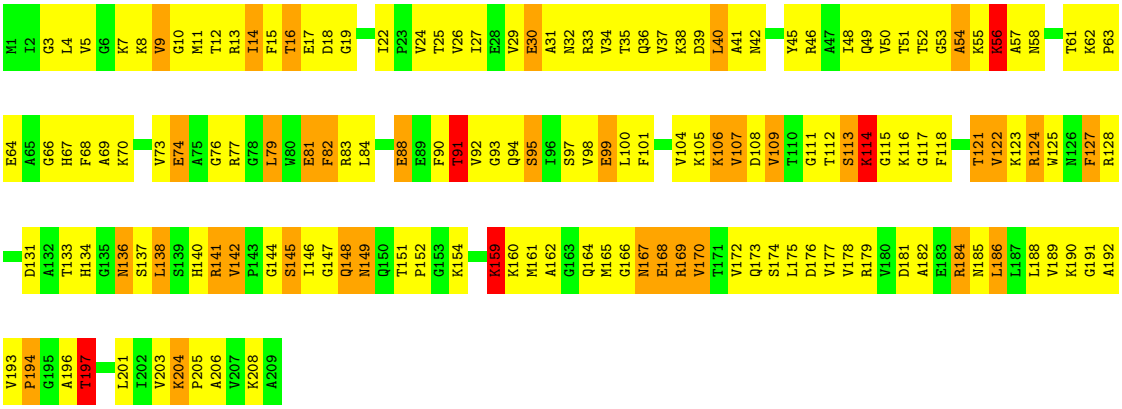




• Molecule 26: 50S ribosomal protein L3

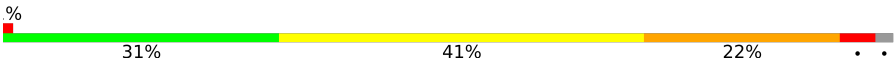
Chain DD:

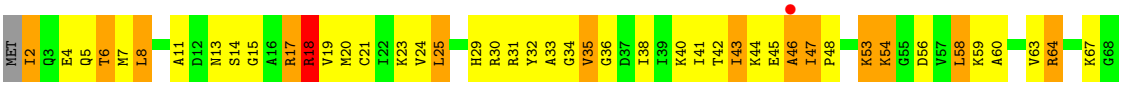




• Molecule 27: 50S ribosomal protein L14

Chain BK:





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- Molecule 27: 50S ribosomal protein L14

Chain DK: 27% 44% 24%

MET I2 Q3 E4 Q5 T6 M7 L8 A11 D12 N13 S14 G15 A16 R17 R18 V19 M20 C21 I22 K23 V24 L25 H29 R30 R31 Y32 A33 G34 V35 G36 D37 I38 I39 K40 I41 T42 I43 K44 E45 A46 I47 P48 K53 K54 G55 D56 V57 L58 K59 A60 V63 R64 K67 G68

V69 R70 R71 P72 D73 G74 S75 V76 I77 R78 F79 D80 G81 N82 V85 L86 L87 N88 N89 E92 Q93 T97 R98 I99 F100 G101 P102 V103 T104 R105 E106 L107 R108 S109 E110 K111 F112 M113 K114 I115 I116 S117 L118 A119 P120 E121 V122 LEU

- Molecule 28: 50S ribosomal protein L19

Chain BP: 25% 58% 13%

S1 M2 I3 I4 K5 Q6 L7 E8 Q9 E10 Q11 M12 K13 F19 R20 P21 G22 D23 T24 V25 E26 V29 W30 V31 V32 E33 K36 K37 R38 L39 Q40 E43 G44 V45 V46 I47 A48 I49 R50 N51 R52 G53 L54 H55 S56 A57 F58 T59 V60 R61 K62 I63 S64 N65 G66 E67

G68 V69 E70 R71 V72 F73 Q74 T75 H76 S77 P78 V79 V80 D81 S82 I83 S84 V85 R88 G89 A90 V91 R92 R93 A94 K95 L96 Y97 Y98 L99 R100 E101 R102 T103 G104 K105 A106 A107 R108 E111 R112 L113 N114

- Molecule 28: 50S ribosomal protein L19

Chain DP: 25% 59% 12%

S1 M2 I3 I4 K5 Q6 L7 E8 Q9 E10 Q11 M12 K13 F19 R20 P21 G22 D23 T24 V25 E26 V29 W30 V31 V32 E33 K36 K37 R38 L39 E43 G44 V45 V46 I47 A48 I49 R50 N51 R52 G53 L54 H55 S56 A57 F58 T59 V60 R61 K62 I63 S64 N65 G66 E67 G68

V69 E70 R71 V72 F73 Q74 T75 H76 S77 P78 V79 V80 D81 S82 I83 S84 V85 K86 R87 R88 G89 A90 V91 R92 R93 A94 K95 L96 Y97 Y98 L99 R100 E101 R102 T103 G104 K105 A106 A107 R108 E111 R112 L113 N114

- Molecule 29: 50S ribosomal protein L4

Chain BE: % 22% 63% 14%

M1 E2 L3 V4 L5 K6 D7 S10 A11 L12 T13 V14 S15 E16 T17 T18 R21 D22 F23 N24 L27 V28 H29 Q30 V31 V32 V33 A34 Y35 A36 A37 G38 A39 R40 Q41 G42 T43 R44 A45 Q46 K47 T48 R49 A50 E51 V52 T53 G56 K57 K58 P59 W60 R61 Q62 K63 G64

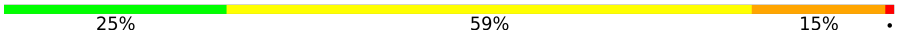
R67 A68 R69 S70 G71 S72 I73 K74 S75 P76 I77 W78 R79 S80 V83 T84 F85 A86 A87 R88 H92 K95 V96 N97 K98 K99 M100 Y101 R102 G103 A104 L105 K106 S107 I108 L109 S110 E111 L112 Q115 D116 R117 L118 E122 K123 F124 S125 V126 E127 A128 P129 K130 T131 K132

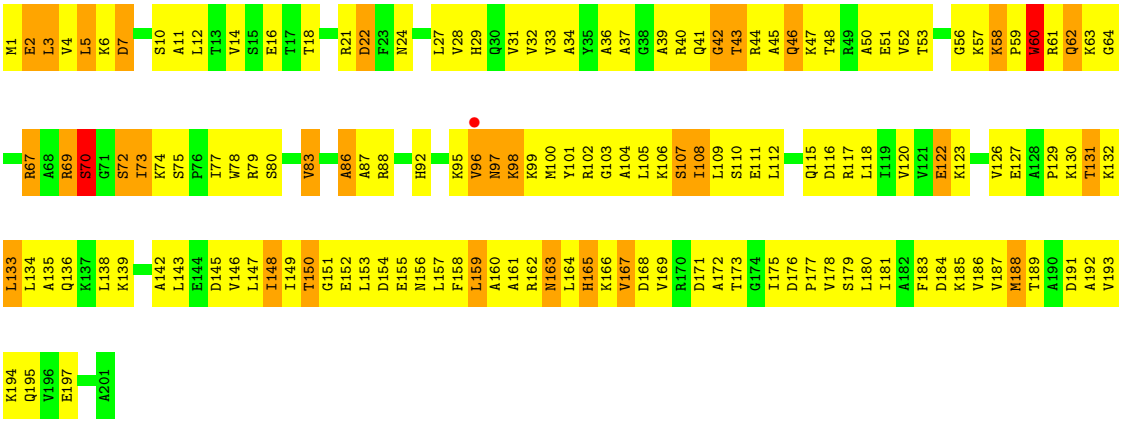
L133 L134 A135 Q136 K137 L138 K139 A142 L143 E144 D145 V146 L147 T148 I149 T150 G151 E152 L153 D154 E155 N156 L157 F158 L159 A160 A161 R162 N163 L164 H165 K166 V167 D168 V169 R170 D171 A172 T173 G174 I175 D176 P177 V178 S179 L180 I181 A182 F183 D184 K185 V186 V187 M188 T189 A190 D191 A192 V193

K194 Q195 V196 E197 L200 A201

• Molecule 29: 50S ribosomal protein L4

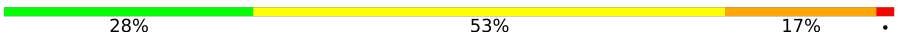
Chain DE:





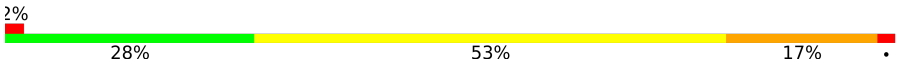
• Molecule 30: 50S ribosomal protein L30

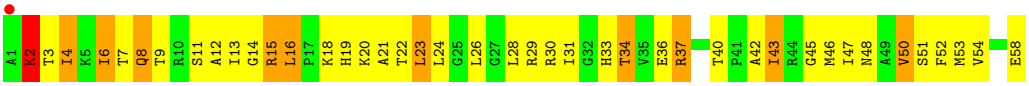
Chain BY:



• Molecule 30: 50S ribosomal protein L30

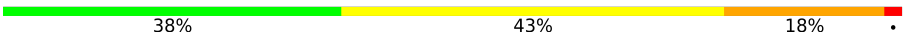
Chain DY:

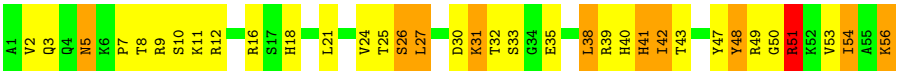




• Molecule 31: 50S ribosomal protein L32

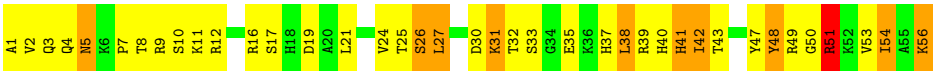
Chain B0:





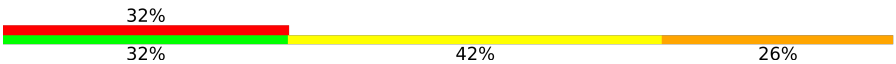
• Molecule 31: 50S ribosomal protein L32

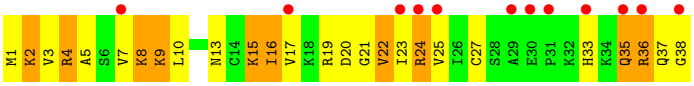
Chain D0:



• Molecule 32: 50S ribosomal protein L36

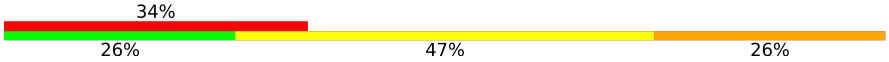
Chain B4:

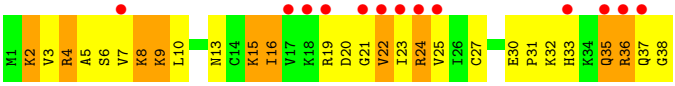




• Molecule 32: 50S ribosomal protein L36

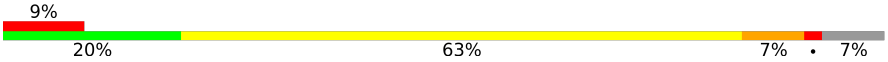
Chain D4:

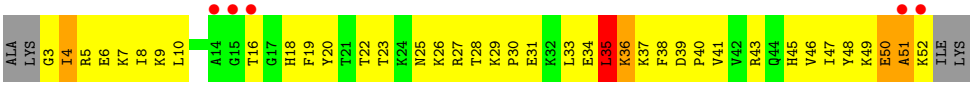




• Molecule 33: 50S ribosomal protein L33

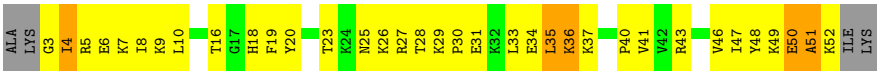
Chain B1:





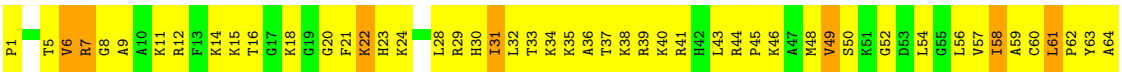
• Molecule 33: 50S ribosomal protein L33

Chain D1:



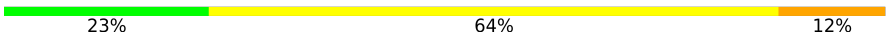
• Molecule 34: 50S ribosomal protein L35

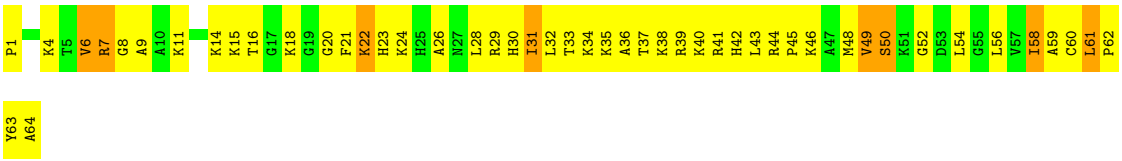
Chain B3:



• Molecule 34: 50S ribosomal protein L35

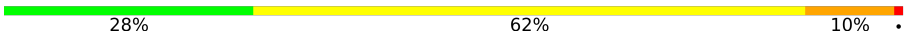
Chain D3:

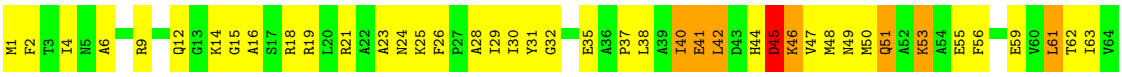


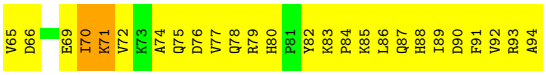


• Molecule 35: 50S ribosomal protein L25

Chain BV:

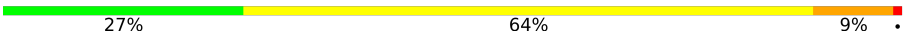


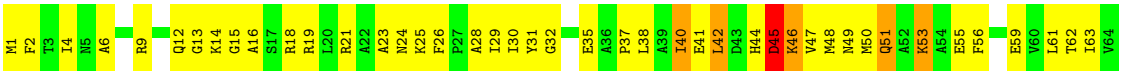


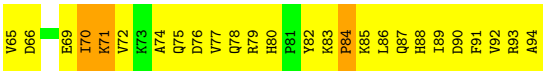


• Molecule 35: 50S ribosomal protein L25

Chain DV:





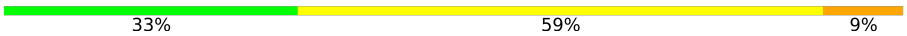


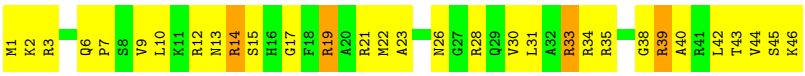
• Molecule 36: 50S ribosomal protein L34

Chain B2:

• Molecule 36: 50S ribosomal protein L34

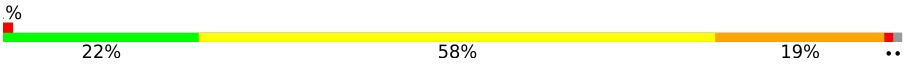
Chain D2:

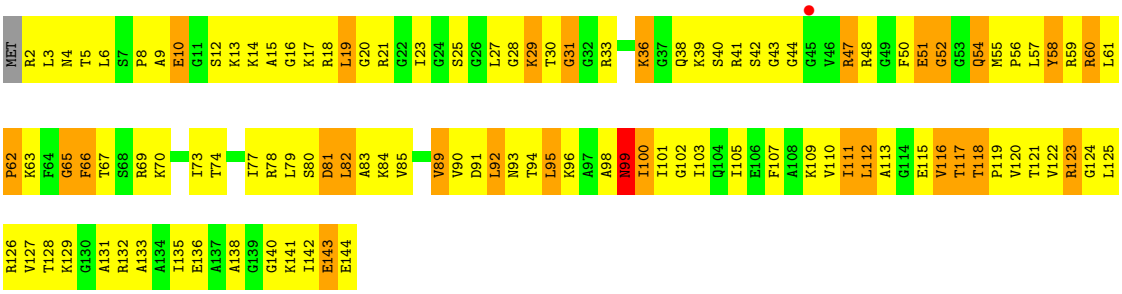




• Molecule 37: 50S ribosomal protein L15

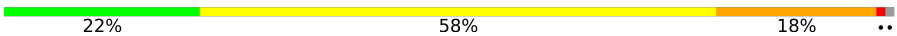
Chain BL:

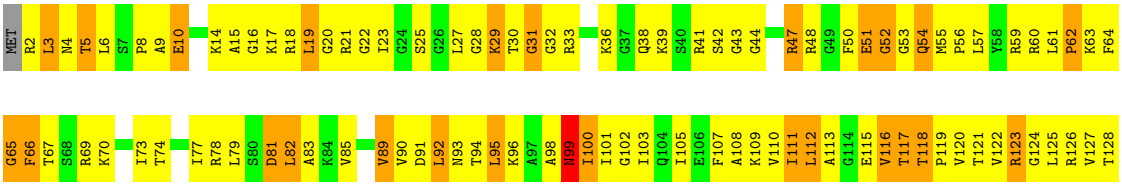




• Molecule 37: 50S ribosomal protein L15

Chain DL:





K129 G130 A131 R132 A133 A134 I135 E136 A137 A138 G139 G140 K141 I142 E143 E144

• Molecule 38: 50S ribosomal protein L16

Chain BM: %
25% 57% 15%

M1 L2 Q3 P4 T7 R8 F9 R10 K11 M12 H13 R16 N17 R18 G19 L20 A21 Q22 G23 T24 D25 V26 G29 S30 F31 G32 L33 K34 A35 V36 G37 R38 G39 R40 L41 T42 A43 R44 Q45 I46 E47 R50 R51 A52 M53 T54 R55 A56 R59 Q60 I63 W64 I65 R66

V67 F68 P69 D70 K71 P72 I73 T74 E75 K76 P77 L78 A79 V80 R81 M82 G83 K84 G85 K86 G87 N88 V89 E90 V93 A94 L95 I96 Q97 P98 G99 K100 V101 L102 Y103 E104 M105 D106 G107 V108 P109 E110 E111 L112 A113 R114 E115 A116 F117 A121 A122 K123 L124 P125 I126 K127 T128 T129

F130 V131 T132 K133 T134 V135 M136

• Molecule 38: 50S ribosomal protein L16

Chain DM: %
25% 57% 17%

M1 L2 Q3 P4 T7 R10 K11 M12 H13 R16 N17 R18 G19 L20 A21 Q22 G23 T24 D25 V26 G29 S30 F31 G32 L33 K34 A35 V36 G37 R38 G39 R40 L41 T42 A43 R44 Q45 I46 E47 R50 R51 A52 M53 T54 R55 A56 R59 Q60 I63 W64 I65 R66 V67

F68 P69 D70 K71 P72 I73 T74 E75 K76 P77 L78 A79 V80 R81 M82 G83 K84 G85 K86 G87 N88 V89 E90 V93 A94 L95 I96 Q97 P98 G99 K100 V101 L102 Y103 E104 M105 D106 G107 V108 P109 E110 E111 L112 A113 R114 E115 A116 F117 A121 A122 K123 L124 P125 I126 K127 T128 T129 F130

V131 T132 K133 T134 V135 M136

• Molecule 39: 50S ribosomal protein L29

Chain BX: 8%
14% 59% 27%

M1 K2 A3 K4 E5 L6 R7 E8 K9 S10 V11 E12 E13 L14 N15 T16 E17 L18 L19 N20 L21 L22 R23 E24 Q25 F26 N27 L28 R29 M30 Q31 S34 G35 Q36 L37 Q38 Q39 S40 H41 L42 L43 K44 Q45 V46 R47 R48 D49 V50 A51 R52 V53 K54 T55 L56 L57 N58 E59 K60 A61

G62 A63

• Molecule 39: 50S ribosomal protein L29

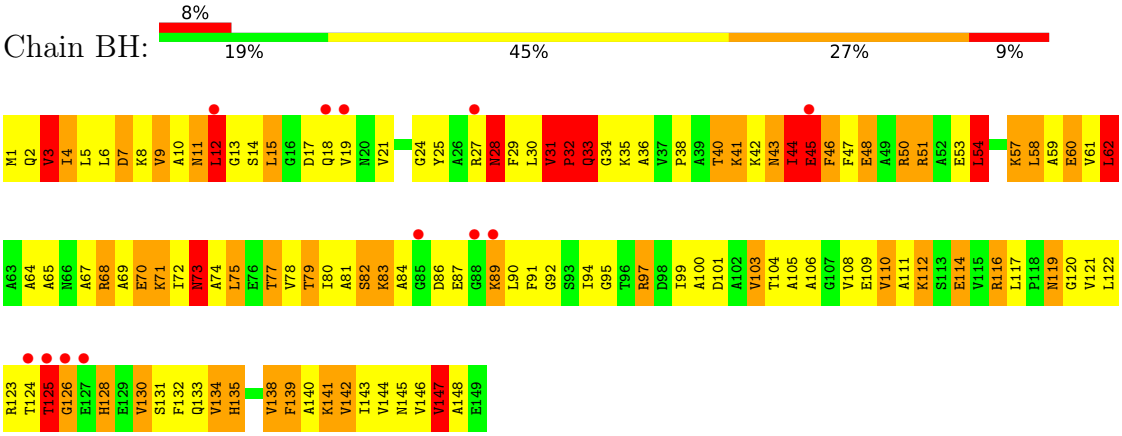
Chain DX: 3%
14% 60% 25%

M1 K2 A3 K4 E5 L6 R7 E8 K9 S10 V11 E12 E13 L14 N15 T16 E17 L18 L19 N20 L21 L22 R23 E24 Q25 F26 N27 L28 R29 M30 Q31 A32 A33 S34 G35 Q36 L37 Q38 Q39 S40 H41 L42 L43 K44 Q45 V46 R47 R48 D49 V50 A51 R52 V53 K54 T55 L56 L57 N58 E59 K60

A61 G62 A63

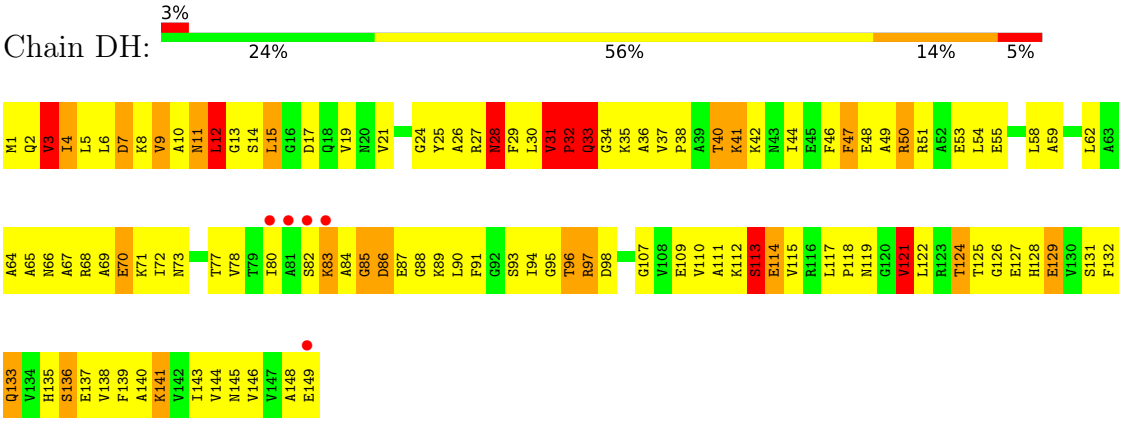
• Molecule 40: 50S ribosomal protein L9

Chain BH:



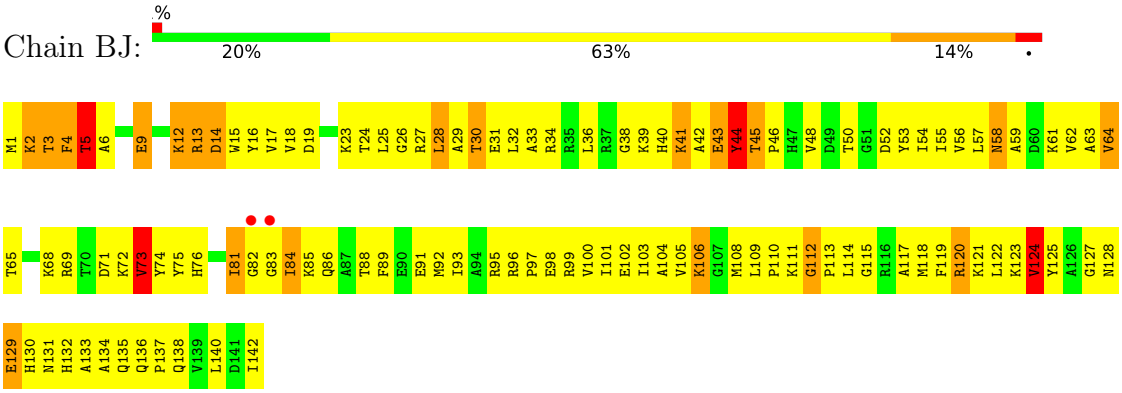
- Molecule 40: 50S ribosomal protein L9

Chain DH:



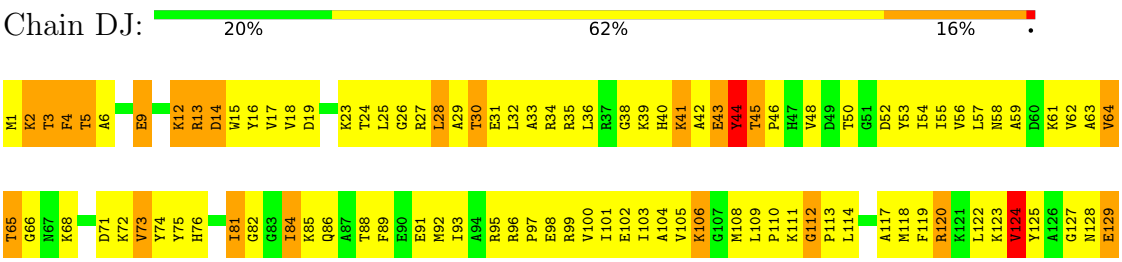
- Molecule 41: 50S ribosomal protein L13

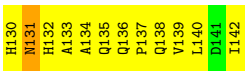
Chain BJ:



- Molecule 41: 50S ribosomal protein L13

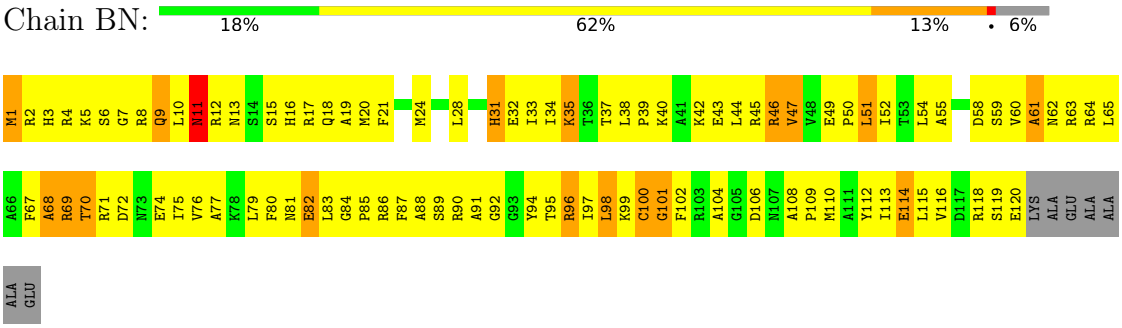
Chain DJ:





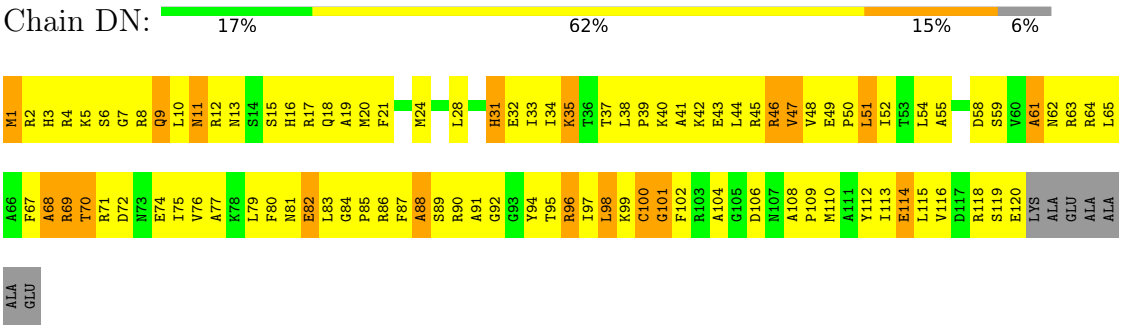
• Molecule 42: 50S ribosomal protein L17

Chain BN:



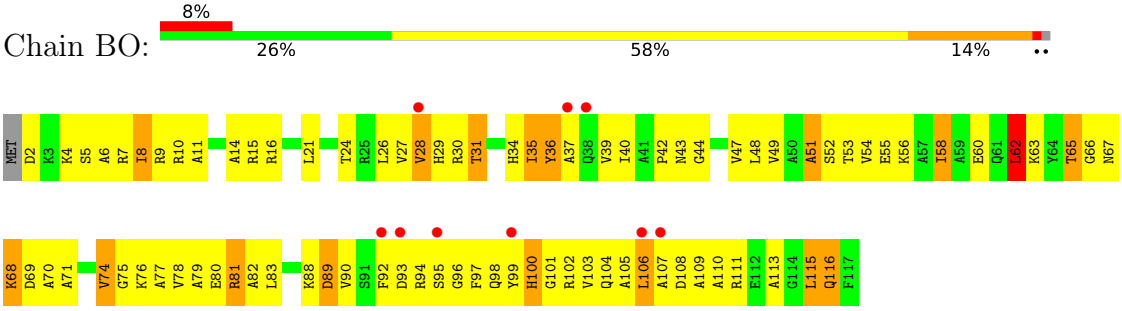
• Molecule 42: 50S ribosomal protein L17

Chain DN:



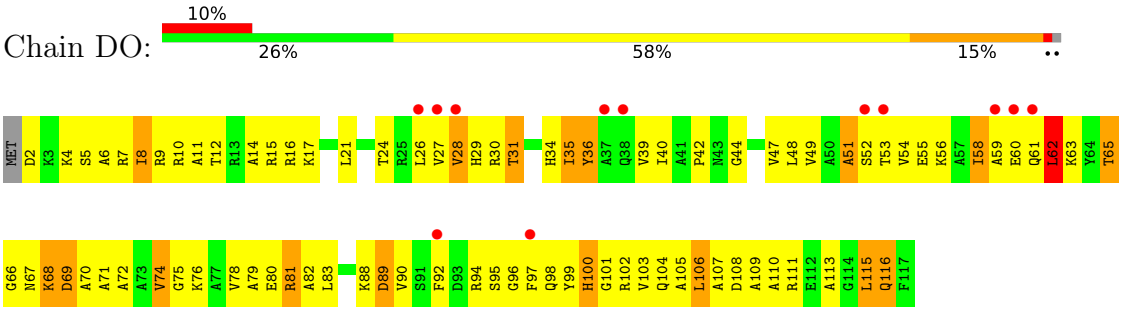
• Molecule 43: 50S ribosomal protein L18

Chain BO:



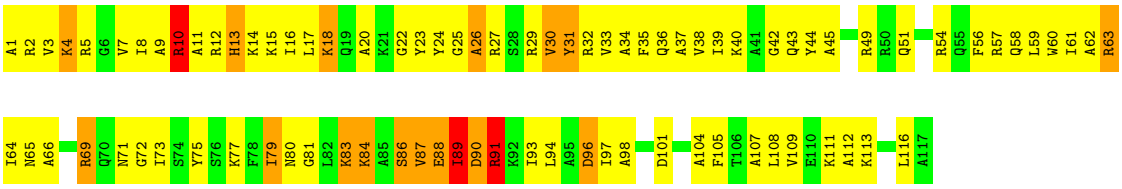
• Molecule 43: 50S ribosomal protein L18

Chain DO:



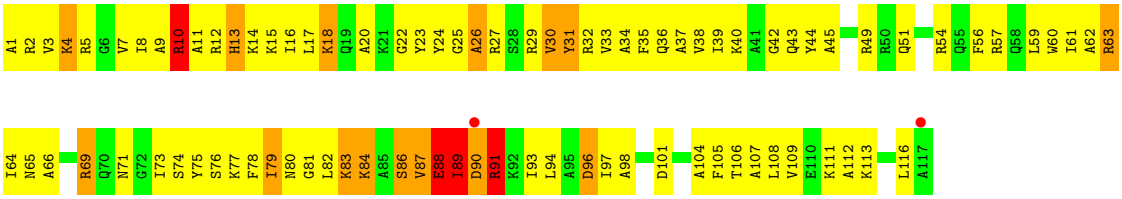
• Molecule 44: 50S ribosomal protein L20

Chain BQ: 26% 57% 14%



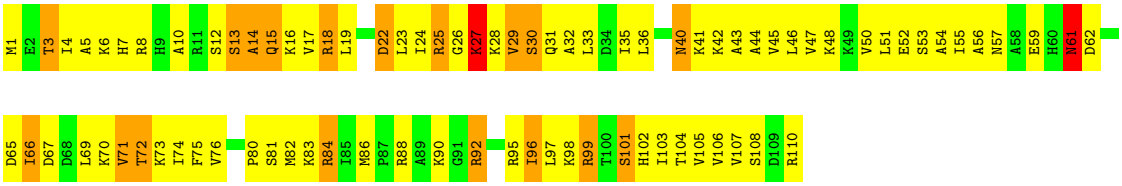
- Molecule 44: 50S ribosomal protein L20

Chain DQ: 2% 24% 60% 13%



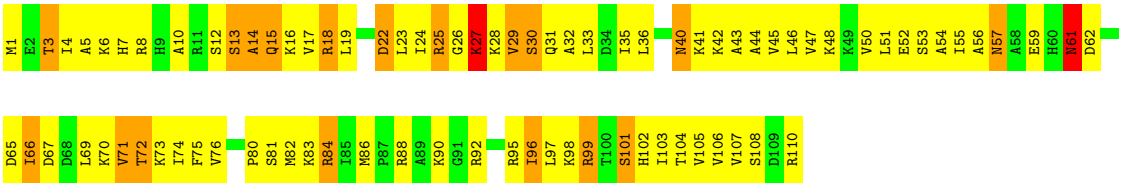
- Molecule 45: 50S ribosomal protein L22

Chain BS: 24% 58% 16%



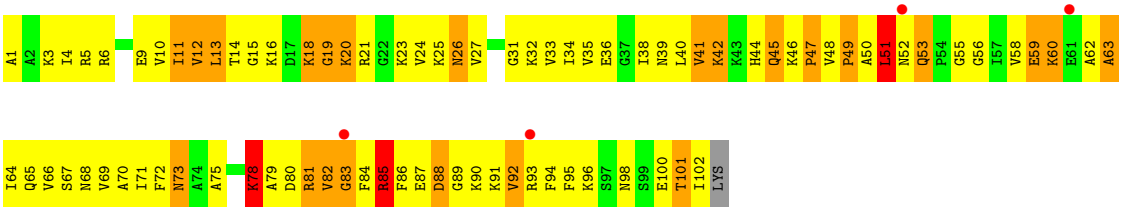
- Molecule 45: 50S ribosomal protein L22

Chain DS: 24% 58% 16%



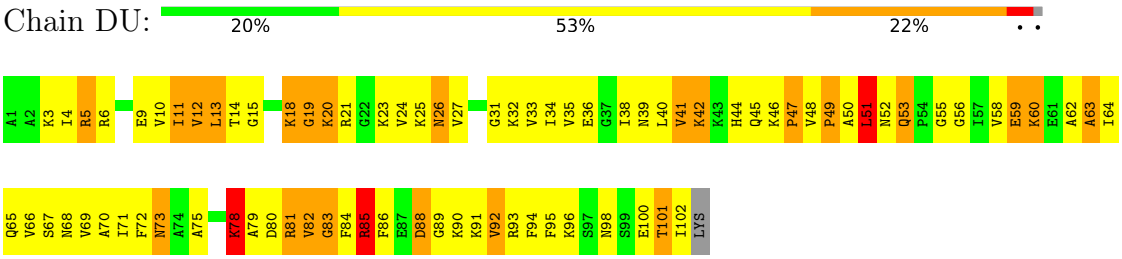
- Molecule 46: 50S ribosomal protein L24

Chain BU: 4% 17% 56% 22%



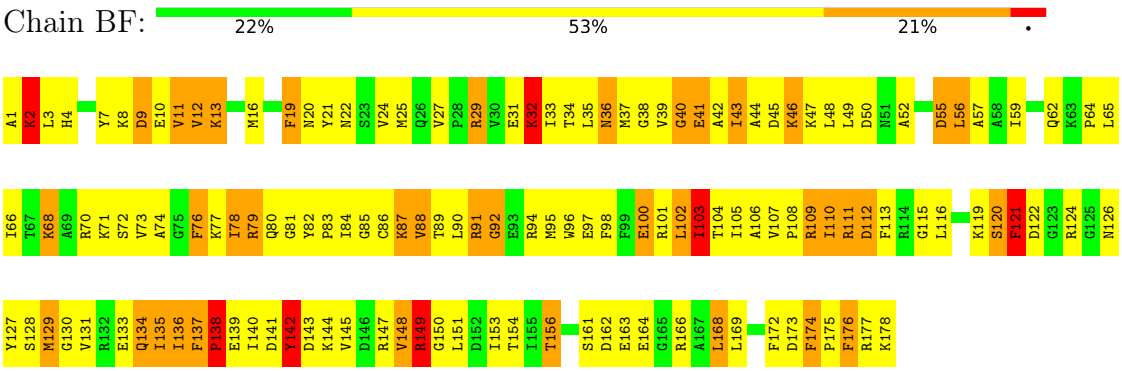
- Molecule 46: 50S ribosomal protein L24

Chain DU:



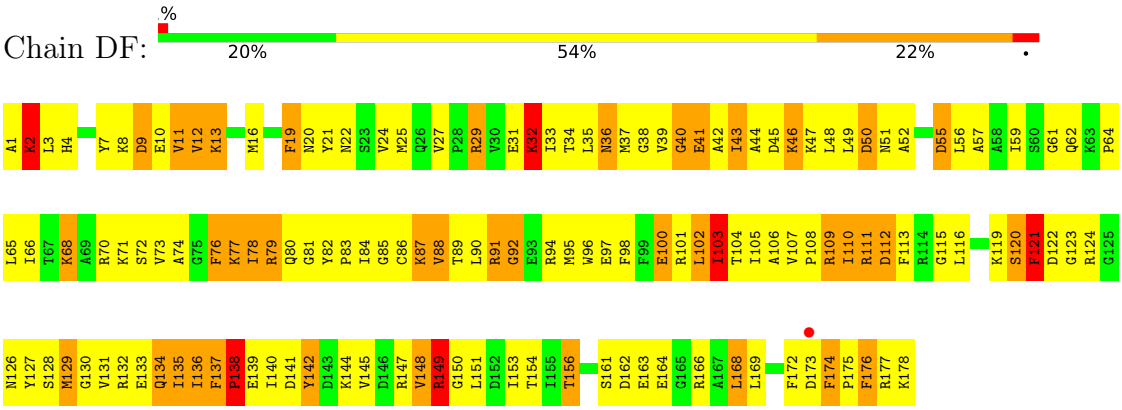
- Molecule 47: 50S ribosomal protein L5

Chain BF:



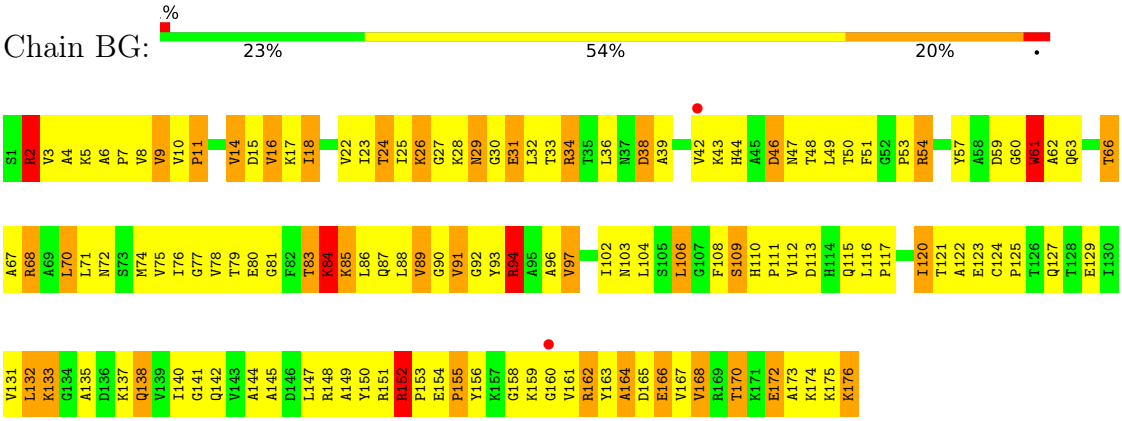
- Molecule 47: 50S ribosomal protein L5

Chain DF:



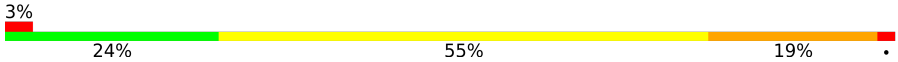
- Molecule 48: 50S ribosomal protein L6

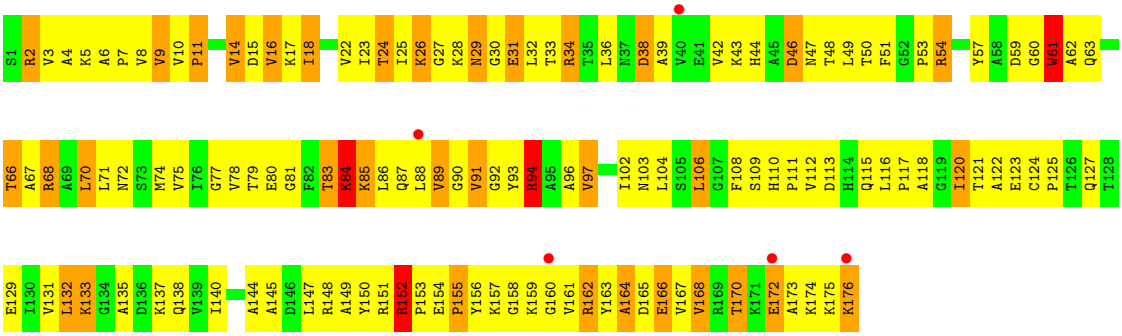
Chain BG:



• Molecule 48: 50S ribosomal protein L6

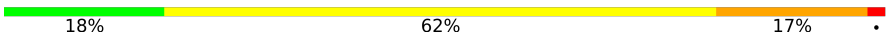
Chain DG:

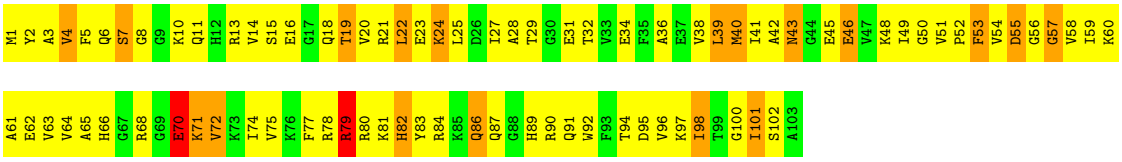




• Molecule 49: 50S ribosomal protein L21

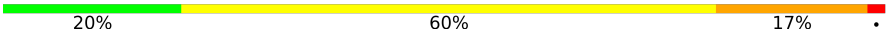
Chain BR:

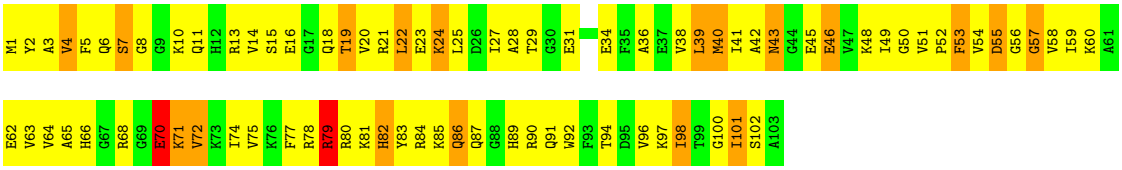




• Molecule 49: 50S ribosomal protein L21

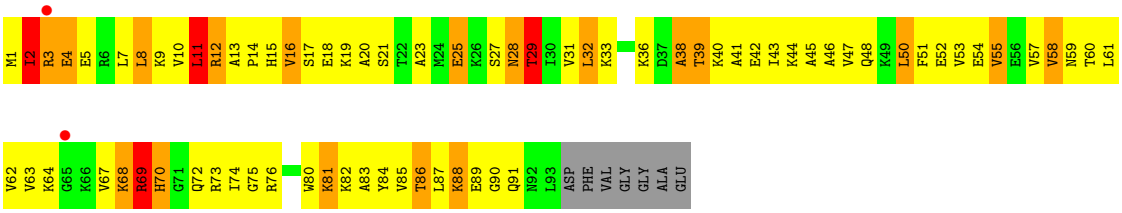
Chain DR:





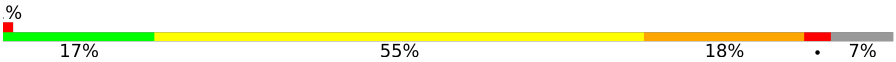
• Molecule 50: 50S ribosomal protein L23

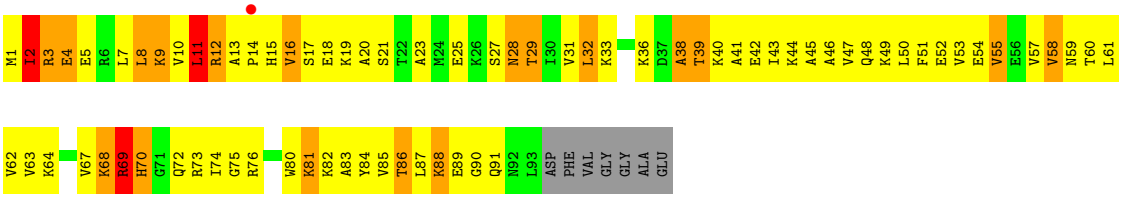
Chain BT:



• Molecule 50: 50S ribosomal protein L23

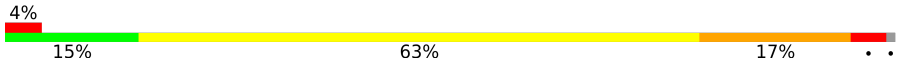
Chain DT:

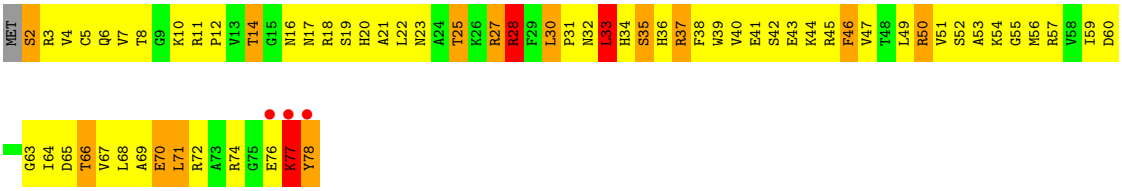




- Molecule 51: 50S ribosomal protein L28

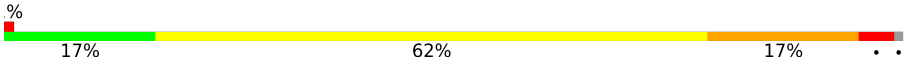
Chain BZ:

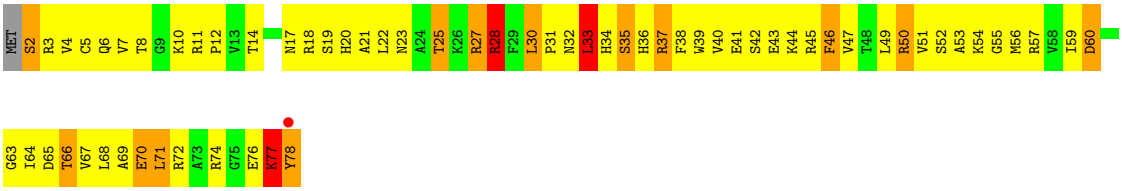




- Molecule 51: 50S ribosomal protein L28

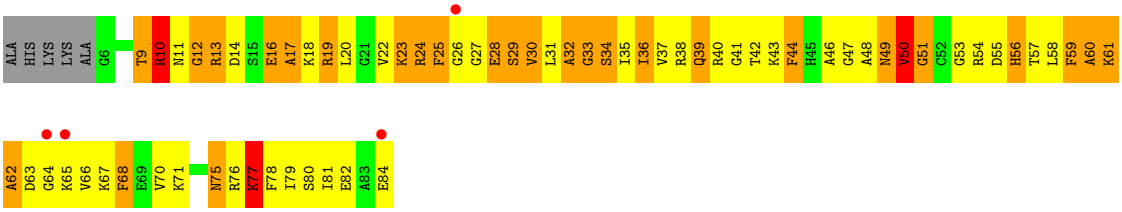
Chain DZ:





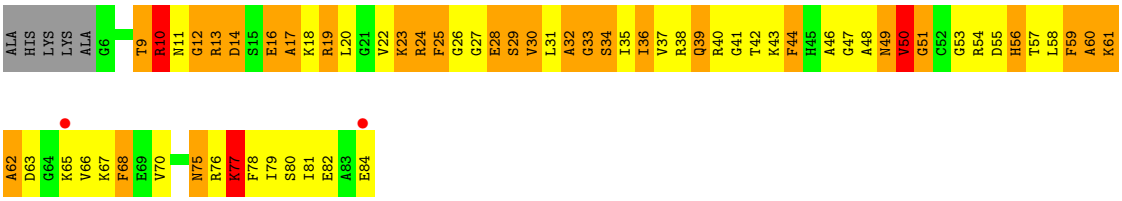
- Molecule 52: 50S ribosomal protein L27

Chain BW:



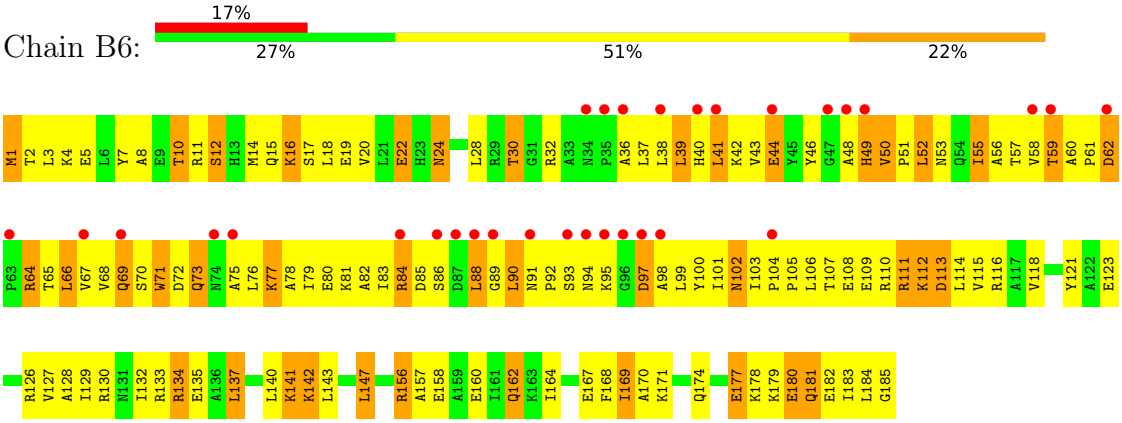
- Molecule 52: 50S ribosomal protein L27

Chain DW:



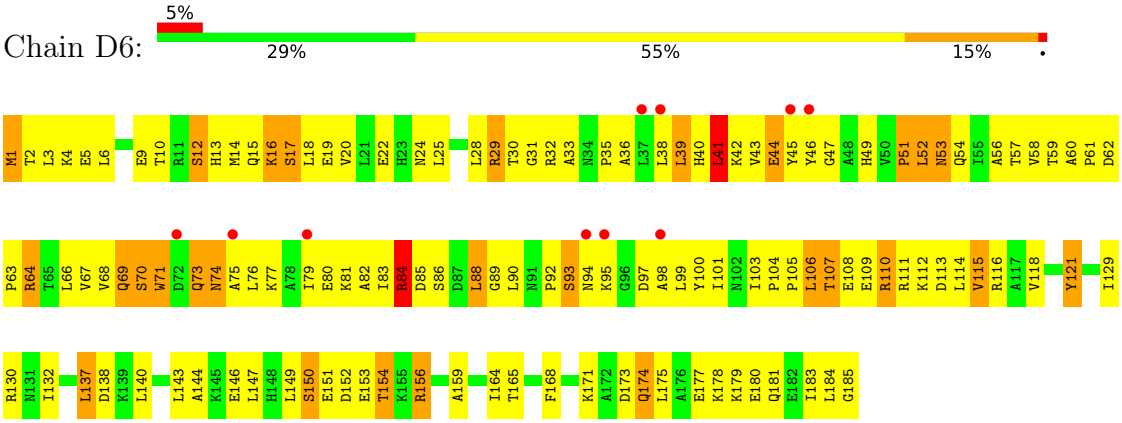
- Molecule 53: 50S ribosomal protein RRF

Chain B6:



- Molecule 53: 50S ribosomal protein RRF

Chain D6:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	208.87Å 378.75Å 738.26Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 4.45 69.15 – 4.45	Depositor EDS
% Data completeness (in resolution range)	95.7 (40.00-4.45) 95.6 (69.15-4.45)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.39 (at 4.46Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.263 , 0.309 0.235 , 0.273	Depositor DCC
R_{free} test set	16978 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å^2)	150.5	Xtriage
Anisotropy	0.297	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.17 , 59.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	287128	wwPDB-VP
Average B, all atoms (Å^2)	72.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.03% of the height of the origin peak. No significant pseudotranslation is detected.*

[1]Intensities estimated from amplitudes.

[2]Theoretical values of $< |L| >$, $< L^2 >$ 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: PAR, MG, ZN

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	0.28	1/36762 (0.0%)	0.76	6/57350 (0.0%)
1	CA	0.28	1/36762 (0.0%)	0.76	10/57350 (0.0%)
2	AC	0.23	0/1651	0.44	0/2225
2	CC	0.23	0/1651	0.44	0/2225
3	AD	0.23	0/1665	0.44	0/2227
3	CD	0.23	0/1665	0.44	0/2227
4	AE	0.23	0/1118	0.45	0/1504
4	CE	0.24	0/1118	0.45	0/1504
5	AF	0.24	0/835	0.45	0/1128
5	CF	0.24	0/835	0.45	0/1128
6	AG	0.23	0/1187	0.45	0/1591
6	CG	0.23	0/1211	0.45	0/1624
7	AH	0.23	0/989	0.44	0/1326
7	CH	0.23	0/989	0.44	0/1326
8	AI	0.24	0/1034	0.45	0/1375
8	CI	0.24	0/1034	0.45	0/1375
9	AJ	0.22	0/796	0.49	0/1077
9	CJ	0.22	0/796	0.48	0/1077
10	AK	0.24	0/893	0.46	0/1205
10	CK	0.24	0/893	0.46	0/1205
11	AL	0.22	0/969	0.48	0/1300
11	CL	0.22	0/969	0.48	0/1300
12	AM	0.21	0/892	0.45	0/1193
12	CM	0.21	0/884	0.45	0/1181
13	AN	0.24	0/785	0.46	0/1043
13	CN	0.24	0/785	0.46	0/1043
14	AO	0.23	0/722	0.47	0/964
14	CO	0.23	0/722	0.47	0/964
15	AP	0.25	0/659	0.46	0/884
15	CP	0.25	0/648	0.46	0/870
16	AQ	0.23	0/657	0.47	0/881
16	CQ	0.24	0/666	0.47	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AR	0.23	0/462	0.45	0/621
17	CR	0.23	0/462	0.45	0/621
18	AS	0.25	0/652	0.46	0/877
18	CS	0.25	0/660	0.47	0/888
19	AT	0.24	0/671	0.40	0/888
19	CT	0.24	0/671	0.40	0/888
20	AB	0.25	0/1735	0.45	0/2338
20	CB	0.25	0/1735	0.45	0/2338
21	AU	0.26	0/430	0.48	0/570
21	CU	0.26	0/430	0.47	0/570
22	BA	0.55	6/2803 (0.2%)	0.83	7/4371 (0.2%)
22	DA	0.56	6/2803 (0.2%)	0.83	7/4371 (0.2%)
23	BB	0.31	8/68314 (0.0%)	0.79	41/106569 (0.0%)
23	DB	0.31	7/68314 (0.0%)	0.79	38/106569 (0.0%)
24	BI	0.24	0/1046	0.47	0/1410
24	DI	0.25	0/1046	0.48	0/1410
25	BC	0.22	0/2121	0.48	0/2852
25	DC	0.22	0/2121	0.48	0/2852
26	BD	0.24	0/1586	0.48	0/2134
26	DD	0.24	0/1586	0.48	0/2134
27	BK	0.24	0/939	0.55	0/1258
27	DK	0.24	0/939	0.55	0/1258
28	BP	0.24	0/929	0.51	0/1242
28	DP	0.24	0/929	0.51	0/1242
29	BE	0.24	0/1571	0.50	0/2113
29	DE	0.24	0/1571	0.50	0/2113
30	BY	0.23	0/453	0.49	0/605
30	DY	0.23	0/453	0.49	0/605
31	B0	0.22	0/450	0.55	0/599
31	D0	0.22	0/450	0.55	0/599
32	B4	0.23	0/303	0.47	0/397
32	D4	0.23	0/303	0.47	0/397
33	B1	0.27	0/416	0.49	0/554
33	D1	0.27	0/416	0.49	0/554
34	B3	0.24	0/513	0.48	0/676
34	D3	0.24	0/513	0.48	0/676
35	BV	0.25	0/766	0.43	0/1025
35	DV	0.25	0/766	0.42	0/1025
36	B2	0.26	0/380	0.46	0/498
36	D2	0.26	0/380	0.46	0/498
37	BL	0.24	0/1054	0.48	0/1403
37	DL	0.23	0/1054	0.48	0/1403
38	BM	0.25	0/1093	0.48	0/1460

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DM	0.25	0/1093	0.48	0/1460
39	BX	0.24	0/510	0.54	0/677
39	DX	0.24	0/510	0.54	0/677
40	BH	0.25	0/1122	0.47	0/1515
40	DH	0.25	0/1122	0.49	0/1515
41	BJ	0.24	0/1152	0.48	0/1551
41	DJ	0.24	0/1152	0.48	0/1551
42	BN	0.24	0/973	0.52	0/1301
42	DN	0.24	0/973	0.52	0/1301
43	BO	0.23	0/902	0.48	0/1209
43	DO	0.23	0/902	0.48	0/1209
44	BQ	0.25	0/960	0.49	0/1278
44	DQ	0.25	0/960	0.49	0/1278
45	BS	0.22	0/864	0.52	0/1156
45	DS	0.22	0/864	0.52	0/1156
46	BU	0.25	0/787	0.47	0/1051
46	DU	0.25	0/787	0.47	0/1051
47	BF	0.26	0/1444	0.51	0/1937
47	DF	0.26	0/1444	0.52	0/1937
48	BG	0.23	0/1343	0.46	0/1816
48	DG	0.23	0/1343	0.46	0/1816
49	BR	0.25	0/829	0.48	0/1107
49	DR	0.25	0/829	0.48	0/1107
50	BT	0.23	0/744	0.55	0/994
50	DT	0.23	0/744	0.55	0/994
51	BZ	0.25	0/635	0.52	0/848
51	DZ	0.25	0/635	0.52	0/848
52	BW	0.28	0/603	0.51	0/797
52	DW	0.27	0/603	0.51	0/797
53	B6	0.23	0/1497	0.48	0/2017
53	D6	0.24	0/1497	0.47	0/2017
All	All	0.29	29/309354 (0.0%)	0.71	109/462003 (0.0%)

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
1	AA	0	14
1	CA	0	12
22	BA	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
22	DA	0	2
23	BB	0	50
23	DB	0	48
All	All	0	128

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BB	1086	A	C5-C6	-16.24	1.26	1.41
23	DB	1086	A	C5-C6	-16.14	1.26	1.41
22	DA	28	C	C2-O2	-14.83	1.11	1.24
22	BA	28	C	C2-O2	-14.74	1.11	1.24
23	DB	2276	G	O3'-P	-14.11	1.44	1.61
23	DB	1088	A	C6-N1	-10.66	1.28	1.35
23	BB	1088	A	C6-N1	-10.60	1.28	1.35
23	BB	2276	G	O3'-P	-10.35	1.48	1.61
22	DA	56	G	C2-N2	10.01	1.44	1.34
22	BA	56	G	C2-N2	9.96	1.44	1.34
22	BA	28	C	N3-C4	-9.82	1.27	1.33
22	DA	28	C	N3-C4	-9.78	1.27	1.33
23	BB	2318	G	O3'-P	9.68	1.72	1.61
22	DA	28	C	N1-C6	-8.22	1.32	1.37
22	BA	28	C	N1-C6	-8.15	1.32	1.37
23	DB	1060	U	C2-N3	7.86	1.43	1.37
23	BB	1060	U	C2-N3	7.85	1.43	1.37
22	BA	28	C	C2-N3	-7.53	1.29	1.35
22	DA	28	C	C2-N3	-7.52	1.29	1.35
23	BB	1086	A	N3-C4	-7.06	1.30	1.34
23	DB	1086	A	N3-C4	-6.86	1.30	1.34
23	DB	2267	A	C5-C6	-6.59	1.35	1.41
23	BB	2267	A	C5-C6	-6.42	1.35	1.41
23	DB	1086	A	N7-C5	-6.28	1.35	1.39
23	BB	1086	A	N7-C5	-6.28	1.35	1.39
22	DA	28	C	C5-C6	-6.05	1.29	1.34
22	BA	28	C	C5-C6	-5.92	1.29	1.34
1	CA	495	A	N3-C4	-5.48	1.31	1.34
1	AA	495	A	N3-C4	-5.38	1.31	1.34

All (109) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	2204	G	O5'-P-OP1	-29.74	75.02	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	2204	G	O5'-P-OP2	-28.61	76.37	110.70
23	BB	2791	G	O5'-P-OP1	-27.22	78.03	110.70
23	DB	2791	G	O5'-P-OP2	-26.58	78.80	110.70
23	BB	2791	G	O5'-P-OP2	18.87	133.34	110.70
23	DB	2791	G	O5'-P-OP1	18.79	133.25	110.70
23	BB	2204	G	O5'-P-OP1	17.85	132.12	110.70
23	DB	2204	G	O5'-P-OP2	17.59	131.81	110.70
23	BB	2790	U	OP1-P-O3'	14.91	138.00	105.20
23	DB	2790	U	OP2-P-O3'	14.83	137.83	105.20
23	DB	2203	U	OP1-P-O3'	14.37	136.81	105.20
23	BB	2203	U	OP2-P-O3'	14.21	136.47	105.20
22	DA	56	G	N3-C2-N2	8.93	126.15	119.90
22	BA	56	G	N3-C2-N2	8.91	126.14	119.90
23	BB	1552	A	N9-C1'-C2'	-8.88	102.23	112.00
23	DB	1552	A	N9-C1'-C2'	-8.85	102.26	112.00
1	AA	765	G	N9-C1'-C2'	-8.27	102.90	112.00
23	BB	1088	A	N1-C6-N6	-8.24	113.66	118.60
23	DB	1088	A	N1-C6-N6	-8.23	113.66	118.60
1	CA	765	G	N9-C1'-C2'	-8.20	102.97	112.00
23	DB	2323	G	O3'-P-O5'	-8.19	88.44	104.00
23	BB	1439	A	N9-C1'-C2'	-7.95	103.26	112.00
23	DB	1439	A	N9-C1'-C2'	-7.91	103.30	112.00
23	DB	1060	U	C5-C4-O4	-7.28	121.53	125.90
23	BB	1060	U	C5-C4-O4	-7.26	121.54	125.90
23	BB	690	G	C5'-C4'-C3'	-7.24	104.42	116.00
23	BB	1086	A	C4-C5-C6	7.17	120.58	117.00
23	BB	2283	C	O5'-P-OP2	-7.15	99.26	105.70
23	DB	1086	A	C4-C5-C6	7.10	120.55	117.00
1	CA	1049	U	O5'-P-OP1	-6.90	99.49	105.70
23	BB	2733	A	N9-C1'-C2'	-6.75	104.57	112.00
1	CA	1432	G	N9-C1'-C2'	-6.74	104.58	112.00
1	AA	1432	G	N9-C1'-C2'	-6.71	104.62	112.00
23	DB	2733	A	N9-C1'-C2'	-6.69	104.64	112.00
23	DB	690	G	C5'-C4'-C3'	-6.69	105.30	116.00
22	BA	28	C	C5-C6-N1	-6.61	117.70	121.00
23	BB	2894	G	N9-C1'-C2'	-6.60	104.74	112.00
1	AA	1301	U	N1-C1'-C2'	6.60	122.58	114.00
23	DB	2894	G	N9-C1'-C2'	-6.59	104.75	112.00
1	CA	1301	U	N1-C1'-C2'	6.58	122.56	114.00
22	DA	28	C	C5-C6-N1	-6.53	117.73	121.00
22	DA	27	C	C5'-C4'-C3'	-6.51	105.59	116.00
23	DB	2619	C	C5'-C4'-C3'	-6.48	105.63	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	2790	U	O3'-P-O5'	-6.45	91.74	104.00
23	BB	2759	G	C5'-C4'-C3'	-6.42	105.72	116.00
23	BB	1088	A	C5-C6-N6	6.37	128.80	123.70
23	DB	1088	A	C5-C6-N6	6.35	128.78	123.70
22	DA	56	G	N1-C2-N2	-6.33	110.50	116.20
23	BB	2323	G	P-O3'-C3'	6.33	127.29	119.70
1	CA	1424	U	C5'-C4'-C3'	-6.32	105.89	116.00
22	BA	56	G	N1-C2-N2	-6.31	110.53	116.20
23	DB	2790	U	O3'-P-O5'	-6.26	92.10	104.00
23	BB	1086	A	C6-C5-N7	-6.18	127.97	132.30
23	DB	1086	A	C6-C5-N7	-6.14	128.00	132.30
22	BA	27	C	C5'-C4'-C3'	-6.04	106.34	116.00
23	DB	2203	U	O3'-P-O5'	-5.95	92.69	104.00
23	DB	508	A	C4'-C3'-O3'	-5.93	96.95	109.40
23	BB	2746	U	C4'-C3'-O3'	5.90	124.81	113.00
1	CA	1250	A	C5'-C4'-C3'	5.89	125.43	116.00
23	BB	2323	G	O3'-P-O5'	-5.88	92.83	104.00
23	DB	131	A	C5'-C4'-C3'	5.87	125.39	116.00
23	BB	1043	C	C4'-C3'-O3'	5.87	124.74	113.00
23	BB	1126	A	C5'-C4'-C3'	-5.87	106.61	116.00
23	DB	1047	G	C5'-C4'-C3'	-5.85	106.64	116.00
23	BB	2480	C	C5'-C4'-C3'	5.83	125.33	116.00
23	DB	2267	A	C5-C6-N6	-5.82	119.04	123.70
23	BB	2267	A	C5-C6-N6	-5.82	119.04	123.70
22	BA	28	C	N3-C2-O2	-5.77	117.86	121.90
22	DA	28	C	N3-C2-O2	-5.74	117.88	121.90
23	DB	2267	A	C4-N9-C1'	5.74	136.63	126.30
23	BB	2267	A	C4-N9-C1'	5.73	136.61	126.30
23	DB	2480	C	C5'-C4'-C3'	5.72	125.16	116.00
23	DB	1397	U	C5'-C4'-C3'	-5.69	106.89	116.00
23	BB	2108	A	C4'-C3'-O3'	5.67	124.33	113.00
23	BB	1060	U	N1-C2-O2	-5.66	118.84	122.80
22	DA	28	C	C2-N3-C4	-5.65	117.07	119.90
23	DB	1118	C	C4'-C3'-O3'	5.65	124.30	113.00
23	BB	1086	A	C2-N3-C4	-5.64	107.78	110.60
22	BA	28	C	C2-N3-C4	-5.63	117.08	119.90
23	DB	1060	U	N1-C2-O2	-5.62	118.86	122.80
23	BB	508	A	C4'-C3'-O3'	-5.58	97.68	109.40
23	DB	1086	A	C2-N3-C4	-5.58	107.81	110.60
23	DB	2324	U	P-O5'-C5'	5.50	129.70	120.90
23	BB	1397	U	C5'-C4'-C3'	-5.49	107.22	116.00
1	AA	1250	A	C5'-C4'-C3'	5.45	124.72	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	278	A	C5'-C4'-C3'	-5.43	107.31	116.00
1	CA	1534	A	C2'-C3'-O3'	-5.42	97.57	109.50
23	BB	2272	U	C5-C4-O4	-5.41	122.66	125.90
23	BB	2203	U	O3'-P-O5'	-5.40	93.74	104.00
23	BB	1060	U	N3-C2-O2	5.35	125.95	122.20
1	CA	1049	U	C5'-C4'-O4'	5.31	115.47	109.10
23	DB	2267	A	C8-N9-C1'	-5.30	118.16	127.70
23	BB	2267	A	C8-N9-C1'	-5.28	118.20	127.70
23	DB	2272	U	C5-C4-O4	-5.27	122.74	125.90
1	CA	434	U	C5'-C4'-C3'	-5.26	107.58	116.00
23	DB	1060	U	N3-C2-O2	5.26	125.88	122.20
23	DB	544	C	C4'-C3'-O3'	5.24	123.47	113.00
22	DA	28	C	O4'-C1'-N1	5.23	112.38	108.20
22	BA	28	C	O4'-C1'-N1	5.18	112.34	108.20
23	DB	1350	C	C5'-C4'-C3'	-5.17	107.72	116.00
23	DB	1126	A	C5'-C4'-O4'	5.17	115.30	109.10
23	BB	72	U	C5'-C4'-C3'	-5.15	107.76	116.00
1	AA	1397	C	C5'-C4'-C3'	-5.14	107.77	116.00
23	BB	479	A	C4'-C3'-O3'	-5.11	98.67	109.40
1	AA	86	G	N9-C1'-C2'	5.07	120.60	114.00
23	BB	2903	U	C4'-C3'-O3'	5.06	123.12	113.00
23	BB	2745	C	C5'-C4'-C3'	-5.06	107.91	116.00
1	CA	855	U	C5'-C4'-C3'	-5.00	107.99	116.00
23	DB	2282	G	C5'-C4'-C3'	-5.00	108.00	116.00

There are no chirality outliers.

All (128) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1331	G	Sidechain
1	AA	1432	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	324	G	Sidechain
1	AA	437	U	Sidechain
1	AA	438	U	Sidechain
1	AA	496	A	Sidechain
1	AA	575	G	Sidechain
1	AA	703	G	Sidechain
1	AA	78	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	86	G	Sidechain
22	BA	28	C	Sidechain
22	BA	56	G	Sidechain
23	BB	1047	G	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	1111	A	Sidechain
23	BB	1247	A	Sidechain
23	BB	1377	G	Sidechain
23	BB	1426	G	Sidechain
23	BB	1432	G	Sidechain
23	BB	1439	A	Sidechain
23	BB	1476	U	Sidechain
23	BB	1546	G	Sidechain
23	BB	1572	A	Sidechain
23	BB	1722	A	Sidechain
23	BB	1734	G	Sidechain
23	BB	1814	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	2108	A	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2272	U	Sidechain
23	BB	2279	G	Sidechain
23	BB	232	G	Sidechain
23	BB	2446	G	Sidechain
23	BB	2454	G	Sidechain
23	BB	2471	A	Sidechain
23	BB	2480	C	Sidechain
23	BB	2503	A	Sidechain
23	BB	2508	G	Sidechain
23	BB	2587	A	Sidechain
23	BB	2638	G	Sidechain
23	BB	2733	A	Sidechain
23	BB	2770	G	Sidechain
23	BB	2834	G	Sidechain
23	BB	2848	G	Sidechain
23	BB	2857	G	Sidechain
23	BB	2868	A	Sidechain
23	BB	2883	A	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	2890	G	Sidechain
23	BB	299	A	Sidechain
23	BB	361	G	Sidechain
23	BB	370	G	Sidechain
23	BB	500	G	Sidechain
23	BB	51	G	Sidechain
23	BB	562	U	Sidechain
23	BB	630	G	Sidechain
23	BB	727	A	Sidechain
23	BB	729	G	Sidechain
23	BB	757	G	Sidechain
1	CA	1048	G	Sidechain
1	CA	1331	G	Sidechain
1	CA	1432	G	Sidechain
1	CA	1441	A	Sidechain
1	CA	187	G	Sidechain
1	CA	281	G	Sidechain
1	CA	324	G	Sidechain
1	CA	437	U	Sidechain
1	CA	438	U	Sidechain
1	CA	496	A	Sidechain
1	CA	575	G	Sidechain
1	CA	703	G	Sidechain
22	DA	28	C	Sidechain
22	DA	56	G	Sidechain
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1247	A	Sidechain
23	DB	1377	G	Sidechain
23	DB	1426	G	Sidechain
23	DB	1432	G	Sidechain
23	DB	1439	A	Sidechain
23	DB	1476	U	Sidechain
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1722	A	Sidechain
23	DB	1734	G	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	2062	A	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	2107	G	Sidechain
23	DB	221	A	Sidechain
23	DB	222	A	Sidechain
23	DB	2272	U	Sidechain
23	DB	2279	G	Sidechain
23	DB	232	G	Sidechain
23	DB	2446	G	Sidechain
23	DB	2454	G	Sidechain
23	DB	2471	A	Sidechain
23	DB	2480	C	Sidechain
23	DB	2503	A	Sidechain
23	DB	2508	G	Sidechain
23	DB	2587	A	Sidechain
23	DB	2638	G	Sidechain
23	DB	2733	A	Sidechain
23	DB	2770	G	Sidechain
23	DB	2834	G	Sidechain
23	DB	2848	G	Sidechain
23	DB	2857	G	Sidechain
23	DB	2868	A	Sidechain
23	DB	2883	A	Sidechain
23	DB	2890	G	Sidechain
23	DB	299	A	Sidechain
23	DB	370	G	Sidechain
23	DB	500	G	Sidechain
23	DB	51	G	Sidechain
23	DB	562	U	Sidechain
23	DB	630	G	Sidechain
23	DB	727	A	Sidechain
23	DB	729	G	Sidechain
23	DB	757	G	Sidechain

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	32831	0	16521	1250	0
1	CA	32831	0	16521	1242	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	AC	1624	0	1699	139	0
2	CC	1624	0	1699	141	0
3	AD	1643	0	1710	173	0
3	CD	1643	0	1710	170	0
4	AE	1105	0	1148	99	0
4	CE	1105	0	1148	104	0
5	AF	817	0	808	83	0
5	CF	817	0	808	80	0
6	AG	1174	0	1230	115	0
6	CG	1196	0	1246	98	0
7	AH	979	0	1034	94	0
7	CH	979	0	1034	90	0
8	AI	1022	0	1070	142	0
8	CI	1022	0	1070	134	0
9	AJ	786	0	828	79	0
9	CJ	786	0	828	85	0
10	AK	877	0	887	108	0
10	CK	877	0	887	99	0
11	AL	955	0	1019	82	0
11	CL	955	0	1019	82	0
12	AM	883	0	944	105	0
12	CM	876	0	937	108	0
13	AN	774	0	827	113	0
13	CN	774	0	827	117	0
14	AO	714	0	734	47	0
14	CO	714	0	734	48	0
15	AP	649	0	666	51	0
15	CP	638	0	656	53	0
16	AQ	648	0	691	58	0
16	CQ	657	0	702	61	0
17	AR	455	0	478	45	0
17	CR	455	0	478	49	0
18	AS	637	0	665	89	0
18	CS	644	0	675	88	0
19	AT	665	0	714	58	0
19	CT	665	0	714	55	0
20	AB	1704	0	1732	189	0
20	CB	1704	0	1732	206	0
21	AU	425	0	449	77	0
21	CU	425	0	449	70	0
22	BA	2507	0	1270	119	0
22	DA	2507	0	1270	119	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	BB	60995	0	30679	2401	0
23	DB	60995	0	30677	2528	1
24	BI	1032	0	1088	117	0
24	DI	1032	0	1088	185	0
25	BC	2082	0	2157	254	0
25	DC	2082	0	2157	253	0
26	BD	1565	0	1616	196	0
26	DD	1565	0	1616	200	0
27	BK	930	0	1000	107	0
27	DK	930	0	1000	114	0
28	BP	917	0	965	102	0
28	DP	917	0	965	99	0
29	BE	1552	0	1619	211	0
29	DE	1552	0	1619	196	0
30	BY	449	0	491	51	0
30	DY	449	0	491	51	0
31	B0	444	0	461	56	0
31	D0	444	0	461	53	0
32	B4	302	0	340	34	0
32	D4	302	0	341	40	0
33	B1	409	0	440	48	0
33	D1	409	0	440	44	0
34	B3	504	0	574	51	0
34	D3	504	0	574	52	0
35	BV	753	0	780	90	0
35	DV	753	0	780	101	0
36	B2	377	0	418	36	0
36	D2	377	0	418	38	0
37	BL	1045	0	1117	163	0
37	DL	1045	0	1117	163	0
38	BM	1074	0	1157	117	0
38	DM	1074	0	1157	121	0
39	BX	509	0	543	70	0
39	DX	509	0	543	66	0
40	BH	1111	0	1148	207	0
40	DH	1111	0	1148	144	0
41	BJ	1129	0	1162	144	0
41	DJ	1129	0	1162	146	0
42	BN	960	0	1000	123	0
42	DN	960	0	1000	121	0
43	BO	892	0	923	104	0
43	DO	892	0	923	113	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BQ	947	0	1022	156	0
44	DQ	947	0	1022	160	0
45	BS	857	0	922	106	0
45	DS	857	0	922	109	0
46	BU	779	0	834	117	0
46	DU	779	0	834	116	0
47	BF	1420	0	1460	236	0
47	DF	1420	0	1460	248	0
48	BG	1323	0	1374	200	0
48	DG	1323	0	1374	195	0
49	BR	816	0	839	124	0
49	DR	816	0	839	127	0
50	BT	738	0	807	120	0
50	DT	738	0	807	116	0
51	BZ	625	0	652	77	0
51	DZ	625	0	652	71	0
52	BW	596	0	610	124	0
52	DW	596	0	610	130	0
53	B6	1478	0	1526	187	0
53	D6	1478	0	1526	166	0
54	AA	60	0	0	0	0
54	BB	110	0	0	0	0
54	CA	61	0	0	0	0
54	CE	1	0	0	0	0
54	DB	111	0	0	0	0
55	AA	42	0	45	3	0
55	BB	42	0	45	1	0
55	CA	42	0	45	2	0
55	DB	42	0	45	1	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	291	0	0	5	0
57	AL	3	0	0	0	0
57	AN	4	0	0	0	0
57	AT	2	0	0	0	0
57	BB	495	0	0	8	0
57	BC	6	0	0	0	0
57	BD	1	0	0	0	0
57	BE	2	0	0	0	0
57	BL	1	0	0	0	0
57	BT	1	0	0	0	0
57	CA	296	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	CE	3	0	0	0	0
57	CL	4	0	0	0	0
57	CN	4	0	0	0	0
57	CP	1	0	0	0	0
57	CT	1	0	0	0	0
57	DB	502	0	0	15	0
57	DC	4	0	0	0	0
57	DD	1	0	0	0	0
57	DE	1	0	0	0	0
57	DL	2	0	0	0	0
57	DQ	1	0	0	0	0
57	DR	1	0	0	0	0
All	All	287128	0	193895	17520	1

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 (17520) 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)
23:DB:1099:G:H8	24:DI:3:LYS:N	1.37	1.19
40:BH:31:VAL:HB	40:BH:32:PRO:HD2	1.28	1.15
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.08	1.15
2:CC:126:ARG:HH22	2:CC:190:THR:HG23	1.09	1.14
2:AC:126:ARG:HH22	2:AC:190:THR:HG23	1.08	1.13
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.30	1.13
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.28	1.12
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.09	1.10
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.33	1.10
40:DH:31:VAL:HB	40:DH:32:PRO:HD2	1.29	1.09
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.34	1.09
23:BB:855:G:H21	52:BW:23:LYS:HG2	1.14	1.08
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.33	1.08
23:DB:1099:G:C8	24:DI:3:LYS:N	2.22	1.07
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.34	1.07
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.35	1.06
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.21	1.05
48:BG:43:LYS:HB2	48:BG:50:THR:HB	1.38	1.05
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.37	1.05
40:DH:133:GLN:HB3	40:DH:139:PHE:HB3	1.39	1.05
44:BQ:30:VAL:HG13	44:BQ:31:TYR:H	1.14	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:33:ILE:HB	10:AK:73:VAL:HG11	1.38	1.04
48:BG:89:VAL:HB	48:BG:159:LYS:HA	1.36	1.04
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.39	1.04
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.22	1.04
44:DQ:30:VAL:HG13	44:DQ:31:TYR:H	1.15	1.04
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.35	1.04
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB3	1.40	1.04
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.40	1.03
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.35	1.03
47:BF:62:GLN:HE22	47:BF:90:LEU:HD13	1.22	1.03
6:AG:149:ALA:HB2	10:AK:55:ARG:HE	1.17	1.03
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.39	1.03
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.38	1.03
1:CA:932:C:H5"	6:CG:3:ARG:HD2	1.40	1.02
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.40	1.02
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.22	1.02
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.91	1.02
48:DG:43:LYS:HB2	48:DG:50:THR:HB	1.40	1.02
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.42	1.01
1:CA:1533:C:H2'	1:CA:1534:A:H3'	1.41	1.01
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.42	1.01
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.42	1.01
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.25	1.01
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.26	1.00
16:AQ:6:THR:HG22	16:AQ:61:ARG:HB3	1.42	1.00
40:BH:116:ARG:HB2	40:BH:133:GLN:HB2	1.44	1.00
48:DG:89:VAL:HB	48:DG:159:LYS:HA	1.40	1.00
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.90	1.00
26:BD:5:VAL:H	26:BD:32:ASN:HD21	1.06	1.00
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.24	1.00
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.40	1.00
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	1.43	1.00
16:CQ:6:THR:HG22	16:CQ:61:ARG:HB3	1.44	0.99
53:D6:92:PRO:HA	53:D6:101:ILE:HG12	1.44	0.99
47:DF:62:GLN:HE22	47:DF:90:LEU:HD13	1.24	0.99
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.45	0.99
53:B6:32:ARG:HE	53:B6:37:LEU:HD23	1.24	0.99
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.27	0.99
40:BH:82:SER:H	40:BH:146:VAL:HG13	1.26	0.99
23:DB:812:C:H4'	44:DQ:12:ARG:HH22	1.25	0.99
23:DB:1420:A:H2'	23:DB:2211:A:H62	1.28	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:20:ILE:HA	8:CI:62:LEU:HD12	1.45	0.98
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.45	0.98
53:B6:77:LYS:HE2	53:B6:94:ASN:HD21	1.23	0.98
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.44	0.98
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.43	0.98
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.27	0.98
25:DC:196:ASN:HD22	25:DC:199:HIS:HB2	1.29	0.98
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.28	0.97
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.28	0.97
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.46	0.97
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.42	0.97
8:AI:20:ILE:HA	8:AI:62:LEU:HD12	1.43	0.97
9:AJ:9:ARG:HB2	9:AJ:99:GLN:HB3	1.43	0.97
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.26	0.97
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.46	0.97
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.30	0.97
53:B6:42:LYS:HA	53:B6:51:PRO:HA	1.43	0.96
35:DV:62:THR:HA	35:DV:71:LYS:HA	1.48	0.96
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.31	0.95
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.49	0.95
47:DF:71:LYS:HE2	47:DF:73:VAL:HB	1.47	0.95
23:BB:100:U:H2'	23:BB:100:U:O2	1.65	0.95
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	1.47	0.95
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.49	0.95
1:CA:1493:A:H2'	23:DB:1913:A:H61	1.31	0.95
23:BB:1420:A:H2'	23:BB:2211:A:H62	1.28	0.95
25:BC:128:THR:HA	25:BC:190:THR:HA	1.48	0.95
53:B6:55:ILE:HG23	53:B6:56:ALA:H	1.29	0.95
23:BB:141:G:H1	50:BT:2:ILE:HD12	1.32	0.95
26:DD:5:VAL:H	26:DD:32:ASN:HD21	1.05	0.95
1:AA:981:U:H4'	13:AN:60:ARG:HD2	1.48	0.95
35:BV:62:THR:HA	35:BV:71:LYS:HA	1.49	0.94
53:D6:35:PRO:HD3	53:D6:60:ALA:HB2	1.48	0.94
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.47	0.94
37:DL:79:LEU:HG	37:DL:112:LEU:HA	1.49	0.94
53:D6:84:ARG:H	53:D6:84:ARG:HE	1.13	0.94
38:DM:17:ASN:HD21	38:DM:95:LEU:HG	1.32	0.94
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	1.46	0.94
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.49	0.94
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.46	0.94
53:B6:67:VAL:HB	53:B6:98:ALA:HB1	1.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:68:ARG:HH11	13:CN:68:ARG:HB3	1.31	0.94
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.50	0.94
23:DB:142:A:H2'	23:DB:143:C:C6	2.03	0.94
45:DS:3:THR:HB	45:DS:62:ASP:HB2	1.50	0.93
50:DT:53:VAL:HG11	50:DT:87:LEU:HD13	1.47	0.93
45:BS:3:THR:HB	45:BS:62:ASP:HB2	1.48	0.93
2:AC:63:ILE:HD12	2:AC:98:ALA:HB2	1.49	0.93
43:DO:53:THR:HB	43:DO:65:THR:HG22	1.50	0.93
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.17	0.93
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.30	0.93
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.50	0.93
1:AA:600:A:H5"	7:AH:88:LYS:HD2	1.51	0.93
29:BE:108:ILE:HD11	29:BE:181:ILE:HB	1.50	0.93
1:CA:600:A:H5"	7:CH:88:LYS:HD2	1.51	0.93
23:DB:2393:U:H5"	37:DL:62:PRO:HG3	1.50	0.93
29:DE:58:LYS:H	29:DE:58:LYS:NZ	1.67	0.93
38:BM:17:ASN:HD21	38:BM:95:LEU:HG	1.34	0.93
25:DC:128:THR:HA	25:DC:190:THR:HA	1.51	0.93
30:DY:16:LEU:H	30:DY:16:LEU:HD22	1.32	0.93
38:DM:35:ALA:HB3	38:DM:99:GLY:H	1.33	0.93
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.50	0.93
53:B6:66:LEU:HD12	53:B6:103:ILE:HD11	1.48	0.92
23:DB:2548:U:H1'	27:DK:23:LYS:NZ	1.84	0.92
52:DW:24:ARG:HA	52:DW:66:VAL:H	1.33	0.92
1:CA:981:U:H4'	13:CN:60:ARG:HD2	1.47	0.92
50:BT:53:VAL:HG11	50:BT:87:LEU:HD13	1.50	0.92
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.50	0.92
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.32	0.92
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.33	0.92
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.17	0.92
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.52	0.92
3:CD:25:ARG:HH11	3:CD:26:ALA:H	1.16	0.92
47:DF:147:ARG:HD2	47:DF:148:VAL:HG22	1.51	0.92
1:CA:1328:C:H5"	12:CM:27:THR:HG21	1.50	0.92
22:DA:2:G:H2'	22:DA:3:C:C6	2.05	0.92
13:AN:68:ARG:HH11	13:AN:68:ARG:HB3	1.33	0.92
40:BH:100:ALA:HB3	40:BH:112:LYS:HA	1.50	0.92
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.35	0.92
7:CH:86:LYS:HD2	7:CH:90:GLU:HG2	1.50	0.92
25:BC:76:VAL:HG12	25:BC:114:GLN:HG2	1.52	0.91
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.70	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1328:C:H5"	12:AM:27:THR:HG21	1.53	0.91
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.69	0.91
40:DH:77:THR:HG22	40:DH:143:ILE:HB	1.49	0.91
53:B6:129:ILE:HA	53:B6:132:ILE:HD12	1.52	0.91
48:BG:15:ASP:HB2	48:BG:26:LYS:H	1.35	0.91
47:BF:71:LYS:HE2	47:BF:73:VAL:HB	1.49	0.91
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.53	0.91
12:AM:106:ARG:HH12	12:AM:109:LYS:HD2	1.36	0.91
34:D3:37:THR:HA	34:D3:40:LYS:HE2	1.53	0.91
7:AH:86:LYS:HD2	7:AH:90:GLU:HG2	1.52	0.91
53:D6:38:LEU:HD22	53:D6:83:ILE:HD12	1.51	0.91
23:BB:79:C:HO2'	23:BB:346:A:H1'	1.37	0.90
25:BC:64:VAL:O	25:BC:65:ASP:HB3	1.71	0.90
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.52	0.90
43:BO:53:THR:HB	43:BO:65:THR:HG22	1.53	0.90
3:AD:25:ARG:HH11	3:AD:26:ALA:H	1.18	0.90
47:DF:42:ALA:HA	47:DF:48:LEU:HD21	1.52	0.90
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.33	0.90
52:BW:24:ARG:HA	52:BW:66:VAL:H	1.33	0.90
1:AA:1206:G:H4'	2:AC:192:TYR:HA	1.51	0.90
30:BY:16:LEU:HD22	30:BY:16:LEU:H	1.34	0.90
51:BZ:40:VAL:HG21	51:BZ:43:GLU:HB3	1.50	0.90
53:B6:44:GLU:HA	53:B6:49:HIS:HA	1.52	0.90
1:AA:411:A:H62	1:AA:413:G:H21	1.20	0.90
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.53	0.90
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.54	0.90
42:BN:83:LEU:HA	42:BN:86:ARG:HB2	1.52	0.90
50:BT:39:THR:HG22	50:BT:42:GLU:HG2	1.52	0.90
23:DB:1060:U:N3	23:DB:1088:A:N7	2.20	0.90
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.85	0.90
34:B3:37:THR:HA	34:B3:40:LYS:HE2	1.51	0.90
23:BB:670:A:H4'	23:BB:671:C:H5'	1.52	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
37:BL:51:GLU:HG3	37:BL:56:PRO:HA	1.54	0.89
47:BF:42:ALA:HA	47:BF:48:LEU:HD21	1.52	0.89
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.54	0.89
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.54	0.89
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.19	0.89
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.53	0.89
12:CM:52:ILE:HG23	12:CM:56:ARG:HH12	1.38	0.89
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:95:PHE:HE1	46:DU:102:ILE:HB	1.37	0.89
40:BH:31:VAL:HB	40:BH:32:PRO:CD	2.02	0.89
47:BF:43:ILE:HG23	47:BF:44:ALA:H	1.36	0.89
47:DF:43:ILE:HG23	47:DF:44:ALA:H	1.35	0.89
40:BH:7:ASP:HA	40:BH:15:LEU:HD22	1.53	0.89
40:BH:84:ALA:HA	40:BH:90:LEU:HA	1.54	0.89
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.37	0.89
37:BL:79:LEU:HG	37:BL:112:LEU:HA	1.53	0.89
40:DH:31:VAL:HB	40:DH:32:PRO:CD	2.03	0.89
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.54	0.89
23:BB:812:C:H4'	44:BQ:12:ARG:HH22	1.35	0.89
23:BB:1076:C:H4'	24:BI:94:LYS:HE3	1.53	0.89
25:BC:180:MET:HB3	25:BC:267:VAL:HB	1.53	0.89
40:BH:116:ARG:HB3	40:BH:131:SER:HB2	1.54	0.89
23:BB:322:A:H3'	29:BE:163:ASN:HD21	1.36	0.89
23:BB:1458:U:H5"	23:BB:1459:G:H5'	1.55	0.89
40:BH:81:ALA:HA	40:BH:146:VAL:HA	1.55	0.89
2:CC:126:ARG:NH2	2:CC:190:THR:HG23	1.88	0.89
23:DB:1099:G:H8	24:DI:3:LYS:H	1.00	0.89
40:DH:5:LEU:HD13	40:DH:13:GLY:HA2	1.54	0.89
40:DH:84:ALA:HB1	40:DH:88:GLY:HA2	1.53	0.89
42:DN:83:LEU:HA	42:DN:86:ARG:HB2	1.52	0.89
43:DO:88:LYS:HE2	43:DO:116:GLN:HB2	1.54	0.88
48:DG:15:ASP:HB2	48:DG:26:LYS:H	1.38	0.88
47:BF:147:ARG:HD2	47:BF:148:VAL:HG22	1.54	0.88
40:DH:7:ASP:HA	40:DH:15:LEU:HD22	1.55	0.88
1:AA:812:G:HO2'	1:AA:813:U:H6	0.92	0.88
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.55	0.88
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.56	0.88
38:BM:35:ALA:HB3	38:BM:99:GLY:H	1.37	0.88
25:BC:105:ALA:HB1	25:BC:109:LEU:HD12	1.55	0.88
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.53	0.88
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.38	0.88
2:CC:63:ILE:HD12	2:CC:98:ALA:HB2	1.53	0.88
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.53	0.88
49:DR:7:SER:HB2	49:DR:22:LEU:HB3	1.55	0.88
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.56	0.88
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.53	0.88
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.08	0.88
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.38	0.88
29:DE:59:PRO:HB2	29:DE:67:ARG:HH22	1.35	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.73	0.87
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.38	0.87
25:BC:196:ASN:HD22	25:BC:199:HIS:HB2	1.38	0.87
53:D6:74:ASN:H	53:D6:74:ASN:HD22	1.19	0.87
1:CA:411:A:H62	1:CA:413:G:H21	1.21	0.87
35:BV:80:HIS:HD2	35:BV:82:TYR:H	1.20	0.87
29:DE:108:ILE:HD11	29:DE:181:ILE:HB	1.55	0.87
43:BO:88:LYS:HE2	43:BO:116:GLN:HB2	1.54	0.87
2:AC:126:ARG:NH2	2:AC:190:THR:HG23	1.88	0.87
7:AH:36:ALA:HA	7:AH:39:LEU:HD12	1.55	0.87
10:AK:111:ASP:HB2	21:AU:19:LYS:HE3	1.57	0.87
23:BB:2305:U:H5"	47:BF:130:GLY:HA3	1.57	0.87
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.39	0.87
12:CM:106:ARG:HH12	12:CM:109:LYS:HD2	1.38	0.87
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.09	0.87
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.39	0.87
38:BM:121:ALA:HA	38:BM:124:LEU:HD12	1.54	0.86
47:BF:65:LEU:H	47:BF:88:VAL:HG22	1.40	0.86
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.38	0.86
20:CB:162:VAL:HG13	20:CB:184:ALA:HB2	1.55	0.86
10:AK:34:THR:HB	10:AK:40:ALA:HA	1.57	0.86
23:BB:2306:C:H3'	23:BB:2307:G:C5'	2.04	0.86
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.40	0.86
1:CA:812:G:HO2'	1:CA:813:U:H6	0.89	0.86
18:CS:48:ILE:HB	18:CS:59:VAL:HG23	1.57	0.86
12:AM:52:ILE:HG23	12:AM:56:ARG:HH12	1.38	0.86
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.57	0.86
29:BE:59:PRO:HB2	29:BE:67:ARG:HH22	1.41	0.86
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.55	0.86
4:CE:37:VAL:HG11	4:CE:113:VAL:HG12	1.56	0.86
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.57	0.86
37:DL:89:VAL:HG23	37:DL:123:ARG:HG3	1.57	0.86
23:BB:2108:A:H2'	23:BB:2109:U:H4'	1.57	0.86
23:DB:670:A:H4'	23:DB:671:C:H5'	1.57	0.86
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.38	0.86
18:AS:48:ILE:HB	18:AS:59:VAL:HG23	1.57	0.86
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.10	0.86
47:BF:34:THR:HA	47:BF:89:THR:HA	1.57	0.86
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.56	0.86
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.56	0.86
25:DC:180:MET:HB3	25:DC:267:VAL:HB	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.57	0.86
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.40	0.86
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.37	0.86
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.75	0.86
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.38	0.86
49:BR:7:SER:HB2	49:BR:22:LEU:HB3	1.56	0.86
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.57	0.86
47:DF:34:THR:HA	47:DF:89:THR:HA	1.57	0.86
6:AG:149:ALA:H	10:AK:55:ARG:HH21	1.20	0.86
8:AI:26:LYS:H	8:AI:61:ASP:HB3	1.41	0.86
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.57	0.86
23:BB:1024:G:H3'	23:BB:1025:G:H5"	1.58	0.86
10:CK:34:THR:HB	10:CK:40:ALA:HA	1.57	0.86
25:DC:105:ALA:HB1	25:DC:109:LEU:HD12	1.55	0.86
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.38	0.86
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.57	0.86
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.41	0.86
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.41	0.85
52:DW:39:GLN:HG2	52:DW:40:ARG:N	1.91	0.85
29:BE:58:LYS:H	29:BE:58:LYS:NZ	1.73	0.85
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.56	0.85
23:DB:2306:C:H3'	23:DB:2307:G:C5'	2.05	0.85
25:DC:64:VAL:O	25:DC:65:ASP:HB3	1.72	0.85
43:DO:49:VAL:HG21	43:DO:82:ALA:HB2	1.58	0.85
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.38	0.85
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.59	0.85
25:DC:144:GLU:HG3	25:DC:151:GLY:N	1.90	0.85
47:DF:65:LEU:H	47:DF:88:VAL:HG22	1.41	0.85
37:BL:89:VAL:HG23	37:BL:123:ARG:HG3	1.58	0.85
52:BW:39:GLN:HG2	52:BW:40:ARG:N	1.92	0.85
13:AN:73:LEU:HD12	13:AN:83:VAL:HG21	1.58	0.85
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.11	0.85
22:DA:2:G:H2'	22:DA:3:C:H6	1.41	0.85
23:DB:1244:A:H5"	37:DL:8:PRO:HD3	1.55	0.85
46:DU:46:LYS:HG2	46:DU:47:PRO:HD2	1.58	0.85
1:AA:79:G:H2'	1:AA:80:A:C8	2.12	0.85
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.41	0.85
2:CC:76:ILE:HA	2:CC:83:VAL:HG23	1.57	0.85
6:CG:74:VAL:HA	6:CG:87:PRO:HA	1.59	0.85
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.57	0.85
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B4:2:LYS:HG2	32:B4:4:ARG:HE	1.42	0.85
25:DC:16:VAL:HB	25:DC:203:VAL:HB	1.56	0.85
29:DE:136:GLN:HE22	29:DE:139:LYS:HD3	1.42	0.85
3:AD:173:ASP:HB3	3:AD:178:GLU:HB2	1.57	0.85
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	1.91	0.85
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	1.56	0.85
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.41	0.85
26:DD:62:LYS:HD2	26:DD:62:LYS:H	1.42	0.85
40:BH:80:ILE:HD12	40:BH:144:VAL:HG22	1.59	0.84
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.42	0.84
53:D6:174:GLN:NE2	53:D6:175:LEU:HD12	1.92	0.84
16:AQ:60:ILE:HG22	16:AQ:74:LEU:HA	1.59	0.84
23:BB:2389:G:H5"	23:BB:2390:U:H5'	1.59	0.84
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.42	0.84
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.42	0.84
48:DG:96:ALA:HB3	48:DG:103:ASN:HB3	1.59	0.84
23:BB:1244:A:H5"	37:BL:8:PRO:HD3	1.59	0.84
33:B1:49:LYS:HG3	33:B1:50:GLU:H	1.41	0.84
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.41	0.84
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.41	0.84
45:DS:52:GLU:HA	45:DS:55:ILE:HG22	1.59	0.84
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.42	0.84
40:BH:103:VAL:HG23	40:BH:110:VAL:HG21	1.59	0.84
24:DI:27:LEU:H	24:DI:27:LEU:HD23	1.42	0.84
26:DD:7:LYS:HB2	26:DD:77:ARG:HH12	1.42	0.84
33:D1:49:LYS:HG3	33:D1:50:GLU:H	1.40	0.84
38:DM:121:ALA:HA	38:DM:124:LEU:HD12	1.57	0.84
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.59	0.84
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.57	0.84
23:BB:2751:G:H5'	48:BG:2:ARG:HD2	1.59	0.84
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.59	0.84
2:CC:106:ARG:HD2	2:CC:106:ARG:H	1.42	0.84
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.57	0.84
23:DB:1099:G:H8	24:DI:3:LYS:CA	1.89	0.84
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.60	0.84
37:DL:51:GLU:HG3	37:DL:56:PRO:HA	1.60	0.84
6:CG:2:ARG:HH11	6:CG:2:ARG:HB3	1.42	0.84
23:DB:972:A:H3'	23:DB:973:A:H5"	1.60	0.84
47:DF:62:GLN:HG3	47:DF:91:ARG:HH11	1.40	0.84
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.60	0.84
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.42	0.84
6:AG:74:VAL:HA	6:AG:87:PRO:HA	1.58	0.84
40:BH:5:LEU:HD13	40:BH:13:GLY:HA2	1.60	0.84
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.58	0.84
53:B6:109:GLU:HA	53:B6:112:LYS:HE3	1.58	0.84
37:DL:124:GLY:N	37:DL:143:GLU:HG3	1.93	0.84
23:BB:1173:U:H2'	23:BB:1174:U:H4'	1.59	0.84
23:DB:1024:G:H3'	23:DB:1025:G:H5"	1.57	0.84
1:AA:865:A:H5'	1:AA:1078:U:O4	1.77	0.84
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.59	0.84
23:BB:532:A:H4'	23:BB:533:G:C8	2.13	0.84
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.59	0.84
1:AA:72:A:H61	1:AA:98:A:H2	1.26	0.84
40:BH:108:VAL:HG12	40:BH:109:GLU:H	1.43	0.84
46:BU:46:LYS:HG2	46:BU:47:PRO:HD2	1.58	0.84
3:CD:173:ASP:HB3	3:CD:178:GLU:HB2	1.57	0.84
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.59	0.84
23:DB:161:A:H3'	23:DB:162:U:H5"	1.59	0.84
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.59	0.83
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.60	0.83
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.58	0.83
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.58	0.83
33:D1:7:LYS:HD3	34:D3:33:THR:HG21	1.59	0.83
40:DH:129:GLU:HA	40:DH:143:ILE:HA	1.60	0.83
23:BB:161:A:H3'	23:BB:162:U:H5"	1.60	0.83
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.58	0.83
23:DB:27:G:H22	23:DB:512:G:H2'	1.43	0.83
53:B6:32:ARG:HH12	53:B6:88:LEU:HD23	1.43	0.83
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.60	0.83
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.43	0.83
38:DM:50:ARG:HA	38:DM:53:MET:HE3	1.60	0.83
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.43	0.83
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.07	0.83
20:AB:221:ARG:HH11	20:AB:221:ARG:HB3	1.43	0.83
46:BU:95:PHE:HE1	46:BU:102:ILE:HB	1.43	0.83
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.60	0.83
23:DB:2267:A:H3'	23:DB:2267:A:C8	2.13	0.83
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.60	0.83
13:AN:51:PRO:HB2	13:AN:54:SER:HB3	1.60	0.83
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.59	0.83
37:BL:124:GLY:N	37:BL:143:GLU:HG3	1.92	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:202:ASN:ND2	20:CB:204:ASP:H	1.77	0.83
20:CB:221:ARG:HH11	20:CB:221:ARG:HB3	1.44	0.83
23:DB:532:A:H4'	23:DB:533:G:C8	2.13	0.83
44:DQ:81:GLY:HA3	44:DQ:112:ALA:HB1	1.59	0.83
17:AR:62:ARG:HD3	17:AR:69:TYR:HA	1.59	0.83
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.43	0.83
19:AT:4:LYS:HE3	19:AT:6:ALA:H	1.44	0.83
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.44	0.83
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.58	0.83
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.43	0.83
13:CN:73:LEU:HD12	13:CN:83:VAL:HG21	1.61	0.83
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.79	0.83
37:DL:29:LYS:HG3	37:DL:30:THR:HG23	1.60	0.83
23:BB:2267:A:C8	23:BB:2267:A:H3'	2.13	0.83
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.75	0.83
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	1.93	0.83
48:BG:96:ALA:HB3	48:BG:103:ASN:HB3	1.60	0.83
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.08	0.83
8:CI:33:SER:HB3	8:CI:36:GLN:HB2	1.61	0.83
10:CK:111:ASP:HB2	21:CU:19:LYS:HE3	1.61	0.83
40:DH:90:LEU:HD12	40:DH:90:LEU:H	1.41	0.83
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.60	0.83
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.58	0.83
23:BB:2267:A:H3'	23:BB:2267:A:H8	1.43	0.83
48:BG:16:VAL:HG13	48:BG:49:LEU:HD11	1.60	0.83
1:CA:699:C:H2'	1:CA:700:G:H5"	1.59	0.83
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	1.94	0.83
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.59	0.83
2:AC:5:HIS:HB3	13:AN:88:MET:SD	2.18	0.83
2:AC:106:ARG:HD2	2:AC:106:ARG:H	1.44	0.83
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.59	0.83
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.59	0.82
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.82
53:B6:162:GLN:HA	53:B6:162:GLN:HE21	1.41	0.82
23:DB:850:U:H5"	30:DY:18:LYS:HD3	1.60	0.82
23:DB:2267:A:H3'	23:DB:2267:A:H8	1.43	0.82
23:DB:2389:G:H5"	23:DB:2390:U:H5'	1.61	0.82
44:DQ:57:ARG:HH12	44:DQ:61:ILE:HD11	1.43	0.82
53:D6:31:GLY:HA2	53:D6:106:LEU:HD13	1.61	0.82
40:BH:128:HIS:HB3	40:BH:144:VAL:HB	1.61	0.82
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.43	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.44	0.82
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.61	0.82
29:BE:149:ILE:HD11	29:BE:172:ALA:HA	1.61	0.82
23:DB:45:G:H5'	23:DB:46:G:H5'	1.60	0.82
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	1.59	0.82
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.62	0.82
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.61	0.82
52:BW:65:LYS:HG3	52:BW:84:GLU:HB3	1.61	0.82
53:B6:41:LEU:HD11	53:B6:88:LEU:HD11	1.60	0.82
1:CA:243:A:H4'	1:CA:244:U:H5'	1.62	0.82
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.44	0.82
40:DH:90:LEU:HD23	40:DH:94:ILE:HD13	1.58	0.82
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	1.93	0.82
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.61	0.82
23:BB:1082:U:C4	23:BB:1086:A:C2	2.67	0.82
29:BE:136:GLN:HE22	29:BE:139:LYS:HD3	1.43	0.82
44:BQ:81:GLY:HA3	44:BQ:112:ALA:HB1	1.62	0.82
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.61	0.82
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.45	0.82
23:DB:2502:G:H5'	23:DB:2503:A:H5"	1.59	0.82
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.60	0.82
23:DB:328:U:H4'	46:DU:65:GLN:HE22	1.45	0.82
23:DB:1099:G:P	24:DI:4:VAL:H	2.02	0.82
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.44	0.82
41:DJ:1:MET:HG2	41:DJ:2:LYS:HG2	1.62	0.82
47:DF:49:LEU:HD11	47:DF:66:ILE:HD12	1.61	0.82
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.62	0.82
2:AC:48:LYS:HD3	2:AC:48:LYS:H	1.45	0.82
23:BB:141:G:N1	50:BT:2:ILE:HD12	1.93	0.82
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.62	0.82
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.61	0.82
44:BQ:57:ARG:HH12	44:BQ:61:ILE:HD11	1.43	0.82
13:CN:51:PRO:HB2	13:CN:54:SER:HB3	1.60	0.82
23:DB:1082:U:C4	23:DB:1086:A:C2	2.67	0.82
23:BB:547:A:H3'	23:BB:548:G:H8	1.45	0.81
23:BB:972:A:H3'	23:BB:973:A:H5"	1.61	0.81
23:BB:2331:G:H21	23:BB:2336:A:H8	1.27	0.81
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.81
2:AC:120:THR:HB	2:AC:188:ALA:HB2	1.62	0.81
10:AK:22:ILE:HG12	10:AK:31:VAL:HG12	1.62	0.81
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.77	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:64:ILE:HD12	51:BZ:64:ILE:H	1.44	0.81
43:DO:67:ASN:HB3	43:DO:70:ALA:HB2	1.63	0.81
1:AA:1238:A:H5'	1:AA:1336:C:N4	1.94	0.81
1:AA:1288:A:N1	1:AA:1371:G:H1'	1.96	0.81
43:BO:49:VAL:HG21	43:BO:82:ALA:HB2	1.60	0.81
23:DB:1458:U:H5"	23:DB:1459:G:H5'	1.61	0.81
23:DB:2379:G:H5'	43:DO:21:LEU:HD11	1.62	0.81
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.62	0.81
35:DV:80:HIS:HD2	35:DV:82:TYR:H	1.23	0.81
23:BB:45:G:H5'	23:BB:46:G:H5'	1.60	0.81
26:BD:7:LYS:HB2	26:BD:77:ARG:HH12	1.44	0.81
31:B0:27:LEU:H	31:B0:27:LEU:HD12	1.45	0.81
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.62	0.81
23:BB:2502:G:H5'	23:BB:2503:A:H5"	1.61	0.81
22:DA:104:A:H2'	22:DA:105:G:O4'	1.81	0.81
30:DY:4:ILE:HD12	30:DY:58:GLU:HG3	1.63	0.81
39:DX:28:LEU:HD13	39:DX:37:LEU:HD11	1.61	0.81
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.45	0.81
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.46	0.81
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.62	0.81
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.14	0.81
23:DB:2484:G:OP1	38:DM:44:ARG:HD3	1.79	0.81
48:DG:16:VAL:HG13	48:DG:49:LEU:HD11	1.62	0.81
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.45	0.81
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.42	0.81
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.61	0.81
47:BF:128:SER:HB3	47:BF:154:THR:HG23	1.62	0.81
23:DB:2108:A:H5"	23:DB:2150:C:H4'	1.63	0.81
51:DZ:64:ILE:H	51:DZ:64:ILE:HD12	1.44	0.81
25:BC:144:GLU:HG3	25:BC:151:GLY:N	1.94	0.81
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.45	0.81
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HG22	1.63	0.81
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.62	0.81
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.61	0.81
23:BB:79:C:O2'	23:BB:346:A:H1'	1.80	0.81
25:BC:16:VAL:HB	25:BC:203:VAL:HB	1.62	0.81
42:BN:72:ASP:HB3	42:BN:75:ILE:HG12	1.62	0.81
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.60	0.81
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.63	0.81
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.46	0.81
29:DE:161:ALA:HA	29:DE:164:LEU:HB2	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:65:LYS:HG3	52:DW:84:GLU:HB3	1.62	0.81
20:AB:198:VAL:HG12	20:AB:200:PRO:HD3	1.63	0.81
26:BD:62:LYS:H	26:BD:62:LYS:HD2	1.44	0.81
27:BK:54:LYS:HD2	27:BK:54:LYS:H	1.45	0.81
1:CA:120:A:H2'	1:CA:121:U:H5"	1.60	0.81
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.46	0.81
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.63	0.80
41:BJ:57:LEU:HG	41:BJ:128:ASN:H	1.44	0.80
17:CR:62:ARG:HD3	17:CR:69:TYR:HA	1.61	0.80
31:D0:27:LEU:HD12	31:D0:27:LEU:H	1.46	0.80
32:D4:2:LYS:HG2	32:D4:4:ARG:HE	1.46	0.80
53:D6:1:MET:HB3	53:D6:143:LEU:HD21	1.64	0.80
8:AI:21:LYS:O	8:AI:60:LEU:HB2	1.81	0.80
18:AS:30:LEU:HB2	18:AS:48:ILE:HG23	1.62	0.80
37:BL:6:LEU:HD23	37:BL:6:LEU:H	1.44	0.80
40:BH:82:SER:N	40:BH:146:VAL:HG13	1.96	0.80
42:BN:101:GLY:HA2	42:BN:110:MET:N	1.95	0.80
53:B6:20:VAL:O	53:B6:24:ASN:HB2	1.81	0.80
10:CK:22:ILE:HG12	10:CK:31:VAL:HG12	1.62	0.80
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.43	0.80
1:AA:203:G:H1'	1:AA:465:A:N6	1.97	0.80
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.15	0.80
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.62	0.80
27:DK:71:ARG:HG3	27:DK:105:ARG:NH2	1.96	0.80
45:DS:66:ILE:HD13	45:DS:66:ILE:H	1.46	0.80
48:DG:8:VAL:HG11	48:DG:49:LEU:HB2	1.62	0.80
1:AA:978:A:H5'	1:AA:1362:A:N6	1.96	0.80
23:BB:1060:U:H5	24:BI:131:THR:HG22	1.46	0.80
8:CI:94:ARG:HH11	8:CI:94:ARG:HB3	1.45	0.80
23:DB:1168:G:H2'	23:DB:1169:A:H8	1.45	0.80
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.46	0.80
29:DE:149:ILE:HD11	29:DE:172:ALA:HA	1.61	0.80
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.62	0.80
1:AA:411:A:N6	1:AA:413:G:H21	1.79	0.80
1:AA:699:C:H2'	1:AA:700:G:H5"	1.62	0.80
22:BA:104:A:H2'	22:BA:105:G:O4'	1.81	0.80
23:BB:968:C:H2'	23:BB:969:G:H8	1.46	0.80
42:BN:114:GLU:HG2	42:BN:115:LEU:N	1.95	0.80
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.63	0.80
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.46	0.80
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:27:G:H22	23:BB:512:G:H2'	1.45	0.80
23:BB:590:A:H2'	23:BB:591:U:C6	2.17	0.80
30:BY:4:ILE:HD12	30:BY:58:GLU:HG3	1.64	0.80
44:BQ:77:LYS:HE2	44:BQ:116:LEU:HD23	1.63	0.80
45:BS:52:GLU:HA	45:BS:55:ILE:HG22	1.62	0.80
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.64	0.80
8:CI:21:LYS:O	8:CI:60:LEU:HB2	1.81	0.80
23:DB:845:A:H2'	23:DB:846:U:H5"	1.64	0.80
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.64	0.80
29:DE:189:THR:HG23	29:DE:192:ALA:H	1.45	0.80
20:AB:53:LEU:HD11	20:AB:216:VAL:HG12	1.64	0.80
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.46	0.80
47:BF:111:ARG:NH2	47:BF:113:PHE:HB2	1.96	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.64	0.80
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.63	0.80
23:BB:571:U:H3'	49:BR:80:ARG:NH1	1.96	0.80
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	1.82	0.80
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	1.63	0.80
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.64	0.80
19:CT:4:LYS:HE3	19:CT:6:ALA:H	1.45	0.80
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.46	0.80
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.96	0.80
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.47	0.80
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.64	0.80
37:BL:29:LYS:HG3	37:BL:30:THR:HG23	1.62	0.80
40:BH:14:SER:HB2	40:BH:17:ASP:HB2	1.63	0.80
40:BH:83:LYS:HB3	40:BH:91:PHE:HB2	1.64	0.80
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	1.78	0.80
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.45	0.80
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.63	0.80
44:DQ:77:LYS:HE2	44:DQ:116:LEU:HD23	1.63	0.80
23:BB:345:A:H1'	23:BB:346:A:H2	1.45	0.80
23:BB:845:A:H2'	23:BB:846:U:H5"	1.64	0.80
29:BE:189:THR:HG23	29:BE:192:ALA:H	1.45	0.80
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.46	0.80
2:CC:120:THR:HB	2:CC:188:ALA:HB2	1.62	0.80
8:CI:26:LYS:H	8:CI:61:ASP:HB3	1.47	0.80
20:CB:198:VAL:HG12	20:CB:200:PRO:HD3	1.63	0.80
38:DM:43:ALA:O	38:DM:46:ILE:HG12	1.82	0.80
38:BM:50:ARG:HA	38:BM:53:MET:HE2	1.64	0.79
46:BU:80:ASP:HB2	46:BU:95:PHE:HB3	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:79:THR:HG22	48:BG:80:GLU:HG2	1.64	0.79
1:CA:1238:A:H5'	1:CA:1336:C:N4	1.97	0.79
2:CC:48:LYS:HD3	2:CC:48:LYS:H	1.46	0.79
22:BA:52:A:OP1	22:BA:52:A:H4'	1.82	0.79
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.46	0.79
41:BJ:1:MET:HG2	41:BJ:2:LYS:HG2	1.63	0.79
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	1.62	0.79
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	1.64	0.79
1:CA:437:U:H2'	1:CA:438:U:O4'	1.82	0.79
22:DA:52:A:OP1	22:DA:52:A:H4'	1.82	0.79
29:DE:145:ASP:HA	29:DE:166:LYS:HB3	1.62	0.79
47:DF:111:ARG:NH2	47:DF:113:PHE:HB2	1.96	0.79
1:AA:116:A:H61	1:AA:313:A:H1'	1.45	0.79
3:AD:187:ARG:HH12	3:AD:191:SER:HA	1.45	0.79
29:BE:145:ASP:HA	29:BE:166:LYS:HB3	1.63	0.79
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.46	0.79
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.47	0.79
23:DB:2886:A:H62	31:D0:39:ARG:NE	1.80	0.79
27:BK:71:ARG:HG3	27:BK:105:ARG:NH2	1.98	0.79
29:BE:147:LEU:HB3	29:BE:186:VAL:HG23	1.64	0.79
23:DB:590:A:H2'	23:DB:591:U:C6	2.16	0.79
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.65	0.79
40:DH:14:SER:HB2	40:DH:17:ASP:HB2	1.63	0.79
1:CA:1288:A:N1	1:CA:1371:G:H1'	1.97	0.79
11:CL:56:LEU:HD21	11:CL:81:ILE:HG13	1.64	0.79
42:DN:33:ILE:HG22	42:DN:114:GLU:HB2	1.63	0.79
42:DN:72:ASP:HB3	42:DN:75:ILE:HG12	1.63	0.79
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.46	0.79
1:CA:21:G:H2'	1:CA:22:G:C8	2.18	0.79
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.46	0.79
21:CU:33:ARG:CZ	21:CU:34:ARG:HG2	2.12	0.79
41:DJ:57:LEU:HG	41:DJ:128:ASN:H	1.46	0.79
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.63	0.79
8:CI:38:PHE:HZ	8:CI:74:GLN:HB3	1.48	0.79
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.46	0.79
49:BR:6:GLN:HE22	49:BR:10:LYS:N	1.80	0.79
49:DR:6:GLN:HE22	49:DR:10:LYS:N	1.81	0.79
12:AM:3:ILE:HA	12:AM:56:ARG:HG2	1.64	0.79
49:BR:49:ILE:HD13	49:BR:53:PHE:N	1.98	0.79
1:CA:978:A:H5'	1:CA:1362:A:N6	1.98	0.79
15:CP:26:ASN:HD21	15:CP:31:ARG:HD3	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	1.82	0.79
42:DN:70:THR:HB	42:DN:75:ILE:HD11	1.64	0.79
43:DO:58:ILE:HG22	43:DO:62:LEU:HD23	1.64	0.79
4:AE:35:LEU:HD21	4:AE:136:VAL:HG11	1.65	0.79
8:AI:56:MET:HA	8:AI:59:LYS:HB2	1.65	0.79
23:BB:855:G:H21	52:BW:23:LYS:CG	1.95	0.79
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.64	0.79
40:BH:73:ASN:HB3	40:BH:141:LYS:HZ3	1.48	0.79
27:DK:99:ILE:HB	27:DK:118:LEU:HD22	1.66	0.79
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.65	0.78
47:BF:49:LEU:HD11	47:BF:66:ILE:HD12	1.64	0.78
1:CA:920:U:H2'	1:CA:921:U:C6	2.18	0.78
23:DB:855:G:N2	52:DW:23:LYS:HG2	1.97	0.78
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.82	0.78
42:DN:114:GLU:HG2	42:DN:115:LEU:N	1.95	0.78
49:DR:49:ILE:HD13	49:DR:53:PHE:N	1.98	0.78
1:AA:21:G:H2'	1:AA:22:G:C8	2.18	0.78
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.64	0.78
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.63	0.78
27:BK:99:ILE:HB	27:BK:118:LEU:HD22	1.65	0.78
43:BO:58:ILE:HG22	43:BO:62:LEU:HD23	1.65	0.78
44:BQ:109:VAL:HG12	44:BQ:113:LYS:HE3	1.66	0.78
1:CA:411:A:N6	1:CA:413:G:H21	1.81	0.78
2:CC:149:LYS:HA	2:CC:168:ARG:HB2	1.65	0.78
29:DE:69:ARG:O	29:DE:70:SER:HB3	1.81	0.78
46:DU:80:ASP:HB2	46:DU:95:PHE:HB3	1.66	0.78
13:AN:30:ILE:H	13:AN:30:ILE:HD12	1.49	0.78
23:BB:2143:C:H2'	23:BB:2144:G:O4'	1.83	0.78
38:BM:55:ARG:HH21	38:BM:55:ARG:HA	1.47	0.78
47:BF:62:GLN:HG3	47:BF:91:ARG:HH11	1.48	0.78
23:DB:1338:G:H4'	50:DT:18:GLU:HG3	1.64	0.78
23:DB:2346:A:H3'	23:DB:2347:C:H5"	1.65	0.78
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.66	0.78
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.48	0.78
40:DH:78:VAL:HB	40:DH:144:VAL:HG13	1.65	0.78
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.48	0.78
39:BX:28:LEU:HD13	39:BX:37:LEU:HD11	1.63	0.78
39:BX:31:GLN:HG2	39:BX:37:LEU:HB2	1.66	0.78
10:CK:24:ALA:HA	10:CK:29:THR:HG23	1.65	0.78
10:CK:83:VAL:HB	10:CK:109:ILE:HG23	1.65	0.78
21:CU:48:LYS:HA	21:CU:51:ALA:HB3	1.63	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:109:ARG:HB3	47:DF:135:ILE:HD12	1.66	0.78
53:D6:56:ALA:HB2	53:D6:79:ILE:HD13	1.65	0.78
1:AA:437:U:H2'	1:AA:438:U:O4'	1.83	0.78
23:DB:9:G:H21	23:DB:10:A:H62	1.29	0.78
1:AA:920:U:H2'	1:AA:921:U:C6	2.19	0.78
23:BB:918:A:H2'	23:BB:919:U:H5'	1.65	0.78
23:DB:140:C:H4'	23:DB:141:G:C6	2.18	0.78
23:DB:1099:G:P	24:DI:3:LYS:HA	2.23	0.78
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.48	0.78
25:DC:77:VAL:HG23	25:DC:112:GLY:N	1.99	0.78
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.64	0.78
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.66	0.78
44:BQ:10:ARG:HH21	44:BQ:14:LYS:HD3	1.49	0.78
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.49	0.78
8:CI:56:MET:HA	8:CI:59:LYS:HB2	1.66	0.78
23:DB:968:C:H2'	23:DB:969:G:H8	1.47	0.78
2:AC:149:LYS:HA	2:AC:168:ARG:HB2	1.65	0.78
23:BB:2867:G:H2'	23:BB:2867:G:N3	1.98	0.78
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.66	0.78
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.48	0.78
1:CA:116:A:H61	1:CA:313:A:H1'	1.48	0.78
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.19	0.78
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.78
1:AA:1347:G:N2	1:AA:1373:G:H2'	1.99	0.78
8:AI:24:ASN:ND2	8:AI:25:GLY:H	1.82	0.78
1:CA:1347:G:N2	1:CA:1373:G:H2'	1.99	0.78
3:CD:187:ARG:HH12	3:CD:191:SER:HA	1.48	0.78
12:CM:3:ILE:HA	12:CM:56:ARG:HG2	1.65	0.78
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.14	0.78
38:DM:55:ARG:HA	38:DM:55:ARG:HH21	1.47	0.78
48:DG:79:THR:HG22	48:DG:80:GLU:HG2	1.66	0.78
23:BB:460:A:H4'	50:BT:72:GLN:HB2	1.64	0.78
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.66	0.78
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.66	0.78
40:BH:68:ARG:NH1	40:BH:134:VAL:HG21	1.99	0.78
35:DV:40:ILE:H	35:DV:40:ILE:HD13	1.49	0.78
44:DQ:10:ARG:HH21	44:DQ:14:LYS:HD3	1.49	0.78
51:DZ:5:CYS:HB3	51:DZ:10:LYS:N	1.99	0.78
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.83	0.77
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.49	0.77
27:BK:58:LEU:HD11	27:BK:86:LEU:HB3	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.49	0.77
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.65	0.77
23:DB:918:A:H2'	23:DB:919:U:H5'	1.64	0.77
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.14	0.77
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.66	0.77
47:DF:149:ARG:HH11	47:DF:149:ARG:HA	1.48	0.77
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.84	0.77
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.67	0.77
46:BU:58:VAL:HG12	46:BU:59:GLU:H	1.48	0.77
1:CA:279:A:H5"	1:CA:280:C:H3'	1.66	0.77
9:CJ:8:ILE:HG13	9:CJ:100:ILE:HG22	1.65	0.77
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.65	0.77
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.67	0.77
49:DR:60:LYS:N	49:DR:100:GLY:HA3	1.94	0.77
1:AA:1299:A:H2'	1:AA:1301:U:H1'	1.66	0.77
23:BB:9:G:H21	23:BB:10:A:H62	1.30	0.77
23:BB:172:A:H2'	23:BB:173:A:C8	2.20	0.77
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	1.65	0.77
29:BE:161:ALA:HA	29:BE:164:LEU:HB2	1.65	0.77
1:CA:18:C:H4'	1:CA:1078:U:O2	1.84	0.77
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.65	0.77
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.65	0.77
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.64	0.77
1:AA:843:U:H5'	1:AA:844:G:N7	1.99	0.77
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.67	0.77
23:BB:364:C:H2'	23:BB:365:U:C6	2.19	0.77
23:BB:2148:G:H3'	23:BB:2149:U:O4'	1.84	0.77
4:CE:52:ALA:HB2	4:CE:61:LYS:HE2	1.66	0.77
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.66	0.77
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.66	0.77
23:DB:1098:A:H2'	24:DI:4:VAL:N	1.99	0.77
23:DB:2867:G:H2'	23:DB:2867:G:N3	1.99	0.77
47:DF:40:GLY:HA2	47:DF:84:ILE:HG23	1.66	0.77
35:BV:79:ARG:HA	35:BV:86:LEU:HA	1.67	0.77
33:D1:33:LEU:H	33:D1:51:ALA:HB3	1.50	0.77
1:AA:715:A:H2'	1:AA:716:A:H8	1.49	0.77
22:BA:28:C:C5	22:BA:56:G:N2	2.53	0.77
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.49	0.77
23:BB:1416:G:HO2'	23:BB:1417:C:H6	1.33	0.77
43:BO:11:ALA:HB2	43:BO:96:GLY:N	1.99	0.77
4:CE:23:THR:HA	4:CE:28:ARG:HA	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.67	0.77
47:DF:128:SER:HB3	47:DF:154:THR:HG23	1.66	0.77
1:AA:243:A:H4'	1:AA:244:U:H5'	1.64	0.77
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.18	0.77
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.66	0.77
49:BR:60:LYS:N	49:BR:100:GLY:HA3	1.94	0.77
53:B6:43:VAL:HB	53:B6:55:ILE:HG21	1.65	0.77
1:CA:203:G:H1'	1:CA:465:A:N6	1.99	0.77
23:DB:1778:U:H2'	23:DB:1784:A:N6	2.00	0.77
29:DE:147:LEU:HB3	29:DE:186:VAL:HG23	1.64	0.77
45:DS:24:ILE:HD11	45:DS:36:LEU:HD11	1.66	0.77
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.65	0.77
43:DO:11:ALA:HB2	43:DO:96:GLY:N	1.99	0.77
52:DW:67:LYS:O	52:DW:68:PHE:HB2	1.85	0.77
1:AA:120:A:H2'	1:AA:121:U:H5"	1.66	0.77
52:BW:67:LYS:O	52:BW:68:PHE:HB2	1.83	0.77
2:CC:69:THR:HG21	2:CC:75:VAL:HG21	1.66	0.77
26:DD:151:THR:HB	26:DD:152:PRO:HD3	1.66	0.77
7:AH:49:LYS:HB3	7:AH:59:GLU:HB2	1.65	0.77
23:BB:287:G:H2'	23:BB:288:U:C6	2.19	0.77
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.85	0.77
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.67	0.77
1:AA:1221:G:O3'	18:AS:76:THR:HG21	1.85	0.76
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.66	0.76
23:BB:321:U:OP2	29:BE:130:LYS:HA	1.84	0.76
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.66	0.76
26:BD:105:LYS:H	26:BD:106:LYS:HZ3	1.33	0.76
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.67	0.76
13:CN:30:ILE:H	13:CN:30:ILE:HD12	1.50	0.76
23:DB:571:U:H3'	49:DR:80:ARG:NH1	1.99	0.76
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	1.67	0.76
21:AU:33:ARG:CZ	21:AU:34:ARG:HG2	2.14	0.76
23:BB:850:U:H5"	30:BY:18:LYS:HD3	1.66	0.76
23:BB:2548:U:H1'	27:BK:23:LYS:NZ	2.01	0.76
42:BN:70:THR:HB	42:BN:75:ILE:HD11	1.66	0.76
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.20	0.76
23:DB:328:U:H4'	46:DU:65:GLN:NE2	2.00	0.76
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.66	0.76
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.49	0.76
53:D6:73:GLN:HA	53:D6:76:LEU:HD12	1.67	0.76
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:35:LEU:HD23	47:BF:153:ILE:HG12	1.67	0.76
47:BF:40:GLY:HA2	47:BF:84:ILE:HG23	1.66	0.76
48:BG:8:VAL:HG11	48:BG:49:LEU:HB2	1.67	0.76
1:CA:1221:G:O3'	18:CS:76:THR:HG21	1.85	0.76
23:DB:1551:A:H3'	23:DB:1552:A:H5"	1.68	0.76
23:DB:2141:G:H2'	23:DB:2142:A:H8	1.50	0.76
33:B1:33:LEU:H	33:B1:51:ALA:HB3	1.50	0.76
53:B6:118:VAL:HG11	53:B6:180:GLU:HB2	1.67	0.76
22:DA:28:C:C5	22:DA:56:G:N2	2.54	0.76
23:DB:571:U:H3'	49:DR:80:ARG:HH12	1.51	0.76
25:DC:196:ASN:ND2	25:DC:199:HIS:HB2	1.99	0.76
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.68	0.76
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.66	0.76
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.14	0.76
23:BB:1558:C:H4'	23:BB:1559:U:H5'	1.65	0.76
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.49	0.76
29:BE:69:ARG:O	29:BE:70:SER:HB3	1.85	0.76
29:BE:155:GLU:HA	29:BE:158:PHE:HB3	1.67	0.76
36:B2:34:ARG:HB3	36:B2:39:ARG:HB2	1.64	0.76
13:CN:5:MET:HB3	13:CN:62:ARG:HH12	1.51	0.76
23:DB:455:C:N3	23:DB:472:A:H2'	2.00	0.76
1:AA:82:G:H2'	1:AA:84:U:H5	1.50	0.76
9:AJ:17:LEU:HD22	9:AJ:96:VAL:HG13	1.68	0.76
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.16	0.76
40:DH:72:ILE:HD11	40:DH:140:ALA:HB3	1.66	0.76
44:DQ:4:LYS:HZ1	44:DQ:7:VAL:HG22	1.51	0.76
44:DQ:86:SER:HB2	49:DR:51:VAL:HA	1.68	0.76
1:AA:279:A:H5"	1:AA:280:C:H3'	1.67	0.76
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.49	0.76
32:B4:23:ILE:HB	32:B4:38:GLY:HA3	1.66	0.76
47:BF:109:ARG:HB3	47:BF:135:ILE:HD12	1.68	0.76
47:BF:126:ASN:HB3	47:BF:156:THR:HA	1.68	0.76
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.50	0.76
23:DB:1700:A:H2'	23:DB:1701:A:H5'	1.67	0.76
3:AD:24:VAL:HG23	3:AD:25:ARG:H	1.50	0.76
4:AE:23:THR:HA	4:AE:28:ARG:HA	1.68	0.76
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.34	0.76
26:BD:151:THR:HB	26:BD:152:PRO:HD3	1.67	0.76
44:BQ:26:ALA:O	44:BQ:30:VAL:HG12	1.86	0.76
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.68	0.76
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:109:VAL:HG12	44:DQ:113:LYS:HE3	1.66	0.76
46:DU:12:VAL:HA	46:DU:69:VAL:HA	1.68	0.76
46:DU:47:PRO:HD3	46:DU:55:GLY:HA3	1.67	0.76
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.50	0.76
23:BB:1338:G:H4'	50:BT:18:GLU:HG3	1.65	0.76
48:BG:9:VAL:HG12	48:BG:11:PRO:HD3	1.68	0.76
48:BG:166:GLU:HG2	48:BG:168:VAL:HG23	1.67	0.76
1:CA:843:U:H5'	1:CA:844:G:N7	2.00	0.76
20:CB:53:LEU:HD11	20:CB:216:VAL:HG12	1.66	0.76
36:D2:21:ARG:HG2	36:D2:31:LEU:HG	1.68	0.76
38:DM:36:VAL:HB	38:DM:127:LYS:O	1.86	0.76
43:DO:89:ASP:HA	43:DO:116:GLN:O	1.86	0.76
23:BB:125:A:H3'	23:BB:126:A:C5'	2.15	0.76
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.21	0.76
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.21	0.76
23:BB:1551:A:H3'	23:BB:1552:A:H5"	1.67	0.76
25:BC:77:VAL:HG23	25:BC:112:GLY:N	1.99	0.76
46:BU:47:PRO:HD3	46:BU:55:GLY:HA3	1.68	0.76
14:CO:89:ARG:HA	14:CO:89:ARG:HH11	1.51	0.76
21:CU:3:ILE:HD13	21:CU:19:LYS:HA	1.68	0.76
25:DC:144:GLU:HB3	25:DC:187:CYS:HB3	1.68	0.76
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.85	0.76
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.68	0.75
25:BC:43:ASN:ND2	25:BC:44:ASN:H	1.84	0.75
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.85	0.75
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.66	0.75
9:CJ:17:LEU:HD22	9:CJ:96:VAL:HG13	1.68	0.75
23:DB:1099:G:H5"	24:DI:3:LYS:N	2.01	0.75
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.21	0.75
49:DR:4:VAL:O	49:DR:38:VAL:HA	1.86	0.75
9:AJ:8:ILE:HG13	9:AJ:100:ILE:HG22	1.67	0.75
20:AB:143:LEU:HD22	20:AB:147:LEU:HD12	1.68	0.75
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.50	0.75
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.21	0.75
42:BN:33:ILE:HG22	42:BN:114:GLU:HB2	1.67	0.75
47:BF:149:ARG:HA	47:BF:149:ARG:HH11	1.52	0.75
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.49	0.75
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.68	0.75
20:CB:143:LEU:HD22	20:CB:147:LEU:HD12	1.68	0.75
35:DV:79:ARG:HA	35:DV:86:LEU:HA	1.67	0.75
48:DG:115:GLN:CD	48:DG:115:GLN:H	1.90	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:174:GLN:HE21	53:D6:175:LEU:N	1.85	0.75
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.68	0.75
2:CC:5:HIS:HB3	13:CN:88:MET:SD	2.26	0.75
3:CD:137:SER:HB2	3:CD:138:PRO:HD2	1.66	0.75
12:CM:49:GLU:O	12:CM:52:ILE:HG22	1.86	0.75
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.86	0.75
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.21	0.75
40:DH:46:PHE:HA	40:DH:50:ARG:HH21	1.52	0.75
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.17	0.75
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.51	0.75
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.67	0.75
38:BM:43:ALA:O	38:BM:46:ILE:HG12	1.86	0.75
40:BH:6:LEU:HD13	40:BH:36:ALA:HA	1.66	0.75
23:DB:2331:G:H21	23:DB:2336:A:H8	1.30	0.75
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.87	0.75
23:DB:2615:U:H1'	31:D0:3:GLN:HB3	1.68	0.75
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.66	0.75
4:AE:81:GLN:H	4:AE:146:MET:HE3	1.51	0.75
11:AL:56:LEU:HD21	11:AL:81:ILE:HG13	1.68	0.75
23:BB:845:A:C2	23:BB:847:U:H1'	2.22	0.75
23:BB:2653:U:O2'	48:BG:109:SER:HB2	1.85	0.75
23:BB:2743:U:H2'	23:BB:2744:G:O4'	1.86	0.75
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.21	0.75
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.22	0.75
18:AS:18:VAL:HG21	18:AS:43:MET:HB3	1.69	0.75
20:AB:96:LEU:HD21	20:AB:146:SER:HB2	1.69	0.75
23:BB:1092:C:OP1	23:BB:2475:C:H4'	1.86	0.75
47:DF:31:GLU:HB3	47:DF:156:THR:O	1.87	0.75
50:DT:21:SER:O	50:DT:25:GLU:HB2	1.86	0.75
3:AD:137:SER:HB2	3:AD:138:PRO:HD2	1.67	0.75
20:AB:120:SER:HA	20:AB:125:PHE:HB3	1.69	0.75
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.68	0.75
1:CA:1299:A:H2'	1:CA:1301:U:H1'	1.67	0.75
12:CM:38:ILE:HG13	12:CM:55:LEU:HD21	1.69	0.75
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.68	0.75
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.51	0.75
51:DZ:17:ASN:HB2	51:DZ:25:THR:OG1	1.86	0.75
8:CI:24:ASN:ND2	8:CI:25:GLY:H	1.85	0.75
12:CM:70:ARG:HH21	47:DF:136:ILE:HB	1.51	0.75
32:D4:23:ILE:HB	32:D4:38:GLY:HA3	1.69	0.75
37:DL:56:PRO:HD2	37:DL:59:ARG:HG3	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.69	0.75
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.52	0.75
50:BT:29:THR:HA	50:BT:86:THR:HA	1.69	0.75
8:CI:87:MET:HG2	8:CI:91:GLU:HG2	1.68	0.75
16:CQ:57:VAL:HB	16:CQ:79:GLU:HB3	1.69	0.75
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.50	0.75
38:DM:114:ARG:HB2	38:DM:114:ARG:HH21	1.51	0.75
53:D6:43:VAL:HG21	53:D6:52:LEU:HD12	1.69	0.75
53:D6:174:GLN:HE22	53:D6:175:LEU:HD12	1.49	0.75
16:AQ:57:VAL:HB	16:AQ:79:GLU:HB3	1.67	0.74
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.51	0.74
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.51	0.74
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.68	0.74
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.69	0.74
45:DS:81:SER:HA	45:DS:99:ARG:HA	1.68	0.74
48:DG:166:GLU:HG2	48:DG:168:VAL:HG23	1.68	0.74
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.22	0.74
23:BB:172:A:H2'	23:BB:173:A:H8	1.51	0.74
23:BB:1082:U:N3	23:BB:1086:A:C2	2.55	0.74
1:CA:1004:A:H2'	1:CA:1005:A:O4'	1.87	0.74
23:DB:137:U:H2'	23:DB:138:U:O4'	1.87	0.74
23:DB:1324:G:H1'	23:DB:1616:A:N6	2.01	0.74
25:DC:43:ASN:ND2	25:DC:44:ASN:H	1.85	0.74
27:DK:41:ILE:HG13	27:DK:42:THR:N	2.02	0.74
39:DX:31:GLN:HG2	39:DX:37:LEU:HB2	1.67	0.74
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.69	0.74
44:DQ:26:ALA:O	44:DQ:30:VAL:HG12	1.86	0.74
50:DT:29:THR:HA	50:DT:86:THR:HA	1.69	0.74
53:D6:53:ASN:H	53:D6:53:ASN:HD22	1.35	0.74
53:D6:53:ASN:H	53:D6:53:ASN:ND2	1.83	0.74
8:AI:117:LEU:HD22	8:AI:123:ARG:HG2	1.70	0.74
21:AU:3:ILE:HD13	21:AU:19:LYS:HA	1.69	0.74
23:BB:1081:U:H5'	24:BI:126:ARG:HD2	1.69	0.74
37:BL:103:ILE:HD12	37:BL:103:ILE:H	1.50	0.74
1:CA:270:A:H2'	1:CA:271:C:C6	2.22	0.74
20:CB:122:ASP:OD2	20:CB:124:THR:HG22	1.87	0.74
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.52	0.74
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.68	0.74
26:DD:30:GLU:HG3	26:DD:52:THR:HG22	1.68	0.74
26:DD:114:LYS:HB2	26:DD:116:LYS:HE3	1.69	0.74
48:DG:9:VAL:HG12	48:DG:11:PRO:HD3	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:31:GLU:H	49:DR:63:VAL:HG22	1.53	0.74
1:AA:108:G:H5'	1:AA:109:A:H5"	1.68	0.74
8:AI:87:MET:HG2	8:AI:91:GLU:HG2	1.69	0.74
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.51	0.74
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.21	0.74
1:CA:673:A:H2'	1:CA:674:G:C8	2.21	0.74
23:DB:172:A:H2'	23:DB:173:A:C8	2.22	0.74
23:DB:580:U:H2'	23:DB:581:C:C6	2.22	0.74
23:DB:2331:G:O2'	52:DW:40:ARG:HB2	1.87	0.74
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.03	0.74
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.35	0.74
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	1.70	0.74
45:DS:43:ALA:HA	45:DS:46:LEU:HD12	1.69	0.74
53:D6:110:ARG:HH11	53:D6:110:ARG:HB3	1.51	0.74
1:AA:269:C:H2'	1:AA:270:A:C8	2.23	0.74
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.52	0.74
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.88	0.74
40:BH:105:ALA:HB3	40:BH:108:VAL:HG21	1.68	0.74
44:BQ:86:SER:HB2	49:BR:51:VAL:HA	1.70	0.74
1:CA:108:G:H5'	1:CA:109:A:H5"	1.70	0.74
23:DB:1911:U:H2'	23:DB:1918:A:N1	2.02	0.74
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.21	0.74
2:AC:154:GLY:HA3	2:AC:162:ALA:HB1	1.69	0.74
10:AK:24:ALA:HA	10:AK:29:THR:HG23	1.69	0.74
23:BB:287:G:H2'	23:BB:288:U:H6	1.52	0.74
48:BG:15:ASP:HB3	48:BG:25:ILE:HA	1.68	0.74
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.03	0.74
23:DB:775:G:H4'	23:DB:776:G:H5'	1.69	0.74
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.21	0.74
23:DB:1804:C:OP1	25:DC:256:THR:HB	1.88	0.74
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.67	0.74
23:BB:62:U:H3'	23:BB:63:A:C8	2.23	0.74
23:BB:923:G:H1'	52:BW:23:LYS:HZ2	1.51	0.74
36:B2:21:ARG:HG2	36:B2:31:LEU:HG	1.67	0.74
53:B6:102:ASN:N	53:B6:102:ASN:HD22	1.86	0.74
1:CA:33:A:H2'	1:CA:34:C:H6	1.52	0.74
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.69	0.74
36:D2:34:ARG:HB3	36:D2:39:ARG:HB2	1.67	0.74
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.69	0.74
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	2.02	0.74
35:BV:72:VAL:HG12	35:BV:94:ALA:H	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:31:GLU:HB3	47:BF:156:THR:O	1.87	0.74
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	1.70	0.74
53:B6:84:ARG:HA	53:B6:89:GLY:HA2	1.70	0.74
8:CI:23:GLY:H	8:CI:60:LEU:HA	1.53	0.74
19:CT:2:ASN:ND2	19:CT:3:ILE:H	1.86	0.74
23:DB:172:A:H2'	23:DB:173:A:H8	1.53	0.74
27:DK:53:LYS:HD3	27:DK:53:LYS:H	1.53	0.74
1:AA:93:U:H5"	1:AA:94:G:OP2	1.88	0.74
1:AA:270:A:H2'	1:AA:271:C:C6	2.22	0.74
3:AD:103:ARG:HH21	3:AD:110:ARG:HH22	1.35	0.74
23:BB:181:A:H2'	23:BB:182:A:C8	2.23	0.74
23:BB:775:G:H4'	23:BB:776:G:H5'	1.69	0.74
31:B0:31:LYS:HD2	31:B0:31:LYS:H	1.52	0.74
33:B1:7:LYS:HD3	34:B3:33:THR:HG21	1.68	0.74
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG22	2.03	0.74
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.17	0.74
2:CC:129:PHE:HE2	2:CC:165:GLU:HG2	1.53	0.74
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.67	0.74
21:CU:24:LYS:HD2	21:CU:25:ALA:H	1.50	0.74
23:DB:191:A:H2'	23:DB:192:C:C6	2.22	0.74
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.23	0.74
41:DJ:24:THR:HA	41:DJ:63:ALA:HB3	1.70	0.74
51:DZ:76:GLU:HG3	51:DZ:77:LYS:H	1.52	0.74
53:D6:109:GLU:HA	53:D6:112:LYS:HE3	1.69	0.74
1:AA:41:G:H2'	1:AA:42:G:C8	2.23	0.74
1:AA:320:A:H2'	1:AA:321:A:C8	2.23	0.74
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.53	0.74
8:AI:38:PHE:HZ	8:AI:74:GLN:HB3	1.51	0.74
19:AT:2:ASN:ND2	19:AT:3:ILE:H	1.86	0.74
20:AB:187:ASP:OD1	20:AB:203:ASP:HB3	1.87	0.74
23:BB:38:A:O2'	29:BE:43:THR:HA	1.87	0.74
23:BB:2393:U:H5"	37:BL:62:PRO:HG3	1.67	0.74
38:BM:36:VAL:HB	38:BM:127:LYS:O	1.88	0.74
3:CD:25:ARG:HD3	3:CD:26:ALA:N	2.03	0.74
23:DB:276:U:H3	23:DB:362:A:H61	1.36	0.74
23:DB:1082:U:N3	23:DB:1086:A:C2	2.55	0.74
26:DD:5:VAL:H	26:DD:32:ASN:ND2	1.84	0.74
5:AF:38:ARG:HH21	5:AF:63:ASN:ND2	1.85	0.73
20:AB:27:LYS:HA	20:AB:30:ILE:HD12	1.68	0.73
48:BG:155:PRO:HA	48:BG:170:THR:HG22	1.70	0.73
12:CM:9:PRO:HB2	12:CM:17:ALA:HB1	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:96:LEU:H	20:CB:99:MET:HE3	1.53	0.73
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	1.89	0.73
40:BH:90:LEU:HD11	40:BH:146:VAL:HG12	1.69	0.73
23:DB:62:U:H3'	23:DB:63:A:C8	2.22	0.73
40:DH:6:LEU:HD13	40:DH:36:ALA:HA	1.69	0.73
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG22	2.03	0.73
23:BB:2267:A:C8	23:BB:2267:A:C3'	2.71	0.73
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.52	0.73
1:CA:812:G:O2'	1:CA:813:U:H6	1.69	0.73
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.24	0.73
27:DK:71:ARG:HG3	27:DK:105:ARG:HH21	1.53	0.73
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.51	0.73
52:DW:35:ILE:HA	52:DW:57:THR:HG23	1.69	0.73
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.52	0.73
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.69	0.73
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.69	0.73
10:AK:83:VAL:HB	10:AK:109:ILE:HG23	1.68	0.73
18:AS:4:LEU:HD11	18:AS:9:PHE:HB3	1.68	0.73
40:BH:78:VAL:HG21	40:BH:142:VAL:HG12	1.67	0.73
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.69	0.73
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.70	0.73
46:BU:12:VAL:HA	46:BU:69:VAL:HA	1.69	0.73
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.19	0.73
49:BR:4:VAL:O	49:BR:38:VAL:HA	1.88	0.73
1:CA:715:A:H2'	1:CA:716:A:H8	1.54	0.73
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.18	0.73
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.71	0.73
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.53	0.73
4:CE:35:LEU:HD21	4:CE:136:VAL:HG11	1.70	0.73
8:CI:25:GLY:HA2	8:CI:60:LEU:O	1.89	0.73
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.68	0.73
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.18	0.73
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.54	0.73
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.04	0.73
53:D6:80:GLU:HA	53:D6:83:ILE:HG12	1.69	0.73
23:BB:773:U:H5'	23:BB:774:G:OP2	1.87	0.73
40:BH:125:THR:HA	40:BH:146:VAL:HB	1.70	0.73
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.23	0.73
14:CO:24:SER:HB3	14:CO:27:VAL:HG23	1.70	0.73
23:DB:62:U:C2'	23:DB:63:A:H5'	2.19	0.73
1:AA:85:U:O3'	1:AA:86:G:H4'	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.23	0.73
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.71	0.73
53:B6:108:GLU:HA	53:B6:111:ARG:HB2	1.70	0.73
13:CN:68:ARG:HH12	13:CN:70:HIS:HB2	1.54	0.73
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.89	0.73
31:D0:31:LYS:HD2	31:D0:31:LYS:H	1.54	0.73
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.50	0.73
46:DU:26:ASN:HD22	46:DU:26:ASN:N	1.85	0.73
46:DU:58:VAL:HG12	46:DU:59:GLU:H	1.52	0.73
21:AU:10:PRO:HB2	2:CC:71:ARG:HD3	1.71	0.73
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.24	0.73
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.71	0.73
23:DB:181:A:H2'	23:DB:182:A:C8	2.24	0.73
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.02	0.73
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.18	0.73
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.24	0.73
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.04	0.73
29:BE:58:LYS:H	29:BE:58:LYS:HZ3	1.37	0.73
7:CH:49:LYS:HB3	7:CH:59:GLU:HB2	1.69	0.73
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	1.69	0.73
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.69	0.73
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.70	0.73
40:DH:115:VAL:HB	40:DH:132:PHE:CD1	2.23	0.73
47:DF:62:GLN:HG3	47:DF:91:ARG:NH1	2.02	0.73
1:AA:973:G:H3'	1:AA:974:A:H5"	1.69	0.73
13:AN:30:ILE:HG22	13:AN:41:TRP:HB2	1.71	0.73
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.69	0.73
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.71	0.73
37:BL:56:PRO:HD2	37:BL:59:ARG:HG3	1.68	0.73
40:BH:97:ARG:HA	40:BH:112:LYS:HB2	1.70	0.73
48:BG:115:GLN:CD	48:BG:115:GLN:H	1.91	0.73
52:BW:35:ILE:HA	52:BW:57:THR:HG23	1.71	0.73
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.52	0.73
13:CN:30:ILE:HG22	13:CN:41:TRP:HB2	1.71	0.73
23:DB:1131:G:N2	23:DB:2024:G:H21	1.87	0.73
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.03	0.73
23:DB:2144:G:O2'	23:DB:2145:C:H5'	1.89	0.73
29:DE:148:ILE:HD13	29:DE:187:VAL:HG21	1.69	0.73
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.89	0.72
1:AA:1216:A:H5"	13:AN:4:SER:HB3	1.69	0.72
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:280:U:H2'	23:BB:281:C:C6	2.24	0.72
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.03	0.72
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.69	0.72
25:BC:144:GLU:HB3	25:BC:187:CYS:HB3	1.71	0.72
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.52	0.72
51:BZ:17:ASN:HB2	51:BZ:25:THR:OG1	1.89	0.72
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	1.71	0.72
8:AI:26:LYS:N	8:AI:61:ASP:HB3	2.03	0.72
12:AM:49:GLU:O	12:AM:52:ILE:HG22	1.87	0.72
50:BT:11:LEU:H	50:BT:11:LEU:HD22	1.54	0.72
1:CA:973:G:H3'	1:CA:974:A:H5"	1.70	0.72
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.37	0.72
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.27	0.72
3:AD:103:ARG:HH21	3:AD:110:ARG:NH2	1.87	0.72
10:AK:45:THR:HG23	10:AK:48:GLY:HA3	1.71	0.72
12:AM:9:PRO:HB2	12:AM:17:ALA:HB1	1.70	0.72
14:AO:89:ARG:HA	14:AO:89:ARG:HH11	1.54	0.72
23:BB:90:U:H3'	23:BB:91:A:H5"	1.70	0.72
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.71	0.72
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.19	0.72
28:BP:26:GLU:HB3	28:BP:84:SER:HB3	1.70	0.72
35:BV:42:LEU:HD23	35:BV:42:LEU:H	1.55	0.72
43:BO:89:ASP:HA	43:BO:116:GLN:O	1.89	0.72
1:CA:41:G:H2'	1:CA:42:G:C8	2.23	0.72
1:CA:269:C:H2'	1:CA:270:A:C8	2.25	0.72
8:CI:34:LEU:HD11	8:CI:47:VAL:HG21	1.71	0.72
10:CK:45:THR:HG23	10:CK:48:GLY:HA3	1.71	0.72
23:DB:90:U:H3'	23:DB:91:A:H5"	1.69	0.72
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.71	0.72
22:BA:75:G:H1	22:BA:102:G:N2	1.88	0.72
23:BB:616:A:H3'	23:BB:617:G:H8	1.54	0.72
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.72	0.72
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.89	0.72
1:CA:946:A:H2'	1:CA:947:G:C8	2.23	0.72
18:CS:48:ILE:HG22	18:CS:49:ALA:H	1.54	0.72
52:DW:49:ASN:HB2	52:DW:61:LYS:H	1.54	0.72
53:D6:84:ARG:H	53:D6:84:ARG:NE	1.88	0.72
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.89	0.72
9:AJ:44:THR:HG23	9:AJ:69:THR:O	1.90	0.72
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.54	0.72
23:DB:2548:U:H1'	27:DK:23:LYS:HZ1	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG22	1.70	0.72
10:AK:105:ARG:NH2	21:AU:10:PRO:HB3	2.05	0.72
21:AU:40:PRO:HA	21:AU:44:ARG:HD3	1.72	0.72
23:BB:62:U:C2'	23:BB:63:A:H5'	2.19	0.72
23:BB:191:A:H2'	23:BB:192:C:C6	2.24	0.72
23:BB:322:A:C3'	29:BE:163:ASN:HD21	2.03	0.72
23:BB:2155:U:H2'	23:BB:2156:G:O4'	1.90	0.72
43:BO:76:LYS:O	43:BO:80:GLU:HG2	1.90	0.72
48:BG:17:LYS:HB3	48:BG:24:THR:H	1.54	0.72
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.71	0.72
51:BZ:76:GLU:HG3	51:BZ:77:LYS:H	1.53	0.72
20:CB:96:LEU:HD21	20:CB:146:SER:HB2	1.72	0.72
23:DB:215:G:H4'	23:DB:216:A:H4'	1.71	0.72
23:DB:2267:A:C8	23:DB:2267:A:C3'	2.71	0.72
26:DD:186:LEU:HD11	28:DP:3:ILE:HG13	1.72	0.72
27:DK:58:LEU:HD11	27:DK:86:LEU:HB3	1.70	0.72
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	1.72	0.72
20:AB:96:LEU:H	20:AB:99:MET:HE3	1.53	0.72
22:BA:32:U:H1'	22:BA:52:A:N7	2.05	0.72
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.70	0.72
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.10	0.72
50:BT:21:SER:O	50:BT:25:GLU:HB2	1.88	0.72
1:CA:17:U:H2'	1:CA:18:C:C6	2.24	0.72
1:CA:706:A:H4'	10:CK:30:ILE:HD11	1.72	0.72
3:CD:90:LEU:HA	3:CD:93:LEU:HD12	1.71	0.72
20:CB:60:ALA:HA	20:CB:64:GLY:HA3	1.70	0.72
23:DB:2720:U:H5"	28:DP:52:ARG:HH21	1.54	0.72
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.90	0.72
47:DF:34:THR:HG22	47:DF:89:THR:HG22	1.72	0.72
48:DG:9:VAL:HA	48:DG:48:THR:HG22	1.69	0.72
49:DR:31:GLU:H	49:DR:63:VAL:CG2	2.02	0.72
4:AE:44:ARG:HA	4:AE:71:ILE:O	1.90	0.72
23:BB:580:U:H2'	23:BB:581:C:C6	2.24	0.72
23:BB:1076:C:H4'	24:BI:94:LYS:CE	2.19	0.72
23:BB:1210:G:H5'	23:BB:1212:G:O4'	1.90	0.72
26:BD:111:GLY:H	26:BD:194:PRO:CG	2.02	0.72
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	1.70	0.72
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.54	0.72
20:CB:187:ASP:OD1	20:CB:203:ASP:HB3	1.90	0.72
23:DB:98:G:H2'	23:DB:99:U:H5"	1.71	0.72
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.19	0.72
23:DB:1558:C:H4'	23:DB:1559:U:H5'	1.69	0.72
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	1.90	0.72
1:AA:301:G:H2'	1:AA:302:G:H8	1.54	0.72
1:AA:337:G:H2'	1:AA:338:A:C8	2.25	0.72
1:AA:552:U:H5'	11:AL:82:ARG:HH11	1.53	0.72
1:AA:1361:G:H2'	1:AA:1362:A:H5"	1.72	0.72
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.72	0.72
13:AN:68:ARG:HH12	13:AN:70:HIS:HB2	1.54	0.72
14:AO:24:SER:HB3	14:AO:27:VAL:HG23	1.71	0.72
23:BB:858:G:N3	23:BB:2268:A:H2'	2.04	0.72
23:BB:1804:C:OP1	25:BC:256:THR:HB	1.90	0.72
26:BD:114:LYS:HB2	26:BD:116:LYS:HE3	1.72	0.72
42:BN:24:MET:HE3	42:BN:44:LEU:HB2	1.71	0.72
53:B6:32:ARG:NH1	53:B6:88:LEU:HD23	2.04	0.72
1:CA:301:G:H2'	1:CA:302:G:H8	1.54	0.72
23:DB:2189:U:H2'	23:DB:2190:G:H5"	1.70	0.72
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.69	0.72
29:DE:194:LYS:O	29:DE:197:GLU:HB3	1.90	0.72
43:DO:76:LYS:O	43:DO:80:GLU:HG2	1.88	0.72
48:DG:17:LYS:HB3	48:DG:24:THR:H	1.54	0.72
51:DZ:6:GLN:NE2	51:DZ:50:ARG:H	1.87	0.72
15:AP:26:ASN:HD21	15:AP:31:ARG:HD3	1.53	0.72
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.90	0.72
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.38	0.72
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.04	0.72
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.71	0.72
52:DW:35:ILE:HG13	52:DW:57:THR:OG1	1.90	0.72
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.25	0.71
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.04	0.71
12:AM:89:ARG:NH2	12:AM:94:LEU:HD12	2.05	0.71
16:AQ:13:SER:HB3	16:AQ:21:VAL:HB	1.70	0.71
23:BB:320:A:H4'	23:BB:322:A:N7	2.05	0.71
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.55	0.71
27:BK:41:ILE:HG13	27:BK:42:THR:N	2.03	0.71
41:BJ:23:LYS:HE3	41:BJ:142:ILE:HG12	1.72	0.71
41:BJ:24:THR:HA	41:BJ:63:ALA:HB3	1.70	0.71
22:DA:28:C:N4	22:DA:56:G:N1	2.38	0.71
23:DB:357:C:H2'	23:DB:358:U:C6	2.25	0.71
25:DC:32:LEU:HD22	25:DC:63:ILE:HG13	1.72	0.71
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.89	0.71
39:DX:20:ASN:N	39:DX:20:ASN:HD22	1.88	0.71
48:DG:26:LYS:HG2	48:DG:27:GLY:N	2.04	0.71
23:BB:581:C:H2'	23:BB:582:A:C8	2.25	0.71
23:BB:2073:C:H5"	25:BC:227:VAL:HG12	1.72	0.71
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	2.04	0.71
38:BM:114:ARG:HH21	38:BM:114:ARG:HB2	1.54	0.71
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.30	0.71
4:CE:44:ARG:HA	4:CE:71:ILE:O	1.90	0.71
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.72	0.71
23:DB:773:U:H5'	23:DB:774:G:OP2	1.89	0.71
23:DB:1125:G:H4'	32:D4:37:GLN:NE2	2.04	0.71
26:DD:34:VAL:HA	26:DD:50:VAL:HG12	1.71	0.71
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.53	0.71
53:D6:52:LEU:HD11	53:D6:79:ILE:HG23	1.72	0.71
1:AA:22:G:H2'	1:AA:23:C:C6	2.25	0.71
1:AA:674:G:H2'	1:AA:675:A:H8	1.55	0.71
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.55	0.71
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.71	0.71
6:AG:78:ARG:HG2	6:AG:83:THR:HG22	1.72	0.71
13:AN:5:MET:HB3	13:AN:62:ARG:HH12	1.55	0.71
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.71	0.71
47:BF:78:ILE:H	47:BF:79:ARG:HH11	1.38	0.71
48:BG:9:VAL:HA	48:BG:48:THR:HG22	1.71	0.71
1:CA:493:A:H5'	1:CA:494:G:OP2	1.91	0.71
1:CA:674:G:H2'	1:CA:675:A:H8	1.54	0.71
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.70	0.71
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.72	0.71
23:DB:855:G:H21	52:DW:23:LYS:CG	2.03	0.71
23:DB:1365:A:OP2	51:DZ:3:ARG:HB2	1.90	0.71
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.72	0.71
1:AA:33:A:H2'	1:AA:34:C:H6	1.54	0.71
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.38	0.71
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.38	0.71
13:AN:11:LYS:O	13:AN:15:LEU:HG	1.91	0.71
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.90	0.71
46:BU:26:ASN:N	46:BU:26:ASN:HD22	1.85	0.71
51:BZ:5:CYS:HB3	51:BZ:10:LYS:N	2.04	0.71
1:CA:33:A:H2'	1:CA:34:C:C6	2.25	0.71
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.53	0.71
8:CI:117:LEU:HD22	8:CI:123:ARG:HG2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:202:ASN:HD22	20:CB:203:ASP:N	1.88	0.71
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.05	0.71
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.56	0.71
1:AA:957:U:H4'	18:AS:78:THR:HB	1.71	0.71
22:BA:28:C:N4	22:BA:56:G:N1	2.38	0.71
40:BH:108:VAL:HG12	40:BH:109:GLU:N	2.04	0.71
15:CP:40:ASN:HD21	15:CP:43:ALA:N	1.89	0.71
23:DB:320:A:H4'	23:DB:322:A:N7	2.04	0.71
23:DB:784:G:O2'	23:DB:785:G:H5"	1.90	0.71
50:DT:2:ILE:HB	50:DT:3:ARG:HD3	1.72	0.71
14:AO:70:LEU:HD12	14:AO:78:TYR:HB2	1.71	0.71
23:BB:30:G:H2'	23:BB:31:C:C6	2.25	0.71
23:BB:1060:U:C4	23:BB:1088:A:N6	2.58	0.71
23:BB:2615:U:H1'	31:B0:3:GLN:HB3	1.72	0.71
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.71	0.71
41:BJ:3:THR:HG21	44:BQ:60:TRP:HE1	1.55	0.71
48:BG:26:LYS:HG2	48:BG:27:GLY:N	2.03	0.71
1:CA:41:G:H2'	1:CA:42:G:H8	1.55	0.71
1:CA:195:A:H2'	1:CA:196:A:C8	2.25	0.71
1:CA:957:U:H4'	18:CS:78:THR:HB	1.71	0.71
1:CA:1216:A:H5"	13:CN:4:SER:HB3	1.69	0.71
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.56	0.71
9:CJ:51:VAL:CG2	13:CN:80:ARG:HB2	2.21	0.71
12:CM:89:ARG:NH2	12:CM:94:LEU:HD12	2.04	0.71
23:DB:2741:A:H2'	23:DB:2742:G:O4'	1.89	0.71
21:AU:24:LYS:HD2	21:AU:25:ALA:H	1.55	0.71
23:BB:1138:G:H2'	23:BB:1139:G:O4'	1.91	0.71
23:BB:2741:A:H2'	23:BB:2742:G:O4'	1.90	0.71
26:BD:186:LEU:HD11	28:BP:3:ILE:HG13	1.73	0.71
38:BM:71:LYS:HD3	38:BM:95:LEU:HD13	1.73	0.71
53:B6:51:PRO:O	53:B6:55:ILE:HG22	1.91	0.71
1:CA:927:G:H4'	1:CA:1503:A:N7	2.06	0.71
10:CK:124:LYS:HA	21:CU:34:ARG:CB	2.18	0.71
23:DB:2529:G:H5"	48:DG:174:LYS:HB2	1.72	0.71
40:DH:94:ILE:HG22	40:DH:122:LEU:HG	1.73	0.71
42:DN:24:MET:HE3	42:DN:44:LEU:HB2	1.73	0.71
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.72	0.71
23:BB:571:U:H3'	49:BR:80:ARG:HH12	1.56	0.71
26:BD:105:LYS:HD2	26:BD:177:VAL:HG22	1.72	0.71
39:BX:20:ASN:N	39:BX:20:ASN:HD22	1.89	0.71
1:CA:320:A:H2'	1:CA:321:A:C8	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.72	0.71
18:CS:18:VAL:HG21	18:CS:43:MET:HB3	1.73	0.71
21:CU:40:PRO:HA	21:CU:44:ARG:HD3	1.73	0.71
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.90	0.71
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.06	0.71
23:DB:2387:U:H1'	52:DW:38:ARG:CZ	2.21	0.71
23:DB:2602:A:N3	23:DB:2602:A:H2'	2.05	0.71
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.71
46:DU:11:ILE:HG22	46:DU:70:ALA:HB3	1.72	0.71
1:AA:1086:U:H3	1:AA:1099:G:H22	1.39	0.71
2:AC:142:ARG:HH21	2:AC:143:LEU:HD21	1.54	0.71
4:AE:39:GLY:HA3	4:AE:116:VAL:HB	1.73	0.71
20:AB:60:ALA:HA	20:AB:64:GLY:HA3	1.71	0.71
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.26	0.71
23:BB:2264:C:H41	52:BW:11:ASN:ND2	1.89	0.71
23:BB:2602:A:H2'	23:BB:2602:A:N3	2.05	0.71
23:BB:2746:U:H4'	48:BG:137:LYS:HG3	1.71	0.71
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.55	0.71
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.06	0.71
40:BH:84:ALA:HA	40:BH:90:LEU:CA	2.21	0.71
50:BT:2:ILE:HB	50:BT:3:ARG:HD3	1.73	0.71
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.38	0.71
23:DB:858:G:N3	23:DB:2268:A:H2'	2.06	0.71
23:DB:2107:G:H2'	23:DB:2108:A:C8	2.25	0.71
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.55	0.71
49:DR:4:VAL:HG23	49:DR:39:LEU:H	1.55	0.71
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	1.70	0.71
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.05	0.71
27:BK:71:ARG:HG3	27:BK:105:ARG:HH21	1.56	0.71
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	1.72	0.71
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.72	0.71
52:BW:43:LYS:HB3	52:BW:58:LEU:HD11	1.73	0.71
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.71	0.71
14:CO:70:LEU:HD12	14:CO:78:TYR:HB2	1.71	0.71
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.73	0.71
22:DA:43:C:O2'	47:DF:91:ARG:HD2	1.91	0.71
28:DP:26:GLU:HB3	28:DP:84:SER:HB3	1.72	0.71
29:DE:130:LYS:HB2	29:DE:133:LEU:HG	1.71	0.71
20:AB:113:LEU:HD12	20:AB:143:LEU:HB3	1.74	0.70
23:BB:131:A:H2'	23:BB:132:G:H8	1.56	0.70
26:BD:14:ILE:HG22	26:BD:22:ILE:O	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:58:LEU:HD12	52:BW:79:ILE:HD12	1.73	0.70
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.55	0.70
13:CN:11:LYS:O	13:CN:15:LEU:HG	1.92	0.70
23:DB:845:A:C2	23:DB:847:U:H1'	2.26	0.70
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.26	0.70
38:DM:42:THR:HB	38:DM:45:GLN:HG3	1.73	0.70
3:AD:90:LEU:HA	3:AD:93:LEU:HD12	1.73	0.70
4:AE:15:ILE:HD12	4:AE:35:LEU:HG	1.73	0.70
16:AQ:16:MET:HB2	16:AQ:19:SER:HB2	1.73	0.70
23:BB:215:G:H4'	23:BB:216:A:H4'	1.73	0.70
23:BB:1458:U:C5'	23:BB:1459:G:H5'	2.21	0.70
27:BK:87:LEU:HB2	27:BK:93:GLN:O	1.91	0.70
40:BH:78:VAL:HB	40:BH:143:ILE:HD12	1.73	0.70
46:BU:11:ILE:HG22	46:BU:70:ALA:HB3	1.72	0.70
1:CA:238:A:H2'	1:CA:239:U:H5"	1.73	0.70
1:CA:474:G:H2'	1:CA:475:C:C6	2.26	0.70
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.26	0.70
9:CJ:44:THR:HG23	9:CJ:69:THR:O	1.91	0.70
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.56	0.70
34:D3:30:HIS:H	34:D3:32:LEU:HD21	1.56	0.70
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.72	0.70
12:AM:2:ARG:HG3	12:AM:6:ILE:H	1.54	0.70
23:BB:162:U:H4'	23:BB:163:C:OP1	1.91	0.70
23:BB:721:A:H2'	23:BB:722:A:C8	2.26	0.70
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.56	0.70
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.90	0.70
23:BB:2840:C:OP1	42:BN:50:PRO:HA	1.91	0.70
29:BE:175:ILE:HD11	29:BE:180:LEU:HD11	1.73	0.70
1:CA:552:U:H5'	11:CL:82:ARG:HH11	1.56	0.70
23:DB:138:U:O3'	23:DB:139:U:H3'	1.91	0.70
23:DB:1099:G:H5"	24:DI:2:LYS:C	2.11	0.70
44:DQ:30:VAL:CG1	44:DQ:33:VAL:HG22	2.21	0.70
1:AA:82:G:H2'	1:AA:84:U:C5	2.26	0.70
1:AA:532:A:N7	2:AC:192:TYR:HD2	1.87	0.70
1:AA:946:A:H2'	1:AA:947:G:C8	2.26	0.70
1:AA:1254:A:H5'	1:AA:1356:G:H4'	1.74	0.70
8:AI:47:VAL:HG23	8:AI:48:ARG:HG3	1.72	0.70
13:AN:71:GLY:O	13:AN:79:SER:HA	1.92	0.70
22:BA:43:C:O2'	47:BF:91:ARG:HD2	1.92	0.70
23:BB:163:C:H2'	23:BB:164:C:O4'	1.92	0.70
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.05	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:18:GLN:NE2	40:BH:44:ILE:HG21	2.07	0.70
40:BH:122:LEU:H	40:BH:122:LEU:HD12	1.55	0.70
49:BR:78:ARG:HB3	49:BR:83:TYR:HB3	1.73	0.70
50:BT:59:ASN:O	50:BT:84:TYR:HB2	1.89	0.70
52:BW:35:ILE:HG13	52:BW:57:THR:OG1	1.91	0.70
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.74	0.70
1:CA:1048:G:O3'	1:CA:1049:U:H3'	1.91	0.70
9:CJ:52:LEU:HD21	9:CJ:59:LYS:HA	1.72	0.70
28:DP:31:VAL:HG12	28:DP:38:ARG:O	1.91	0.70
1:AA:41:G:H2'	1:AA:42:G:H8	1.54	0.70
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.71	0.70
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.72	0.70
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.74	0.70
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.25	0.70
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	1.91	0.70
33:B1:26:LYS:HB2	33:B1:52:LYS:NZ	2.06	0.70
53:B6:95:LYS:HB3	53:B6:100:TYR:HE2	1.55	0.70
1:CA:337:G:H2'	1:CA:338:A:C8	2.26	0.70
16:CQ:16:MET:HB2	16:CQ:19:SER:HB2	1.74	0.70
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	1.74	0.70
23:DB:592:A:H2'	23:DB:593:U:C6	2.26	0.70
23:DB:636:G:H3'	37:DL:128:THR:CG2	2.20	0.70
48:DG:15:ASP:HB3	48:DG:25:ILE:HA	1.72	0.70
52:DW:43:LYS:HB3	52:DW:58:LEU:HD11	1.73	0.70
1:AA:33:A:H2'	1:AA:34:C:C6	2.27	0.70
9:AJ:8:ILE:HB	9:AJ:74:VAL:HB	1.72	0.70
10:AK:110:THR:HG22	21:AU:4:LYS:HA	1.74	0.70
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.27	0.70
35:BV:9:ARG:NH2	35:BV:12:GLN:HA	2.06	0.70
42:BN:34:ILE:HB	42:BN:113:ILE:HG22	1.74	0.70
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.26	0.70
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.73	0.70
8:CI:47:VAL:HG23	8:CI:48:ARG:HG3	1.72	0.70
10:CK:105:ARG:NH2	21:CU:10:PRO:HB3	2.05	0.70
23:DB:276:U:H2'	23:DB:278:A:C2	2.27	0.70
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.74	0.70
37:DL:90:VAL:HB	37:DL:122:VAL:HA	1.74	0.70
38:DM:19:GLY:N	38:DM:38:ARG:HH22	1.89	0.70
38:DM:126:ILE:HG22	38:DM:127:LYS:H	1.56	0.70
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.56	0.70
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.73	0.70
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.07	0.70
23:DB:224:U:O4	23:DB:420:C:H5'	1.91	0.70
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.72	0.70
1:AA:1048:G:O3'	1:AA:1049:U:H3'	1.91	0.70
1:AA:1273:C:H2'	1:AA:1274:A:O4'	1.92	0.70
4:AE:52:ALA:HB2	4:AE:61:LYS:HE2	1.74	0.70
9:AJ:24:GLU:HG2	9:AJ:90:LEU:HD21	1.74	0.70
11:AL:98:ARG:HA	11:AL:103:CYS:SG	2.31	0.70
15:AP:40:ASN:HD21	15:AP:43:ALA:N	1.89	0.70
23:BB:98:G:H2'	23:BB:99:U:H5"	1.73	0.70
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.91	0.70
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.57	0.70
37:BL:30:THR:O	37:BL:33:ARG:HG2	1.91	0.70
37:BL:90:VAL:HB	37:BL:122:VAL:HA	1.74	0.70
52:BW:49:ASN:HB2	52:BW:61:LYS:H	1.56	0.70
7:CH:51:GLU:HG2	7:CH:52:GLY:H	1.56	0.70
23:DB:264:C:O2'	23:DB:265:A:H5"	1.92	0.70
27:DK:60:ALA:HA	27:DK:87:LEU:HD23	1.74	0.70
27:DK:112:PHE:O	27:DK:115:ILE:HG22	1.92	0.70
48:DG:104:LEU:HB2	48:DG:112:VAL:HB	1.74	0.70
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.74	0.70
23:BB:49:A:H5"	23:BB:51:G:O4'	1.91	0.70
23:BB:2356:U:H5"	52:BW:16:GLU:HG3	1.73	0.70
39:BX:34:SER:HB2	39:BX:36:GLN:OE1	1.92	0.70
53:B6:60:ALA:HA	53:B6:66:LEU:HA	1.72	0.70
1:CA:335:C:H2'	1:CA:336:A:C8	2.27	0.70
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.26	0.70
23:DB:616:A:H3'	23:DB:617:G:H8	1.55	0.70
23:DB:2379:G:H2'	23:DB:2380:C:C6	2.27	0.70
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	2.07	0.70
35:DV:42:LEU:HD23	35:DV:42:LEU:H	1.57	0.70
35:DV:72:VAL:HG12	35:DV:94:ALA:H	1.55	0.70
50:DT:59:ASN:O	50:DT:84:TYR:HB2	1.91	0.70
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.57	0.70
20:AB:202:ASN:HD22	20:AB:203:ASP:N	1.89	0.70
23:BB:264:C:O2'	23:BB:265:A:H5"	1.91	0.70
23:BB:1139:G:O2'	23:BB:1140:C:H5'	1.92	0.70
29:BE:194:LYS:O	29:BE:197:GLU:HB3	1.91	0.70
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.72	0.70
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1210:G:H5'	23:DB:1212:G:O4'	1.91	0.70
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.27	0.70
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	2.07	0.70
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.74	0.69
23:BB:836:G:H2'	23:BB:837:C:C6	2.26	0.69
23:BB:968:C:H2'	23:BB:969:G:C8	2.26	0.69
23:BB:2444:G:P	29:BE:63:LYS:HD2	2.32	0.69
34:B3:30:HIS:H	34:B3:32:LEU:HD21	1.56	0.69
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.74	0.69
44:BQ:104:ALA:HA	49:BR:46:GLU:OE1	1.92	0.69
47:BF:105:ILE:O	47:BF:109:ARG:HB2	1.91	0.69
47:BF:107:VAL:O	47:BF:110:ILE:HG22	1.92	0.69
49:BR:31:GLU:H	49:BR:63:VAL:HG22	1.56	0.69
20:CB:95:TRP:HH2	20:CB:100:LEU:HB2	1.55	0.69
23:DB:968:C:H2'	23:DB:969:G:C8	2.26	0.69
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.26	0.69
49:DR:8:GLY:HA3	49:DR:23:GLU:HB2	1.74	0.69
49:DR:68:ARG:NH1	49:DR:90:ARG:HD3	2.06	0.69
3:AD:84:ASN:ND2	4:AE:101:GLY:HA3	2.07	0.69
23:BB:645:C:H4'	23:BB:646:U:OP2	1.92	0.69
23:BB:1583:A:H5"	23:BB:1584:U:OP1	1.91	0.69
26:BD:148:GLN:HG3	26:BD:152:PRO:HG2	1.73	0.69
27:BK:53:LYS:HD3	27:BK:53:LYS:H	1.55	0.69
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.57	0.69
40:BH:73:ASN:N	40:BH:73:ASN:HD22	1.89	0.69
43:BO:47:VAL:HG12	43:BO:48:LEU:H	1.57	0.69
49:BR:19:THR:HB	49:BR:97:LYS:HA	1.74	0.69
1:CA:195:A:H1'	1:CA:222:C:O2'	1.92	0.69
15:CP:40:ASN:HD21	15:CP:43:ALA:H	1.39	0.69
1:AA:673:A:H2'	1:AA:674:G:C8	2.27	0.69
11:AL:20:VAL:HG12	11:AL:93:ARG:HB3	1.74	0.69
20:AB:95:TRP:HH2	20:AB:100:LEU:HB2	1.57	0.69
23:BB:64:A:H2'	23:BB:65:U:C6	2.27	0.69
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.57	0.69
23:BB:2144:G:H2'	23:BB:2146:C:OP2	1.92	0.69
26:BD:30:GLU:HG3	26:BD:52:THR:HG22	1.74	0.69
43:BO:24:THR:HG22	43:BO:42:PRO:HD3	1.74	0.69
23:DB:721:A:H2'	23:DB:722:A:H8	1.57	0.69
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.92	0.69
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.57	0.69
47:DF:107:VAL:O	47:DF:110:ILE:HG22	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:238:A:H2'	1:AA:239:U:H5"	1.73	0.69
9:AJ:51:VAL:CG2	13:AN:80:ARG:HB2	2.22	0.69
18:AS:42:ASN:ND2	18:AS:43:MET:HG2	2.07	0.69
23:BB:118:A:OP2	23:BB:119:A:H2'	1.92	0.69
23:BB:784:G:O2'	23:BB:785:G:H5"	1.93	0.69
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.56	0.69
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.04	0.69
38:BM:19:GLY:N	38:BM:38:ARG:HH22	1.90	0.69
38:BM:126:ILE:HG22	38:BM:127:LYS:H	1.57	0.69
30:DY:15:ARG:O	30:DY:20:LYS:HE3	1.93	0.69
1:AA:22:G:H2'	1:AA:23:C:H6	1.56	0.69
3:AD:192:ALA:HB3	3:AD:194:ILE:HG22	1.72	0.69
23:BB:670:A:H5"	37:BL:42:SER:HB2	1.73	0.69
23:BB:1012:U:O4	41:BJ:30:THR:HG21	1.91	0.69
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.07	0.69
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.28	0.69
49:BR:68:ARG:NH1	49:BR:90:ARG:HD3	2.07	0.69
53:B6:69:GLN:NE2	53:B6:98:ALA:HB2	2.07	0.69
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.56	0.69
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.22	0.69
18:CS:4:LEU:HD11	18:CS:9:PHE:HB3	1.72	0.69
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.26	0.69
26:DD:34:VAL:HB	26:DD:48:ILE:HD11	1.74	0.69
35:DV:79:ARG:NH1	38:DM:134:THR:HG21	2.07	0.69
49:DR:78:ARG:HB3	49:DR:83:TYR:HB3	1.73	0.69
52:DW:58:LEU:HD12	52:DW:79:ILE:HD12	1.73	0.69
20:AB:163:ILE:HG23	20:AB:164:ASP:N	2.04	0.69
23:BB:274:C:H2'	23:BB:275:C:O4'	1.92	0.69
27:BK:60:ALA:HA	27:BK:87:LEU:HD23	1.74	0.69
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.75	0.69
38:BM:71:LYS:HE3	38:BM:73:ILE:HD11	1.75	0.69
40:BH:79:THR:HA	40:BH:145:ASN:HB2	1.75	0.69
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.56	0.69
3:CD:169:TRP:CE2	3:CD:185:PRO:HB3	2.28	0.69
9:CJ:37:ARG:HA	9:CJ:37:ARG:NE	2.07	0.69
23:DB:37:C:O2'	29:DE:45:ALA:HA	1.93	0.69
23:DB:125:A:H3'	23:DB:126:A:H5"	1.74	0.69
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	1.75	0.69
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.75	0.69
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.74	0.69
42:DN:34:ILE:HB	42:DN:113:ILE:HG22	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:51:GLY:HA3	52:DW:59:PHE:CB	2.22	0.69
1:AA:1137:C:H1'	1:AA:1138:G:C2	2.27	0.69
2:AC:8:GLY:HA3	13:AN:88:MET:SD	2.32	0.69
8:AI:48:ARG:HA	8:AI:51:LEU:HD12	1.74	0.69
9:AJ:52:LEU:HD21	9:AJ:59:LYS:HA	1.73	0.69
23:BB:592:A:H2'	23:BB:593:U:C6	2.27	0.69
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.74	0.69
49:BR:8:GLY:HA3	49:BR:23:GLU:HB2	1.75	0.69
51:BZ:6:GLN:NE2	51:BZ:50:ARG:H	1.90	0.69
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.58	0.69
13:CN:87:ALA:HB2	13:CN:92:ILE:HD12	1.75	0.69
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.57	0.69
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.08	0.69
1:AA:17:U:H2'	1:AA:18:C:C6	2.27	0.69
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.57	0.69
6:AG:108:ARG:HA	6:AG:115:MET:HE1	1.73	0.69
18:AS:48:ILE:HG22	18:AS:49:ALA:H	1.56	0.69
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.27	0.69
29:BE:109:LEU:HD13	29:BE:180:LEU:HD13	1.75	0.69
47:BF:34:THR:HG22	47:BF:89:THR:HG22	1.74	0.69
49:BR:4:VAL:HG23	49:BR:39:LEU:H	1.58	0.69
49:BR:31:GLU:H	49:BR:63:VAL:CG2	2.05	0.69
53:B6:58:VAL:HG22	53:B6:68:VAL:HG13	1.75	0.69
2:CC:96:VAL:HB	2:CC:97:PRO:HD2	1.75	0.69
6:CG:58:LEU:H	6:CG:58:LEU:HD23	1.58	0.69
20:CB:27:LYS:HA	20:CB:30:ILE:HD12	1.74	0.69
23:DB:354:A:H2'	23:DB:355:U:C6	2.27	0.69
23:DB:361:G:O2'	23:DB:362:A:H5'	1.92	0.69
23:DB:721:A:H2'	23:DB:722:A:C8	2.28	0.69
23:DB:1666:G:O3'	27:DK:6:THR:HG23	1.92	0.69
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.74	0.69
26:DD:148:GLN:HG3	26:DD:152:PRO:HG2	1.75	0.69
38:DM:41:LEU:HB2	38:DM:94:ALA:HB3	1.73	0.69
38:DM:71:LYS:HD3	38:DM:95:LEU:HD13	1.73	0.69
39:DX:17:GLU:OE1	39:DX:21:LEU:HD11	1.93	0.69
41:DJ:117:ALA:HA	41:DJ:120:ARG:HD2	1.74	0.69
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.06	0.69
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.57	0.69
23:BB:455:C:N3	23:BB:472:A:H2'	2.07	0.69
23:BB:1131:G:N2	23:BB:2024:G:H21	1.90	0.69
23:BB:2346:A:H3'	23:BB:2347:C:H5"	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.85	0.69
40:BH:84:ALA:HB2	40:BH:147:VAL:O	1.93	0.69
1:CA:16:A:O2'	1:CA:17:U:H5'	1.93	0.69
1:CA:22:G:H2'	1:CA:23:C:H6	1.58	0.69
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE2	1.75	0.69
23:DB:117:G:H5'	23:DB:126:A:H8	1.57	0.69
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.06	0.69
23:DB:2283:C:H5"	23:DB:2389:G:O2'	1.93	0.69
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.75	0.69
1:AA:493:A:H5'	1:AA:494:G:OP2	1.92	0.69
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.08	0.69
6:AG:58:LEU:HD23	6:AG:58:LEU:H	1.58	0.69
29:BE:148:ILE:HD13	29:BE:187:VAL:HG21	1.74	0.69
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.73	0.69
40:BH:124:THR:O	40:BH:125:THR:HB	1.91	0.69
45:BS:27:LYS:O	45:BS:32:ALA:HB2	1.91	0.69
47:BF:161:SER:OG	47:BF:164:GLU:HG3	1.93	0.69
11:CL:20:VAL:HG12	11:CL:93:ARG:HB3	1.74	0.69
23:DB:974:G:OP2	49:DR:78:ARG:HD3	1.93	0.69
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.28	0.69
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.57	0.69
45:DS:25:ARG:HE	45:DS:73:LYS:NZ	1.91	0.69
48:DG:148:ARG:HB2	48:DG:152:ARG:NH2	2.08	0.69
22:BA:13:G:H2'	22:BA:14:U:H5"	1.75	0.68
23:BB:152:A:H2'	23:BB:153:U:C6	2.27	0.68
23:BB:170:U:H2'	23:BB:171:U:C6	2.28	0.68
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.58	0.68
27:BK:43:ILE:HG22	27:BK:54:LYS:HA	1.76	0.68
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.23	0.68
3:CD:103:ARG:HH21	3:CD:110:ARG:HH22	1.39	0.68
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.58	0.68
23:DB:170:U:H2'	23:DB:171:U:C6	2.28	0.68
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	1.92	0.68
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.28	0.68
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.58	0.68
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.75	0.68
13:AN:17:ASP:O	13:AN:21:ALA:HB3	1.94	0.68
15:AP:40:ASN:HD21	15:AP:43:ALA:H	1.42	0.68
39:BX:17:GLU:OE1	39:BX:21:LEU:HD11	1.92	0.68
1:CA:235:C:H2'	1:CA:236:A:H8	1.57	0.68
6:CG:108:ARG:HA	6:CG:115:MET:HE1	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:28:SER:OG	7:CH:56:PRO:HB2	1.93	0.68
23:DB:163:C:H2'	23:DB:164:C:O4'	1.94	0.68
23:DB:645:C:H4'	23:DB:646:U:OP2	1.92	0.68
1:AA:484:G:H4'	1:AA:485:U:H5"	1.76	0.68
1:AA:636:U:H2'	1:AA:637:C:C6	2.29	0.68
23:BB:121:G:H2'	23:BB:122:G:H8	1.57	0.68
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.58	0.68
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.74	0.68
35:BV:28:ALA:HA	35:BV:88:HIS:ND1	2.09	0.68
36:B2:21:ARG:HH21	36:B2:43:THR:HG21	1.58	0.68
37:BL:47:ARG:HG2	37:BL:50:PHE:HB2	1.75	0.68
47:BF:103:ILE:HD11	47:BF:174:PHE:HA	1.75	0.68
13:CN:71:GLY:O	13:CN:79:SER:HA	1.93	0.68
23:DB:152:A:H2'	23:DB:153:U:C6	2.29	0.68
23:DB:630:G:N2	23:DB:632:A:H3'	2.07	0.68
23:DB:836:G:H2'	23:DB:837:C:C6	2.27	0.68
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.28	0.68
35:DV:28:ALA:HA	35:DV:88:HIS:ND1	2.08	0.68
41:DJ:36:LEU:HD11	41:DJ:122:LEU:HB2	1.75	0.68
1:AA:1048:G:H4'	13:AN:2:LYS:NZ	2.08	0.68
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.75	0.68
23:BB:947:A:HO2'	23:BB:984:A:H2	1.40	0.68
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.57	0.68
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	1.94	0.68
2:CC:26:LYS:HE2	2:CC:27:GLU:HG3	1.74	0.68
2:CC:59:PRO:HG2	2:CC:62:SER:OG	1.93	0.68
16:CQ:24:ILE:HD11	16:CQ:43:LEU:HD13	1.74	0.68
23:DB:64:A:H2'	23:DB:65:U:C6	2.28	0.68
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.74	0.68
38:DM:71:LYS:HE3	38:DM:73:ILE:HD11	1.73	0.68
48:DG:155:PRO:HA	48:DG:170:THR:HG22	1.74	0.68
50:DT:11:LEU:HD22	50:DT:11:LEU:H	1.57	0.68
1:AA:195:A:H1'	1:AA:222:C:O2'	1.93	0.68
1:AA:474:G:H2'	1:AA:475:C:C6	2.29	0.68
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.27	0.68
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.07	0.68
23:BB:848:C:H2'	23:BB:849:A:C8	2.29	0.68
23:BB:1060:U:O2	23:BB:1088:A:N7	2.27	0.68
23:BB:1700:A:H2'	23:BB:1701:A:H5'	1.75	0.68
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.74	0.68
1:CA:859:G:H2'	1:CA:860:A:C8	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:49:A:H5"	23:DB:51:G:O4'	1.94	0.68
23:DB:581:C:H2'	23:DB:582:A:C8	2.27	0.68
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.29	0.68
23:DB:1597:A:H5"	23:DB:1598:A:H5'	1.73	0.68
23:DB:2886:A:H3'	23:DB:2887:A:H8	1.58	0.68
25:DC:86:ARG:HB3	25:DC:86:ARG:NH1	2.08	0.68
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.74	0.68
39:DX:7:ARG:NH1	39:DX:7:ARG:HB2	2.08	0.68
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.58	0.68
40:DH:96:THR:HG23	40:DH:97:ARG:HD3	1.75	0.68
43:DO:24:THR:HG22	43:DO:42:PRO:HD3	1.75	0.68
47:DF:105:ILE:O	47:DF:109:ARG:HB2	1.94	0.68
1:AA:203:G:H1'	1:AA:465:A:H61	1.58	0.68
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.74	0.68
23:BB:721:A:H2'	23:BB:722:A:H8	1.58	0.68
23:BB:2379:G:H2'	23:BB:2380:C:C6	2.28	0.68
23:BB:2751:G:H5'	48:BG:2:ARG:CD	2.23	0.68
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.75	0.68
40:BH:100:ALA:HB1	40:BH:132:PHE:HE1	1.58	0.68
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	1.76	0.68
3:CD:94:GLU:HG2	3:CD:185:PRO:HG3	1.76	0.68
5:CF:16:GLU:CD	5:CF:16:GLU:H	1.97	0.68
18:CS:47:THR:HG23	18:CS:60:PHE:HE1	1.59	0.68
23:DB:96:C:H4'	39:DX:41:HIS:ND1	2.08	0.68
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.77	0.68
40:DH:80:ILE:HD11	40:DH:146:VAL:HG13	1.75	0.68
40:DH:94:ILE:O	40:DH:122:LEU:HB2	1.93	0.68
1:AA:1423:G:H2'	1:AA:1424:U:H6	1.59	0.68
4:AE:89:THR:HG21	4:AE:134:ASN:ND2	2.08	0.68
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.24	0.68
19:AT:66:ILE:HG13	19:AT:70:LYS:HE3	1.74	0.68
23:BB:90:U:H3'	23:BB:91:A:C5'	2.24	0.68
23:BB:142:A:H2'	23:BB:143:C:C6	2.29	0.68
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.28	0.68
39:BX:7:ARG:NH1	39:BX:7:ARG:HB2	2.09	0.68
1:CA:707:U:H2'	1:CA:708:C:C6	2.29	0.68
13:CN:24:ALA:O	13:CN:27:LYS:HG2	1.93	0.68
22:DA:13:G:H2'	22:DA:14:U:H5"	1.76	0.68
23:DB:281:C:H2'	23:DB:282:A:C8	2.29	0.68
23:DB:919:U:H2'	23:DB:920:A:C8	2.28	0.68
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:33:ARG:CZ	26:DD:74:GLU:HB3	2.23	0.68
27:DK:87:LEU:HB2	27:DK:93:GLN:O	1.93	0.68
35:DV:53:LYS:NZ	35:DV:53:LYS:HA	2.08	0.68
37:DL:30:THR:O	37:DL:33:ARG:HG2	1.92	0.68
44:DQ:91:ARG:HG2	44:DQ:93:ILE:HG22	1.75	0.68
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.33	0.68
53:D6:177:GLU:O	53:D6:181:GLN:HG3	1.93	0.68
1:AA:812:G:O2'	1:AA:813:U:H6	1.73	0.68
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.58	0.68
26:BD:34:VAL:CG1	26:BD:94:GLN:H	2.05	0.68
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.22	0.68
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.39	0.68
23:DB:141:G:H3'	23:DB:141:G:N3	2.07	0.68
2:AC:129:PHE:HE2	2:AC:165:GLU:HG2	1.56	0.68
5:AF:53:LYS:HE2	5:AF:53:LYS:HA	1.75	0.68
23:BB:125:A:H5'	36:B2:19:ARG:HG3	1.76	0.68
23:BB:1021:A:H61	23:BB:1142:A:N6	1.92	0.68
23:BB:1827:U:O2'	23:BB:1828:G:H5'	1.94	0.68
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.09	0.68
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.28	0.68
46:BU:72:PHE:HA	46:BU:78:LYS:O	1.94	0.68
1:CA:193:C:H2'	1:CA:194:C:C6	2.29	0.68
23:DB:848:C:H2'	23:DB:849:A:C8	2.29	0.68
23:DB:1469:A:H2'	23:DB:1470:A:H8	1.58	0.68
28:DP:52:ARG:HH11	28:DP:52:ARG:HG2	1.59	0.68
44:DQ:10:ARG:NH1	44:DQ:10:ARG:HB2	2.08	0.68
44:DQ:104:ALA:HA	49:DR:46:GLU:OE1	1.94	0.68
1:AA:621:A:H2'	1:AA:622:A:C8	2.28	0.68
13:AN:87:ALA:HB2	13:AN:92:ILE:HD12	1.74	0.68
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	1.76	0.68
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.74	0.68
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.07	0.68
48:BG:68:ARG:HH12	48:BG:72:ASN:HD22	1.40	0.68
52:BW:24:ARG:HD2	52:BW:65:LYS:HG2	1.76	0.68
1:CA:1137:C:O2'	1:CA:1138:G:H5"	1.94	0.68
3:CD:160:LEU:HD13	3:CD:160:LEU:H	1.58	0.68
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.76	0.68
21:CU:36:PHE:HA	21:CU:39:LYS:HE3	1.76	0.68
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.76	0.68
29:DE:175:ILE:HD11	29:DE:180:LEU:HD11	1.76	0.68
33:D1:34:GLU:HB3	33:D1:49:LYS:HD3	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:65:LEU:HD11	42:DN:69:ARG:CZ	2.24	0.68
48:DG:68:ARG:HH12	48:DG:72:ASN:HD22	1.42	0.68
1:AA:602:A:O2'	1:AA:603:U:H5'	1.93	0.67
1:AA:848:C:H2'	1:AA:849:G:O4'	1.94	0.67
5:AF:80:PHE:CZ	25:BC:123:ILE:HG12	2.28	0.67
16:AQ:59:GLU:O	16:AQ:75:VAL:HG22	1.93	0.67
23:BB:919:U:H2'	23:BB:920:A:C8	2.29	0.67
40:BH:90:LEU:HD11	40:BH:146:VAL:CG1	2.22	0.67
44:BQ:91:ARG:HG2	44:BQ:93:ILE:HG22	1.75	0.67
1:CA:147:G:H2'	1:CA:148:G:H8	1.58	0.67
1:CA:1302:C:OP2	12:CM:16:ILE:HD11	1.94	0.67
12:CM:2:ARG:HG3	12:CM:6:ILE:H	1.59	0.67
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.76	0.67
38:DM:42:THR:O	38:DM:44:ARG:N	2.28	0.67
39:DX:48:ARG:O	39:DX:51:ALA:HB3	1.94	0.67
1:AA:780:A:O2'	1:AA:781:A:H5"	1.94	0.67
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.77	0.67
23:BB:594:U:H2'	23:BB:595:C:H6	1.60	0.67
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	2.09	0.67
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.30	0.67
43:BO:34:HIS:HB3	43:BO:36:TYR:HE2	1.58	0.67
43:BO:62:LEU:HD11	43:BO:70:ALA:HA	1.77	0.67
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.76	0.67
1:CA:22:G:H2'	1:CA:23:C:C6	2.28	0.67
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.29	0.67
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.29	0.67
6:CG:56:SER:HB3	6:CG:59:GLU:HG3	1.75	0.67
8:CI:26:LYS:N	8:CI:61:ASP:HB3	2.09	0.67
23:DB:115:C:O2'	23:DB:116:C:H5'	1.94	0.67
23:DB:540:C:H2'	23:DB:541:A:H8	1.57	0.67
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.29	0.67
45:DS:31:GLN:O	45:DS:35:ILE:HG12	1.94	0.67
1:AA:335:C:H2'	1:AA:336:A:C8	2.29	0.67
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.76	0.67
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.30	0.67
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.76	0.67
40:BH:41:LYS:HA	40:BH:44:ILE:HG13	1.76	0.67
40:BH:128:HIS:CE1	40:BH:130:VAL:HG13	2.29	0.67
1:CA:802:A:H2'	1:CA:803:G:O4'	1.95	0.67
9:CJ:8:ILE:HB	9:CJ:74:VAL:HB	1.74	0.67
23:DB:30:G:H2'	23:DB:31:C:C6	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:162:U:H4'	23:DB:163:C:OP1	1.92	0.67
23:DB:717:C:H3'	23:DB:718:A:H5"	1.76	0.67
23:DB:742:A:H2'	23:DB:743:A:H8	1.60	0.67
26:DD:148:GLN:O	26:DD:149:ASN:HB2	1.94	0.67
28:DP:31:VAL:O	28:DP:32:VAL:HB	1.93	0.67
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.76	0.67
51:DZ:5:CYS:CB	51:DZ:10:LYS:H	2.07	0.67
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.77	0.67
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.75	0.67
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.58	0.67
23:BB:181:A:H2'	23:BB:182:A:H8	1.56	0.67
23:BB:609:A:H2'	23:BB:610:C:O4'	1.94	0.67
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.30	0.67
26:BD:33:ARG:CZ	26:BD:74:GLU:HB3	2.24	0.67
33:B1:34:GLU:HB3	33:B1:49:LYS:HD3	1.75	0.67
48:BG:148:ARG:HB2	48:BG:152:ARG:NH2	2.09	0.67
1:CA:484:G:H4'	1:CA:485:U:H5"	1.76	0.67
1:CA:806:C:H2'	1:CA:807:A:C8	2.29	0.67
1:CA:834:U:H2'	1:CA:835:U:C6	2.30	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
23:DB:1373:A:H2'	23:DB:1374:G:O4'	1.95	0.67
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.30	0.67
23:DB:1509:A:H5'	23:DB:1510:G:H5'	1.75	0.67
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	1.76	0.67
40:DH:88:GLY:O	40:DH:124:THR:HA	1.94	0.67
41:DJ:23:LYS:HE3	41:DJ:142:ILE:HG12	1.76	0.67
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.75	0.67
46:DU:48:VAL:C	46:DU:53:GLN:HG3	2.15	0.67
51:DZ:5:CYS:HB2	51:DZ:10:LYS:HB3	1.76	0.67
2:AC:26:LYS:HE2	2:AC:27:GLU:HG3	1.75	0.67
3:AD:25:ARG:HH11	3:AD:25:ARG:HB2	1.60	0.67
18:AS:49:ALA:HA	18:AS:57:VAL:O	1.95	0.67
23:BB:364:C:H2'	23:BB:365:U:H6	1.55	0.67
23:BB:1309:G:OP1	36:B2:9:VAL:HG12	1.94	0.67
23:BB:2886:A:H3'	23:BB:2887:A:H8	1.57	0.67
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.93	0.67
3:CD:103:ARG:HH21	3:CD:110:ARG:NH2	1.93	0.67
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	1.75	0.67
13:CN:26:LEU:HD11	13:CN:44:VAL:HG22	1.76	0.67
22:DA:25:U:OP1	22:DA:25:U:H3'	1.94	0.67
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.59	0.67
26:DD:105:LYS:H	26:DD:106:LYS:HZ3	1.42	0.67
46:DU:70:ALA:HB1	46:DU:79:ALA:CB	2.24	0.67
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.74	0.67
1:AA:195:A:H2'	1:AA:196:A:C8	2.28	0.67
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.77	0.67
13:AN:24:ALA:O	13:AN:27:LYS:HG2	1.94	0.67
23:BB:974:G:OP2	49:BR:78:ARG:HD3	1.95	0.67
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.95	0.67
49:BR:5:PHE:O	49:BR:11:GLN:HA	1.95	0.67
51:BZ:40:VAL:HG22	51:BZ:45:ARG:O	1.95	0.67
53:B6:77:LYS:CE	53:B6:94:ASN:HD21	2.02	0.67
2:CC:116:ALA:O	2:CC:119:ILE:HG22	1.95	0.67
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.10	0.67
23:DB:414:C:H2'	23:DB:415:A:C8	2.30	0.67
23:DB:1390:U:O2'	23:DB:1391:U:H5'	1.94	0.67
23:DB:1872:A:H2'	23:DB:1873:G:O4'	1.95	0.67
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.67
25:DC:149:LYS:HD3	25:DC:152:GLN:HE22	1.60	0.67
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.24	0.67
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.28	0.67
10:AK:124:LYS:HA	21:AU:34:ARG:CB	2.20	0.67
18:AS:27:LYS:HG3	18:AS:28:LYS:HD2	1.75	0.67
23:BB:1778:U:H2'	23:BB:1784:A:N6	2.09	0.67
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.75	0.67
25:BC:32:LEU:O	25:BC:63:ILE:HG12	1.94	0.67
28:BP:31:VAL:HG12	28:BP:38:ARG:O	1.94	0.67
40:BH:65:ALA:O	40:BH:68:ARG:HD2	1.94	0.67
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.74	0.67
1:CA:621:A:H2'	1:CA:622:A:C8	2.30	0.67
1:CA:848:C:H2'	1:CA:849:G:O4'	1.95	0.67
9:CJ:24:GLU:HG2	9:CJ:90:LEU:HD21	1.76	0.67
23:DB:362:A:N3	23:DB:362:A:H2'	2.10	0.67
23:DB:365:U:H2'	23:DB:366:C:C6	2.29	0.67
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.08	0.67
57:DB:3574:HOH:O	25:DC:230:PRO:HA	1.93	0.67
26:DD:105:LYS:HD2	26:DD:177:VAL:HG22	1.77	0.67
29:DE:22:ASP:O	29:DE:107:SER:HB2	1.95	0.67
41:DJ:3:THR:HG21	44:DQ:60:TRP:HE1	1.59	0.67
47:DF:103:ILE:HD11	47:DF:174:PHE:HA	1.75	0.67
52:DW:24:ARG:HD2	52:DW:65:LYS:HG2	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:926:G:N2	1:AA:1505:G:H2'	2.09	0.67
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.09	0.67
23:BB:704:G:H2'	23:BB:726:G:H22	1.59	0.67
23:BB:1597:A:H5"	23:BB:1598:A:H5'	1.76	0.67
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.76	0.67
23:BB:2749:A:H3'	23:BB:2750:A:H5"	1.77	0.67
43:BO:51:ALA:HB3	43:BO:78:VAL:HG22	1.77	0.67
1:CA:335:C:H2'	1:CA:336:A:H8	1.60	0.67
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.77	0.67
10:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.76	0.67
13:CN:26:LEU:HG	13:CN:30:ILE:HD13	1.75	0.67
18:CS:42:ASN:ND2	18:CS:43:MET:HG2	2.09	0.67
19:CT:66:ILE:HG13	19:CT:70:LYS:HE3	1.76	0.67
20:CB:63:LYS:HA	20:CB:224:ARG:HH11	1.60	0.67
23:DB:27:G:N2	23:DB:512:G:H2'	2.09	0.67
23:DB:90:U:H3'	23:DB:91:A:C5'	2.25	0.67
23:DB:2305:U:H5"	47:DF:130:GLY:HA3	1.75	0.67
29:DE:109:LEU:HD13	29:DE:180:LEU:HD13	1.75	0.67
49:DR:39:LEU:HA	49:DR:53:PHE:HA	1.77	0.67
51:DZ:33:LEU:HA	51:DZ:52:SER:HA	1.77	0.67
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.76	0.67
1:AA:1320:C:OP2	18:AS:2:ARG:HA	1.94	0.67
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.77	0.67
16:AQ:24:ILE:HD11	16:AQ:43:LEU:HD13	1.76	0.67
16:AQ:46:HIS:HB2	16:AQ:70:LYS:HE2	1.76	0.67
23:BB:1172:C:H3'	23:BB:1173:U:C6	2.29	0.67
23:BB:2091:C:H1'	51:BZ:34:HIS:CD2	2.30	0.67
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.75	0.67
38:BM:42:THR:HB	38:BM:45:GLN:HG3	1.75	0.67
40:BH:27:ARG:H	40:BH:31:VAL:CG2	2.08	0.67
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	1.77	0.67
1:CA:17:U:H2'	1:CA:18:C:H6	1.57	0.67
1:CA:1254:A:H5'	1:CA:1356:G:H4'	1.75	0.67
13:CN:27:LYS:HG3	13:CN:28:ALA:H	1.60	0.67
23:DB:848:C:H2'	23:DB:849:A:H8	1.59	0.67
23:DB:1139:G:O2'	23:DB:1140:C:H5'	1.94	0.67
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	1.94	0.67
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.60	0.67
34:D3:40:LYS:HA	34:D3:43:LEU:HD12	1.76	0.67
48:DG:15:ASP:CB	48:DG:26:LYS:H	2.07	0.67
7:AH:51:GLU:HG2	7:AH:52:GLY:H	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:57:ASN:HB2	20:AB:219:THR:O	1.95	0.67
23:BB:27:G:N2	23:BB:512:G:H2'	2.09	0.67
23:BB:1176:U:H3'	23:BB:1177:G:H8	1.59	0.67
23:BB:1727:C:H2'	23:BB:1728:C:H6	1.60	0.67
23:BB:2484:G:OP1	38:BM:44:ARG:HD3	1.95	0.67
23:BB:2720:U:H5"	28:BP:52:ARG:HH21	1.60	0.67
28:BP:31:VAL:O	28:BP:32:VAL:HB	1.95	0.67
47:BF:78:ILE:H	47:BF:79:ARG:NH1	1.93	0.67
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.95	0.67
53:B6:18:LEU:HD21	53:B6:171:LYS:HD2	1.77	0.67
53:B6:55:ILE:HG23	53:B6:56:ALA:N	2.08	0.67
1:CA:736:C:H2'	1:CA:737:C:C6	2.30	0.67
9:CJ:37:ARG:NH1	9:CJ:77:VAL:HG21	2.10	0.67
18:CS:5:LYS:C	18:CS:6:LYS:HD2	2.15	0.67
18:CS:27:LYS:HG3	18:CS:28:LYS:HD2	1.77	0.67
20:CB:185:ILE:HA	20:CB:199:ILE:HB	1.77	0.67
23:DB:1558:C:H4'	23:DB:1559:U:C5'	2.25	0.67
26:DD:14:ILE:HG22	26:DD:22:ILE:O	1.95	0.67
29:DE:58:LYS:C	29:DE:60:TRP:H	1.98	0.67
32:D4:24:ARG:HG2	32:D4:36:ARG:HG3	1.77	0.67
53:D6:81:LYS:HA	53:D6:84:ARG:NH2	2.09	0.67
1:AA:147:G:H2'	1:AA:148:G:H8	1.59	0.66
2:AC:6:PRO:HA	2:AC:9:ILE:HG22	1.76	0.66
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.77	0.66
6:AG:149:ALA:N	10:AK:55:ARG:HH21	1.91	0.66
20:AB:20:ARG:CZ	20:AB:20:ARG:HA	2.24	0.66
30:BY:40:THR:O	30:BY:43:ILE:HG23	1.95	0.66
45:BS:43:ALA:HA	45:BS:46:LEU:HD12	1.75	0.66
47:BF:62:GLN:HG3	47:BF:91:ARG:NH1	2.10	0.66
53:B6:42:LYS:HB3	53:B6:49:HIS:O	1.95	0.66
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.76	0.66
3:CD:171:GLU:HB2	3:CD:180:THR:HB	1.77	0.66
12:CM:109:LYS:HD3	12:CM:113:LYS:HE3	1.77	0.66
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	1.95	0.66
18:CS:43:MET:O	18:CS:46:LEU:HB2	1.95	0.66
25:DC:204:LEU:HD23	25:DC:209:ALA:HB1	1.76	0.66
29:DE:109:LEU:HD12	29:DE:112:LEU:HD12	1.76	0.66
43:DO:34:HIS:HB3	43:DO:36:TYR:HE2	1.60	0.66
47:DF:37:MET:HE1	47:DF:149:ARG:HD2	1.77	0.66
47:DF:78:ILE:H	47:DF:79:ARG:HH11	1.41	0.66
1:AA:634:C:H2'	1:AA:635:A:H8	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:64:VAL:HG12	5:AF:65:GLU:H	1.59	0.66
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.77	0.66
23:BB:296:U:H2'	23:BB:297:G:H8	1.59	0.66
23:BB:2001:C:H4'	23:BB:2689:U:O2'	1.95	0.66
40:BH:134:VAL:HG13	40:BH:135:HIS:H	1.59	0.66
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.59	0.66
2:CC:6:PRO:HA	2:CC:9:ILE:HG22	1.77	0.66
3:CD:84:ASN:ND2	4:CE:101:GLY:HA3	2.09	0.66
9:CJ:9:ARG:CB	9:CJ:99:GLN:HB3	2.23	0.66
13:CN:17:ASP:O	13:CN:21:ALA:HB3	1.94	0.66
20:CB:20:ARG:CZ	20:CB:20:ARG:HA	2.25	0.66
23:DB:21:A:H2'	23:DB:22:C:C6	2.30	0.66
23:DB:38:A:O2'	29:DE:43:THR:HA	1.95	0.66
23:DB:594:U:H2'	23:DB:595:C:H6	1.60	0.66
23:DB:704:G:H2'	23:DB:726:G:H22	1.60	0.66
23:DB:1176:U:H2'	23:DB:1177:G:C8	2.30	0.66
30:DY:2:LYS:HD3	30:DY:2:LYS:H	1.59	0.66
45:DS:27:LYS:O	45:DS:32:ALA:HB2	1.95	0.66
1:AA:16:A:O2'	1:AA:17:U:H5'	1.94	0.66
1:AA:108:G:O6	19:AT:9:ARG:HG2	1.96	0.66
1:AA:269:C:H2'	1:AA:270:A:H8	1.58	0.66
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.58	0.66
13:AN:27:LYS:HG3	13:AN:28:ALA:H	1.60	0.66
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.24	0.66
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.59	0.66
26:BD:113:SER:HB3	26:BD:167:ASN:N	2.10	0.66
34:B3:40:LYS:HA	34:B3:43:LEU:HD12	1.77	0.66
35:BV:53:LYS:HA	35:BV:53:LYS:NZ	2.10	0.66
40:BH:2:GLN:O	40:BH:3:VAL:HG22	1.96	0.66
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.28	0.66
1:CA:1314:C:H41	18:CS:3:SER:HB3	1.60	0.66
3:CD:97:LEU:HB2	3:CD:134:TYR:HB3	1.76	0.66
25:DC:94:LEU:HD13	25:DC:100:ARG:HD3	1.76	0.66
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.77	0.66
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.78	0.66
5:AF:29:ILE:HG22	5:AF:34:GLY:HA3	1.77	0.66
23:BB:224:U:O4	23:BB:420:C:H5'	1.95	0.66
23:BB:594:U:H2'	23:BB:595:C:C6	2.31	0.66
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.30	0.66
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.10	0.66
48:BG:104:LEU:HB2	48:BG:112:VAL:HB	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:108:G:O6	19:CT:9:ARG:HG2	1.95	0.66
1:CA:336:A:O2'	1:CA:337:G:H5'	1.95	0.66
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.61	0.66
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.09	0.66
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.78	0.66
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.77	0.66
23:DB:1583:A:H5"	23:DB:1584:U:OP1	1.95	0.66
39:DX:34:SER:HB2	39:DX:36:GLN:OE1	1.96	0.66
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	1.94	0.66
49:DR:2:TYR:HB2	49:DR:42:ALA:HB2	1.78	0.66
2:AC:119:ILE:HG21	2:AC:197:VAL:HG11	1.78	0.66
12:AM:87:GLY:HA2	12:AM:90:HIS:HD2	1.60	0.66
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.60	0.66
23:BB:848:C:H2'	23:BB:849:A:H8	1.60	0.66
25:BC:67:LYS:HD3	25:BC:150:GLY:HA2	1.76	0.66
38:BM:42:THR:O	38:BM:44:ARG:N	2.29	0.66
41:BJ:105:VAL:O	41:BJ:109:LEU:HG	1.96	0.66
53:B6:3:LEU:HD12	53:B6:143:LEU:HD23	1.78	0.66
1:CA:517:G:H22	1:CA:533:A:P	2.18	0.66
1:CA:634:C:H2'	1:CA:635:A:H8	1.61	0.66
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.31	0.66
16:CQ:8:GLN:HA	16:CQ:59:GLU:HA	1.78	0.66
20:CB:83:ALA:O	20:CB:88:GLN:HB2	1.96	0.66
23:DB:1458:U:C5'	23:DB:1459:G:H5'	2.26	0.66
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.31	0.66
23:DB:2080:A:OP1	51:DZ:20:HIS:HB3	1.95	0.66
23:DB:2138:G:H2'	23:DB:2139:U:O4'	1.96	0.66
26:DD:113:SER:HB3	26:DD:167:ASN:N	2.10	0.66
37:DL:47:ARG:HG2	37:DL:50:PHE:HB2	1.75	0.66
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.75	0.66
1:AA:1532:U:C2	1:AA:1534:A:H5'	2.30	0.66
20:AB:83:ALA:O	20:AB:88:GLN:HB2	1.96	0.66
21:AU:3:ILE:HG21	21:AU:19:LYS:HG3	1.76	0.66
23:BB:526:A:N6	23:BB:2626:C:H4'	2.11	0.66
23:BB:1390:U:O2'	23:BB:1391:U:H5'	1.95	0.66
23:BB:1872:A:H2'	23:BB:1873:G:O4'	1.96	0.66
23:BB:2066:C:O2'	23:BB:2067:G:H5'	1.95	0.66
28:BP:52:ARG:HG2	28:BP:52:ARG:HH11	1.59	0.66
40:BH:27:ARG:HH11	51:BZ:64:ILE:HD11	1.61	0.66
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.26	0.66
47:BF:71:LYS:HG2	47:BF:73:VAL:H	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:602:A:O2'	1:CA:603:U:H5'	1.96	0.66
1:CA:1027:C:H2'	1:CA:1028:C:C6	2.31	0.66
2:CC:8:GLY:HA3	13:CN:88:MET:SD	2.35	0.66
6:CG:14:ASP:HB3	6:CG:18:GLY:H	1.58	0.66
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.11	0.66
23:DB:609:A:H2'	23:DB:610:C:O4'	1.95	0.66
23:DB:2027:G:O2'	23:DB:2028:U:H5'	1.95	0.66
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	2.10	0.66
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.25	0.66
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.11	0.66
47:DF:102:LEU:HA	47:DF:106:ALA:HB2	1.78	0.66
1:AA:1002:G:H2'	1:AA:1003:G:O4'	1.95	0.66
1:AA:1137:C:O2'	1:AA:1138:G:H5"	1.96	0.66
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	1.96	0.66
23:BB:547:A:H3'	23:BB:548:G:C8	2.29	0.66
23:BB:1469:A:H2'	23:BB:1470:A:H8	1.60	0.66
44:BQ:30:VAL:CG1	44:BQ:33:VAL:HG22	2.25	0.66
49:BR:2:TYR:HB2	49:BR:42:ALA:HB2	1.77	0.66
53:B6:114:LEU:O	53:B6:118:VAL:HG23	1.95	0.66
1:CA:135:C:O2	15:CP:1:MET:HB2	1.95	0.66
1:CA:1314:C:N4	18:CS:3:SER:HB3	2.10	0.66
23:DB:982:C:O2	23:DB:982:C:H5'	1.96	0.66
23:DB:1033:U:H5	32:D4:15:LYS:HE3	1.60	0.66
23:DB:1173:U:H2'	23:DB:1174:U:C6	2.30	0.66
41:DJ:64:VAL:O	41:DJ:68:LYS:HD2	1.96	0.66
47:DF:101:ARG:CZ	47:DF:138:PRO:HB2	2.26	0.66
48:DG:17:LYS:HZ2	48:DG:17:LYS:HA	1.61	0.66
1:AA:17:U:H2'	1:AA:18:C:H6	1.61	0.66
1:AA:868:C:H2'	1:AA:869:G:O4'	1.94	0.66
20:AB:120:SER:HA	20:AB:125:PHE:CB	2.26	0.66
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.77	0.66
25:BC:94:LEU:HB2	25:BC:100:ARG:HD3	1.78	0.66
53:B6:51:PRO:HG2	53:B6:53:ASN:OD1	1.96	0.66
1:CA:636:U:H2'	1:CA:637:C:C6	2.31	0.66
3:CD:25:ARG:HH11	3:CD:26:ALA:N	1.91	0.66
5:CF:64:VAL:HG12	5:CF:65:GLU:H	1.61	0.66
8:CI:59:LYS:HB3	8:CI:60:LEU:HD23	1.78	0.66
42:DN:90:ARG:HB3	42:DN:94:TYR:CE1	2.31	0.66
46:DU:95:PHE:CE1	46:DU:102:ILE:HB	2.27	0.66
47:DF:71:LYS:HG2	47:DF:73:VAL:H	1.61	0.66
50:DT:54:GLU:HG3	50:DT:90:GLY:H	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.31	0.66
11:AL:17:LYS:HE3	11:AL:17:LYS:N	2.11	0.66
20:AB:26:MET:SD	20:AB:192:PRO:HD3	2.36	0.66
21:AU:36:PHE:HA	21:AU:39:LYS:HE3	1.76	0.66
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.60	0.66
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.29	0.66
27:BK:63:VAL:HG21	27:BK:85:VAL:HG23	1.76	0.66
31:B0:21:LEU:HD13	45:BS:23:LEU:HD11	1.78	0.66
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.95	0.66
12:CM:44:ILE:HA	12:CM:47:LEU:HD12	1.77	0.66
23:DB:1021:A:H61	23:DB:1142:A:N6	1.94	0.66
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.30	0.66
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.31	0.66
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.31	0.66
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.09	0.66
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.60	0.66
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.95	0.66
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.60	0.66
49:DR:34:GLU:HG2	49:DR:60:LYS:HG2	1.77	0.66
3:AD:2:ARG:NH1	3:AD:114:ARG:HG3	2.11	0.66
6:AG:149:ALA:CB	10:AK:55:ARG:HE	2.01	0.66
23:BB:1203:U:H4'	37:BL:3:LEU:HD12	1.78	0.66
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.11	0.66
26:BD:148:GLN:O	26:BD:149:ASN:HB2	1.96	0.66
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.61	0.66
48:BG:15:ASP:CB	48:BG:26:LYS:H	2.07	0.66
1:CA:235:C:H2'	1:CA:236:A:C8	2.31	0.66
23:DB:62:U:H3'	23:DB:63:A:H8	1.61	0.66
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.30	0.66
23:DB:2377:A:H2'	23:DB:2378:A:C8	2.31	0.66
26:DD:111:GLY:H	26:DD:194:PRO:CG	2.08	0.66
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.76	0.66
29:DE:154:ASP:OD2	29:DE:157:LEU:HB3	1.96	0.66
38:DM:35:ALA:HB2	38:DM:100:LYS:H	1.60	0.66
40:DH:27:ARG:H	40:DH:31:VAL:CG2	2.09	0.66
45:DS:95:ARG:HG3	45:DS:97:LEU:HD13	1.78	0.66
47:DF:161:SER:OG	47:DF:164:GLU:HG3	1.94	0.66
1:AA:193:C:H2'	1:AA:194:C:C6	2.31	0.65
20:AB:63:LYS:HA	20:AB:224:ARG:HH11	1.60	0.65
23:BB:107:G:O2'	23:BB:108:G:H5'	1.96	0.65
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.11	0.65
23:BB:2022:U:O2'	23:BB:2617:U:H5'	1.96	0.65
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.28	0.65
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.31	0.65
1:CA:780:A:O2'	1:CA:781:A:H5"	1.95	0.65
1:CA:868:C:H2'	1:CA:869:G:O4'	1.96	0.65
1:CA:1086:U:H3	1:CA:1099:G:H22	1.43	0.65
2:CC:104:GLU:HG2	2:CC:105:VAL:H	1.61	0.65
3:CD:53:GLN:HA	3:CD:198:LEU:HD22	1.78	0.65
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.16	0.65
23:DB:62:U:O2'	23:DB:63:A:H5'	1.96	0.65
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.61	0.65
33:D1:3:GLY:O	33:D1:4:ILE:HG12	1.96	0.65
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.11	0.65
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.97	0.65
1:AA:860:A:H2'	1:AA:861:G:O4'	1.96	0.65
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.77	0.65
23:BB:1739:A:H2'	23:BB:1740:G:O4'	1.96	0.65
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.30	0.65
32:B4:2:LYS:HG2	32:B4:4:ARG:NE	2.12	0.65
37:BL:74:THR:HA	37:BL:107:PHE:O	1.95	0.65
38:BM:30:SER:HA	38:BM:133:LYS:HB2	1.78	0.65
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.11	0.65
15:CP:57:ILE:O	15:CP:61:VAL:HG23	1.96	0.65
23:DB:181:A:H2'	23:DB:182:A:H8	1.59	0.65
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.31	0.65
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	1.77	0.65
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.61	0.65
23:DB:2884:U:O2	31:D0:49:ARG:HG2	1.97	0.65
25:DC:94:LEU:HB2	25:DC:100:ARG:HD3	1.77	0.65
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.61	0.65
36:D2:21:ARG:HD2	36:D2:43:THR:HG21	1.77	0.65
39:DX:56:LEU:C	39:DX:58:ASN:H	2.00	0.65
40:DH:73:ASN:OD1	40:DH:140:ALA:HB1	1.95	0.65
1:AA:764:C:C2'	1:AA:765:G:H5'	2.26	0.65
1:AA:802:A:H2'	1:AA:803:G:O4'	1.95	0.65
7:AH:55:LYS:HA	7:AH:55:LYS:HZ1	1.62	0.65
18:AS:5:LYS:C	18:AS:6:LYS:HD2	2.17	0.65
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.32	0.65
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.30	0.65
39:BX:48:ARG:O	39:BX:51:ALA:HB3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:116:ARG:NH1	40:BH:139:PHE:HB2	2.12	0.65
49:BR:34:GLU:HG2	49:BR:60:LYS:HG2	1.79	0.65
53:B6:77:LYS:O	53:B6:81:LYS:HG2	1.96	0.65
1:CA:57:G:H2'	1:CA:58:C:C6	2.32	0.65
1:CA:203:G:H1'	1:CA:465:A:H61	1.60	0.65
22:DA:32:U:H1'	22:DA:52:A:N7	2.11	0.65
22:DA:37:C:H2'	22:DA:38:C:O4'	1.97	0.65
23:DB:1174:U:H1'	23:DB:1176:U:C2	2.30	0.65
23:DB:2748:A:H4'	48:DG:3:VAL:HG21	1.78	0.65
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.15	0.65
1:AA:736:C:H2'	1:AA:737:C:C6	2.31	0.65
2:AC:116:ALA:O	2:AC:119:ILE:HG22	1.96	0.65
3:AD:116:LEU:HD21	3:AD:153:ARG:HD2	1.78	0.65
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.78	0.65
13:AN:53:ASP:HA	13:AN:58:ARG:CD	2.26	0.65
18:AS:18:VAL:CG2	18:AS:43:MET:HB3	2.26	0.65
23:BB:982:C:H5'	23:BB:982:C:O2	1.96	0.65
40:BH:114:GLU:HB3	40:BH:134:VAL:HA	1.79	0.65
47:BF:2:LYS:HD2	47:BF:100:GLU:HG2	1.79	0.65
1:CA:577:G:O2'	1:CA:578:C:H5'	1.97	0.65
1:CA:764:C:C2'	1:CA:765:G:H5'	2.26	0.65
12:CM:78:ARG:O	12:CM:82:LEU:HB2	1.96	0.65
13:CN:53:ASP:HA	13:CN:58:ARG:CD	2.25	0.65
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.32	0.65
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.61	0.65
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.96	0.65
40:DH:113:SER:N	40:DH:132:PHE:HE1	1.94	0.65
1:AA:68:G:H5'	1:AA:171:A:H1'	1.78	0.65
1:AA:239:U:OP1	1:AA:239:U:H4'	1.96	0.65
1:AA:336:A:O2'	1:AA:337:G:H5'	1.97	0.65
1:AA:781:A:H2'	1:AA:782:A:H5'	1.76	0.65
9:AJ:37:ARG:HA	9:AJ:37:ARG:NE	2.11	0.65
23:BB:321:U:H1'	29:BE:162:ARG:HH11	1.61	0.65
23:BB:345:A:H1'	23:BB:346:A:C2	2.31	0.65
23:BB:717:C:H3'	23:BB:718:A:H5"	1.77	0.65
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.79	0.65
53:B6:14:MET:HB3	53:B6:168:PHE:CD2	2.32	0.65
23:DB:811:U:OP2	37:DL:20:GLY:HA2	1.97	0.65
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.60	0.65
24:DI:25:PRO:O	24:DI:29:GLN:HG3	1.96	0.65
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.78	0.65
27:DK:63:VAL:HG21	27:DK:85:VAL:HG23	1.76	0.65
36:D2:21:ARG:HH21	36:D2:43:THR:HG21	1.60	0.65
45:DS:29:VAL:HA	45:DS:32:ALA:HB3	1.78	0.65
49:DR:49:ILE:HD13	49:DR:53:PHE:H	1.60	0.65
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.32	0.65
3:AD:171:GLU:HB2	3:AD:180:THR:HB	1.78	0.65
8:AI:64:ILE:H	8:AI:64:ILE:HD12	1.61	0.65
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	1.96	0.65
13:AN:25:GLU:HB2	13:AN:29:ILE:HD11	1.78	0.65
23:BB:121:G:H2'	23:BB:122:G:C8	2.31	0.65
23:BB:773:U:H4'	25:BC:45:ASN:O	1.97	0.65
23:BB:1993:U:H4'	26:BD:133:THR:HG22	1.78	0.65
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.62	0.65
23:BB:2579:C:O2'	26:BD:136:ASN:HA	1.97	0.65
25:BC:86:ARG:NH1	25:BC:86:ARG:HB3	2.11	0.65
25:BC:128:THR:HA	25:BC:190:THR:CA	2.25	0.65
32:B4:7:VAL:HB	32:B4:36:ARG:O	1.97	0.65
49:BR:49:ILE:HD13	49:BR:53:PHE:H	1.59	0.65
1:CA:270:A:H2'	1:CA:271:C:H6	1.59	0.65
1:CA:501:C:H2'	1:CA:502:A:H8	1.62	0.65
2:CC:72:PRO:O	2:CC:76:ILE:HG12	1.96	0.65
3:CD:2:ARG:NH1	3:CD:114:ARG:HG3	2.12	0.65
6:CG:21:LEU:HG	6:CG:22:LEU:H	1.61	0.65
6:CG:102:TRP:HZ3	6:CG:137:ARG:HB2	1.62	0.65
21:CU:3:ILE:HG21	21:CU:19:LYS:HG3	1.76	0.65
23:DB:857:G:C2'	23:DB:858:G:H5'	2.27	0.65
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.32	0.65
23:DB:1460:U:H4'	23:DB:1461:C:O5'	1.97	0.65
23:DB:1739:A:H2'	23:DB:1740:G:O4'	1.96	0.65
23:DB:2630:G:H2'	23:DB:2631:G:H8	1.62	0.65
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.32	0.65
25:DC:41:GLY:HA3	25:DC:53:ILE:HG21	1.78	0.65
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.24	0.65
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.77	0.65
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	2.11	0.65
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.78	0.65
1:AA:6:G:H4'	1:AA:298:A:H4'	1.79	0.65
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.62	0.65
2:AC:81:GLU:HG3	2:AC:82:ASP:N	2.11	0.65
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.32	0.65
23:BB:1790:C:H2'	23:BB:1791:A:C8	2.32	0.65
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.62	0.65
26:BD:34:VAL:HA	26:BD:50:VAL:HG12	1.77	0.65
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.11	0.65
45:BS:6:LYS:HB3	45:BS:104:THR:HA	1.78	0.65
48:BG:84:LYS:HG3	48:BG:131:VAL:CA	2.27	0.65
1:CA:524:G:H2'	1:CA:525:C:C6	2.32	0.65
15:CP:76:LYS:NZ	15:CP:80:LYS:HD3	2.11	0.65
20:CB:57:ASN:HB2	20:CB:219:THR:O	1.97	0.65
22:DA:111:U:H2'	22:DA:112:G:C8	2.32	0.65
23:DB:851:C:O4'	30:DY:46:MET:HG2	1.96	0.65
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.61	0.65
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.29	0.65
44:DQ:27:ARG:HA	44:DQ:33:VAL:HG23	1.79	0.65
1:AA:806:C:H2'	1:AA:807:A:C8	2.32	0.65
1:AA:859:G:H2'	1:AA:860:A:C8	2.31	0.65
1:AA:920:U:H2'	1:AA:921:U:H6	1.62	0.65
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.11	0.65
3:AD:97:LEU:HB2	3:AD:134:TYR:HB3	1.77	0.65
23:BB:1192:G:O2'	23:BB:1193:G:H5'	1.96	0.65
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.61	0.65
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.32	0.65
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.32	0.65
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.60	0.65
36:B2:21:ARG:HD2	36:B2:43:THR:HG21	1.78	0.65
45:BS:22:ASP:HA	45:BS:25:ARG:NH1	2.12	0.65
1:CA:394:G:H2'	1:CA:395:C:H6	1.59	0.65
1:CA:781:A:H2'	1:CA:782:A:H5'	1.78	0.65
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.32	0.65
23:DB:1813:G:N3	25:DC:49:THR:HG21	2.11	0.65
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.31	0.65
37:DL:123:ARG:HA	37:DL:143:GLU:CB	2.21	0.65
53:D6:77:LYS:O	53:D6:81:LYS:HG3	1.96	0.65
1:AA:793:U:O2	1:AA:1516:G:H4'	1.97	0.65
16:AQ:46:HIS:HB2	16:AQ:66:LEU:HD13	1.79	0.65
22:BA:25:U:OP1	22:BA:25:U:H3'	1.96	0.65
23:BB:1171:G:C4	23:BB:1172:C:H1'	2.32	0.65
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.31	0.65
23:BB:2820:A:OP1	42:BN:4:ARG:HA	1.97	0.65
25:BC:196:ASN:ND2	25:BC:199:HIS:HB2	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.77	0.65
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.78	0.65
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.32	0.65
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.77	0.65
20:CB:172:ILE:HG22	20:CB:176:ASN:HD21	1.61	0.65
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.12	0.65
23:DB:1012:U:O4	41:DJ:30:THR:HG21	1.97	0.65
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.60	0.65
23:DB:1192:G:O2'	23:DB:1193:G:H5'	1.96	0.65
23:DB:1827:U:O2'	23:DB:1828:G:H5'	1.97	0.65
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.32	0.65
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.96	0.65
25:DC:239:PHE:O	25:DC:241:LYS:HG3	1.96	0.65
40:DH:31:VAL:O	40:DH:32:PRO:C	2.34	0.65
46:DU:72:PHE:HA	46:DU:78:LYS:O	1.97	0.65
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.96	0.65
1:AA:1314:C:N4	18:AS:3:SER:HB3	2.12	0.65
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.97	0.65
23:BB:21:A:H2'	23:BB:22:C:C6	2.32	0.65
23:BB:664:G:H2'	23:BB:665:U:H6	1.62	0.65
23:BB:2710:C:H2'	23:BB:2711:A:H8	1.62	0.65
40:BH:57:LYS:HG3	40:BH:58:LEU:N	2.12	0.65
40:BH:90:LEU:HD21	40:BH:146:VAL:HG11	1.79	0.65
46:BU:48:VAL:C	46:BU:53:GLN:HG3	2.16	0.65
46:BU:70:ALA:HB1	46:BU:79:ALA:CB	2.27	0.65
5:CF:53:LYS:HE2	5:CF:53:LYS:HA	1.79	0.65
10:CK:110:THR:HG22	21:CU:4:LYS:HA	1.79	0.65
15:CP:25:ARG:HD3	15:CP:25:ARG:H	1.61	0.65
23:DB:559:G:H21	44:DQ:51:GLN:NE2	1.95	0.65
23:DB:594:U:H2'	23:DB:595:C:C6	2.31	0.65
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.61	0.65
23:DB:1355:G:O2'	23:DB:1356:G:H5'	1.97	0.65
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.32	0.65
23:DB:1788:C:O2'	23:DB:1789:A:H5'	1.97	0.65
25:DC:67:LYS:HD3	25:DC:150:GLY:HA2	1.77	0.65
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.61	0.65
49:DR:19:THR:HB	49:DR:97:LYS:HA	1.78	0.65
1:AA:147:G:H2'	1:AA:148:G:C8	2.32	0.64
1:AA:264:C:O2'	16:AQ:65:PRO:HG2	1.98	0.64
1:AA:270:A:H2'	1:AA:271:C:H6	1.61	0.64
1:AA:1239:A:H62	1:AA:1299:A:H62	1.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:593:U:H2'	23:BB:594:U:C6	2.33	0.64
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.62	0.64
46:BU:85:ARG:HD3	46:BU:86:PHE:N	2.12	0.64
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.32	0.64
1:CA:147:G:H2'	1:CA:148:G:C8	2.31	0.64
1:CA:1002:G:H2'	1:CA:1003:G:O4'	1.96	0.64
3:CD:148:ALA:O	3:CD:151:GLN:HB2	1.97	0.64
5:CF:29:ILE:HG22	5:CF:34:GLY:HA3	1.79	0.64
16:CQ:46:HIS:HB2	16:CQ:66:LEU:HD13	1.78	0.64
23:DB:27:G:H1'	23:DB:513:A:N6	2.12	0.64
23:DB:321:U:H1'	29:DE:162:ARG:HH11	1.62	0.64
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.61	0.64
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.60	0.64
23:DB:1821:A:H2'	23:DB:1822:C:C6	2.31	0.64
25:DC:64:VAL:HG11	25:DC:66:PHE:CE2	2.32	0.64
27:DK:43:ILE:HG22	27:DK:54:LYS:HA	1.78	0.64
1:AA:394:G:H2'	1:AA:395:C:H6	1.60	0.64
1:AA:797:C:O2'	1:AA:798:U:H5'	1.98	0.64
3:AD:88:ASN:O	3:AD:92:LEU:HD23	1.97	0.64
6:AG:66:GLU:HA	6:AG:69:ARG:HD2	1.79	0.64
7:AH:28:SER:OG	7:AH:56:PRO:HB2	1.96	0.64
23:BB:693:A:H2'	23:BB:694:U:C6	2.32	0.64
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.32	0.64
26:BD:34:VAL:HB	26:BD:48:ILE:HD11	1.78	0.64
37:BL:19:LEU:O	37:BL:21:ARG:HG2	1.97	0.64
37:BL:143:GLU:CG	37:BL:144:GLU:H	2.10	0.64
45:BS:25:ARG:HE	45:BS:73:LYS:NZ	1.95	0.64
1:CA:371:A:O2'	1:CA:372:C:H5'	1.97	0.64
1:CA:1009:U:H1'	1:CA:1021:A:C2	2.32	0.64
6:CG:21:LEU:HD23	6:CG:21:LEU:H	1.62	0.64
19:CT:43:LYS:HE2	19:CT:44:ALA:H	1.61	0.64
23:DB:309:A:H4'	46:DU:15:GLY:HA3	1.79	0.64
23:DB:742:A:H2'	23:DB:743:A:C8	2.33	0.64
25:DC:14:HIS:O	25:DC:203:VAL:HG11	1.97	0.64
25:DC:219:VAL:HG12	25:DC:224:MET:HE2	1.78	0.64
28:DP:20:ARG:O	28:DP:46:VAL:HG21	1.98	0.64
49:DR:66:HIS:ND1	49:DR:94:THR:HG22	2.12	0.64
1:AA:1053:G:N7	1:AA:1200:C:H5"	2.11	0.64
6:AG:21:LEU:HD23	6:AG:21:LEU:H	1.63	0.64
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.79	0.64
23:BB:27:G:H1'	23:BB:513:A:N6	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:170:U:H2'	23:BB:171:U:H6	1.60	0.64
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.32	0.64
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.32	0.64
23:BB:1778:U:H2'	23:BB:1784:A:H62	1.61	0.64
25:BC:94:LEU:HD13	25:BC:100:ARG:HD3	1.79	0.64
33:B1:3:GLY:O	33:B1:4:ILE:HG12	1.98	0.64
35:BV:40:ILE:HD13	35:BV:40:ILE:N	2.12	0.64
45:BS:95:ARG:HG3	45:BS:97:LEU:HD13	1.79	0.64
47:BF:102:LEU:HA	47:BF:106:ALA:HB2	1.78	0.64
1:CA:678:U:H2'	1:CA:679:C:C6	2.33	0.64
3:CD:25:ARG:NH1	3:CD:26:ALA:H	1.92	0.64
4:CE:15:ILE:HD12	4:CE:35:LEU:HG	1.79	0.64
19:CT:60:GLN:HB3	19:CT:65:LEU:HD23	1.77	0.64
23:DB:170:U:H2'	23:DB:171:U:H6	1.62	0.64
23:DB:521:U:H2'	23:DB:522:A:C8	2.33	0.64
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.62	0.64
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.32	0.64
23:DB:1866:A:H2'	23:DB:1867:G:O4'	1.97	0.64
24:DI:126:ARG:HH11	24:DI:126:ARG:HB3	1.62	0.64
40:DH:67:ALA:O	40:DH:70:GLU:HG3	1.96	0.64
45:DS:6:LYS:HB3	45:DS:104:THR:HA	1.79	0.64
51:DZ:40:VAL:HG22	51:DZ:45:ARG:O	1.98	0.64
23:BB:557:C:H2'	23:BB:558:U:C6	2.33	0.64
24:BI:7:TYR:HB2	24:BI:58:ILE:O	1.97	0.64
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.11	0.64
29:BE:136:GLN:NE2	29:BE:139:LYS:HD3	2.12	0.64
39:BX:56:LEU:C	39:BX:58:ASN:H	2.01	0.64
44:BQ:101:ASP:HB2	49:BR:2:TYR:OH	1.98	0.64
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.60	0.64
48:BG:30:GLY:CA	48:BG:78:VAL:HA	2.28	0.64
53:B6:111:ARG:O	53:B6:115:VAL:HG23	1.97	0.64
1:CA:255:G:H2'	1:CA:256:U:C6	2.33	0.64
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.61	0.64
2:CC:119:ILE:HG21	2:CC:197:VAL:HG11	1.79	0.64
4:CE:81:GLN:H	4:CE:146:MET:HE3	1.61	0.64
12:CM:12:LYS:HB3	12:CM:16:ILE:HG23	1.79	0.64
20:CB:52:ALA:O	20:CB:56:LEU:HB2	1.98	0.64
23:DB:664:G:H2'	23:DB:665:U:H6	1.61	0.64
23:DB:1915:U:O5'	23:DB:1915:U:H6	1.81	0.64
23:DB:2066:C:O2'	23:DB:2067:G:H5'	1.96	0.64
23:DB:2635:A:H5'	26:DD:79:LEU:HD23	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.31	0.64
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.98	0.64
29:DE:58:LYS:H	29:DE:58:LYS:HZ2	1.43	0.64
39:DX:21:LEU:HA	39:DX:25:GLN:HE21	1.62	0.64
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.27	0.64
52:DW:49:ASN:HB3	52:DW:81:ILE:CG1	2.28	0.64
15:AP:68:SER:OG	15:AP:71:VAL:HG12	1.98	0.64
16:AQ:8:GLN:HA	16:AQ:59:GLU:HA	1.80	0.64
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.60	0.64
22:BA:75:G:H1	22:BA:102:G:H22	1.42	0.64
23:BB:75:G:H4'	39:BX:48:ARG:HH22	1.62	0.64
23:BB:328:U:H4'	46:BU:65:GLN:NE2	2.13	0.64
23:BB:753:A:H2'	23:BB:754:U:C6	2.32	0.64
23:BB:1355:G:O2'	23:BB:1356:G:H5'	1.96	0.64
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.33	0.64
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.33	0.64
23:BB:2027:G:O2'	23:BB:2028:U:H5'	1.97	0.64
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.28	0.64
23:BB:2884:U:O2	31:B0:49:ARG:HG2	1.98	0.64
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.61	0.64
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.62	0.64
39:BX:21:LEU:HA	39:BX:25:GLN:HE21	1.62	0.64
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD21	2.31	0.64
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.79	0.64
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.80	0.64
1:CA:1239:A:H62	1:CA:1299:A:H62	1.44	0.64
9:CJ:22:THR:OG1	9:CJ:72:ARG:HG3	1.97	0.64
12:CM:6:ILE:O	12:CM:8:ILE:HG23	1.97	0.64
14:CO:11:ILE:HD11	14:CO:30:ALA:HB1	1.80	0.64
14:CO:26:GLU:HA	14:CO:81:LEU:HD11	1.78	0.64
23:DB:125:A:H3'	23:DB:126:A:C5'	2.28	0.64
23:DB:819:A:H5'	23:DB:973:A:N1	2.13	0.64
23:DB:1042:G:H2'	23:DB:1043:C:C6	2.31	0.64
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.62	0.64
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.61	0.64
23:DB:2415:G:H4'	37:DL:66:PHE:HB2	1.79	0.64
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.77	0.64
37:DL:3:LEU:O	37:DL:5:THR:HG23	1.98	0.64
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.79	0.64
43:DO:47:VAL:HG12	43:DO:48:LEU:H	1.61	0.64
50:DT:68:LYS:O	50:DT:69:ARG:HB3	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.18	0.64
1:AA:407:U:O2'	3:AD:112:GLU:HG3	1.97	0.64
18:AS:43:MET:O	18:AS:46:LEU:HB2	1.96	0.64
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.33	0.64
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.32	0.64
25:BC:116:GLN:HG2	25:BC:117:SER:H	1.62	0.64
30:BY:15:ARG:O	30:BY:20:LYS:HE3	1.97	0.64
51:BZ:33:LEU:HA	51:BZ:52:SER:HA	1.79	0.64
52:BW:23:LYS:HZ3	52:BW:24:ARG:HG3	1.62	0.64
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.32	0.64
2:CC:81:GLU:HG3	2:CC:82:ASP:N	2.13	0.64
23:DB:296:U:H2'	23:DB:297:G:H8	1.62	0.64
23:DB:937:C:H2'	23:DB:938:G:H8	1.63	0.64
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.27	0.64
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.33	0.64
29:DE:149:ILE:HG23	29:DE:188:MET:HA	1.78	0.64
30:DY:40:THR:O	30:DY:43:ILE:HG23	1.98	0.64
37:DL:123:ARG:HH11	37:DL:123:ARG:HB3	1.63	0.64
40:DH:113:SER:HB2	40:DH:132:PHE:HZ	1.62	0.64
42:DN:90:ARG:HB3	42:DN:94:TYR:HE1	1.61	0.64
48:DG:30:GLY:CA	48:DG:78:VAL:HA	2.27	0.64
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.32	0.64
1:AA:366:A:H1'	1:AA:395:C:O2	1.98	0.64
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.33	0.64
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.32	0.64
22:BA:28:C:C4	22:BA:56:G:N1	2.66	0.64
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.63	0.64
39:BX:1:MET:O	39:BX:5:GLU:HG2	1.98	0.64
45:BS:29:VAL:HA	45:BS:32:ALA:HB3	1.80	0.64
46:BU:3:LYS:HD3	46:BU:82:VAL:HG21	1.79	0.64
50:BT:1:MET:HG3	50:BT:2:ILE:H	1.61	0.64
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.79	0.64
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.15	0.64
1:CA:269:C:H2'	1:CA:270:A:H8	1.61	0.64
1:CA:678:U:H2'	1:CA:679:C:H6	1.62	0.64
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.80	0.64
6:CG:134:VAL:O	6:CG:138:GLU:HG3	1.97	0.64
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.80	0.64
11:CL:79:ILE:HG22	11:CL:103:CYS:HB2	1.80	0.64
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.63	0.64
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD21	2.33	0.64
43:DO:9:ARG:HG3	43:DO:10:ARG:N	2.13	0.64
44:DQ:30:VAL:HG11	44:DQ:33:VAL:HG22	1.79	0.64
50:DT:69:ARG:HG2	50:DT:73:ARG:O	1.98	0.64
1:AA:57:G:H2'	1:AA:58:C:C6	2.33	0.64
2:AC:104:GLU:HG2	2:AC:105:VAL:H	1.62	0.64
19:AT:60:GLN:HB3	19:AT:65:LEU:HD23	1.79	0.64
22:BA:111:U:H2'	22:BA:112:G:C8	2.33	0.64
23:BB:18:U:H2'	23:BB:19:A:H8	1.63	0.64
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.32	0.64
23:BB:2751:G:H2'	23:BB:2751:G:N3	2.12	0.64
44:BQ:63:ARG:HH21	44:BQ:64:ILE:HD11	1.61	0.64
52:BW:35:ILE:HG12	52:BW:35:ILE:O	1.97	0.64
11:CL:35:ARG:NH1	53:D6:104:PRO:HB3	2.13	0.64
20:CB:26:MET:SD	20:CB:192:PRO:HD3	2.38	0.64
23:DB:18:U:H2'	23:DB:19:A:H8	1.62	0.64
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.32	0.64
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.33	0.64
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.13	0.64
29:DE:136:GLN:NE2	29:DE:139:LYS:HD3	2.12	0.64
35:DV:62:THR:HB	35:DV:71:LYS:HG2	1.79	0.64
38:DM:30:SER:HA	38:DM:133:LYS:HB2	1.79	0.64
40:DH:4:ILE:HG22	40:DH:17:ASP:N	2.12	0.64
42:DN:8:ARG:HH21	42:DN:39:PRO:HB3	1.62	0.64
44:DQ:86:SER:CB	49:DR:51:VAL:HA	2.28	0.64
1:AA:213:G:H3'	1:AA:214:C:H6	1.63	0.64
1:AA:1226:C:C4	12:AM:102:LYS:HB3	2.33	0.64
3:AD:148:ALA:O	3:AD:151:GLN:HB2	1.98	0.64
6:AG:135:LYS:HD3	6:AG:136:LYS:N	2.12	0.64
10:AK:16:SER:HA	10:AK:78:ILE:HA	1.80	0.64
23:BB:131:A:H2'	23:BB:132:G:C8	2.32	0.64
23:BB:2019:A:H4'	44:BQ:33:VAL:HG11	1.78	0.64
23:BB:2306:C:H3'	23:BB:2307:G:H5"	1.79	0.64
23:BB:2801:G:H2'	23:BB:2802:G:C8	2.33	0.64
25:BC:219:VAL:HG12	25:BC:224:MET:HE2	1.79	0.64
29:BE:109:LEU:HD12	29:BE:112:LEU:HD12	1.78	0.64
42:BN:8:ARG:HH21	42:BN:39:PRO:HB3	1.61	0.64
44:BQ:27:ARG:HA	44:BQ:33:VAL:HG23	1.79	0.64
53:B6:42:LYS:HG2	53:B6:51:PRO:HB3	1.80	0.64
53:B6:75:ALA:O	53:B6:79:ILE:HD12	1.98	0.64
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:68:VAL:HG11	6:CG:133:ALA:HB1	1.79	0.64
13:CN:65:GLN:HG2	13:CN:82:LYS:HE2	1.80	0.64
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.32	0.64
23:DB:1256:G:H21	29:DE:77:ILE:HG22	1.62	0.64
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.79	0.64
23:DB:1582:C:H2'	23:DB:1583:A:O4'	1.98	0.64
23:DB:1789:A:P	25:DC:220:ARG:HD3	2.38	0.64
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.61	0.64
26:DD:16:THR:O	28:DP:78:PRO:HG2	1.98	0.64
38:DM:108:VAL:HG13	38:DM:112:LEU:HB3	1.78	0.64
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.80	0.64
52:DW:77:LYS:NZ	52:DW:77:LYS:H	1.96	0.64
1:AA:97:G:H2'	1:AA:98:A:O4'	1.98	0.64
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.60	0.64
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.33	0.64
3:AD:60:VAL:HA	3:AD:63:ILE:HD12	1.80	0.64
5:AF:36:ILE:HA	5:AF:64:VAL:HG13	1.80	0.64
11:AL:120:ARG:HG3	11:AL:121:PRO:HD2	1.79	0.64
18:AS:47:THR:HG23	18:AS:60:PHE:HE1	1.63	0.64
23:BB:857:G:C2'	23:BB:858:G:H5'	2.28	0.64
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.13	0.64
23:BB:1460:U:H4'	23:BB:1461:C:O5'	1.98	0.64
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.11	0.64
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	1.98	0.64
45:BS:82:MET:HB2	45:BS:98:LYS:HB2	1.80	0.64
50:BT:12:ARG:HB3	50:BT:12:ARG:NH1	2.12	0.64
1:CA:239:U:H4'	1:CA:239:U:OP1	1.98	0.64
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.33	0.64
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.33	0.64
20:CB:8:MET:CG	20:CB:9:LEU:H	2.11	0.64
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.07	0.64
23:DB:526:A:N6	23:DB:2626:C:H4'	2.13	0.64
23:DB:543:G:H2'	23:DB:544:C:H4'	1.81	0.64
23:DB:873:C:H2'	23:DB:874:G:H8	1.63	0.64
25:DC:116:GLN:HG2	25:DC:117:SER:H	1.63	0.64
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.62	0.64
33:D1:26:LYS:HB2	33:D1:52:LYS:NZ	2.13	0.64
42:DN:15:SER:O	42:DN:18:GLN:HB2	1.98	0.64
47:DF:37:MET:SD	47:DF:52:ALA:HB1	2.38	0.64
1:AA:1029:U:H2'	1:AA:1031:C:N3	2.14	0.63
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:47:ASP:CG	7:AH:48:PHE:H	2.01	0.63
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.79	0.63
14:AO:11:ILE:HD11	14:AO:30:ALA:HB1	1.81	0.63
20:AB:172:ILE:HG22	20:AB:176:ASN:HD21	1.62	0.63
23:BB:100:U:O2	23:BB:100:U:C2'	2.42	0.63
23:BB:138:U:O5'	23:BB:138:U:H6	1.81	0.63
23:BB:559:G:H21	44:BQ:51:GLN:NE2	1.94	0.63
23:BB:1060:U:OP2	24:BI:74:PRO:HA	1.98	0.63
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.63	0.63
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.81	0.63
25:BC:239:PHE:O	25:BC:241:LYS:HG3	1.98	0.63
32:B4:24:ARG:HG2	32:B4:36:ARG:HG3	1.78	0.63
42:BN:15:SER:O	42:BN:18:GLN:HB2	1.98	0.63
45:BS:31:GLN:O	45:BS:35:ILE:HG12	1.97	0.63
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.28	0.63
46:BU:39:ASN:HB3	46:BU:62:ALA:HB3	1.80	0.63
51:BZ:71:LEU:O	51:BZ:74:ARG:HG2	1.97	0.63
1:CA:1048:G:H4'	13:CN:2:LYS:NZ	2.12	0.63
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.33	0.63
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.13	0.63
23:DB:2139:U:O2'	23:DB:2140:G:H5'	1.97	0.63
23:DB:2360:G:H4'	37:DL:61:LEU:HD11	1.79	0.63
23:DB:2379:G:H2'	23:DB:2380:C:H6	1.63	0.63
23:DB:2498:C:O2'	23:DB:2499:C:H5'	1.97	0.63
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.28	0.63
36:D2:9:VAL:HG13	36:D2:10:LEU:N	2.13	0.63
45:DS:24:ILE:HG23	45:DS:32:ALA:HB1	1.78	0.63
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.63	0.63
3:AD:53:GLN:HA	3:AD:198:LEU:HD22	1.78	0.63
4:AE:28:ARG:NH2	4:AE:30:PHE:HA	2.13	0.63
6:AG:4:ARG:NE	6:AG:6:ILE:HG23	2.14	0.63
6:AG:14:ASP:HB3	6:AG:19:SER:H	1.63	0.63
6:AG:134:VAL:O	6:AG:138:GLU:HG3	1.98	0.63
20:AB:128:LEU:HG	20:AB:132:GLU:HG2	1.80	0.63
23:BB:632:A:H2'	23:BB:633:A:C8	2.32	0.63
23:BB:675:A:H5'	29:BE:60:TRP:HE1	1.63	0.63
23:BB:1666:G:O3'	27:BK:6:THR:HG23	1.97	0.63
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.34	0.63
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.80	0.63
25:BC:166:ARG:HB2	25:BC:171:VAL:HG22	1.79	0.63
27:BK:35:VAL:HG12	27:BK:69:VAL:HG22	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.33	0.63
48:BG:17:LYS:NZ	48:BG:18:ILE:H	1.95	0.63
52:BW:51:GLY:HA3	52:BW:59:PHE:CB	2.27	0.63
1:CA:501:C:H2'	1:CA:502:A:C8	2.33	0.63
1:CA:793:U:O2	1:CA:1516:G:H4'	1.98	0.63
1:CA:1329:A:OP1	12:CM:28:ARG:HB2	1.97	0.63
10:CK:16:SER:HA	10:CK:78:ILE:HA	1.79	0.63
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.80	0.63
23:DB:200:U:H5"	51:DZ:22:LEU:O	1.98	0.63
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.63
26:DD:105:LYS:H	26:DD:106:LYS:NZ	1.95	0.63
37:DL:143:GLU:CG	37:DL:144:GLU:H	2.09	0.63
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.80	0.63
53:D6:58:VAL:HG22	53:D6:68:VAL:HG22	1.80	0.63
53:D6:68:VAL:HG21	53:D6:99:LEU:HD12	1.80	0.63
1:AA:1006:G:H2'	1:AA:1007:U:H6	1.64	0.63
12:AM:44:ILE:HA	12:AM:47:LEU:HD12	1.79	0.63
23:BB:630:G:N2	23:BB:632:A:H3'	2.14	0.63
23:BB:1373:A:H2'	23:BB:1374:G:O4'	1.98	0.63
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.60	0.63
23:BB:2512:C:H2'	23:BB:2513:A:O4'	1.98	0.63
40:BH:82:SER:HB3	40:BH:92:GLY:O	1.99	0.63
49:BR:39:LEU:HA	49:BR:53:PHE:HA	1.80	0.63
1:CA:87:C:H2'	1:CA:88:U:H5"	1.79	0.63
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.33	0.63
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.80	0.63
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.81	0.63
15:CP:4:ILE:HG12	15:CP:21:VAL:HG22	1.79	0.63
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.13	0.63
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.63	0.63
23:DB:1636:U:H2'	23:DB:1637:A:H8	1.64	0.63
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.64	0.63
23:DB:2540:C:H2'	23:DB:2541:A:C8	2.33	0.63
37:DL:74:THR:HA	37:DL:107:PHE:O	1.97	0.63
53:D6:61:PRO:HD2	53:D6:66:LEU:HA	1.80	0.63
1:AA:235:C:H2'	1:AA:236:A:C8	2.34	0.63
6:AG:24:LYS:O	6:AG:28:ILE:HG12	1.99	0.63
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.79	0.63
8:AI:59:LYS:HB3	8:AI:60:LEU:HD23	1.78	0.63
9:AJ:37:ARG:NH1	9:AJ:77:VAL:HG21	2.14	0.63
15:AP:5:ARG:HH21	15:AP:24:SER:HA	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:27:G:H1'	23:BB:513:A:H61	1.62	0.63
23:BB:1040:A:H2	23:BB:1115:G:H22	1.46	0.63
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	1.81	0.63
29:BE:154:ASP:OD2	29:BE:157:LEU:HB3	1.99	0.63
31:B0:21:LEU:HD12	45:BS:19:LEU:O	1.98	0.63
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.81	0.63
1:CA:413:G:H2'	1:CA:428:G:H21	1.62	0.63
1:CA:676:A:H2'	1:CA:677:U:C6	2.33	0.63
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.63	0.63
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.80	0.63
4:CE:19:ARG:O	4:CE:20:VAL:HB	1.98	0.63
9:CJ:92:LEU:HD22	9:CJ:92:LEU:H	1.62	0.63
14:CO:25:THR:HB	14:CO:70:LEU:HD23	1.79	0.63
18:CS:62:THR:HG22	18:CS:63:ASP:H	1.62	0.63
23:DB:850:U:O2'	30:DY:22:THR:HG22	1.99	0.63
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.34	0.63
39:DX:1:MET:O	39:DX:5:GLU:HG2	1.98	0.63
43:DO:62:LEU:HD11	43:DO:70:ALA:HA	1.79	0.63
52:DW:23:LYS:HZ3	52:DW:24:ARG:HG3	1.61	0.63
3:AD:25:ARG:NH1	3:AD:26:ALA:H	1.93	0.63
11:AL:14:LYS:HG2	11:AL:15:VAL:N	2.14	0.63
17:AR:41:SER:HB2	17:AR:51:GLN:HG2	1.79	0.63
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.32	0.63
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.28	0.63
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.32	0.63
23:BB:2377:A:H2'	23:BB:2378:A:C8	2.34	0.63
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.34	0.63
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.81	0.63
44:BQ:10:ARG:HA	44:BQ:13:HIS:HB2	1.79	0.63
45:BS:24:ILE:HG12	45:BS:36:LEU:HD21	1.81	0.63
51:BZ:5:CYS:HB2	51:BZ:10:LYS:HB3	1.79	0.63
1:CA:213:G:H3'	1:CA:214:C:H6	1.62	0.63
1:CA:880:C:H2'	1:CA:881:G:H8	1.64	0.63
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.13	0.63
3:CD:25:ARG:HH11	3:CD:25:ARG:HB2	1.63	0.63
3:CD:169:TRP:HB2	3:CD:183:ARG:HD2	1.81	0.63
11:CL:98:ARG:HA	11:CL:103:CYS:SG	2.38	0.63
11:CL:120:ARG:HG3	11:CL:121:PRO:HD2	1.79	0.63
15:CP:68:SER:OG	15:CP:71:VAL:HG12	1.99	0.63
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.63	0.63
22:DA:28:C:C4	22:DA:56:G:N1	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.79	0.63
23:DB:2471:A:HO2'	23:DB:2472:G:H8	1.47	0.63
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.34	0.63
24:DI:121:ILE:HD13	24:DI:121:ILE:N	2.13	0.63
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.80	0.63
50:DT:12:ARG:HB3	50:DT:12:ARG:NH1	2.12	0.63
53:D6:63:PRO:HD2	53:D6:64:ARG:NH1	2.14	0.63
1:AA:707:U:H2'	1:AA:708:C:C6	2.34	0.63
1:AA:1314:C:H41	18:AS:3:SER:HB3	1.63	0.63
23:BB:506:G:H5"	23:BB:509:C:O2'	1.99	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.31	0.63
23:BB:1326:U:H2'	23:BB:1327:A:H8	1.63	0.63
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.34	0.63
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.64	0.63
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.81	0.63
1:CA:920:U:O2'	1:CA:1081:A:H4'	1.98	0.63
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.27	0.63
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.64	0.63
2:CC:142:ARG:HH21	2:CC:143:LEU:HD21	1.63	0.63
23:DB:1551:A:C3'	23:DB:1552:A:H5"	2.28	0.63
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.29	0.63
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.63	0.63
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.34	0.63
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.79	0.63
28:DP:24:THR:O	28:DP:25:VAL:HG22	1.99	0.63
29:DE:158:PHE:HA	29:DE:169:VAL:HG21	1.81	0.63
33:D1:33:LEU:N	33:D1:51:ALA:HB3	2.12	0.63
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.62	0.63
46:DU:80:ASP:HB3	46:DU:96:LYS:N	2.13	0.63
47:DF:78:ILE:H	47:DF:79:ARG:NH1	1.97	0.63
1:AA:335:C:H2'	1:AA:336:A:H8	1.64	0.63
3:AD:187:ARG:NH1	3:AD:191:SER:HA	2.13	0.63
14:AO:26:GLU:HA	14:AO:81:LEU:HD11	1.80	0.63
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.79	0.63
23:BB:1259:G:H2'	23:BB:1260:A:H8	1.64	0.63
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.34	0.63
52:BW:49:ASN:O	52:BW:50:VAL:HG13	1.99	0.63
1:CA:876:C:H1'	7:CH:11:THR:HG21	1.81	0.63
6:CG:66:GLU:HA	6:CG:69:ARG:HD2	1.79	0.63
6:CG:135:LYS:HD3	6:CG:136:LYS:N	2.13	0.63
18:CS:49:ALA:HA	18:CS:57:VAL:O	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:8:MET:SD	20:CB:9:LEU:N	2.72	0.63
23:DB:693:A:H2'	23:DB:694:U:C6	2.34	0.63
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.63	0.63
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.64	0.63
23:DB:2720:U:H5"	28:DP:52:ARG:NH2	2.13	0.63
30:DY:18:LYS:O	30:DY:22:THR:HG23	1.99	0.63
45:DS:82:MET:HB2	45:DS:98:LYS:HB2	1.81	0.63
52:DW:49:ASN:O	52:DW:50:VAL:HG13	1.98	0.63
1:AA:135:C:O2	15:AP:1:MET:HB2	1.99	0.63
1:AA:1271:A:H5'	1:AA:1314:C:H5"	1.81	0.63
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.33	0.63
8:AI:14:SER:HA	8:AI:68:GLY:O	1.99	0.63
20:AB:14:HIS:HB2	20:AB:208:ALA:HB2	1.80	0.63
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.64	0.63
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.62	0.63
29:BE:22:ASP:O	29:BE:107:SER:HB2	1.97	0.63
30:BY:29:ARG:H	30:BY:33:HIS:CD2	2.17	0.63
37:BL:102:GLY:O	37:BL:105:ILE:HG12	1.99	0.63
44:BQ:90:ASP:O	44:BQ:94:LEU:HB2	1.98	0.63
47:BF:32:LYS:HA	47:BF:95:MET:HG3	1.80	0.63
50:BT:69:ARG:HG2	50:BT:73:ARG:O	1.99	0.63
1:CA:806:C:H2'	1:CA:807:A:H8	1.64	0.63
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.63	0.63
13:CN:68:ARG:HB3	13:CN:68:ARG:NH1	2.10	0.63
23:DB:269:C:H2'	23:DB:270:A:H8	1.63	0.63
23:DB:632:A:H2'	23:DB:633:A:C8	2.32	0.63
31:D0:43:THR:OG1	31:D0:47:TYR:HB2	1.99	0.63
32:D4:7:VAL:HB	32:D4:36:ARG:O	1.99	0.63
1:AA:524:G:H2'	1:AA:525:C:C6	2.33	0.63
1:AA:1027:C:H2'	1:AA:1028:C:C6	2.34	0.63
1:AA:1148:U:O4'	8:AI:17:ARG:HD3	1.99	0.63
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.63	0.63
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.34	0.63
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.80	0.63
13:AN:26:LEU:HD11	13:AN:44:VAL:HG22	1.81	0.63
13:AN:60:ARG:HG3	13:AN:62:ARG:HG3	1.81	0.63
23:BB:62:U:H3'	23:BB:63:A:H8	1.62	0.63
23:BB:1024:G:C3'	23:BB:1025:G:H5"	2.27	0.63
23:BB:1551:A:C3'	23:BB:1552:A:H5"	2.28	0.63
23:BB:1939:U:H5'	23:BB:1939:U:H6	1.64	0.63
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:117:ALA:HA	41:BJ:120:ARG:HD2	1.79	0.63
47:BF:111:ARG:HH22	47:BF:113:PHE:HB2	1.62	0.63
52:BW:49:ASN:HB3	52:BW:81:ILE:CG1	2.29	0.63
1:CA:451:A:H4'	1:CA:452:A:O4'	1.99	0.63
9:CJ:80:THR:HB	9:CJ:83:THR:OG1	1.99	0.63
19:CT:57:VAL:HG23	19:CT:58:ASP:H	1.64	0.63
23:DB:947:A:HO2'	23:DB:984:A:H2	1.47	0.63
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.34	0.63
23:DB:1958:C:O2'	23:DB:1959:G:H5'	1.99	0.63
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.34	0.63
23:DB:2093:G:O5'	40:DH:24:GLY:HA3	1.99	0.63
23:DB:2776:A:H4'	23:DB:2777:G:H5"	1.79	0.63
27:DK:118:LEU:O	27:DK:120:PRO:HD2	1.98	0.63
43:DO:63:LYS:HD3	43:DO:67:ASN:OD1	1.99	0.63
52:DW:81:ILE:HG13	52:DW:81:ILE:O	1.99	0.63
53:D6:63:PRO:HD2	53:D6:64:ARG:CZ	2.29	0.63
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.33	0.62
1:AA:1377:A:H2'	6:AG:6:ILE:HD11	1.81	0.62
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.79	0.62
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.34	0.62
24:BI:20:SER:O	24:BI:25:PRO:HD2	1.99	0.62
40:BH:31:VAL:O	40:BH:32:PRO:C	2.34	0.62
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.77	0.62
40:BH:47:PHE:HA	40:BH:50:ARG:NH2	2.14	0.62
40:BH:134:VAL:HG13	40:BH:138:VAL:O	1.98	0.62
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.64	0.62
42:BN:58:ASP:O	42:BN:59:SER:HB3	1.99	0.62
47:BF:37:MET:SD	47:BF:52:ALA:HB1	2.39	0.62
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.34	0.62
1:CA:6:G:H4'	1:CA:298:A:H4'	1.81	0.62
1:CA:620:C:H2'	1:CA:621:A:C8	2.34	0.62
3:CD:29:THR:HG22	3:CD:30:LYS:H	1.64	0.62
14:CO:78:TYR:CZ	14:CO:82:ILE:HD11	2.34	0.62
20:CB:14:HIS:HB2	20:CB:208:ALA:HB2	1.79	0.62
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.34	0.62
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.33	0.62
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.33	0.62
24:DI:20:SER:O	24:DI:25:PRO:HD2	1.99	0.62
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.81	0.62
35:DV:40:ILE:HD13	35:DV:40:ILE:N	2.13	0.62
37:DL:19:LEU:O	37:DL:21:ARG:HG2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:35:ALA:CB	38:DM:100:LYS:H	2.12	0.62
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.80	0.62
46:DU:21:ARG:HD3	46:DU:72:PHE:CG	2.34	0.62
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.12	0.62
47:DF:43:ILE:HB	47:DF:82:TYR:OH	1.98	0.62
47:DF:102:LEU:HD22	47:DF:103:ILE:H	1.64	0.62
48:DG:54:ARG:HB3	48:DG:57:TYR:CD1	2.34	0.62
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.34	0.62
53:D6:36:ALA:HA	53:D6:39:LEU:CD2	2.29	0.62
1:AA:255:G:H2'	1:AA:256:U:C6	2.33	0.62
1:AA:413:G:H2'	1:AA:428:G:H21	1.64	0.62
1:AA:927:G:O2'	1:AA:928:G:H5'	1.99	0.62
2:AC:72:PRO:O	2:AC:76:ILE:HG12	1.99	0.62
13:AN:26:LEU:HG	13:AN:30:ILE:HD13	1.80	0.62
19:AT:43:LYS:HE2	19:AT:44:ALA:H	1.63	0.62
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.19	0.62
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.34	0.62
23:BB:1904:G:H1'	23:BB:1927:A:N1	2.13	0.62
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.14	0.62
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.80	0.62
27:BK:8:LEU:HD12	27:BK:8:LEU:N	2.14	0.62
33:B1:33:LEU:N	33:B1:51:ALA:HB3	2.12	0.62
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.81	0.62
23:DB:573:U:O2'	23:DB:574:A:H3'	1.99	0.62
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.64	0.62
23:DB:2001:C:H4'	23:DB:2689:U:O2'	1.97	0.62
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.34	0.62
23:DB:2199:A:H5'	23:DB:2200:C:OP2	1.99	0.62
25:DC:128:THR:HA	25:DC:190:THR:CA	2.28	0.62
44:DQ:10:ARG:HA	44:DQ:13:HIS:HB2	1.81	0.62
53:D6:16:LYS:O	53:D6:20:VAL:HG23	1.98	0.62
1:AA:678:U:H2'	1:AA:679:C:C6	2.34	0.62
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.22	0.62
6:AG:56:SER:HB3	6:AG:59:GLU:HG3	1.81	0.62
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.81	0.62
12:AM:12:LYS:HB3	12:AM:16:ILE:HG23	1.81	0.62
20:AB:165:ALA:HA	20:AB:172:ILE:HD11	1.82	0.62
23:BB:171:U:H2'	23:BB:172:A:C8	2.34	0.62
23:BB:350:G:H2'	23:BB:351:C:C6	2.34	0.62
23:BB:863:A:H2'	23:BB:864:G:C8	2.34	0.62
23:BB:2758:A:H2'	23:BB:2759:G:O4'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.35	0.62
25:BC:14:HIS:O	25:BC:203:VAL:HG11	1.99	0.62
26:BD:37:VAL:CG2	26:BD:91:THR:HA	2.29	0.62
28:BP:24:THR:O	28:BP:25:VAL:HG22	1.99	0.62
38:BM:59:ARG:NH1	38:BM:60:GLN:HB3	2.10	0.62
43:BO:63:LYS:HD3	43:BO:67:ASN:OD1	1.99	0.62
45:BS:6:LYS:HD3	45:BS:104:THR:HG23	1.81	0.62
46:BU:85:ARG:NE	46:BU:85:ARG:HA	2.12	0.62
47:BF:76:PHE:HD2	47:BF:78:ILE:HD13	1.65	0.62
1:CA:1006:G:H2'	1:CA:1007:U:H6	1.63	0.62
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.64	0.62
16:CQ:80:LYS:H	16:CQ:80:LYS:HD2	1.64	0.62
20:CB:125:PHE:HA	20:CB:127:LYS:NZ	2.14	0.62
23:DB:547:A:N1	23:DB:548:G:H1'	2.15	0.62
23:DB:664:G:H2'	23:DB:665:U:C6	2.34	0.62
23:DB:2091:C:H1'	51:DZ:34:HIS:CD2	2.33	0.62
23:DB:2393:U:H5"	37:DL:62:PRO:CG	2.28	0.62
24:DI:27:LEU:H	24:DI:27:LEU:CD2	2.12	0.62
25:DC:18:VAL:O	25:DC:18:VAL:HG13	1.98	0.62
26:DD:108:ASP:OD2	26:DD:173:GLN:HA	1.99	0.62
27:DK:8:LEU:HD12	27:DK:8:LEU:N	2.13	0.62
29:DE:58:LYS:HE2	29:DE:60:TRP:HD1	1.64	0.62
47:DF:2:LYS:HD2	47:DF:100:GLU:HG2	1.80	0.62
1:AA:235:C:H2'	1:AA:236:A:H8	1.61	0.62
1:AA:481:G:HO2'	1:AA:482:A:H8	1.47	0.62
4:AE:19:ARG:O	4:AE:20:VAL:HB	1.99	0.62
6:AG:102:TRP:HZ3	6:AG:137:ARG:HB2	1.64	0.62
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.64	0.62
23:BB:1913:A:H4'	23:BB:1914:C:H5"	1.81	0.62
23:BB:2019:A:H2	23:BB:2035:G:H22	1.47	0.62
29:BE:58:LYS:C	29:BE:60:TRP:H	2.01	0.62
38:BM:41:LEU:HB2	38:BM:94:ALA:HB3	1.80	0.62
42:BN:65:LEU:HD11	42:BN:69:ARG:CZ	2.29	0.62
50:BT:82:LYS:HD2	50:BT:84:TYR:HE1	1.64	0.62
51:BZ:7:VAL:HG21	51:BZ:59:ILE:HD11	1.80	0.62
1:CA:1515:G:O2'	1:CA:1516:G:H5'	1.99	0.62
9:CJ:29:ALA:O	9:CJ:32:THR:HG22	1.99	0.62
12:CM:47:LEU:HD13	12:CM:51:GLN:O	1.99	0.62
20:CB:8:MET:HB2	20:CB:11:ALA:HB3	1.82	0.62
23:DB:557:C:H2'	23:DB:558:U:C6	2.35	0.62
23:DB:580:U:H2'	23:DB:581:C:H6	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:833:A:H1'	37:DL:52:GLY:H	1.62	0.62
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.63	0.62
40:DH:59:ALA:O	40:DH:62:LEU:HD22	1.99	0.62
40:DH:131:SER:HB2	40:DH:141:LYS:HG3	1.81	0.62
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD11	1.64	0.62
50:DT:1:MET:HG3	50:DT:2:ILE:H	1.64	0.62
50:DT:82:LYS:HD2	50:DT:84:TYR:HE1	1.64	0.62
53:D6:36:ALA:HA	53:D6:39:LEU:HD23	1.81	0.62
1:AA:98:A:O2'	1:AA:99:C:H5'	1.99	0.62
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.34	0.62
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.33	0.62
3:AD:25:ARG:HH11	3:AD:26:ALA:N	1.93	0.62
6:AG:41:ILE:HG21	6:AG:115:MET:HG3	1.82	0.62
9:AJ:55:PRO:HA	13:AN:80:ARG:HH22	1.64	0.62
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.80	0.62
23:BB:540:C:H2'	23:BB:541:A:H8	1.64	0.62
23:BB:1080:A:O2'	24:BI:126:ARG:HB2	1.98	0.62
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.28	0.62
25:BC:64:VAL:HG11	25:BC:66:PHE:CE2	2.35	0.62
26:BD:105:LYS:H	26:BD:106:LYS:NZ	1.97	0.62
44:BQ:10:ARG:HB2	44:BQ:10:ARG:NH1	2.14	0.62
1:CA:676:A:H2'	1:CA:677:U:H6	1.64	0.62
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.99	0.62
6:CG:24:LYS:O	6:CG:28:ILE:HG12	1.98	0.62
7:CH:11:THR:HA	7:CH:14:ARG:NH1	2.14	0.62
15:CP:5:ARG:HH21	15:CP:24:SER:HA	1.63	0.62
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG22	2.35	0.62
17:CR:41:SER:HB2	17:CR:51:GLN:HG2	1.80	0.62
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.81	0.62
23:DB:38:A:N3	29:DE:43:THR:HB	2.15	0.62
23:DB:593:U:H2'	23:DB:594:U:C6	2.33	0.62
23:DB:899:A:H3'	23:DB:900:A:C8	2.35	0.62
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.64	0.62
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.63	0.62
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.20	0.62
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	1.81	0.62
48:DG:84:LYS:HG3	48:DG:131:VAL:CA	2.28	0.62
51:DZ:7:VAL:HG21	51:DZ:59:ILE:HD11	1.80	0.62
53:D6:1:MET:HB3	53:D6:143:LEU:HD11	1.79	0.62
1:AA:216:U:H2'	1:AA:217:C:C6	2.34	0.62
1:AA:532:A:N6	2:AC:191:THR:HB	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:551:U:O2'	11:AL:82:ARG:HD2	1.99	0.62
6:AG:21:LEU:HG	6:AG:22:LEU:H	1.63	0.62
7:AH:11:THR:HA	7:AH:14:ARG:NH1	2.15	0.62
7:AH:76:ARG:HG3	7:AH:77:VAL:N	2.15	0.62
8:AI:9:GLY:HA3	8:AI:81:GLY:N	2.14	0.62
8:AI:62:LEU:H	8:AI:62:LEU:HD22	1.63	0.62
22:BA:24:G:N7	22:BA:56:G:H2'	2.15	0.62
23:BB:414:C:H2'	23:BB:415:A:C8	2.33	0.62
23:BB:634:C:H2'	23:BB:635:C:H6	1.65	0.62
23:BB:1509:A:H5'	23:BB:1510:G:H5'	1.81	0.62
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.34	0.62
31:B0:43:THR:OG1	31:B0:47:TYR:HB2	1.99	0.62
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.82	0.62
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.19	0.62
40:BH:4:ILE:HG22	40:BH:17:ASP:N	2.15	0.62
52:BW:39:GLN:NE2	52:BW:43:LYS:HB2	2.14	0.62
53:B6:128:ALA:O	53:B6:132:ILE:HG13	1.98	0.62
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.40	0.62
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.82	0.62
12:CM:78:ARG:HH22	18:CS:68:HIS:CE1	2.18	0.62
17:CR:40:PRO:HD2	17:CR:43:ILE:HD12	1.82	0.62
20:CB:113:LEU:HD12	20:CB:143:LEU:HB3	1.81	0.62
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.64	0.62
23:DB:2380:C:H5'	43:DO:17:LYS:NZ	2.15	0.62
23:DB:2400:G:O2'	23:DB:2401:U:H5'	1.98	0.62
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.34	0.62
29:DE:105:LEU:HA	29:DE:108:ILE:HG22	1.80	0.62
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.65	0.62
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.14	0.62
53:D6:90:LEU:O	53:D6:92:PRO:HD3	2.00	0.62
1:AA:398:U:H2'	1:AA:399:G:H8	1.63	0.62
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.80	0.62
12:AM:6:ILE:O	12:AM:8:ILE:HG23	1.98	0.62
15:AP:59:HIS:O	15:AP:63:GLN:HG3	1.99	0.62
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.82	0.62
23:BB:125:A:OP2	36:B2:19:ARG:HD2	2.00	0.62
23:BB:372:G:O2'	51:BZ:54:LYS:HE2	2.00	0.62
23:BB:819:A:H5'	23:BB:973:A:N1	2.14	0.62
23:BB:1081:U:C5'	24:BI:126:ARG:HD2	2.28	0.62
23:BB:1354:A:H2'	23:BB:1355:G:O4'	1.99	0.62
25:BC:18:VAL:O	25:BC:18:VAL:HG13	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:62:THR:HB	35:BV:71:LYS:HG2	1.82	0.62
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.15	0.62
3:CD:197:HIS:O	3:CD:200:VAL:HG22	2.00	0.62
7:CH:47:ASP:CG	7:CH:48:PHE:H	2.02	0.62
7:CH:113:ARG:HH21	7:CH:114:ALA:HA	1.63	0.62
8:CI:14:SER:HA	8:CI:68:GLY:O	2.00	0.62
13:CN:60:ARG:HG3	13:CN:62:ARG:HG3	1.81	0.62
23:DB:1001:A:H2'	23:DB:1002:G:O4'	1.99	0.62
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.63	0.62
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.65	0.62
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.34	0.62
23:DB:1657:U:O2'	23:DB:1658:C:H5'	1.99	0.62
23:DB:2021:C:OP1	31:D0:8:THR:HG21	1.99	0.62
23:DB:2849:U:N3	23:DB:2867:G:C8	2.66	0.62
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.19	0.62
30:DY:6:ILE:O	30:DY:34:THR:HA	2.00	0.62
32:D4:2:LYS:HG2	32:D4:4:ARG:NE	2.14	0.62
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	1.98	0.62
53:D6:40:HIS:O	53:D6:51:PRO:HA	2.00	0.62
1:AA:370:C:O2'	1:AA:371:A:H5'	2.00	0.62
1:AA:678:U:H2'	1:AA:679:C:H6	1.64	0.62
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.14	0.62
2:AC:78:LYS:HG3	2:AC:81:GLU:CB	2.29	0.62
23:BB:955:U:H5"	38:BM:86:LYS:HD2	1.82	0.62
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.64	0.62
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.34	0.62
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.34	0.62
23:BB:2720:U:H5"	28:BP:52:ARG:NH2	2.15	0.62
39:BX:20:ASN:O	39:BX:24:GLU:HB3	1.99	0.62
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.15	0.62
50:BT:54:GLU:HG3	50:BT:90:GLY:H	1.63	0.62
1:CA:285:C:H2'	1:CA:286:C:H6	1.64	0.62
1:CA:492:C:H2'	1:CA:493:A:N3	2.15	0.62
1:CA:920:U:H2'	1:CA:921:U:H6	1.61	0.62
1:CA:1067:A:H4'	1:CA:1068:G:O5'	1.99	0.62
20:CB:165:ALA:HA	20:CB:172:ILE:HD11	1.82	0.62
22:DA:7:G:H5"	43:DO:29:HIS:CD2	2.35	0.62
23:DB:27:G:H1'	23:DB:513:A:H61	1.62	0.62
23:DB:626:A:H2'	37:DL:78:ARG:NH1	2.15	0.62
23:DB:743:A:O2'	23:DB:744:U:H5'	2.00	0.62
23:DB:780:G:H1	25:DC:228:ASP:CG	2.02	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.34	0.62
23:DB:1782:U:H3'	57:DB:3607:HOH:O	1.99	0.62
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.35	0.62
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.15	0.62
26:DD:79:LEU:N	26:DD:79:LEU:HD22	2.15	0.62
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.64	0.62
1:AA:577:G:O2'	1:AA:578:C:H5'	2.00	0.62
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.35	0.62
1:AA:1494:G:H5'	23:BB:1913:A:C6	2.35	0.62
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.34	0.62
12:AM:1:ALA:C	12:AM:8:ILE:HG22	2.20	0.62
13:AN:65:GLN:HG2	13:AN:82:LYS:HE2	1.82	0.62
23:BB:2247:A:H3'	57:BB:3266:HOH:O	1.98	0.62
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.35	0.62
26:BD:125:TRP:CG	26:BD:160:LYS:HB3	2.35	0.62
29:BE:34:ALA:HB2	29:BE:96:VAL:HG21	1.82	0.62
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	1.99	0.62
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.82	0.62
2:CC:131:ARG:HH11	2:CC:131:ARG:HG2	1.64	0.62
3:CD:88:ASN:O	3:CD:92:LEU:HD23	1.99	0.62
23:DB:184:C:H2'	23:DB:185:G:H8	1.65	0.62
23:DB:272:A:H2'	23:DB:273:G:C8	2.35	0.62
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.65	0.62
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.34	0.62
25:DC:32:LEU:O	25:DC:63:ILE:HG12	1.99	0.62
29:DE:34:ALA:HB2	29:DE:96:VAL:HG21	1.82	0.62
42:DN:83:LEU:HA	42:DN:86:ARG:CB	2.27	0.62
51:DZ:71:LEU:O	51:DZ:74:ARG:HG2	2.00	0.62
53:D6:107:THR:O	53:D6:111:ARG:HG3	2.00	0.62
3:AD:169:TRP:HB2	3:AD:183:ARG:HD2	1.82	0.62
8:AI:34:LEU:HD21	8:AI:48:ARG:HE	1.64	0.62
11:AL:107:LYS:H	11:AL:107:LYS:NZ	1.98	0.62
22:BA:7:G:H5"	43:BO:29:HIS:CD2	2.35	0.62
23:BB:417:C:H2'	23:BB:418:C:C6	2.34	0.62
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.34	0.62
23:BB:1306:C:H2'	23:BB:1307:A:H8	1.64	0.62
23:BB:1866:A:H2'	23:BB:1867:G:O4'	2.00	0.62
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.35	0.62
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.35	0.62
25:BC:32:LEU:HD22	25:BC:63:ILE:HG13	1.82	0.62
38:BM:64:TRP:HB2	38:BM:104:GLU:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:3:LYS:HD3	46:BU:82:VAL:CG2	2.30	0.62
50:BT:68:LYS:O	50:BT:69:ARG:HB3	1.98	0.62
1:CA:707:U:H2'	1:CA:708:C:H6	1.64	0.62
6:CG:122:GLU:OE1	6:CG:131:GLY:HA3	2.00	0.62
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.82	0.62
22:DA:98:G:N1	35:DV:14:LYS:HB2	2.14	0.62
23:DB:139:U:O2'	50:DT:1:MET:HB2	1.99	0.62
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.64	0.62
23:DB:2578:G:C5	26:DD:145:SER:HB2	2.35	0.62
33:D1:20:TYR:CD2	33:D1:37:LYS:HD3	2.35	0.62
45:DS:17:VAL:C	45:DS:19:LEU:H	2.03	0.62
46:DU:26:ASN:HD21	46:DU:34:ILE:HD12	1.63	0.62
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.82	0.62
47:DF:111:ARG:HH22	47:DF:113:PHE:HB2	1.62	0.62
1:AA:301:G:H2'	1:AA:302:G:C8	2.32	0.61
1:AA:939:G:H5'	6:AG:101:ARG:NH1	2.15	0.61
1:AA:1072:G:H21	20:AB:105:THR:HG21	1.64	0.61
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.35	0.61
4:AE:154:ALA:HB1	7:AH:65:PHE:CZ	2.35	0.61
7:AH:40:LYS:HD2	7:AH:47:ASP:HA	1.82	0.61
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.81	0.61
14:AO:78:TYR:CZ	14:AO:82:ILE:HD11	2.35	0.61
23:BB:5:A:H2'	23:BB:6:A:C8	2.35	0.61
23:BB:139:U:H3'	23:BB:140:C:H4'	1.82	0.61
23:BB:1046:A:C3'	23:BB:1047:G:H5"	2.30	0.61
23:BB:1176:U:H3'	23:BB:1177:G:C8	2.34	0.61
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.35	0.61
23:BB:2540:C:H2'	23:BB:2541:A:C8	2.34	0.61
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.80	0.61
29:BE:149:ILE:HG23	29:BE:188:MET:HA	1.80	0.61
42:BN:90:ARG:HB3	42:BN:94:TYR:CE1	2.35	0.61
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.00	0.61
53:B6:112:LYS:HB2	53:B6:116:ARG:HH21	1.65	0.61
1:CA:301:G:H2'	1:CA:302:G:C8	2.33	0.61
1:CA:570:G:H2'	1:CA:571:U:C6	2.35	0.61
1:CA:783:C:O2'	1:CA:784:A:H5'	1.99	0.61
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.35	0.61
8:CI:9:GLY:HA3	8:CI:81:GLY:N	2.15	0.61
8:CI:34:LEU:HD21	8:CI:48:ARG:HE	1.63	0.61
16:CQ:80:LYS:H	16:CQ:80:LYS:CD	2.13	0.61
23:DB:321:U:OP2	29:DE:130:LYS:HD3	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:900:A:O2'	23:DB:901:C:H5'	2.00	0.61
23:DB:909:A:H2'	23:DB:912:C:H5	1.65	0.61
23:DB:1203:U:H4'	37:DL:3:LEU:HD12	1.81	0.61
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.34	0.61
23:DB:2073:C:H5"	25:DC:227:VAL:HG12	1.81	0.61
23:DB:2756:U:H1'	23:DB:2757:A:H5"	1.82	0.61
29:DE:1:MET:HB3	29:DE:14:VAL:O	2.00	0.61
37:DL:102:GLY:O	37:DL:105:ILE:HG12	2.00	0.61
45:DS:6:LYS:HD3	45:DS:104:THR:HG23	1.81	0.61
53:D6:14:MET:SD	53:D6:164:ILE:HG22	2.40	0.61
53:D6:44:GLU:HA	53:D6:49:HIS:HA	1.81	0.61
1:AA:1527:U:H2'	1:AA:1528:U:C6	2.36	0.61
5:AF:80:PHE:HE1	25:BC:135:PRO:HG2	1.64	0.61
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.65	0.61
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.35	0.61
23:BB:2276:G:OP2	38:BM:85:GLY:N	2.32	0.61
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.34	0.61
39:BX:6:LEU:O	39:BX:7:ARG:HB3	2.00	0.61
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.14	0.61
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.00	0.61
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.00	0.61
52:BW:81:ILE:O	52:BW:81:ILE:HG13	2.00	0.61
53:B6:2:THR:OG1	53:B6:5:GLU:HG3	2.00	0.61
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.15	0.61
1:CA:1320:C:H41	18:CS:36:ARG:HE	1.48	0.61
3:CD:154:VAL:HG23	3:CD:155:LYS:H	1.65	0.61
11:CL:107:LYS:H	11:CL:107:LYS:NZ	1.98	0.61
17:CR:33:THR:HG23	17:CR:37:LYS:O	1.99	0.61
19:CT:79:THR:HA	19:CT:82:ILE:HG12	1.82	0.61
22:DA:39:A:H2	22:DA:46:A:H61	1.48	0.61
23:DB:19:A:H2'	23:DB:20:C:C6	2.34	0.61
23:DB:120:U:H4'	23:DB:121:G:H5"	1.82	0.61
23:DB:591:U:H1'	34:D3:1:PRO:N	2.15	0.61
23:DB:996:A:C4'	44:DQ:91:ARG:HH11	2.12	0.61
23:DB:1152:C:H3'	57:DB:3274:HOH:O	2.00	0.61
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.34	0.61
23:DB:2306:C:H3'	23:DB:2307:G:H5"	1.82	0.61
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.00	0.61
35:DV:49:ASN:N	35:DV:49:ASN:HD22	1.98	0.61
53:D6:113:ASP:HA	53:D6:116:ARG:CD	2.30	0.61
1:AA:1080:A:H5"	4:AE:51:LYS:HZ3	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:52:ALA:O	20:AB:56:LEU:HB2	2.00	0.61
23:BB:909:A:H2'	23:BB:912:C:H5	1.64	0.61
23:BB:1173:U:H2'	23:BB:1174:U:C4'	2.28	0.61
23:BB:1788:C:O2'	23:BB:1789:A:H5'	2.00	0.61
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.36	0.61
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.14	0.61
25:BC:130:PRO:HG2	25:BC:133:ASN:HD22	1.64	0.61
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.15	0.61
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.64	0.61
45:BS:55:ILE:HD12	45:BS:107:VAL:HG21	1.82	0.61
45:BS:83:LYS:HD3	45:BS:97:LEU:HD11	1.82	0.61
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.82	0.61
48:BG:116:LEU:HD23	48:BG:121:THR:HA	1.83	0.61
48:BG:153:PRO:HG3	48:BG:162:ARG:HB3	1.82	0.61
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.81	0.61
1:CA:308:C:H2'	1:CA:309:A:H8	1.64	0.61
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.35	0.61
6:CG:77:ARG:HG3	6:CG:79:VAL:HG23	1.82	0.61
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	1.83	0.61
12:CM:12:LYS:HD2	12:CM:16:ILE:HD13	1.81	0.61
23:DB:71:A:H4'	23:DB:72:U:H5'	1.81	0.61
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.34	0.61
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.35	0.61
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.34	0.61
38:DM:82:MET:HE3	38:DM:83:GLY:H	1.65	0.61
45:DS:24:ILE:HG12	45:DS:36:LEU:HD21	1.81	0.61
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.66	0.61
1:AA:171:A:H2'	1:AA:172:A:C8	2.36	0.61
1:AA:390:U:H2'	1:AA:391:G:C8	2.34	0.61
1:AA:501:C:H1'	1:AA:549:C:H1'	1.81	0.61
1:AA:505:G:H4'	1:AA:534:U:C4	2.35	0.61
1:AA:1432:G:H5'	28:BP:105:LYS:CG	2.29	0.61
23:BB:220:G:H1	23:BB:427:U:H2'	1.65	0.61
25:BC:61:TYR:HA	25:BC:85:ASN:HD21	1.64	0.61
29:BE:105:LEU:HA	29:BE:108:ILE:HG22	1.82	0.61
29:BE:145:ASP:HB3	29:BE:184:ASP:HB2	1.82	0.61
38:BM:21:ALA:HB2	38:BM:100:LYS:HG2	1.82	0.61
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.19	0.61
1:CA:321:A:O2'	1:CA:322:C:H5'	2.01	0.61
1:CA:390:U:H2'	1:CA:391:G:C8	2.35	0.61
6:CG:14:ASP:HB3	6:CG:19:SER:H	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:24:LYS:HZ3	21:CU:25:ALA:H	1.47	0.61
23:DB:773:U:H4'	25:DC:45:ASN:O	1.99	0.61
23:DB:1376:C:H3'	57:DB:3278:HOH:O	2.00	0.61
23:DB:1583:A:H4'	23:DB:1585:C:C4	2.36	0.61
23:DB:2210:U:N3	23:DB:2212:A:N7	2.48	0.61
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.36	0.61
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.35	0.61
41:DJ:110:PRO:HB2	41:DJ:111:LYS:HE3	1.82	0.61
46:DU:3:LYS:HD3	46:DU:82:VAL:HG21	1.82	0.61
49:DR:71:LYS:HG3	49:DR:72:VAL:N	2.14	0.61
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.16	0.61
4:AE:158:LYS:NZ	7:AH:65:PHE:HA	2.16	0.61
6:AG:62:GLU:O	6:AG:66:GLU:HG3	2.01	0.61
23:BB:634:C:H2'	23:BB:635:C:C6	2.35	0.61
23:BB:1432:G:H2'	23:BB:1433:A:C8	2.35	0.61
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.36	0.61
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.35	0.61
23:BB:2810:A:H2'	23:BB:2811:G:O4'	2.01	0.61
27:BK:13:ASN:HD21	27:BK:98:ARG:H	1.48	0.61
44:BQ:4:LYS:HZ1	44:BQ:7:VAL:HG22	1.65	0.61
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.16	0.61
46:BU:21:ARG:HD3	46:BU:72:PHE:CG	2.36	0.61
46:BU:80:ASP:HB3	46:BU:96:LYS:N	2.15	0.61
46:BU:85:ARG:HH11	46:BU:86:PHE:H	1.47	0.61
1:CA:1313:U:OP2	18:CS:5:LYS:HA	2.00	0.61
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.83	0.61
12:CM:38:ILE:HG22	12:CM:42:VAL:HG21	1.82	0.61
13:CN:25:GLU:HB2	13:CN:29:ILE:HD11	1.81	0.61
15:CP:74:LEU:O	15:CP:78:VAL:HG12	2.01	0.61
19:CT:35:TYR:O	19:CT:38:ILE:HG22	2.01	0.61
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.20	0.61
23:DB:833:A:H1'	37:DL:52:GLY:N	2.15	0.61
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.34	0.61
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.36	0.61
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.81	0.61
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.65	0.61
42:DN:33:ILE:HD12	42:DN:33:ILE:O	2.00	0.61
49:DR:5:PHE:O	49:DR:11:GLN:HA	2.00	0.61
53:D6:51:PRO:HB2	53:D6:53:ASN:ND2	2.16	0.61
1:AA:237:G:H2'	1:AA:238:A:H8	1.66	0.61
1:AA:1021:A:H2'	1:AA:1022:A:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1302:C:OP2	12:AM:16:ILE:HD11	2.00	0.61
8:AI:29:ILE:HA	8:AI:64:ILE:HB	1.82	0.61
12:AM:38:ILE:HG22	12:AM:42:VAL:HG21	1.81	0.61
23:BB:38:A:N3	29:BE:43:THR:HB	2.16	0.61
23:BB:664:G:H2'	23:BB:665:U:C6	2.35	0.61
23:BB:742:A:H2'	23:BB:743:A:C8	2.36	0.61
23:BB:923:G:H1'	52:BW:23:LYS:NZ	2.16	0.61
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.36	0.61
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.64	0.61
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.66	0.61
29:BE:188:MET:HE3	29:BE:193:VAL:HG13	1.82	0.61
30:BY:18:LYS:O	30:BY:22:THR:HG23	2.01	0.61
32:B4:7:VAL:HG23	32:B4:35:GLN:CB	2.28	0.61
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.64	0.61
42:BN:83:LEU:HA	42:BN:86:ARG:CB	2.27	0.61
44:BQ:107:ALA:HB1	49:BR:48:LYS:HE3	1.81	0.61
45:BS:17:VAL:C	45:BS:19:LEU:H	2.03	0.61
48:BG:122:ALA:HA	48:BG:132:LEU:HA	1.82	0.61
49:BR:71:LYS:HG3	49:BR:72:VAL:N	2.16	0.61
1:CA:214:C:H2'	1:CA:215:C:C6	2.36	0.61
1:CA:216:U:H2'	1:CA:217:C:C6	2.34	0.61
1:CA:812:G:H2'	1:CA:812:G:N3	2.15	0.61
17:CR:34:GLU:HB2	21:CU:18:PHE:CZ	2.36	0.61
18:CS:18:VAL:CG2	18:CS:43:MET:HB3	2.30	0.61
22:DA:28:C:OP1	43:DO:31:THR:HG21	2.00	0.61
23:DB:139:U:H3	50:DT:49:LYS:HE2	1.65	0.61
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.65	0.61
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.01	0.61
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.65	0.61
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.36	0.61
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.36	0.61
26:DD:37:VAL:CG2	26:DD:91:THR:HA	2.30	0.61
26:DD:125:TRP:CG	26:DD:160:LYS:HB3	2.35	0.61
31:D0:21:LEU:HD12	45:DS:19:LEU:O	2.00	0.61
33:D1:8:ILE:HD11	33:D1:52:LYS:HB2	1.82	0.61
47:DF:32:LYS:HA	47:DF:95:MET:HG3	1.81	0.61
48:DG:123:GLU:HG2	48:DG:124:CYS:N	2.16	0.61
52:DW:39:GLN:NE2	52:DW:43:LYS:HB2	2.16	0.61
1:AA:746:A:H2'	1:AA:747:A:C8	2.36	0.61
1:AA:1313:U:OP2	18:AS:5:LYS:HA	1.99	0.61
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:131:ARG:HH11	2:AC:131:ARG:HG2	1.64	0.61
5:AF:16:GLU:CD	5:AF:16:GLU:H	2.02	0.61
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.83	0.61
18:AS:39:ILE:HB	18:AS:66:VAL:HA	1.83	0.61
21:AU:11:PHE:O	21:AU:13:VAL:N	2.34	0.61
23:BB:28:A:N6	23:BB:512:G:H1'	2.16	0.61
23:BB:1082:U:N3	23:BB:1086:A:C6	2.69	0.61
23:BB:2092:U:H4'	23:BB:2093:G:O5'	2.01	0.61
23:BB:2199:A:H5'	23:BB:2200:C:OP2	2.01	0.61
29:BE:158:PHE:HA	29:BE:169:VAL:HG21	1.81	0.61
37:BL:42:SER:C	37:BL:44:GLY:H	2.04	0.61
42:BN:90:ARG:HB3	42:BN:94:TYR:HE1	1.65	0.61
46:BU:26:ASN:HD21	46:BU:34:ILE:HD12	1.65	0.61
47:BF:115:GLY:HA2	47:BF:177:ARG:HH11	1.66	0.61
1:CA:366:A:H1'	1:CA:395:C:O2	2.00	0.61
1:CA:551:U:O2'	11:CL:82:ARG:HD2	2.01	0.61
1:CA:859:G:H2'	1:CA:860:A:H8	1.64	0.61
4:CE:28:ARG:NH2	4:CE:30:PHE:HA	2.15	0.61
6:CG:23:ALA:O	6:CG:26:VAL:HG22	2.01	0.61
17:CR:34:GLU:CD	17:CR:34:GLU:H	2.04	0.61
20:CB:160:LEU:HD23	20:CB:181:PRO:O	2.01	0.61
23:DB:937:C:H2'	23:DB:938:G:C8	2.36	0.61
25:DC:245:THR:O	25:DC:247:TRP:N	2.34	0.61
27:DK:13:ASN:HD21	27:DK:98:ARG:H	1.48	0.61
48:DG:122:ALA:HA	48:DG:132:LEU:HA	1.83	0.61
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.66	0.61
52:DW:37:VAL:HG13	52:DW:55:ASP:O	2.00	0.61
1:AA:676:A:H2'	1:AA:677:U:C6	2.35	0.61
1:AA:1049:U:H5'	1:AA:1049:U:H6	1.65	0.61
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.30	0.61
12:AM:78:ARG:O	12:AM:82:LEU:HB2	2.00	0.61
17:AR:33:THR:HG23	17:AR:37:LYS:O	2.00	0.61
20:AB:23:ASN:HD22	20:AB:24:PRO:HD2	1.65	0.61
21:AU:24:LYS:HZ3	21:AU:25:ALA:H	1.49	0.61
23:BB:129:C:H2'	23:BB:130:C:C6	2.36	0.61
23:BB:184:C:H2'	23:BB:185:G:H8	1.65	0.61
23:BB:523:C:H4'	23:BB:540:C:O2	2.00	0.61
23:BB:873:C:H2'	23:BB:874:G:H8	1.63	0.61
23:BB:2379:G:H2'	23:BB:2380:C:H6	1.63	0.61
23:BB:2498:C:O2'	23:BB:2499:C:H5'	2.00	0.61
26:BD:106:LYS:HB3	26:BD:206:ALA:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.14	0.61
41:BJ:36:LEU:HD11	41:BJ:122:LEU:HB2	1.82	0.61
47:BF:101:ARG:CZ	47:BF:138:PRO:HB2	2.30	0.61
51:BZ:66:THR:O	51:BZ:69:ALA:HB3	2.01	0.61
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.31	0.61
1:CA:300:A:H2'	1:CA:301:G:O4'	2.01	0.61
18:CS:32:THR:HG22	18:CS:34:SER:H	1.65	0.61
23:DB:16:C:O2'	23:DB:17:G:H5'	1.99	0.61
23:DB:171:U:H2'	23:DB:172:A:C8	2.36	0.61
23:DB:307:G:H2'	23:DB:309:A:OP2	2.00	0.61
23:DB:506:G:H5"	23:DB:509:C:O2'	2.01	0.61
23:DB:962:G:N2	23:DB:2250:G:H1	1.99	0.61
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.36	0.61
23:DB:1993:U:H4'	26:DD:133:THR:HG22	1.83	0.61
23:DB:2354:C:H4'	52:DW:31:LEU:HD22	1.81	0.61
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.83	0.61
45:DS:22:ASP:HA	45:DS:25:ARG:NH1	2.15	0.61
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.15	0.61
53:D6:18:LEU:HD22	53:D6:168:PHE:CD2	2.36	0.61
53:D6:29:ARG:HD3	53:D6:110:ARG:NH2	2.15	0.61
53:D6:74:ASN:HD22	53:D6:74:ASN:N	1.93	0.61
1:AA:676:A:H2'	1:AA:677:U:H6	1.65	0.61
1:AA:1320:C:N3	18:AS:35:ARG:HD3	2.16	0.61
4:AE:96:GLN:HB3	4:AE:123:LEU:HD12	1.82	0.61
14:AO:25:THR:HB	14:AO:70:LEU:HD23	1.82	0.61
20:AB:85:SER:O	20:AB:86:CYS:HB2	2.01	0.61
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.66	0.61
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.35	0.61
23:BB:2109:U:H2'	23:BB:2110:G:H5'	1.83	0.61
23:BB:2186:G:H2'	23:BB:2187:U:C6	2.35	0.61
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.81	0.61
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.21	0.61
30:BY:6:ILE:O	30:BY:34:THR:HA	2.01	0.61
40:BH:80:ILE:HB	40:BH:144:VAL:HG13	1.83	0.61
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.65	0.61
44:BQ:86:SER:CB	49:BR:51:VAL:HA	2.31	0.61
46:BU:95:PHE:CE1	46:BU:102:ILE:HB	2.32	0.61
3:CD:60:VAL:HA	3:CD:63:ILE:HD12	1.81	0.61
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	1.82	0.61
22:DA:111:U:H2'	22:DA:112:G:H8	1.65	0.61
23:DB:18:U:H2'	23:DB:19:A:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1082:U:N3	23:DB:1086:A:C6	2.69	0.61
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.35	0.61
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.65	0.61
23:DB:2243:U:H2'	23:DB:2244:U:H6	1.62	0.61
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.36	0.61
29:DE:58:LYS:H	29:DE:58:LYS:HZ3	1.47	0.61
35:DV:53:LYS:HB3	35:DV:55:GLU:OE1	2.01	0.61
45:DS:16:LYS:O	45:DS:19:LEU:HB3	2.01	0.61
45:DS:55:ILE:HD12	45:DS:107:VAL:HG21	1.83	0.61
1:AA:636:U:H2'	1:AA:637:C:H6	1.65	0.61
1:AA:919:A:O2'	1:AA:920:U:H5'	2.01	0.61
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.66	0.61
6:AG:68:VAL:HG11	6:AG:133:ALA:HB1	1.82	0.61
6:AG:77:ARG:HG3	6:AG:79:VAL:HG23	1.83	0.61
13:AN:68:ARG:HB3	13:AN:68:ARG:NH1	2.11	0.61
20:AB:133:ALA:O	20:AB:137:THR:HG23	2.00	0.61
23:BB:321:U:OP2	29:BE:130:LYS:HD3	2.00	0.61
23:BB:870:U:O2'	23:BB:871:U:H5'	2.00	0.61
25:BC:204:LEU:HD23	25:BC:209:ALA:HB1	1.82	0.61
25:BC:245:THR:O	25:BC:247:TRP:N	2.34	0.61
38:BM:59:ARG:HE	38:BM:60:GLN:H	1.49	0.61
42:BN:12:ARG:HG3	42:BN:13:ASN:H	1.66	0.61
43:BO:9:ARG:HG3	43:BO:10:ARG:N	2.16	0.61
47:BF:24:VAL:O	47:BF:27:VAL:HG22	2.01	0.61
47:BF:102:LEU:HD22	47:BF:103:ILE:H	1.64	0.61
48:BG:17:LYS:HA	48:BG:17:LYS:HZ2	1.65	0.61
51:BZ:5:CYS:CB	51:BZ:10:LYS:H	2.12	0.61
53:B6:59:THR:HG23	53:B6:67:VAL:HG23	1.82	0.61
1:CA:797:C:O2'	1:CA:798:U:H5'	1.99	0.61
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.35	0.61
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.31	0.61
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.35	0.61
3:CD:187:ARG:NH1	3:CD:191:SER:HA	2.16	0.61
4:CE:89:THR:HG21	4:CE:134:ASN:ND2	2.15	0.61
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.41	0.61
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.82	0.61
15:CP:59:HIS:O	15:CP:63:GLN:HG3	2.01	0.61
22:DA:24:G:N7	22:DA:56:G:H2'	2.16	0.61
23:DB:401:A:H2'	23:DB:402:A:C8	2.36	0.61
23:DB:523:C:H4'	23:DB:540:C:O2	2.01	0.61
23:DB:636:G:O5'	37:DL:128:THR:HG22	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:782:A:N3	25:DC:224:MET:HB3	2.15	0.61
23:DB:794:A:H2'	23:DB:795:C:C6	2.36	0.61
23:DB:899:A:H3'	23:DB:900:A:H8	1.65	0.61
23:DB:1024:G:C3'	23:DB:1025:G:H5"	2.27	0.61
23:DB:1796:U:O2'	23:DB:1797:G:H5'	2.01	0.61
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.66	0.61
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.66	0.61
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.83	0.61
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.83	0.61
25:DC:143:VAL:HG12	25:DC:144:GLU:N	2.16	0.61
25:DC:146:LYS:HB3	25:DC:147:PRO:HD2	1.82	0.61
25:DC:166:ARG:HB2	25:DC:171:VAL:HG22	1.82	0.61
39:DX:6:LEU:O	39:DX:7:ARG:HB3	2.00	0.61
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.15	0.61
47:DF:102:LEU:HD13	47:DF:103:ILE:HB	1.82	0.61
48:DG:54:ARG:HB3	48:DG:57:TYR:HD1	1.64	0.61
53:D6:17:SER:O	53:D6:20:VAL:HB	2.00	0.61
1:AA:715:A:H2'	1:AA:716:A:C8	2.34	0.60
1:AA:876:C:H1'	7:AH:11:THR:HG21	1.82	0.60
1:AA:1190:G:OP1	2:AC:3:LYS:HA	2.00	0.60
8:AI:83:THR:HA	8:AI:86:LEU:HD22	1.82	0.60
12:AM:47:LEU:HD13	12:AM:51:GLN:O	1.99	0.60
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.01	0.60
23:BB:401:A:H2'	23:BB:402:A:C8	2.36	0.60
23:BB:1283:G:N2	23:BB:1285:A:H3'	2.16	0.60
23:BB:1387:A:H5'	23:BB:1469:A:H1'	1.83	0.60
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.35	0.60
23:BB:2267:A:H8	23:BB:2267:A:C3'	2.10	0.60
23:BB:2748:A:H4'	48:BG:3:VAL:HG21	1.81	0.60
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.36	0.60
38:BM:35:ALA:HB2	38:BM:100:LYS:H	1.64	0.60
38:BM:108:VAL:HG13	38:BM:112:LEU:HB3	1.82	0.60
43:BO:47:VAL:HG12	43:BO:48:LEU:N	2.16	0.60
1:CA:1190:G:OP1	2:CC:3:LYS:HA	2.01	0.60
20:CB:125:PHE:HA	20:CB:127:LYS:HZ1	1.66	0.60
23:DB:19:A:H2'	23:DB:20:C:H6	1.66	0.60
23:DB:100:U:OP1	23:DB:100:U:H3'	2.01	0.60
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.64	0.60
23:DB:2019:A:H2	23:DB:2035:G:H22	1.49	0.60
23:DB:2267:A:H8	23:DB:2267:A:O5'	1.83	0.60
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2412:A:H2'	23:DB:2413:G:O4'	1.99	0.60
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.36	0.60
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.36	0.60
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.65	0.60
38:DM:21:ALA:HB2	38:DM:100:LYS:HG2	1.83	0.60
38:DM:59:ARG:NH1	38:DM:60:GLN:HB3	2.07	0.60
38:DM:59:ARG:HE	38:DM:60:GLN:H	1.48	0.60
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.36	0.60
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.77	0.60
41:DJ:29:ALA:HA	41:DJ:32:LEU:HD12	1.81	0.60
51:DZ:77:LYS:HD2	51:DZ:78:TYR:H	1.65	0.60
53:D6:92:PRO:HA	53:D6:101:ILE:CG1	2.28	0.60
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.18	0.60
1:AA:539:A:H2'	1:AA:540:G:C8	2.36	0.60
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.01	0.60
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.15	0.60
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.00	0.60
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.00	0.60
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.83	0.60
17:AR:40:PRO:HD2	17:AR:43:ILE:HD12	1.83	0.60
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.22	0.60
23:BB:30:G:OP1	44:BQ:4:LYS:HG2	2.01	0.60
23:BB:1170:C:H2'	23:BB:1171:G:C8	2.36	0.60
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.65	0.60
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.35	0.60
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.36	0.60
23:BB:2704:C:H2'	23:BB:2705:A:O4'	2.02	0.60
25:BC:41:GLY:HA3	25:BC:53:ILE:HG21	1.82	0.60
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.16	0.60
34:B3:39:ARG:O	34:B3:43:LEU:HG	2.01	0.60
35:BV:80:HIS:CG	35:BV:83:LYS:HB2	2.36	0.60
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.15	0.60
40:BH:57:LYS:NZ	40:BH:58:LEU:HD13	2.16	0.60
44:BQ:18:LYS:C	44:BQ:20:ALA:H	2.05	0.60
8:CI:64:ILE:HD12	8:CI:64:ILE:H	1.65	0.60
23:DB:63:A:H2'	23:DB:63:A:OP2	2.01	0.60
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.00	0.60
23:DB:1248:G:OP1	44:DQ:1:ALA:HB3	2.01	0.60
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.35	0.60
23:DB:1930:G:H2'	23:DB:1968:G:C6	2.36	0.60
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2366:A:H4'	52:DW:61:LYS:HE2	1.83	0.60
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	2.01	0.60
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HG3	2.36	0.60
46:DU:85:ARG:HA	46:DU:85:ARG:NE	2.15	0.60
48:DG:106:LEU:HD12	48:DG:151:ARG:HD3	1.82	0.60
53:D6:57:THR:O	53:D6:69:GLN:N	2.34	0.60
1:AA:371:A:O2'	1:AA:372:C:H5'	2.01	0.60
1:AA:1260:G:H4'	1:AA:1283:U:O2'	2.02	0.60
1:AA:1296:C:C4'	1:AA:1302:C:H41	2.10	0.60
1:AA:1319:A:H4'	1:AA:1320:C:OP1	2.01	0.60
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.17	0.60
16:AQ:30:HIS:CE1	16:AQ:32:ILE:HG22	2.36	0.60
18:AS:62:THR:HG22	18:AS:63:ASP:H	1.67	0.60
22:BA:30:C:H2'	22:BA:31:C:H5'	1.84	0.60
23:BB:2146:C:H1'	23:BB:2147:A:H4'	1.83	0.60
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.01	0.60
23:BB:2710:C:H2'	23:BB:2711:A:C8	2.37	0.60
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.35	0.60
23:BB:2800:A:H2'	23:BB:2801:G:O4'	2.01	0.60
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.35	0.60
26:BD:148:GLN:CG	26:BD:152:PRO:HG2	2.30	0.60
27:BK:88:ASN:HB3	27:BK:92:GLU:O	2.01	0.60
39:BX:13:GLU:HB2	39:BX:57:LEU:HD13	1.84	0.60
48:BG:123:GLU:HG2	48:BG:124:CYS:N	2.15	0.60
1:CA:426:U:H4'	3:CD:39:GLN:HA	1.83	0.60
1:CA:482:A:H2'	1:CA:483:C:O4'	2.00	0.60
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.02	0.60
1:CA:1035:A:H2'	1:CA:1036:A:H8	1.67	0.60
1:CA:1180:A:P	8:CI:98:ARG:HH22	2.24	0.60
1:CA:1320:C:N3	18:CS:35:ARG:HD3	2.16	0.60
3:CD:26:ALA:HA	3:CD:30:LYS:HE3	1.83	0.60
3:CD:116:LEU:HD21	3:CD:153:ARG:HD2	1.82	0.60
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.83	0.60
10:CK:17:ASP:HB3	10:CK:80:ASN:ND2	2.17	0.60
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.82	0.60
20:CB:8:MET:HB2	20:CB:11:ALA:CB	2.31	0.60
23:DB:417:C:H2'	23:DB:418:C:C6	2.36	0.60
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.36	0.60
23:DB:2136:G:N1	23:DB:2156:G:H1'	2.16	0.60
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.37	0.60
23:DB:2801:G:H2'	23:DB:2802:G:C8	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:30:GLU:HG3	26:DD:52:THR:CG2	2.30	0.60
29:DE:130:LYS:C	29:DE:132:LYS:H	2.05	0.60
37:DL:42:SER:C	37:DL:44:GLY:H	2.05	0.60
38:DM:126:ILE:HD12	38:DM:126:ILE:N	2.14	0.60
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.13	0.60
47:DF:107:VAL:HG11	47:DF:175:PRO:HG3	1.83	0.60
1:AA:1320:C:H41	18:AS:36:ARG:HE	1.47	0.60
8:AI:67:LYS:HZ3	8:AI:67:LYS:HB2	1.66	0.60
23:BB:307:G:H2'	23:BB:309:A:OP2	2.02	0.60
23:BB:817:C:H2'	23:BB:818:G:O4'	2.00	0.60
23:BB:1205:A:N1	29:BE:165:HIS:HB2	2.16	0.60
23:BB:1365:A:OP2	51:BZ:3:ARG:HB2	2.01	0.60
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.37	0.60
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.37	0.60
23:BB:2052:A:O4'	26:BD:147:GLY:HA3	2.01	0.60
23:BB:2093:G:O5'	40:BH:24:GLY:HA3	2.01	0.60
33:B1:26:LYS:HB2	33:B1:52:LYS:HZ2	1.66	0.60
46:BU:81:ARG:HH21	46:BU:81:ARG:H	1.49	0.60
53:B6:60:ALA:HB2	53:B6:66:LEU:HG	1.83	0.60
1:CA:746:A:H2'	1:CA:747:A:C8	2.35	0.60
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.35	0.60
4:CE:22:LYS:HB3	4:CE:29:ILE:HB	1.84	0.60
6:CG:41:ILE:HG21	6:CG:115:MET:HG3	1.82	0.60
13:CN:48:GLN:O	13:CN:51:PRO:HD2	2.02	0.60
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.02	0.60
23:DB:870:U:O2'	23:DB:871:U:H5'	2.01	0.60
23:DB:923:G:H1'	52:DW:23:LYS:HZ2	1.67	0.60
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.36	0.60
23:DB:1416:G:HO2'	23:DB:1417:C:H6	1.47	0.60
23:DB:2194:U:H2'	23:DB:2195:U:C6	2.35	0.60
36:D2:26:ASN:O	36:D2:30:VAL:HG23	2.00	0.60
40:DH:77:THR:HA	40:DH:143:ILE:O	1.99	0.60
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.36	0.60
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.02	0.60
19:AT:57:VAL:HG23	19:AT:58:ASP:H	1.66	0.60
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	1.83	0.60
23:BB:19:A:H2'	23:BB:20:C:C6	2.37	0.60
23:BB:1081:U:H4'	24:BI:123:ALA:HB1	1.83	0.60
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	2.02	0.60
23:BB:2630:G:H2'	23:BB:2631:G:C8	2.36	0.60
28:BP:20:ARG:O	28:BP:46:VAL:HG21	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:50:ARG:O	40:BH:54:LEU:HD21	2.01	0.60
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.36	0.60
4:CE:96:GLN:HB3	4:CE:123:LEU:HD12	1.84	0.60
13:CN:12:ARG:HA	13:CN:15:LEU:HD12	1.83	0.60
23:DB:634:C:H2'	23:DB:635:C:C6	2.36	0.60
23:DB:934:U:H2'	23:DB:935:C:C6	2.37	0.60
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.36	0.60
23:DB:2252:G:O2'	23:DB:2253:G:H5'	2.02	0.60
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.00	0.60
24:DI:128:ILE:HA	24:DI:131:THR:HG23	1.83	0.60
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	2.01	0.60
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	2.01	0.60
1:AA:35:G:H2'	1:AA:36:C:C6	2.36	0.60
1:AA:707:U:H4'	10:AK:21:HIS:CD2	2.36	0.60
3:AD:197:HIS:O	3:AD:200:VAL:HG22	2.02	0.60
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.42	0.60
23:BB:479:A:N3	23:BB:481:G:H5"	2.17	0.60
23:BB:693:A:H2'	23:BB:694:U:H6	1.66	0.60
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.36	0.60
23:BB:2860:A:H8	23:BB:2860:A:O5'	1.85	0.60
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.36	0.60
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.05	0.60
47:BF:110:ILE:HA	47:BF:111:ARG:NH1	2.15	0.60
22:DA:30:C:H2'	22:DA:31:C:H5'	1.84	0.60
23:DB:1023:U:H2'	23:DB:1024:G:H5'	1.82	0.60
23:DB:1920:C:N4	55:DB:3112:PAR:H122	1.99	0.60
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.37	0.60
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.37	0.60
23:DB:2751:G:O2'	23:DB:2752:C:H5'	2.02	0.60
39:DX:5:GLU:O	39:DX:8:GLU:HG2	2.01	0.60
48:DG:162:ARG:HG3	48:DG:166:GLU:OE2	2.02	0.60
2:AC:129:PHE:CD2	2:AC:156:LEU:HD22	2.37	0.60
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.02	0.60
9:AJ:66:GLU:HB3	13:AN:98:ALA:HB2	1.84	0.60
23:BB:3:U:O2'	23:BB:4:U:H6	1.85	0.60
23:BB:1236:G:H1'	23:BB:1237:A:H8	1.66	0.60
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.67	0.60
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.02	0.60
37:BL:23:ILE:H	37:BL:23:ILE:HD12	1.66	0.60
40:BH:44:ILE:HG22	40:BH:51:ARG:HH12	1.66	0.60
49:BR:66:HIS:ND1	49:BR:94:THR:HG22	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.17	0.60
1:CA:1029:U:H2'	1:CA:1031:C:N3	2.17	0.60
1:CA:1280:A:O4'	9:CJ:43:PRO:HG3	2.02	0.60
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.67	0.60
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.02	0.60
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.37	0.60
4:CE:12:GLU:HG2	4:CE:38:VAL:HG22	1.84	0.60
7:CH:76:ARG:HG3	7:CH:77:VAL:N	2.16	0.60
12:CM:87:GLY:HA2	12:CM:90:HIS:HD2	1.65	0.60
23:DB:5:A:H2'	23:DB:6:A:C8	2.37	0.60
23:DB:96:C:H4'	39:DX:41:HIS:CE1	2.37	0.60
23:DB:670:A:H5"	37:DL:42:SER:HB2	1.83	0.60
23:DB:1042:G:H2'	23:DB:1043:C:H6	1.67	0.60
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.01	0.60
23:DB:1199:U:C5'	44:DQ:4:LYS:HD3	2.32	0.60
23:DB:1236:G:H1'	23:DB:1237:A:H8	1.66	0.60
23:DB:1306:C:H2'	23:DB:1307:A:H8	1.67	0.60
23:DB:1571:A:H2'	23:DB:1572:A:H8	1.67	0.60
23:DB:1937:A:N7	23:DB:1939:U:H2'	2.16	0.60
23:DB:2103:C:H3'	23:DB:2104:C:C2	2.37	0.60
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.36	0.60
25:DC:64:VAL:HG11	25:DC:66:PHE:CZ	2.37	0.60
29:DE:59:PRO:HB2	29:DE:67:ARG:NH2	2.14	0.60
33:D1:18:HIS:NE2	33:D1:40:PRO:HD2	2.17	0.60
35:DV:80:HIS:CG	35:DV:83:LYS:HB2	2.36	0.60
37:DL:23:ILE:H	37:DL:23:ILE:HD12	1.67	0.60
37:DL:143:GLU:HG2	37:DL:144:GLU:N	2.16	0.60
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.66	0.60
42:DN:58:ASP:O	42:DN:59:SER:HB3	2.01	0.60
43:DO:79:ALA:O	43:DO:83:LEU:HB2	2.01	0.60
45:DS:90:LYS:HD2	45:DS:92:ARG:NH1	2.16	0.60
47:DF:110:ILE:HA	47:DF:111:ARG:NH1	2.16	0.60
51:DZ:40:VAL:CG2	51:DZ:43:GLU:HB3	2.26	0.60
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	2.02	0.60
1:AA:1004:A:C8	1:AA:1025:U:H1'	2.36	0.60
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.31	0.60
1:AA:1226:C:H2'	12:AM:101:THR:OG1	2.01	0.60
1:AA:1532:U:H2'	1:AA:1533:C:H3'	1.83	0.60
3:AD:165:GLU:HG3	3:AD:166:LYS:H	1.67	0.60
13:AN:51:PRO:HB2	13:AN:54:SER:CB	2.31	0.60
20:AB:112:ARG:HA	20:AB:115:ASP:OD2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:42:THR:HB	21:AU:46:ARG:HE	1.67	0.60
22:BA:37:C:H2'	22:BA:38:C:O4'	2.02	0.60
23:BB:222:A:N1	23:BB:233:A:H5"	2.17	0.60
23:BB:682:G:O2'	23:BB:683:U:H5'	2.02	0.60
23:BB:1001:A:H2'	23:BB:1002:G:O4'	2.02	0.60
23:BB:1054:A:H2'	23:BB:1055:G:C8	2.35	0.60
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.02	0.60
23:BB:2750:A:OP1	23:BB:2750:A:H8	1.85	0.60
32:B4:8:LYS:O	32:B4:25:VAL:HG21	2.02	0.60
43:BO:108:ASP:HA	43:BO:111:ARG:HB3	1.83	0.60
46:BU:10:VAL:O	46:BU:21:ARG:HA	2.01	0.60
50:BT:48:GLN:HE21	50:BT:48:GLN:HA	1.66	0.60
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	2.01	0.60
1:CA:35:G:H2'	1:CA:36:C:C6	2.37	0.60
6:CG:62:GLU:O	6:CG:66:GLU:HG3	2.01	0.60
8:CI:62:LEU:HD22	8:CI:62:LEU:H	1.66	0.60
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.84	0.60
17:CR:34:GLU:HB2	21:CU:18:PHE:HZ	1.67	0.60
21:CU:24:LYS:CD	21:CU:25:ALA:H	2.15	0.60
23:DB:6:A:H2'	23:DB:7:G:H8	1.66	0.60
23:DB:140:C:H4'	23:DB:141:G:C5	2.36	0.60
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.02	0.60
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.67	0.60
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.37	0.60
30:DY:43:ILE:O	30:DY:47:ILE:HG12	2.01	0.60
47:DF:7:TYR:O	47:DF:11:VAL:HB	2.01	0.60
1:AA:501:C:H2'	1:AA:502:A:H8	1.65	0.60
1:AA:880:C:H2'	1:AA:881:G:H8	1.65	0.60
1:AA:918:A:H2'	1:AA:919:A:C8	2.37	0.60
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.36	0.60
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.02	0.60
5:AF:81:ASN:OD1	5:AF:83:ALA:HB3	2.02	0.60
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	1.82	0.60
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.37	0.60
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.36	0.60
23:BB:2267:A:H8	23:BB:2267:A:O5'	1.84	0.60
23:BB:2578:G:C5	26:BD:145:SER:HB2	2.36	0.60
26:BD:8:LYS:HD3	26:BD:197:THR:H	1.67	0.60
33:B1:18:HIS:NE2	33:B1:40:PRO:HD2	2.17	0.60
40:BH:67:ALA:O	40:BH:71:LYS:HB2	2.01	0.60
40:BH:72:ILE:HG23	40:BH:140:ALA:CB	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:40:HIS:CE1	41:BJ:41:LYS:HG3	2.36	0.60
47:BF:102:LEU:HD13	47:BF:103:ILE:HB	1.84	0.60
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.22	0.60
1:CA:272:C:H2'	1:CA:273:U:H6	1.67	0.60
1:CA:413:G:H2'	1:CA:428:G:N2	2.17	0.60
1:CA:423:G:H2'	1:CA:424:G:O4'	2.02	0.60
1:CA:518:C:H2'	1:CA:530:G:C8	2.37	0.60
23:DB:2:G:O2'	23:DB:3:U:H5'	2.01	0.60
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.67	0.60
23:DB:1278:C:O3'	42:DN:34:ILE:HG23	2.02	0.60
23:DB:1326:U:H2'	23:DB:1327:A:H8	1.66	0.60
23:DB:1386:C:H2'	23:DB:1387:A:H8	1.66	0.60
23:DB:2019:A:H4'	44:DQ:33:VAL:HG11	1.84	0.60
25:DC:130:PRO:HG2	25:DC:133:ASN:HD22	1.65	0.60
28:DP:97:TYR:O	28:DP:100:ARG:HB2	2.02	0.60
30:DY:29:ARG:H	30:DY:33:HIS:CD2	2.19	0.60
31:D0:21:LEU:HD13	45:DS:23:LEU:HD11	1.84	0.60
42:DN:77:ALA:O	42:DN:81:ASN:HB2	2.02	0.60
44:DQ:18:LYS:C	44:DQ:20:ALA:H	2.05	0.60
46:DU:83:GLY:O	46:DU:93:ARG:HA	2.02	0.60
50:DT:38:ALA:O	50:DT:39:THR:HB	2.01	0.60
53:D6:39:LEU:HD12	53:D6:39:LEU:O	2.01	0.60
53:D6:59:THR:HG22	53:D6:67:VAL:CG2	2.31	0.60
3:AD:158:LEU:HA	3:AD:161:ALA:HB2	1.84	0.60
4:AE:43:GLY:O	4:AE:72:ASN:HA	2.02	0.60
9:AJ:29:ALA:O	9:AJ:32:THR:HG22	2.01	0.60
17:AR:34:GLU:CD	17:AR:34:GLU:H	2.05	0.60
20:AB:94:ARG:HE	20:AB:94:ARG:N	1.99	0.60
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.37	0.60
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.37	0.60
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.01	0.60
31:B0:54:ILE:H	42:BN:118:ARG:HH12	1.48	0.60
40:BH:47:PHE:HA	40:BH:50:ARG:HH21	1.65	0.60
40:BH:89:LYS:HZ1	40:BH:123:ARG:HB3	1.67	0.60
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	2.02	0.60
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	1.82	0.60
53:B6:1:MET:HA	53:B6:5:GLU:OE2	2.02	0.60
1:CA:481:G:HO2'	1:CA:482:A:H8	1.48	0.60
1:CA:1147:C:O2'	8:CI:17:ARG:HD2	2.02	0.60
3:CD:25:ARG:HD3	3:CD:25:ARG:C	2.22	0.60
3:CD:77:GLU:HA	3:CD:80:ARG:HG2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:165:GLU:HG3	3:CD:166:LYS:H	1.67	0.60
10:CK:88:PRO:HD3	21:CU:28:LEU:HD11	1.84	0.60
14:CO:55:GLY:O	14:CO:59:MET:HG2	2.02	0.60
22:DA:60:C:H2'	22:DA:61:G:H8	1.66	0.60
23:DB:2487:G:H2'	23:DB:2488:G:C8	2.37	0.60
23:DB:2579:C:O2'	26:DD:136:ASN:HA	2.01	0.60
31:D0:9:ARG:O	31:D0:12:ARG:HB3	2.02	0.60
40:DH:31:VAL:O	40:DH:33:GLN:N	2.34	0.60
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	1.84	0.60
45:DS:83:LYS:HD3	45:DS:97:LEU:HD11	1.84	0.60
47:DF:78:ILE:HD12	47:DF:78:ILE:N	2.17	0.60
1:AA:215:C:H2'	1:AA:216:U:C6	2.37	0.59
1:AA:834:U:H2'	1:AA:835:U:C6	2.36	0.59
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.37	0.59
20:AB:102:ASN:OD1	20:AB:105:THR:HB	2.01	0.59
20:AB:160:LEU:HD23	20:AB:181:PRO:O	2.02	0.59
23:BB:742:A:H2'	23:BB:743:A:H8	1.66	0.59
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.84	0.59
23:BB:1657:U:O2'	23:BB:1658:C:H5'	2.02	0.59
23:BB:1744:A:H2'	23:BB:1745:A:C8	2.37	0.59
23:BB:1919:A:H2'	23:BB:1920:C:H5'	1.84	0.59
25:BC:170:TYR:HE2	25:BC:184:GLU:HG2	1.67	0.59
30:BY:43:ILE:O	30:BY:47:ILE:HG12	2.02	0.59
37:BL:123:ARG:HH11	37:BL:123:ARG:HB3	1.65	0.59
38:BM:35:ALA:CB	38:BM:100:LYS:H	2.15	0.59
50:BT:38:ALA:O	50:BT:39:THR:HB	2.02	0.59
53:B6:39:LEU:HD12	53:B6:40:HIS:N	2.17	0.59
3:CD:158:LEU:HA	3:CD:161:ALA:HB2	1.84	0.59
4:CE:158:LYS:NZ	7:CH:65:PHE:HA	2.16	0.59
20:CB:128:LEU:HD22	20:CB:129:THR:H	1.67	0.59
23:DB:828:U:H4'	23:DB:831:G:N1	2.16	0.59
23:DB:863:A:H2'	23:DB:864:G:C8	2.36	0.59
23:DB:917:A:H2'	23:DB:918:A:O4'	2.02	0.59
23:DB:1354:A:H2'	23:DB:1355:G:O4'	2.01	0.59
23:DB:1473:G:O2'	23:DB:1474:U:H5'	2.02	0.59
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.36	0.59
23:DB:1789:A:OP2	25:DC:220:ARG:HD3	2.01	0.59
23:DB:2148:G:H2'	23:DB:2148:G:N3	2.17	0.59
23:DB:2389:G:C5'	23:DB:2390:U:H5'	2.32	0.59
35:DV:6:ALA:O	35:DV:65:VAL:HG12	2.02	0.59
47:DF:72:SER:HB2	47:DF:80:GLN:HA	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:8:VAL:HG11	48:DG:49:LEU:CB	2.31	0.59
48:DG:145:ALA:HA	48:DG:148:ARG:HG3	1.83	0.59
1:AA:390:U:H2'	1:AA:391:G:H8	1.67	0.59
1:AA:482:A:H2'	1:AA:483:C:O4'	2.02	0.59
1:AA:517:G:H22	1:AA:533:A:P	2.24	0.59
1:AA:806:C:H2'	1:AA:807:A:H8	1.67	0.59
1:AA:812:G:N3	1:AA:812:G:H2'	2.16	0.59
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.37	0.59
4:AE:12:GLU:HG2	4:AE:38:VAL:HG22	1.84	0.59
22:BA:60:C:H2'	22:BA:61:G:H8	1.67	0.59
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.02	0.59
23:BB:118:A:N3	23:BB:178:G:H1'	2.17	0.59
23:BB:143:C:H2'	23:BB:144:A:C8	2.37	0.59
23:BB:392:U:O2'	23:BB:393:C:H5'	2.03	0.59
23:BB:402:A:H2'	23:BB:403:U:O4'	2.02	0.59
23:BB:1042:G:H2'	23:BB:1043:C:C6	2.36	0.59
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.34	0.59
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.83	0.59
40:BH:73:ASN:HD22	40:BH:74:ALA:H	1.48	0.59
40:BH:94:ILE:HB	40:BH:121:VAL:HB	1.83	0.59
42:BN:31:HIS:O	42:BN:33:ILE:HG13	2.02	0.59
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.66	0.59
47:BF:33:ILE:HD13	47:BF:95:MET:HG2	1.84	0.59
53:B6:109:GLU:HA	53:B6:112:LYS:CE	2.32	0.59
1:CA:818:G:H3'	1:CA:819:A:H5"	1.83	0.59
1:CA:860:A:H2'	1:CA:861:G:O4'	2.01	0.59
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.37	0.59
3:CD:71:PHE:O	3:CD:74:TYR:HB2	2.02	0.59
8:CI:83:THR:HA	8:CI:86:LEU:HD22	1.83	0.59
14:CO:70:LEU:HD11	14:CO:77:ARG:HB2	1.84	0.59
23:DB:402:A:H2'	23:DB:403:U:O4'	2.01	0.59
23:DB:634:C:H2'	23:DB:635:C:H6	1.66	0.59
23:DB:753:A:H2'	23:DB:754:U:C6	2.37	0.59
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.01	0.59
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.02	0.59
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.37	0.59
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.22	0.59
26:DD:124:ARG:HA	26:DD:165:MET:CE	2.32	0.59
40:DH:135:HIS:HB3	40:DH:138:VAL:HB	1.84	0.59
43:DO:74:VAL:O	43:DO:78:VAL:HG23	2.02	0.59
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.09	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	1.84	0.59
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.16	0.59
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.17	0.59
52:DW:35:ILE:O	52:DW:35:ILE:HG12	2.00	0.59
1:AA:570:G:H2'	1:AA:571:U:C6	2.37	0.59
1:AA:1072:G:N2	20:AB:105:THR:HG21	2.16	0.59
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.67	0.59
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.66	0.59
6:AG:24:LYS:HA	6:AG:27:ASN:HD22	1.67	0.59
22:BA:49:C:H2'	22:BA:50:A:H8	1.68	0.59
23:BB:71:A:H4'	23:BB:72:U:H5'	1.84	0.59
23:BB:79:C:HO2'	23:BB:346:A:C1'	2.12	0.59
23:BB:492:A:H2'	23:BB:493:G:O4'	2.01	0.59
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.37	0.59
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.67	0.59
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.67	0.59
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.17	0.59
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.84	0.59
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.37	0.59
48:BG:54:ARG:HB3	48:BG:57:TYR:CD1	2.37	0.59
53:B6:178:LYS:O	53:B6:181:GLN:HG3	2.01	0.59
1:CA:237:G:H2'	1:CA:238:A:H8	1.67	0.59
1:CA:370:C:O2'	1:CA:371:A:H5'	2.02	0.59
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.38	0.59
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.36	0.59
22:DA:16:G:O2'	22:DA:17:C:H5'	2.03	0.59
23:DB:173:A:H2'	23:DB:174:U:C6	2.37	0.59
23:DB:315:G:H2'	23:DB:316:C:C6	2.37	0.59
23:DB:441:U:H2'	23:DB:442:G:C8	2.37	0.59
23:DB:826:U:H2'	23:DB:828:U:O4'	2.02	0.59
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.02	0.59
29:DE:58:LYS:C	29:DE:60:TRP:N	2.56	0.59
39:DX:17:GLU:HB3	39:DX:53:VAL:HG11	1.84	0.59
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.37	0.59
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.84	0.59
42:DN:19:ALA:C	42:DN:21:PHE:H	2.06	0.59
52:DW:77:LYS:N	52:DW:77:LYS:HZ2	2.00	0.59
1:AA:182:A:O2'	1:AA:183:C:H5"	2.02	0.59
1:AA:300:A:H2'	1:AA:301:G:O4'	2.03	0.59
1:AA:398:U:H2'	1:AA:399:G:C8	2.37	0.59
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:324:A:H2'	23:BB:325:G:O4'	2.02	0.59
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.38	0.59
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.84	0.59
41:BJ:64:VAL:O	41:BJ:68:LYS:HD2	2.01	0.59
42:BN:77:ALA:O	42:BN:81:ASN:HB2	2.02	0.59
44:BQ:30:VAL:HG11	44:BQ:33:VAL:HG22	1.84	0.59
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.30	0.59
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.17	0.59
52:BW:77:LYS:H	52:BW:77:LYS:NZ	2.01	0.59
1:CA:539:A:H2'	1:CA:540:G:C8	2.38	0.59
1:CA:1008:U:H5"	13:CN:23:ARG:HH22	1.67	0.59
1:CA:1271:A:H5'	1:CA:1314:C:H5"	1.83	0.59
1:CA:1524:C:H2'	1:CA:1525:G:H8	1.67	0.59
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.18	0.59
7:CH:100:ILE:HG13	7:CH:128:VAL:O	2.02	0.59
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.83	0.59
12:CM:1:ALA:C	12:CM:8:ILE:HG22	2.23	0.59
13:CN:51:PRO:HB2	13:CN:54:SER:CB	2.31	0.59
13:CN:63:CYS:HB2	13:CN:79:SER:HB3	1.85	0.59
21:CU:11:PHE:O	21:CU:13:VAL:N	2.34	0.59
23:DB:794:A:H2'	23:DB:795:C:H6	1.66	0.59
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.43	0.59
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.83	0.59
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.38	0.59
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.85	0.59
26:DD:117:GLY:HA2	26:DD:164:GLN:CD	2.23	0.59
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.68	0.59
29:DE:148:ILE:HA	29:DE:187:VAL:HB	1.82	0.59
34:D3:39:ARG:O	34:D3:43:LEU:HG	2.03	0.59
35:DV:70:ILE:N	35:DV:70:ILE:HD13	2.16	0.59
39:DX:20:ASN:O	39:DX:24:GLU:HB3	2.02	0.59
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.02	0.59
47:DF:32:LYS:HB2	47:DF:90:LEU:O	2.03	0.59
53:D6:67:VAL:HA	53:D6:99:LEU:O	2.01	0.59
1:AA:308:C:H2'	1:AA:309:A:H8	1.67	0.59
1:AA:620:C:H2'	1:AA:621:A:C8	2.37	0.59
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.84	0.59
10:AK:92:ARG:HE	21:AU:20:ARG:HH22	1.51	0.59
13:AN:60:ARG:O	13:AN:62:ARG:N	2.35	0.59
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.03	0.59
21:AU:3:ILE:HD11	21:AU:23:GLU:HB2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.66	0.59
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.67	0.59
23:BB:2400:G:O2'	23:BB:2401:U:H5'	2.01	0.59
23:BB:2675:A:N1	23:BB:2732:G:O6	2.36	0.59
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.66	0.59
29:BE:108:ILE:HD13	29:BE:108:ILE:O	2.02	0.59
36:B2:30:VAL:HA	36:B2:33:ARG:HH22	1.67	0.59
42:BN:19:ALA:C	42:BN:21:PHE:H	2.05	0.59
47:BF:32:LYS:H	47:BF:95:MET:HE1	1.67	0.59
48:BG:162:ARG:HG3	48:BG:166:GLU:OE2	2.03	0.59
1:CA:253:A:H2'	1:CA:254:G:H8	1.68	0.59
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.37	0.59
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.02	0.59
4:CE:154:ALA:HB1	7:CH:65:PHE:CZ	2.37	0.59
23:DB:682:G:O2'	23:DB:683:U:H5'	2.03	0.59
23:DB:817:C:H2'	23:DB:818:G:O4'	2.02	0.59
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.02	0.59
23:DB:2380:C:H5'	43:DO:17:LYS:HZ3	1.67	0.59
25:DC:71:ASP:HA	25:DC:117:SER:O	2.02	0.59
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.17	0.59
41:DJ:127:GLY:O	41:DJ:128:ASN:HB2	2.02	0.59
1:AA:764:C:H2'	1:AA:765:G:H5'	1.84	0.59
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.37	0.59
3:AD:77:GLU:HA	3:AD:80:ARG:HG2	1.83	0.59
12:AM:95:PRO:HD3	12:AM:108:ARG:HG2	1.85	0.59
23:BB:573:U:O2'	23:BB:574:A:H3'	2.02	0.59
23:BB:709:U:H2'	23:BB:710:U:C6	2.38	0.59
23:BB:936:A:H2'	23:BB:937:C:C6	2.37	0.59
23:BB:1535:A:H3'	23:BB:1536:C:H6	1.66	0.59
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.67	0.59
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.38	0.59
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.03	0.59
23:BB:2760:C:O2'	23:BB:2761:A:H5'	2.02	0.59
24:BI:27:LEU:H	24:BI:27:LEU:CD2	2.14	0.59
31:B0:9:ARG:O	31:B0:12:ARG:HB3	2.01	0.59
37:BL:132:ARG:O	37:BL:136:GLU:HG3	2.03	0.59
43:BO:79:ALA:O	43:BO:83:LEU:HB2	2.01	0.59
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.31	0.59
47:BF:72:SER:HB2	47:BF:80:GLN:HA	1.83	0.59
1:CA:430:A:OP1	3:CD:8:LEU:HB2	2.03	0.59
1:CA:512:U:O2'	1:CA:513:C:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.18	0.59
23:DB:161:A:C3'	23:DB:162:U:H5"	2.32	0.59
23:DB:479:A:N3	23:DB:481:G:H5"	2.17	0.59
23:DB:1032:A:H1'	32:D4:23:ILE:HD13	1.84	0.59
23:DB:1082:U:C2	23:DB:1086:A:C6	2.91	0.59
23:DB:1439:A:C6	23:DB:1552:A:N7	2.71	0.59
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.62	0.59
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.67	0.59
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.37	0.59
23:DB:2092:U:H4'	23:DB:2093:G:O5'	2.03	0.59
23:DB:2356:U:H5"	52:DW:16:GLU:HG3	1.84	0.59
23:DB:2746:U:H4'	48:DG:137:LYS:HG3	1.85	0.59
25:DC:123:ILE:HD12	25:DC:191:LEU:CD1	2.32	0.59
26:DD:117:GLY:HA2	26:DD:164:GLN:NE2	2.18	0.59
39:DX:13:GLU:HB2	39:DX:57:LEU:HD13	1.84	0.59
43:DO:24:THR:OG1	43:DO:90:VAL:HG12	2.02	0.59
44:DQ:34:ALA:O	44:DQ:37:ALA:HB3	2.02	0.59
47:DF:24:VAL:O	47:DF:27:VAL:HG22	2.03	0.59
50:DT:28:ASN:HA	50:DT:91:GLN:HE22	1.66	0.59
1:AA:659:U:O2'	1:AA:660:C:H5'	2.02	0.59
1:AA:737:C:H2'	1:AA:738:C:H6	1.68	0.59
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.37	0.59
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.37	0.59
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.84	0.59
21:AU:24:LYS:HD2	21:AU:25:ALA:N	2.17	0.59
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.18	0.59
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.38	0.59
23:BB:129:C:H2'	23:BB:130:C:H6	1.67	0.59
23:BB:942:G:H2'	23:BB:943:A:O4'	2.02	0.59
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.32	0.59
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.38	0.59
23:BB:1508:A:H2'	23:BB:1509:A:C2	2.37	0.59
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.02	0.59
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	2.03	0.59
23:BB:2708:G:H2'	23:BB:2709:G:H8	1.67	0.59
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.38	0.59
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.27	0.59
27:BK:105:ARG:HB3	27:BK:122:VAL:HG12	1.85	0.59
29:BE:61:ARG:NH1	29:BE:64:GLY:HA3	2.17	0.59
29:BE:146:VAL:HA	29:BE:185:LYS:O	2.02	0.59
40:BH:31:VAL:O	40:BH:33:GLN:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:76:LYS:HG3	43:BO:113:ALA:HB1	1.83	0.59
47:BF:7:TYR:O	47:BF:11:VAL:HB	2.02	0.59
47:BF:134:GLN:H	47:BF:150:GLY:H	1.50	0.59
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.18	0.59
53:B6:70:SER:OG	53:B6:75:ALA:HB3	2.03	0.59
53:B6:123:GLU:O	53:B6:127:VAL:HG23	2.02	0.59
53:B6:142:LYS:HE3	53:B6:142:LYS:HA	1.84	0.59
1:CA:1080:A:H5"	4:CE:20:VAL:HG11	1.84	0.59
1:CA:1148:U:O4'	8:CI:17:ARG:HD3	2.03	0.59
3:CD:48:SER:O	3:CD:52:VAL:HG23	2.03	0.59
20:CB:128:LEU:HD13	20:CB:129:THR:N	2.18	0.59
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.67	0.59
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.67	0.59
23:DB:2261:C:O2'	23:DB:2262:U:H5'	2.02	0.59
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.37	0.59
29:DE:109:LEU:O	29:DE:112:LEU:HB2	2.03	0.59
44:DQ:91:ARG:HE	49:DR:11:GLN:HB2	1.68	0.59
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.03	0.59
47:DF:134:GLN:C	47:DF:136:ILE:H	2.06	0.59
48:DG:116:LEU:HD23	48:DG:121:THR:HA	1.84	0.59
48:DG:153:PRO:HG3	48:DG:162:ARG:HB3	1.85	0.59
50:DT:43:ILE:O	50:DT:47:VAL:HG23	2.02	0.59
50:DT:48:GLN:HA	50:DT:48:GLN:HE21	1.67	0.59
1:AA:586:C:H5"	7:AH:81:GLY:HA2	1.84	0.59
1:AA:783:C:O2'	1:AA:784:A:H5'	2.02	0.59
1:AA:950:U:H2'	1:AA:951:G:C8	2.37	0.59
3:AD:154:VAL:HG23	3:AD:155:LYS:H	1.66	0.59
12:AM:95:PRO:HB2	12:AM:99:GLN:OE1	2.03	0.59
14:AO:26:GLU:HG3	14:AO:77:ARG:NH1	2.17	0.59
23:BB:173:A:H2'	23:BB:174:U:C6	2.38	0.59
23:BB:315:G:H2'	23:BB:316:C:C6	2.38	0.59
23:BB:675:A:H4'	29:BE:60:TRP:CZ2	2.37	0.59
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.37	0.59
23:BB:1813:G:N3	25:BC:49:THR:HG21	2.18	0.59
23:BB:2379:G:H5'	43:BO:21:LEU:HD11	1.84	0.59
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.68	0.59
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.68	0.59
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.84	0.59
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.38	0.59
1:CA:476:U:O2'	1:CA:477:C:H5'	2.03	0.59
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:68:GLN:O	5:CF:71:ILE:HG23	2.03	0.59
13:CN:78:LEU:HD23	13:CN:82:LYS:HB3	1.85	0.59
17:CR:55:ALA:HA	17:CR:58:ILE:HD12	1.83	0.59
23:DB:286:U:H2'	23:DB:287:G:H8	1.67	0.59
23:DB:492:A:H2'	23:DB:493:G:O4'	2.03	0.59
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.38	0.59
23:DB:2243:U:O2'	23:DB:2244:U:H5'	2.03	0.59
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.03	0.59
23:DB:2675:A:N1	23:DB:2732:G:O6	2.36	0.59
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.38	0.59
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.38	0.59
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.03	0.59
46:DU:39:ASN:HB3	46:DU:62:ALA:HB3	1.84	0.59
53:D6:45:TYR:OH	53:D6:74:ASN:HB2	2.02	0.59
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.38	0.59
3:AD:25:ARG:HD3	3:AD:25:ARG:C	2.23	0.59
11:AL:79:ILE:HG22	11:AL:103:CYS:HB2	1.84	0.59
14:AO:55:GLY:O	14:AO:59:MET:HG2	2.02	0.59
18:AS:28:LYS:HD2	18:AS:28:LYS:H	1.68	0.59
18:AS:32:THR:HG22	18:AS:34:SER:H	1.66	0.59
20:AB:62:ARG:HD2	20:AB:62:ARG:H	1.67	0.59
23:BB:176:A:O2'	23:BB:177:G:H5'	2.03	0.59
23:BB:934:U:H2'	23:BB:935:C:C6	2.38	0.59
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	2.03	0.59
23:BB:2243:U:O2'	23:BB:2244:U:H5'	2.03	0.59
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.03	0.59
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.67	0.59
29:BE:148:ILE:HA	29:BE:187:VAL:HB	1.84	0.59
35:BV:30:ILE:HG12	35:BV:91:PHE:HB2	1.85	0.59
40:BH:73:ASN:HB3	40:BH:141:LYS:NZ	2.17	0.59
48:BG:152:ARG:HH22	48:BG:162:ARG:HA	1.66	0.59
51:BZ:77:LYS:HD2	51:BZ:78:TYR:H	1.67	0.59
1:CA:562:U:H1'	11:CL:11:ARG:HB3	1.84	0.59
1:CA:692:U:H2'	1:CA:693:G:H3'	1.83	0.59
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.68	0.59
2:CC:78:LYS:HG3	2:CC:81:GLU:CB	2.33	0.59
12:CM:82:LEU:HD22	18:CS:73:PHE:HE2	1.67	0.59
23:DB:28:A:N6	23:DB:512:G:H1'	2.18	0.59
23:DB:709:U:H2'	23:DB:710:U:C6	2.38	0.59
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.84	0.59
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.84	0.59
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.17	0.59
1:AA:285:C:H2'	1:AA:286:C:H6	1.68	0.59
1:AA:451:A:N6	1:AA:480:U:H2'	2.18	0.59
1:AA:499:A:H4'	1:AA:500:G:H5'	1.85	0.59
1:AA:1035:A:H2'	1:AA:1036:A:H8	1.67	0.59
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.38	0.59
2:AC:21:TRP:CH2	2:AC:31:ASN:HB3	2.37	0.59
9:AJ:85:ASP:HA	9:AJ:88:MET:SD	2.42	0.59
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.03	0.59
13:AN:12:ARG:HA	13:AN:15:LEU:HD12	1.85	0.59
14:AO:70:LEU:HD11	14:AO:77:ARG:HB2	1.85	0.59
15:AP:20:VAL:HG23	15:AP:34:GLU:O	2.02	0.59
22:BA:86:G:H2'	22:BA:87:U:O4'	2.03	0.59
23:BB:151:C:H2'	23:BB:152:A:H8	1.68	0.59
23:BB:644:A:O2'	23:BB:645:C:H5'	2.03	0.59
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.37	0.59
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.38	0.59
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.03	0.59
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.03	0.59
23:BB:2749:A:C3'	23:BB:2750:A:H5"	2.33	0.59
25:BC:146:LYS:HB3	25:BC:147:PRO:HD2	1.83	0.59
28:BP:88:ARG:HG3	28:BP:112:ARG:HB3	1.85	0.59
33:B1:20:TYR:CD2	33:B1:37:LYS:HD3	2.37	0.59
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.17	0.59
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.05	0.59
45:BS:40:ASN:O	45:BS:41:LYS:HG3	2.02	0.59
47:BF:32:LYS:HB2	47:BF:90:LEU:O	2.03	0.59
50:BT:28:ASN:HA	50:BT:91:GLN:HE22	1.68	0.59
52:BW:37:VAL:HG13	52:BW:55:ASP:O	2.03	0.59
1:CA:285:C:H2'	1:CA:286:C:C6	2.38	0.59
12:CM:95:PRO:HB2	12:CM:99:GLN:OE1	2.03	0.59
13:CN:60:ARG:O	13:CN:62:ARG:N	2.36	0.59
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.84	0.59
20:CB:112:ARG:HA	20:CB:115:ASP:OD2	2.03	0.59
23:DB:277:G:H4'	23:DB:278:A:C5	2.38	0.59
23:DB:532:A:N3	23:DB:532:A:H2'	2.17	0.59
23:DB:644:A:O2'	23:DB:645:C:H5'	2.03	0.59
23:DB:1113:U:O2'	23:DB:1114:C:H5'	2.03	0.59
23:DB:1432:G:H2'	23:DB:1433:A:C8	2.38	0.59
23:DB:1729:U:H3'	23:DB:1730:C:O4'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1824:G:OP1	25:DC:51:ARG:HD3	2.03	0.59
23:DB:1897:G:O2'	23:DB:1898:U:H5'	2.03	0.59
23:DB:2264:C:H41	52:DW:11:ASN:HD21	1.49	0.59
23:DB:2825:G:H2'	23:DB:2826:A:H5'	1.85	0.59
23:DB:2840:C:OP1	42:DN:50:PRO:HA	2.03	0.59
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.02	0.59
30:DY:50:VAL:O	30:DY:54:VAL:HG22	2.02	0.59
39:DX:9:LYS:O	39:DX:13:GLU:HG2	2.03	0.59
41:DJ:55:ILE:O	41:DJ:55:ILE:HG13	2.03	0.59
42:DN:37:THR:OG1	42:DN:40:LYS:HE2	2.03	0.59
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.38	0.59
1:AA:93:U:H6	1:AA:93:U:O5'	1.85	0.58
1:AA:430:A:OP1	3:AD:8:LEU:HB2	2.02	0.58
1:AA:441:A:H61	1:AA:493:A:N6	2.01	0.58
1:AA:501:C:H2'	1:AA:502:A:C8	2.36	0.58
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.38	0.58
6:AG:107:ALA:O	6:AG:110:ARG:HB2	2.03	0.58
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.03	0.58
7:AH:107:LYS:HE3	7:AH:107:LYS:HA	1.84	0.58
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	1.85	0.58
16:AQ:80:LYS:HD2	16:AQ:80:LYS:H	1.68	0.58
19:AT:38:ILE:HG12	19:AT:85:LEU:HD13	1.84	0.58
22:BA:39:A:H2	22:BA:46:A:H61	1.48	0.58
23:BB:278:A:N3	23:BB:278:A:H2'	2.16	0.58
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.58
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.85	0.58
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.68	0.58
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.68	0.58
23:BB:2031:A:C6	23:BB:2498:C:H1'	2.38	0.58
23:BB:2548:U:H1'	27:BK:23:LYS:HZ1	1.66	0.58
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.67	0.58
26:BD:101:PHE:HE2	26:BD:205:PRO:HD3	1.67	0.58
26:BD:124:ARG:HA	26:BD:165:MET:CE	2.33	0.58
35:BV:70:ILE:HD13	35:BV:70:ILE:N	2.17	0.58
38:BM:50:ARG:HA	38:BM:53:MET:CE	2.32	0.58
41:BJ:18:VAL:HG12	41:BJ:54:ILE:HD11	1.83	0.58
1:CA:264:C:O2'	16:CQ:65:PRO:HG2	2.02	0.58
1:CA:398:U:H2'	1:CA:399:G:H8	1.66	0.58
1:CA:735:C:O2'	1:CA:736:C:H5'	2.02	0.58
1:CA:1030:U:H2'	1:CA:1030:U:O2	2.02	0.58
6:CG:104:VAL:O	6:CG:108:ARG:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:4:ILE:HB	15:CP:67:ILE:HD12	1.84	0.58
22:DA:13:G:C2'	22:DA:14:U:H5"	2.33	0.58
23:DB:222:A:N1	23:DB:233:A:H5"	2.18	0.58
23:DB:608:A:H2'	23:DB:609:A:C8	2.38	0.58
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.33	0.58
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.67	0.58
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.38	0.58
25:DC:170:TYR:HE2	25:DC:184:GLU:HG2	1.67	0.58
26:DD:67:HIS:O	26:DD:70:LYS:HB3	2.03	0.58
26:DD:121:THR:HB	26:DD:127:PHE:CD1	2.37	0.58
26:DD:148:GLN:CG	26:DD:152:PRO:HG2	2.31	0.58
43:DO:11:ALA:HB2	43:DO:96:GLY:H	1.67	0.58
43:DO:76:LYS:HG3	43:DO:113:ALA:HB1	1.83	0.58
49:DR:43:ASN:ND2	49:DR:45:GLU:H	2.01	0.58
1:AA:45:G:H2'	1:AA:46:G:H8	1.67	0.58
1:AA:451:A:H4'	1:AA:452:A:O4'	2.02	0.58
1:AA:492:C:H2'	1:AA:493:A:N3	2.19	0.58
1:AA:1008:U:H5"	13:AN:23:ARG:HH22	1.67	0.58
1:AA:1030:U:O2	1:AA:1030:U:H2'	2.03	0.58
1:AA:1524:C:H2'	1:AA:1525:G:H8	1.68	0.58
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	1.85	0.58
9:AJ:9:ARG:CB	9:AJ:99:GLN:HB3	2.27	0.58
10:AK:17:ASP:HB3	10:AK:80:ASN:ND2	2.17	0.58
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.83	0.58
19:AT:82:ILE:HA	19:AT:85:LEU:HD22	1.84	0.58
23:BB:6:A:H2'	23:BB:7:G:H8	1.68	0.58
23:BB:96:C:O2'	23:BB:97:C:H5'	2.02	0.58
23:BB:222:A:N6	23:BB:232:G:H1'	2.18	0.58
23:BB:836:G:H2'	23:BB:837:C:H6	1.67	0.58
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.85	0.58
23:BB:1798:U:OP1	25:BC:257:ARG:HB2	2.03	0.58
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.03	0.58
26:BD:149:ASN:O	26:BD:152:PRO:HD2	2.03	0.58
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.84	0.58
41:BJ:26:GLY:O	41:BJ:30:THR:HG22	2.02	0.58
46:BU:25:LYS:HE3	46:BU:36:GLU:HG3	1.85	0.58
48:BG:54:ARG:HB3	48:BG:57:TYR:HD1	1.68	0.58
48:BG:84:LYS:CG	48:BG:85:LYS:H	2.16	0.58
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.68	0.58
1:CA:636:U:H2'	1:CA:637:C:H6	1.67	0.58
1:CA:659:U:O2'	1:CA:660:C:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.37	0.58
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.03	0.58
7:CH:51:GLU:HG2	7:CH:52:GLY:N	2.19	0.58
9:CJ:85:ASP:HA	9:CJ:88:MET:SD	2.43	0.58
20:CB:63:LYS:HG2	20:CB:224:ARG:NH1	2.17	0.58
20:CB:156:LEU:H	20:CB:156:LEU:HD12	1.69	0.58
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.38	0.58
23:DB:192:C:H2'	23:DB:193:U:H5'	1.84	0.58
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.65	0.58
23:DB:1667:G:OP1	27:DK:6:THR:HA	2.02	0.58
23:DB:2800:A:H2'	23:DB:2801:G:O4'	2.03	0.58
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.85	0.58
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.86	0.58
44:DQ:90:ASP:O	44:DQ:94:LEU:HB2	2.02	0.58
46:DU:46:LYS:HZ1	46:DU:47:PRO:HG2	1.68	0.58
48:DG:17:LYS:NZ	48:DG:18:ILE:H	2.01	0.58
1:AA:736:C:H2'	1:AA:737:C:H6	1.68	0.58
1:AA:1280:A:O4'	9:AJ:43:PRO:HG3	2.03	0.58
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.68	0.58
23:BB:62:U:O2'	23:BB:63:A:H5'	2.03	0.58
23:BB:296:U:H2'	23:BB:297:G:C8	2.37	0.58
23:BB:322:A:P	29:BE:163:ASN:HD22	2.27	0.58
23:BB:328:U:H4'	46:BU:65:GLN:HE22	1.68	0.58
23:BB:419:U:H2'	23:BB:420:C:C6	2.37	0.58
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.37	0.58
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.69	0.58
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.37	0.58
23:BB:2313:C:H4'	47:BF:87:LYS:HB3	1.85	0.58
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.38	0.58
23:BB:2438:U:O2'	23:BB:2439:A:H5"	2.03	0.58
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.02	0.58
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.84	0.58
45:BS:16:LYS:O	45:BS:19:LEU:HB3	2.02	0.58
47:BF:78:ILE:N	47:BF:79:ARG:HH11	2.01	0.58
49:BR:43:ASN:ND2	49:BR:45:GLU:H	2.01	0.58
1:CA:1039:G:H2'	1:CA:1040:U:C6	2.38	0.58
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.30	0.58
5:CF:47:LEU:HD21	5:CF:57:ALA:HB3	1.86	0.58
23:DB:125:A:C6	36:D2:10:LEU:HD23	2.38	0.58
23:DB:414:C:H2'	23:DB:415:A:H8	1.68	0.58
23:DB:590:A:H2'	23:DB:591:U:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2899:A:H2'	23:DB:2900:A:H8	1.68	0.58
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.85	0.58
26:DD:8:LYS:HD3	26:DD:197:THR:H	1.69	0.58
27:DK:105:ARG:HB3	27:DK:122:VAL:HG12	1.85	0.58
29:DE:98:LYS:O	29:DE:102:ARG:HG2	2.04	0.58
40:DH:93:SER:O	40:DH:94:ILE:HD12	2.03	0.58
46:DU:3:LYS:HD3	46:DU:82:VAL:CG2	2.32	0.58
47:DF:134:GLN:O	47:DF:136:ILE:N	2.37	0.58
50:DT:5:GLU:HA	50:DT:8:LEU:CB	2.20	0.58
1:AA:1147:C:O2'	8:AI:17:ARG:HD2	2.02	0.58
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.68	0.58
2:AC:16:PRO:HG2	2:AC:53:ARG:NH2	2.18	0.58
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	1.84	0.58
22:BA:111:U:H2'	22:BA:112:G:H8	1.66	0.58
23:BB:581:C:H2'	23:BB:582:A:H8	1.65	0.58
23:BB:680:C:H2'	23:BB:681:G:H8	1.68	0.58
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.04	0.58
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.67	0.58
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.03	0.58
23:BB:2331:G:O2'	52:BW:40:ARG:HB2	2.04	0.58
23:BB:2635:A:H5'	26:BD:79:LEU:HD23	1.84	0.58
23:BB:2776:A:H4'	23:BB:2777:G:H5"	1.85	0.58
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.67	0.58
29:BE:130:LYS:C	29:BE:132:LYS:H	2.05	0.58
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.85	0.58
1:CA:390:U:H2'	1:CA:391:G:H8	1.67	0.58
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.39	0.58
12:CM:43:LYS:HB2	12:CM:46:GLU:HG3	1.86	0.58
14:CO:26:GLU:HG3	14:CO:77:ARG:NH1	2.19	0.58
15:CP:6:LEU:CD1	15:CP:71:VAL:HB	2.34	0.58
21:CU:42:THR:HB	21:CU:46:ARG:HE	1.68	0.58
22:DA:89:U:H5'	22:DA:90:C:C6	2.38	0.58
23:DB:102:U:H5"	23:DB:102:U:O2	2.03	0.58
23:DB:321:U:H1'	29:DE:162:ARG:NH1	2.18	0.58
23:DB:813:U:H2'	23:DB:814:C:H6	1.68	0.58
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.84	0.58
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.24	0.58
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.38	0.58
23:DB:1387:A:H5'	23:DB:1469:A:H1'	1.85	0.58
23:DB:1820:U:H4'	23:DB:1821:A:OP2	2.03	0.58
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.17	0.58
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.03	0.58
26:DD:101:PHE:HE2	26:DD:205:PRO:HD3	1.68	0.58
26:DD:106:LYS:HB3	26:DD:206:ALA:N	2.18	0.58
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.50	0.58
40:DH:4:ILE:H	40:DH:4:ILE:HD12	1.67	0.58
45:DS:3:THR:HB	45:DS:62:ASP:CB	2.31	0.58
45:DS:56:ALA:O	45:DS:59:GLU:HB2	2.02	0.58
46:DU:46:LYS:NZ	46:DU:47:PRO:HG2	2.18	0.58
47:DF:33:ILE:HD13	47:DF:95:MET:HG2	1.85	0.58
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.24	0.58
1:AA:128:G:H2'	1:AA:129:A:C8	2.39	0.58
1:AA:373:A:H2'	1:AA:374:A:H8	1.69	0.58
1:AA:426:U:H4'	3:AD:39:GLN:HA	1.85	0.58
1:AA:470:C:H2'	1:AA:471:U:C6	2.38	0.58
3:AD:26:ALA:HA	3:AD:30:LYS:HE3	1.84	0.58
3:AD:160:LEU:HD13	3:AD:160:LEU:N	2.17	0.58
12:AM:12:LYS:HD2	12:AM:16:ILE:HD13	1.83	0.58
12:AM:78:ARG:HH22	18:AS:68:HIS:CE1	2.22	0.58
13:AN:78:LEU:HD23	13:AN:82:LYS:HB3	1.85	0.58
20:AB:63:LYS:HG2	20:AB:224:ARG:NH1	2.17	0.58
23:BB:917:A:H2'	23:BB:918:A:O4'	2.03	0.58
23:BB:962:G:N2	23:BB:2250:G:H1	2.01	0.58
23:BB:1439:A:C6	23:BB:1552:A:N7	2.72	0.58
23:BB:2023:C:H4'	23:BB:2617:U:O3'	2.04	0.58
23:BB:2134:A:H2'	23:BB:2135:A:H8	1.69	0.58
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.84	0.58
37:BL:79:LEU:HB3	37:BL:115:GLU:O	2.03	0.58
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.85	0.58
40:BH:116:ARG:CZ	40:BH:131:SER:HB3	2.33	0.58
47:BF:107:VAL:HG11	47:BF:175:PRO:HG3	1.86	0.58
48:BG:84:LYS:HB3	48:BG:132:LEU:O	2.03	0.58
48:BG:145:ALA:HA	48:BG:148:ARG:HG3	1.85	0.58
50:BT:1:MET:C	50:BT:2:ILE:HD13	2.24	0.58
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.68	0.58
1:CA:328:C:H4'	1:CA:329:A:H5"	1.84	0.58
1:CA:707:U:H4'	10:CK:21:HIS:CD2	2.38	0.58
1:CA:764:C:H2'	1:CA:765:G:H5'	1.85	0.58
1:CA:1217:C:OP1	13:CN:8:ARG:HD2	2.04	0.58
4:CE:100:GLU:HA	4:CE:121:ASN:ND2	2.18	0.58
5:CF:36:ILE:HA	5:CF:64:VAL:HG13	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:9:GLU:OE2	13:CN:60:ARG:HG2	2.03	0.58
23:DB:649:G:H2'	23:DB:650:C:C6	2.38	0.58
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.66	0.58
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.37	0.58
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.69	0.58
35:DV:30:ILE:HD12	35:DV:38:LEU:HD23	1.84	0.58
35:DV:80:HIS:CD2	35:DV:83:LYS:H	2.22	0.58
38:DM:126:ILE:HG22	38:DM:127:LYS:N	2.19	0.58
40:DH:47:PHE:HB3	40:DH:51:ARG:NH2	2.19	0.58
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.69	0.58
44:DQ:101:ASP:HB2	49:DR:2:TYR:OH	2.03	0.58
1:AA:1250:A:H4'	8:AI:69:GLY:H	1.68	0.58
1:AA:1458:G:H5"	19:AT:25:SER:HB2	1.85	0.58
1:AA:1507:A:H2'	1:AA:1508:A:C8	2.37	0.58
8:AI:62:LEU:HD22	8:AI:62:LEU:N	2.19	0.58
12:AM:2:ARG:HG3	12:AM:6:ILE:N	2.19	0.58
12:AM:64:VAL:HA	12:AM:68:LEU:CD1	2.34	0.58
19:AT:35:TYR:O	19:AT:38:ILE:HG22	2.02	0.58
23:BB:64:A:H2'	23:BB:65:U:H6	1.66	0.58
23:BB:521:U:H2'	23:BB:522:A:C8	2.38	0.58
23:BB:690:G:H2'	23:BB:691:C:O4'	2.03	0.58
23:BB:1341:G:H3'	23:BB:1397:U:O2	2.03	0.58
23:BB:1881:C:H2'	23:BB:1882:U:O4'	2.03	0.58
23:BB:2553:G:H2'	23:BB:2554:U:C4'	2.33	0.58
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.04	0.58
29:BE:150:THR:HG21	29:BE:153:LEU:HA	1.86	0.58
39:BX:49:ASP:O	39:BX:53:VAL:HG23	2.04	0.58
44:BQ:30:VAL:O	44:BQ:31:TYR:HB2	2.04	0.58
53:B6:19:GLU:HA	53:B6:22:GLU:HB2	1.84	0.58
1:CA:1004:A:C8	1:CA:1025:U:H1'	2.38	0.58
1:CA:1009:U:H5'	1:CA:1010:U:OP2	2.02	0.58
1:CA:1319:A:H4'	1:CA:1320:C:OP1	2.03	0.58
6:CG:24:LYS:HA	6:CG:27:ASN:HD22	1.67	0.58
8:CI:20:ILE:HG23	8:CI:60:LEU:CD1	2.34	0.58
23:DB:98:G:C2'	23:DB:99:U:H5"	2.34	0.58
23:DB:570:G:H2'	23:DB:2030:A:N7	2.17	0.58
23:DB:923:G:H1'	52:DW:23:LYS:NZ	2.18	0.58
23:DB:946:C:H2'	23:DB:947:A:H8	1.69	0.58
23:DB:2379:G:C5'	43:DO:21:LEU:HD11	2.32	0.58
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.38	0.58
29:DE:103:GLY:O	29:DE:106:LYS:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D0:48:TYR:CG	31:D0:49:ARG:N	2.71	0.58
36:D2:10:LEU:HD11	36:D2:14:ARG:CZ	2.34	0.58
40:DH:85:GLY:H	40:DH:89:LYS:C	2.06	0.58
40:DH:119:ASN:OD1	40:DH:121:VAL:HG13	2.03	0.58
47:DF:76:PHE:HD2	47:DF:78:ILE:HD13	1.68	0.58
53:D6:68:VAL:O	53:D6:98:ALA:HA	2.04	0.58
1:AA:90:C:H2'	1:AA:91:U:C5	2.39	0.58
1:AA:522:C:H41	11:AL:49:ARG:NH2	2.01	0.58
1:AA:844:G:H2'	1:AA:845:A:C8	2.39	0.58
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.38	0.58
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.18	0.58
6:AG:122:GLU:OE1	6:AG:131:GLY:HA3	2.04	0.58
19:AT:49:ALA:O	19:AT:52:GLU:HG2	2.04	0.58
19:AT:79:THR:HA	19:AT:82:ILE:HG12	1.85	0.58
23:BB:18:U:H2'	23:BB:19:A:C8	2.37	0.58
23:BB:826:U:H2'	23:BB:828:U:O4'	2.04	0.58
23:BB:904:G:H2'	23:BB:905:A:H8	1.67	0.58
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.18	0.58
25:BC:61:TYR:HA	25:BC:85:ASN:ND2	2.19	0.58
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.02	0.58
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.03	0.58
53:B6:10:THR:HG22	53:B6:14:MET:CE	2.34	0.58
1:CA:522:C:H41	11:CL:49:ARG:NH2	2.00	0.58
1:CA:591:U:OP1	7:CH:30:LYS:HE2	2.03	0.58
1:CA:1048:G:H4'	13:CN:2:LYS:HZ2	1.68	0.58
1:CA:1250:A:H4'	8:CI:69:GLY:H	1.68	0.58
2:CC:21:TRP:CH2	2:CC:31:ASN:HB3	2.39	0.58
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.85	0.58
4:CE:43:GLY:O	4:CE:72:ASN:HA	2.04	0.58
7:CH:107:LYS:HA	7:CH:107:LYS:HE3	1.86	0.58
20:CB:79:VAL:HG12	20:CB:90:PHE:HB2	1.86	0.58
23:DB:296:U:H2'	23:DB:297:G:C8	2.38	0.58
23:DB:324:A:H2'	23:DB:325:G:O4'	2.03	0.58
23:DB:544:C:H2'	23:DB:545:U:C4	2.38	0.58
23:DB:654:A:H2'	23:DB:655:A:H5"	1.86	0.58
23:DB:690:G:H2'	23:DB:691:C:O4'	2.03	0.58
23:DB:850:U:H2'	23:DB:851:C:C6	2.39	0.58
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.39	0.58
23:DB:1857:G:N2	23:DB:1884:G:H2'	2.19	0.58
23:DB:1899:A:O2'	23:DB:1900:A:H5"	2.02	0.58
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.85	0.58
39:DX:8:GLU:HB2	39:DX:13:GLU:OE1	2.03	0.58
40:DH:41:LYS:O	40:DH:44:ILE:HG12	2.03	0.58
40:DH:113:SER:H	40:DH:132:PHE:HE1	1.51	0.58
44:DQ:30:VAL:O	44:DQ:31:TYR:HB2	2.03	0.58
1:AA:413:G:H2'	1:AA:428:G:N2	2.19	0.58
1:AA:512:U:O2'	1:AA:513:C:H5'	2.04	0.58
3:AD:116:LEU:O	3:AD:121:ALA:HB3	2.03	0.58
6:AG:146:ALA:HA	10:AK:55:ARG:HH12	1.68	0.58
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	1.86	0.58
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.03	0.58
12:AM:106:ARG:HD3	12:AM:110:GLY:O	2.03	0.58
18:AS:35:ARG:HB3	18:AS:50:VAL:CG1	2.34	0.58
19:AT:27:MET:O	19:AT:31:ILE:HG13	2.04	0.58
23:BB:937:C:H2'	23:BB:938:G:H8	1.69	0.58
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.69	0.58
23:BB:1789:A:P	25:BC:220:ARG:HD3	2.44	0.58
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.69	0.58
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.04	0.58
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.39	0.58
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.19	0.58
25:BC:64:VAL:HG11	25:BC:66:PHE:CZ	2.39	0.58
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.86	0.58
26:BD:30:GLU:HG3	26:BD:52:THR:CG2	2.33	0.58
26:BD:67:HIS:O	26:BD:70:LYS:HB3	2.03	0.58
32:B4:24:ARG:HG2	32:B4:36:ARG:CG	2.33	0.58
40:BH:68:ARG:HB3	40:BH:134:VAL:HG11	1.86	0.58
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.19	0.58
43:BO:74:VAL:O	43:BO:78:VAL:HG23	2.04	0.58
47:BF:62:GLN:NE2	47:BF:90:LEU:HD13	2.06	0.58
53:B6:83:ILE:O	53:B6:88:LEU:HB2	2.03	0.58
1:CA:193:C:H2'	1:CA:194:C:C5	2.39	0.58
1:CA:777:A:H2'	1:CA:778:G:H8	1.69	0.58
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.67	0.58
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.85	0.58
8:CI:79:ARG:HA	8:CI:82:ILE:HD12	1.86	0.58
23:DB:138:U:H2'	23:DB:140:C:N1	2.18	0.58
23:DB:441:U:H2'	23:DB:442:G:H8	1.68	0.58
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.03	0.58
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.03	0.58
25:DC:221:GLY:C	25:DC:223:ALA:H	2.07	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:88:ASN:HB3	27:DK:92:GLU:O	2.04	0.58
29:DE:146:VAL:HA	29:DE:185:LYS:O	2.04	0.58
32:D4:24:ARG:HG2	32:D4:36:ARG:CG	2.34	0.58
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.38	0.58
44:DQ:107:ALA:HB1	49:DR:48:LYS:HE3	1.85	0.58
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.15	0.58
47:DF:134:GLN:H	47:DF:150:GLY:H	1.52	0.58
1:AA:692:U:H2'	1:AA:693:G:H3'	1.84	0.58
1:AA:764:C:N4	1:AA:812:G:H1	2.02	0.58
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.51	0.58
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.38	0.58
5:AF:38:ARG:HH21	5:AF:63:ASN:HD21	1.48	0.58
6:AG:19:SER:OG	6:AG:22:LEU:HB2	2.04	0.58
6:AG:149:ALA:HB2	10:AK:55:ARG:NE	2.02	0.58
8:AI:70:GLY:O	8:AI:74:GLN:HB2	2.04	0.58
15:AP:74:LEU:O	15:AP:78:VAL:HG12	2.04	0.58
23:BB:39:G:O2'	23:BB:40:U:H5'	2.04	0.58
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.69	0.58
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.39	0.58
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.38	0.58
23:BB:2753:A:H2'	23:BB:2754:U:C6	2.39	0.58
25:BC:170:TYR:CD2	25:BC:184:GLU:HA	2.38	0.58
29:BE:122:GLU:O	29:BE:123:LYS:HB2	2.04	0.58
42:BN:33:ILE:O	42:BN:33:ILE:HD12	2.04	0.58
42:BN:49:GLU:OE2	42:BN:95:THR:HG22	2.03	0.58
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.69	0.58
1:CA:204:G:H1'	1:CA:466:A:N7	2.19	0.58
1:CA:918:A:H2'	1:CA:919:A:C8	2.39	0.58
1:CA:1308:U:OP2	12:CM:97:ARG:HD3	2.03	0.58
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	1.85	0.58
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	1.85	0.58
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.18	0.58
23:DB:220:G:H1	23:DB:427:U:H2'	1.69	0.58
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.86	0.58
23:DB:1419:A:H2'	23:DB:1421:G:N7	2.19	0.58
23:DB:2810:A:H2'	23:DB:2811:G:O4'	2.03	0.58
25:DC:16:VAL:H	25:DC:203:VAL:HG12	1.68	0.58
25:DC:75:ALA:CB	25:DC:95:TYR:HA	2.32	0.58
26:DD:106:LYS:HB3	26:DD:206:ALA:HB3	1.86	0.58
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.04	0.58
27:DK:109:SER:HB2	27:DK:111:LYS:HE2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:64:TRP:HB2	38:DM:104:GLU:HB2	1.85	0.58
41:DJ:19:ASP:OD2	41:DJ:58:ASN:HB2	2.04	0.58
41:DJ:26:GLY:O	41:DJ:30:THR:HG22	2.03	0.58
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.19	0.58
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.68	0.58
47:DF:32:LYS:H	47:DF:95:MET:HE1	1.67	0.58
47:DF:65:LEU:N	47:DF:88:VAL:HG22	2.17	0.58
48:DG:87:GLN:HG2	48:DG:164:ALA:HA	1.84	0.58
3:AD:196:GLU:O	3:AD:199:ILE:HG12	2.03	0.58
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.44	0.58
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD13	2.39	0.58
22:BA:95:U:H2'	22:BA:96:G:C8	2.39	0.58
23:BB:2095:A:H2'	23:BB:2096:C:C6	2.39	0.58
25:BC:209:ALA:O	25:BC:213:ARG:HB2	2.04	0.58
26:BD:15:PHE:H	26:BD:15:PHE:HD1	1.51	0.58
29:BE:58:LYS:HE2	29:BE:60:TRP:HD1	1.68	0.58
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.68	0.58
34:B3:22:LYS:HD2	34:B3:46:LYS:HB2	1.85	0.58
40:BH:99:ILE:CD1	40:BH:144:VAL:HG21	2.34	0.58
40:BH:116:ARG:CB	40:BH:133:GLN:HB2	2.27	0.58
41:BJ:55:ILE:O	41:BJ:55:ILE:HG13	2.04	0.58
41:BJ:110:PRO:HB2	41:BJ:111:LYS:HE3	1.86	0.58
1:CA:505:G:H4'	1:CA:534:U:C4	2.39	0.58
1:CA:719:C:O2	17:CR:37:LYS:HA	2.03	0.58
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.03	0.58
7:CH:40:LYS:HD2	7:CH:47:ASP:HA	1.85	0.58
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HD12	1.86	0.58
19:CT:49:ALA:O	19:CT:52:GLU:HG2	2.04	0.58
22:DA:35:C:H2'	22:DA:36:C:C5'	2.34	0.58
23:DB:581:C:H2'	23:DB:582:A:H8	1.67	0.58
23:DB:1930:G:H2'	23:DB:1968:G:O6	2.03	0.58
24:DI:121:ILE:H	24:DI:121:ILE:CD1	2.14	0.58
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.67	0.58
25:DC:170:TYR:CD2	25:DC:184:GLU:HA	2.38	0.58
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.86	0.58
26:DD:113:SER:HB3	26:DD:167:ASN:CA	2.34	0.58
36:D2:21:ARG:HH21	36:D2:43:THR:CG2	2.17	0.58
36:D2:33:ARG:HH21	36:D2:33:ARG:HB2	1.68	0.58
45:DS:27:LYS:HD2	45:DS:27:LYS:H	1.68	0.58
46:DU:85:ARG:HH11	46:DU:86:PHE:H	1.50	0.58
47:DF:109:ARG:CB	47:DF:135:ILE:HD12	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:44:PHE:HB3	52:DW:78:PHE:CD1	2.39	0.58
1:AA:662:U:H2'	1:AA:663:A:C8	2.39	0.57
3:AD:122:ILE:O	3:AD:128:VAL:HG23	2.04	0.57
21:AU:10:PRO:HB2	2:CC:71:ARG:CD	2.34	0.57
23:BB:362:A:H3'	23:BB:363:G:H8	1.68	0.57
23:BB:743:A:O2'	23:BB:744:U:H5'	2.04	0.57
23:BB:794:A:H2'	23:BB:795:C:C6	2.39	0.57
23:BB:946:C:H2'	23:BB:947:A:H8	1.68	0.57
23:BB:981:A:H2'	23:BB:982:C:H5"	1.85	0.57
23:BB:996:A:C4'	44:BQ:91:ARG:HH11	2.15	0.57
23:BB:1082:U:O4	23:BB:1086:A:C2	2.57	0.57
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.39	0.57
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.04	0.57
23:BB:2849:U:N3	23:BB:2867:G:C8	2.72	0.57
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.39	0.57
31:B0:42:ILE:HG12	42:BN:99:LYS:O	2.04	0.57
35:BV:49:ASN:HD22	35:BV:49:ASN:N	2.02	0.57
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.17	0.57
45:BS:31:GLN:C	45:BS:33:LEU:H	2.07	0.57
1:CA:611:C:H2'	1:CA:612:C:H6	1.69	0.57
1:CA:844:G:H2'	1:CA:845:A:C8	2.39	0.57
1:CA:926:G:H3'	1:CA:1505:G:H21	1.69	0.57
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.39	0.57
1:CA:1481:U:O2'	1:CA:1482:G:H5'	2.03	0.57
8:CI:56:MET:CG	8:CI:57:VAL:H	2.17	0.57
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.24	0.57
17:CR:38:ILE:H	17:CR:38:ILE:HD13	1.69	0.57
19:CT:82:ILE:HA	19:CT:85:LEU:HD22	1.86	0.57
20:CB:94:ARG:HE	20:CB:94:ARG:N	2.01	0.57
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.18	0.57
23:DB:1647:U:H3'	23:DB:1647:U:P	2.44	0.57
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.04	0.57
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.39	0.57
34:D3:22:LYS:HD2	34:D3:46:LYS:HB2	1.86	0.57
43:DO:108:ASP:HA	43:DO:111:ARG:HB3	1.85	0.57
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.06	0.57
1:AA:518:C:H2'	1:AA:530:G:C8	2.39	0.57
1:AA:1150:A:H1'	1:AA:1280:A:N6	2.18	0.57
1:AA:1278:G:H4'	1:AA:1279:G:C5'	2.34	0.57
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.39	0.57
3:AD:48:SER:O	3:AD:52:VAL:HG23	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:48:GLN:O	13:AN:51:PRO:HD2	2.04	0.57
15:AP:6:LEU:CD1	15:AP:71:VAL:HB	2.34	0.57
21:AU:8:ASN:O	21:AU:9:GLU:HB3	2.04	0.57
23:BB:580:U:H2'	23:BB:581:C:H6	1.66	0.57
23:BB:654:A:H2'	23:BB:655:A:H5"	1.86	0.57
23:BB:828:U:H4'	23:BB:831:G:N1	2.18	0.57
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.04	0.57
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.20	0.57
26:BD:106:LYS:HB3	26:BD:206:ALA:HB3	1.85	0.57
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.34	0.57
38:BM:67:VAL:HG11	38:BM:102:LEU:HD13	1.86	0.57
38:BM:82:MET:HE3	38:BM:83:GLY:H	1.69	0.57
39:BX:5:GLU:O	39:BX:8:GLU:HG2	2.04	0.57
44:BQ:40:LYS:HA	44:BQ:43:GLN:OE1	2.04	0.57
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.85	0.57
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.04	0.57
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.17	0.57
47:BF:134:GLN:C	47:BF:136:ILE:H	2.08	0.57
1:CA:586:C:H5"	7:CH:81:GLY:HA2	1.86	0.57
3:CD:187:ARG:O	3:CD:191:SER:HB3	2.04	0.57
12:CM:95:PRO:HD3	12:CM:108:ARG:HG2	1.85	0.57
14:CO:24:SER:HB3	14:CO:27:VAL:CG2	2.33	0.57
17:CR:36:GLY:HA3	17:CR:70:THR:HA	1.85	0.57
21:CU:11:PHE:O	21:CU:13:VAL:HG12	2.03	0.57
23:DB:443:A:OP1	29:DE:40:ARG:HD2	2.04	0.57
23:DB:854:C:O2'	23:DB:855:G:H5'	2.03	0.57
23:DB:904:G:H2'	23:DB:905:A:H8	1.68	0.57
23:DB:942:G:H2'	23:DB:943:A:O4'	2.03	0.57
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.18	0.57
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.03	0.57
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.38	0.57
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.39	0.57
23:DB:2812:G:H2'	23:DB:2813:A:C8	2.39	0.57
30:DY:8:GLN:CG	30:DY:31:ILE:HA	2.27	0.57
1:AA:57:G:H2'	1:AA:58:C:H6	1.69	0.57
1:AA:213:G:H5"	1:AA:214:C:H5	1.69	0.57
1:AA:843:U:OP2	1:AA:843:U:H4'	2.04	0.57
1:AA:859:G:H2'	1:AA:860:A:H8	1.68	0.57
1:AA:978:A:H5'	1:AA:1362:A:H62	1.69	0.57
21:AU:11:PHE:O	21:AU:11:PHE:HD1	1.87	0.57
23:BB:269:C:H2'	23:BB:270:A:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1636:U:H2'	23:BB:1637:A:H8	1.68	0.57
23:BB:1729:U:H3'	23:BB:1730:C:O4'	2.05	0.57
23:BB:1816:C:H3'	25:BC:61:TYR:CE2	2.39	0.57
23:BB:1820:U:H4'	23:BB:1821:A:OP2	2.04	0.57
23:BB:1930:G:H2'	23:BB:1968:G:O6	2.05	0.57
23:BB:1958:C:O2'	23:BB:1959:G:H5'	2.04	0.57
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.70	0.57
23:BB:2487:G:H2'	23:BB:2488:G:C8	2.39	0.57
23:BB:2723:C:H5"	42:BN:1:MET:HE2	1.87	0.57
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.85	0.57
47:BF:43:ILE:HB	47:BF:82:TYR:OH	2.04	0.57
47:BF:65:LEU:O	47:BF:86:CYS:HA	2.04	0.57
48:BG:148:ARG:HA	48:BG:161:VAL:CB	2.34	0.57
1:CA:950:U:H2'	1:CA:951:G:C8	2.39	0.57
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.38	0.57
1:CA:1226:C:C4	12:CM:102:LYS:HB3	2.39	0.57
1:CA:1260:G:H4'	1:CA:1283:U:O2'	2.05	0.57
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.86	0.57
10:CK:92:ARG:HE	21:CU:20:ARG:HH22	1.51	0.57
18:CS:39:ILE:HG12	18:CS:70:LEU:HD12	1.86	0.57
22:DA:86:G:H2'	22:DA:87:U:O4'	2.04	0.57
23:DB:1728:C:H2'	23:DB:1730:C:O2	2.05	0.57
23:DB:1744:A:H2'	23:DB:1745:A:C8	2.40	0.57
23:DB:2630:G:H2'	23:DB:2631:G:C8	2.39	0.57
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.40	0.57
35:DV:63:ILE:HD13	35:DV:72:VAL:HG22	1.86	0.57
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.33	0.57
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.34	0.57
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.86	0.57
53:D6:25:LEU:HD21	53:D6:118:VAL:HG13	1.86	0.57
1:AA:399:G:H2'	1:AA:400:C:C6	2.40	0.57
1:AA:404:G:O2'	1:AA:405:U:H5'	2.04	0.57
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.40	0.57
1:AA:1123:U:H4'	9:AJ:39:PRO:HD2	1.86	0.57
4:AE:148:SER:HB2	4:AE:150:GLU:OE1	2.04	0.57
5:AF:80:PHE:CE1	25:BC:135:PRO:HG2	2.38	0.57
14:AO:35:GLN:O	14:AO:39:LEU:HD13	2.05	0.57
23:BB:532:A:H2'	23:BB:532:A:N3	2.18	0.57
23:BB:833:A:H1'	37:BL:52:GLY:N	2.19	0.57
23:BB:1419:A:H2'	23:BB:1421:G:N7	2.19	0.57
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:71:ASP:HA	25:BC:117:SER:O	2.04	0.57
31:B0:38:LEU:HD23	31:B0:39:ARG:H	1.69	0.57
35:BV:28:ALA:HA	35:BV:88:HIS:CE1	2.39	0.57
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.04	0.57
40:BH:44:ILE:C	40:BH:46:PHE:H	2.07	0.57
41:BJ:19:ASP:OD2	41:BJ:58:ASN:HB2	2.05	0.57
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.68	0.57
47:BF:41:GLU:O	47:BF:43:ILE:HG22	2.05	0.57
48:BG:87:GLN:HG2	48:BG:164:ALA:HA	1.86	0.57
1:CA:215:C:H2'	1:CA:216:U:C6	2.39	0.57
1:CA:407:U:O2'	3:CD:112:GLU:HG3	2.04	0.57
1:CA:414:A:H2'	1:CA:415:A:O4'	2.04	0.57
1:CA:441:A:H61	1:CA:493:A:N6	2.02	0.57
1:CA:1060:U:C5	2:CC:1:GLY:HA3	2.38	0.57
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.05	0.57
1:CA:1450:U:H2'	1:CA:1452:C:C5	2.39	0.57
2:CC:190:THR:HG22	2:CC:191:THR:N	2.19	0.57
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.39	0.57
9:CJ:57:VAL:HG13	9:CJ:58:ASN:N	2.18	0.57
20:CB:62:ARG:HD2	20:CB:62:ARG:H	1.70	0.57
23:DB:576:U:H2'	23:DB:577:G:C8	2.39	0.57
23:DB:833:A:C1'	37:DL:52:GLY:H	2.18	0.57
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.39	0.57
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.69	0.57
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.39	0.57
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.70	0.57
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.70	0.57
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.04	0.57
25:DC:61:TYR:HA	25:DC:85:ASN:HD21	1.69	0.57
26:DD:15:PHE:HD1	26:DD:15:PHE:H	1.52	0.57
26:DD:136:ASN:HD21	26:DD:140:HIS:N	2.03	0.57
34:D3:62:PRO:HG2	37:DL:48:ARG:NH2	2.19	0.57
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.15	0.57
39:DX:39:GLN:O	39:DX:42:LEU:HB2	2.05	0.57
52:DW:39:GLN:HG2	52:DW:40:ARG:H	1.68	0.57
1:AA:204:G:H1'	1:AA:466:A:N7	2.20	0.57
1:AA:272:C:H2'	1:AA:273:U:H6	1.68	0.57
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.39	0.57
2:AC:14:VAL:O	2:AC:15:LYS:HD2	2.04	0.57
7:AH:87:ARG:H	7:AH:90:GLU:HB3	1.70	0.57
23:BB:111:A:O2'	23:BB:112:U:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:155:A:H2'	23:BB:156:A:C8	2.40	0.57
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.40	0.57
23:BB:1725:U:O2'	23:BB:1726:C:H5'	2.04	0.57
23:BB:2322:A:N6	23:BB:2333:A:H62	2.02	0.57
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.66	0.57
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.86	0.57
38:BM:34:LYS:HE2	38:BM:99:GLY:HA2	1.87	0.57
40:BH:130:VAL:HG21	40:BH:144:VAL:HG23	1.87	0.57
47:BF:78:ILE:N	47:BF:78:ILE:HD12	2.19	0.57
1:CA:268:U:H2'	1:CA:269:C:C6	2.39	0.57
1:CA:313:A:H2'	1:CA:314:C:C6	2.39	0.57
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.70	0.57
3:CD:28:ASP:HB2	3:CD:33:ILE:HG21	1.85	0.57
6:CG:63:VAL:HA	6:CG:66:GLU:CD	2.25	0.57
6:CG:110:ARG:HB2	6:CG:118:ARG:HB3	1.87	0.57
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.04	0.57
23:DB:1927:A:O2'	23:DB:1928:A:H5'	2.03	0.57
23:DB:2106:U:O2	23:DB:2106:U:H2'	2.03	0.57
23:DB:2267:A:H8	23:DB:2267:A:C3'	2.10	0.57
23:DB:2370:G:H2'	23:DB:2371:G:O4'	2.03	0.57
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.05	0.57
23:DB:2648:G:H2'	23:DB:2649:C:O4'	2.04	0.57
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.69	0.57
35:DV:48:MET:O	35:DV:51:GLN:HG3	2.03	0.57
40:DH:127:GLU:HB2	40:DH:143:ILE:CG2	2.33	0.57
41:DJ:105:VAL:O	41:DJ:109:LEU:HG	2.04	0.57
43:DO:47:VAL:HG12	43:DO:48:LEU:N	2.18	0.57
44:DQ:86:SER:HB2	49:DR:50:GLY:O	2.04	0.57
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.85	0.57
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.19	0.57
49:DR:40:MET:HG3	49:DR:48:LYS:HA	1.87	0.57
50:DT:38:ALA:HB1	50:DT:43:ILE:HD11	1.85	0.57
1:AA:414:A:H2'	1:AA:415:A:O4'	2.05	0.57
1:AA:1008:U:H5"	13:AN:23:ARG:NH2	2.20	0.57
1:AA:1123:U:O2'	1:AA:1124:G:H5'	2.05	0.57
6:AG:23:ALA:O	6:AG:26:VAL:HG22	2.03	0.57
11:AL:122:LYS:HG3	11:AL:123:ALA:H	1.70	0.57
22:BA:91:C:H2'	22:BA:92:C:H6	1.70	0.57
23:BB:417:C:H2'	23:BB:418:C:H6	1.68	0.57
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.05	0.57
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1805:A:N3	25:BC:49:THR:CG2	2.68	0.57
23:BB:2389:G:C5'	23:BB:2390:U:H5'	2.33	0.57
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.04	0.57
28:BP:97:TYR:O	28:BP:100:ARG:HB2	2.04	0.57
29:BE:58:LYS:C	29:BE:60:TRP:N	2.57	0.57
30:BY:50:VAL:O	30:BY:54:VAL:HG22	2.04	0.57
40:BH:42:LYS:O	40:BH:47:PHE:HB2	2.04	0.57
44:BQ:57:ARG:HG2	44:BQ:57:ARG:HH11	1.68	0.57
46:BU:34:ILE:HG12	46:BU:63:ALA:CB	2.34	0.57
47:BF:65:LEU:N	47:BF:88:VAL:HG22	2.16	0.57
48:BG:174:LYS:NZ	48:BG:176:LYS:HG2	2.20	0.57
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.20	0.57
52:BW:33:GLY:O	52:BW:34:SER:HB2	2.04	0.57
1:CA:373:A:H2'	1:CA:374:A:H8	1.68	0.57
1:CA:451:A:N6	1:CA:480:U:H2'	2.19	0.57
1:CA:699:C:C2'	1:CA:700:G:H5"	2.33	0.57
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.53	0.57
23:DB:540:C:H2'	23:DB:541:A:C8	2.39	0.57
23:DB:543:G:C6	23:DB:544:C:H1'	2.39	0.57
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.03	0.57
23:DB:1688:U:O2	23:DB:1700:A:H5'	2.05	0.57
23:DB:2264:C:H41	52:DW:11:ASN:ND2	2.02	0.57
23:DB:2324:U:H3'	23:DB:2325:G:H5"	1.85	0.57
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.39	0.57
23:DB:2635:A:H4'	26:DD:79:LEU:HB2	1.87	0.57
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.05	0.57
25:DC:69:ASN:O	25:DC:70:LYS:C	2.42	0.57
26:DD:109:VAL:HG11	26:DD:193:VAL:HG11	1.85	0.57
39:DX:39:GLN:HB2	39:DX:42:LEU:HD22	1.86	0.57
47:DF:149:ARG:HA	47:DF:149:ARG:NH1	2.19	0.57
50:DT:54:GLU:HG3	50:DT:90:GLY:N	2.20	0.57
53:D6:80:GLU:OE1	53:D6:99:LEU:HD22	2.05	0.57
1:AA:93:U:H3'	1:AA:94:G:H5"	1.86	0.57
1:AA:707:U:H2'	1:AA:708:C:H6	1.70	0.57
1:AA:735:C:O2'	1:AA:736:C:H5'	2.05	0.57
1:AA:1217:C:OP1	13:AN:8:ARG:HD2	2.03	0.57
7:AH:35:ILE:O	7:AH:39:LEU:HG	2.05	0.57
8:AI:20:ILE:HG23	8:AI:60:LEU:CD1	2.34	0.57
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.19	0.57
23:BB:16:C:O2'	23:BB:17:G:H5'	2.04	0.57
23:BB:1667:G:OP1	27:BK:6:THR:HA	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.39	0.57
26:BD:108:ASP:OD2	26:BD:173:GLN:HA	2.03	0.57
29:BE:46:GLN:HB2	29:BE:87:ALA:O	2.05	0.57
43:BO:11:ALA:HB2	43:BO:96:GLY:H	1.68	0.57
46:BU:83:GLY:O	46:BU:93:ARG:HA	2.04	0.57
52:BW:44:PHE:O	52:BW:78:PHE:HA	2.05	0.57
53:B6:102:ASN:HD22	53:B6:102:ASN:H	1.51	0.57
1:CA:128:G:H2'	1:CA:129:A:C8	2.40	0.57
1:CA:182:A:O2'	1:CA:183:C:H5"	2.04	0.57
1:CA:429:U:H1'	1:CA:430:A:H5"	1.87	0.57
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.39	0.57
8:CI:82:ILE:O	8:CI:86:LEU:HD13	2.04	0.57
19:CT:27:MET:O	19:CT:31:ILE:HG13	2.05	0.57
19:CT:38:ILE:HG12	19:CT:85:LEU:HD13	1.86	0.57
20:CB:85:SER:O	20:CB:86:CYS:HB2	2.04	0.57
21:CU:11:PHE:O	21:CU:11:PHE:HD1	1.87	0.57
23:DB:234:U:H2'	23:DB:235:U:H6	1.69	0.57
23:DB:392:U:O2'	23:DB:393:C:H5'	2.05	0.57
23:DB:950:G:H2'	23:DB:951:C:C6	2.40	0.57
23:DB:1021:A:H62	23:DB:1141:U:H3	1.52	0.57
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.39	0.57
23:DB:2035:G:H4'	23:DB:2036:C:OP2	2.03	0.57
23:DB:2182:U:H2'	23:DB:2183:A:H8	1.69	0.57
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.39	0.57
23:DB:2636:C:H4'	26:DD:81:GLU:OE2	2.03	0.57
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.69	0.57
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.39	0.57
26:DD:116:LYS:HB2	26:DD:165:MET:HB3	1.87	0.57
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.85	0.57
37:DL:131:ALA:C	37:DL:133:ALA:H	2.08	0.57
40:DH:82:SER:OG	40:DH:94:ILE:HD11	2.05	0.57
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.07	0.57
46:DU:25:LYS:HE3	46:DU:36:GLU:HG3	1.86	0.57
46:DU:81:ARG:H	46:DU:81:ARG:HH21	1.51	0.57
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.52	0.57
1:AA:545:C:H5"	3:AD:68:GLU:HG2	1.85	0.57
1:AA:1009:U:H5'	1:AA:1010:U:OP2	2.04	0.57
3:AD:28:ASP:HB2	3:AD:33:ILE:HG21	1.85	0.57
8:AI:23:GLY:N	8:AI:60:LEU:HA	2.20	0.57
10:AK:111:ASP:HB2	21:AU:19:LYS:CE	2.33	0.57
20:AB:83:ALA:HB3	20:AB:90:PHE:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:28:C:OP1	43:BO:31:THR:HG21	2.05	0.57
23:BB:485:C:O2'	23:BB:486:C:H5'	2.03	0.57
23:BB:591:U:H1'	34:B3:1:PRO:N	2.19	0.57
23:BB:833:A:H1'	37:BL:52:GLY:H	1.69	0.57
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.40	0.57
23:BB:1647:U:P	23:BB:1647:U:H3'	2.44	0.57
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.05	0.57
23:BB:2188:U:H2'	23:BB:2189:U:C6	2.40	0.57
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.39	0.57
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.34	0.57
25:BC:69:ASN:O	25:BC:70:LYS:C	2.42	0.57
25:BC:94:LEU:HB2	25:BC:100:ARG:CD	2.35	0.57
25:BC:270:ARG:NH1	25:BC:270:ARG:HB3	2.20	0.57
29:BE:151:GLY:CA	29:BE:195:GLN:HE22	2.18	0.57
31:B0:48:TYR:CG	31:B0:49:ARG:N	2.72	0.57
36:B2:33:ARG:HB2	36:B2:33:ARG:HH21	1.70	0.57
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.86	0.57
37:BL:57:LEU:C	37:BL:59:ARG:H	2.07	0.57
39:BX:9:LYS:O	39:BX:13:GLU:HG2	2.04	0.57
40:BH:27:ARG:H	40:BH:31:VAL:HG21	1.69	0.57
46:BU:11:ILE:CG2	46:BU:70:ALA:HB3	2.34	0.57
51:BZ:41:GLU:O	51:BZ:44:LYS:HD2	2.05	0.57
1:CA:903:G:O2'	1:CA:904:U:H5'	2.05	0.57
1:CA:1468:A:O2'	1:CA:1469:C:H5'	2.05	0.57
3:CD:196:GLU:O	3:CD:199:ILE:HG12	2.05	0.57
8:CI:123:ARG:HB3	8:CI:123:ARG:NH1	2.20	0.57
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.69	0.57
18:CS:15:LEU:O	18:CS:18:VAL:HG12	2.05	0.57
23:DB:127:A:N7	36:D2:46:LYS:HE2	2.20	0.57
23:DB:222:A:N6	23:DB:232:G:H1'	2.20	0.57
23:DB:417:C:H2'	23:DB:418:C:H6	1.68	0.57
23:DB:2487:G:H2'	23:DB:2488:G:H8	1.70	0.57
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.33	0.57
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.04	0.57
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.57
27:DK:35:VAL:HG12	27:DK:69:VAL:CG2	2.35	0.57
27:DK:71:ARG:HB3	27:DK:72:PRO:HD2	1.86	0.57
29:DE:46:GLN:HB2	29:DE:87:ALA:O	2.04	0.57
29:DE:150:THR:HG21	29:DE:153:LEU:HA	1.85	0.57
31:D0:33:SER:C	31:D0:35:GLU:H	2.08	0.57
35:DV:30:ILE:HG12	35:DV:91:PHE:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:57:LEU:C	37:DL:59:ARG:H	2.08	0.57
37:DL:79:LEU:HB3	37:DL:115:GLU:O	2.05	0.57
42:DN:61:ALA:C	42:DN:63:ARG:H	2.08	0.57
46:DU:11:ILE:CG2	46:DU:70:ALA:HB3	2.34	0.57
53:D6:59:THR:O	53:D6:61:PRO:HD3	2.05	0.57
1:AA:214:C:H2'	1:AA:215:C:C6	2.39	0.57
1:AA:268:U:H2'	1:AA:269:C:C6	2.38	0.57
1:AA:1308:U:OP2	12:AM:97:ARG:HD3	2.05	0.57
1:AA:1319:A:H3'	18:AS:2:ARG:HA	1.86	0.57
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.05	0.57
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.67	0.57
2:AC:13:ILE:O	2:AC:14:VAL:HG22	2.05	0.57
4:AE:155:LYS:O	4:AE:158:LYS:HE3	2.04	0.57
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.04	0.57
14:AO:8:THR:O	14:AO:12:VAL:HG23	2.04	0.57
22:BA:13:G:C2'	22:BA:14:U:H5"	2.33	0.57
23:BB:587:C:O2'	37:BL:19:LEU:HD13	2.05	0.57
23:BB:988:A:P	30:BY:11:SER:HB3	2.45	0.57
23:BB:1021:A:H62	23:BB:1141:U:H3	1.52	0.57
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.70	0.57
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	2.04	0.57
23:BB:1534:U:O5'	23:BB:1534:U:H6	1.88	0.57
23:BB:1636:U:H2'	23:BB:1637:A:C8	2.39	0.57
23:BB:1789:A:OP2	25:BC:220:ARG:HD3	2.04	0.57
23:BB:1930:G:H2'	23:BB:1968:G:C6	2.38	0.57
23:BB:2264:C:H41	52:BW:11:ASN:HD21	1.52	0.57
23:BB:2333:A:H5'	23:BB:2335:A:H1'	1.87	0.57
23:BB:2660:A:H2'	23:BB:2661:G:C8	2.40	0.57
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.39	0.57
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.68	0.57
26:BD:32:ASN:HA	26:BD:51:THR:O	2.05	0.57
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	1.87	0.57
38:BM:126:ILE:HG22	38:BM:127:LYS:N	2.18	0.57
43:BO:79:ALA:HA	43:BO:115:LEU:HD23	1.87	0.57
44:BQ:91:ARG:CZ	49:BR:11:GLN:H	2.18	0.57
45:BS:56:ALA:O	45:BS:59:GLU:HB2	2.04	0.57
48:BG:68:ARG:HH12	48:BG:72:ASN:ND2	2.02	0.57
52:BW:44:PHE:HB3	52:BW:78:PHE:CD1	2.40	0.57
53:B6:59:THR:HG23	53:B6:67:VAL:CG2	2.35	0.57
1:CA:692:U:H2'	1:CA:694:A:OP2	2.05	0.57
2:CC:16:PRO:HG2	2:CC:53:ARG:NH2	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:39:GLN:HG3	3:CD:40:HIS:N	2.19	0.57
6:CG:129:ASN:HA	6:CG:134:VAL:HG21	1.87	0.57
7:CH:35:ILE:O	7:CH:39:LEU:HG	2.04	0.57
11:CL:86:VAL:HB	11:CL:89:LEU:HB2	1.86	0.57
23:DB:956:G:OP2	38:DM:86:LYS:HE2	2.05	0.57
23:DB:1338:G:H4'	50:DT:18:GLU:CG	2.34	0.57
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.40	0.57
23:DB:1725:U:O2'	23:DB:1726:C:H5'	2.05	0.57
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.39	0.57
23:DB:2379:G:H5'	43:DO:21:LEU:CD1	2.33	0.57
28:DP:30:TRP:HD1	28:DP:39:LEU:HG	1.70	0.57
29:DE:115:GLN:HE22	37:DL:2:ARG:HD3	1.68	0.57
29:DE:145:ASP:HB3	29:DE:184:ASP:HB2	1.87	0.57
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.05	0.57
38:DM:34:LYS:HE2	38:DM:99:GLY:HA2	1.85	0.57
40:DH:32:PRO:O	40:DH:33:GLN:HB2	2.04	0.57
47:DF:115:GLY:HA2	47:DF:177:ARG:HH11	1.67	0.57
47:DF:141:ASP:CB	47:DF:144:LYS:HB2	2.35	0.57
50:DT:50:LEU:H	50:DT:50:LEU:HD22	1.70	0.57
7:AH:100:ILE:HG13	7:AH:128:VAL:O	2.05	0.57
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.05	0.57
20:AB:103:TRP:O	20:AB:107:ARG:HG2	2.05	0.57
20:AB:202:ASN:HD22	20:AB:202:ASN:C	2.07	0.57
23:BB:513:A:H8	23:BB:513:A:O5'	1.88	0.57
23:BB:546:U:H5'	23:BB:548:G:O6	2.05	0.57
23:BB:1120:G:O2'	23:BB:1121:C:H5'	2.04	0.57
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.40	0.57
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.05	0.57
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.70	0.57
23:BB:2035:G:H4'	23:BB:2036:C:OP2	2.04	0.57
23:BB:2099:U:H2'	23:BB:2100:G:H8	1.70	0.57
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.39	0.57
23:BB:2496:C:OP1	38:BM:82:MET:HB2	2.05	0.57
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.05	0.57
26:BD:117:GLY:HA2	26:BD:164:GLN:CD	2.25	0.57
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.86	0.57
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.05	0.57
1:CA:394:G:H2'	1:CA:395:C:C6	2.39	0.57
1:CA:719:C:O2'	17:CR:37:LYS:HB2	2.05	0.57
1:CA:1226:C:H2'	12:CM:101:THR:OG1	2.04	0.57
1:CA:1301:U:H2'	1:CA:1301:U:O2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1360:A:H2'	1:CA:1361:G:O4'	2.05	0.57
8:CI:70:GLY:O	8:CI:74:GLN:HB2	2.04	0.57
15:CP:20:VAL:HG23	15:CP:34:GLU:O	2.05	0.57
23:DB:151:C:H2'	23:DB:152:A:H8	1.68	0.57
23:DB:485:C:O2'	23:DB:486:C:H5'	2.04	0.57
23:DB:633:A:H8	23:DB:633:A:O5'	1.87	0.57
23:DB:936:A:H2'	23:DB:937:C:C6	2.39	0.57
23:DB:993:G:H1'	49:DR:91:GLN:NE2	2.19	0.57
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.40	0.57
23:DB:1283:G:N2	23:DB:1285:A:H3'	2.20	0.57
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.40	0.57
23:DB:2723:C:H5"	42:DN:1:MET:HE2	1.87	0.57
26:DD:104:VAL:HA	26:DD:106:LYS:HZ3	1.70	0.57
32:D4:7:VAL:HG23	32:D4:35:GLN:CB	2.32	0.57
40:DH:80:ILE:HD11	40:DH:146:VAL:HA	1.87	0.57
43:DO:51:ALA:O	43:DO:74:VAL:HG13	2.05	0.57
44:DQ:10:ARG:HB2	44:DQ:10:ARG:CZ	2.33	0.57
46:DU:73:ASN:C	46:DU:75:ALA:H	2.08	0.57
47:DF:131:VAL:C	47:DF:133:GLU:H	2.07	0.57
50:DT:40:LYS:HG2	50:DT:60:THR:HG23	1.87	0.57
52:DW:23:LYS:O	52:DW:66:VAL:HB	2.04	0.57
53:D6:30:THR:C	53:D6:32:ARG:H	2.07	0.57
1:AA:68:G:H2'	1:AA:69:G:O4'	2.05	0.56
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.40	0.56
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.87	0.56
9:AJ:80:THR:HB	9:AJ:83:THR:OG1	2.03	0.56
22:BA:43:C:H1'	47:BF:91:ARG:NH2	2.20	0.56
23:BB:192:C:H2'	23:BB:193:U:H5'	1.86	0.56
23:BB:1046:A:H3'	23:BB:1047:G:H5"	1.87	0.56
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.35	0.56
23:BB:2648:G:H2'	23:BB:2649:C:O4'	2.04	0.56
23:BB:2847:U:H5"	28:BP:94:ALA:CB	2.34	0.56
23:BB:2880:C:C1'	42:BN:91:ALA:HB3	2.34	0.56
27:BK:109:SER:HB2	27:BK:111:LYS:HE2	1.87	0.56
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.70	0.56
35:BV:30:ILE:HD12	35:BV:38:LEU:HD23	1.87	0.56
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.23	0.56
40:BH:133:GLN:HA	40:BH:139:PHE:CB	2.35	0.56
40:BH:134:VAL:HG22	40:BH:135:HIS:N	2.17	0.56
42:BN:32:GLU:O	42:BN:114:GLU:HA	2.05	0.56
44:BQ:29:ARG:HH11	44:BQ:29:ARG:HG2	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:36:ALA:HA	49:BR:58:VAL:HA	1.87	0.56
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.04	0.56
52:BW:39:GLN:HG2	52:BW:40:ARG:H	1.69	0.56
53:B6:126:ARG:HD3	53:B6:169:ILE:HD12	1.87	0.56
1:CA:1488:G:H2'	1:CA:1489:G:H8	1.70	0.56
6:CG:107:ALA:O	6:CG:110:ARG:HB2	2.05	0.56
7:CH:37:ASN:O	7:CH:41:GLU:HG2	2.05	0.56
7:CH:87:ARG:H	7:CH:90:GLU:HB3	1.70	0.56
9:CJ:14:ASP:OD1	9:CJ:17:LEU:HB2	2.05	0.56
20:CB:202:ASN:HD22	20:CB:202:ASN:C	2.08	0.56
22:DA:109:A:H2'	22:DA:110:C:C6	2.40	0.56
23:DB:138:U:H4'	23:DB:139:U:H2'	1.86	0.56
23:DB:419:U:H2'	23:DB:420:C:C6	2.39	0.56
23:DB:460:A:H2'	23:DB:461:C:O4'	2.05	0.56
23:DB:2577:A:H5"	23:DB:2578:G:H5'	1.87	0.56
23:DB:2708:G:H2'	23:DB:2709:G:H8	1.69	0.56
25:DC:143:VAL:HG12	25:DC:144:GLU:H	1.68	0.56
26:DD:33:ARG:NE	26:DD:74:GLU:HB3	2.20	0.56
27:DK:20:MET:C	27:DK:41:ILE:HD12	2.25	0.56
29:DE:151:GLY:CA	29:DE:195:GLN:HE22	2.18	0.56
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.04	0.56
36:D2:30:VAL:HA	36:D2:33:ARG:HH22	1.68	0.56
41:DJ:103:ILE:HA	41:DJ:106:LYS:HB3	1.87	0.56
43:DO:88:LYS:HG2	43:DO:89:ASP:N	2.20	0.56
45:DS:52:GLU:HA	45:DS:55:ILE:CG2	2.33	0.56
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	1.87	0.56
52:DW:48:ALA:HB3	52:DW:81:ILE:O	2.05	0.56
52:DW:77:LYS:H	52:DW:77:LYS:HZ2	1.51	0.56
53:D6:56:ALA:HB1	53:D6:70:SER:HB2	1.87	0.56
53:D6:70:SER:HB3	53:D6:76:LEU:CD2	2.35	0.56
1:AA:562:U:H1'	11:AL:11:ARG:HB3	1.85	0.56
6:AG:70:PRO:O	6:AG:95:ARG:HG3	2.06	0.56
7:AH:113:ARG:HH21	7:AH:114:ALA:HA	1.70	0.56
9:AJ:57:VAL:HG13	9:AJ:58:ASN:N	2.20	0.56
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.05	0.56
16:AQ:60:ILE:HA	16:AQ:75:VAL:HG13	1.85	0.56
22:BA:42:C:O4'	47:BF:65:LEU:HB2	2.05	0.56
22:BA:109:A:H2'	22:BA:110:C:C6	2.40	0.56
23:BB:633:A:H8	23:BB:633:A:O5'	1.88	0.56
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.70	0.56
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2393:U:H5'	37:BL:60:ARG:O	2.06	0.56
26:BD:125:TRP:CD2	26:BD:160:LYS:HB3	2.40	0.56
53:B6:79:ILE:HA	53:B6:82:ALA:HB3	1.87	0.56
53:B6:143:LEU:O	53:B6:147:LEU:HG	2.04	0.56
1:CA:369:G:O2'	1:CA:370:C:H5'	2.05	0.56
1:CA:501:C:H1'	1:CA:549:C:H1'	1.85	0.56
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.40	0.56
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.05	0.56
23:DB:1082:U:O4	23:DB:1086:A:C2	2.57	0.56
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.68	0.56
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.34	0.56
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.68	0.56
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.40	0.56
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.40	0.56
23:DB:2438:U:O2'	23:DB:2439:A:H5"	2.05	0.56
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.68	0.56
25:DC:90:ILE:CD1	25:DC:102:TYR:HB3	2.36	0.56
25:DC:245:THR:C	25:DC:247:TRP:H	2.09	0.56
39:DX:49:ASP:O	39:DX:53:VAL:HG23	2.05	0.56
44:DQ:40:LYS:HA	44:DQ:43:GLN:OE1	2.04	0.56
1:AA:193:C:H2'	1:AA:194:C:C5	2.40	0.56
1:AA:394:G:H2'	1:AA:395:C:C6	2.40	0.56
1:AA:825:A:H2'	1:AA:826:C:H6	1.70	0.56
1:AA:950:U:H2'	1:AA:951:G:H8	1.69	0.56
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.39	0.56
1:AA:1348:U:C4'	8:AI:121:ARG:HG3	2.27	0.56
3:AD:39:GLN:HG3	3:AD:40:HIS:N	2.20	0.56
6:AG:4:ARG:HE	6:AG:6:ILE:HG23	1.69	0.56
6:AG:114:SER:O	6:AG:118:ARG:HG3	2.05	0.56
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	1.87	0.56
8:AI:46:VAL:O	8:AI:79:ARG:HG3	2.05	0.56
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.35	0.56
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.20	0.56
20:AB:79:VAL:HG12	20:AB:90:PHE:HB2	1.87	0.56
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.69	0.56
23:BB:570:G:H2'	23:BB:2030:A:N7	2.19	0.56
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.70	0.56
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.40	0.56
23:BB:1403:A:O2'	23:BB:1404:C:H5'	2.04	0.56
23:BB:1573:G:H2'	23:BB:1574:C:H5'	1.88	0.56
23:BB:1785:A:O2'	23:BB:1786:A:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1824:G:OP1	25:BC:51:ARG:HD3	2.05	0.56
23:BB:1857:G:N2	23:BB:1884:G:H2'	2.19	0.56
23:BB:2135:A:C2	23:BB:2136:G:H1'	2.40	0.56
25:BC:244:VAL:HB	25:BC:249:VAL:N	2.20	0.56
26:BD:122:VAL:HA	26:BD:127:PHE:H	1.70	0.56
29:BE:103:GLY:O	29:BE:106:LYS:HB2	2.05	0.56
34:B3:7:ARG:HG3	34:B3:7:ARG:NH1	2.19	0.56
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.51	0.56
36:B2:21:ARG:HH21	36:B2:43:THR:CG2	2.17	0.56
39:BX:39:GLN:O	39:BX:42:LEU:HB2	2.04	0.56
39:BX:39:GLN:HB2	39:BX:42:LEU:HD22	1.86	0.56
40:BH:32:PRO:O	40:BH:33:GLN:HB2	2.03	0.56
41:BJ:36:LEU:HD12	41:BJ:118:MET:O	2.04	0.56
42:BN:38:LEU:O	42:BN:42:LYS:HG3	2.06	0.56
44:BQ:104:ALA:O	44:BQ:105:PHE:HB3	2.05	0.56
49:BR:39:LEU:O	49:BR:40:MET:HB2	2.04	0.56
49:BR:91:GLN:HG3	49:BR:92:TRP:H	1.70	0.56
50:BT:40:LYS:HG2	50:BT:60:THR:HG23	1.87	0.56
52:BW:10:ARG:O	52:BW:11:ASN:HB2	2.06	0.56
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.52	0.56
1:CA:54:C:H2'	1:CA:352:C:H41	1.69	0.56
1:CA:55:A:OP2	1:CA:352:C:N4	2.37	0.56
1:CA:154:U:H2'	1:CA:155:A:C8	2.39	0.56
1:CA:628:G:O2'	1:CA:629:A:H5'	2.05	0.56
1:CA:796:C:OP1	10:CK:127:ARG:HB3	2.05	0.56
1:CA:909:A:H2'	1:CA:910:C:O4'	2.06	0.56
1:CA:922:G:H2'	1:CA:923:A:C8	2.40	0.56
1:CA:939:G:H5'	6:CG:101:ARG:NH1	2.20	0.56
1:CA:1008:U:H5"	13:CN:23:ARG:NH2	2.21	0.56
1:CA:1080:A:H2'	1:CA:1081:A:H5'	1.87	0.56
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.13	0.56
2:CC:129:PHE:CD2	2:CC:156:LEU:HD22	2.40	0.56
5:CF:43:GLY:HA2	5:CF:58:HIS:NE2	2.21	0.56
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.70	0.56
11:CL:64:SER:OG	11:CL:96:THR:HG23	2.04	0.56
12:CM:44:ILE:HA	12:CM:47:LEU:CD1	2.36	0.56
13:CN:14:ALA:O	13:CN:18:LYS:HG3	2.05	0.56
14:CO:8:THR:O	14:CO:12:VAL:HG23	2.04	0.56
21:CU:19:LYS:HD3	21:CU:20:ARG:HH21	1.69	0.56
21:CU:26:GLY:O	21:CU:30:GLU:HB2	2.06	0.56
22:DA:2:G:O2'	22:DA:3:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:27:C:N4	22:DA:28:C:N4	2.54	0.56
23:DB:125:A:C2	36:D2:10:LEU:HA	2.40	0.56
23:DB:155:A:H2'	23:DB:156:A:C8	2.40	0.56
23:DB:547:A:H2'	23:DB:547:A:N3	2.19	0.56
23:DB:836:G:H2'	23:DB:837:C:H6	1.68	0.56
23:DB:979:A:H3'	23:DB:980:A:C5'	2.35	0.56
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.71	0.56
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.40	0.56
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.05	0.56
23:DB:1655:A:H2'	23:DB:1656:C:O4'	2.05	0.56
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.40	0.56
23:DB:2276:G:OP2	38:DM:85:GLY:N	2.38	0.56
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.70	0.56
23:DB:2722:G:O2'	23:DB:2723:C:H5'	2.06	0.56
25:DC:76:VAL:CG1	25:DC:114:GLN:HG2	2.32	0.56
25:DC:94:LEU:HB2	25:DC:100:ARG:CD	2.35	0.56
26:DD:4:LEU:HD23	26:DD:101:PHE:CE1	2.40	0.56
26:DD:7:LYS:HB2	26:DD:77:ARG:NH1	2.18	0.56
27:DK:87:LEU:HD12	27:DK:92:GLU:HA	1.87	0.56
29:DE:189:THR:O	29:DE:193:VAL:HG23	2.04	0.56
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.05	0.56
40:DH:14:SER:HB2	40:DH:17:ASP:CB	2.35	0.56
42:DN:47:VAL:C	42:DN:50:PRO:HD2	2.25	0.56
43:DO:26:LEU:HB2	43:DO:39:VAL:HG22	1.88	0.56
43:DO:88:LYS:HG2	43:DO:89:ASP:H	1.70	0.56
44:DQ:91:ARG:CZ	49:DR:11:GLN:H	2.18	0.56
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.40	0.56
47:DF:41:GLU:O	47:DF:43:ILE:HG22	2.05	0.56
47:DF:137:PHE:HB2	47:DF:138:PRO:CD	2.33	0.56
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.06	0.56
8:AI:20:ILE:HG23	8:AI:60:LEU:HD11	1.87	0.56
8:AI:55:ASP:HB2	8:AI:59:LYS:HG3	1.87	0.56
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.71	0.56
23:BB:28:A:H61	23:BB:512:G:H1'	1.69	0.56
23:BB:549:G:H3'	23:BB:549:G:OP2	2.06	0.56
23:BB:2021:C:OP1	31:B0:8:THR:HG21	2.05	0.56
25:BC:221:GLY:C	25:BC:223:ALA:H	2.09	0.56
26:BD:7:LYS:HB2	26:BD:77:ARG:NH1	2.17	0.56
26:BD:136:ASN:HD21	26:BD:140:HIS:N	2.03	0.56
26:BD:159:LYS:O	26:BD:161:MET:HG2	2.05	0.56
33:B1:34:GLU:HA	33:B1:48:TYR:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:55:VAL:HG13	50:BT:85:VAL:HG12	1.88	0.56
50:BT:69:ARG:HB2	50:BT:69:ARG:HH11	1.70	0.56
1:CA:398:U:H2'	1:CA:399:G:C8	2.40	0.56
1:CA:502:A:H2'	1:CA:503:C:H6	1.71	0.56
1:CA:612:C:H2'	1:CA:613:C:C6	2.41	0.56
1:CA:635:A:H2'	1:CA:636:U:H6	1.70	0.56
1:CA:715:A:H2'	1:CA:716:A:C8	2.37	0.56
1:CA:719:C:H2'	17:CR:38:ILE:CD1	2.35	0.56
1:CA:764:C:N4	1:CA:812:G:H1	2.03	0.56
1:CA:779:C:H5"	10:CK:123:PRO:HB3	1.88	0.56
1:CA:1123:U:H4'	9:CJ:39:PRO:HD2	1.87	0.56
2:CC:13:ILE:HD13	2:CC:13:ILE:H	1.70	0.56
3:CD:201:GLU:OE1	4:CE:104:ILE:HG22	2.06	0.56
6:CG:35:LYS:O	6:CG:39:GLU:HG3	2.05	0.56
8:CI:46:VAL:O	8:CI:79:ARG:HG3	2.05	0.56
8:CI:79:ARG:NH2	8:CI:102:PHE:HA	2.21	0.56
10:CK:61:ALA:O	10:CK:64:VAL:HG12	2.05	0.56
18:CS:35:ARG:HB3	18:CS:50:VAL:CG1	2.35	0.56
21:CU:19:LYS:HB2	21:CU:20:ARG:HE	1.69	0.56
22:DA:78:A:H2'	22:DA:79:G:O4'	2.05	0.56
22:DA:95:U:H2'	22:DA:96:G:C8	2.39	0.56
23:DB:981:A:H2'	23:DB:982:C:H5"	1.86	0.56
23:DB:1881:C:H2'	23:DB:1882:U:O4'	2.06	0.56
23:DB:1885:A:H3'	23:DB:1886:U:C6	2.40	0.56
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.88	0.56
33:D1:10:LEU:O	33:D1:19:PHE:HB2	2.05	0.56
35:DV:28:ALA:HA	35:DV:88:HIS:CE1	2.40	0.56
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA3	1.86	0.56
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	2.05	0.56
47:DF:135:ILE:HD11	47:DF:137:PHE:CD1	2.40	0.56
48:DG:84:LYS:HB3	48:DG:132:LEU:O	2.05	0.56
53:D6:19:GLU:HA	53:D6:22:GLU:HG3	1.88	0.56
1:AA:154:U:H2'	1:AA:155:A:C8	2.40	0.56
1:AA:591:U:H2'	1:AA:592:G:H8	1.70	0.56
1:AA:638:U:H2'	1:AA:639:G:O4'	2.06	0.56
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.05	0.56
2:AC:61:LYS:O	2:AC:96:VAL:HB	2.04	0.56
12:AM:44:ILE:HD12	12:AM:45:SER:H	1.70	0.56
17:AR:34:GLU:HB2	21:AU:18:PHE:CZ	2.40	0.56
20:AB:156:LEU:H	20:AB:156:LEU:HD12	1.71	0.56
21:AU:26:GLY:O	21:AU:30:GLU:HB2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:27:VAL:O	21:AU:31:VAL:HG23	2.05	0.56
23:BB:309:A:H4'	46:BU:15:GLY:HA3	1.88	0.56
23:BB:596:U:H2'	23:BB:597:G:C8	2.41	0.56
23:BB:596:U:H2'	23:BB:597:G:H8	1.70	0.56
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.40	0.56
23:BB:2902:C:C2	23:BB:2903:U:H5	2.24	0.56
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.33	0.56
25:BC:245:THR:C	25:BC:247:TRP:H	2.09	0.56
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.87	0.56
29:BE:134:LEU:HD21	29:BE:161:ALA:HB2	1.87	0.56
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.05	0.56
44:BQ:24:TYR:O	44:BQ:27:ARG:HB2	2.06	0.56
44:BQ:94:LEU:HD21	49:BR:11:GLN:HB2	1.87	0.56
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.20	0.56
45:BS:27:LYS:HD2	45:BS:27:LYS:H	1.71	0.56
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.21	0.56
53:B6:58:VAL:HG12	53:B6:59:THR:N	2.20	0.56
1:CA:731:G:O2'	1:CA:732:C:H5'	2.05	0.56
1:CA:1313:U:OP1	18:CS:6:LYS:HD3	2.06	0.56
3:CD:160:LEU:HD13	3:CD:160:LEU:N	2.18	0.56
10:CK:111:ASP:HB2	21:CU:19:LYS:CE	2.34	0.56
11:CL:54:VAL:HG21	11:CL:79:ILE:HD11	1.87	0.56
23:DB:17:G:H2'	23:DB:18:U:C6	2.41	0.56
23:DB:408:G:O2'	23:DB:409:G:H5'	2.05	0.56
23:DB:659:G:H4'	29:DE:95:LYS:HB3	1.87	0.56
23:DB:673:C:C2'	23:DB:674:G:H5'	2.36	0.56
23:DB:855:G:N3	52:DW:23:LYS:HE3	2.21	0.56
25:DC:123:ILE:O	25:DC:123:ILE:HG13	2.04	0.56
28:DP:112:ARG:HB2	28:DP:112:ARG:HH11	1.71	0.56
29:DE:61:ARG:NH1	29:DE:64:GLY:HA3	2.21	0.56
38:DM:50:ARG:HA	38:DM:53:MET:CE	2.33	0.56
42:DN:38:LEU:O	42:DN:42:LYS:HG3	2.05	0.56
50:DT:1:MET:C	50:DT:2:ILE:HD13	2.26	0.56
52:DW:44:PHE:O	52:DW:78:PHE:HA	2.05	0.56
53:D6:51:PRO:HB2	53:D6:53:ASN:HD21	1.70	0.56
1:AA:591:U:OP1	7:AH:30:LYS:HE2	2.06	0.56
1:AA:696:A:H2'	1:AA:697:U:C6	2.40	0.56
1:AA:909:A:H2'	1:AA:910:C:O4'	2.05	0.56
1:AA:1060:U:C5	2:AC:1:GLY:HA3	2.40	0.56
4:AE:100:GLU:HA	4:AE:121:ASN:ND2	2.21	0.56
6:AG:145:GLU:C	6:AG:147:ASN:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:37:ASN:O	7:AH:41:GLU:HG2	2.04	0.56
7:AH:86:LYS:HB3	7:AH:90:GLU:HB3	1.88	0.56
14:AO:77:ARG:O	14:AO:81:LEU:HB2	2.06	0.56
22:BA:10:G:H2'	22:BA:11:C:O4'	2.06	0.56
22:BA:41:G:H21	23:BB:2340:A:H5'	1.70	0.56
23:BB:161:A:C3'	23:BB:162:U:H5"	2.33	0.56
23:BB:782:A:N3	25:BC:224:MET:HB3	2.20	0.56
23:BB:1859:U:H2'	23:BB:1860:G:H8	1.70	0.56
23:BB:2080:A:OP1	51:BZ:20:HIS:HB3	2.05	0.56
23:BB:2144:G:O2'	23:BB:2146:C:H5'	2.06	0.56
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.06	0.56
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA3	1.86	0.56
41:BJ:127:GLY:O	41:BJ:128:ASN:HB2	2.04	0.56
44:BQ:91:ARG:HB2	44:BQ:94:LEU:HD23	1.88	0.56
47:BF:137:PHE:HB2	47:BF:138:PRO:CD	2.34	0.56
48:BG:10:VAL:O	48:BG:10:VAL:HG12	2.04	0.56
50:BT:80:TRP:CZ3	50:BT:82:LYS:HG2	2.41	0.56
1:CA:737:C:H2'	1:CA:738:C:H6	1.71	0.56
2:CC:156:LEU:HD11	2:CC:165:GLU:HB2	1.87	0.56
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.06	0.56
12:CM:92:ARG:HA	12:CM:92:ARG:HE	1.71	0.56
16:CQ:60:ILE:HA	16:CQ:75:VAL:HG13	1.87	0.56
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.40	0.56
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.70	0.56
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.40	0.56
23:DB:2834:G:H2'	23:DB:2879:A:H61	1.71	0.56
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.41	0.56
30:DY:2:LYS:H	30:DY:2:LYS:CD	2.18	0.56
42:DN:49:GLU:OE2	42:DN:95:THR:HG22	2.05	0.56
44:DQ:43:GLN:NE2	49:DR:77:PHE:HB3	2.21	0.56
50:DT:69:ARG:HB2	50:DT:69:ARG:HH11	1.71	0.56
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.35	0.56
53:D6:32:ARG:O	53:D6:103:ILE:HG12	2.06	0.56
53:D6:80:GLU:HG3	53:D6:92:PRO:HB3	1.86	0.56
1:AA:423:G:H2'	1:AA:424:G:O4'	2.05	0.56
1:AA:1186:G:H21	13:AN:100:TRP:C	2.09	0.56
3:AD:96:ARG:O	3:AD:100:VAL:HG23	2.05	0.56
11:AL:54:VAL:HG21	11:AL:79:ILE:HD11	1.88	0.56
20:AB:102:ASN:O	20:AB:106:VAL:HG23	2.06	0.56
22:BA:89:U:H5'	22:BA:90:C:C6	2.40	0.56
23:BB:19:A:H2'	23:BB:20:C:H6	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:27:G:HO2'	23:BB:28:A:H8	1.52	0.56
23:BB:576:U:H2'	23:BB:577:G:C8	2.41	0.56
23:BB:649:G:H2'	23:BB:650:C:C6	2.40	0.56
23:BB:673:C:C2'	23:BB:674:G:H5'	2.36	0.56
23:BB:753:A:H2'	23:BB:754:U:H6	1.69	0.56
23:BB:945:A:H3'	23:BB:946:C:H5"	1.88	0.56
23:BB:950:G:H2'	23:BB:951:C:C6	2.41	0.56
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.40	0.56
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.70	0.56
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.05	0.56
23:BB:2825:G:H2'	23:BB:2826:A:H5'	1.88	0.56
24:BI:10:LEU:O	24:BI:10:LEU:HD12	2.05	0.56
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.06	0.56
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.88	0.56
29:BE:72:SER:C	29:BE:74:LYS:H	2.08	0.56
29:BE:98:LYS:O	29:BE:102:ARG:HG2	2.06	0.56
40:BH:68:ARG:CZ	40:BH:134:VAL:HG21	2.36	0.56
40:BH:73:ASN:ND2	40:BH:74:ALA:H	2.02	0.56
44:BQ:10:ARG:HB2	44:BQ:10:ARG:CZ	2.36	0.56
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.21	0.56
1:CA:284:C:H2'	1:CA:285:C:H6	1.70	0.56
1:CA:399:G:H2'	1:CA:400:C:C6	2.41	0.56
1:CA:692:U:C2	1:CA:694:A:H5"	2.41	0.56
1:CA:1150:A:H1'	1:CA:1280:A:N6	2.21	0.56
3:CD:2:ARG:HG3	3:CD:114:ARG:NH1	2.20	0.56
8:CI:22:PRO:HA	8:CI:60:LEU:CB	2.36	0.56
8:CI:67:LYS:HB2	8:CI:67:LYS:NZ	2.20	0.56
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.06	0.56
13:CN:2:LYS:O	13:CN:6:LYS:HB2	2.06	0.56
15:CP:72:ALA:HA	15:CP:75:ILE:HD12	1.87	0.56
20:CB:83:ALA:HB3	20:CB:90:PHE:HB3	1.88	0.56
23:DB:152:A:H2'	23:DB:153:U:H6	1.71	0.56
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.20	0.56
23:DB:2491:U:H5"	23:DB:2570:G:H5"	1.87	0.56
23:DB:2553:G:H2'	23:DB:2554:U:C4'	2.35	0.56
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.41	0.56
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.06	0.56
26:DD:118:PHE:HE2	42:DN:1:MET:SD	2.28	0.56
29:DE:21:ARG:HG3	29:DE:22:ASP:N	2.20	0.56
29:DE:131:THR:HB	29:DE:164:LEU:HG	1.87	0.56
31:D0:39:ARG:HH11	31:D0:39:ARG:HG3	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:45:THR:HG21	41:DJ:50:THR:HG21	1.88	0.56
41:DJ:56:VAL:HG12	41:DJ:57:LEU:N	2.21	0.56
44:DQ:104:ALA:O	44:DQ:105:PHE:HB3	2.06	0.56
48:DG:10:VAL:HG23	48:DG:48:THR:HA	1.88	0.56
48:DG:148:ARG:HA	48:DG:161:VAL:CB	2.32	0.56
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.38	0.56
53:D6:32:ARG:HH22	53:D6:88:LEU:C	2.08	0.56
53:D6:129:ILE:O	53:D6:132:ILE:HB	2.06	0.56
1:AA:719:C:O2	17:AR:37:LYS:HA	2.05	0.56
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.05	0.56
1:AA:1465:A:H2'	1:AA:1466:C:C6	2.41	0.56
8:AI:56:MET:CG	8:AI:57:VAL:H	2.19	0.56
10:AK:61:ALA:O	10:AK:64:VAL:HG12	2.06	0.56
10:AK:92:ARG:HH21	21:AU:24:LYS:HG2	1.71	0.56
15:AP:4:ILE:HB	15:AP:67:ILE:HD12	1.86	0.56
23:BB:135:U:H2'	23:BB:136:G:C8	2.40	0.56
23:BB:441:U:H2'	23:BB:442:G:C8	2.41	0.56
23:BB:1338:G:H4'	50:BT:18:GLU:CG	2.36	0.56
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.40	0.56
23:BB:1899:A:O2'	23:BB:1900:A:H5"	2.05	0.56
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.41	0.56
23:BB:2749:A:OP1	23:BB:2751:G:H5"	2.06	0.56
33:B1:8:ILE:HD11	33:B1:52:LYS:HB2	1.87	0.56
38:BM:35:ALA:HB2	38:BM:100:LYS:HB2	1.87	0.56
40:BH:135:HIS:HB2	40:BH:138:VAL:HB	1.88	0.56
41:BJ:103:ILE:HA	41:BJ:106:LYS:HB3	1.88	0.56
43:BO:24:THR:OG1	43:BO:90:VAL:HG12	2.06	0.56
45:BS:55:ILE:HD12	45:BS:69:LEU:HD23	1.88	0.56
46:BU:46:LYS:NZ	46:BU:47:PRO:HG2	2.21	0.56
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.39	0.56
1:CA:818:G:C3'	1:CA:819:A:H5"	2.36	0.56
1:CA:919:A:O2'	1:CA:920:U:H5'	2.05	0.56
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.06	0.56
6:CG:145:GLU:C	6:CG:147:ASN:H	2.07	0.56
7:CH:66:GLN:C	7:CH:68:LYS:H	2.09	0.56
9:CJ:17:LEU:HD22	9:CJ:96:VAL:CG1	2.35	0.56
13:CN:12:ARG:HG2	13:CN:53:ASP:HB3	1.88	0.56
18:CS:29:PRO:HA	18:CS:47:THR:O	2.06	0.56
23:DB:264:C:C2'	23:DB:265:A:H5"	2.35	0.56
23:DB:289:G:H2'	23:DB:290:U:C6	2.40	0.56
23:DB:479:A:O2'	23:DB:481:G:H5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:558:U:O3'	41:DJ:111:LYS:HD3	2.06	0.56
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.06	0.56
23:DB:807:U:H2'	23:DB:808:G:H8	1.70	0.56
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.35	0.56
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.68	0.56
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.70	0.56
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.40	0.56
23:DB:2031:A:C6	23:DB:2498:C:H1'	2.40	0.56
23:DB:2284:A:OP2	33:D1:5:ARG:HG3	2.04	0.56
23:DB:2547:A:H5'	23:DB:2566:A:C2	2.41	0.56
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.36	0.56
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.21	0.56
35:DV:63:ILE:HD12	35:DV:63:ILE:N	2.20	0.56
40:DH:72:ILE:CD1	40:DH:140:ALA:HB3	2.35	0.56
44:DQ:24:TYR:O	44:DQ:27:ARG:HB2	2.06	0.56
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.19	0.56
48:DG:6:ALA:HB3	48:DG:68:ARG:NE	2.21	0.56
48:DG:9:VAL:H	48:DG:48:THR:HB	1.70	0.56
48:DG:68:ARG:HH12	48:DG:72:ASN:ND2	2.03	0.56
51:DZ:6:GLN:HE21	51:DZ:50:ARG:H	1.53	0.56
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.21	0.56
1:AA:634:C:H2'	1:AA:635:A:C8	2.39	0.56
1:AA:1057:G:H5"	2:AC:153:SER:HB2	1.87	0.56
1:AA:1313:U:OP1	18:AS:6:LYS:HD3	2.06	0.56
16:AQ:80:LYS:H	16:AQ:80:LYS:CD	2.18	0.56
22:BA:91:C:H2'	22:BA:92:C:C6	2.41	0.56
23:BB:10:A:H61	23:BB:2895:G:H1'	1.70	0.56
23:BB:17:G:H2'	23:BB:18:U:C6	2.41	0.56
23:BB:279:A:H2'	23:BB:280:U:H5'	1.88	0.56
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.41	0.56
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.69	0.56
23:BB:2359:C:H2'	23:BB:2360:G:C8	2.41	0.56
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.71	0.56
23:BB:2570:G:H2'	23:BB:2571:U:O4'	2.06	0.56
26:BD:109:VAL:HG11	26:BD:193:VAL:HG11	1.86	0.56
28:BP:38:ARG:HB2	28:BP:38:ARG:HH21	1.70	0.56
35:BV:48:MET:O	35:BV:51:GLN:HG3	2.05	0.56
48:BG:88:LEU:HD13	48:BG:93:TYR:HB3	1.87	0.56
50:BT:50:LEU:HD22	50:BT:50:LEU:H	1.70	0.56
53:B6:92:PRO:HB3	53:B6:100:TYR:O	2.05	0.56
1:CA:45:G:H2'	1:CA:46:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:204:G:H2'	1:CA:205:A:H8	1.71	0.56
1:CA:250:A:H1'	1:CA:252:U:C5	2.41	0.56
1:CA:1140:C:O2'	1:CA:1141:C:H5'	2.05	0.56
1:CA:1186:G:H21	13:CN:100:TRP:C	2.09	0.56
7:CH:44:PHE:HA	7:CH:70:VAL:HG11	1.87	0.56
19:CT:38:ILE:HD13	19:CT:38:ILE:O	2.05	0.56
19:CT:53:MET:O	19:CT:57:VAL:HG22	2.06	0.56
23:DB:9:G:N2	23:DB:10:A:H62	2.01	0.56
23:DB:37:C:O2'	23:DB:38:A:H5'	2.06	0.56
23:DB:355:U:H2'	23:DB:356:G:C8	2.41	0.56
23:DB:1534:U:H6	23:DB:1534:U:O5'	1.89	0.56
23:DB:1566:A:H5'	25:DC:213:ARG:NH2	2.21	0.56
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.41	0.56
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.71	0.56
23:DB:2814:A:H4'	31:D0:25:THR:HG21	1.88	0.56
29:DE:72:SER:C	29:DE:74:LYS:H	2.09	0.56
29:DE:122:GLU:O	29:DE:123:LYS:HB2	2.05	0.56
40:DH:85:GLY:HA2	40:DH:91:PHE:CZ	2.40	0.56
49:DR:36:ALA:HA	49:DR:58:VAL:HA	1.88	0.56
50:DT:47:VAL:HG13	50:DT:51:PHE:HD1	1.71	0.56
1:AA:253:A:H2'	1:AA:254:G:H8	1.71	0.56
1:AA:926:G:H21	1:AA:1505:G:H2'	1.70	0.56
2:AC:190:THR:HG22	2:AC:191:THR:N	2.19	0.56
5:AF:68:GLN:O	5:AF:71:ILE:HG23	2.05	0.56
13:AN:2:LYS:O	13:AN:6:LYS:HB2	2.05	0.56
15:AP:23:ASP:O	15:AP:26:ASN:HB2	2.06	0.56
20:AB:10:LYS:O	20:AB:13:VAL:HG23	2.06	0.56
21:AU:11:PHE:O	21:AU:13:VAL:HG12	2.06	0.56
21:AU:40:PRO:O	21:AU:44:ARG:HB2	2.06	0.56
23:BB:63:A:OP2	23:BB:63:A:H2'	2.05	0.56
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.41	0.56
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.06	0.56
23:BB:1105:U:O2'	23:BB:1106:G:H5'	2.06	0.56
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.41	0.56
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.05	0.56
26:BD:116:LYS:HB2	26:BD:165:MET:HB3	1.88	0.56
31:B0:33:SER:C	31:B0:35:GLU:H	2.09	0.56
35:BV:63:ILE:HD13	35:BV:72:VAL:HG22	1.88	0.56
46:BU:26:ASN:N	46:BU:26:ASN:ND2	2.53	0.56
50:BT:54:GLU:HG3	50:BT:90:GLY:N	2.21	0.56
1:CA:36:C:O3'	11:CL:119:LYS:HA	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:83:C:O2'	1:CA:84:U:H2'	2.06	0.56
1:CA:502:A:H4'	1:CA:550:G:H4'	1.88	0.56
3:CD:122:ILE:O	3:CD:128:VAL:HG23	2.06	0.56
20:CB:69:VAL:HB	20:CB:162:VAL:HB	1.88	0.56
23:DB:833:A:H2'	23:DB:834:G:C8	2.41	0.56
23:DB:899:A:H2'	23:DB:900:A:O4'	2.05	0.56
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.41	0.56
23:DB:1205:A:H4'	23:DB:1206:G:OP2	2.04	0.56
23:DB:1793:C:H2'	23:DB:1794:A:C8	2.40	0.56
26:DD:125:TRP:CD2	26:DD:160:LYS:HB3	2.42	0.56
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.21	0.56
31:D0:38:LEU:HD23	31:D0:39:ARG:H	1.71	0.56
42:DN:72:ASP:OD1	42:DN:75:ILE:HG23	2.06	0.56
47:DF:65:LEU:O	47:DF:86:CYS:HA	2.06	0.56
48:DG:67:ALA:O	48:DG:71:LEU:HD23	2.05	0.56
53:D6:39:LEU:HA	53:D6:52:LEU:HB3	1.87	0.56
1:AA:204:G:H2'	1:AA:205:A:H8	1.71	0.55
1:AA:611:C:H2'	1:AA:612:C:H6	1.71	0.55
1:AA:719:C:O2'	17:AR:37:LYS:HB2	2.05	0.55
3:AD:18:LEU:HD12	3:AD:63:ILE:HG12	1.88	0.55
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.86	0.55
10:AK:52:ARG:HH11	10:AK:53:GLY:H	1.54	0.55
14:AO:24:SER:HB3	14:AO:27:VAL:CG2	2.35	0.55
23:BB:45:G:C5'	23:BB:46:G:H5'	2.35	0.55
23:BB:780:G:H1	25:BC:228:ASP:CG	2.10	0.55
23:BB:818:G:H3'	23:BB:1187:G:H22	1.70	0.55
23:BB:1821:A:H2'	23:BB:1822:C:H6	1.70	0.55
23:BB:2834:G:H2'	23:BB:2879:A:N6	2.21	0.55
23:BB:2899:A:H2'	23:BB:2900:A:H8	1.71	0.55
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.87	0.55
26:BD:113:SER:HB3	26:BD:167:ASN:CA	2.37	0.55
37:BL:93:ASN:O	37:BL:95:LEU:N	2.39	0.55
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.87	0.55
44:BQ:43:GLN:NE2	49:BR:77:PHE:HB3	2.20	0.55
48:BG:67:ALA:O	48:BG:71:LEU:HD23	2.06	0.55
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.32	0.55
50:BT:43:ILE:O	50:BT:46:ALA:HB3	2.06	0.55
53:B6:95:LYS:HB3	53:B6:100:TYR:CE2	2.37	0.55
1:CA:761:G:H2'	1:CA:762:U:C6	2.41	0.55
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.40	0.55
2:CC:61:LYS:O	2:CC:96:VAL:HB	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:7:GLY:HA3	8:CI:81:GLY:O	2.06	0.55
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.21	0.55
12:CM:52:ILE:HG23	12:CM:56:ARG:NH1	2.16	0.55
15:CP:23:ASP:O	15:CP:26:ASN:HB2	2.06	0.55
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.88	0.55
20:CB:119:GLN:HA	20:CB:124:THR:CG2	2.36	0.55
23:DB:453:A:H4'	23:DB:472:A:N6	2.21	0.55
23:DB:513:A:H8	23:DB:513:A:O5'	1.89	0.55
23:DB:659:G:H4'	29:DE:95:LYS:HD2	1.88	0.55
23:DB:871:U:H2'	23:DB:872:U:H6	1.72	0.55
23:DB:2393:U:H5'	37:DL:60:ARG:O	2.05	0.55
23:DB:2820:A:OP1	42:DN:4:ARG:HA	2.07	0.55
28:DP:31:VAL:HG11	28:DP:38:ARG:HG3	1.88	0.55
28:DP:38:ARG:HH21	28:DP:38:ARG:HB2	1.70	0.55
33:D1:8:ILE:HD12	33:D1:51:ALA:HA	1.88	0.55
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.88	0.55
37:DL:132:ARG:O	37:DL:136:GLU:HG3	2.06	0.55
39:DX:33:ALA:HB1	50:DT:14:PRO:HD2	1.88	0.55
42:DN:31:HIS:O	42:DN:33:ILE:HG13	2.06	0.55
45:DS:51:LEU:C	45:DS:53:SER:H	2.10	0.55
1:AA:922:G:H2'	1:AA:923:A:C8	2.41	0.55
17:AR:55:ALA:HA	17:AR:58:ILE:HD12	1.88	0.55
23:BB:408:G:O2'	23:BB:409:G:H5'	2.07	0.55
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.70	0.55
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.05	0.55
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.35	0.55
23:BB:2834:G:H2'	23:BB:2879:A:H61	1.70	0.55
25:BC:124:LYS:HG3	25:BC:125:PRO:HD2	1.88	0.55
37:BL:143:GLU:HG2	37:BL:144:GLU:N	2.17	0.55
42:BN:47:VAL:C	42:BN:50:PRO:HD2	2.26	0.55
42:BN:83:LEU:CA	42:BN:86:ARG:HB2	2.30	0.55
50:BT:18:GLU:C	50:BT:20:ALA:H	2.10	0.55
1:CA:62:U:H2'	1:CA:63:C:C6	2.41	0.55
1:CA:308:C:H2'	1:CA:309:A:C8	2.41	0.55
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.41	0.55
1:CA:1154:G:O2'	1:CA:1155:A:H5'	2.06	0.55
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.41	0.55
1:CA:1483:A:H2'	1:CA:1484:C:O4'	2.06	0.55
3:CD:116:LEU:O	3:CD:121:ALA:HB3	2.07	0.55
18:CS:39:ILE:HB	18:CS:66:VAL:HA	1.88	0.55
20:CB:221:ARG:HH11	20:CB:221:ARG:CB	2.18	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:322:A:H5'	23:DB:340:A:H1'	1.87	0.55
23:DB:660:C:H2'	23:DB:661:A:H8	1.70	0.55
25:DC:123:ILE:HD12	25:DC:191:LEU:HD11	1.87	0.55
37:DL:25:SER:O	37:DL:27:LEU:HD12	2.06	0.55
38:DM:35:ALA:HB2	38:DM:100:LYS:HB2	1.88	0.55
48:DG:91:VAL:HG23	48:DG:92:GLY:H	1.72	0.55
53:D6:12:SER:O	53:D6:16:LYS:HD2	2.06	0.55
1:AA:761:G:H2'	1:AA:762:U:C6	2.42	0.55
10:AK:88:PRO:HD3	21:AU:28:LEU:HD11	1.89	0.55
12:AM:89:ARG:HB2	12:AM:96:VAL:HG22	1.88	0.55
15:AP:73:ALA:O	15:AP:77:GLU:HG3	2.07	0.55
23:BB:3:U:HO2'	23:BB:4:U:H6	1.54	0.55
23:BB:993:G:H1'	49:BR:91:GLN:NE2	2.22	0.55
23:BB:1256:G:H21	29:BE:77:ILE:HG22	1.71	0.55
23:BB:1473:G:O2'	23:BB:1474:U:H5'	2.06	0.55
23:BB:1520:U:H2'	23:BB:1521:G:O4'	2.06	0.55
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.07	0.55
23:BB:1656:C:H2'	23:BB:1657:U:C6	2.41	0.55
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.06	0.55
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.87	0.55
25:BC:71:ASP:OD2	25:BC:118:GLY:HA2	2.06	0.55
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.07	0.55
29:BE:21:ARG:HG3	29:BE:22:ASP:N	2.19	0.55
30:BY:8:GLN:CG	30:BY:31:ILE:HA	2.31	0.55
33:B1:10:LEU:O	33:B1:19:PHE:HB2	2.07	0.55
38:BM:114:ARG:HA	38:BM:130:PHE:CE1	2.42	0.55
40:BH:57:LYS:NZ	40:BH:58:LEU:HD22	2.22	0.55
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.74	0.55
1:CA:95:C:H2'	1:CA:95:C:O2	2.05	0.55
1:CA:213:G:H3'	1:CA:214:C:C6	2.42	0.55
1:CA:358:U:H2'	1:CA:359:G:C8	2.41	0.55
1:CA:499:A:H4'	1:CA:500:G:H5'	1.88	0.55
1:CA:524:G:H2'	1:CA:525:C:H6	1.70	0.55
1:CA:638:U:H2'	1:CA:639:G:O4'	2.06	0.55
1:CA:642:A:H2'	1:CA:643:C:H6	1.71	0.55
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.06	0.55
1:CA:1458:G:H5"	19:CT:25:SER:HB2	1.88	0.55
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.42	0.55
2:CC:13:ILE:O	2:CC:14:VAL:HG22	2.06	0.55
3:CD:18:LEU:HD12	3:CD:63:ILE:HG12	1.87	0.55
3:CD:26:ALA:HA	3:CD:30:LYS:CE	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:72:VAL:HG12	6:CG:89:GLU:HG3	1.87	0.55
7:CH:26:MET:HB2	7:CH:27:PRO:HD2	1.89	0.55
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.34	0.55
20:CB:60:ALA:HB1	20:CB:220:VAL:HG13	1.87	0.55
23:DB:1047:G:O3'	23:DB:1048:A:H8	1.89	0.55
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.71	0.55
23:DB:1785:A:O2'	23:DB:1786:A:H5'	2.06	0.55
23:DB:2053:G:O2'	23:DB:2054:A:H5'	2.06	0.55
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.21	0.55
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.72	0.55
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.21	0.55
34:D3:7:ARG:HH11	34:D3:7:ARG:HG3	1.71	0.55
38:DM:114:ARG:HA	38:DM:130:PHE:CE1	2.41	0.55
41:DJ:38:GLY:O	41:DJ:43:GLU:HB2	2.06	0.55
43:DO:5:SER:HA	43:DO:8:ILE:CD1	2.34	0.55
45:DS:40:ASN:O	45:DS:41:LYS:HG3	2.05	0.55
47:DF:7:TYR:HA	47:DF:11:VAL:CG2	2.36	0.55
48:DG:10:VAL:HG12	48:DG:10:VAL:O	2.05	0.55
48:DG:174:LYS:NZ	48:DG:176:LYS:HG2	2.22	0.55
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.22	0.55
1:AA:104:G:O2'	1:AA:105:G:H5'	2.07	0.55
1:AA:285:C:H2'	1:AA:286:C:C6	2.41	0.55
1:AA:533:A:H5"	57:AA:1892:HOH:O	2.06	0.55
5:AF:86:ARG:NH1	17:AR:64:LEU:HD12	2.21	0.55
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.87	0.55
23:BB:83:A:N1	23:BB:101:A:H5'	2.21	0.55
23:BB:264:C:C2'	23:BB:265:A:H5"	2.36	0.55
23:BB:453:A:H4'	23:BB:472:A:N6	2.21	0.55
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.42	0.55
23:BB:2197:U:O2'	23:BB:2198:A:H2'	2.06	0.55
23:BB:2384:U:H5"	23:BB:2386:A:OP1	2.05	0.55
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.71	0.55
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.71	0.55
26:BD:148:GLN:CB	26:BD:152:PRO:HG2	2.36	0.55
27:BK:59:LYS:HD3	27:BK:89:ASN:HA	1.88	0.55
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.07	0.55
29:BE:5:LEU:CD1	29:BE:10:SER:HB2	2.31	0.55
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.06	0.55
44:BQ:26:ALA:HB1	44:BQ:30:VAL:HG11	1.88	0.55
45:BS:10:ALA:HB3	45:BS:101:SER:OG	2.06	0.55
50:BT:17:SER:N	50:BT:21:SER:OG	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:63:GLY:O	51:BZ:67:VAL:HG23	2.07	0.55
1:CA:449:G:H2'	1:CA:450:G:C8	2.41	0.55
1:CA:635:A:H2'	1:CA:636:U:C6	2.42	0.55
1:CA:674:G:H2'	1:CA:675:A:C8	2.39	0.55
1:CA:784:A:H2'	1:CA:785:G:H8	1.72	0.55
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.72	0.55
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.07	0.55
8:CI:55:ASP:HB2	8:CI:59:LYS:HG3	1.88	0.55
8:CI:79:ARG:O	8:CI:83:THR:HG22	2.06	0.55
10:CK:52:ARG:HH11	10:CK:53:GLY:H	1.53	0.55
12:CM:106:ARG:HD3	12:CM:110:GLY:O	2.06	0.55
22:DA:42:C:O4'	47:DF:65:LEU:HB2	2.06	0.55
23:DB:106:C:H2'	23:DB:107:G:H8	1.71	0.55
23:DB:452:G:OP1	29:DE:53:THR:HG23	2.07	0.55
23:DB:598:U:H2'	23:DB:599:A:H8	1.71	0.55
23:DB:693:A:H2'	23:DB:694:U:H6	1.69	0.55
23:DB:1014:A:O2'	23:DB:1015:U:H5'	2.05	0.55
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.07	0.55
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.71	0.55
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.06	0.55
23:DB:2573:C:H3'	57:DB:3629:HOH:O	2.04	0.55
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.42	0.55
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.23	0.55
25:DC:128:THR:HG23	25:DC:190:THR:HG22	1.89	0.55
25:DC:156:SER:HB3	25:DC:159:THR:HG21	1.88	0.55
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.36	0.55
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.70	0.55
38:DM:67:VAL:HG11	38:DM:102:LEU:HD13	1.89	0.55
42:DN:7:GLY:HA2	42:DN:46:ARG:HH11	1.72	0.55
43:DO:94:ARG:O	43:DO:97:PHE:HB2	2.06	0.55
48:DG:34:ARG:HD3	48:DG:34:ARG:N	2.20	0.55
51:DZ:35:SER:HA	51:DZ:49:LEU:O	2.05	0.55
1:AA:314:C:O2'	1:AA:315:A:H5'	2.07	0.55
1:AA:484:G:H4'	1:AA:485:U:C5'	2.37	0.55
1:AA:608:A:H3'	57:AA:1895:HOH:O	2.05	0.55
1:AA:1301:U:O2	1:AA:1301:U:H2'	2.04	0.55
8:AI:22:PRO:HA	8:AI:60:LEU:CB	2.35	0.55
8:AI:79:ARG:HA	8:AI:82:ILE:HD12	1.87	0.55
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.22	0.55
23:BB:9:G:N2	23:BB:10:A:H62	2.04	0.55
23:BB:350:G:H2'	23:BB:351:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:589:U:H2'	23:BB:590:A:C8	2.42	0.55
23:BB:608:A:H2'	23:BB:609:A:C8	2.41	0.55
23:BB:1822:C:O2'	23:BB:1823:G:H5'	2.07	0.55
23:BB:2102:G:N3	23:BB:2102:G:H2'	2.22	0.55
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.41	0.55
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.06	0.55
27:BK:59:LYS:HD2	27:BK:89:ASN:ND2	2.22	0.55
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.88	0.55
28:BP:50:ARG:HD3	28:BP:56:SER:HB3	1.89	0.55
39:BX:8:GLU:HB2	39:BX:13:GLU:OE1	2.06	0.55
40:BH:27:ARG:HG2	40:BH:27:ARG:HH21	1.71	0.55
45:BS:51:LEU:C	45:BS:53:SER:H	2.10	0.55
48:BG:6:ALA:HB3	48:BG:68:ARG:NE	2.22	0.55
49:BR:3:ALA:O	49:BR:4:VAL:HG13	2.06	0.55
1:CA:484:G:H4'	1:CA:485:U:C5'	2.37	0.55
1:CA:505:G:H2'	1:CA:506:G:H8	1.72	0.55
1:CA:545:C:H5"	3:CD:68:GLU:HG2	1.88	0.55
8:CI:50:PRO:O	8:CI:54:VAL:HG22	2.06	0.55
20:CB:16:GLY:CA	20:CB:40:ILE:H	2.19	0.55
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.41	0.55
23:DB:1784:A:H4'	23:DB:1785:A:O5'	2.07	0.55
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.71	0.55
26:DD:9:VAL:O	28:DP:4:ILE:HD11	2.06	0.55
40:DH:80:ILE:HD12	40:DH:80:ILE:O	2.07	0.55
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.06	0.55
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.27	0.55
1:AA:617:G:H4'	15:AP:46:LYS:NZ	2.22	0.55
1:AA:696:A:H2'	1:AA:697:U:H6	1.71	0.55
6:AG:109:LYS:HE2	6:AG:109:LYS:HA	1.89	0.55
13:AN:1:ALA:HB1	13:AN:6:LYS:HE2	1.89	0.55
17:AR:36:GLY:HA3	17:AR:70:THR:HA	1.89	0.55
20:AB:204:ASP:CG	20:AB:205:ALA:H	2.10	0.55
23:BB:244:A:H1'	23:BB:255:A:N6	2.22	0.55
23:BB:590:A:H2'	23:BB:591:U:H6	1.69	0.55
23:BB:665:U:O2'	23:BB:666:A:H5'	2.07	0.55
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.72	0.55
23:BB:1439:A:N7	23:BB:1440:U:N1	2.54	0.55
23:BB:1793:C:H2'	23:BB:1794:A:C8	2.41	0.55
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.71	0.55
25:BC:109:LEU:CD2	25:BC:109:LEU:H	2.20	0.55
25:BC:156:SER:HB3	25:BC:159:THR:HG21	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:31:VAL:HG11	28:BP:38:ARG:HG3	1.87	0.55
30:BY:8:GLN:OE1	30:BY:23:LEU:HD11	2.07	0.55
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.72	0.55
35:BV:6:ALA:O	35:BV:65:VAL:HG12	2.06	0.55
35:BV:53:LYS:HB3	35:BV:55:GLU:OE1	2.06	0.55
47:BF:121:PHE:HB3	47:BF:127:TYR:CZ	2.41	0.55
50:BT:5:GLU:HA	50:BT:8:LEU:CB	2.19	0.55
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.20	0.55
1:CA:104:G:O2'	1:CA:105:G:H5'	2.06	0.55
1:CA:182:A:H5"	1:CA:182:A:N3	2.21	0.55
1:CA:373:A:H1'	1:CA:481:G:N3	2.22	0.55
1:CA:384:G:H2'	1:CA:385:C:C6	2.42	0.55
1:CA:865:A:H2'	1:CA:866:C:C6	2.41	0.55
1:CA:1329:A:O2'	1:CA:1330:U:H5'	2.05	0.55
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.06	0.55
1:CA:1343:G:H4'	8:CI:123:ARG:O	2.06	0.55
2:CC:82:ASP:O	2:CC:86:LEU:HG	2.06	0.55
17:CR:56:ARG:O	17:CR:60:ARG:HG2	2.07	0.55
20:CB:103:TRP:O	20:CB:107:ARG:HG2	2.07	0.55
21:CU:8:ASN:O	21:CU:9:GLU:HB3	2.06	0.55
23:DB:28:A:H61	23:DB:512:G:H1'	1.71	0.55
23:DB:987:C:H2'	23:DB:988:A:O4'	2.07	0.55
23:DB:1109:C:H3'	23:DB:1110:G:C8	2.41	0.55
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.07	0.55
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.07	0.55
23:DB:2660:A:H2'	23:DB:2661:G:C8	2.42	0.55
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.42	0.55
28:DP:50:ARG:HD3	28:DP:56:SER:HB3	1.88	0.55
29:DE:117:ARG:HA	29:DE:185:LYS:HG2	1.88	0.55
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	1.87	0.55
38:DM:78:LEU:O	38:DM:80:VAL:HG12	2.06	0.55
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.88	0.55
43:DO:39:VAL:HB	43:DO:49:VAL:HG22	1.88	0.55
46:DU:53:GLN:HG2	46:DU:53:GLN:O	2.07	0.55
47:DF:71:LYS:O	47:DF:73:VAL:HG23	2.06	0.55
1:AA:473:U:H2'	1:AA:474:G:H8	1.72	0.55
2:AC:78:LYS:HG3	2:AC:81:GLU:HB2	1.89	0.55
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.27	0.55
20:AB:221:ARG:HH11	20:AB:221:ARG:CB	2.18	0.55
23:BB:63:A:H8	23:BB:63:A:OP2	1.90	0.55
23:BB:234:U:H2'	23:BB:235:U:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:365:U:H2'	23:BB:366:C:C6	2.42	0.55
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.42	0.55
23:BB:741:U:H2'	23:BB:742:A:C8	2.41	0.55
23:BB:2540:C:H2'	23:BB:2541:A:H8	1.72	0.55
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.41	0.55
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.06	0.55
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.06	0.55
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.19	0.55
40:BH:78:VAL:HG11	40:BH:103:VAL:HG12	1.88	0.55
41:BJ:45:THR:HG21	41:BJ:50:THR:HG21	1.89	0.55
41:BJ:130:HIS:HD2	41:BJ:132:HIS:HB2	1.71	0.55
43:BO:4:LYS:O	43:BO:8:ILE:HG13	2.07	0.55
44:BQ:16:ILE:O	44:BQ:18:LYS:N	2.40	0.55
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	1.87	0.55
48:BG:89:VAL:CB	48:BG:159:LYS:HA	2.25	0.55
48:BG:152:ARG:NH2	48:BG:162:ARG:HA	2.21	0.55
50:BT:25:GLU:HA	50:BT:29:THR:O	2.06	0.55
51:BZ:35:SER:HA	51:BZ:49:LEU:O	2.06	0.55
1:CA:978:A:H5'	1:CA:1362:A:H62	1.71	0.55
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.42	0.55
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.42	0.55
7:CH:86:LYS:HB3	7:CH:90:GLU:HB3	1.89	0.55
12:CM:2:ARG:HG3	12:CM:6:ILE:N	2.21	0.55
14:CO:77:ARG:O	14:CO:81:LEU:HB2	2.07	0.55
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.22	0.55
20:CB:144:GLU:O	20:CB:148:GLY:HA3	2.07	0.55
22:DA:94:A:OP1	35:DV:19:ARG:HD3	2.05	0.55
23:DB:176:A:O2'	23:DB:177:G:H5'	2.07	0.55
23:DB:575:A:O2'	23:DB:576:U:H5'	2.06	0.55
23:DB:596:U:H2'	23:DB:597:G:C8	2.42	0.55
23:DB:818:G:H3'	23:DB:1187:G:H22	1.71	0.55
23:DB:1849:G:H2'	23:DB:1850:G:H8	1.72	0.55
23:DB:1915:U:H5"	57:DB:3486:HOH:O	2.05	0.55
23:DB:2415:G:C4'	37:DL:66:PHE:HB2	2.37	0.55
23:DB:2676:C:O2'	23:DB:2677:G:H5'	2.07	0.55
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.42	0.55
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.22	0.55
44:DQ:94:LEU:CD1	49:DR:13:ARG:HB2	2.37	0.55
48:DG:84:LYS:CG	48:DG:85:LYS:H	2.16	0.55
48:DG:97:VAL:HA	48:DG:102:ILE:HA	1.88	0.55
48:DG:152:ARG:HH22	48:DG:162:ARG:HA	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:180:GLU:O	53:D6:184:LEU:HG	2.06	0.55
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.42	0.55
3:AD:187:ARG:O	3:AD:191:SER:HB3	2.06	0.55
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.07	0.55
8:AI:24:ASN:HD21	8:AI:26:LYS:HG3	1.72	0.55
11:AL:20:VAL:O	11:AL:20:VAL:HG23	2.07	0.55
12:AM:44:ILE:HA	12:AM:47:LEU:CD1	2.37	0.55
17:AR:38:ILE:HD13	17:AR:38:ILE:H	1.72	0.55
20:AB:25:LYS:HD3	20:AB:193:ASP:OD1	2.06	0.55
22:BA:27:C:N4	22:BA:28:C:N4	2.55	0.55
23:BB:116:C:O2'	23:BB:117:G:H5'	2.06	0.55
23:BB:355:U:H2'	23:BB:356:G:H8	1.71	0.55
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.72	0.55
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.72	0.55
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.72	0.55
23:BB:2801:G:H2'	23:BB:2802:G:H8	1.70	0.55
24:BI:58:ILE:HD12	24:BI:58:ILE:N	2.21	0.55
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.37	0.55
25:BC:149:LYS:HD3	25:BC:152:GLN:HE22	1.71	0.55
35:BV:26:PHE:CE2	35:BV:44:HIS:HA	2.42	0.55
41:BJ:56:VAL:HG12	41:BJ:57:LEU:N	2.22	0.55
42:BN:61:ALA:C	42:BN:63:ARG:H	2.09	0.55
47:BF:168:LEU:O	47:BF:169:LEU:HB2	2.06	0.55
48:BG:84:LYS:HG3	48:BG:132:LEU:N	2.22	0.55
53:B6:118:VAL:HG21	53:B6:183:ILE:HG21	1.88	0.55
1:CA:649:A:H2'	1:CA:650:G:O4'	2.07	0.55
1:CA:696:A:H2'	1:CA:697:U:C6	2.42	0.55
1:CA:721:G:H4'	1:CA:722:G:O4'	2.06	0.55
1:CA:843:U:OP2	1:CA:843:U:H4'	2.05	0.55
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.41	0.55
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.42	0.55
1:CA:1464:U:H2'	1:CA:1465:A:C8	2.42	0.55
7:CH:17:GLN:HE21	7:CH:17:GLN:HA	1.70	0.55
7:CH:87:ARG:N	7:CH:90:GLU:HB3	2.22	0.55
8:CI:27:ILE:HD13	8:CI:34:LEU:HD22	1.89	0.55
22:DA:107:G:O2'	22:DA:108:A:H5'	2.07	0.55
23:DB:63:A:H8	23:DB:63:A:OP2	1.90	0.55
23:DB:141:G:C6	50:DT:2:ILE:HG23	2.42	0.55
23:DB:286:U:H2'	23:DB:287:G:C8	2.42	0.55
23:DB:460:A:H4'	50:DT:72:GLN:HB2	1.88	0.55
23:DB:740:C:O2'	23:DB:741:U:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:969:G:H2'	23:DB:970:U:H6	1.72	0.55
23:DB:1309:G:OP1	36:D2:9:VAL:HG12	2.07	0.55
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.71	0.55
40:DH:90:LEU:H	40:DH:90:LEU:CD1	2.15	0.55
52:DW:33:GLY:O	52:DW:34:SER:HB2	2.06	0.55
53:D6:86:SER:HB3	53:D6:88:LEU:HD13	1.87	0.55
1:AA:28:A:N3	1:AA:296:U:H4'	2.21	0.55
1:AA:476:U:O2'	1:AA:477:C:H5'	2.07	0.55
1:AA:487:A:H2'	1:AA:488:C:O4'	2.07	0.55
1:AA:779:C:H5"	10:AK:123:PRO:HB3	1.89	0.55
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.41	0.55
1:AA:1225:A:H3'	1:AA:1226:C:H6	1.72	0.55
12:AM:43:LYS:HB2	12:AM:46:GLU:HG3	1.87	0.55
12:AM:92:ARG:HA	12:AM:92:ARG:HE	1.72	0.55
12:AM:95:PRO:CD	12:AM:108:ARG:HG2	2.36	0.55
13:AN:29:ILE:HB	13:AN:30:ILE:HD12	1.89	0.55
23:BB:479:A:O2'	23:BB:481:G:H5'	2.07	0.55
23:BB:528:A:N1	23:BB:2042:A:H2'	2.21	0.55
23:BB:937:C:H2'	23:BB:938:G:C8	2.41	0.55
23:BB:1582:C:H3'	23:BB:1583:A:C2	2.41	0.55
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.41	0.55
23:BB:1728:C:H2'	23:BB:1730:C:O2	2.06	0.55
23:BB:1789:A:H2'	23:BB:1790:C:C6	2.41	0.55
23:BB:2577:A:H5"	23:BB:2578:G:H5'	1.88	0.55
25:BC:90:ILE:CD1	25:BC:102:TYR:HB3	2.37	0.55
26:BD:118:PHE:HE2	42:BN:1:MET:SD	2.29	0.55
39:BX:20:ASN:N	39:BX:20:ASN:ND2	2.55	0.55
45:BS:3:THR:HB	45:BS:62:ASP:CB	2.29	0.55
47:BF:84:ILE:HG22	47:BF:84:ILE:O	2.07	0.55
48:BG:97:VAL:HA	48:BG:102:ILE:HA	1.89	0.55
52:BW:48:ALA:HB3	52:BW:81:ILE:O	2.06	0.55
1:CA:157:U:O2'	1:CA:158:G:H5'	2.07	0.55
1:CA:254:G:O2'	1:CA:255:G:H5'	2.07	0.55
1:CA:551:U:H2'	1:CA:552:U:C6	2.42	0.55
1:CA:591:U:H2'	1:CA:592:G:H8	1.71	0.55
1:CA:852:G:H2'	1:CA:853:C:C6	2.42	0.55
1:CA:923:A:H2'	1:CA:924:C:C6	2.42	0.55
1:CA:1507:A:H2'	1:CA:1508:A:C8	2.41	0.55
2:CC:14:VAL:O	2:CC:15:LYS:HD2	2.07	0.55
6:CG:50:ALA:CB	6:CG:57:GLU:HG3	2.37	0.55
10:CK:73:VAL:O	10:CK:76:TYR:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:91:GLY:O	10:CK:95:THR:HG22	2.06	0.55
23:DB:45:G:C5'	23:DB:46:G:H5'	2.33	0.55
23:DB:545:U:H2'	23:DB:546:U:H4'	1.89	0.55
23:DB:972:A:OP2	23:DB:974:G:H5"	2.07	0.55
23:DB:1047:G:H1'	23:DB:1110:G:H22	1.71	0.55
23:DB:1117:C:H2'	23:DB:1118:C:C6	2.42	0.55
23:DB:1117:C:H2'	23:DB:1118:C:H6	1.71	0.55
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.42	0.55
23:DB:1477:A:H2'	23:DB:1478:G:O4'	2.07	0.55
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.37	0.55
34:D3:7:ARG:HG3	34:D3:7:ARG:NH1	2.22	0.55
40:DH:4:ILE:HG22	40:DH:17:ASP:H	1.71	0.55
44:DQ:26:ALA:HB1	44:DQ:30:VAL:HG11	1.88	0.55
51:DZ:51:VAL:HG11	51:DZ:56:MET:HG3	1.87	0.55
1:AA:628:G:O2'	1:AA:629:A:H5'	2.07	0.55
1:AA:649:A:H2'	1:AA:650:G:O4'	2.07	0.55
1:AA:784:A:H2'	1:AA:785:G:H8	1.72	0.55
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.07	0.55
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.07	0.55
3:AD:118:SER:HA	3:AD:130:ASN:HB2	1.89	0.55
22:BA:6:G:H2'	22:BA:7:G:H8	1.70	0.55
23:BB:134:G:H2'	23:BB:135:U:C6	2.42	0.55
23:BB:1937:A:N7	23:BB:1939:U:H2'	2.22	0.55
27:BK:54:LYS:HD2	27:BK:54:LYS:N	2.20	0.55
31:B0:39:ARG:HH11	31:B0:39:ARG:HG3	1.71	0.55
37:BL:131:ALA:C	37:BL:133:ALA:H	2.09	0.55
40:BH:8:LYS:O	40:BH:13:GLY:HA3	2.07	0.55
41:BJ:38:GLY:O	41:BJ:43:GLU:HB2	2.07	0.55
43:BO:26:LEU:HB2	43:BO:39:VAL:HG22	1.88	0.55
44:BQ:91:ARG:HB2	49:BR:11:GLN:NE2	2.21	0.55
46:BU:73:ASN:C	46:BU:75:ALA:H	2.09	0.55
47:BF:101:ARG:HA	47:BF:105:ILE:HD12	1.88	0.55
47:BF:109:ARG:CB	47:BF:135:ILE:HD12	2.35	0.55
47:BF:115:GLY:CA	47:BF:177:ARG:HD2	2.32	0.55
48:BG:74:MET:O	48:BG:78:VAL:HG13	2.06	0.55
48:BG:106:LEU:HD12	48:BG:151:ARG:HD3	1.89	0.55
48:BG:153:PRO:HG3	48:BG:162:ARG:CB	2.37	0.55
1:CA:28:A:N3	1:CA:296:U:H4'	2.22	0.55
1:CA:57:G:H2'	1:CA:58:C:H6	1.69	0.55
1:CA:71:A:O2'	1:CA:72:A:H5"	2.07	0.55
1:CA:634:C:H2'	1:CA:635:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:869:G:H5'	1:CA:872:A:O4'	2.07	0.55
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.06	0.55
9:CJ:66:GLU:HB3	13:CN:98:ALA:HB2	1.88	0.55
13:CN:7:ALA:O	13:CN:11:LYS:HG2	2.06	0.55
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.41	0.55
21:CU:40:PRO:O	21:CU:44:ARG:HB2	2.07	0.55
23:DB:285:G:H2'	23:DB:286:U:O4'	2.07	0.55
23:DB:549:G:H2'	41:DJ:2:LYS:HE3	1.89	0.55
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.42	0.55
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	2.06	0.55
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.72	0.55
23:DB:1822:C:O2'	23:DB:1823:G:H5'	2.06	0.55
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.41	0.55
25:DC:16:VAL:CB	25:DC:203:VAL:HB	2.34	0.55
26:DD:141:ARG:O	26:DD:142:VAL:HG13	2.07	0.55
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.26	0.55
41:DJ:103:ILE:HD12	41:DJ:104:ALA:N	2.22	0.55
42:DN:80:PHE:O	42:DN:85:PRO:HD3	2.07	0.55
47:DF:16:MET:O	47:DF:20:ASN:HA	2.07	0.55
49:DR:68:ARG:NH2	49:DR:90:ARG:HB2	2.21	0.55
1:AA:74:A:O2'	1:AA:75:G:H5'	2.07	0.54
1:AA:551:U:H2'	1:AA:552:U:C6	2.41	0.54
1:AA:818:G:H3'	1:AA:819:A:H5"	1.88	0.54
1:AA:903:G:O2'	1:AA:904:U:H5'	2.07	0.54
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.07	0.54
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.89	0.54
7:AH:49:LYS:O	7:AH:59:GLU:N	2.39	0.54
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.71	0.54
13:AN:7:ALA:O	13:AN:11:LYS:HG2	2.06	0.54
20:AB:164:ASP:CG	20:AB:203:ASP:HB2	2.27	0.54
22:BA:78:A:H2'	22:BA:79:G:O4'	2.06	0.54
22:BA:107:G:O2'	22:BA:108:A:H5'	2.06	0.54
23:BB:136:G:H2'	23:BB:137:U:C6	2.41	0.54
23:BB:962:G:H21	23:BB:2250:G:H22	1.55	0.54
23:BB:1205:A:H4'	23:BB:1206:G:OP2	2.05	0.54
25:BC:123:ILE:HD12	25:BC:191:LEU:CD1	2.36	0.54
26:BD:4:LEU:HD23	26:BD:101:PHE:CE1	2.42	0.54
26:BD:106:LYS:HB3	26:BD:206:ALA:CB	2.38	0.54
35:BV:44:HIS:CE1	35:BV:85:LYS:HB2	2.43	0.54
37:BL:113:ALA:HB3	37:BL:115:GLU:OE1	2.06	0.54
44:BQ:34:ALA:O	44:BQ:37:ALA:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:91:ARG:NH1	49:BR:10:LYS:HB3	2.22	0.54
47:BF:71:LYS:O	47:BF:73:VAL:HG23	2.07	0.54
48:BG:17:LYS:HZ2	48:BG:18:ILE:H	1.53	0.54
48:BG:87:GLN:HE21	48:BG:164:ALA:HA	1.72	0.54
50:BT:38:ALA:HB1	50:BT:43:ILE:HD11	1.89	0.54
1:CA:171:A:H2'	1:CA:172:A:C8	2.42	0.54
1:CA:272:C:H2'	1:CA:273:U:C6	2.41	0.54
1:CA:317:U:H2'	1:CA:318:G:H8	1.72	0.54
1:CA:470:C:H2'	1:CA:471:U:C6	2.42	0.54
1:CA:736:C:H2'	1:CA:737:C:H6	1.67	0.54
1:CA:926:G:N2	1:CA:1505:G:H2'	2.22	0.54
1:CA:1060:U:H2'	1:CA:1061:G:H8	1.72	0.54
1:CA:1296:C:C4'	1:CA:1302:C:H41	2.11	0.54
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.88	0.54
6:CG:50:ALA:HB2	6:CG:57:GLU:HG3	1.88	0.54
11:CL:20:VAL:HG23	11:CL:20:VAL:O	2.07	0.54
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.21	0.54
23:DB:445:C:O2'	23:DB:446:G:H5'	2.06	0.54
23:DB:564:C:O2'	23:DB:565:C:H5'	2.07	0.54
23:DB:572:A:H3'	23:DB:573:U:O4'	2.07	0.54
23:DB:596:U:H2'	23:DB:597:G:H8	1.72	0.54
23:DB:967:U:H2'	23:DB:968:C:C6	2.42	0.54
23:DB:1513:U:H2'	23:DB:1514:G:C8	2.43	0.54
23:DB:1656:C:H2'	23:DB:1657:U:C6	2.42	0.54
23:DB:2041:U:H2'	23:DB:2042:A:H8	1.72	0.54
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	2.07	0.54
23:DB:2529:G:H4'	48:DG:174:LYS:CG	2.36	0.54
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.06	0.54
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.22	0.54
32:D4:5:ALA:HA	32:D4:37:GLN:HE21	1.72	0.54
35:DV:31:TYR:HB3	35:DV:37:PRO:HG3	1.89	0.54
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CG1	2.36	0.54
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HB2	2.09	0.54
44:DQ:65:ASN:HB2	44:DQ:75:TYR:HB2	1.89	0.54
45:DS:13:SER:OG	45:DS:14:ALA:N	2.40	0.54
47:DF:7:TYR:O	47:DF:12:VAL:HG23	2.06	0.54
1:AA:21:G:H2'	1:AA:22:G:H8	1.70	0.54
1:AA:45:G:H2'	1:AA:46:G:C8	2.42	0.54
1:AA:321:A:O2'	1:AA:322:C:H5'	2.07	0.54
1:AA:731:G:O2'	1:AA:732:C:H5'	2.06	0.54
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1343:G:H4'	8:AI:123:ARG:O	2.07	0.54
4:AE:152:VAL:HA	4:AE:155:LYS:HD3	1.89	0.54
6:AG:21:LEU:HG	6:AG:22:LEU:N	2.21	0.54
6:AG:110:ARG:HB2	6:AG:118:ARG:HB3	1.89	0.54
7:AH:17:GLN:HA	7:AH:17:GLN:HE21	1.70	0.54
9:AJ:17:LEU:HD22	9:AJ:96:VAL:CG1	2.36	0.54
9:AJ:36:VAL:HA	9:AJ:76:ILE:HA	1.89	0.54
20:AB:16:GLY:CA	20:AB:40:ILE:H	2.20	0.54
22:BA:49:C:H2'	22:BA:50:A:C8	2.42	0.54
23:BB:98:G:C2'	23:BB:99:U:H5"	2.37	0.54
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.21	0.54
23:BB:794:A:H2'	23:BB:795:C:H6	1.71	0.54
23:BB:1571:A:H2'	23:BB:1572:A:H8	1.71	0.54
23:BB:1915:U:H2'	23:BB:1916:A:C8	2.42	0.54
23:BB:2487:G:H2'	23:BB:2488:G:H8	1.72	0.54
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.22	0.54
25:BC:202:ARG:NH1	25:BC:213:ARG:NE	2.55	0.54
26:BD:51:THR:HG22	26:BD:52:THR:N	2.23	0.54
29:BE:105:LEU:HD21	29:BE:177:PRO:HA	1.87	0.54
30:BY:40:THR:HG22	30:BY:42:ALA:H	1.72	0.54
40:BH:105:ALA:HB3	40:BH:108:VAL:CG2	2.36	0.54
43:BO:88:LYS:HG2	43:BO:89:ASP:H	1.72	0.54
46:BU:53:GLN:O	46:BU:53:GLN:HG2	2.07	0.54
47:BF:131:VAL:C	47:BF:133:GLU:H	2.10	0.54
48:BG:34:ARG:HH11	48:BG:34:ARG:HG2	1.71	0.54
48:BG:38:ASP:CG	48:BG:39:ALA:H	2.10	0.54
1:CA:17:U:O2'	1:CA:18:C:H5'	2.06	0.54
1:CA:404:G:O2'	1:CA:405:U:H5'	2.07	0.54
1:CA:425:G:H2'	1:CA:426:U:C6	2.42	0.54
1:CA:617:G:H4'	15:CP:46:LYS:NZ	2.22	0.54
1:CA:1451:U:H5"	1:CA:1452:C:OP2	2.08	0.54
1:CA:1484:C:O2'	1:CA:1485:U:H5'	2.07	0.54
5:CF:6:ILE:O	5:CF:6:ILE:HG13	2.07	0.54
7:CH:100:ILE:HD11	7:CH:128:VAL:HB	1.90	0.54
19:CT:48:LYS:O	19:CT:52:GLU:HB3	2.07	0.54
23:DB:10:A:H61	23:DB:2895:G:H1'	1.72	0.54
23:DB:139:U:H3	50:DT:49:LYS:CE	2.20	0.54
23:DB:813:U:H2'	23:DB:814:C:C6	2.42	0.54
23:DB:1276:A:O2'	23:DB:1277:G:H5'	2.06	0.54
23:DB:1300:G:H4'	23:DB:1301:A:O5'	2.05	0.54
23:DB:2095:A:H3'	23:DB:2096:C:H6	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2290:G:H2'	23:DB:2291:U:C6	2.42	0.54
23:DB:2494:G:H4'	38:DM:79:ALA:HB2	1.89	0.54
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.71	0.54
26:DD:8:LYS:CD	26:DD:197:THR:H	2.20	0.54
26:DD:122:VAL:HA	26:DD:127:PHE:H	1.72	0.54
27:DK:88:ASN:ND2	27:DK:88:ASN:C	2.61	0.54
28:DP:3:ILE:HG23	28:DP:4:ILE:HG13	1.88	0.54
48:DG:74:MET:O	48:DG:78:VAL:HG13	2.07	0.54
53:D6:76:LEU:HD21	53:D6:97:ASP:O	2.07	0.54
53:D6:93:SER:HB3	53:D6:100:TYR:O	2.07	0.54
1:AA:213:G:H3'	1:AA:214:C:C6	2.42	0.54
1:AA:975:A:H4'	1:AA:976:G:OP2	2.07	0.54
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.72	0.54
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.08	0.54
6:AG:57:GLU:CD	6:AG:57:GLU:H	2.10	0.54
9:AJ:14:ASP:OD1	9:AJ:17:LEU:HB2	2.07	0.54
17:AR:61:ALA:HB3	17:AR:67:LEU:HD12	1.89	0.54
23:BB:184:C:H2'	23:BB:185:G:C8	2.43	0.54
23:BB:322:A:H5'	23:BB:340:A:H1'	1.89	0.54
23:BB:674:G:O3'	29:BE:60:TRP:CZ2	2.61	0.54
23:BB:714:U:H1'	23:BB:717:C:H5	1.72	0.54
23:BB:831:G:H2'	23:BB:832:U:O4'	2.08	0.54
23:BB:904:G:H2'	23:BB:905:A:C8	2.42	0.54
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.42	0.54
23:BB:1299:G:H4'	23:BB:1301:A:H1'	1.88	0.54
23:BB:2073:C:C5'	25:BC:227:VAL:HG12	2.37	0.54
23:BB:2814:A:H4'	31:B0:25:THR:HG21	1.88	0.54
25:BC:16:VAL:H	25:BC:203:VAL:HG12	1.73	0.54
25:BC:18:VAL:HG11	25:BC:202:ARG:HD2	1.90	0.54
27:BK:25:LEU:HD13	27:BK:38:ILE:HG22	1.90	0.54
28:BP:112:ARG:HH11	28:BP:112:ARG:HB2	1.72	0.54
40:BH:124:THR:O	40:BH:125:THR:CB	2.54	0.54
43:BO:105:ALA:C	43:BO:107:ALA:H	2.11	0.54
44:BQ:34:ALA:O	44:BQ:38:VAL:HG23	2.07	0.54
45:BS:52:GLU:HA	45:BS:55:ILE:CG2	2.36	0.54
47:BF:1:ALA:O	47:BF:4:HIS:HB3	2.07	0.54
47:BF:115:GLY:CA	47:BF:177:ARG:HH11	2.21	0.54
53:B6:181:GLN:O	53:B6:185:GLY:HA3	2.08	0.54
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.07	0.54
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.23	0.54
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.48	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:66:THR:O	15:CP:67:ILE:HB	2.07	0.54
21:CU:42:THR:O	21:CU:46:ARG:HG3	2.08	0.54
23:DB:955:U:H5"	38:DM:86:LYS:HD2	1.89	0.54
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.43	0.54
23:DB:1341:G:H3'	23:DB:1397:U:O2	2.06	0.54
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.07	0.54
23:DB:1563:U:H2'	23:DB:1564:C:C6	2.42	0.54
23:DB:2384:U:H5"	23:DB:2386:A:OP1	2.08	0.54
28:DP:88:ARG:HG3	28:DP:112:ARG:HB3	1.88	0.54
33:D1:34:GLU:HA	33:D1:48:TYR:O	2.07	0.54
39:DX:18:LEU:HA	39:DX:21:LEU:HD12	1.89	0.54
40:DH:86:ASP:HB2	40:DH:89:LYS:HD3	1.89	0.54
43:DO:4:LYS:O	43:DO:8:ILE:HG13	2.07	0.54
44:DQ:83:LYS:NZ	44:DQ:87:VAL:HA	2.23	0.54
45:DS:8:ARG:HB3	45:DS:102:HIS:CE1	2.42	0.54
45:DS:30:SER:O	45:DS:33:LEU:HB2	2.07	0.54
49:DR:39:LEU:CB	49:DR:49:ILE:HG12	2.37	0.54
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.18	0.54
1:AA:730:G:O2'	1:AA:766:A:H5'	2.07	0.54
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.42	0.54
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.07	0.54
1:AA:1451:U:H5"	1:AA:1452:C:OP2	2.07	0.54
3:AD:185:PRO:HB2	3:AD:190:LEU:HG	1.89	0.54
8:AI:94:ARG:HH11	8:AI:94:ARG:CB	2.17	0.54
11:AL:64:SER:OG	11:AL:96:THR:HG23	2.06	0.54
18:AS:51:HIS:HA	18:AS:55:GLN:O	2.07	0.54
23:BB:443:A:OP1	29:BE:40:ARG:HD2	2.07	0.54
23:BB:575:A:O2'	23:BB:576:U:H5'	2.07	0.54
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.43	0.54
23:BB:1459:G:H5"	23:BB:1460:U:OP1	2.06	0.54
23:BB:1849:G:H2'	23:BB:1850:G:H8	1.72	0.54
23:BB:1885:A:H3'	23:BB:1886:U:C6	2.42	0.54
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.23	0.54
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.71	0.54
36:B2:21:ARG:HG2	36:B2:31:LEU:CG	2.38	0.54
37:BL:23:ILE:HG13	49:BR:82:HIS:CE1	2.42	0.54
43:BO:5:SER:HA	43:BO:8:ILE:CD1	2.35	0.54
47:BF:162:ASP:O	47:BF:166:ARG:HD2	2.06	0.54
1:CA:950:U:H2'	1:CA:951:G:H8	1.73	0.54
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.42	0.54
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	1.90	0.54
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.90	0.54
12:CM:89:ARG:HB2	12:CM:96:VAL:HG22	1.88	0.54
13:CN:1:ALA:HB1	13:CN:6:LYS:HE2	1.89	0.54
20:CB:204:ASP:CG	20:CB:205:ALA:H	2.10	0.54
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.21	0.54
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	2.08	0.54
23:DB:1104:C:H2'	23:DB:1105:U:C6	2.43	0.54
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.71	0.54
23:DB:1508:A:H5'	23:DB:1509:A:C6	2.43	0.54
23:DB:1637:A:H2'	23:DB:1638:C:C6	2.42	0.54
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.55	0.54
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.07	0.54
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.37	0.54
25:DC:175:LEU:HD11	25:DC:181:ARG:HG3	1.90	0.54
26:DD:9:VAL:HA	26:DD:197:THR:HG23	1.89	0.54
26:DD:148:GLN:CB	26:DD:152:PRO:HG2	2.37	0.54
40:DH:88:GLY:HA3	40:DH:125:THR:OG1	2.07	0.54
48:DG:132:LEU:O	48:DG:132:LEU:HD12	2.08	0.54
48:DG:145:ALA:HA	48:DG:148:ARG:CG	2.38	0.54
49:DR:91:GLN:HG3	49:DR:92:TRP:H	1.72	0.54
50:DT:80:TRP:CZ3	50:DT:82:LYS:HG2	2.42	0.54
53:D6:59:THR:HG22	53:D6:67:VAL:HG23	1.89	0.54
53:D6:98:ALA:O	53:D6:99:LEU:HD23	2.08	0.54
53:D6:109:GLU:O	53:D6:112:LYS:HB2	2.07	0.54
1:AA:54:C:H2'	1:AA:352:C:H41	1.72	0.54
1:AA:373:A:H1'	1:AA:481:G:N3	2.23	0.54
1:AA:477:C:H2'	1:AA:478:A:C8	2.43	0.54
1:AA:692:U:H2'	1:AA:694:A:OP2	2.08	0.54
1:AA:1073:U:H4'	20:AB:104:LYS:HE3	1.89	0.54
3:AD:89:LEU:HD23	3:AD:199:ILE:HD11	1.90	0.54
5:AF:43:GLY:HA2	5:AF:58:HIS:NE2	2.21	0.54
7:AH:87:ARG:N	7:AH:90:GLU:HB3	2.23	0.54
12:AM:43:LYS:O	12:AM:46:GLU:HG3	2.08	0.54
15:AP:54:LEU:HD22	15:AP:80:LYS:HE3	1.89	0.54
20:AB:40:ILE:HG21	20:AB:200:PRO:O	2.07	0.54
22:BA:43:C:H2'	22:BA:44:G:H5"	1.90	0.54
23:BB:806:C:O2'	23:BB:807:U:H5'	2.08	0.54
23:BB:813:U:H2'	23:BB:814:C:C6	2.43	0.54
23:BB:861:A:H2'	23:BB:862:G:O4'	2.07	0.54
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1276:A:O2'	23:BB:1277:G:H5'	2.07	0.54
23:BB:2491:U:H5"	23:BB:2570:G:H5"	1.90	0.54
23:BB:2543:G:H2'	23:BB:2544:G:O4'	2.07	0.54
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.43	0.54
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.42	0.54
25:BC:261:ARG:O	25:BC:261:ARG:HG2	2.08	0.54
26:BD:111:GLY:H	26:BD:194:PRO:HG3	1.72	0.54
26:BD:174:SER:O	26:BD:175:LEU:HB2	2.07	0.54
28:BP:3:ILE:HG23	28:BP:4:ILE:HG13	1.88	0.54
28:BP:30:TRP:HD1	28:BP:39:LEU:HG	1.73	0.54
29:BE:154:ASP:OD1	29:BE:156:ASN:HB3	2.07	0.54
33:B1:47:ILE:H	33:B1:47:ILE:HD12	1.73	0.54
42:BN:34:ILE:O	42:BN:112:TYR:HA	2.08	0.54
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CG1	2.38	0.54
45:BS:30:SER:O	45:BS:33:LEU:HB2	2.07	0.54
47:BF:7:TYR:HA	47:BF:11:VAL:CG2	2.38	0.54
48:BG:26:LYS:HA	48:BG:32:LEU:HA	1.90	0.54
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.43	0.54
50:BT:44:LYS:O	50:BT:48:GLN:HG2	2.08	0.54
50:BT:47:VAL:HG13	50:BT:51:PHE:HD1	1.72	0.54
51:BZ:51:VAL:HG11	51:BZ:56:MET:HG3	1.90	0.54
1:CA:1317:C:OP1	13:CN:56:PRO:HD2	2.06	0.54
3:CD:87:GLU:OE1	3:CD:91:ALA:HB2	2.08	0.54
10:CK:83:VAL:CB	10:CK:109:ILE:HG23	2.37	0.54
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD13	2.43	0.54
20:CB:172:ILE:HG22	20:CB:176:ASN:ND2	2.23	0.54
21:CU:3:ILE:HD11	21:CU:23:GLU:HB2	1.87	0.54
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.43	0.54
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.42	0.54
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.43	0.54
23:DB:2543:G:H2'	23:DB:2544:G:O4'	2.07	0.54
25:DC:16:VAL:N	25:DC:203:VAL:HG12	2.23	0.54
27:DK:8:LEU:HD12	27:DK:8:LEU:H	1.73	0.54
30:DY:7:THR:HG23	30:DY:34:THR:OG1	2.08	0.54
32:D4:8:LYS:O	32:D4:25:VAL:HG21	2.08	0.54
37:DL:113:ALA:HB3	37:DL:115:GLU:OE1	2.07	0.54
41:DJ:72:LYS:HB2	41:DJ:89:PHE:HB2	1.89	0.54
48:DG:148:ARG:HB2	48:DG:152:ARG:HH21	1.73	0.54
52:DW:32:ALA:C	52:DW:34:SER:H	2.10	0.54
1:AA:551:U:H2'	1:AA:552:U:H6	1.72	0.54
1:AA:721:G:H4'	1:AA:722:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:979:C:H1'	1:AA:1317:C:H41	1.72	0.54
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.73	0.54
4:AE:22:LYS:HB3	4:AE:29:ILE:HB	1.90	0.54
7:AH:51:GLU:HG2	7:AH:52:GLY:N	2.23	0.54
10:AK:92:ARG:NH2	21:AU:24:LYS:HG2	2.22	0.54
15:AP:75:ILE:HG22	15:AP:80:LYS:HD2	1.89	0.54
20:AB:60:ALA:HB1	20:AB:220:VAL:HG13	1.89	0.54
23:BB:355:U:H2'	23:BB:356:G:C8	2.43	0.54
23:BB:394:C:H2'	23:BB:395:U:O4'	2.08	0.54
23:BB:877:A:H2	23:BB:900:A:N7	2.05	0.54
23:BB:1583:A:H4'	23:BB:1585:C:C4	2.43	0.54
23:BB:2210:U:N3	23:BB:2212:A:N7	2.54	0.54
23:BB:2419:U:H2'	23:BB:2420:C:C6	2.43	0.54
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.07	0.54
25:BC:143:VAL:HG12	25:BC:144:GLU:H	1.71	0.54
27:BK:88:ASN:HD22	27:BK:89:ASN:N	2.05	0.54
29:BE:28:VAL:O	29:BE:32:VAL:HG13	2.07	0.54
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.20	0.54
40:BH:81:ALA:CB	40:BH:147:VAL:HG23	2.37	0.54
40:BH:121:VAL:HG21	40:BH:128:HIS:NE2	2.23	0.54
44:BQ:86:SER:HB2	49:BR:50:GLY:O	2.08	0.54
47:BF:103:ILE:HD11	47:BF:174:PHE:CA	2.36	0.54
53:B6:58:VAL:HG12	53:B6:59:THR:H	1.73	0.54
1:CA:254:G:H4'	16:CQ:19:SER:OG	2.08	0.54
1:CA:462:G:H2'	1:CA:463:U:C6	2.43	0.54
1:CA:1013:G:H2'	1:CA:1015:G:OP2	2.07	0.54
11:CL:33:CYS:HB2	11:CL:77:SER:O	2.07	0.54
11:CL:38:THR:OG1	53:D6:84:ARG:HG2	2.07	0.54
19:CT:50:PHE:O	19:CT:53:MET:HG3	2.08	0.54
20:CB:15:PHE:HA	20:CB:42:LEU:HD21	1.90	0.54
20:CB:95:TRP:CH2	20:CB:100:LEU:HB2	2.41	0.54
22:DA:10:G:H2'	22:DA:11:C:O4'	2.08	0.54
23:DB:528:A:N1	23:DB:2042:A:H2'	2.22	0.54
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.38	0.54
23:DB:904:G:H2'	23:DB:905:A:C8	2.43	0.54
23:DB:1249:U:H4'	44:DQ:3:VAL:HG11	1.90	0.54
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.42	0.54
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.43	0.54
23:DB:1821:A:H2'	23:DB:1822:C:H6	1.69	0.54
23:DB:2355:G:H4'	52:DW:20:LEU:CD1	2.37	0.54
23:DB:2570:G:H2'	23:DB:2571:U:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.71	0.54
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.07	0.54
29:DE:18:THR:HA	29:DE:106:LYS:HD3	1.90	0.54
29:DE:134:LEU:HD21	29:DE:161:ALA:HB2	1.89	0.54
29:DE:176:ASP:OD1	29:DE:178:VAL:HG12	2.07	0.54
39:DX:21:LEU:HA	39:DX:25:GLN:HB3	1.89	0.54
40:DH:27:ARG:H	40:DH:31:VAL:HG21	1.71	0.54
47:DF:133:GLU:HA	47:DF:150:GLY:HA2	1.90	0.54
48:DG:26:LYS:HA	48:DG:32:LEU:HA	1.90	0.54
49:DR:39:LEU:HB2	49:DR:49:ILE:HG12	1.88	0.54
50:DT:18:GLU:C	50:DT:20:ALA:H	2.11	0.54
1:AA:284:C:H2'	1:AA:285:C:H6	1.72	0.54
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.73	0.54
1:AA:1533:C:O2'	1:AA:1534:A:H5"	2.07	0.54
8:AI:50:PRO:O	8:AI:54:VAL:HG22	2.07	0.54
12:AM:58:GLU:O	12:AM:61:LYS:HG2	2.08	0.54
12:AM:79:LEU:CD2	12:AM:86:ARG:HH21	2.21	0.54
23:BB:37:C:O2'	23:BB:38:A:H5'	2.08	0.54
23:BB:441:U:H2'	23:BB:442:G:H8	1.73	0.54
23:BB:675:A:H4'	29:BE:60:TRP:HZ2	1.71	0.54
23:BB:996:A:H4'	44:BQ:91:ARG:HH11	1.71	0.54
26:BD:9:VAL:O	28:BP:4:ILE:HD11	2.08	0.54
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.23	0.54
37:BL:47:ARG:HG3	37:BL:48:ARG:N	2.22	0.54
42:BN:80:PHE:O	42:BN:85:PRO:HD3	2.08	0.54
43:BO:88:LYS:HG2	43:BO:89:ASP:N	2.23	0.54
47:BF:7:TYR:O	47:BF:12:VAL:HG23	2.08	0.54
53:B6:58:VAL:HG22	53:B6:68:VAL:HA	1.89	0.54
53:B6:68:VAL:HG21	53:B6:99:LEU:HD12	1.90	0.54
1:CA:98:A:H2'	1:CA:99:C:C6	2.43	0.54
1:CA:730:G:O2'	1:CA:766:A:H5'	2.07	0.54
1:CA:1058:G:OP1	2:CC:198:LYS:HE3	2.07	0.54
1:CA:1254:A:O4'	1:CA:1356:G:H5"	2.08	0.54
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.73	0.54
8:CI:20:ILE:HG23	8:CI:60:LEU:HD11	1.88	0.54
19:CT:68:LYS:HE2	19:CT:68:LYS:HA	1.90	0.54
23:DB:189:G:H2'	23:DB:205:G:H22	1.73	0.54
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.07	0.54
23:DB:2369:A:H2'	23:DB:2370:G:H8	1.71	0.54
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.72	0.54
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:65:ASP:CG	25:DC:65:ASP:O	2.46	0.54
25:DC:71:ASP:OD2	25:DC:118:GLY:HA2	2.08	0.54
39:DX:20:ASN:N	39:DX:20:ASN:ND2	2.54	0.54
41:DJ:4:PHE:CG	41:DJ:5:THR:N	2.75	0.54
43:DO:35:ILE:HG21	43:DO:71:ALA:CB	2.38	0.54
45:DS:66:ILE:HD13	45:DS:66:ILE:N	2.20	0.54
50:DT:44:LYS:O	50:DT:48:GLN:HG2	2.08	0.54
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.23	0.54
51:DZ:69:ALA:HA	51:DZ:72:ARG:NH1	2.23	0.54
1:AA:55:A:OP2	1:AA:352:C:N4	2.40	0.54
1:AA:113:G:O4'	1:AA:354:G:H4'	2.07	0.54
1:AA:337:G:H2'	1:AA:338:A:H8	1.71	0.54
1:AA:706:A:C4'	10:AK:30:ILE:HD11	2.38	0.54
1:AA:1239:A:N6	1:AA:1299:A:H62	2.05	0.54
2:AC:13:ILE:N	2:AC:13:ILE:HD13	2.23	0.54
14:AO:81:LEU:HD23	14:AO:85:LEU:HD13	1.89	0.54
18:AS:39:ILE:HG12	18:AS:70:LEU:HD12	1.89	0.54
19:AT:14:GLU:OE2	19:AT:18:LYS:HE2	2.08	0.54
19:AT:19:HIS:O	19:AT:23:ARG:HG2	2.08	0.54
22:BA:16:G:O2'	22:BA:17:C:H5'	2.07	0.54
22:BA:35:C:H2'	22:BA:36:C:C5'	2.37	0.54
23:BB:423:A:H5"	23:BB:424:G:H5'	1.89	0.54
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.41	0.54
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.42	0.54
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.07	0.54
23:BB:1688:U:O2	23:BB:1700:A:H5'	2.08	0.54
23:BB:1796:U:O2'	23:BB:1797:G:H5'	2.07	0.54
23:BB:2196:C:H2'	23:BB:2197:U:C6	2.43	0.54
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.71	0.54
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.72	0.54
23:BB:2635:A:H4'	26:BD:79:LEU:HB2	1.90	0.54
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.24	0.54
27:BK:87:LEU:HD12	27:BK:92:GLU:HA	1.89	0.54
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.22	0.54
36:B2:10:LEU:HD11	36:B2:14:ARG:CZ	2.38	0.54
40:BH:1:MET:HB3	40:BH:21:VAL:O	2.08	0.54
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.43	0.54
41:BJ:99:ARG:O	41:BJ:103:ILE:HG13	2.08	0.54
42:BN:7:GLY:HA2	42:BN:46:ARG:HH11	1.73	0.54
47:BF:134:GLN:O	47:BF:136:ILE:N	2.40	0.54
48:BG:132:LEU:O	48:BG:132:LEU:HD12	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:75:ASN:O	52:BW:76:ARG:HB2	2.08	0.54
1:CA:253:A:H2'	1:CA:254:G:C8	2.42	0.54
1:CA:477:C:H2'	1:CA:478:A:C8	2.43	0.54
1:CA:677:U:H1'	10:CK:120:CYS:SG	2.48	0.54
1:CA:734:G:O2'	17:CR:59:LYS:HD3	2.08	0.54
2:CC:181:ILE:HD12	2:CC:181:ILE:N	2.23	0.54
6:CG:21:LEU:HG	6:CG:22:LEU:N	2.21	0.54
8:CI:23:GLY:N	8:CI:60:LEU:HA	2.20	0.54
10:CK:88:PRO:HD3	21:CU:28:LEU:CD1	2.37	0.54
11:CL:26:CYS:SG	11:CL:29:LYS:HE2	2.48	0.54
17:CR:31:TYR:CG	17:CR:54:LEU:HD11	2.43	0.54
20:CB:14:HIS:HD2	20:CB:202:ASN:H	1.53	0.54
23:DB:831:G:H2'	23:DB:832:U:O4'	2.07	0.54
23:DB:1119:U:O2'	23:DB:1120:G:H5'	2.08	0.54
23:DB:1339:G:N2	23:DB:1603:A:H1'	2.22	0.54
23:DB:1439:A:N7	23:DB:1440:U:N1	2.55	0.54
23:DB:2822:G:H2'	23:DB:2823:A:H5"	1.90	0.54
25:DC:124:LYS:HG3	25:DC:125:PRO:HD2	1.89	0.54
30:DY:2:LYS:HE3	30:DY:58:GLU:HB3	1.89	0.54
40:DH:87:GLU:HB2	40:DH:89:LYS:NZ	2.23	0.54
40:DH:113:SER:HB2	40:DH:132:PHE:CZ	2.43	0.54
45:DS:31:GLN:C	45:DS:33:LEU:H	2.09	0.54
47:DF:174:PHE:HB3	47:DF:176:PHE:CD1	2.43	0.54
52:DW:49:ASN:HA	52:DW:61:LYS:HB2	1.90	0.54
53:D6:33:ALA:CB	53:D6:63:PRO:HA	2.38	0.54
1:AA:254:G:H4'	16:AQ:19:SER:OG	2.08	0.54
1:AA:272:C:H2'	1:AA:273:U:C6	2.42	0.54
1:AA:332:G:O2'	1:AA:333:U:H5'	2.08	0.54
1:AA:429:U:H1'	1:AA:430:A:H5"	1.90	0.54
1:AA:978:A:H5'	1:AA:1362:A:H61	1.73	0.54
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.73	0.54
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.08	0.54
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.08	0.54
11:AL:86:VAL:HB	11:AL:89:LEU:HB2	1.88	0.54
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.38	0.54
15:AP:6:LEU:HD23	15:AP:17:TYR:HB2	1.90	0.54
17:AR:19:GLU:HG3	17:AR:54:LEU:HD12	1.90	0.54
19:AT:53:MET:O	19:AT:57:VAL:HG22	2.08	0.54
20:AB:187:ASP:H	20:AB:190:SER:HB2	1.73	0.54
23:BB:8:C:O2'	23:BB:9:G:H5'	2.08	0.54
23:BB:125:A:H3'	23:BB:126:A:H5"	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:564:C:O2'	23:BB:565:C:H5'	2.08	0.54
23:BB:657:U:H2'	23:BB:658:U:C6	2.43	0.54
23:BB:871:U:H2'	23:BB:872:U:H6	1.73	0.54
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.73	0.54
23:BB:1566:A:H5'	25:BC:213:ARG:NH2	2.23	0.54
23:BB:1897:G:O2'	23:BB:1898:U:H5'	2.08	0.54
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.42	0.54
23:BB:2822:G:H2'	23:BB:2823:A:H5"	1.90	0.54
25:BC:65:ASP:O	25:BC:65:ASP:CG	2.46	0.54
25:BC:175:LEU:HD11	25:BC:181:ARG:HG3	1.90	0.54
26:BD:105:LYS:N	26:BD:106:LYS:HZ3	2.03	0.54
27:BK:20:MET:C	27:BK:41:ILE:HD12	2.28	0.54
27:BK:58:LEU:CD1	27:BK:86:LEU:HB3	2.38	0.54
34:B3:50:SER:C	34:B3:52:GLY:H	2.12	0.54
38:BM:4:PRO:HG3	38:BM:68:PHE:HE2	1.73	0.54
42:BN:72:ASP:OD1	42:BN:75:ILE:HG23	2.07	0.54
44:BQ:57:ARG:NH1	44:BQ:57:ARG:HG2	2.22	0.54
48:BG:93:TYR:C	48:BG:94:ARG:HG3	2.27	0.54
53:B6:72:ASP:HB3	53:B6:75:ALA:HB2	1.88	0.54
1:CA:168:G:O2'	1:CA:169:C:H5'	2.08	0.54
1:CA:239:U:H6	1:CA:239:U:C5'	2.21	0.54
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.07	0.54
1:CA:1239:A:N6	1:CA:1299:A:H62	2.06	0.54
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.43	0.54
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.08	0.54
10:CK:23:HIS:O	10:CK:29:THR:HA	2.08	0.54
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	1.90	0.54
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.73	0.54
20:CB:65:LYS:HB2	20:CB:158:ASP:H	1.73	0.54
20:CB:119:GLN:NE2	20:CB:124:THR:HG23	2.22	0.54
20:CB:129:THR:C	20:CB:131:LYS:H	2.10	0.54
23:DB:64:A:H2'	23:DB:65:U:H6	1.68	0.54
23:DB:429:A:H2'	23:DB:430:A:C8	2.43	0.54
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.07	0.54
23:DB:1301:A:O2'	23:DB:1302:A:H2'	2.08	0.54
23:DB:1499:C:H2'	23:DB:1500:G:H8	1.73	0.54
23:DB:1582:C:H3'	23:DB:1583:A:C2	2.42	0.54
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.42	0.54
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.72	0.54
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.07	0.54
27:DK:105:ARG:HD2	27:DK:122:VAL:HG11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.08	0.54
35:DV:72:VAL:HB	35:DV:92:VAL:O	2.08	0.54
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.21	0.54
43:DO:58:ILE:HG22	43:DO:62:LEU:CD2	2.36	0.54
44:DQ:77:LYS:HA	44:DQ:80:ASN:HB3	1.90	0.54
47:DF:115:GLY:CA	47:DF:177:ARG:HH11	2.20	0.54
48:DG:34:ARG:HH11	48:DG:34:ARG:HG2	1.72	0.54
48:DG:84:LYS:HG3	48:DG:132:LEU:N	2.23	0.54
1:AA:677:U:H2'	1:AA:678:U:C6	2.43	0.54
1:AA:923:A:H2'	1:AA:924:C:C6	2.43	0.54
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.08	0.54
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.43	0.54
2:AC:13:ILE:HD13	2:AC:13:ILE:H	1.73	0.54
4:AE:45:VAL:O	4:AE:71:ILE:HG22	2.08	0.54
5:AF:6:ILE:O	5:AF:6:ILE:HG13	2.07	0.54
5:AF:47:LEU:HD21	5:AF:57:ALA:CB	2.38	0.54
12:AM:82:LEU:HD22	18:AS:73:PHE:HE2	1.72	0.54
20:AB:172:ILE:HG22	20:AB:176:ASN:ND2	2.23	0.54
23:BB:445:C:O2'	23:BB:446:G:H5'	2.08	0.54
23:BB:1386:C:H2'	23:BB:1387:A:H8	1.71	0.54
23:BB:1965:C:H5"	23:BB:1966:A:H2'	1.88	0.54
23:BB:2243:U:H2'	23:BB:2244:U:H6	1.73	0.54
23:BB:2322:A:N6	23:BB:2333:A:N6	2.55	0.54
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.43	0.54
23:BB:2678:C:H2'	23:BB:2679:A:C8	2.42	0.54
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.72	0.54
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.43	0.54
40:BH:80:ILE:HD12	40:BH:144:VAL:CG2	2.34	0.54
43:BO:35:ILE:HG22	43:BO:53:THR:HG23	1.89	0.54
44:BQ:91:ARG:HE	49:BR:11:GLN:HB2	1.73	0.54
47:BF:141:ASP:CB	47:BF:144:LYS:HB2	2.38	0.54
49:BR:39:LEU:HD22	49:BR:53:PHE:HD1	1.73	0.54
53:B6:113:ASP:HA	53:B6:116:ARG:NE	2.22	0.54
1:CA:87:C:C2'	1:CA:88:U:H5"	2.38	0.54
1:CA:487:A:H2'	1:CA:488:C:O4'	2.08	0.54
1:CA:820:U:H4'	1:CA:821:G:OP2	2.08	0.54
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.89	0.54
12:CM:64:VAL:HA	12:CM:68:LEU:CD1	2.38	0.54
13:CN:41:TRP:O	13:CN:44:VAL:HG12	2.08	0.54
14:CO:7:ALA:O	14:CO:11:ILE:HG22	2.08	0.54
20:CB:69:VAL:HB	20:CB:162:VAL:CB	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:423:A:H5"	23:DB:424:G:H5'	1.89	0.54
23:DB:665:U:O2'	23:DB:666:A:H5'	2.08	0.54
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.43	0.54
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.43	0.54
23:DB:1825:U:H2'	23:DB:1826:G:H8	1.73	0.54
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.72	0.54
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.08	0.54
26:DD:45:TYR:HD2	26:DD:83:ARG:HD3	1.71	0.54
30:DY:40:THR:HG22	30:DY:42:ALA:H	1.73	0.54
40:DH:127:GLU:CD	40:DH:127:GLU:H	2.12	0.54
42:DN:83:LEU:CA	42:DN:86:ARG:HB2	2.31	0.54
43:DO:79:ALA:HA	43:DO:115:LEU:HD23	1.90	0.54
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.22	0.54
48:DG:93:TYR:C	48:DG:94:ARG:HG3	2.28	0.54
51:DZ:41:GLU:O	51:DZ:44:LYS:HD2	2.07	0.54
1:AA:86:G:O2'	1:AA:88:U:H5	1.91	0.53
1:AA:328:C:H4'	1:AA:329:A:H5"	1.90	0.53
1:AA:389:A:H2'	1:AA:389:A:N3	2.23	0.53
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.42	0.53
1:AA:1320:C:H41	18:AS:36:ARG:HB3	1.74	0.53
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.07	0.53
6:AG:72:VAL:HG12	6:AG:89:GLU:HG3	1.89	0.53
13:AN:41:TRP:O	13:AN:44:VAL:HG12	2.07	0.53
20:AB:15:PHE:HA	20:AB:42:LEU:HD11	1.89	0.53
20:AB:210:THR:HA	20:AB:213:LEU:HB2	1.89	0.53
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.71	0.53
23:BB:1820:U:OP1	25:BC:176:ARG:HD2	2.08	0.53
23:BB:2747:G:O6	23:BB:2755:C:H5"	2.07	0.53
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.38	0.53
26:BD:33:ARG:NE	26:BD:74:GLU:HB3	2.23	0.53
27:BK:35:VAL:HG12	27:BK:69:VAL:CG2	2.37	0.53
29:BE:117:ARG:HA	29:BE:185:LYS:HG2	1.90	0.53
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.44	0.53
37:BL:95:LEU:HB2	37:BL:101:ILE:HG13	1.88	0.53
38:BM:18:ARG:C	38:BM:38:ARG:HH22	2.11	0.53
40:BH:133:GLN:HA	40:BH:139:PHE:HB3	1.90	0.53
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.22	0.53
42:BN:51:LEU:HD11	42:BN:69:ARG:HG3	1.90	0.53
45:BS:90:LYS:HD2	45:BS:92:ARG:NH1	2.23	0.53
47:BF:43:ILE:HG13	47:BF:44:ALA:N	2.23	0.53
48:BG:9:VAL:H	48:BG:48:THR:HB	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:50:LEU:HD22	50:BT:50:LEU:N	2.23	0.53
53:B6:42:LYS:HA	53:B6:51:PRO:CA	2.28	0.53
1:CA:542:G:O2'	1:CA:543:U:H5'	2.08	0.53
1:CA:662:U:H2'	1:CA:663:A:C8	2.42	0.53
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.08	0.53
2:CC:46:LEU:HB3	2:CC:49:ALA:CB	2.38	0.53
4:CE:148:SER:HB2	4:CE:150:GLU:OE1	2.08	0.53
23:DB:269:C:H2'	23:DB:270:A:C8	2.43	0.53
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.07	0.53
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.08	0.53
23:DB:2496:C:OP1	38:DM:82:MET:HB2	2.09	0.53
26:DD:124:ARG:HA	26:DD:165:MET:HE3	1.89	0.53
27:DK:98:ARG:HE	27:DK:98:ARG:N	2.06	0.53
29:DE:188:MET:HE3	29:DE:193:VAL:HG13	1.89	0.53
42:DN:32:GLU:O	42:DN:114:GLU:HA	2.08	0.53
43:DO:66:GLY:HA2	43:DO:102:ARG:NE	2.23	0.53
44:DQ:57:ARG:HH11	44:DQ:57:ARG:HG2	1.73	0.53
47:DF:103:ILE:HD11	47:DF:174:PHE:CA	2.37	0.53
52:DW:75:ASN:O	52:DW:76:ARG:HB2	2.07	0.53
53:D6:144:ALA:HA	53:D6:149:LEU:HG	1.90	0.53
1:AA:386:C:O2'	1:AA:387:U:H5'	2.08	0.53
1:AA:699:C:C2'	1:AA:700:G:H5"	2.35	0.53
1:AA:737:C:H2'	1:AA:738:C:C6	2.43	0.53
1:AA:1154:G:O2'	1:AA:1155:A:H5'	2.08	0.53
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.23	0.53
5:AF:3:HIS:CD2	5:AF:3:HIS:N	2.76	0.53
19:AT:48:LYS:O	19:AT:52:GLU:HB3	2.08	0.53
19:AT:50:PHE:O	19:AT:53:MET:HG3	2.08	0.53
20:AB:14:HIS:HD2	20:AB:202:ASN:H	1.55	0.53
20:AB:69:VAL:HG12	20:AB:168:GLU:HG3	1.90	0.53
22:BA:74:U:O5'	22:BA:74:U:H6	1.90	0.53
23:BB:171:U:H2'	23:BB:172:A:H8	1.72	0.53
23:BB:673:C:H2'	23:BB:674:G:H5'	1.90	0.53
23:BB:675:A:OP1	29:BE:60:TRP:NE1	2.41	0.53
23:BB:833:A:H2'	23:BB:834:G:C8	2.42	0.53
23:BB:967:U:H2'	23:BB:968:C:C6	2.43	0.53
23:BB:1022:G:N2	23:BB:1142:A:N1	2.55	0.53
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.07	0.53
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.08	0.53
23:BB:1889:A:H2'	23:BB:1890:A:H8	1.71	0.53
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:80:LEU:HD11	25:BC:109:LEU:HG	1.91	0.53
26:BD:8:LYS:CD	26:BD:197:THR:H	2.21	0.53
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.38	0.53
39:BX:21:LEU:HA	39:BX:25:GLN:HB3	1.89	0.53
41:BJ:72:LYS:HB2	41:BJ:89:PHE:HB2	1.90	0.53
46:BU:27:VAL:CG2	46:BU:33:VAL:HG12	2.35	0.53
1:CA:332:G:O2'	1:CA:333:U:H5'	2.08	0.53
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.89	0.53
6:CG:19:SER:OG	6:CG:22:LEU:HB2	2.07	0.53
9:CJ:36:VAL:HA	9:CJ:76:ILE:HA	1.89	0.53
20:CB:69:VAL:O	20:CB:163:ILE:HG22	2.07	0.53
20:CB:93:HIS:CD2	20:CB:145:ASN:HB3	2.43	0.53
21:CU:16:ARG:HA	21:CU:16:ARG:NE	2.24	0.53
22:DA:43:C:H2'	22:DA:44:G:H5"	1.91	0.53
23:DB:62:U:H2'	23:DB:63:A:O4'	2.09	0.53
23:DB:244:A:H1'	23:DB:255:A:N6	2.23	0.53
23:DB:559:G:H21	44:DQ:51:GLN:HE22	1.56	0.53
23:DB:680:C:H2'	23:DB:681:G:H8	1.73	0.53
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.72	0.53
23:DB:1236:G:H1'	23:DB:1237:A:C8	2.43	0.53
23:DB:1299:G:H4'	23:DB:1301:A:H1'	1.90	0.53
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.08	0.53
23:DB:1657:U:O2'	26:DD:138:LEU:HD12	2.08	0.53
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.09	0.53
26:DD:106:LYS:O	26:DD:107:VAL:HB	2.08	0.53
26:DD:159:LYS:O	26:DD:161:MET:HG2	2.08	0.53
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.43	0.53
35:DV:16:ALA:HA	35:DV:19:ARG:HE	1.73	0.53
37:DL:110:VAL:HG23	37:DL:126:ARG:O	2.08	0.53
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.89	0.53
41:DJ:29:ALA:O	41:DJ:32:LEU:HB2	2.07	0.53
47:DF:40:GLY:HA2	47:DF:84:ILE:CG2	2.36	0.53
47:DF:78:ILE:N	47:DF:79:ARG:HH11	2.05	0.53
47:DF:119:LYS:HA	47:DF:121:PHE:CE1	2.42	0.53
50:DT:32:LEU:O	50:DT:83:ALA:HB2	2.08	0.53
50:DT:47:VAL:HG13	50:DT:51:PHE:CD1	2.42	0.53
52:DW:10:ARG:O	52:DW:11:ASN:HB2	2.07	0.53
1:AA:182:A:N3	1:AA:182:A:H5"	2.23	0.53
1:AA:612:C:H2'	1:AA:613:C:C6	2.43	0.53
1:AA:898:G:N2	1:AA:900:A:H3'	2.23	0.53
6:AG:134:VAL:HB	6:AG:137:ARG:NH2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.48	0.53
19:AT:57:VAL:HG23	19:AT:58:ASP:N	2.22	0.53
21:AU:16:ARG:HA	21:AU:16:ARG:NE	2.24	0.53
22:BA:64:G:H2'	22:BA:65:U:C6	2.44	0.53
23:BB:4:U:H2'	23:BB:5:A:H8	1.74	0.53
23:BB:250:G:H2'	23:BB:251:A:C8	2.42	0.53
23:BB:813:U:H2'	23:BB:814:C:H6	1.71	0.53
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.43	0.53
23:BB:1315:C:H2'	23:BB:1316:U:H6	1.73	0.53
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.08	0.53
23:BB:1563:U:H2'	23:BB:1564:C:C6	2.43	0.53
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.44	0.53
23:BB:2033:A:O2'	23:BB:2035:G:OP2	2.24	0.53
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.07	0.53
25:BC:76:VAL:HA	25:BC:113:ASP:O	2.09	0.53
37:BL:141:LYS:HZ3	37:BL:143:GLU:HA	1.74	0.53
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.20	0.53
42:BN:7:GLY:HA2	42:BN:46:ARG:NH1	2.23	0.53
43:BO:39:VAL:HB	43:BO:49:VAL:HG22	1.89	0.53
44:BQ:4:LYS:HZ3	44:BQ:7:VAL:HG22	1.73	0.53
46:BU:13:LEU:HD12	46:BU:68:ASN:O	2.08	0.53
47:BF:135:ILE:HD11	47:BF:137:PHE:CD1	2.42	0.53
48:BG:154:GLU:OE2	48:BG:156:TYR:HB2	2.08	0.53
50:BT:69:ARG:HG2	50:BT:73:ARG:C	2.29	0.53
53:B6:162:GLN:HA	53:B6:162:GLN:NE2	2.18	0.53
1:CA:386:C:O2'	1:CA:387:U:H5'	2.08	0.53
1:CA:607:A:H2'	1:CA:608:A:C8	2.44	0.53
1:CA:825:A:H2'	1:CA:826:C:H6	1.74	0.53
3:CD:197:HIS:ND1	3:CD:198:LEU:N	2.57	0.53
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.08	0.53
6:CG:57:GLU:CD	6:CG:57:GLU:H	2.12	0.53
7:CH:55:LYS:HZ1	7:CH:55:LYS:HA	1.73	0.53
13:CN:40:ARG:HH12	18:CS:6:LYS:HB2	1.73	0.53
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.07	0.53
18:CS:51:HIS:HA	18:CS:55:GLN:O	2.08	0.53
20:CB:163:ILE:CG2	20:CB:164:ASP:H	2.12	0.53
23:DB:39:G:O2'	23:DB:40:U:H5'	2.09	0.53
23:DB:281:C:H2'	23:DB:282:A:H8	1.73	0.53
23:DB:285:G:O2'	23:DB:286:U:H5'	2.08	0.53
23:DB:741:U:H2'	23:DB:742:A:C8	2.43	0.53
25:DC:131:MET:HE1	25:DC:143:VAL:HG13	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:14:ILE:HA	28:DP:11:GLN:HE22	1.72	0.53
29:DE:5:LEU:CD1	29:DE:10:SER:HB2	2.37	0.53
35:DV:44:HIS:CE1	35:DV:85:LYS:HB2	2.43	0.53
47:DF:121:PHE:HB3	47:DF:127:TYR:CZ	2.43	0.53
48:DG:154:GLU:C	48:DG:156:TYR:H	2.12	0.53
50:DT:17:SER:N	50:DT:21:SER:OG	2.40	0.53
50:DT:25:GLU:HA	50:DT:29:THR:O	2.08	0.53
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.73	0.53
53:D6:174:GLN:CD	53:D6:178:LYS:HE2	2.28	0.53
1:AA:719:C:H2'	17:AR:38:ILE:CD1	2.38	0.53
1:AA:1254:A:O4'	1:AA:1356:G:H5"	2.08	0.53
1:AA:1317:C:H3'	1:AA:1318:A:H8	1.73	0.53
2:AC:174:LEU:H	2:AC:174:LEU:HD12	1.73	0.53
5:AF:80:PHE:CE1	25:BC:123:ILE:HG12	2.43	0.53
7:AH:44:PHE:HA	7:AH:70:VAL:HG11	1.90	0.53
17:AR:34:GLU:HB2	21:AU:18:PHE:HZ	1.72	0.53
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.23	0.53
23:BB:321:U:H4'	29:BE:159:LEU:O	2.09	0.53
23:BB:680:C:H2'	23:BB:681:G:C8	2.43	0.53
23:BB:1109:C:H3'	23:BB:1110:G:C8	2.43	0.53
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.07	0.53
23:BB:2155:U:H2'	23:BB:2156:G:C8	2.43	0.53
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.74	0.53
23:BB:2884:U:H4'	31:B0:49:ARG:NH2	2.24	0.53
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.07	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
25:BC:177:SER:O	25:BC:270:ARG:HG3	2.08	0.53
26:BD:40:LEU:HD12	26:BD:41:ALA:N	2.24	0.53
26:BD:45:TYR:HD2	26:BD:83:ARG:HD3	1.73	0.53
40:BH:57:LYS:O	40:BH:61:VAL:HG12	2.08	0.53
43:BO:28:VAL:O	43:BO:28:VAL:HG13	2.09	0.53
53:B6:7:TYR:CE1	53:B6:160:GLU:HG2	2.44	0.53
1:CA:452:A:H2'	1:CA:453:G:O4'	2.09	0.53
1:CA:693:G:H2'	1:CA:694:A:O4'	2.08	0.53
1:CA:1123:U:O2'	1:CA:1124:G:H5'	2.07	0.53
5:CF:85:ILE:HG22	5:CF:86:ARG:N	2.24	0.53
15:CP:73:ALA:O	15:CP:77:GLU:HG3	2.08	0.53
20:CB:164:ASP:CG	20:CB:203:ASP:HB2	2.29	0.53
23:DB:303:G:H2'	23:DB:304:U:C6	2.43	0.53
23:DB:322:A:H3'	29:DE:163:ASN:HD21	1.72	0.53
23:DB:464:U:H2'	23:DB:465:G:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:545:U:H2'	23:DB:548:G:OP2	2.09	0.53
23:DB:559:G:P	41:DJ:111:LYS:HD3	2.48	0.53
23:DB:1240:U:O2'	23:DB:1241:A:H5'	2.09	0.53
23:DB:1315:C:H2'	23:DB:1316:U:H6	1.71	0.53
23:DB:1827:U:C2'	23:DB:1828:G:H5'	2.39	0.53
23:DB:2529:G:O2'	48:DG:174:LYS:HE2	2.09	0.53
23:DB:2816:G:O2'	23:DB:2817:U:H5'	2.08	0.53
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.73	0.53
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.38	0.53
27:DK:59:LYS:HD2	27:DK:89:ASN:ND2	2.22	0.53
27:DK:88:ASN:HD22	27:DK:89:ASN:N	2.06	0.53
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.24	0.53
28:DP:3:ILE:HD13	28:DP:3:ILE:C	2.28	0.53
37:DL:79:LEU:CG	37:DL:112:LEU:HA	2.32	0.53
37:DL:95:LEU:HD13	37:DL:101:ILE:HG13	1.90	0.53
37:DL:125:LEU:H	37:DL:143:GLU:HG3	1.74	0.53
41:DJ:36:LEU:HD12	41:DJ:118:MET:O	2.09	0.53
42:DN:7:GLY:HA2	42:DN:46:ARG:NH1	2.24	0.53
48:DG:30:GLY:H	48:DG:78:VAL:HA	1.73	0.53
1:AA:313:A:H2'	1:AA:314:C:C6	2.44	0.53
1:AA:607:A:H2'	1:AA:608:A:C8	2.43	0.53
1:AA:607:A:H2'	1:AA:608:A:H8	1.73	0.53
1:AA:677:U:H1'	10:AK:120:CYS:SG	2.49	0.53
1:AA:818:G:C3'	1:AA:819:A:H5"	2.38	0.53
1:AA:1140:C:O2'	1:AA:1141:C:H5'	2.08	0.53
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	2.09	0.53
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.08	0.53
3:AD:197:HIS:ND1	3:AD:198:LEU:N	2.56	0.53
4:AE:110:MET:SD	4:AE:126:ALA:HB2	2.49	0.53
7:AH:66:GLN:C	7:AH:68:LYS:H	2.10	0.53
8:AI:56:MET:C	8:AI:58:GLU:H	2.11	0.53
12:AM:80:MET:HA	12:AM:87:GLY:HA3	1.91	0.53
23:BB:141:G:H1	50:BT:2:ILE:CD1	2.12	0.53
23:BB:540:C:H2'	23:BB:541:A:C8	2.43	0.53
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.43	0.53
23:BB:1150:C:O2'	23:BB:1151:A:H5'	2.08	0.53
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.72	0.53
23:BB:1300:G:H4'	23:BB:1301:A:O5'	2.07	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.90	0.53
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:80:ILE:H	40:BH:145:ASN:H	1.56	0.53
40:BH:130:VAL:HG21	40:BH:144:VAL:CG2	2.38	0.53
45:BS:72:THR:CG2	45:BS:108:SER:HB3	2.38	0.53
47:BF:163:GLU:HA	47:BF:166:ARG:HD3	1.90	0.53
50:BT:69:ARG:HG3	50:BT:70:HIS:N	2.24	0.53
1:CA:706:A:C4'	10:CK:30:ILE:HD11	2.39	0.53
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.09	0.53
3:CD:89:LEU:HD23	3:CD:199:ILE:HD11	1.89	0.53
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.23	0.53
19:CT:57:VAL:HG23	19:CT:58:ASP:N	2.23	0.53
23:DB:45:G:H5'	23:DB:46:G:OP1	2.09	0.53
23:DB:394:C:H2'	23:DB:395:U:O4'	2.08	0.53
23:DB:649:G:H2'	23:DB:650:C:H6	1.73	0.53
23:DB:807:U:H2'	23:DB:808:G:C8	2.43	0.53
23:DB:851:C:O2'	30:DY:45:GLY:HA3	2.09	0.53
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.44	0.53
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.43	0.53
23:DB:2460:U:H2'	23:DB:2461:A:H8	1.73	0.53
23:DB:2733:A:H2'	23:DB:2734:A:O4'	2.08	0.53
23:DB:2825:G:H5"	23:DB:2825:G:N3	2.23	0.53
26:DD:170:VAL:O	26:DD:170:VAL:HG23	2.08	0.53
29:DE:58:LYS:HE2	29:DE:60:TRP:CD1	2.43	0.53
41:DJ:59:ALA:C	41:DJ:61:LYS:H	2.11	0.53
42:DN:72:ASP:OD2	42:DN:74:GLU:HB3	2.09	0.53
45:DS:14:ALA:O	45:DS:18:ARG:HG2	2.09	0.53
46:DU:34:ILE:HG12	46:DU:63:ALA:CB	2.38	0.53
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.21	0.53
1:AA:86:G:N3	1:AA:87:C:N4	2.56	0.53
1:AA:162:A:H2'	1:AA:163:C:O4'	2.09	0.53
1:AA:451:A:C6	1:AA:480:U:H2'	2.43	0.53
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.43	0.53
6:AG:50:ALA:CB	6:AG:57:GLU:HG3	2.38	0.53
8:AI:27:ILE:HD13	8:AI:34:LEU:HD22	1.90	0.53
10:AK:51:PHE:CZ	10:AK:61:ALA:HA	2.44	0.53
12:AM:43:LYS:HB2	12:AM:46:GLU:CG	2.38	0.53
13:AN:40:ARG:HH12	18:AS:6:LYS:HB2	1.73	0.53
18:AS:69:LYS:O	18:AS:72:GLU:HG2	2.08	0.53
19:AT:78:LEU:O	19:AT:82:ILE:HG23	2.09	0.53
21:AU:42:THR:O	21:AU:46:ARG:HG3	2.09	0.53
23:BB:416:U:H2'	23:BB:417:C:C6	2.44	0.53
23:BB:572:A:H3'	23:BB:573:U:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1107:G:H2'	23:BB:1108:U:C6	2.44	0.53
23:BB:2190:G:O2'	23:BB:2191:A:H5'	2.09	0.53
23:BB:2252:G:O2'	23:BB:2253:G:H5'	2.09	0.53
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.09	0.53
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.74	0.53
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.08	0.53
23:BB:2834:G:O6	23:BB:2879:A:H2'	2.08	0.53
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.72	0.53
25:BC:123:ILE:O	25:BC:123:ILE:HG13	2.07	0.53
26:BD:14:ILE:HG23	26:BD:14:ILE:O	2.09	0.53
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.90	0.53
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.08	0.53
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.40	0.53
40:BH:89:LYS:HZ1	40:BH:123:ARG:CB	2.21	0.53
47:BF:133:GLU:HA	47:BF:150:GLY:HA2	1.90	0.53
48:BG:16:VAL:HG11	48:BG:44:HIS:CE1	2.44	0.53
1:CA:993:G:N2	1:CA:996:A:N6	2.57	0.53
1:CA:1470:U:O2'	1:CA:1471:U:H5'	2.08	0.53
1:CA:1514:G:H2'	1:CA:1515:G:H8	1.73	0.53
2:CC:174:LEU:HD12	2:CC:174:LEU:H	1.74	0.53
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.07	0.53
8:CI:20:ILE:HD13	8:CI:85:ALA:CB	2.39	0.53
9:CJ:5:ARG:HG2	9:CJ:79:PRO:HD3	1.91	0.53
14:CO:81:LEU:HD23	14:CO:85:LEU:HD13	1.90	0.53
23:DB:141:G:N2	23:DB:141:G:OP2	2.42	0.53
23:DB:1520:U:H2'	23:DB:1521:G:O4'	2.09	0.53
23:DB:2136:G:O2'	23:DB:2137:U:H5'	2.09	0.53
23:DB:2834:G:H2'	23:DB:2879:A:N6	2.23	0.53
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.24	0.53
27:DK:59:LYS:HD3	27:DK:89:ASN:HA	1.90	0.53
33:D1:26:LYS:HB2	33:D1:52:LYS:HZ2	1.73	0.53
34:D3:38:LYS:HG3	34:D3:41:ARG:NH1	2.24	0.53
40:DH:27:ARG:NH1	51:DZ:60:ASP:HA	2.22	0.53
46:DU:39:ASN:CG	46:DU:62:ALA:HB3	2.29	0.53
48:DG:88:LEU:HD13	48:DG:93:TYR:HB3	1.89	0.53
50:DT:69:ARG:HG2	50:DT:73:ARG:C	2.29	0.53
51:DZ:53:ALA:O	51:DZ:55:GLY:N	2.38	0.53
1:AA:645:G:O2'	1:AA:646:G:H5'	2.08	0.53
1:AA:1074:G:O3'	20:AB:101:THR:OG1	2.21	0.53
1:AA:1080:A:H2'	1:AA:1081:A:H5'	1.90	0.53
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:42:THR:O	8:AI:45:MET:HG2	2.09	0.53
8:AI:82:ILE:O	8:AI:86:LEU:HD13	2.08	0.53
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.91	0.53
10:AK:73:VAL:O	10:AK:76:TYR:HB2	2.09	0.53
11:AL:109:ARG:HH21	11:AL:112:ALA:HB3	1.73	0.53
13:AN:51:PRO:HG2	13:AN:52:ARG:H	1.72	0.53
17:AR:63:TYR:N	17:AR:63:TYR:CD2	2.75	0.53
20:AB:46:VAL:HA	20:AB:49:PHE:CD2	2.43	0.53
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	2.09	0.53
22:BA:32:U:C4'	22:BA:52:A:H62	2.22	0.53
22:BA:90:C:OP1	38:BM:16:ARG:HB2	2.09	0.53
23:BB:987:C:H2'	23:BB:988:A:O4'	2.09	0.53
23:BB:2078:C:H2'	23:BB:2079:U:H6	1.73	0.53
23:BB:2324:U:H3'	23:BB:2325:G:H5"	1.90	0.53
23:BB:2496:C:H5'	38:BM:82:MET:HG3	1.91	0.53
23:BB:2854:G:H2'	23:BB:2855:C:C6	2.44	0.53
25:BC:123:ILE:HD12	25:BC:191:LEU:HD11	1.91	0.53
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.39	0.53
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.24	0.53
42:BN:54:LEU:CD1	42:BN:62:ASN:HB3	2.38	0.53
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.13	0.53
44:BQ:65:ASN:HB2	44:BQ:75:TYR:HB2	1.91	0.53
45:BS:36:LEU:HD22	45:BS:36:LEU:H	1.74	0.53
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.29	0.53
49:BR:6:GLN:HE22	49:BR:10:LYS:H	1.56	0.53
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.20	0.53
1:CA:451:A:C6	1:CA:480:U:H2'	2.44	0.53
1:CA:560:A:H4'	1:CA:561:U:H5"	1.90	0.53
1:CA:975:A:H4'	1:CA:976:G:OP2	2.07	0.53
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.35	0.53
5:CF:53:LYS:HD3	5:CF:54:LEU:H	1.74	0.53
12:CM:95:PRO:CD	12:CM:108:ARG:HG2	2.37	0.53
18:CS:79:TYR:CE1	18:CS:80:ARG:HG3	2.44	0.53
23:DB:79:C:O2'	23:DB:346:A:H1'	2.08	0.53
23:DB:930:G:H1'	30:DY:24:LEU:HD11	1.91	0.53
23:DB:1031:G:H4'	32:D4:6:SER:HB3	1.90	0.53
23:DB:1295:C:H2'	23:DB:1296:G:H8	1.73	0.53
23:DB:1351:C:H4'	23:DB:1572:A:O4'	2.08	0.53
23:DB:1389:G:O2'	23:DB:1390:U:H5'	2.08	0.53
23:DB:1777:U:O2'	23:DB:1778:U:H5'	2.08	0.53
23:DB:2030:A:H4'	23:DB:2031:A:H5'	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2540:C:H2'	23:DB:2541:A:H8	1.72	0.53
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.44	0.53
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.08	0.53
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.08	0.53
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.39	0.53
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.91	0.53
25:DC:76:VAL:HA	25:DC:113:ASP:O	2.07	0.53
25:DC:209:ALA:O	25:DC:213:ARG:HB2	2.07	0.53
27:DK:89:ASN:C	27:DK:89:ASN:HD22	2.12	0.53
37:DL:95:LEU:HA	37:DL:98:ALA:HB3	1.91	0.53
40:DH:113:SER:N	40:DH:132:PHE:CE1	2.75	0.53
40:DH:135:HIS:CG	40:DH:136:SER:N	2.77	0.53
41:DJ:130:HIS:HD2	41:DJ:132:HIS:HB2	1.72	0.53
1:AA:168:G:O2'	1:AA:169:C:H5'	2.09	0.53
1:AA:237:G:H2'	1:AA:238:A:C8	2.44	0.53
1:AA:449:G:H2'	1:AA:450:G:C8	2.43	0.53
1:AA:590:U:H2'	1:AA:591:U:C6	2.44	0.53
1:AA:948:C:O2'	1:AA:949:A:H5'	2.08	0.53
3:AD:129:VAL:HG12	3:AD:131:ILE:H	1.74	0.53
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.35	0.53
5:AF:7:VAL:HG11	17:AR:64:LEU:HD21	1.90	0.53
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.73	0.53
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.91	0.53
11:AL:28:GLN:HB2	11:AL:80:LEU:HG	1.90	0.53
21:AU:24:LYS:CD	21:AU:25:ALA:H	2.20	0.53
23:BB:934:U:H2'	23:BB:935:C:H6	1.74	0.53
23:BB:979:A:H3'	23:BB:980:A:C5'	2.39	0.53
23:BB:2041:U:H2'	23:BB:2042:A:H8	1.73	0.53
23:BB:2369:A:H2'	23:BB:2370:G:H8	1.74	0.53
23:BB:2604:U:O2'	23:BB:2605:U:H5'	2.09	0.53
23:BB:2636:C:H4'	26:BD:81:GLU:OE2	2.09	0.53
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.43	0.53
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.08	0.53
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.23	0.53
27:BK:8:LEU:HD12	27:BK:8:LEU:H	1.74	0.53
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.44	0.53
40:BH:97:ARG:O	40:BH:101:ASP:HB2	2.08	0.53
45:BS:70:LYS:HD3	45:BS:110:ARG:O	2.08	0.53
47:BF:111:ARG:O	47:BF:112:ASP:HB2	2.08	0.53
48:BG:10:VAL:HG23	48:BG:48:THR:HA	1.89	0.53
1:CA:473:U:H2'	1:CA:474:G:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:833:G:O2'	1:CA:834:U:H5'	2.09	0.53
1:CA:979:C:H1'	1:CA:1317:C:H41	1.74	0.53
1:CA:1081:A:OP1	4:CE:21:SER:O	2.26	0.53
1:CA:1320:C:H41	18:CS:36:ARG:HB3	1.72	0.53
3:CD:94:GLU:HA	3:CD:99:ASN:ND2	2.24	0.53
3:CD:118:SER:HA	3:CD:130:ASN:HB2	1.89	0.53
4:CE:42:ASN:O	4:CE:75:LEU:HD12	2.09	0.53
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.90	0.53
12:CM:14:ALA:HB1	12:CM:33:LEU:HD21	1.91	0.53
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.90	0.53
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.44	0.53
23:DB:1153:C:H2'	23:DB:1154:G:O4'	2.08	0.53
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.41	0.53
23:DB:1268:A:H2'	23:DB:1269:A:O4'	2.09	0.53
23:DB:1835:G:H2'	23:DB:1836:C:C6	2.44	0.53
23:DB:2821:A:OP2	26:DD:115:GLY:HA3	2.09	0.53
27:DK:58:LEU:HD23	27:DK:58:LEU:N	2.23	0.53
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.09	0.53
29:DE:105:LEU:HD21	29:DE:177:PRO:HA	1.89	0.53
30:DY:13:ILE:HG22	30:DY:14:GLY:N	2.24	0.53
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.38	0.53
34:D3:36:ALA:O	34:D3:39:ARG:HB3	2.09	0.53
40:DH:5:LEU:HD13	40:DH:13:GLY:CA	2.34	0.53
46:DU:32:LYS:HA	46:DU:65:GLN:HA	1.90	0.53
47:DF:141:ASP:HB2	47:DF:144:LYS:HB2	1.90	0.53
48:DG:153:PRO:HG3	48:DG:162:ARG:CB	2.39	0.53
49:DR:39:LEU:O	49:DR:40:MET:HB2	2.08	0.53
1:AA:129:A:H1'	1:AA:130:A:C8	2.44	0.53
1:AA:764:C:N4	1:AA:812:G:N1	2.57	0.53
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.72	0.53
2:AC:181:ILE:HD12	2:AC:181:ILE:N	2.23	0.53
5:AF:18:VAL:HG11	5:AF:58:HIS:NE2	2.24	0.53
9:AJ:7:ARG:NH1	9:AJ:101:SER:HB2	2.24	0.53
23:BB:222:A:H61	23:BB:232:G:H1'	1.72	0.53
23:BB:273:G:O2'	23:BB:274:C:H5'	2.09	0.53
23:BB:460:A:H2'	23:BB:461:C:O4'	2.09	0.53
23:BB:972:A:OP2	23:BB:974:G:H5"	2.09	0.53
23:BB:2439:A:N7	23:BB:2586:U:H4'	2.24	0.53
23:BB:2733:A:H2'	23:BB:2734:A:O4'	2.08	0.53
23:BB:2812:G:H2'	23:BB:2813:A:C8	2.43	0.53
23:BB:2889:C:O2'	23:BB:2890:G:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:9:VAL:HA	26:BD:197:THR:HG23	1.91	0.53
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.08	0.53
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.08	0.53
37:BL:95:LEU:HB2	37:BL:101:ILE:CG1	2.39	0.53
45:BS:14:ALA:O	45:BS:18:ARG:HG2	2.09	0.53
50:BT:32:LEU:O	50:BT:83:ALA:HB2	2.09	0.53
53:B6:38:LEU:HD22	53:B6:41:LEU:HD22	1.91	0.53
1:CA:87:C:C3'	1:CA:88:U:H5"	2.39	0.53
1:CA:89:U:H2'	1:CA:90:C:C6	2.44	0.53
1:CA:551:U:H2'	1:CA:552:U:H6	1.73	0.53
1:CA:1057:G:H5"	2:CC:153:SER:HB2	1.89	0.53
4:CE:155:LYS:O	4:CE:158:LYS:HE3	2.08	0.53
8:CI:56:MET:C	8:CI:58:GLU:H	2.11	0.53
20:CB:124:THR:HG23	20:CB:124:THR:O	2.09	0.53
23:DB:582:A:H2'	23:DB:583:G:H8	1.74	0.53
23:DB:947:A:H2'	23:DB:948:C:H6	1.74	0.53
23:DB:1021:A:H61	23:DB:1142:A:H61	1.56	0.53
23:DB:1060:U:OP2	24:DI:74:PRO:HA	2.09	0.53
23:DB:1459:G:H5"	23:DB:1460:U:OP1	2.08	0.53
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.09	0.53
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.39	0.53
23:DB:2023:C:H4'	23:DB:2617:U:O3'	2.09	0.53
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.27	0.53
23:DB:2652:C:H2'	23:DB:2653:U:O4'	2.09	0.53
25:DC:270:ARG:HB3	25:DC:270:ARG:NH1	2.24	0.53
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	1.91	0.53
29:DE:48:THR:O	29:DE:52:VAL:HG23	2.09	0.53
29:DE:155:GLU:O	29:DE:159:LEU:HB2	2.09	0.53
30:DY:8:GLN:OE1	30:DY:23:LEU:HD11	2.09	0.53
37:DL:56:PRO:O	37:DL:59:ARG:HB2	2.09	0.53
40:DH:70:GLU:HA	40:DH:73:ASN:HB2	1.89	0.53
41:DJ:88:THR:HG22	41:DJ:91:GLU:HG3	1.91	0.53
42:DN:52:ILE:HD13	42:DN:87:PHE:CD2	2.44	0.53
44:DQ:2:ARG:HG3	44:DQ:3:VAL:H	1.74	0.53
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.22	0.53
46:DU:26:ASN:N	46:DU:26:ASN:ND2	2.52	0.53
47:DF:7:TYR:OH	47:DF:29:ARG:HG3	2.09	0.53
47:DF:101:ARG:HA	47:DF:105:ILE:HD12	1.90	0.53
48:DG:30:GLY:HA3	48:DG:78:VAL:HG12	1.90	0.53
1:AA:452:A:H2'	1:AA:453:G:O4'	2.09	0.53
1:AA:981:U:C4'	13:AN:60:ARG:HD2	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.44	0.53
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.44	0.53
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.90	0.53
6:AG:35:LYS:O	6:AG:39:GLU:HG3	2.08	0.53
7:AH:44:PHE:HE2	7:AH:100:ILE:HG12	1.74	0.53
20:AB:65:LYS:HB2	20:AB:158:ASP:H	1.74	0.53
23:BB:4:U:H2'	23:BB:5:A:C8	2.44	0.53
23:BB:598:U:H2'	23:BB:599:A:H8	1.74	0.53
23:BB:724:U:H2'	23:BB:725:G:O4'	2.09	0.53
23:BB:850:U:H2'	23:BB:851:C:C6	2.44	0.53
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.38	0.53
23:BB:1203:U:H3'	23:BB:1204:A:H5"	1.89	0.53
23:BB:1671:U:H2'	23:BB:1673:G:OP2	2.09	0.53
23:BB:2108:A:H2'	23:BB:2109:U:C4'	2.35	0.53
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.44	0.53
23:BB:2553:G:H2'	23:BB:2554:U:O4'	2.09	0.53
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.37	0.53
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.74	0.53
26:BD:170:VAL:O	26:BD:170:VAL:HG23	2.09	0.53
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.44	0.53
37:BL:110:VAL:HG23	37:BL:126:ARG:O	2.09	0.53
43:BO:110:ALA:O	43:BO:115:LEU:HB2	2.09	0.53
44:BQ:59:LEU:HD13	44:BQ:60:TRP:N	2.24	0.53
44:BQ:93:ILE:O	44:BQ:96:ASP:HB3	2.09	0.53
48:BG:154:GLU:C	48:BG:156:TYR:H	2.12	0.53
53:B6:68:VAL:HB	53:B6:99:LEU:HG	1.90	0.53
1:CA:255:G:H2'	1:CA:256:U:H6	1.73	0.53
1:CA:393:A:O2'	1:CA:394:G:H5'	2.08	0.53
1:CA:597:G:H2'	1:CA:598:U:H5'	1.90	0.53
1:CA:677:U:H2'	1:CA:678:U:C6	2.44	0.53
1:CA:911:U:H2'	1:CA:912:C:C6	2.44	0.53
3:CD:129:VAL:HG12	3:CD:131:ILE:H	1.74	0.53
8:CI:36:GLN:HE21	8:CI:36:GLN:N	2.07	0.53
13:CN:29:ILE:HB	13:CN:30:ILE:HD12	1.91	0.53
16:CQ:30:HIS:CG	16:CQ:33:TYR:HB2	2.43	0.53
21:CU:27:VAL:O	21:CU:31:VAL:HG23	2.08	0.53
23:DB:705:A:N6	23:DB:726:G:O2'	2.42	0.53
23:DB:806:C:O2'	23:DB:807:U:H5'	2.08	0.53
23:DB:1234:U:O2'	23:DB:1235:G:H5'	2.08	0.53
23:DB:2146:C:H4'	23:DB:2148:G:C1'	2.39	0.53
23:DB:2196:C:H2'	23:DB:2197:U:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2468:A:H2'	23:DB:2476:A:C6	2.43	0.53
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.09	0.53
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.09	0.53
23:DB:2846:G:H2'	23:DB:2847:U:C6	2.43	0.53
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.73	0.53
25:DC:109:LEU:CD2	25:DC:109:LEU:H	2.22	0.53
25:DC:119:VAL:HG13	25:DC:133:ASN:HD21	1.73	0.53
25:DC:261:ARG:HG2	25:DC:261:ARG:O	2.08	0.53
29:DE:47:LYS:HA	29:DE:51:GLU:OE2	2.09	0.53
29:DE:138:LEU:HB3	29:DE:143:LEU:O	2.09	0.53
33:D1:47:ILE:H	33:D1:47:ILE:HD12	1.73	0.53
37:DL:121:THR:HA	37:DL:141:LYS:HB3	1.91	0.53
48:DG:34:ARG:HG2	48:DG:34:ARG:NH1	2.24	0.53
49:DR:39:LEU:HD22	49:DR:53:PHE:HD1	1.74	0.53
50:DT:12:ARG:HB3	50:DT:12:ARG:HH11	1.74	0.53
52:DW:22:VAL:O	52:DW:23:LYS:HG3	2.09	0.53
1:AA:157:U:O2'	1:AA:158:G:H5'	2.09	0.52
1:AA:250:A:H1'	1:AA:252:U:C5	2.44	0.52
1:AA:820:U:H4'	1:AA:821:G:OP2	2.09	0.52
1:AA:833:G:O2'	1:AA:834:U:H5'	2.09	0.52
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.44	0.52
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.09	0.52
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.09	0.52
12:AM:14:ALA:HB1	12:AM:33:LEU:HD21	1.90	0.52
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.91	0.52
15:AP:66:THR:O	15:AP:67:ILE:HB	2.09	0.52
19:AT:38:ILE:HD13	19:AT:38:ILE:O	2.09	0.52
21:AU:19:LYS:HB2	21:AU:20:ARG:HE	1.74	0.52
23:BB:533:G:H2'	23:BB:534:U:C6	2.43	0.52
23:BB:559:G:H21	44:BQ:51:GLN:HE22	1.57	0.52
23:BB:863:A:H2'	23:BB:864:G:H8	1.74	0.52
23:BB:1021:A:H61	23:BB:1142:A:H61	1.55	0.52
23:BB:1188:U:O2'	23:BB:1189:A:H5'	2.09	0.52
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.75	0.52
23:BB:1784:A:H4'	23:BB:1785:A:O5'	2.08	0.52
23:BB:2098:U:H2'	23:BB:2099:U:O4'	2.08	0.52
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.09	0.52
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.39	0.52
25:BC:66:PHE:HB2	25:BC:150:GLY:O	2.08	0.52
25:BC:128:THR:OG1	25:BC:190:THR:HG22	2.09	0.52
26:BD:141:ARG:O	26:BD:142:VAL:HG13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:89:ASN:C	27:BK:89:ASN:HD22	2.13	0.52
28:BP:3:ILE:C	28:BP:3:ILE:HD13	2.30	0.52
37:BL:56:PRO:O	37:BL:59:ARG:HB2	2.07	0.52
40:BH:73:ASN:N	40:BH:73:ASN:ND2	2.58	0.52
44:BQ:56:PHE:HA	44:BQ:59:LEU:HB3	1.90	0.52
47:BF:177:ARG:HA	47:BF:177:ARG:NE	2.24	0.52
1:CA:162:A:H2'	1:CA:163:C:O4'	2.08	0.52
1:CA:309:A:O2'	1:CA:310:G:H5'	2.10	0.52
1:CA:389:A:N3	1:CA:389:A:H2'	2.23	0.52
1:CA:1227:A:H5"	12:CM:113:LYS:HD2	1.91	0.52
5:CF:54:LEU:N	5:CF:54:LEU:HD13	2.24	0.52
6:CG:70:PRO:O	6:CG:95:ARG:HG3	2.09	0.52
7:CH:77:VAL:HG11	7:CH:124:ILE:HG21	1.91	0.52
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.76	0.52
18:CS:20:LYS:NZ	18:CS:27:LYS:HD2	2.24	0.52
20:CB:210:THR:HA	20:CB:213:LEU:HB2	1.91	0.52
23:DB:184:C:H2'	23:DB:185:G:C8	2.43	0.52
23:DB:347:A:H2'	23:DB:348:A:C8	2.44	0.52
23:DB:406:G:O2'	23:DB:407:G:H5'	2.09	0.52
23:DB:861:A:H2'	23:DB:862:G:O4'	2.09	0.52
23:DB:1537:G:N3	23:DB:1537:G:H5"	2.25	0.52
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.43	0.52
23:DB:2213:U:C2'	23:DB:2213:U:O2	2.58	0.52
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.44	0.52
23:DB:2868:A:H2'	23:DB:2869:G:H8	1.74	0.52
25:DC:61:TYR:HA	25:DC:85:ASN:ND2	2.24	0.52
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.91	0.52
26:DD:176:ASP:HB2	26:DD:190:LYS:HG2	1.90	0.52
28:DP:52:ARG:HB2	28:DP:55:HIS:O	2.09	0.52
35:DV:1:MET:O	35:DV:62:THR:HG23	2.08	0.52
43:DO:105:ALA:C	43:DO:107:ALA:H	2.11	0.52
45:DS:10:ALA:HB3	45:DS:101:SER:OG	2.08	0.52
48:DG:152:ARG:NH2	48:DG:162:ARG:HA	2.24	0.52
48:DG:174:LYS:HZ2	48:DG:176:LYS:HG2	1.73	0.52
49:DR:16:GLU:HG2	49:DR:101:ILE:HG13	1.91	0.52
1:AA:253:A:H2'	1:AA:254:G:C8	2.44	0.52
1:AA:255:G:H2'	1:AA:256:U:H6	1.73	0.52
1:AA:317:U:H2'	1:AA:318:G:H8	1.74	0.52
1:AA:410:G:H2'	1:AA:429:U:C5	2.44	0.52
1:AA:505:G:H2'	1:AA:506:G:H8	1.73	0.52
1:AA:811:C:H4'	1:AA:900:A:N6	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.45	0.52
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.44	0.52
9:AJ:53:ILE:HG23	9:AJ:54:SER:H	1.75	0.52
13:AN:20:PHE:HB3	13:AN:24:ALA:HB2	1.91	0.52
17:AR:33:THR:C	17:AR:35:SER:H	2.13	0.52
18:AS:42:ASN:HD22	18:AS:42:ASN:H	1.57	0.52
20:AB:68:PHE:CD1	20:AB:83:ALA:HB2	2.45	0.52
22:BA:93:C:O2'	22:BA:94:A:H5'	2.09	0.52
23:BB:275:C:C2'	23:BB:276:U:H5'	2.39	0.52
23:BB:854:C:O2'	23:BB:855:G:H5'	2.09	0.52
23:BB:1063:G:H1'	24:BI:134:SER:O	2.10	0.52
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.73	0.52
23:BB:1253:A:H4'	23:BB:1254:A:OP2	2.08	0.52
23:BB:1747:U:H2'	23:BB:1748:C:H6	1.74	0.52
23:BB:2204:G:O2'	23:BB:2205:A:H5'	2.09	0.52
23:BB:2213:U:C2'	23:BB:2213:U:O2	2.57	0.52
57:BB:3457:HOH:O	37:BL:99:ASN:HB3	2.09	0.52
29:BE:1:MET:HB3	29:BE:14:VAL:O	2.09	0.52
33:B1:18:HIS:CD2	33:B1:40:PRO:HD2	2.45	0.52
44:BQ:83:LYS:NZ	44:BQ:87:VAL:HA	2.24	0.52
53:B6:41:LEU:HD21	53:B6:88:LEU:HD13	1.90	0.52
53:B6:178:LYS:O	53:B6:182:GLU:HG3	2.10	0.52
1:CA:405:U:O4	3:CD:1:ALA:HA	2.09	0.52
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.73	0.52
3:CD:113:ALA:O	3:CD:116:LEU:HB2	2.10	0.52
6:CG:49:LEU:HD12	6:CG:124:SER:OG	2.10	0.52
12:CM:43:LYS:HB2	12:CM:46:GLU:CG	2.39	0.52
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.91	0.52
20:CB:68:PHE:HA	20:CB:161:PHE:O	2.09	0.52
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	2.09	0.52
22:DA:90:C:OP1	38:DM:16:ARG:HB2	2.09	0.52
23:DB:135:U:H2'	23:DB:136:G:C8	2.45	0.52
23:DB:771:G:O2'	23:DB:772:C:H5'	2.09	0.52
23:DB:783:A:H8	23:DB:784:G:H4'	1.74	0.52
23:DB:950:G:H2'	23:DB:951:C:H6	1.73	0.52
23:DB:1011:G:O2'	23:DB:1013:C:H5"	2.08	0.52
23:DB:1036:G:O2'	23:DB:1037:G:H5'	2.10	0.52
23:DB:1159:U:H2'	23:DB:1160:G:H8	1.73	0.52
23:DB:1747:U:H2'	23:DB:1748:C:H6	1.74	0.52
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.44	0.52
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:113:LEU:O	28:DP:113:LEU:HD23	2.09	0.52
31:D0:25:THR:O	31:D0:26:SER:HB3	2.09	0.52
33:D1:40:PRO:O	33:D1:43:ARG:HG2	2.08	0.52
46:DU:47:PRO:CD	46:DU:55:GLY:HA3	2.38	0.52
47:DF:32:LYS:HA	47:DF:95:MET:SD	2.50	0.52
48:DG:26:LYS:HA	48:DG:32:LEU:H	1.74	0.52
50:DT:69:ARG:HG3	50:DT:70:HIS:N	2.24	0.52
1:AA:308:C:H2'	1:AA:309:A:C8	2.43	0.52
1:AA:513:C:H2'	1:AA:514:C:H6	1.74	0.52
1:AA:869:G:H5'	1:AA:872:A:O4'	2.10	0.52
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.45	0.52
1:AA:1533:C:C3'	1:AA:1534:A:H5"	2.39	0.52
5:AF:85:ILE:HG22	5:AF:86:ARG:N	2.24	0.52
12:AM:42:VAL:HB	12:AM:47:LEU:HD21	1.91	0.52
12:AM:63:VAL:CG1	12:AM:67:ASP:HB2	2.40	0.52
16:AQ:28:VAL:HG12	16:AQ:37:ILE:O	2.10	0.52
18:AS:66:VAL:HG23	18:AS:67:GLY:H	1.74	0.52
20:AB:93:HIS:CD2	20:AB:145:ASN:HB3	2.45	0.52
23:BB:96:C:H4'	39:BX:41:HIS:CE1	2.44	0.52
23:BB:670:A:H4'	23:BB:671:C:C5'	2.32	0.52
23:BB:1060:U:O2	23:BB:1088:A:C8	2.63	0.52
23:BB:1174:U:HO2'	23:BB:1176:U:H5	1.54	0.52
23:BB:1201:U:H2'	23:BB:1202:G:H8	1.75	0.52
23:BB:1427:A:H5"	23:BB:1559:U:O2	2.10	0.52
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.10	0.52
23:BB:1753:G:N2	23:BB:1755:A:H3'	2.25	0.52
23:BB:2303:G:H1'	47:BF:122:ASP:OD1	2.09	0.52
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.45	0.52
35:BV:72:VAL:HB	35:BV:92:VAL:O	2.09	0.52
40:BH:4:ILE:H	40:BH:4:ILE:HD12	1.74	0.52
40:BH:83:LYS:HB2	40:BH:92:GLY:N	2.24	0.52
44:BQ:35:PHE:O	44:BQ:39:ILE:HG12	2.09	0.52
45:BS:15:GLN:HA	45:BS:18:ARG:CG	2.39	0.52
52:BW:22:VAL:O	52:BW:23:LYS:HG3	2.10	0.52
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.44	0.52
1:CA:213:G:H5"	1:CA:214:C:H5	1.74	0.52
1:CA:898:G:N2	1:CA:900:A:H3'	2.24	0.52
1:CA:1064:G:OP1	1:CA:1386:G:H4'	2.09	0.52
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.44	0.52
4:CE:32:PHE:CE2	4:CE:55:VAL:HG22	2.45	0.52
13:CN:20:PHE:HB3	13:CN:24:ALA:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:21:ASP:OD1	17:CR:23:LYS:HD2	2.10	0.52
17:CR:44:THR:C	17:CR:46:THR:H	2.13	0.52
19:CT:19:HIS:O	19:CT:23:ARG:HG2	2.08	0.52
22:DA:49:C:H2'	22:DA:50:A:H8	1.75	0.52
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.10	0.52
23:DB:1353:A:H2'	23:DB:1354:A:H8	1.74	0.52
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.44	0.52
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.09	0.52
26:DD:107:VAL:HG12	26:DD:109:VAL:HG23	1.90	0.52
26:DD:149:ASN:O	26:DD:152:PRO:HD2	2.08	0.52
27:DK:75:SER:HB2	28:DP:73:PHE:HA	1.91	0.52
30:DY:11:SER:HA	30:DY:31:ILE:HG22	1.91	0.52
35:DV:26:PHE:CE2	35:DV:44:HIS:HA	2.44	0.52
36:D2:22:MET:SD	36:D2:28:ARG:HG2	2.49	0.52
37:DL:129:LYS:HA	37:DL:132:ARG:HG2	1.91	0.52
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.09	0.52
44:DQ:91:ARG:HB2	49:DR:11:GLN:NE2	2.25	0.52
47:DF:43:ILE:HG23	47:DF:44:ALA:N	2.15	0.52
1:AA:36:C:O3'	11:AL:119:LYS:HA	2.09	0.52
1:AA:411:A:H62	1:AA:413:G:N2	1.98	0.52
1:AA:731:G:H5'	1:AA:766:A:H4'	1.90	0.52
1:AA:993:G:N2	1:AA:996:A:N6	2.56	0.52
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.44	0.52
19:AT:42:ASP:HA	19:AT:43:LYS:NZ	2.25	0.52
23:BB:275:C:H2'	23:BB:276:U:O4'	2.09	0.52
23:BB:279:A:C2	23:BB:362:A:H4'	2.45	0.52
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.44	0.52
23:BB:2030:A:H4'	23:BB:2031:A:H5'	1.89	0.52
25:BC:76:VAL:CG1	25:BC:114:GLN:HG2	2.33	0.52
27:BK:43:ILE:CG2	27:BK:54:LYS:HA	2.40	0.52
29:BE:131:THR:HB	29:BE:164:LEU:HG	1.90	0.52
31:B0:31:LYS:HD2	31:B0:31:LYS:N	2.23	0.52
35:BV:26:PHE:HE2	35:BV:44:HIS:HA	1.75	0.52
40:BH:14:SER:HB2	40:BH:17:ASP:CB	2.36	0.52
40:BH:100:ALA:CB	40:BH:112:LYS:HA	2.32	0.52
43:BO:68:LYS:HA	43:BO:102:ARG:HG2	1.92	0.52
43:BO:94:ARG:O	43:BO:97:PHE:HB2	2.10	0.52
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.22	0.52
47:BF:119:LYS:HA	47:BF:121:PHE:CE1	2.44	0.52
47:BF:142:TYR:CD1	47:BF:142:TYR:N	2.76	0.52
48:BG:8:VAL:HG11	48:BG:49:LEU:CB	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.74	0.52
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.09	0.52
50:BT:47:VAL:HG13	50:BT:51:PHE:CD1	2.44	0.52
51:BZ:28:ARG:HG2	51:BZ:28:ARG:O	2.09	0.52
53:B6:12:SER:O	53:B6:16:LYS:HD2	2.09	0.52
53:B6:64:ARG:HA	53:B6:103:ILE:HB	1.90	0.52
53:B6:126:ARG:HA	53:B6:129:ILE:HD12	1.92	0.52
53:B6:180:GLU:HA	53:B6:183:ILE:HG22	1.92	0.52
1:CA:89:U:H2'	1:CA:90:C:H6	1.75	0.52
1:CA:284:C:H2'	1:CA:285:C:C6	2.45	0.52
1:CA:607:A:H2'	1:CA:608:A:H8	1.73	0.52
1:CA:1318:A:H4'	18:CS:9:PHE:CE1	2.45	0.52
8:CI:67:LYS:HB2	8:CI:67:LYS:HZ3	1.74	0.52
20:CB:127:LYS:O	20:CB:127:LYS:HD2	2.09	0.52
23:DB:292:U:O2'	23:DB:293:U:H5'	2.09	0.52
23:DB:627:A:H4'	23:DB:628:G:OP1	2.09	0.52
23:DB:732:C:O2'	23:DB:733:G:H5'	2.09	0.52
23:DB:857:G:H2'	23:DB:858:G:H5'	1.91	0.52
23:DB:947:A:H2'	23:DB:948:C:C6	2.44	0.52
23:DB:1010:A:N3	23:DB:1153:C:H1'	2.24	0.52
23:DB:1099:G:H4'	24:DI:4:VAL:CG1	2.39	0.52
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.43	0.52
23:DB:1774:C:H2'	23:DB:1774:C:O2	2.10	0.52
23:DB:1994:C:O2'	23:DB:1995:U:H5'	2.09	0.52
23:DB:2138:G:H2'	23:DB:2139:U:C6	2.44	0.52
23:DB:2801:G:H2'	23:DB:2802:G:H8	1.73	0.52
24:DI:2:LYS:HB3	24:DI:2:LYS:NZ	2.25	0.52
26:DD:51:THR:HG22	26:DD:52:THR:N	2.24	0.52
42:DN:76:VAL:HA	42:DN:79:LEU:HD12	1.90	0.52
43:DO:51:ALA:HB3	43:DO:78:VAL:CG2	2.39	0.52
44:DQ:56:PHE:HA	44:DQ:59:LEU:HB3	1.92	0.52
47:DF:141:ASP:O	47:DF:145:VAL:HG13	2.10	0.52
50:DT:36:LYS:HD3	50:DT:36:LYS:O	2.10	0.52
1:AA:238:A:C2'	1:AA:239:U:H5"	2.39	0.52
1:AA:384:G:H2'	1:AA:385:C:C6	2.44	0.52
1:AA:635:A:H2'	1:AA:636:U:H6	1.74	0.52
3:AD:2:ARG:HG3	3:AD:114:ARG:NH1	2.24	0.52
7:AH:34:ALA:O	7:AH:38:VAL:HG23	2.10	0.52
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HD12	1.91	0.52
18:AS:20:LYS:NZ	18:AS:27:LYS:HD2	2.24	0.52
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:15:PHE:HA	20:AB:42:LEU:HD21	1.91	0.52
20:AB:144:GLU:O	20:AB:148:GLY:HA3	2.09	0.52
23:BB:72:U:H1'	39:BX:51:ALA:CB	2.39	0.52
23:BB:414:C:H2'	23:BB:415:A:H8	1.73	0.52
23:BB:600:G:H2'	23:BB:601:C:C6	2.45	0.52
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.10	0.52
23:BB:1532:A:H2'	23:BB:1532:A:N3	2.25	0.52
23:BB:1637:A:H2'	23:BB:1638:C:C6	2.44	0.52
23:BB:1870:C:H5"	23:BB:1871:A:C6	2.45	0.52
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.45	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.25	0.52
25:BC:134:ILE:O	25:BC:134:ILE:HG13	2.08	0.52
25:BC:222:THR:HA	25:BC:231:HIS:O	2.10	0.52
29:BE:18:THR:HA	29:BE:106:LYS:HD3	1.91	0.52
29:BE:176:ASP:OD1	29:BE:178:VAL:HG12	2.10	0.52
30:BY:2:LYS:HE3	30:BY:58:GLU:HB3	1.91	0.52
30:BY:40:THR:HB	30:BY:43:ILE:HG22	1.91	0.52
37:BL:23:ILE:HD12	37:BL:23:ILE:N	2.24	0.52
45:BS:36:LEU:HD22	45:BS:36:LEU:N	2.24	0.52
46:BU:12:VAL:HG22	46:BU:69:VAL:CG1	2.37	0.52
46:BU:81:ARG:HB2	46:BU:96:LYS:CG	2.39	0.52
47:BF:149:ARG:HA	47:BF:149:ARG:NH1	2.23	0.52
49:BR:20:VAL:HG12	49:BR:21:ARG:H	1.75	0.52
49:BR:40:MET:O	49:BR:41:ILE:HD13	2.10	0.52
50:BT:61:LEU:HD12	50:BT:62:VAL:O	2.09	0.52
1:CA:731:G:H5'	1:CA:766:A:H4'	1.91	0.52
1:CA:777:A:H2'	1:CA:778:G:C8	2.45	0.52
1:CA:1317:C:H3'	1:CA:1318:A:H8	1.75	0.52
3:CD:154:VAL:O	3:CD:158:LEU:HD12	2.09	0.52
3:CD:157:ALA:O	3:CD:160:LEU:HD22	2.09	0.52
4:CE:80:LEU:HA	4:CE:146:MET:HE1	1.90	0.52
6:CG:45:ALA:HB3	6:CG:119:LEU:HD23	1.91	0.52
6:CG:114:SER:O	6:CG:118:ARG:HG3	2.10	0.52
8:CI:24:ASN:HD21	8:CI:26:LYS:HG3	1.74	0.52
12:CM:58:GLU:O	12:CM:61:LYS:HG2	2.09	0.52
13:CN:27:LYS:HA	13:CN:31:SER:HB2	1.91	0.52
22:DA:43:C:H1'	47:DF:91:ARG:NH2	2.25	0.52
22:DA:50:A:OP1	43:DO:68:LYS:HB2	2.10	0.52
23:DB:7:G:H4'	41:DJ:15:TRP:CH2	2.43	0.52
23:DB:82:U:H2'	23:DB:83:A:O4'	2.10	0.52
23:DB:132:G:H2'	23:DB:133:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:151:C:H2'	23:DB:152:A:C8	2.44	0.52
23:DB:276:U:O2	23:DB:362:A:N1	2.43	0.52
23:DB:278:A:OP2	23:DB:278:A:H3'	2.08	0.52
23:DB:336:C:O2'	23:DB:337:C:H5'	2.09	0.52
23:DB:934:U:H2'	23:DB:935:C:H6	1.73	0.52
23:DB:962:G:H21	23:DB:2250:G:H22	1.57	0.52
23:DB:1577:C:H2'	23:DB:1578:U:O4'	2.10	0.52
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.73	0.52
23:DB:1820:U:OP1	25:DC:176:ARG:HD2	2.10	0.52
23:DB:2746:U:H5"	48:DG:137:LYS:HG3	1.92	0.52
23:DB:2789:C:O2	23:DB:2892:G:H5"	2.10	0.52
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.90	0.52
26:DD:114:LYS:HE3	26:DD:116:LYS:NZ	2.25	0.52
34:D3:50:SER:C	34:D3:52:GLY:H	2.13	0.52
37:DL:141:LYS:NZ	37:DL:143:GLU:HA	2.24	0.52
41:DJ:56:VAL:HG12	41:DJ:57:LEU:H	1.75	0.52
41:DJ:109:LEU:CD1	41:DJ:119:PHE:HB2	2.39	0.52
42:DN:51:LEU:HD11	42:DN:69:ARG:HG3	1.91	0.52
42:DN:79:LEU:HA	42:DN:83:LEU:CD1	2.39	0.52
43:DO:35:ILE:HG22	43:DO:53:THR:HG23	1.90	0.52
44:DQ:57:ARG:HA	44:DQ:60:TRP:CE3	2.44	0.52
47:DF:111:ARG:O	47:DF:112:ASP:HB2	2.09	0.52
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.44	0.52
48:DG:122:ALA:HB2	48:DG:132:LEU:HB3	1.92	0.52
50:DT:54:GLU:CB	50:DT:88:LYS:HB2	2.39	0.52
51:DZ:28:ARG:HG2	51:DZ:28:ARG:O	2.10	0.52
1:AA:377:G:H2'	1:AA:378:G:H8	1.75	0.52
1:AA:674:G:H2'	1:AA:675:A:C8	2.41	0.52
1:AA:1014:A:N3	1:AA:1219:A:H1'	2.24	0.52
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.45	0.52
3:AD:149:LYS:HB2	3:AD:177:MET:HG3	1.92	0.52
6:AG:29:LEU:O	6:AG:29:LEU:HD23	2.10	0.52
12:AM:10:ASP:O	12:AM:11:HIS:HB2	2.09	0.52
12:AM:14:ALA:HB2	12:AM:42:VAL:HG23	1.91	0.52
18:AS:15:LEU:O	18:AS:18:VAL:HG12	2.09	0.52
18:AS:42:ASN:HD22	18:AS:42:ASN:N	2.08	0.52
20:AB:45:THR:HG22	20:AB:49:PHE:CZ	2.44	0.52
20:AB:69:VAL:HB	20:AB:162:VAL:HB	1.91	0.52
23:BB:151:C:H2'	23:BB:152:A:C8	2.44	0.52
23:BB:573:U:N3	23:BB:2031:A:OP1	2.38	0.52
23:BB:704:G:H1'	23:BB:727:A:N6	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1477:A:H2'	23:BB:1478:G:O4'	2.09	0.52
23:BB:1732:C:OP1	23:BB:1732:C:H2'	2.10	0.52
23:BB:1835:G:H2'	23:BB:1836:C:C6	2.44	0.52
23:BB:1994:C:O2'	23:BB:1995:U:H5'	2.10	0.52
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.09	0.52
23:BB:2436:G:O2'	23:BB:2437:G:H5'	2.10	0.52
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.10	0.52
25:BC:107:LYS:O	25:BC:109:LEU:HD22	2.10	0.52
25:BC:116:GLN:O	25:BC:127:ASN:HA	2.10	0.52
38:BM:78:LEU:O	38:BM:80:VAL:HG12	2.10	0.52
39:BX:9:LYS:NZ	39:BX:60:LYS:HE3	2.25	0.52
40:BH:68:ARG:HG3	40:BH:138:VAL:O	2.10	0.52
44:BQ:111:LYS:HZ3	49:BR:50:GLY:HA2	1.75	0.52
46:BU:35:VAL:HB	46:BU:38:ILE:CB	2.40	0.52
47:BF:37:MET:HE1	47:BF:149:ARG:HD2	1.91	0.52
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.73	0.52
48:BG:30:GLY:H	48:BG:78:VAL:HA	1.74	0.52
49:BR:16:GLU:HG2	49:BR:101:ILE:HG13	1.91	0.52
52:BW:77:LYS:O	52:BW:78:PHE:HB2	2.09	0.52
53:B6:67:VAL:HG12	53:B6:99:LEU:O	2.08	0.52
53:B6:83:ILE:HG23	53:B6:90:LEU:HD12	1.91	0.52
1:CA:640:A:O2'	1:CA:641:U:H5'	2.09	0.52
1:CA:696:A:H2'	1:CA:697:U:H6	1.73	0.52
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.10	0.52
1:CA:1521:C:O2'	1:CA:1522:U:H5'	2.10	0.52
3:CD:10:LEU:HB3	3:CD:62:ARG:HD3	1.92	0.52
3:CD:84:ASN:ND2	3:CD:86:GLY:H	2.08	0.52
6:CG:29:LEU:O	6:CG:29:LEU:HD23	2.10	0.52
9:CJ:59:LYS:HB2	9:CJ:62:ARG:NH2	2.25	0.52
17:CR:33:THR:C	17:CR:35:SER:H	2.12	0.52
22:DA:28:C:N4	22:DA:56:G:H1	2.05	0.52
23:DB:222:A:H61	23:DB:232:G:H1'	1.73	0.52
23:DB:272:A:H2'	23:DB:273:G:H8	1.74	0.52
23:DB:642:U:O2	23:DB:644:A:H3'	2.10	0.52
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.45	0.52
23:DB:2033:A:O2'	23:DB:2035:G:OP2	2.26	0.52
23:DB:2105:U:H2'	23:DB:2106:U:O4'	2.10	0.52
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.09	0.52
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.40	0.52
35:DV:29:ILE:HD13	35:DV:31:TYR:CE2	2.44	0.52
37:DL:47:ARG:HG3	37:DL:48:ARG:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:64:ALA:O	40:DH:68:ARG:HG2	2.10	0.52
42:DN:87:PHE:C	42:DN:89:SER:H	2.13	0.52
45:DS:70:LYS:HD3	45:DS:110:ARG:O	2.10	0.52
48:DG:30:GLY:N	48:DG:78:VAL:HA	2.24	0.52
48:DG:154:GLU:OE2	48:DG:156:TYR:HB2	2.09	0.52
1:AA:86:G:C2	1:AA:87:C:N4	2.77	0.52
1:AA:841:C:H2'	1:AA:843:U:OP2	2.10	0.52
1:AA:1069:C:O2'	1:AA:1192:C:H1'	2.09	0.52
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.74	0.52
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.45	0.52
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.09	0.52
3:AD:26:ALA:HA	3:AD:30:LYS:CE	2.40	0.52
5:AF:86:ARG:HH11	17:AR:64:LEU:HD12	1.73	0.52
20:AB:27:LYS:HB3	20:AB:28:PRO:HD3	1.91	0.52
20:AB:107:ARG:HA	20:AB:110:ILE:HD12	1.92	0.52
23:BB:125:A:H5'	36:B2:19:ARG:CG	2.40	0.52
23:BB:969:G:H2'	23:BB:970:U:H6	1.74	0.52
23:BB:1125:G:H4'	32:B4:37:GLN:NE2	2.25	0.52
23:BB:1351:C:H4'	23:BB:1572:A:O4'	2.10	0.52
23:BB:1414:C:H2'	23:BB:1415:U:H6	1.75	0.52
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.45	0.52
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.92	0.52
23:BB:2002:G:OP1	42:BN:13:ASN:HA	2.10	0.52
29:BE:155:GLU:O	29:BE:159:LEU:HB2	2.08	0.52
35:BV:1:MET:O	35:BV:62:THR:HG23	2.09	0.52
35:BV:31:TYR:HB3	35:BV:37:PRO:HG3	1.91	0.52
36:B2:13:ASN:O	36:B2:17:GLY:N	2.43	0.52
37:BL:92:LEU:HD23	37:BL:92:LEU:H	1.74	0.52
37:BL:121:THR:HA	37:BL:141:LYS:HB3	1.91	0.52
47:BF:64:PRO:HA	47:BF:88:VAL:HG21	1.90	0.52
50:BT:1:MET:CG	50:BT:2:ILE:H	2.23	0.52
52:BW:32:ALA:C	52:BW:34:SER:H	2.12	0.52
53:B6:133:ARG:NH1	53:B6:162:GLN:HE22	2.07	0.52
1:CA:502:A:H2'	1:CA:503:C:C6	2.44	0.52
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.45	0.52
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.43	0.52
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.73	0.52
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.40	0.52
10:CK:92:ARG:HH21	21:CU:24:LYS:HG2	1.74	0.52
11:CL:122:LYS:HG3	11:CL:123:ALA:H	1.74	0.52
18:CS:51:HIS:HB2	18:CS:56:HIS:CE1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:187:ASP:H	20:CB:190:SER:HB2	1.75	0.52
23:DB:69:C:O2'	23:DB:70:G:H5'	2.10	0.52
23:DB:126:A:OP2	36:D2:19:ARG:HB2	2.08	0.52
23:DB:372:G:O2'	51:DZ:54:LYS:HE2	2.10	0.52
23:DB:686:U:H1'	36:D2:6:GLN:O	2.10	0.52
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.40	0.52
23:DB:1123:C:O2'	23:DB:1124:G:H5'	2.10	0.52
23:DB:1253:A:H4'	23:DB:1254:A:OP2	2.09	0.52
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.10	0.52
23:DB:1479:G:O2'	23:DB:1480:C:H5'	2.10	0.52
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.75	0.52
23:DB:2354:C:H4'	52:DW:31:LEU:CD2	2.39	0.52
23:DB:2439:A:N7	23:DB:2586:U:H4'	2.25	0.52
23:DB:2548:U:H1'	27:DK:23:LYS:HZ3	1.71	0.52
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.45	0.52
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.92	0.52
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.45	0.52
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.90	0.52
29:DE:149:ILE:HG23	29:DE:188:MET:CA	2.40	0.52
32:D4:15:LYS:O	32:D4:15:LYS:HE2	2.10	0.52
37:DL:95:LEU:HB2	37:DL:101:ILE:CG1	2.40	0.52
40:DH:49:ALA:HB3	40:DH:50:ARG:NH2	2.24	0.52
45:DS:36:LEU:H	45:DS:36:LEU:HD22	1.75	0.52
46:DU:70:ALA:HB1	46:DU:79:ALA:HB3	1.90	0.52
47:DF:33:ILE:O	47:DF:90:LEU:N	2.42	0.52
47:DF:162:ASP:O	47:DF:166:ARG:HD2	2.10	0.52
48:DG:166:GLU:CG	48:DG:168:VAL:HG23	2.39	0.52
49:DR:3:ALA:O	49:DR:4:VAL:HG13	2.09	0.52
49:DR:6:GLN:HE22	49:DR:10:LYS:H	1.55	0.52
53:D6:113:ASP:HA	53:D6:116:ARG:HD3	1.90	0.52
1:AA:392:C:H2'	1:AA:393:A:H8	1.75	0.52
1:AA:621:A:H2'	1:AA:622:A:H8	1.74	0.52
2:AC:82:ASP:O	2:AC:86:LEU:HG	2.10	0.52
5:AF:4:TYR:O	5:AF:63:ASN:HA	2.10	0.52
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.90	0.52
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.92	0.52
11:AL:49:ARG:HD2	11:AL:49:ARG:N	2.24	0.52
12:AM:13:HIS:HB3	12:AM:40:GLU:O	2.09	0.52
18:AS:51:HIS:HB2	18:AS:56:HIS:CE1	2.44	0.52
20:AB:64:GLY:O	20:AB:66:ILE:HG12	2.09	0.52
23:BB:81:G:H2'	23:BB:82:U:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:406:G:O2'	23:BB:407:G:H5'	2.10	0.52
23:BB:920:A:H2'	23:BB:921:C:O4'	2.09	0.52
23:BB:1252:G:N2	44:BQ:32:ARG:HB3	2.24	0.52
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.45	0.52
23:BB:1655:A:H2'	23:BB:1656:C:O4'	2.09	0.52
23:BB:2639:A:H2'	23:BB:2640:G:O4'	2.10	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.74	0.52
26:BD:124:ARG:HA	26:BD:165:MET:HE3	1.90	0.52
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.24	0.52
27:BK:60:ALA:HA	27:BK:87:LEU:CD2	2.39	0.52
29:BE:48:THR:C	29:BE:50:ALA:H	2.12	0.52
29:BE:153:LEU:HG	29:BE:154:ASP:H	1.75	0.52
34:B3:22:LYS:HB2	34:B3:48:MET:SD	2.50	0.52
35:BV:23:ALA:O	35:BV:24:ASN:HB2	2.10	0.52
39:BX:18:LEU:HA	39:BX:21:LEU:HD12	1.91	0.52
48:BG:15:ASP:OD2	48:BG:17:LYS:HB2	2.09	0.52
48:BG:145:ALA:HA	48:BG:148:ARG:CG	2.39	0.52
51:BZ:17:ASN:HD22	51:BZ:25:THR:HB	1.75	0.52
1:CA:223:A:H2'	1:CA:224:U:C6	2.45	0.52
1:CA:227:G:H2'	1:CA:228:A:C8	2.45	0.52
1:CA:590:U:H2'	1:CA:591:U:C6	2.45	0.52
1:CA:1142:G:C2	1:CA:1143:G:H1'	2.44	0.52
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.75	0.52
3:CD:145:ARG:NH2	3:CD:147:LYS:HE2	2.24	0.52
9:CJ:80:THR:HG21	9:CJ:82:LYS:NZ	2.25	0.52
10:CK:70:ALA:C	10:CK:72:ALA:H	2.12	0.52
12:CM:13:HIS:HB3	12:CM:40:GLU:O	2.09	0.52
22:DA:91:C:H2'	22:DA:92:C:C6	2.45	0.52
23:DB:175:G:O2'	23:DB:176:A:H5'	2.10	0.52
23:DB:713:G:O2'	23:DB:714:U:H5'	2.10	0.52
23:DB:996:A:H4'	44:DQ:91:ARG:HH11	1.73	0.52
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.75	0.52
23:DB:2226:C:H2'	23:DB:2227:A:H8	1.74	0.52
23:DB:2286:G:C8	23:DB:2286:G:H5'	2.45	0.52
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.58	0.52
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.73	0.52
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.24	0.52
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.10	0.52
25:DC:15:VAL:HG22	25:DC:204:LEU:O	2.10	0.52
25:DC:226:PRO:HA	25:DC:232:GLY:HA3	1.92	0.52
37:DL:93:ASN:O	37:DL:95:LEU:N	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:28:LEU:HD23	42:DN:113:ILE:HG23	1.90	0.52
44:DQ:34:ALA:O	44:DQ:38:VAL:HG23	2.09	0.52
45:DS:55:ILE:HD12	45:DS:69:LEU:HD23	1.91	0.52
47:DF:56:LEU:HD22	47:DF:59:ILE:HD12	1.92	0.52
47:DF:64:PRO:HA	47:DF:88:VAL:HG21	1.92	0.52
47:DF:169:LEU:HD22	47:DF:174:PHE:CE1	2.44	0.52
48:DG:38:ASP:CG	48:DG:39:ALA:H	2.13	0.52
50:DT:45:ALA:O	50:DT:48:GLN:HB2	2.10	0.52
52:DW:77:LYS:O	52:DW:78:PHE:HB2	2.10	0.52
1:AA:1250:A:H4'	8:AI:69:GLY:N	2.25	0.52
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.11	0.52
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.09	0.52
3:AD:94:GLU:HA	3:AD:99:ASN:ND2	2.24	0.52
6:AG:50:ALA:HB2	6:AG:57:GLU:HG3	1.90	0.52
8:AI:67:LYS:HB2	8:AI:67:LYS:NZ	2.22	0.52
11:AL:34:THR:HG21	11:AL:53:ARG:HH21	1.75	0.52
23:BB:75:G:H4'	39:BX:48:ARG:NH2	2.25	0.52
23:BB:141:G:C6	50:BT:2:ILE:HD12	2.44	0.52
23:BB:236:C:O2'	23:BB:237:C:H5'	2.10	0.52
23:BB:732:C:O2'	23:BB:733:G:H5'	2.10	0.52
23:BB:978:G:O2'	23:BB:979:A:H5'	2.10	0.52
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.10	0.52
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.43	0.52
25:BC:181:ARG:HD3	25:BC:182:LYS:H	1.74	0.52
26:BD:114:LYS:HE3	26:BD:116:LYS:NZ	2.25	0.52
26:BD:121:THR:C	26:BD:123:LYS:H	2.14	0.52
27:BK:35:VAL:CG2	27:BK:36:GLY:H	2.07	0.52
27:BK:107:LEU:C	27:BK:109:SER:H	2.13	0.52
35:BV:16:ALA:HA	35:BV:19:ARG:HE	1.74	0.52
37:BL:41:ARG:HH21	37:BL:41:ARG:HG2	1.75	0.52
37:BL:47:ARG:CB	37:BL:47:ARG:HH21	2.23	0.52
37:BL:124:GLY:H	37:BL:143:GLU:HG3	1.75	0.52
37:BL:125:LEU:H	37:BL:143:GLU:HG3	1.74	0.52
39:BX:17:GLU:HB3	39:BX:53:VAL:CG1	2.39	0.52
44:BQ:86:SER:O	44:BQ:88:GLU:N	2.42	0.52
47:BF:31:GLU:O	47:BF:32:LYS:HD3	2.10	0.52
48:BG:30:GLY:N	48:BG:78:VAL:HA	2.25	0.52
50:BT:36:LYS:O	50:BT:36:LYS:HD3	2.09	0.52
50:BT:54:GLU:CB	50:BT:88:LYS:HB2	2.40	0.52
53:B6:126:ARG:O	53:B6:130:ARG:HG2	2.10	0.52
1:CA:410:G:H2'	1:CA:429:U:C5	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:410:G:P	3:CD:25:ARG:HE	2.33	0.52
1:CA:764:C:O2'	1:CA:765:G:H5'	2.10	0.52
1:CA:810:C:O2'	1:CA:811:C:H5'	2.10	0.52
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.45	0.52
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.75	0.52
1:CA:1250:A:H4'	8:CI:69:GLY:N	2.24	0.52
4:CE:110:MET:SD	4:CE:126:ALA:HB2	2.50	0.52
5:CF:6:ILE:HD11	5:CF:8:PHE:CD2	2.45	0.52
5:CF:85:ILE:HG22	5:CF:86:ARG:H	1.75	0.52
10:CK:22:ILE:HD13	10:CK:95:THR:HG21	1.91	0.52
20:CB:68:PHE:CD1	20:CB:83:ALA:HB2	2.44	0.52
23:DB:165:A:H2'	23:DB:166:U:C6	2.44	0.52
23:DB:364:C:H2'	23:DB:365:U:C6	2.44	0.52
23:DB:533:G:H2'	23:DB:534:U:C6	2.45	0.52
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.75	0.52
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.45	0.52
23:DB:1714:U:H3'	23:DB:1715:G:H5'	1.91	0.52
23:DB:2671:G:H2'	23:DB:2672:U:H6	1.74	0.52
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.09	0.52
25:DC:141:HIS:HB3	25:DC:190:THR:HG1	1.74	0.52
27:DK:60:ALA:HA	27:DK:87:LEU:CD2	2.39	0.52
29:DE:153:LEU:HG	29:DE:154:ASP:H	1.75	0.52
35:DV:51:GLN:NE2	35:DV:79:ARG:HH22	2.07	0.52
40:DH:8:LYS:O	40:DH:13:GLY:HA3	2.10	0.52
51:DZ:30:LEU:N	51:DZ:30:LEU:HD23	2.25	0.52
51:DZ:38:PHE:CE2	51:DZ:51:VAL:HG21	2.45	0.52
53:D6:110:ARG:HB3	53:D6:110:ARG:NH1	2.21	0.52
1:AA:215:C:H2'	1:AA:216:U:H6	1.73	0.52
1:AA:312:C:H2'	1:AA:313:A:C8	2.45	0.52
1:AA:614:C:O2'	1:AA:615:G:H5'	2.10	0.52
1:AA:642:A:H2'	1:AA:643:C:H6	1.75	0.52
1:AA:724:G:O2'	1:AA:725:G:H5'	2.10	0.52
1:AA:1514:G:H2'	1:AA:1515:G:H8	1.74	0.52
9:AJ:59:LYS:HB2	9:AJ:62:ARG:NH2	2.24	0.52
15:AP:72:ALA:HA	15:AP:75:ILE:HD12	1.92	0.52
16:AQ:59:GLU:O	16:AQ:74:LEU:HD22	2.10	0.52
17:AR:31:TYR:CG	17:AR:54:LEU:HD11	2.44	0.52
18:AS:29:PRO:HA	18:AS:47:THR:O	2.10	0.52
20:AB:18:GLN:HB2	20:AB:188:THR:OG1	2.10	0.52
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.92	0.52
23:BB:41:C:H2'	23:BB:42:A:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:167:A:H2'	23:BB:168:G:O4'	2.10	0.52
23:BB:925:A:O2'	23:BB:926:G:H5'	2.09	0.52
23:BB:1059:G:N2	24:BI:130:GLY:HA3	2.25	0.52
23:BB:1236:G:H1'	23:BB:1237:A:C8	2.44	0.52
23:BB:1445:G:H2'	23:BB:1446:C:C6	2.44	0.52
23:BB:1465:G:H2'	23:BB:1466:U:C6	2.45	0.52
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.45	0.52
23:BB:1724:G:H2'	23:BB:1725:U:C6	2.45	0.52
23:BB:1767:G:O2'	23:BB:1768:C:H5'	2.09	0.52
34:B3:15:LYS:HA	34:B3:21:PHE:HA	1.92	0.52
37:BL:95:LEU:HD13	37:BL:101:ILE:HG13	1.92	0.52
37:BL:141:LYS:NZ	37:BL:143:GLU:HA	2.24	0.52
38:BM:2:LEU:CD2	38:BM:46:ILE:HD11	2.39	0.52
44:BQ:40:LYS:HD2	44:BQ:44:TYR:CE1	2.44	0.52
44:BQ:94:LEU:HG	49:BR:11:GLN:HE21	1.75	0.52
45:BS:47:VAL:HG12	45:BS:103:ILE:CG2	2.40	0.52
49:BR:14:VAL:HG21	49:BR:98:ILE:HG12	1.92	0.52
50:BT:67:VAL:HG23	50:BT:75:GLY:O	2.10	0.52
51:BZ:30:LEU:HD23	51:BZ:30:LEU:N	2.25	0.52
53:B6:10:THR:HG22	53:B6:14:MET:HE3	1.92	0.52
1:CA:363:A:P	11:CL:57:THR:HG21	2.50	0.52
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.45	0.52
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.73	0.52
2:CC:84:GLU:OE2	2:CC:87:ARG:HD3	2.10	0.52
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.10	0.52
14:CO:35:GLN:O	14:CO:39:LEU:HD13	2.09	0.52
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.25	0.52
20:CB:15:PHE:HA	20:CB:42:LEU:HD11	1.90	0.52
20:CB:40:ILE:HG21	20:CB:200:PRO:O	2.09	0.52
23:DB:135:U:H2'	23:DB:136:G:H8	1.74	0.52
23:DB:358:U:H2'	23:DB:359:G:C8	2.45	0.52
23:DB:547:A:C6	23:DB:548:G:H1'	2.45	0.52
23:DB:582:A:H2'	23:DB:583:G:C8	2.45	0.52
23:DB:920:A:H2'	23:DB:921:C:O4'	2.09	0.52
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.09	0.52
23:DB:1613:G:H2'	23:DB:1617:C:H42	1.74	0.52
23:DB:1825:U:H2'	23:DB:1826:G:C8	2.45	0.52
23:DB:1859:U:H2'	23:DB:1860:G:H8	1.75	0.52
23:DB:2100:G:H3'	23:DB:2101:A:H8	1.75	0.52
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.45	0.52
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.40	0.52
34:D3:41:ARG:HG3	34:D3:44:ARG:NH2	2.25	0.52
35:DV:23:ALA:O	35:DV:24:ASN:HB2	2.10	0.52
37:DL:136:GLU:HA	37:DL:140:GLY:H	1.74	0.52
38:DM:4:PRO:HG3	38:DM:68:PHE:HE2	1.74	0.52
38:DM:18:ARG:C	38:DM:38:ARG:HH22	2.13	0.52
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.18	0.52
42:DN:54:LEU:CD1	42:DN:62:ASN:HB3	2.40	0.52
43:DO:28:VAL:O	43:DO:28:VAL:HG13	2.10	0.52
45:DS:36:LEU:HD22	45:DS:36:LEU:N	2.25	0.52
45:DS:72:THR:CG2	45:DS:108:SER:HB3	2.40	0.52
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.92	0.51
1:AA:1243:C:H2'	1:AA:1244:G:H8	1.75	0.51
1:AA:1523:G:O2'	1:AA:1524:C:H5'	2.10	0.51
2:AC:131:ARG:HG2	2:AC:131:ARG:NH1	2.25	0.51
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.25	0.51
8:AI:66:VAL:HG11	8:AI:78:ILE:HD11	1.93	0.51
10:AK:35:ASP:OD1	10:AK:37:GLN:HB2	2.09	0.51
18:AS:79:TYR:CE1	18:AS:80:ARG:HG3	2.45	0.51
20:AB:68:PHE:HA	20:AB:161:PHE:O	2.10	0.51
22:BA:13:G:H1'	22:BA:69:G:N2	2.25	0.51
23:BB:125:A:H3'	23:BB:126:A:H5'	1.91	0.51
23:BB:464:U:H2'	23:BB:465:G:O4'	2.10	0.51
23:BB:955:U:OP1	38:BM:86:LYS:HE3	2.10	0.51
23:BB:1526:C:O2'	23:BB:1527:G:H5'	2.10	0.51
23:BB:2590:A:H2'	23:BB:2591:C:H6	1.76	0.51
26:BD:104:VAL:HA	26:BD:106:LYS:HZ3	1.75	0.51
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.10	0.51
45:BS:13:SER:OG	45:BS:16:LYS:HB2	2.11	0.51
48:BG:34:ARG:HG2	48:BG:34:ARG:NH1	2.24	0.51
49:BR:68:ARG:NH2	49:BR:90:ARG:HB2	2.25	0.51
1:CA:558:G:C8	1:CA:559:A:H2'	2.46	0.51
1:CA:737:C:H2'	1:CA:738:C:C6	2.44	0.51
1:CA:852:G:H2'	1:CA:853:C:H6	1.73	0.51
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.92	0.51
2:CC:78:LYS:HG3	2:CC:81:GLU:HB2	1.92	0.51
3:CD:29:THR:HG22	3:CD:30:LYS:N	2.24	0.51
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	1.90	0.51
11:CL:107:LYS:H	11:CL:107:LYS:HZ2	1.57	0.51
19:CT:78:LEU:O	19:CT:82:ILE:HG23	2.09	0.51
20:CB:25:LYS:HD3	20:CB:193:ASP:OD1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:360:U:H2'	23:DB:361:G:C8	2.45	0.51
23:DB:589:U:H2'	23:DB:590:A:C8	2.45	0.51
23:DB:864:G:O2'	23:DB:865:C:H5'	2.11	0.51
23:DB:877:A:O2'	23:DB:878:A:H5'	2.10	0.51
23:DB:925:A:O2'	23:DB:926:G:H5'	2.10	0.51
23:DB:1098:A:C4	24:DI:3:LYS:O	2.63	0.51
23:DB:1150:C:O2'	23:DB:1151:A:H5'	2.10	0.51
23:DB:1332:G:H2'	23:DB:1332:G:N3	2.24	0.51
23:DB:1652:A:OP1	42:DN:8:ARG:HD3	2.10	0.51
23:DB:1724:G:H2'	23:DB:1725:U:C6	2.46	0.51
23:DB:2253:G:H22	53:D6:152:ASP:CG	2.13	0.51
23:DB:2604:U:O2'	23:DB:2605:U:H5'	2.11	0.51
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.75	0.51
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.31	0.51
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.50	0.51
26:DD:32:ASN:HA	26:DD:51:THR:O	2.09	0.51
26:DD:40:LEU:HD12	26:DD:41:ALA:N	2.24	0.51
26:DD:106:LYS:HB3	26:DD:206:ALA:CB	2.39	0.51
29:DE:69:ARG:O	29:DE:70:SER:CB	2.56	0.51
42:DN:34:ILE:O	42:DN:112:TYR:HA	2.09	0.51
44:DQ:91:ARG:HB2	44:DQ:94:LEU:HD23	1.92	0.51
47:DF:43:ILE:HG13	47:DF:44:ALA:N	2.26	0.51
47:DF:46:LYS:O	47:DF:49:LEU:HB3	2.09	0.51
48:DG:173:ALA:HB3	48:DG:175:LYS:NZ	2.25	0.51
1:AA:67:C:H4'	1:AA:172:A:C4'	2.40	0.51
1:AA:369:G:O2'	1:AA:370:C:H5'	2.10	0.51
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.75	0.51
2:AC:46:LEU:HB3	2:AC:49:ALA:CB	2.39	0.51
3:AD:173:ASP:CB	3:AD:178:GLU:HB2	2.36	0.51
16:AQ:30:HIS:CG	16:AQ:33:TYR:HB2	2.45	0.51
20:AB:69:VAL:O	20:AB:163:ILE:HG22	2.10	0.51
20:AB:95:TRP:CH2	20:AB:100:LEU:HB2	2.42	0.51
23:BB:189:G:H2'	23:BB:205:G:H22	1.75	0.51
23:BB:642:U:O2	23:BB:644:A:H3'	2.09	0.51
23:BB:946:C:H2'	23:BB:947:A:C8	2.45	0.51
23:BB:1577:C:H2'	23:BB:1578:U:O4'	2.10	0.51
23:BB:1809:A:H2'	23:BB:1810:A:C8	2.45	0.51
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.45	0.51
23:BB:1827:U:C2'	23:BB:1828:G:H5'	2.41	0.51
23:BB:1998:A:H2'	23:BB:1999:C:H6	1.75	0.51
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2734:A:N6	23:BB:2770:G:H1'	2.24	0.51
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.75	0.51
26:BD:168:GLU:O	26:BD:170:VAL:HG22	2.09	0.51
27:BK:88:ASN:ND2	27:BK:88:ASN:C	2.61	0.51
29:BE:29:HIS:CD2	37:BL:8:PRO:HA	2.44	0.51
35:BV:63:ILE:HD12	35:BV:63:ILE:N	2.23	0.51
37:BL:95:LEU:HA	37:BL:98:ALA:HB3	1.90	0.51
37:BL:136:GLU:HA	37:BL:140:GLY:H	1.74	0.51
40:BH:78:VAL:HG21	40:BH:142:VAL:CG1	2.36	0.51
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.92	0.51
42:BN:28:LEU:HD23	42:BN:113:ILE:HG23	1.92	0.51
45:BS:36:LEU:H	45:BS:36:LEU:CD2	2.22	0.51
47:BF:46:LYS:O	47:BF:49:LEU:HB3	2.10	0.51
47:BF:174:PHE:HB3	47:BF:176:PHE:CD1	2.45	0.51
1:CA:106:C:H2'	1:CA:107:G:H8	1.74	0.51
1:CA:237:G:H2'	1:CA:238:A:C8	2.45	0.51
1:CA:337:G:H2'	1:CA:338:A:H8	1.71	0.51
1:CA:546:A:P	3:CD:68:GLU:HB3	2.51	0.51
1:CA:724:G:O2'	1:CA:725:G:H5'	2.10	0.51
1:CA:833:G:H2'	1:CA:834:U:C6	2.45	0.51
1:CA:1014:A:C2	1:CA:1219:A:H1'	2.46	0.51
1:CA:1086:U:H2'	1:CA:1087:G:H8	1.74	0.51
1:CA:1310:G:O2'	1:CA:1311:A:H5'	2.10	0.51
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.10	0.51
8:CI:123:ARG:HB3	8:CI:123:ARG:CZ	2.39	0.51
21:CU:46:ARG:O	21:CU:49:ALA:HB3	2.10	0.51
22:DA:49:C:H2'	22:DA:50:A:C8	2.46	0.51
23:DB:99:U:H5'	23:DB:99:U:O2	2.09	0.51
23:DB:127:A:C8	36:D2:46:LYS:HE2	2.46	0.51
23:DB:560:C:H2'	23:DB:561:G:O4'	2.10	0.51
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.09	0.51
23:DB:1234:U:H2'	23:DB:1235:G:O4'	2.11	0.51
23:DB:1287:A:H3'	23:DB:1288:G:H21	1.74	0.51
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.45	0.51
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.74	0.51
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.09	0.51
23:DB:2359:C:O2'	23:DB:2360:G:H5'	2.10	0.51
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.45	0.51
23:DB:2889:C:O2'	23:DB:2890:G:H5'	2.10	0.51
26:DD:4:LEU:HD12	26:DD:32:ASN:HB2	1.92	0.51
26:DD:133:THR:HG23	26:DD:134:HIS:CD2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:18:HIS:CD2	33:D1:40:PRO:HD2	2.45	0.51
38:DM:31:PHE:HB3	38:DM:130:PHE:CZ	2.46	0.51
43:DO:68:LYS:HA	43:DO:102:ARG:HG2	1.90	0.51
46:DU:82:VAL:HG13	46:DU:93:ARG:HB3	1.91	0.51
1:AA:31:G:N7	1:AA:306:A:H1'	2.26	0.51
1:AA:239:U:H6	1:AA:239:U:C5'	2.24	0.51
1:AA:320:A:H2'	1:AA:321:A:H8	1.74	0.51
1:AA:560:A:H5'	1:AA:566:G:N2	2.25	0.51
1:AA:878:A:H5"	7:AH:80:PRO:HG2	1.91	0.51
1:AA:1007:U:H2'	1:AA:1008:U:H6	1.74	0.51
1:AA:1048:G:H4'	13:AN:2:LYS:HZ1	1.73	0.51
2:AC:139:ASN:O	2:AC:143:LEU:HD23	2.11	0.51
3:AD:154:VAL:O	3:AD:158:LEU:HD12	2.10	0.51
5:AF:15:SER:HA	5:AF:18:VAL:HG23	1.91	0.51
10:AK:23:HIS:O	10:AK:29:THR:HA	2.10	0.51
10:AK:70:ALA:C	10:AK:72:ALA:H	2.13	0.51
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	1.92	0.51
14:AO:85:LEU:HD12	14:AO:85:LEU:N	2.24	0.51
20:AB:65:LYS:HA	20:AB:89:PHE:HE1	1.76	0.51
21:AU:19:LYS:HD3	21:AU:20:ARG:HH21	1.75	0.51
22:BA:28:C:N4	22:BA:56:G:H1	2.05	0.51
22:BA:101:A:H2'	22:BA:102:G:O4'	2.11	0.51
23:BB:363:G:H2'	23:BB:364:C:C6	2.46	0.51
23:BB:477:A:H2'	23:BB:478:A:C8	2.45	0.51
23:BB:909:A:H2'	23:BB:912:C:C5	2.45	0.51
23:BB:1180:U:O2'	23:BB:1181:U:H5'	2.10	0.51
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.09	0.51
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.46	0.51
23:BB:2773:C:H5"	26:BD:169:ARG:HB2	1.91	0.51
40:BH:78:VAL:H	40:BH:143:ILE:HD11	1.75	0.51
44:BQ:57:ARG:HA	44:BQ:60:TRP:CE3	2.45	0.51
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.10	0.51
46:BU:32:LYS:HA	46:BU:65:GLN:HA	1.92	0.51
47:BF:7:TYR:OH	47:BF:29:ARG:HG3	2.10	0.51
47:BF:32:LYS:HA	47:BF:95:MET:SD	2.50	0.51
50:BT:62:VAL:HG12	50:BT:63:VAL:N	2.26	0.51
1:CA:49:U:O2'	1:CA:50:A:H2'	2.10	0.51
1:CA:83:C:H1'	1:CA:84:U:C6	2.45	0.51
1:CA:131:A:H2'	1:CA:132:C:C6	2.45	0.51
1:CA:190:A:O5'	1:CA:190:A:H8	1.93	0.51
1:CA:882:C:O2'	1:CA:883:C:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:930:C:H2'	1:CA:931:C:H6	1.76	0.51
1:CA:1461:G:O2'	1:CA:1462:C:H5'	2.11	0.51
5:CF:7:VAL:HG11	17:CR:64:LEU:HD21	1.92	0.51
7:CH:49:LYS:O	7:CH:59:GLU:N	2.43	0.51
8:CI:113:LYS:HA	8:CI:120:ALA:HB2	1.92	0.51
11:CL:52:CYS:SG	11:CL:66:ILE:HD11	2.50	0.51
11:CL:109:ARG:HH21	11:CL:112:ALA:HB3	1.75	0.51
12:CM:10:ASP:O	12:CM:11:HIS:HB2	2.10	0.51
16:CQ:59:GLU:O	16:CQ:74:LEU:HD22	2.10	0.51
16:CQ:60:ILE:HD13	16:CQ:60:ILE:H	1.76	0.51
17:CR:19:GLU:HG3	17:CR:54:LEU:HD12	1.92	0.51
18:CS:69:LYS:O	18:CS:72:GLU:HG2	2.11	0.51
20:CB:27:LYS:HB3	20:CB:28:PRO:HD3	1.91	0.51
23:DB:755:U:H2'	23:DB:756:A:C8	2.46	0.51
23:DB:945:A:H3'	23:DB:946:C:H5"	1.91	0.51
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.10	0.51
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.45	0.51
23:DB:2356:U:C5'	52:DW:16:GLU:HG3	2.40	0.51
23:DB:2358:A:H2'	23:DB:2359:C:C6	2.46	0.51
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.10	0.51
25:DC:204:LEU:HD23	25:DC:209:ALA:CB	2.40	0.51
29:DE:173:THR:C	29:DE:175:ILE:H	2.13	0.51
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.41	0.51
40:DH:73:ASN:CG	40:DH:140:ALA:HB1	2.31	0.51
40:DH:126:GLY:N	40:DH:146:VAL:HB	2.26	0.51
48:DG:85:LYS:HA	48:DG:131:VAL:HG12	1.92	0.51
50:DT:43:ILE:O	50:DT:46:ALA:HB3	2.11	0.51
50:DT:54:GLU:HG3	50:DT:89:GLU:H	1.75	0.51
52:DW:36:ILE:HB	52:DW:39:GLN:NE2	2.24	0.51
52:DW:43:LYS:HB3	52:DW:58:LEU:CD1	2.40	0.51
1:AA:539:A:H2'	1:AA:540:G:H8	1.75	0.51
1:AA:852:G:H2'	1:AA:853:C:C6	2.46	0.51
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.11	0.51
8:AI:36:GLN:N	8:AI:36:GLN:HE21	2.09	0.51
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	1.91	0.51
10:AK:63:GLN:HG3	10:AK:98:ALA:HB2	1.93	0.51
11:AL:79:ILE:HD12	11:AL:96:THR:HG22	1.93	0.51
13:AN:9:GLU:OE2	13:AN:60:ARG:HG2	2.10	0.51
18:AS:28:LYS:HB2	18:AS:29:PRO:HD2	1.93	0.51
23:BB:82:U:H2'	23:BB:83:A:O4'	2.10	0.51
23:BB:152:A:H2'	23:BB:153:U:H6	1.71	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:873:C:H2'	23:BB:874:G:C8	2.44	0.51
23:BB:1063:G:H4'	24:BI:135:MET:CB	2.40	0.51
23:BB:1833:C:O2'	23:BB:1834:U:H5'	2.10	0.51
23:BB:2457:U:O2'	23:BB:2458:G:H5'	2.10	0.51
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.59	0.51
26:BD:148:GLN:HG3	26:BD:152:PRO:CG	2.41	0.51
28:BP:52:ARG:HG2	28:BP:52:ARG:NH1	2.25	0.51
29:BE:149:ILE:HG23	29:BE:188:MET:CA	2.40	0.51
29:BE:158:PHE:HA	29:BE:169:VAL:CG2	2.41	0.51
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.64	0.51
45:BS:81:SER:HB3	45:BS:99:ARG:HB3	1.93	0.51
1:CA:552:U:H2'	1:CA:553:A:C8	2.46	0.51
1:CA:614:C:O2'	1:CA:615:G:H5'	2.10	0.51
1:CA:645:G:O2'	1:CA:646:G:H5'	2.11	0.51
1:CA:719:C:H1'	17:CR:37:LYS:HB2	1.92	0.51
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.75	0.51
1:CA:1283:U:O2'	1:CA:1284:C:H5'	2.11	0.51
3:CD:164:ARG:HH11	3:CD:164:ARG:HG2	1.75	0.51
20:CB:14:HIS:CD2	20:CB:202:ASN:H	2.29	0.51
20:CB:70:GLY:HA3	20:CB:79:VAL:HG21	1.92	0.51
23:DB:165:A:H2'	23:DB:166:U:H6	1.76	0.51
23:DB:587:C:N3	37:DL:33:ARG:NH2	2.58	0.51
23:DB:672:C:O2'	23:DB:673:C:H5'	2.11	0.51
23:DB:969:G:H2'	23:DB:970:U:C6	2.45	0.51
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.46	0.51
23:DB:2135:A:O2'	23:DB:2136:G:H5'	2.11	0.51
23:DB:2226:C:H2'	23:DB:2227:A:C8	2.46	0.51
23:DB:2674:G:H4'	27:DK:30:ARG:HG3	1.91	0.51
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.40	0.51
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.40	0.51
25:DC:42:ARG:HD2	25:DC:48:ILE:HG12	1.91	0.51
25:DC:91:ALA:HB3	25:DC:105:ALA:HB2	1.92	0.51
26:DD:121:THR:C	26:DD:123:LYS:H	2.14	0.51
26:DD:168:GLU:O	26:DD:170:VAL:HG13	2.09	0.51
30:DY:40:THR:HB	30:DY:43:ILE:HG22	1.92	0.51
37:DL:23:ILE:HD12	37:DL:23:ILE:N	2.25	0.51
38:DM:19:GLY:N	38:DM:38:ARG:NH2	2.58	0.51
40:DH:1:MET:HB3	40:DH:21:VAL:O	2.10	0.51
43:DO:2:ASP:OD2	43:DO:4:LYS:HB3	2.10	0.51
43:DO:81:ARG:HD3	43:DO:81:ARG:H	1.75	0.51
47:DF:131:VAL:HG22	47:DF:151:LEU:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:177:ARG:NE	47:DF:177:ARG:HA	2.26	0.51
51:DZ:63:GLY:O	51:DZ:67:VAL:HG23	2.09	0.51
1:AA:312:C:H2'	1:AA:313:A:H8	1.76	0.51
1:AA:734:G:O2'	17:AR:59:LYS:HD3	2.11	0.51
1:AA:790:A:H2'	1:AA:791:G:C8	2.46	0.51
1:AA:1013:G:H2'	1:AA:1015:G:OP2	2.11	0.51
5:AF:6:ILE:HD11	5:AF:8:PHE:CD2	2.45	0.51
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	1.92	0.51
17:AR:21:ASP:OD1	17:AR:23:LYS:HD2	2.10	0.51
20:AB:15:PHE:HD1	20:AB:16:GLY:N	2.08	0.51
22:BA:50:A:OP1	43:BO:68:LYS:HB2	2.11	0.51
22:BA:87:U:H2'	22:BA:88:C:H5"	1.93	0.51
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.75	0.51
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.46	0.51
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.46	0.51
23:BB:1499:C:H2'	23:BB:1500:G:H8	1.75	0.51
23:BB:1513:U:H2'	23:BB:1514:G:C8	2.45	0.51
23:BB:1551:A:H2'	23:BB:1552:A:O4'	2.11	0.51
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.39	0.51
23:BB:2671:G:H2'	23:BB:2672:U:H6	1.75	0.51
23:BB:2846:G:H2'	23:BB:2847:U:C6	2.46	0.51
26:BD:107:VAL:HG12	26:BD:109:VAL:HG23	1.91	0.51
27:BK:2:ILE:HG23	27:BK:33:ALA:O	2.11	0.51
27:BK:7:MET:SD	27:BK:20:MET:HB2	2.51	0.51
31:B0:25:THR:O	31:B0:26:SER:HB3	2.09	0.51
39:BX:56:LEU:O	39:BX:57:LEU:HB3	2.11	0.51
40:BH:73:ASN:ND2	40:BH:74:ALA:N	2.58	0.51
41:BJ:59:ALA:C	41:BJ:61:LYS:H	2.13	0.51
47:BF:33:ILE:O	47:BF:90:LEU:N	2.43	0.51
47:BF:133:GLU:HA	47:BF:150:GLY:CA	2.40	0.51
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.10	0.51
48:BG:106:LEU:O	48:BG:108:PHE:HD1	1.94	0.51
49:BR:31:GLU:O	49:BR:63:VAL:HG22	2.11	0.51
51:BZ:38:PHE:CE2	51:BZ:51:VAL:HG21	2.44	0.51
51:BZ:45:ARG:HE	51:BZ:47:VAL:CG1	2.23	0.51
1:CA:31:G:N7	1:CA:306:A:H1'	2.26	0.51
1:CA:448:A:H2'	1:CA:449:G:C8	2.46	0.51
1:CA:1048:G:H5"	13:CN:2:LYS:HD2	1.93	0.51
1:CA:1102:A:H2'	1:CA:1103:C:C6	2.46	0.51
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.11	0.51
1:CA:1220:G:H21	18:CS:53:GLY:HA2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.46	0.51
2:CC:183:TYR:HE1	2:CC:198:LYS:HB3	1.75	0.51
3:CD:96:ARG:O	3:CD:100:VAL:HG23	2.10	0.51
4:CE:17:VAL:HG23	4:CE:33:THR:O	2.11	0.51
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.93	0.51
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.26	0.51
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.91	0.51
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.41	0.51
14:CO:50:HIS:O	14:CO:53:ARG:HB3	2.10	0.51
14:CO:85:LEU:HD12	14:CO:85:LEU:N	2.25	0.51
16:CQ:16:MET:HB3	16:CQ:19:SER:HB2	1.91	0.51
16:CQ:28:VAL:HG12	16:CQ:37:ILE:O	2.11	0.51
19:CT:42:ASP:HA	19:CT:43:LYS:NZ	2.25	0.51
20:CB:64:GLY:O	20:CB:66:ILE:HG12	2.09	0.51
23:DB:103:A:H3'	23:DB:104:A:H8	1.75	0.51
23:DB:150:U:H2'	23:DB:151:C:C6	2.45	0.51
23:DB:528:A:C2	23:DB:2042:A:H2'	2.45	0.51
23:DB:1009:A:P	41:DJ:39:LYS:HZ2	2.33	0.51
23:DB:1045:C:H4'	23:DB:1046:A:H5"	1.91	0.51
23:DB:1050:A:H2'	23:DB:1051:G:O4'	2.11	0.51
23:DB:1805:A:N3	25:DC:49:THR:CG2	2.74	0.51
23:DB:1965:C:H5"	23:DB:1966:A:H2'	1.93	0.51
23:DB:2002:G:OP1	42:DN:13:ASN:HA	2.10	0.51
23:DB:2217:G:O2'	23:DB:2218:G:H5'	2.11	0.51
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.46	0.51
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.10	0.51
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.74	0.51
25:DC:86:ARG:HB3	25:DC:86:ARG:CZ	2.41	0.51
25:DC:259:ASN:C	25:DC:261:ARG:H	2.13	0.51
37:DL:41:ARG:HG2	37:DL:41:ARG:HH21	1.75	0.51
37:DL:124:GLY:N	37:DL:143:GLU:CG	2.72	0.51
39:DX:18:LEU:HD12	39:DX:22:LEU:HD22	1.92	0.51
40:DH:125:THR:HG22	40:DH:146:VAL:HG12	1.92	0.51
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.40	0.51
44:DQ:93:ILE:O	44:DQ:96:ASP:HB3	2.10	0.51
46:DU:27:VAL:CG2	46:DU:33:VAL:HG12	2.36	0.51
53:D6:14:MET:CE	53:D6:165:THR:HA	2.40	0.51
1:AA:885:G:O2'	1:AA:886:G:H5'	2.11	0.51
1:AA:1041:G:O2'	1:AA:1042:A:H5'	2.11	0.51
2:AC:113:LYS:HE3	2:AC:117:ASP:OD1	2.11	0.51
2:AC:149:LYS:HB2	2:AC:168:ARG:HG3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:80:LEU:HA	4:AE:146:MET:HE1	1.90	0.51
5:AF:85:ILE:HG22	5:AF:86:ARG:H	1.75	0.51
20:AB:87:ASP:HB2	20:AB:224:ARG:CZ	2.40	0.51
22:BA:83:G:OP1	30:BY:16:LEU:HD21	2.11	0.51
23:BB:45:G:H5'	23:BB:46:G:OP1	2.10	0.51
23:BB:132:G:H2'	23:BB:133:U:C6	2.46	0.51
23:BB:217:A:H2'	23:BB:218:A:O4'	2.11	0.51
23:BB:242:G:H5"	34:B3:63:TYR:CE2	2.45	0.51
23:BB:587:C:N3	37:BL:33:ARG:NH2	2.59	0.51
23:BB:626:A:H2'	37:BL:78:ARG:NH1	2.26	0.51
23:BB:1234:U:O2'	23:BB:1235:G:H5'	2.11	0.51
23:BB:1339:G:N2	23:BB:1603:A:H1'	2.26	0.51
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.46	0.51
23:BB:1779:U:C5	23:BB:1784:A:N7	2.78	0.51
23:BB:2038:G:H2'	23:BB:2039:U:C6	2.46	0.51
23:BB:2104:C:H2'	23:BB:2105:U:H6	1.76	0.51
23:BB:2594:C:O2'	23:BB:2595:G:H5'	2.11	0.51
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.10	0.51
25:BC:259:ASN:C	25:BC:261:ARG:H	2.14	0.51
26:BD:46:ARG:HH12	26:BD:88:GLU:HG3	1.75	0.51
27:BK:42:THR:O	27:BK:44:LYS:HG2	2.11	0.51
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	1.92	0.51
31:B0:32:THR:OG1	31:B0:50:GLY:HA2	2.11	0.51
39:BX:18:LEU:HD12	39:BX:22:LEU:HD22	1.93	0.51
40:BH:62:LEU:HD12	40:BH:62:LEU:N	2.25	0.51
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	2.10	0.51
51:BZ:18:ARG:HA	51:BZ:23:ASN:O	2.10	0.51
52:BW:66:VAL:HA	52:BW:81:ILE:HG22	1.93	0.51
1:CA:358:U:H2'	1:CA:359:G:H8	1.76	0.51
2:CC:86:LEU:O	2:CC:90:VAL:HG23	2.11	0.51
3:CD:11:SER:HA	3:CD:18:LEU:CD2	2.41	0.51
4:CE:87:VAL:HG22	4:CE:88:HIS:N	2.25	0.51
6:CG:41:ILE:HG21	6:CG:115:MET:CG	2.41	0.51
11:CL:49:ARG:N	11:CL:49:ARG:HD2	2.26	0.51
20:CB:10:LYS:O	20:CB:13:VAL:HG23	2.10	0.51
20:CB:18:GLN:HB2	20:CB:188:THR:OG1	2.11	0.51
22:DA:6:G:H2'	22:DA:7:G:H8	1.76	0.51
23:DB:5:A:H2'	23:DB:6:A:H8	1.76	0.51
23:DB:81:G:H2'	23:DB:82:U:O4'	2.10	0.51
23:DB:191:A:H2'	23:DB:192:C:H6	1.73	0.51
23:DB:538:A:H2'	23:DB:539:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:753:A:H2'	23:DB:754:U:H6	1.73	0.51
23:DB:852:U:H2'	23:DB:853:C:C6	2.45	0.51
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.24	0.51
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.11	0.51
23:DB:1403:A:O2'	23:DB:1404:C:H5'	2.10	0.51
23:DB:2221:G:O2'	23:DB:2222:C:H5'	2.11	0.51
23:DB:2331:G:O2'	23:DB:2332:C:H5'	2.11	0.51
23:DB:2366:A:H2'	23:DB:2367:G:O4'	2.10	0.51
23:DB:2455:G:O2'	23:DB:2456:C:H5'	2.11	0.51
24:DI:116:MET:HE1	24:DI:128:ILE:HG13	1.93	0.51
28:DP:4:ILE:O	28:DP:6:GLN:N	2.42	0.51
29:DE:98:LYS:HG2	29:DE:99:LYS:N	2.25	0.51
33:D1:3:GLY:C	33:D1:5:ARG:H	2.13	0.51
34:D3:15:LYS:HA	34:D3:21:PHE:HA	1.91	0.51
41:DJ:114:LEU:O	41:DJ:117:ALA:HB3	2.11	0.51
43:DO:26:LEU:HD13	43:DO:39:VAL:HG23	1.92	0.51
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.40	0.51
52:DW:49:ASN:HB2	52:DW:61:LYS:N	2.24	0.51
53:D6:150:SER:O	53:D6:154:THR:HG23	2.10	0.51
1:AA:279:A:C5'	1:AA:280:C:H3'	2.40	0.51
1:AA:777:A:H2'	1:AA:778:G:H8	1.75	0.51
1:AA:1014:A:C2	1:AA:1219:A:H1'	2.45	0.51
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.75	0.51
2:AC:140:ALA:HB3	2:AC:148:ILE:HD12	1.93	0.51
3:AD:10:LEU:HB3	3:AD:62:ARG:HD3	1.91	0.51
3:AD:145:ARG:HB3	3:AD:147:LYS:HD2	1.93	0.51
8:AI:7:GLY:HA3	8:AI:81:GLY:O	2.11	0.51
8:AI:64:ILE:HD12	8:AI:64:ILE:N	2.25	0.51
14:AO:62:GLN:O	14:AO:66:LEU:HD23	2.11	0.51
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.26	0.51
21:AU:46:ARG:O	21:AU:49:ALA:HB3	2.10	0.51
22:BA:32:U:H4'	22:BA:52:A:H62	1.76	0.51
23:BB:636:G:H3'	37:BL:128:THR:HG21	1.93	0.51
23:BB:857:G:H2'	23:BB:858:G:H5'	1.91	0.51
23:BB:1197:G:O2'	23:BB:1198:U:H5'	2.11	0.51
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.45	0.51
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.76	0.51
23:BB:1669:A:O3'	23:BB:2549:G:H5'	2.10	0.51
23:BB:2147:A:H5'	23:BB:2148:G:C4'	2.40	0.51
23:BB:2359:C:O2'	23:BB:2360:G:H5'	2.11	0.51
23:BB:2843:G:O2'	23:BB:2844:G:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.73	0.51
25:BC:43:ASN:ND2	25:BC:44:ASN:N	2.55	0.51
27:BK:109:SER:HB2	27:BK:111:LYS:HG2	1.93	0.51
28:BP:31:VAL:CG1	28:BP:38:ARG:HG3	2.41	0.51
30:BY:16:LEU:H	30:BY:16:LEU:CD2	2.13	0.51
32:B4:5:ALA:HA	32:B4:37:GLN:HE21	1.76	0.51
33:B1:8:ILE:HD12	33:B1:51:ALA:HA	1.92	0.51
41:BJ:72:LYS:CB	41:BJ:89:PHE:H	2.24	0.51
41:BJ:88:THR:HG22	41:BJ:91:GLU:HG3	1.92	0.51
42:BN:54:LEU:HD11	42:BN:62:ASN:HB3	1.92	0.51
43:BO:66:GLY:HA2	43:BO:102:ARG:NE	2.25	0.51
46:BU:70:ALA:HB1	46:BU:79:ALA:HB3	1.91	0.51
47:BF:40:GLY:HA2	47:BF:84:ILE:CG2	2.40	0.51
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.10	0.51
48:BG:122:ALA:HB2	48:BG:132:LEU:HB3	1.92	0.51
49:BR:74:ILE:HB	49:BR:87:GLN:O	2.11	0.51
50:BT:54:GLU:HG3	50:BT:89:GLU:H	1.75	0.51
51:BZ:6:GLN:HE21	51:BZ:50:ARG:H	1.57	0.51
1:CA:598:U:H2'	1:CA:599:C:C6	2.45	0.51
1:CA:885:G:O2'	1:CA:886:G:H5'	2.11	0.51
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.10	0.51
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.46	0.51
1:CA:1392:G:H2'	1:CA:1393:U:C6	2.45	0.51
6:CG:86:VAL:HG13	6:CG:151:ALA:O	2.11	0.51
10:CK:77:GLY:O	10:CK:79:LYS:HE3	2.11	0.51
12:CM:56:ARG:O	12:CM:59:VAL:HG12	2.11	0.51
18:CS:28:LYS:HB2	18:CS:29:PRO:HD2	1.93	0.51
22:DA:32:U:C4'	22:DA:52:A:H62	2.23	0.51
23:DB:160:A:H2'	23:DB:161:A:C8	2.46	0.51
23:DB:195:A:H61	23:DB:198:C:H3'	1.76	0.51
23:DB:279:A:H2'	23:DB:280:U:H5'	1.91	0.51
23:DB:640:C:H2'	23:DB:641:U:C6	2.46	0.51
23:DB:673:C:H2'	23:DB:674:G:H5'	1.91	0.51
23:DB:951:C:O2'	23:DB:952:G:H5'	2.10	0.51
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.46	0.51
23:DB:1241:A:H2'	23:DB:1242:U:C5'	2.41	0.51
23:DB:1856:U:H2'	23:DB:1857:G:H5'	1.91	0.51
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.75	0.51
23:DB:2457:U:C2'	23:DB:2458:G:H5'	2.41	0.51
23:DB:2880:C:C1'	42:DN:91:ALA:HB3	2.41	0.51
25:DC:15:VAL:HA	25:DC:203:VAL:HG12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:92:LEU:HD23	37:DL:92:LEU:H	1.75	0.51
38:DM:96:ILE:HD11	38:DM:126:ILE:HG12	1.93	0.51
45:DS:36:LEU:H	45:DS:36:LEU:CD2	2.23	0.51
47:DF:10:GLU:O	47:DF:13:LYS:HG3	2.11	0.51
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.74	0.51
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.11	0.51
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.76	0.51
49:DR:20:VAL:HG12	49:DR:21:ARG:H	1.76	0.51
53:D6:15:GLN:HA	53:D6:168:PHE:HE2	1.75	0.51
1:AA:358:U:H2'	1:AA:359:G:C8	2.45	0.51
1:AA:425:G:H2'	1:AA:426:U:C6	2.46	0.51
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.76	0.51
1:AA:1399:C:H1'	57:AA:1973:HOH:O	2.11	0.51
1:AA:1491:G:H3'	55:AA:1661:PAR:O31	2.11	0.51
2:AC:84:GLU:OE2	2:AC:87:ARG:HD3	2.10	0.51
3:AD:113:ALA:O	3:AD:116:LEU:HB2	2.11	0.51
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.41	0.51
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.25	0.51
6:AG:119:LEU:O	6:AG:123:LEU:HG	2.11	0.51
13:AN:63:CYS:HB3	13:AN:67:GLY:N	2.26	0.51
20:AB:38:HIS:O	20:AB:39:ILE:HD13	2.11	0.51
23:BB:165:A:H2'	23:BB:166:U:C6	2.46	0.51
23:BB:263:G:H2'	23:BB:264:C:O4'	2.11	0.51
23:BB:538:A:H2'	23:BB:539:G:O4'	2.10	0.51
23:BB:663:G:OP1	37:BL:17:LYS:HG2	2.11	0.51
23:BB:673:C:C4'	29:BE:77:ILE:HD11	2.40	0.51
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.11	0.51
23:BB:1773:A:N7	23:BB:1829:A:H1'	2.26	0.51
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.46	0.51
23:BB:2366:A:H2'	23:BB:2367:G:O4'	2.11	0.51
23:BB:2547:A:H5'	23:BB:2566:A:C2	2.46	0.51
23:BB:2605:U:H2'	23:BB:2606:C:C5	2.46	0.51
23:BB:2674:G:H4'	27:BK:30:ARG:HG3	1.92	0.51
29:BE:98:LYS:HG2	29:BE:99:LYS:N	2.25	0.51
30:BY:7:THR:HG23	30:BY:34:THR:OG1	2.11	0.51
33:B1:49:LYS:HG3	33:B1:50:GLU:N	2.20	0.51
35:BV:51:GLN:NE2	35:BV:79:ARG:HH22	2.09	0.51
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	1.92	0.51
42:BN:106:ASP:C	42:BN:108:ALA:H	2.13	0.51
42:BN:108:ALA:O	42:BN:110:MET:HE3	2.10	0.51
44:BQ:30:VAL:CG1	44:BQ:31:TYR:N	2.65	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:12:VAL:O	47:BF:16:MET:HG2	2.10	0.51
47:BF:137:PHE:O	47:BF:139:GLU:N	2.43	0.51
50:BT:41:ALA:C	50:BT:43:ILE:H	2.12	0.51
53:B6:4:LYS:HA	53:B6:7:TYR:CD2	2.46	0.51
53:B6:71:TRP:HA	53:B6:71:TRP:CE3	2.45	0.51
53:B6:81:LYS:O	53:B6:84:ARG:HG2	2.10	0.51
1:CA:66:A:H4'	1:CA:173:U:C4	2.46	0.51
1:CA:129:A:H1'	1:CA:130:A:C8	2.46	0.51
1:CA:233:C:O2'	1:CA:234:C:H5'	2.11	0.51
1:CA:238:A:C2'	1:CA:239:U:H5"	2.39	0.51
1:CA:764:C:N4	1:CA:812:G:N1	2.59	0.51
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.77	0.51
6:CG:58:LEU:HA	6:CG:61:PHE:HB3	1.93	0.51
6:CG:121:ASN:N	6:CG:121:ASN:HD22	2.07	0.51
8:CI:11:ARG:HA	8:CI:105:ARG:NH1	2.26	0.51
8:CI:22:PRO:HA	8:CI:60:LEU:HB3	1.93	0.51
10:CK:51:PHE:CZ	10:CK:61:ALA:HA	2.46	0.51
14:CO:16:GLY:HA2	14:CO:27:VAL:HG22	1.92	0.51
20:CB:69:VAL:HG12	20:CB:168:GLU:HG3	1.92	0.51
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.92	0.51
22:DA:91:C:H2'	22:DA:92:C:H6	1.76	0.51
23:DB:863:A:H2'	23:DB:864:G:H8	1.75	0.51
23:DB:1445:G:H2'	23:DB:1446:C:C6	2.46	0.51
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.11	0.51
23:DB:1789:A:H2'	23:DB:1790:C:C6	2.46	0.51
23:DB:1793:C:H2'	23:DB:1794:A:H8	1.76	0.51
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.11	0.51
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.55	0.51
24:DI:10:LEU:HD12	24:DI:10:LEU:O	2.10	0.51
27:DK:25:LEU:HD13	27:DK:38:ILE:HG22	1.93	0.51
27:DK:105:ARG:HD2	27:DK:122:VAL:CG1	2.40	0.51
37:DL:47:ARG:CB	37:DL:47:ARG:HH21	2.23	0.51
38:DM:17:ASN:ND2	38:DM:95:LEU:HG	2.14	0.51
40:DH:135:HIS:CG	40:DH:136:SER:H	2.28	0.51
43:DO:52:SER:OG	43:DO:54:VAL:HG12	2.11	0.51
44:DQ:59:LEU:HD13	44:DQ:60:TRP:N	2.25	0.51
49:DR:34:GLU:OE1	49:DR:60:LYS:HE2	2.11	0.51
50:DT:41:ALA:C	50:DT:43:ILE:H	2.13	0.51
53:D6:137:LEU:O	53:D6:140:LEU:HB3	2.11	0.51
1:AA:399:G:H2'	1:AA:400:C:H6	1.76	0.51
1:AA:437:U:H4'	3:AD:153:ARG:NH1	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:635:A:H2'	1:AA:636:U:C6	2.46	0.51
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.76	0.51
8:AI:79:ARG:NH2	8:AI:102:PHE:HA	2.26	0.51
9:AJ:76:ILE:HD12	9:AJ:76:ILE:O	2.11	0.51
10:AK:88:PRO:HD3	21:AU:28:LEU:CD1	2.41	0.51
13:AN:30:ILE:CG2	13:AN:41:TRP:HB2	2.40	0.51
19:AT:68:LYS:HE2	19:AT:68:LYS:HA	1.91	0.51
23:BB:91:A:H1'	23:BB:92:U:C6	2.46	0.51
23:BB:702:U:H2'	23:BB:703:U:C6	2.46	0.51
23:BB:740:C:O2'	23:BB:741:U:H5'	2.10	0.51
23:BB:853:C:H2'	23:BB:854:C:H6	1.75	0.51
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.11	0.51
23:BB:1439:A:N7	23:BB:1440:U:C2	2.79	0.51
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.11	0.51
23:BB:2226:C:H2'	23:BB:2227:A:H8	1.75	0.51
23:BB:2355:G:H4'	52:BW:20:LEU:CD1	2.41	0.51
23:BB:2789:C:O2	23:BB:2892:G:H5"	2.10	0.51
26:BD:104:VAL:O	26:BD:177:VAL:HG21	2.10	0.51
28:BP:113:LEU:HD23	28:BP:113:LEU:O	2.11	0.51
29:BE:11:ALA:O	29:BE:12:LEU:HD22	2.11	0.51
40:BH:4:ILE:HG22	40:BH:17:ASP:H	1.75	0.51
40:BH:5:LEU:HD13	40:BH:13:GLY:CA	2.38	0.51
40:BH:128:HIS:NE2	40:BH:130:VAL:HG13	2.26	0.51
41:BJ:89:PHE:CE1	41:BJ:93:ILE:HD13	2.46	0.51
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.10	0.51
42:BN:102:PHE:N	42:BN:109:PRO:HA	2.24	0.51
45:BS:13:SER:OG	45:BS:14:ALA:N	2.40	0.51
46:BU:82:VAL:HG13	46:BU:93:ARG:HB3	1.91	0.51
47:BF:141:ASP:HB2	47:BF:144:LYS:HB2	1.92	0.51
48:BG:148:ARG:HB2	48:BG:152:ARG:HH21	1.74	0.51
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.25	0.51
52:BW:43:LYS:HB3	52:BW:58:LEU:CD1	2.40	0.51
53:B6:14:MET:SD	53:B6:129:ILE:HG23	2.51	0.51
53:B6:104:PRO:HB2	53:B6:105:PRO:CD	2.40	0.51
1:CA:89:U:H2'	1:CA:90:C:O4'	2.11	0.51
1:CA:97:G:H2'	1:CA:98:A:O4'	2.09	0.51
1:CA:833:G:H2'	1:CA:834:U:H6	1.75	0.51
1:CA:930:C:H2'	1:CA:931:C:C6	2.46	0.51
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.46	0.51
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.92	0.51
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:47:GLU:OE1	6:CG:57:GLU:HG2	2.11	0.51
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.10	0.51
11:CL:34:THR:HG21	11:CL:53:ARG:HH21	1.76	0.51
18:CS:28:LYS:HD2	18:CS:28:LYS:H	1.76	0.51
20:CB:16:GLY:HA2	20:CB:40:ILE:CG1	2.41	0.51
20:CB:22:TRP:HA	20:CB:188:THR:HB	1.92	0.51
22:DA:103:U:O2'	22:DA:104:A:H5'	2.11	0.51
23:DB:26:G:H1'	23:DB:514:A:N6	2.26	0.51
23:DB:569:U:H2'	23:DB:570:G:O4'	2.11	0.51
23:DB:840:C:H2'	23:DB:841:G:H8	1.75	0.51
23:DB:909:A:H2'	23:DB:912:C:C5	2.46	0.51
23:DB:917:A:C2	23:DB:918:A:H1'	2.45	0.51
23:DB:973:A:H1'	23:DB:1188:U:C5	2.46	0.51
23:DB:2461:A:N1	23:DB:2490:G:N2	2.59	0.51
26:DD:104:VAL:O	26:DD:177:VAL:HG21	2.11	0.51
29:DE:48:THR:C	29:DE:50:ALA:H	2.14	0.51
44:DQ:91:ARG:HH21	44:DQ:94:LEU:HD21	1.75	0.51
45:DS:26:GLY:O	45:DS:28:LYS:N	2.44	0.51
46:DU:81:ARG:HB2	46:DU:96:LYS:CG	2.41	0.51
47:DF:79:ARG:HE	47:DF:79:ARG:N	2.09	0.51
48:DG:9:VAL:HA	48:DG:48:THR:CG2	2.41	0.51
50:DT:23:ALA:C	50:DT:25:GLU:H	2.15	0.51
53:D6:70:SER:HB3	53:D6:76:LEU:HD21	1.92	0.51
1:AA:256:U:H3'	1:AA:257:G:H8	1.75	0.51
1:AA:405:U:O4	3:AD:1:ALA:HA	2.11	0.51
1:AA:598:U:H2'	1:AA:599:C:C6	2.46	0.51
1:AA:599:C:H5"	7:AH:86:LYS:O	2.10	0.51
1:AA:692:U:C2	1:AA:694:A:H5"	2.45	0.51
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.76	0.51
2:AC:63:ILE:HD12	2:AC:98:ALA:CB	2.31	0.51
3:AD:145:ARG:NH2	3:AD:147:LYS:HE2	2.26	0.51
9:AJ:26:VAL:HG12	9:AJ:30:LYS:HE2	1.92	0.51
20:AB:57:ASN:HA	20:AB:60:ALA:HB3	1.92	0.51
23:BB:76:C:O2'	23:BB:77:G:H5'	2.11	0.51
23:BB:615:U:O4	29:BE:39:ALA:HB2	2.11	0.51
23:BB:856:G:C1'	52:BW:23:LYS:HB3	2.40	0.51
23:BB:951:C:O2'	23:BB:952:G:H5'	2.11	0.51
23:BB:1868:C:H2'	23:BB:1869:G:O4'	2.11	0.51
23:BB:2147:A:H5'	23:BB:2148:G:O4'	2.11	0.51
23:BB:2356:U:C5'	52:BW:16:GLU:HG3	2.39	0.51
23:BB:2756:U:H1'	23:BB:2757:A:H5"	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:4:ILE:O	28:BP:6:GLN:N	2.41	0.51
35:BV:53:LYS:HA	35:BV:53:LYS:HZ3	1.75	0.51
38:BM:17:ASN:ND2	38:BM:95:LEU:HG	2.16	0.51
40:BH:94:ILE:HG23	40:BH:99:ILE:HD11	1.92	0.51
42:BN:49:GLU:HA	42:BN:94:TYR:HD2	1.76	0.51
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.10	0.51
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.24	0.51
48:BG:174:LYS:HZ2	48:BG:176:LYS:HG2	1.76	0.51
49:BR:78:ARG:HH21	49:BR:78:ARG:HG3	1.76	0.51
1:CA:236:A:H2'	1:CA:237:G:H8	1.76	0.51
1:CA:465:A:H5'	1:CA:465:A:N3	2.25	0.51
1:CA:801:U:O2'	1:CA:802:A:H5'	2.11	0.51
1:CA:803:G:H2'	1:CA:804:U:C6	2.46	0.51
1:CA:857:C:H2'	1:CA:858:G:O4'	2.11	0.51
1:CA:1069:C:O2'	1:CA:1192:C:H1'	2.10	0.51
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.10	0.51
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.76	0.51
3:CD:169:TRP:NE1	3:CD:170:LEU:HD23	2.25	0.51
6:CG:59:GLU:O	6:CG:63:VAL:HG23	2.10	0.51
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.92	0.51
9:CJ:92:LEU:HD22	9:CJ:92:LEU:N	2.25	0.51
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.26	0.51
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.93	0.51
20:CB:107:ARG:HA	20:CB:110:ILE:HD12	1.92	0.51
23:DB:657:U:H2'	23:DB:658:U:C6	2.46	0.51
23:DB:663:G:OP1	37:DL:17:LYS:HG2	2.11	0.51
23:DB:1351:C:H2'	23:DB:1352:U:C1'	2.41	0.51
23:DB:1372:U:O2'	23:DB:1373:A:H5'	2.11	0.51
23:DB:1732:C:H2'	23:DB:1732:C:OP1	2.11	0.51
23:DB:1999:C:O2'	23:DB:2000:C:H5'	2.11	0.51
24:DI:54:ILE:HD13	24:DI:54:ILE:C	2.31	0.51
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.51	0.51
26:DD:29:VAL:O	26:DD:185:ASN:HB3	2.10	0.51
26:DD:138:LEU:N	26:DD:138:LEU:HD22	2.26	0.51
38:DM:32:GLY:HA2	38:DM:117:PHE:CZ	2.46	0.51
40:DH:131:SER:HA	40:DH:141:LYS:HA	1.93	0.51
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.11	0.51
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.31	0.51
42:DN:106:ASP:C	42:DN:108:ALA:H	2.13	0.51
42:DN:108:ALA:O	42:DN:110:MET:HE3	2.11	0.51
44:DQ:83:LYS:HZ1	44:DQ:87:VAL:HA	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:90:LYS:HB3	46:DU:92:VAL:HG23	1.93	0.51
51:DZ:45:ARG:HE	51:DZ:47:VAL:CG1	2.24	0.51
1:AA:87:C:H2'	1:AA:88:U:H4'	1.92	0.50
1:AA:719:C:H1'	17:AR:37:LYS:HB2	1.94	0.50
1:AA:1392:G:H2'	1:AA:1393:U:C6	2.45	0.50
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.11	0.50
10:AK:34:THR:HB	10:AK:40:ALA:CA	2.38	0.50
23:BB:289:G:H2'	23:BB:290:U:O4'	2.11	0.50
23:BB:528:A:C2	23:BB:2042:A:H2'	2.45	0.50
23:BB:569:U:H2'	23:BB:570:G:O4'	2.11	0.50
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.46	0.50
23:BB:2415:G:H4'	37:BL:66:PHE:HB2	1.93	0.50
25:BC:129:LEU:HB3	25:BC:134:ILE:HG22	1.92	0.50
25:BC:183:VAL:HG22	25:BC:184:GLU:H	1.76	0.50
33:B1:40:PRO:O	33:B1:43:ARG:HG2	2.10	0.50
35:BV:2:PHE:HD2	35:BV:59:GLU:OE1	1.94	0.50
35:BV:9:ARG:HH21	35:BV:12:GLN:HA	1.73	0.50
40:BH:90:LEU:HD13	40:BH:124:THR:O	2.12	0.50
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.32	0.50
42:BN:83:LEU:HD12	42:BN:84:GLY:N	2.27	0.50
48:BG:26:LYS:HA	48:BG:32:LEU:H	1.74	0.50
49:BR:39:LEU:CB	49:BR:49:ILE:HG12	2.41	0.50
49:BR:40:MET:HG3	49:BR:48:LYS:HA	1.92	0.50
53:B6:72:ASP:HB3	53:B6:75:ALA:CB	2.41	0.50
1:CA:617:G:H4'	15:CP:46:LYS:HE2	1.93	0.50
1:CA:946:A:H2'	1:CA:947:G:H8	1.72	0.50
1:CA:992:U:H1'	1:CA:993:G:C2	2.46	0.50
1:CA:1014:A:N3	1:CA:1219:A:H1'	2.26	0.50
6:CG:30:MET:HG2	6:CG:31:VAL:N	2.25	0.50
6:CG:109:LYS:HE2	6:CG:109:LYS:HA	1.92	0.50
12:CM:42:VAL:HB	12:CM:47:LEU:HD21	1.93	0.50
12:CM:44:ILE:HD12	12:CM:45:SER:H	1.76	0.50
12:CM:100:ARG:HH11	12:CM:103:THR:HB	1.76	0.50
22:DA:33:G:O2'	22:DA:34:A:H5'	2.10	0.50
23:DB:1060:U:O2	23:DB:1088:A:C8	2.63	0.50
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.46	0.50
23:DB:1754:A:N1	23:DB:2716:C:O2'	2.43	0.50
23:DB:1952:A:C2	27:DK:22:ILE:HD12	2.45	0.50
23:DB:1998:A:H2'	23:DB:1999:C:H6	1.76	0.50
23:DB:2365:G:O2'	52:DW:59:PHE:HE1	1.94	0.50
23:DB:2393:U:C5'	37:DL:62:PRO:HG3	2.35	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2605:U:H2'	23:DB:2606:C:C5	2.46	0.50
24:DI:126:ARG:HB3	24:DI:126:ARG:NH1	2.25	0.50
26:DD:168:GLU:O	26:DD:170:VAL:HG22	2.10	0.50
39:DX:7:ARG:HB2	39:DX:7:ARG:HH11	1.75	0.50
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CE1	2.46	0.50
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.10	0.50
48:DG:22:VAL:HG13	48:DG:36:LEU:HD13	1.93	0.50
48:DG:42:VAL:HG23	48:DG:50:THR:O	2.11	0.50
50:DT:5:GLU:CA	50:DT:8:LEU:HB2	2.22	0.50
53:D6:84:ARG:CZ	53:D6:92:PRO:HG2	2.41	0.50
1:AA:6:G:H3'	1:AA:6:G:N3	2.26	0.50
1:AA:251:G:N3	1:AA:266:G:O6	2.44	0.50
1:AA:254:G:O2'	1:AA:255:G:H5'	2.11	0.50
1:AA:284:C:H2'	1:AA:285:C:C6	2.46	0.50
1:AA:560:A:H4'	1:AA:561:U:H5"	1.92	0.50
1:AA:580:C:H2'	1:AA:581:G:O4'	2.12	0.50
1:AA:1058:G:OP1	2:AC:198:LYS:HE3	2.10	0.50
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.46	0.50
1:AA:1078:U:H2'	1:AA:1079:G:O4'	2.11	0.50
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.11	0.50
1:AA:1277:C:O2'	1:AA:1279:G:H1'	2.12	0.50
6:AG:49:LEU:HD12	6:AG:124:SER:OG	2.12	0.50
7:AH:40:LYS:HA	7:AH:45:ILE:HG13	1.94	0.50
7:AH:58:LEU:CD2	7:AH:60:LEU:HB2	2.41	0.50
8:AI:56:MET:SD	8:AI:57:VAL:N	2.83	0.50
8:AI:123:ARG:HB3	8:AI:123:ARG:CZ	2.41	0.50
20:AB:98:GLY:O	20:AB:102:ASN:N	2.44	0.50
23:BB:15:G:O2'	23:BB:16:C:H5'	2.11	0.50
23:BB:150:U:H2'	23:BB:151:C:C6	2.45	0.50
23:BB:438:G:H2'	23:BB:439:A:H8	1.76	0.50
23:BB:533:G:H5'	44:BQ:23:TYR:CD2	2.46	0.50
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.75	0.50
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.75	0.50
23:BB:1258:U:C4'	29:BE:79:ARG:HD2	2.41	0.50
23:BB:1268:A:H2'	23:BB:1269:A:O4'	2.10	0.50
23:BB:1368:G:H2'	23:BB:1369:G:H8	1.77	0.50
23:BB:1438:U:H2'	23:BB:1439:A:O4'	2.11	0.50
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.76	0.50
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.46	0.50
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.75	0.50
23:BB:2460:U:H2'	23:BB:2461:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:104:VAL:HG13	26:BD:106:LYS:HE2	1.94	0.50
26:BD:168:GLU:O	26:BD:170:VAL:HG13	2.12	0.50
29:BE:58:LYS:HE2	29:BE:60:TRP:CD1	2.46	0.50
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.31	0.50
38:BM:19:GLY:CA	38:BM:97:GLN:HB2	2.39	0.50
40:BH:100:ALA:HA	40:BH:103:VAL:CG2	2.42	0.50
42:BN:32:GLU:HB3	42:BN:115:LEU:HG	1.92	0.50
43:BO:36:TYR:N	43:BO:36:TYR:HD2	2.09	0.50
46:BU:41:VAL:O	46:BU:42:LYS:HB2	2.11	0.50
49:BR:2:TYR:HB2	49:BR:42:ALA:N	2.26	0.50
53:B6:83:ILE:HG13	53:B6:92:PRO:HD2	1.92	0.50
1:CA:256:U:H3'	1:CA:257:G:H8	1.74	0.50
1:CA:434:U:H3'	1:CA:435:A:H8	1.74	0.50
1:CA:841:C:H2'	1:CA:843:U:OP2	2.11	0.50
1:CA:886:G:O2'	1:CA:887:G:H5'	2.11	0.50
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.76	0.50
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.11	0.50
1:CA:1225:A:H3'	1:CA:1226:C:H6	1.73	0.50
10:CK:52:ARG:NH1	10:CK:53:GLY:H	2.07	0.50
17:CR:31:TYR:CD1	17:CR:54:LEU:HD11	2.46	0.50
18:CS:66:VAL:HG23	18:CS:67:GLY:H	1.76	0.50
20:CB:15:PHE:HD1	20:CB:16:GLY:N	2.09	0.50
20:CB:216:VAL:O	20:CB:220:VAL:HG23	2.11	0.50
22:DA:109:A:H2'	22:DA:110:C:H6	1.75	0.50
23:DB:41:C:H2'	23:DB:42:A:O4'	2.11	0.50
23:DB:660:C:H2'	23:DB:661:A:C8	2.45	0.50
23:DB:724:U:H2'	23:DB:725:G:O4'	2.12	0.50
23:DB:963:U:O2'	23:DB:964:C:H5'	2.10	0.50
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.11	0.50
23:DB:1773:A:N7	23:DB:1829:A:H1'	2.26	0.50
23:DB:2247:A:H2'	23:DB:2248:C:H6	1.77	0.50
23:DB:2333:A:H5'	23:DB:2335:A:H1'	1.92	0.50
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.35	0.50
23:DB:2645:G:H4'	23:DB:2732:G:H2'	1.94	0.50
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.52	0.50
25:DC:107:LYS:O	25:DC:109:LEU:HD22	2.11	0.50
28:DP:52:ARG:HG2	28:DP:52:ARG:NH1	2.25	0.50
29:DE:105:LEU:HA	29:DE:108:ILE:CG2	2.41	0.50
29:DE:158:PHE:HA	29:DE:169:VAL:CG2	2.41	0.50
41:DJ:9:GLU:CD	41:DJ:9:GLU:H	2.15	0.50
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:86:SER:O	44:DQ:88:GLU:N	2.43	0.50
45:DS:81:SER:HB3	45:DS:99:ARG:HB3	1.93	0.50
49:DR:31:GLU:O	49:DR:63:VAL:HG22	2.11	0.50
51:DZ:18:ARG:HA	51:DZ:23:ASN:O	2.12	0.50
53:D6:39:LEU:CA	53:D6:52:LEU:HB3	2.40	0.50
1:AA:532:A:C8	2:AC:192:TYR:HD2	2.29	0.50
1:AA:986:U:H2'	1:AA:987:G:O4'	2.12	0.50
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.12	0.50
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.26	0.50
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.12	0.50
5:AF:70:VAL:HG23	5:AF:71:ILE:H	1.76	0.50
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.93	0.50
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.11	0.50
20:AB:70:GLY:HA3	20:AB:79:VAL:HG21	1.94	0.50
22:BA:106:G:H2'	22:BA:107:G:C8	2.46	0.50
23:BB:126:A:O2'	23:BB:127:A:H5'	2.12	0.50
23:BB:132:G:O2'	23:BB:133:U:H5'	2.11	0.50
23:BB:660:C:H2'	23:BB:661:A:H8	1.76	0.50
23:BB:864:G:O2'	23:BB:865:C:H5'	2.12	0.50
23:BB:945:A:OP2	23:BB:945:A:H4'	2.11	0.50
23:BB:1332:G:N3	23:BB:1332:G:H2'	2.25	0.50
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.11	0.50
23:BB:2269:G:H4'	52:BW:19:ARG:HH11	1.74	0.50
25:BC:245:THR:OG1	25:BC:249:VAL:HG23	2.11	0.50
26:BD:9:VAL:O	26:BD:9:VAL:HG13	2.10	0.50
26:BD:39:ASP:HB3	26:BD:42:ASN:HB3	1.92	0.50
28:BP:52:ARG:HB2	28:BP:55:HIS:O	2.10	0.50
31:B0:30:ASP:OD2	31:B0:31:LYS:HD2	2.11	0.50
31:B0:42:ILE:HD11	42:BN:98:LEU:HB3	1.92	0.50
34:B3:36:ALA:O	34:B3:39:ARG:HB3	2.11	0.50
40:BH:111:ALA:HB3	40:BH:114:GLU:CG	2.41	0.50
42:BN:72:ASP:OD2	42:BN:74:GLU:HB3	2.11	0.50
43:BO:76:LYS:HG3	43:BO:113:ALA:CB	2.41	0.50
48:BG:30:GLY:HA3	48:BG:78:VAL:HG12	1.91	0.50
51:BZ:76:GLU:HG3	51:BZ:77:LYS:N	2.25	0.50
53:B6:58:VAL:HG13	53:B6:68:VAL:HA	1.93	0.50
1:CA:45:G:H2'	1:CA:46:G:C8	2.45	0.50
1:CA:376:G:H2'	1:CA:377:G:H8	1.76	0.50
1:CA:411:A:H62	1:CA:413:G:N2	1.99	0.50
1:CA:521:G:O2'	1:CA:522:C:H5'	2.12	0.50
1:CA:966:G:H2'	1:CA:967:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1289:A:H2'	1:CA:1290:G:H5'	1.93	0.50
3:CD:10:LEU:HD12	3:CD:20:LEU:CD1	2.42	0.50
5:CF:15:SER:HA	5:CF:18:VAL:HG23	1.93	0.50
7:CH:11:THR:HA	7:CH:14:ARG:CZ	2.41	0.50
19:CT:50:PHE:HD2	19:CT:78:LEU:HD13	1.76	0.50
20:CB:19:THR:OG1	20:CB:20:ARG:N	2.45	0.50
20:CB:45:THR:HG22	20:CB:49:PHE:CZ	2.47	0.50
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.47	0.50
23:DB:2254:C:H1'	53:D6:151:GLU:HB2	1.92	0.50
23:DB:2594:C:O2'	23:DB:2595:G:H5'	2.10	0.50
23:DB:2734:A:N6	23:DB:2770:G:H1'	2.26	0.50
23:DB:2789:C:H3'	23:DB:2893:A:H62	1.75	0.50
38:DM:19:GLY:CA	38:DM:97:GLN:HB2	2.40	0.50
40:DH:27:ARG:HG2	40:DH:27:ARG:HH21	1.76	0.50
41:DJ:31:GLU:O	41:DJ:34:ARG:HB2	2.10	0.50
41:DJ:38:GLY:HA3	41:DJ:50:THR:O	2.11	0.50
42:DN:72:ASP:C	42:DN:74:GLU:H	2.14	0.50
48:DG:59:ASP:O	48:DG:63:GLN:HB2	2.11	0.50
48:DG:148:ARG:HA	48:DG:161:VAL:CG1	2.42	0.50
53:D6:38:LEU:HD12	53:D6:66:LEU:HD23	1.92	0.50
53:D6:84:ARG:HD2	53:D6:92:PRO:CD	2.41	0.50
53:D6:86:SER:C	53:D6:88:LEU:H	2.15	0.50
1:AA:35:G:H2'	1:AA:36:C:H6	1.76	0.50
1:AA:192:A:O2'	1:AA:193:C:H5'	2.12	0.50
1:AA:764:C:O2'	1:AA:765:G:H5'	2.10	0.50
1:AA:946:A:H2'	1:AA:947:G:H8	1.74	0.50
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.25	0.50
1:AA:1471:U:O2'	1:AA:1472:U:H5'	2.11	0.50
3:AD:84:ASN:ND2	3:AD:86:GLY:H	2.10	0.50
8:AI:11:ARG:HA	8:AI:105:ARG:NH1	2.26	0.50
18:AS:30:LEU:HB2	18:AS:48:ILE:CG2	2.38	0.50
18:AS:42:ASN:HD21	18:AS:43:MET:HG2	1.75	0.50
20:AB:19:THR:OG1	20:AB:20:ARG:N	2.45	0.50
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.11	0.50
23:BB:139:U:H3'	23:BB:140:C:C5'	2.42	0.50
23:BB:279:A:N6	23:BB:361:G:H1'	2.26	0.50
23:BB:588:U:H1'	29:BE:85:PHE:CG	2.46	0.50
23:BB:855:G:N3	52:BW:23:LYS:HE3	2.26	0.50
23:BB:947:A:H2'	23:BB:948:C:C6	2.46	0.50
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.45	0.50
23:BB:1777:U:O2'	23:BB:1778:U:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1819:A:OP1	25:BC:154:ALA:HA	2.11	0.50
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.77	0.50
23:BB:2226:C:H2'	23:BB:2227:A:C8	2.46	0.50
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.11	0.50
25:BC:183:VAL:HG22	25:BC:184:GLU:N	2.26	0.50
28:BP:92:ARG:HG2	28:BP:92:ARG:O	2.11	0.50
29:BE:47:LYS:HA	29:BE:51:GLU:OE2	2.11	0.50
33:B1:16:THR:OG1	33:B1:41:VAL:HG11	2.12	0.50
38:BM:19:GLY:N	38:BM:38:ARG:NH2	2.58	0.50
40:BH:83:LYS:HB2	40:BH:92:GLY:H	1.76	0.50
43:BO:51:ALA:O	43:BO:74:VAL:HG13	2.12	0.50
1:CA:215:C:H2'	1:CA:216:U:H6	1.76	0.50
1:CA:314:C:O2'	1:CA:315:A:H5'	2.11	0.50
1:CA:518:C:H2'	1:CA:530:G:H8	1.76	0.50
1:CA:878:A:H5"	7:CH:80:PRO:HG2	1.92	0.50
1:CA:1041:G:O2'	1:CA:1042:A:H5'	2.11	0.50
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.10	0.50
1:CA:1243:C:H2'	1:CA:1244:G:H8	1.76	0.50
7:CH:94:VAL:HG12	7:CH:99:GLY:HA3	1.93	0.50
14:CO:5:THR:O	14:CO:8:THR:HB	2.11	0.50
22:DA:53:A:O2'	22:DA:54:G:H5'	2.11	0.50
23:DB:4:U:H2'	23:DB:5:A:C8	2.46	0.50
23:DB:360:U:H2'	23:DB:361:G:C1'	2.42	0.50
23:DB:416:U:H2'	23:DB:417:C:C6	2.47	0.50
23:DB:697:G:H2'	23:DB:698:C:C6	2.46	0.50
23:DB:704:G:H1'	23:DB:727:A:N6	2.26	0.50
23:DB:910:A:H2'	23:DB:911:A:C8	2.47	0.50
23:DB:912:C:H2'	23:DB:913:U:C6	2.46	0.50
23:DB:1046:A:H4'	23:DB:1047:G:OP2	2.11	0.50
23:DB:1251:C:O2'	23:DB:1252:G:H3'	2.10	0.50
23:DB:1368:G:H2'	23:DB:1369:G:H8	1.76	0.50
23:DB:2218:G:O2'	23:DB:2219:U:H5'	2.12	0.50
23:DB:2324:U:H3'	23:DB:2325:G:C5'	2.40	0.50
23:DB:2807:U:H1'	23:DB:2892:G:N2	2.27	0.50
25:DC:18:VAL:HG11	25:DC:202:ARG:HD2	1.93	0.50
32:D4:13:ASN:O	32:D4:27:CYS:HA	2.11	0.50
42:DN:59:SER:O	42:DN:63:ARG:HB2	2.11	0.50
43:DO:97:PHE:HB3	43:DO:103:VAL:HG21	1.94	0.50
44:DQ:109:VAL:O	44:DQ:113:LYS:HG3	2.12	0.50
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.11	0.50
48:DG:120:ILE:HD13	48:DG:121:THR:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:25:LEU:HD22	53:D6:179:LYS:HG2	1.92	0.50
53:D6:38:LEU:CB	53:D6:58:VAL:HG21	2.42	0.50
1:AA:524:G:H2'	1:AA:525:C:H6	1.73	0.50
1:AA:640:A:O2'	1:AA:641:U:H5'	2.11	0.50
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.12	0.50
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.77	0.50
4:AE:45:VAL:HG13	4:AE:117:ALA:HA	1.94	0.50
9:AJ:5:ARG:HG2	9:AJ:79:PRO:HD3	1.94	0.50
23:BB:7:G:H4'	41:BJ:15:TRP:CZ2	2.46	0.50
23:BB:713:G:O2'	23:BB:714:U:H5'	2.12	0.50
23:BB:807:U:H2'	23:BB:808:G:H8	1.77	0.50
23:BB:1014:A:O2'	23:BB:1015:U:H5'	2.12	0.50
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.47	0.50
23:BB:1685:C:O2'	23:BB:1686:C:H5'	2.12	0.50
23:BB:1754:A:N1	23:BB:2716:C:O2'	2.45	0.50
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.27	0.50
30:BY:13:ILE:HG22	30:BY:14:GLY:N	2.25	0.50
35:BV:14:LYS:HE3	35:BV:18:ARG:NH2	2.27	0.50
39:BX:23:ARG:HA	39:BX:26:PHE:HB3	1.94	0.50
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.93	0.50
45:BS:47:VAL:HG12	45:BS:103:ILE:HG21	1.93	0.50
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.32	0.50
48:BG:34:ARG:HH11	48:BG:34:ARG:N	1.99	0.50
49:BR:49:ILE:HG21	49:BR:53:PHE:C	2.32	0.50
50:BT:5:GLU:CA	50:BT:8:LEU:HB2	2.21	0.50
52:BW:30:VAL:HA	52:BW:60:ALA:O	2.11	0.50
52:BW:77:LYS:HZ2	52:BW:77:LYS:N	2.09	0.50
1:CA:6:G:H3'	1:CA:6:G:N3	2.27	0.50
1:CA:73:C:O2'	1:CA:74:A:H5'	2.11	0.50
1:CA:859:G:O2'	1:CA:860:A:H5'	2.11	0.50
1:CA:1476:A:O2'	1:CA:1477:U:H5'	2.12	0.50
8:CI:41:GLU:C	8:CI:43:ALA:H	2.14	0.50
12:CM:63:VAL:CG1	12:CM:67:ASP:HB2	2.41	0.50
22:DA:42:C:C6	47:DF:65:LEU:HD13	2.47	0.50
23:DB:208:C:H2'	23:DB:209:C:H6	1.76	0.50
23:DB:290:U:O2'	23:DB:291:G:H5'	2.11	0.50
23:DB:350:G:H2'	23:DB:351:C:O4'	2.12	0.50
23:DB:714:U:H1'	23:DB:717:C:H5	1.77	0.50
23:DB:727:A:OP1	23:DB:1431:A:O2'	2.28	0.50
23:DB:949:G:O2'	23:DB:950:G:H5'	2.10	0.50
23:DB:1427:A:H5"	23:DB:1559:U:O2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.45	0.50
23:DB:2529:G:O3'	48:DG:174:LYS:HD2	2.12	0.50
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.94	0.50
26:DD:36:GLN:HG2	26:DD:37:VAL:N	2.27	0.50
26:DD:39:ASP:HB3	26:DD:42:ASN:HB3	1.92	0.50
28:DP:29:VAL:HA	28:DP:79:VAL:O	2.12	0.50
35:DV:79:ARG:HH12	38:DM:134:THR:HG21	1.75	0.50
43:DO:36:TYR:N	43:DO:36:TYR:HD2	2.10	0.50
53:D6:2:THR:HB	53:D6:5:GLU:HG3	1.92	0.50
53:D6:4:LYS:HD3	53:D6:5:GLU:N	2.26	0.50
1:AA:82:G:C6	1:AA:88:U:O2	2.65	0.50
1:AA:179:A:H2'	1:AA:180:U:O4'	2.12	0.50
1:AA:521:G:O2'	1:AA:522:C:H5'	2.12	0.50
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.27	0.50
2:AC:86:LEU:O	2:AC:90:VAL:HG23	2.11	0.50
8:AI:117:LEU:HB3	8:AI:122:ARG:O	2.12	0.50
8:AI:123:ARG:HB3	8:AI:123:ARG:NH1	2.26	0.50
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.26	0.50
14:AO:7:ALA:O	14:AO:11:ILE:HG22	2.12	0.50
20:AB:69:VAL:HB	20:AB:162:VAL:CB	2.42	0.50
22:BA:28:C:O2'	22:BA:29:A:H5'	2.12	0.50
22:BA:32:U:H4'	22:BA:52:A:N6	2.27	0.50
23:BB:718:A:H5'	23:BB:719:C:C5	2.46	0.50
23:BB:841:G:O2'	23:BB:842:U:H5'	2.12	0.50
23:BB:917:A:C2	23:BB:918:A:H1'	2.47	0.50
23:BB:950:G:H2'	23:BB:951:C:H6	1.75	0.50
23:BB:1011:G:O2'	23:BB:1013:C:H5"	2.12	0.50
23:BB:2151:U:H2'	23:BB:2152:G:H8	1.77	0.50
23:BB:2318:G:C6	23:BB:2319:G:N1	2.80	0.50
23:BB:2461:A:H2'	23:BB:2462:C:H6	1.76	0.50
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.47	0.50
24:BI:29:GLN:HE21	24:BI:29:GLN:HA	1.76	0.50
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.11	0.50
25:BC:42:ARG:HD2	25:BC:48:ILE:HG12	1.94	0.50
26:BD:138:LEU:N	26:BD:138:LEU:HD22	2.26	0.50
27:BK:98:ARG:HE	27:BK:98:ARG:N	2.09	0.50
29:BE:60:TRP:C	29:BE:62:GLN:H	2.14	0.50
40:BH:25:TYR:O	40:BH:30:LEU:HG	2.11	0.50
41:BJ:114:LEU:O	41:BJ:117:ALA:HB3	2.11	0.50
43:BO:81:ARG:HD3	43:BO:81:ARG:H	1.75	0.50
43:BO:97:PHE:HB3	43:BO:103:VAL:HG21	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:2:ARG:HG3	44:BQ:3:VAL:H	1.76	0.50
44:BQ:32:ARG:O	44:BQ:36:GLN:HG3	2.12	0.50
44:BQ:42:GLY:HA3	49:BR:75:VAL:HG21	1.93	0.50
44:BQ:109:VAL:CG1	44:BQ:113:LYS:HE3	2.40	0.50
46:BU:13:LEU:HD12	46:BU:13:LEU:H	1.77	0.50
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.14	0.50
48:BG:59:ASP:O	48:BG:63:GLN:HB2	2.12	0.50
50:BT:48:GLN:HA	50:BT:48:GLN:NE2	2.27	0.50
1:CA:194:C:O2'	1:CA:195:A:H5'	2.11	0.50
1:CA:652:U:H1'	1:CA:653:U:C6	2.46	0.50
1:CA:1040:U:O2'	1:CA:1041:G:H5'	2.12	0.50
1:CA:1523:G:O2'	1:CA:1524:C:H5'	2.12	0.50
3:CD:2:ARG:HB3	3:CD:114:ARG:NH2	2.26	0.50
11:CL:28:GLN:HB2	11:CL:80:LEU:HG	1.92	0.50
11:CL:79:ILE:HD12	11:CL:96:THR:CG2	2.42	0.50
17:CR:38:ILE:HG23	17:CR:62:ARG:NH2	2.26	0.50
19:CT:79:THR:O	19:CT:82:ILE:HG12	2.11	0.50
23:DB:231:A:H3'	23:DB:232:G:H8	1.76	0.50
23:DB:598:U:H2'	23:DB:599:A:C8	2.47	0.50
23:DB:796:C:H2'	23:DB:797:G:C8	2.47	0.50
23:DB:857:G:O2'	23:DB:858:G:H5'	2.10	0.50
23:DB:1203:U:H3'	23:DB:1204:A:H5"	1.92	0.50
23:DB:1561:C:H2'	23:DB:1562:U:C6	2.45	0.50
23:DB:2547:A:H5"	27:DK:29:HIS:NE2	2.26	0.50
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.11	0.50
26:DD:174:SER:O	26:DD:175:LEU:HB2	2.10	0.50
28:DP:25:VAL:HA	28:DP:85:VAL:HA	1.94	0.50
31:D0:38:LEU:HD13	31:D0:41:HIS:NE2	2.27	0.50
35:DV:77:VAL:HG23	35:DV:89:ILE:HG22	1.94	0.50
39:DX:10:SER:HA	39:DX:57:LEU:HD13	1.93	0.50
39:DX:23:ARG:O	39:DX:27:ASN:N	2.43	0.50
41:DJ:99:ARG:O	41:DJ:103:ILE:HG13	2.11	0.50
42:DN:54:LEU:HD11	42:DN:62:ASN:HB3	1.94	0.50
46:DU:51:LEU:O	46:DU:52:ASN:HB2	2.11	0.50
49:DR:84:ARG:HH21	49:DR:84:ARG:HG3	1.76	0.50
1:AA:233:C:O2'	1:AA:234:C:H5'	2.11	0.50
1:AA:332:G:OP2	19:AT:4:LYS:HB2	2.12	0.50
1:AA:652:U:H1'	1:AA:653:U:C6	2.46	0.50
1:AA:857:C:H2'	1:AA:858:G:O4'	2.12	0.50
1:AA:865:A:H5'	1:AA:1078:U:C4	2.45	0.50
1:AA:1407:C:O2'	23:BB:1912:A:N1	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:183:TYR:HE1	2:AC:198:LYS:HB3	1.76	0.50
3:AD:87:GLU:OE1	3:AD:91:ALA:HB2	2.11	0.50
11:AL:41:PRO:HB2	11:AL:88:ASP:HB3	1.94	0.50
20:AB:71:THR:HG23	20:AB:94:ARG:H	1.77	0.50
20:AB:93:HIS:HB2	20:AB:145:ASN:O	2.11	0.50
20:AB:128:LEU:CD1	20:AB:129:THR:H	2.25	0.50
21:AU:10:PRO:CB	2:CC:71:ARG:HE	2.24	0.50
23:BB:208:C:H2'	23:BB:209:C:H6	1.76	0.50
23:BB:336:C:O2'	23:BB:337:C:H5'	2.11	0.50
23:BB:378:C:O2'	23:BB:379:G:H5'	2.11	0.50
23:BB:1240:U:O2'	23:BB:1241:A:H5'	2.11	0.50
23:BB:1295:C:H2'	23:BB:1296:G:H8	1.76	0.50
23:BB:1508:A:H5'	23:BB:1509:A:C6	2.47	0.50
23:BB:1536:C:H4'	23:BB:1537:G:C4	2.46	0.50
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.47	0.50
23:BB:1793:C:H2'	23:BB:1794:A:H8	1.77	0.50
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.76	0.50
23:BB:2526:G:O2'	32:B4:1:MET:HB2	2.12	0.50
30:BY:2:LYS:H	30:BY:2:LYS:CD	2.21	0.50
31:B0:5:ASN:O	31:B0:7:PRO:HD3	2.11	0.50
31:B0:33:SER:OG	31:B0:35:GLU:HG2	2.11	0.50
40:BH:108:VAL:CG1	40:BH:109:GLU:H	2.18	0.50
41:BJ:96:ARG:CZ	41:BJ:99:ARG:HD2	2.42	0.50
41:BJ:109:LEU:CD1	41:BJ:119:PHE:HB2	2.42	0.50
42:BN:76:VAL:HA	42:BN:79:LEU:HD12	1.92	0.50
43:BO:49:VAL:HG11	43:BO:82:ALA:CA	2.41	0.50
43:BO:102:ARG:O	43:BO:106:LEU:HD23	2.11	0.50
47:BF:79:ARG:HE	47:BF:79:ARG:N	2.08	0.50
48:BG:85:LYS:HA	48:BG:131:VAL:HG12	1.93	0.50
53:B6:2:THR:HG23	53:B6:5:GLU:OE1	2.11	0.50
1:CA:611:C:H2'	1:CA:612:C:C6	2.46	0.50
1:CA:955:U:H1'	1:CA:1227:A:N6	2.27	0.50
1:CA:981:U:C4'	13:CN:60:ARG:HD2	2.32	0.50
1:CA:1063:C:H2'	1:CA:1064:G:C8	2.46	0.50
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.11	0.50
3:CD:149:LYS:HB2	3:CD:177:MET:HG3	1.92	0.50
5:CF:18:VAL:HG11	5:CF:58:HIS:NE2	2.27	0.50
13:CN:53:ASP:HA	13:CN:58:ARG:HD2	1.93	0.50
13:CN:63:CYS:HB3	13:CN:67:GLY:N	2.27	0.50
23:DB:77:G:H2'	23:DB:78:U:O4'	2.12	0.50
23:DB:108:G:H2'	23:DB:109:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:277:G:O2'	23:DB:278:A:N7	2.43	0.50
23:DB:458:G:N2	23:DB:469:G:H2'	2.26	0.50
23:DB:637:A:P	37:DL:112:LEU:HD22	2.52	0.50
23:DB:902:C:H2'	23:DB:903:C:C6	2.47	0.50
23:DB:2073:C:C5'	25:DC:227:VAL:HG12	2.42	0.50
23:DB:2436:G:O2'	23:DB:2437:G:H5'	2.12	0.50
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.75	0.50
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.12	0.50
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.26	0.50
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	1.92	0.50
40:DH:114:GLU:HG3	40:DH:133:GLN:O	2.12	0.50
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.46	0.50
53:D6:38:LEU:HB3	53:D6:58:VAL:HG21	1.93	0.50
1:AA:124:C:O2'	1:AA:125:U:H5'	2.12	0.50
1:AA:742:G:H2'	1:AA:743:A:H8	1.77	0.50
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.12	0.50
3:AD:43:ARG:HH11	3:AD:43:ARG:HB3	1.77	0.50
3:AD:192:ALA:C	3:AD:194:ILE:H	2.13	0.50
8:AI:22:PRO:HA	8:AI:60:LEU:HB3	1.93	0.50
12:AM:89:ARG:HD3	12:AM:95:PRO:O	2.12	0.50
13:AN:12:ARG:HG2	13:AN:53:ASP:HB3	1.94	0.50
23:BB:5:A:H2'	23:BB:6:A:H8	1.73	0.50
23:BB:1199:U:H5'	44:BQ:4:LYS:HD3	1.93	0.50
23:BB:1251:C:O2'	23:BB:1252:G:H3'	2.11	0.50
23:BB:1345:C:H5'	23:BB:1396:U:C5	2.47	0.50
23:BB:1350:C:H5'	23:BB:1351:C:OP2	2.12	0.50
23:BB:1439:A:N7	23:BB:1440:U:C6	2.80	0.50
23:BB:2465:C:O2'	23:BB:2466:C:H5'	2.12	0.50
23:BB:2821:A:OP2	42:BN:3:HIS:NE2	2.45	0.50
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.47	0.50
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.12	0.50
29:BE:173:THR:C	29:BE:175:ILE:H	2.15	0.50
30:BY:51:SER:C	30:BY:53:MET:H	2.13	0.50
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.12	0.50
43:BO:2:ASP:OD2	43:BO:4:LYS:HB3	2.12	0.50
50:BT:39:THR:O	50:BT:40:LYS:HB2	2.12	0.50
52:BW:36:ILE:HB	52:BW:39:GLN:NE2	2.26	0.50
1:CA:113:G:O4'	1:CA:354:G:H4'	2.11	0.50
1:CA:214:C:H2'	1:CA:215:C:H6	1.77	0.50
1:CA:585:G:H2'	1:CA:586:C:H6	1.77	0.50
1:CA:986:U:H2'	1:CA:987:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1079:G:H5"	4:CE:49:TYR:HE2	1.74	0.50
9:CJ:53:ILE:HG23	9:CJ:54:SER:H	1.75	0.50
9:CJ:67:ILE:HA	13:CN:94:GLY:O	2.12	0.50
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.92	0.50
19:CT:71:ALA:O	19:CT:74:HIS:HB2	2.12	0.50
20:CB:16:GLY:HA3	20:CB:39:ILE:HA	1.94	0.50
22:DA:46:A:H2'	22:DA:47:C:O4'	2.12	0.50
23:DB:118:A:OP2	23:DB:119:A:H5"	2.11	0.50
23:DB:155:A:H2'	23:DB:156:A:H8	1.77	0.50
23:DB:217:A:H2'	23:DB:218:A:O4'	2.12	0.50
23:DB:289:G:H2'	23:DB:290:U:H6	1.76	0.50
23:DB:600:G:H1'	29:DE:100:MET:HG2	1.94	0.50
23:DB:702:U:H2'	23:DB:703:U:C6	2.46	0.50
23:DB:796:C:H2'	23:DB:797:G:H8	1.77	0.50
23:DB:1022:G:N2	23:DB:1142:A:N1	2.60	0.50
23:DB:1327:A:H2'	23:DB:1328:A:O4'	2.11	0.50
23:DB:1465:G:H2'	23:DB:1466:U:C6	2.47	0.50
23:DB:1663:G:H3'	57:DB:3246:HOH:O	2.11	0.50
23:DB:1711:A:O2'	23:DB:1712:U:H5'	2.12	0.50
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.11	0.50
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.11	0.50
26:DD:9:VAL:O	26:DD:9:VAL:HG13	2.11	0.50
28:DP:61:ARG:HB3	28:DP:61:ARG:HH21	1.77	0.50
29:DE:28:VAL:O	29:DE:32:VAL:HG13	2.11	0.50
29:DE:88:ARG:HH21	29:DE:88:ARG:HG3	1.76	0.50
29:DE:97:ASN:ND2	29:DE:100:MET:HG3	2.27	0.50
30:DY:51:SER:C	30:DY:53:MET:H	2.13	0.50
31:D0:5:ASN:O	31:D0:7:PRO:HD3	2.12	0.50
37:DL:119:PRO:HA	37:DL:138:ALA:O	2.11	0.50
39:DX:51:ALA:O	39:DX:55:THR:N	2.41	0.50
42:DN:24:MET:SD	42:DN:44:LEU:HD22	2.52	0.50
43:DO:36:TYR:N	43:DO:36:TYR:CD2	2.80	0.50
43:DO:49:VAL:HG11	43:DO:82:ALA:CA	2.42	0.50
44:DQ:45:ALA:O	44:DQ:49:ARG:N	2.42	0.50
45:DS:15:GLN:HA	45:DS:18:ARG:CG	2.42	0.50
45:DS:47:VAL:HG12	45:DS:103:ILE:CG2	2.41	0.50
46:DU:13:LEU:H	46:DU:13:LEU:HD12	1.76	0.50
46:DU:14:THR:O	46:DU:18:LYS:HG2	2.12	0.50
47:DF:74:ALA:HB1	47:DF:76:PHE:CD2	2.46	0.50
1:AA:49:U:O2'	1:AA:50:A:H2'	2.11	0.50
1:AA:264:C:H4'	16:AQ:64:ARG:HD2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:401:C:H2'	1:AA:402:G:C8	2.47	0.50
1:AA:502:A:H2'	1:AA:503:C:H6	1.76	0.50
1:AA:911:U:H2'	1:AA:912:C:C6	2.46	0.50
3:AD:157:ALA:O	3:AD:160:LEU:HD22	2.12	0.50
4:AE:87:VAL:HG22	4:AE:88:HIS:N	2.27	0.50
5:AF:32:ALA:O	5:AF:33:GLU:HB2	2.12	0.50
6:AG:30:MET:HG2	6:AG:31:VAL:N	2.26	0.50
7:AH:100:ILE:HD11	7:AH:128:VAL:HB	1.92	0.50
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.12	0.50
9:AJ:92:LEU:N	9:AJ:92:LEU:HD13	2.27	0.50
10:AK:16:SER:HA	10:AK:77:GLY:O	2.12	0.50
17:AR:56:ARG:O	17:AR:60:ARG:HG2	2.12	0.50
20:AB:96:LEU:N	20:AB:99:MET:HE3	2.25	0.50
23:BB:144:A:H2'	23:BB:145:C:C6	2.47	0.50
23:BB:155:A:H2'	23:BB:156:A:H8	1.77	0.50
23:BB:649:G:H2'	23:BB:650:C:H6	1.77	0.50
23:BB:969:G:H2'	23:BB:970:U:C6	2.47	0.50
23:BB:986:C:O2'	23:BB:987:C:H5'	2.12	0.50
23:BB:2241:A:H2'	23:BB:2242:G:H8	1.76	0.50
23:BB:2439:A:C8	23:BB:2586:U:H4'	2.46	0.50
23:BB:2573:C:H3'	57:BB:3613:HOH:O	2.10	0.50
23:BB:2652:C:H2'	23:BB:2653:U:O4'	2.11	0.50
23:BB:2655:G:O2'	23:BB:2656:U:P	2.70	0.50
23:BB:2655:G:HO2'	23:BB:2656:U:P	2.35	0.50
29:BE:102:ARG:O	29:BE:106:LYS:HG3	2.12	0.50
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.12	0.50
35:BV:79:ARG:NH1	38:BM:134:THR:HG21	2.26	0.50
41:BJ:133:ALA:C	41:BJ:135:GLN:H	2.16	0.50
46:BU:51:LEU:O	46:BU:52:ASN:HB2	2.11	0.50
52:BW:49:ASN:HA	52:BW:61:LYS:HB2	1.94	0.50
1:CA:312:C:H2'	1:CA:313:A:C8	2.47	0.50
1:CA:437:U:H4'	3:CD:153:ARG:NH1	2.27	0.50
1:CA:925:G:C2	1:CA:927:G:C8	3.00	0.50
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.12	0.50
1:CA:1426:G:O2'	1:CA:1427:C:H5'	2.12	0.50
1:CA:1494:G:H5'	23:DB:1913:A:N6	2.27	0.50
3:CD:145:ARG:HB3	3:CD:147:LYS:HD2	1.93	0.50
9:CJ:57:VAL:HG22	9:CJ:58:ASN:N	2.21	0.50
10:CK:63:GLN:HG3	10:CK:98:ALA:HB2	1.93	0.50
13:CN:9:GLU:HB2	13:CN:62:ARG:NE	2.27	0.50
20:CB:87:ASP:HB2	20:CB:224:ARG:CZ	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:94:ARG:HD2	20:CB:142:LYS:HE2	1.93	0.50
20:CB:172:ILE:HG23	20:CB:182:VAL:HG11	1.94	0.50
21:CU:40:PRO:C	21:CU:42:THR:H	2.15	0.50
22:DA:106:G:H2'	22:DA:107:G:C8	2.47	0.50
23:DB:6:A:H2'	23:DB:7:G:C8	2.45	0.50
23:DB:1053:C:H2'	23:DB:1054:A:H5'	1.94	0.50
23:DB:2007:U:O2'	23:DB:2008:C:H5'	2.12	0.50
23:DB:2074:U:O2'	23:DB:2075:U:H5'	2.12	0.50
23:DB:2203:U:C2'	23:DB:2204:G:OP2	2.60	0.50
25:DC:134:ILE:O	25:DC:134:ILE:HG13	2.08	0.50
25:DC:222:THR:HA	25:DC:231:HIS:O	2.11	0.50
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.27	0.50
28:DP:92:ARG:HG2	28:DP:92:ARG:O	2.10	0.50
34:D3:21:PHE:CE1	34:D3:58:ILE:HG12	2.47	0.50
37:DL:4:ASN:N	37:DL:4:ASN:HD22	2.10	0.50
38:DM:2:LEU:CD2	38:DM:46:ILE:HD11	2.42	0.50
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.26	0.50
44:DQ:57:ARG:NH1	44:DQ:57:ARG:HG2	2.25	0.50
45:DS:47:VAL:HG12	45:DS:103:ILE:HG21	1.94	0.50
47:DF:137:PHE:O	47:DF:139:GLU:N	2.44	0.50
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.26	0.50
51:DZ:14:THR:HA	51:DZ:28:ARG:CA	2.42	0.50
53:D6:58:VAL:HG22	53:D6:68:VAL:HG13	1.93	0.50
1:AA:190:A:H8	1:AA:190:A:O5'	1.95	0.49
1:AA:693:G:H2'	1:AA:694:A:O4'	2.11	0.49
1:AA:865:A:H2'	1:AA:866:C:C6	2.47	0.49
1:AA:1220:G:H21	18:AS:53:GLY:HA2	1.76	0.49
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.93	0.49
4:AE:42:ASN:O	4:AE:75:LEU:HD12	2.12	0.49
6:AG:121:ASN:N	6:AG:121:ASN:HD22	2.07	0.49
9:AJ:80:THR:HG21	9:AJ:82:LYS:NZ	2.27	0.49
10:AK:52:ARG:NH1	10:AK:53:GLY:H	2.09	0.49
10:AK:126:ARG:HB2	21:AU:33:ARG:CD	2.42	0.49
23:BB:77:G:H2'	23:BB:78:U:O4'	2.12	0.49
23:BB:729:G:C5	25:BC:206:LYS:HB2	2.47	0.49
23:BB:949:G:O2'	23:BB:950:G:H5'	2.12	0.49
23:BB:956:G:OP2	38:BM:86:LYS:HE2	2.11	0.49
23:BB:1153:C:H2'	23:BB:1154:G:O4'	2.12	0.49
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.46	0.49
23:BB:1535:A:H5"	23:BB:1536:C:H5	1.77	0.49
23:BB:1537:G:H5"	23:BB:1537:G:N3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1846:G:H2'	23:BB:1847:A:O4'	2.12	0.49
23:BB:2191:A:H2'	23:BB:2192:U:O4'	2.12	0.49
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.27	0.49
28:BP:62:LYS:HE3	28:BP:64:SER:OG	2.12	0.49
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.26	0.49
29:BE:146:VAL:O	29:BE:167:VAL:HA	2.12	0.49
40:BH:18:GLN:HE21	40:BH:44:ILE:HG21	1.74	0.49
40:BH:47:PHE:CA	40:BH:50:ARG:HH21	2.24	0.49
40:BH:77:THR:CG2	40:BH:79:THR:HG23	2.41	0.49
42:BN:12:ARG:HG2	42:BN:16:HIS:HB2	1.94	0.49
47:BF:43:ILE:HG23	47:BF:44:ALA:N	2.15	0.49
49:BR:39:LEU:HB2	49:BR:49:ILE:HG12	1.94	0.49
1:CA:90:C:H2'	1:CA:91:U:C6	2.47	0.49
1:CA:208:U:O5'	1:CA:208:U:H6	1.95	0.49
1:CA:325:A:H2'	1:CA:326:G:O4'	2.12	0.49
1:CA:598:U:H4'	7:CH:85:TYR:CG	2.47	0.49
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.94	0.49
1:CA:1277:C:O2'	1:CA:1279:G:H8	1.95	0.49
1:CA:1423:G:H2'	1:CA:1424:U:H6	1.77	0.49
2:CC:46:LEU:HB3	2:CC:49:ALA:HB3	1.93	0.49
3:CD:154:VAL:HG23	3:CD:155:LYS:HD2	1.94	0.49
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.12	0.49
12:CM:43:LYS:O	12:CM:46:GLU:HG3	2.11	0.49
15:CP:67:ILE:O	15:CP:67:ILE:HG23	2.12	0.49
17:CR:61:ALA:HB3	17:CR:67:LEU:HD12	1.93	0.49
23:DB:132:G:H2'	23:DB:133:U:H6	1.77	0.49
23:DB:143:C:H2'	23:DB:144:A:C8	2.47	0.49
23:DB:600:G:H2'	23:DB:601:C:C6	2.46	0.49
23:DB:730:A:O2'	23:DB:731:C:H5'	2.11	0.49
23:DB:946:C:H2'	23:DB:947:A:C8	2.46	0.49
23:DB:2419:U:H2'	23:DB:2420:C:C6	2.46	0.49
23:DB:2677:G:H2'	23:DB:2678:C:H6	1.78	0.49
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.47	0.49
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.93	0.49
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.94	0.49
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.94	0.49
26:DD:68:PHE:C	26:DD:73:VAL:HB	2.33	0.49
26:DD:141:ARG:O	26:DD:141:ARG:HG3	2.11	0.49
26:DD:193:VAL:HB	26:DD:194:PRO:HD2	1.94	0.49
28:DP:8:GLU:HG2	28:DP:54:LEU:HD23	1.94	0.49
28:DP:94:ALA:C	28:DP:95:LYS:HD2	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:29:LYS:N	33:D1:30:PRO:HD3	2.27	0.49
36:D2:13:ASN:O	36:D2:17:GLY:N	2.45	0.49
37:DL:90:VAL:CB	37:DL:122:VAL:HG12	2.42	0.49
40:DH:83:LYS:O	40:DH:90:LEU:HA	2.12	0.49
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.40	0.49
41:DJ:89:PHE:CE1	41:DJ:93:ILE:HD13	2.47	0.49
44:DQ:16:ILE:O	44:DQ:18:LYS:N	2.43	0.49
47:DF:163:GLU:HA	47:DF:166:ARG:HD3	1.93	0.49
48:DG:10:VAL:HG21	48:DG:49:LEU:HD13	1.94	0.49
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.25	0.49
1:AA:597:G:H2'	1:AA:598:U:H5'	1.94	0.49
1:AA:1076:U:H2'	1:AA:1077:G:C8	2.48	0.49
1:AA:1148:U:H5'	8:AI:6:TYR:OH	2.12	0.49
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.46	0.49
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.12	0.49
6:AG:63:VAL:HA	6:AG:66:GLU:CD	2.33	0.49
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.52	0.49
13:AN:14:ALA:C	13:AN:18:LYS:HE2	2.33	0.49
14:AO:16:GLY:HA2	14:AO:27:VAL:HG22	1.92	0.49
17:AR:31:TYR:CD1	17:AR:54:LEU:HD11	2.48	0.49
18:AS:61:VAL:HG12	18:AS:62:THR:N	2.27	0.49
20:AB:33:ALA:HB2	20:AB:38:HIS:ND1	2.27	0.49
22:BA:109:A:H2'	22:BA:110:C:H6	1.74	0.49
23:BB:160:A:H2'	23:BB:161:A:C8	2.47	0.49
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.11	0.49
23:BB:1774:C:O2	23:BB:1774:C:H2'	2.11	0.49
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.77	0.49
34:B3:41:ARG:HG3	34:B3:44:ARG:NH2	2.27	0.49
39:BX:28:LEU:HB3	39:BX:43:LEU:HD21	1.93	0.49
41:BJ:42:ALA:O	41:BJ:44:TYR:N	2.45	0.49
42:BN:52:ILE:HD13	42:BN:87:PHE:CD2	2.47	0.49
45:BS:66:ILE:HD13	45:BS:66:ILE:N	2.19	0.49
51:BZ:14:THR:HA	51:BZ:28:ARG:CA	2.40	0.49
1:CA:182:A:O2'	1:CA:183:C:H3'	2.12	0.49
1:CA:310:G:H5"	15:CP:31:ARG:HB2	1.94	0.49
1:CA:858:G:O6	1:CA:869:G:H3'	2.12	0.49
1:CA:1225:A:H5'	1:CA:1226:C:OP2	2.12	0.49
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.11	0.49
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.77	0.49
2:CC:113:LYS:HE3	2:CC:117:ASP:OD1	2.12	0.49
2:CC:139:ASN:O	2:CC:143:LEU:HD23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:22:SER:H	3:CD:109:THR:HG22	1.77	0.49
7:CH:40:LYS:HA	7:CH:45:ILE:HG13	1.94	0.49
8:CI:44:ARG:HH11	8:CI:44:ARG:HG2	1.75	0.49
12:CM:5:GLY:O	12:CM:7:ASN:N	2.45	0.49
13:CN:14:ALA:C	13:CN:18:LYS:HE2	2.33	0.49
13:CN:52:ARG:HG3	13:CN:53:ASP:N	2.27	0.49
15:CP:6:LEU:HD23	15:CP:17:TYR:HB2	1.92	0.49
18:CS:42:ASN:H	18:CS:42:ASN:HD22	1.60	0.49
23:DB:8:C:O2'	23:DB:9:G:H5'	2.11	0.49
23:DB:278:A:C8	23:DB:361:G:N1	2.80	0.49
23:DB:544:C:H2'	23:DB:545:U:C5	2.47	0.49
23:DB:704:G:C2'	23:DB:726:G:H22	2.24	0.49
23:DB:1139:G:O2'	23:DB:1143:A:N1	2.41	0.49
23:DB:1407:G:H2'	23:DB:1408:G:C8	2.45	0.49
23:DB:1439:A:N7	23:DB:1440:U:C2	2.80	0.49
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.12	0.49
23:DB:2655:G:O2'	23:DB:2656:U:P	2.69	0.49
26:DD:3:GLY:C	26:DD:4:LEU:HD22	2.32	0.49
28:DP:96:LEU:HB3	28:DP:99:LEU:HB2	1.94	0.49
37:DL:135:ILE:HG23	37:DL:136:GLU:N	2.28	0.49
40:DH:4:ILE:HG21	40:DH:51:ARG:HH22	1.75	0.49
42:DN:38:LEU:HD11	42:DN:42:LYS:HD2	1.94	0.49
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.65	0.49
46:DU:13:LEU:HA	46:DU:18:LYS:HD3	1.92	0.49
46:DU:35:VAL:HB	46:DU:38:ILE:CB	2.41	0.49
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.35	0.49
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.33	0.49
1:AA:67:C:H4'	1:AA:172:A:O4'	2.12	0.49
1:AA:631:C:H5"	1:AA:632:U:O4'	2.12	0.49
1:AA:821:G:H2'	1:AA:822:U:C6	2.48	0.49
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.12	0.49
1:AA:1337:G:H5"	1:AA:1338:G:OP1	2.12	0.49
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.12	0.49
2:AC:110:LEU:HD21	2:AC:140:ALA:O	2.13	0.49
3:AD:158:LEU:HA	3:AD:161:ALA:CB	2.43	0.49
3:AD:169:TRP:NE1	3:AD:170:LEU:HD23	2.27	0.49
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.11	0.49
5:AF:53:LYS:C	5:AF:54:LEU:HD22	2.32	0.49
5:AF:54:LEU:HD13	5:AF:54:LEU:N	2.26	0.49
8:AI:41:GLU:C	8:AI:43:ALA:H	2.15	0.49
17:AR:22:TYR:CE2	17:AR:23:LYS:HE3	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:209:VAL:HG23	20:AB:210:THR:N	2.28	0.49
21:AU:24:LYS:HB3	21:AU:24:LYS:NZ	2.28	0.49
23:BB:188:G:OP1	51:BZ:14:THR:HG23	2.13	0.49
23:BB:431:U:O2'	23:BB:432:A:H5'	2.13	0.49
23:BB:627:A:H4'	23:BB:628:G:OP1	2.12	0.49
23:BB:674:G:H2'	23:BB:804:A:H61	1.78	0.49
23:BB:857:G:O2'	23:BB:858:G:H5'	2.11	0.49
23:BB:972:A:C3'	23:BB:973:A:H5"	2.39	0.49
23:BB:1037:G:O2'	23:BB:1038:G:H5'	2.12	0.49
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.12	0.49
23:BB:1583:A:H2	23:BB:1583:A:OP2	1.94	0.49
23:BB:1917:U:O2'	23:BB:1918:A:H5'	2.11	0.49
23:BB:2260:C:O2'	23:BB:2261:C:H5'	2.12	0.49
23:BB:2840:C:H2'	23:BB:2841:C:C6	2.48	0.49
23:BB:2868:A:H2'	23:BB:2869:G:H8	1.77	0.49
28:BP:96:LEU:HB3	28:BP:99:LEU:HB2	1.94	0.49
29:BE:29:HIS:C	29:BE:32:VAL:HG22	2.33	0.49
29:BE:46:GLN:HB3	29:BE:86:ALA:CA	2.42	0.49
29:BE:115:GLN:O	29:BE:117:ARG:HG3	2.12	0.49
33:B1:47:ILE:HD12	33:B1:47:ILE:N	2.27	0.49
37:BL:122:VAL:HG23	37:BL:143:GLU:OE1	2.12	0.49
40:BH:67:ALA:HB1	40:BH:70:GLU:HG2	1.93	0.49
42:BN:65:LEU:O	42:BN:68:ALA:HB3	2.12	0.49
44:BQ:83:LYS:HZ1	44:BQ:87:VAL:HA	1.77	0.49
1:CA:124:C:O2'	1:CA:125:U:H5'	2.12	0.49
1:CA:169:C:O2'	1:CA:170:U:H5'	2.13	0.49
1:CA:763:G:H2'	1:CA:764:C:H6	1.77	0.49
1:CA:1080:A:H4'	4:CE:20:VAL:HG13	1.94	0.49
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.12	0.49
8:CI:83:THR:OG1	8:CI:97:LEU:HD13	2.13	0.49
10:CK:14:GLN:HA	10:CK:76:TYR:O	2.12	0.49
10:CK:16:SER:HA	10:CK:77:GLY:O	2.12	0.49
18:CS:47:THR:HA	18:CS:60:PHE:CD1	2.48	0.49
23:DB:303:G:H2'	23:DB:304:U:H6	1.78	0.49
23:DB:347:A:H2'	23:DB:348:A:H8	1.76	0.49
23:DB:680:C:H2'	23:DB:681:G:C8	2.46	0.49
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.47	0.49
23:DB:1414:C:H2'	23:DB:1415:U:H6	1.77	0.49
23:DB:1446:C:H2'	23:DB:1447:C:C6	2.48	0.49
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.77	0.49
23:DB:1526:C:O2'	23:DB:1527:G:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2315:G:H5'	47:DF:156:THR:HG21	1.95	0.49
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.47	0.49
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.94	0.49
23:DB:2439:A:C8	23:DB:2586:U:H4'	2.48	0.49
23:DB:2458:G:H1'	23:DB:2460:U:O4	2.12	0.49
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.75	0.49
23:DB:2485:G:O2'	23:DB:2486:C:H5'	2.12	0.49
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.12	0.49
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.92	0.49
29:DE:126:VAL:CG2	29:DE:133:LEU:HB2	2.42	0.49
35:DV:26:PHE:HE2	35:DV:44:HIS:HA	1.77	0.49
35:DV:62:THR:CB	35:DV:71:LYS:HG2	2.42	0.49
37:DL:120:VAL:HG12	37:DL:121:THR:N	2.27	0.49
39:DX:23:ARG:HA	39:DX:26:PHE:HB3	1.95	0.49
40:DH:41:LYS:HA	40:DH:44:ILE:HG12	1.94	0.49
40:DH:77:THR:HG22	40:DH:143:ILE:CB	2.34	0.49
43:DO:102:ARG:O	43:DO:106:LEU:HD23	2.12	0.49
44:DQ:73:ILE:HD11	44:DQ:77:LYS:HB3	1.93	0.49
45:DS:96:ILE:HG23	45:DS:96:ILE:O	2.12	0.49
46:DU:35:VAL:O	46:DU:38:ILE:HG22	2.12	0.49
47:DF:31:GLU:O	47:DF:32:LYS:HD3	2.11	0.49
47:DF:133:GLU:HA	47:DF:150:GLY:CA	2.42	0.49
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.12	0.49
53:D6:10:THR:O	53:D6:14:MET:HG3	2.13	0.49
1:AA:33:A:O2'	1:AA:34:C:H5'	2.12	0.49
1:AA:160:A:H1'	1:AA:344:A:N7	2.27	0.49
1:AA:502:A:H2'	1:AA:503:C:C6	2.47	0.49
1:AA:598:U:H4'	7:AH:85:TYR:CG	2.47	0.49
1:AA:1080:A:H5"	4:AE:51:LYS:NZ	2.25	0.49
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.12	0.49
2:AC:128:MET:H	2:AC:128:MET:CE	2.26	0.49
3:AD:11:SER:HA	3:AD:18:LEU:CD2	2.42	0.49
7:AH:23:ALA:HB1	7:AH:61:THR:HA	1.94	0.49
11:AL:106:VAL:HA	11:AL:107:LYS:NZ	2.27	0.49
20:AB:14:HIS:CD2	20:AB:202:ASN:H	2.30	0.49
20:AB:94:ARG:HG2	20:AB:94:ARG:O	2.12	0.49
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.76	0.49
21:AU:48:LYS:HA	21:AU:51:ALA:CB	2.36	0.49
22:BA:46:A:H2'	22:BA:47:C:O4'	2.11	0.49
23:BB:67:U:H2'	23:BB:68:G:H8	1.77	0.49
23:BB:99:U:O2	23:BB:99:U:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:458:G:N2	23:BB:469:G:H2'	2.28	0.49
23:BB:672:C:H2'	23:BB:673:C:C6	2.47	0.49
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.11	0.49
23:BB:1372:U:O2'	23:BB:1373:A:H5'	2.11	0.49
23:BB:1535:A:H5"	23:BB:1536:C:C5	2.47	0.49
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.48	0.49
23:BB:1717:A:H2'	23:BB:1718:G:O4'	2.12	0.49
23:BB:1856:U:H2'	23:BB:1857:G:H5'	1.94	0.49
23:BB:2756:U:C1'	23:BB:2757:A:H5"	2.42	0.49
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.75	0.49
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.06	0.49
25:BC:196:ASN:C	25:BC:198:GLU:H	2.15	0.49
27:BK:105:ARG:HD2	27:BK:122:VAL:HG11	1.93	0.49
28:BP:25:VAL:HA	28:BP:85:VAL:HA	1.94	0.49
29:BE:59:PRO:HB2	29:BE:67:ARG:NH2	2.18	0.49
33:B1:29:LYS:N	33:B1:30:PRO:HD3	2.28	0.49
34:B3:62:PRO:HG2	37:BL:48:ARG:NH2	2.27	0.49
40:BH:100:ALA:HA	40:BH:103:VAL:HG21	1.95	0.49
41:BJ:56:VAL:HG12	41:BJ:57:LEU:H	1.76	0.49
42:BN:9:GLN:O	42:BN:17:ARG:HD3	2.12	0.49
46:BU:35:VAL:O	46:BU:38:ILE:HG22	2.13	0.49
46:BU:90:LYS:HB3	46:BU:92:VAL:HG23	1.95	0.49
1:CA:415:A:H3'	1:CA:416:G:H8	1.77	0.49
3:CD:154:VAL:HG23	3:CD:155:LYS:N	2.27	0.49
9:CJ:7:ARG:NH1	9:CJ:101:SER:HB2	2.28	0.49
10:CK:80:ASN:HD22	10:CK:80:ASN:H	1.60	0.49
12:CM:80:MET:HA	12:CM:87:GLY:HA3	1.93	0.49
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.76	0.49
23:DB:96:C:O2'	23:DB:97:C:H5'	2.11	0.49
23:DB:138:U:O4'	50:DT:1:MET:HA	2.12	0.49
23:DB:662:G:O2'	23:DB:663:G:H5'	2.12	0.49
23:DB:1495:A:H2'	23:DB:1496:A:H8	1.77	0.49
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.12	0.49
23:DB:1669:A:O3'	23:DB:2549:G:H5'	2.13	0.49
23:DB:1838:C:H4'	23:DB:1839:G:H8	1.77	0.49
23:DB:2204:G:O2'	23:DB:2205:A:H5'	2.11	0.49
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.32	0.49
25:DC:80:LEU:HD11	25:DC:109:LEU:HG	1.94	0.49
28:DP:64:SER:O	28:DP:66:GLY:N	2.46	0.49
29:DE:126:VAL:HG21	29:DE:133:LEU:HB2	1.93	0.49
30:DY:7:THR:HA	30:DY:34:THR:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:56:PHE:O	35:DV:61:LEU:HD21	2.13	0.49
41:DJ:13:ARG:O	41:DJ:14:ASP:HB2	2.12	0.49
45:DS:1:MET:SD	45:DS:62:ASP:HB3	2.53	0.49
47:DF:140:ILE:O	47:DF:145:VAL:HG12	2.13	0.49
49:DR:59:ILE:HG23	49:DR:101:ILE:H	1.77	0.49
51:DZ:17:ASN:HD22	51:DZ:25:THR:HB	1.77	0.49
53:D6:84:ARG:HH11	53:D6:92:PRO:HD2	1.78	0.49
1:AA:204:G:H2'	1:AA:205:A:C8	2.48	0.49
1:AA:204:G:O2'	1:AA:205:A:H5'	2.12	0.49
1:AA:227:G:H2'	1:AA:228:A:C8	2.47	0.49
1:AA:992:U:H1'	1:AA:993:G:C2	2.47	0.49
1:AA:1318:A:H4'	18:AS:9:PHE:CE1	2.47	0.49
3:AD:104:MET:CE	3:AD:170:LEU:HD13	2.41	0.49
3:AD:170:LEU:HB2	3:AD:180:THR:O	2.12	0.49
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.11	0.49
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.42	0.49
14:AO:50:HIS:O	14:AO:53:ARG:HB3	2.12	0.49
19:AT:57:VAL:HB	19:AT:71:ALA:HB1	1.95	0.49
20:AB:130:LYS:O	20:AB:134:LEU:HG	2.12	0.49
20:AB:186:VAL:O	20:AB:200:PRO:HA	2.12	0.49
22:BA:6:G:H2'	22:BA:7:G:C8	2.47	0.49
23:BB:96:C:H2'	23:BB:97:C:H6	1.77	0.49
23:BB:116:C:H1'	23:BB:127:A:N3	2.27	0.49
23:BB:321:U:O4'	29:BE:159:LEU:HG	2.13	0.49
23:BB:833:A:C1'	37:BL:52:GLY:H	2.26	0.49
23:BB:1040:A:H2'	23:BB:1041:G:H8	1.77	0.49
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.12	0.49
23:BB:1351:C:H2'	23:BB:1352:U:C1'	2.42	0.49
23:BB:2457:U:H2'	23:BB:2458:G:H5'	1.94	0.49
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.13	0.49
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.12	0.49
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.16	0.49
25:BC:6:LYS:C	25:BC:8:THR:H	2.15	0.49
25:BC:132:ARG:O	25:BC:132:ARG:HG3	2.12	0.49
35:BV:30:ILE:HB	35:BV:38:LEU:HB3	1.94	0.49
40:BH:59:ALA:C	40:BH:62:LEU:HG	2.32	0.49
40:BH:94:ILE:CG2	40:BH:99:ILE:HD11	2.42	0.49
43:BO:36:TYR:N	43:BO:36:TYR:CD2	2.80	0.49
44:BQ:23:TYR:CD2	44:BQ:23:TYR:N	2.79	0.49
47:BF:10:GLU:O	47:BF:13:LYS:HG3	2.12	0.49
47:BF:27:VAL:O	47:BF:29:ARG:HD2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:53:PRO:HG3	48:BG:61:TRP:CD2	2.48	0.49
48:BG:133:LYS:HD3	48:BG:133:LYS:H	1.76	0.49
53:B6:52:LEU:HD11	53:B6:58:VAL:HG23	1.94	0.49
53:B6:107:THR:HG22	53:B6:108:GLU:H	1.78	0.49
1:CA:114:U:H2'	1:CA:115:G:C8	2.48	0.49
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.12	0.49
1:CA:790:A:H2'	1:CA:791:G:C8	2.48	0.49
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.42	0.49
1:CA:1079:G:H5"	4:CE:49:TYR:CE2	2.47	0.49
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.12	0.49
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.43	0.49
3:CD:121:ALA:O	3:CD:122:ILE:HD13	2.13	0.49
3:CD:129:VAL:HG12	3:CD:130:ASN:N	2.27	0.49
4:CE:152:VAL:O	4:CE:156:ARG:HG2	2.13	0.49
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.11	0.49
5:CF:86:ARG:NH1	17:CR:64:LEU:HD12	2.27	0.49
10:CK:17:ASP:HA	10:CK:80:ASN:O	2.12	0.49
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.27	0.49
18:CS:50:VAL:HG23	18:CS:59:VAL:HG21	1.95	0.49
22:DA:88:C:O2'	22:DA:89:U:H5"	2.12	0.49
23:DB:79:C:HO2'	23:DB:346:A:H1'	1.77	0.49
23:DB:108:G:H2'	23:DB:109:C:C6	2.48	0.49
23:DB:251:A:H2'	23:DB:252:G:O4'	2.12	0.49
23:DB:620:G:H5'	23:DB:620:G:N3	2.27	0.49
23:DB:1188:U:O2'	23:DB:1189:A:H5'	2.12	0.49
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.27	0.49
23:DB:1816:C:H3'	25:DC:61:TYR:CE2	2.48	0.49
23:DB:2303:G:H1'	47:DF:122:ASP:OD1	2.13	0.49
23:DB:2732:G:H5'	23:DB:2733:A:O4'	2.12	0.49
23:DB:2756:U:C1'	23:DB:2757:A:H5"	2.43	0.49
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.28	0.49
25:DC:128:THR:OG1	25:DC:190:THR:HG22	2.12	0.49
28:DP:9:GLN:HA	28:DP:12:MET:SD	2.53	0.49
28:DP:31:VAL:CG1	28:DP:38:ARG:HG3	2.42	0.49
29:DE:60:TRP:C	29:DE:62:GLN:H	2.15	0.49
29:DE:146:VAL:O	29:DE:167:VAL:HA	2.12	0.49
33:D1:7:LYS:HA	33:D1:23:THR:HG22	1.95	0.49
33:D1:7:LYS:CD	34:D3:33:THR:HG21	2.37	0.49
37:DL:136:GLU:HA	37:DL:140:GLY:HA3	1.94	0.49
1:AA:677:U:H2'	1:AA:678:U:H6	1.76	0.49
1:AA:1040:U:O2'	1:AA:1041:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1144:G:N2	1:AA:1146:A:H62	2.11	0.49
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.77	0.49
3:AD:10:LEU:HD12	3:AD:20:LEU:CD1	2.43	0.49
10:AK:14:GLN:HA	10:AK:76:TYR:O	2.12	0.49
10:AK:90:PRO:C	10:AK:92:ARG:H	2.15	0.49
13:AN:27:LYS:HA	13:AN:31:SER:HB2	1.94	0.49
23:BB:673:C:O4'	29:BE:77:ILE:HD11	2.13	0.49
23:BB:902:C:H2'	23:BB:903:C:C6	2.48	0.49
23:BB:923:G:N3	52:BW:23:LYS:HE3	2.27	0.49
23:BB:1163:G:O2'	23:BB:1164:C:H5'	2.13	0.49
23:BB:1184:U:OP1	30:BY:29:ARG:HD3	2.11	0.49
23:BB:1389:G:O2'	23:BB:1390:U:H5'	2.13	0.49
23:BB:2069:G:O2'	23:BB:2070:A:H5'	2.13	0.49
23:BB:2311:A:H1'	47:BF:84:ILE:HD13	1.94	0.49
26:BD:36:GLN:HG2	26:BD:37:VAL:N	2.26	0.49
26:BD:125:TRP:CD1	26:BD:160:LYS:HB3	2.47	0.49
27:BK:17:ARG:HB2	27:BK:45:GLU:HB3	1.95	0.49
29:BE:58:LYS:N	29:BE:58:LYS:CD	2.75	0.49
34:B3:61:LEU:HB2	34:B3:64:ALA:HB2	1.95	0.49
40:BH:3:VAL:HG12	40:BH:38:PRO:HA	1.94	0.49
40:BH:95:GLY:O	40:BH:99:ILE:HG12	2.11	0.49
41:BJ:84:ILE:O	41:BJ:84:ILE:HG23	2.12	0.49
42:BN:79:LEU:HA	42:BN:83:LEU:CD1	2.42	0.49
44:BQ:109:VAL:O	44:BQ:113:LYS:HG3	2.11	0.49
46:BU:46:LYS:HZ1	46:BU:47:PRO:HG2	1.76	0.49
53:B6:14:MET:HB3	53:B6:168:PHE:CG	2.47	0.49
1:CA:218:U:H2'	1:CA:219:U:C6	2.48	0.49
1:CA:947:G:H2'	1:CA:948:C:H6	1.77	0.49
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.76	0.49
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.12	0.49
4:CE:111:ARG:HG3	4:CE:112:ALA:N	2.27	0.49
4:CE:143:LEU:O	4:CE:146:MET:HG2	2.12	0.49
5:CF:25:TYR:O	5:CF:29:ILE:HG13	2.12	0.49
6:CG:129:ASN:HA	6:CG:134:VAL:HG11	1.94	0.49
8:CI:56:MET:SD	8:CI:57:VAL:N	2.84	0.49
8:CI:117:LEU:HB3	8:CI:122:ARG:O	2.12	0.49
19:CT:14:GLU:OE2	19:CT:18:LYS:HE2	2.13	0.49
19:CT:85:LEU:HD23	19:CT:86:ALA:H	1.77	0.49
23:DB:521:U:H2'	23:DB:522:A:H8	1.74	0.49
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.13	0.49
23:DB:1147:A:O2'	23:DB:1148:U:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1201:U:H2'	23:DB:1202:G:H8	1.76	0.49
23:DB:1252:G:N2	44:DQ:32:ARG:HB3	2.27	0.49
23:DB:2270:A:H2'	23:DB:2271:G:O4'	2.13	0.49
23:DB:2457:U:O2'	23:DB:2458:G:H5'	2.13	0.49
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.13	0.49
25:DC:183:VAL:HG22	25:DC:184:GLU:N	2.27	0.49
26:DD:46:ARG:HH12	26:DD:88:GLU:HG3	1.77	0.49
26:DD:111:GLY:H	26:DD:194:PRO:HG3	1.78	0.49
26:DD:113:SER:HB3	26:DD:167:ASN:HA	1.94	0.49
27:DK:17:ARG:HB2	27:DK:45:GLU:HB3	1.94	0.49
31:D0:12:ARG:HD2	31:D0:16:ARG:NH1	2.27	0.49
33:D1:16:THR:OG1	33:D1:41:VAL:HG11	2.12	0.49
33:D1:47:ILE:HD12	33:D1:47:ILE:N	2.27	0.49
37:DL:95:LEU:HB2	37:DL:101:ILE:HG13	1.93	0.49
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.19	0.49
43:DO:58:ILE:O	43:DO:62:LEU:HB2	2.12	0.49
44:DQ:97:ILE:HD11	44:DQ:108:LEU:HD11	1.95	0.49
45:DS:29:VAL:CA	45:DS:32:ALA:HB3	2.43	0.49
46:DU:13:LEU:HD12	46:DU:68:ASN:O	2.13	0.49
49:DR:38:VAL:HG13	49:DR:54:VAL:HG12	1.94	0.49
49:DR:78:ARG:HG3	49:DR:78:ARG:HH21	1.78	0.49
50:DT:1:MET:CG	50:DT:2:ILE:H	2.24	0.49
50:DT:62:VAL:HG12	50:DT:63:VAL:N	2.27	0.49
1:AA:694:A:C2	1:AA:695:A:H1'	2.46	0.49
1:AA:737:C:O2'	1:AA:738:C:H5'	2.13	0.49
1:AA:766:A:H2'	1:AA:767:A:O4'	2.13	0.49
1:AA:1078:U:O2'	4:AE:137:ARG:NH1	2.46	0.49
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.94	0.49
3:AD:18:LEU:HB2	3:AD:20:LEU:HG	1.94	0.49
3:AD:154:VAL:HG23	3:AD:155:LYS:N	2.28	0.49
3:AD:160:LEU:HD23	3:AD:164:ARG:NH2	2.28	0.49
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	1.93	0.49
22:BA:33:G:O2'	22:BA:34:A:H5'	2.12	0.49
23:BB:150:U:H2'	23:BB:151:C:H6	1.78	0.49
23:BB:345:A:N3	23:BB:346:A:N1	2.60	0.49
23:BB:621:A:H2'	23:BB:622:G:O4'	2.12	0.49
23:BB:1103:A:H5"	23:BB:1104:C:C5	2.46	0.49
23:BB:1693:U:H4'	23:BB:1694:C:OP2	2.13	0.49
23:BB:1805:A:N3	25:BC:49:THR:HG23	2.27	0.49
23:BB:1848:A:H2'	23:BB:1849:G:H8	1.78	0.49
23:BB:2218:G:O2'	23:BB:2219:U:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.47	0.49
23:BB:2394:C:OP1	37:BL:63:LYS:HG2	2.12	0.49
23:BB:2592:G:O2'	23:BB:2593:U:H5'	2.13	0.49
23:BB:2789:C:H3'	23:BB:2893:A:H62	1.78	0.49
23:BB:2847:U:H5"	28:BP:94:ALA:HB2	1.93	0.49
29:BE:69:ARG:O	29:BE:70:SER:CB	2.56	0.49
29:BE:145:ASP:OD1	29:BE:183:PHE:HA	2.12	0.49
31:B0:41:HIS:HB2	42:BN:99:LYS:C	2.33	0.49
37:BL:2:ARG:HG2	37:BL:2:ARG:O	2.12	0.49
37:BL:25:SER:O	37:BL:27:LEU:HD12	2.13	0.49
39:BX:14:LEU:O	39:BX:18:LEU:HB2	2.12	0.49
40:BH:140:ALA:C	40:BH:141:LYS:HD3	2.33	0.49
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.11	0.49
41:BJ:55:ILE:HG22	41:BJ:123:LYS:HB2	1.94	0.49
42:BN:72:ASP:C	42:BN:74:GLU:H	2.16	0.49
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	1.94	0.49
45:BS:96:ILE:HG23	45:BS:96:ILE:O	2.12	0.49
47:BF:131:VAL:HG22	47:BF:151:LEU:O	2.12	0.49
48:BG:166:GLU:CG	48:BG:168:VAL:HG23	2.39	0.49
50:BT:29:THR:CA	50:BT:86:THR:HA	2.41	0.49
50:BT:42:GLU:O	50:BT:46:ALA:HB2	2.12	0.49
53:B6:40:HIS:O	53:B6:41:LEU:C	2.49	0.49
1:CA:179:A:H2'	1:CA:180:U:O4'	2.13	0.49
1:CA:201:G:O2'	1:CA:469:C:H4'	2.12	0.49
1:CA:935:A:O2'	1:CA:936:C:H5'	2.13	0.49
1:CA:998:C:H2'	1:CA:999:C:C6	2.47	0.49
1:CA:1308:U:H3'	12:CM:97:ARG:NH1	2.28	0.49
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.25	0.49
2:CC:54:ILE:HG23	2:CC:54:ILE:O	2.12	0.49
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.94	0.49
5:CF:4:TYR:O	5:CF:63:ASN:HA	2.12	0.49
8:CI:62:LEU:HD13	8:CI:62:LEU:N	2.28	0.49
10:CK:115:ILE:HD11	17:CR:72:ARG:HH12	1.78	0.49
10:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.43	0.49
13:CN:61:ASN:O	13:CN:62:ARG:HB2	2.12	0.49
20:CB:8:MET:CG	20:CB:9:LEU:N	2.76	0.49
20:CB:102:ASN:OD1	20:CB:105:THR:HB	2.13	0.49
22:DA:59:A:H2'	22:DA:60:C:O4'	2.13	0.49
23:DB:4:U:H2'	23:DB:5:A:H8	1.78	0.49
23:DB:630:G:H22	23:DB:632:A:H3'	1.74	0.49
23:DB:927:A:H2'	23:DB:928:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1664:A:H1'	23:DB:2726:A:N1	2.28	0.49
23:DB:1717:A:H2'	23:DB:1718:G:O4'	2.12	0.49
23:DB:2197:U:O2'	23:DB:2198:A:H2'	2.13	0.49
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.12	0.49
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.12	0.49
23:DB:2854:G:H2'	23:DB:2855:C:C6	2.48	0.49
25:DC:132:ARG:O	25:DC:132:ARG:HG3	2.12	0.49
29:DE:3:LEU:CB	29:DE:12:LEU:HB2	2.43	0.49
29:DE:58:LYS:HB2	29:DE:60:TRP:HB2	1.94	0.49
35:DV:76:ASP:H	35:DV:90:ASP:HB2	1.77	0.49
38:DM:26:VAL:HG23	38:DM:104:GLU:OE2	2.11	0.49
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.12	0.49
40:DH:127:GLU:HB2	40:DH:143:ILE:HG21	1.95	0.49
41:DJ:82:GLY:O	41:DJ:84:ILE:HG22	2.13	0.49
43:DO:26:LEU:HD13	43:DO:39:VAL:CG2	2.43	0.49
43:DO:76:LYS:HG3	43:DO:113:ALA:CB	2.42	0.49
44:DQ:7:VAL:O	44:DQ:11:ALA:HB2	2.12	0.49
49:DR:4:VAL:HB	49:DR:39:LEU:HG	1.95	0.49
1:AA:401:C:H2'	1:AA:402:G:H8	1.77	0.49
1:AA:678:U:O2'	1:AA:679:C:H5'	2.13	0.49
1:AA:852:G:H2'	1:AA:853:C:H6	1.77	0.49
1:AA:1216:A:H5"	13:AN:4:SER:CB	2.42	0.49
2:AC:46:LEU:HB3	2:AC:49:ALA:HB3	1.93	0.49
3:AD:11:SER:HA	3:AD:18:LEU:HD22	1.95	0.49
3:AD:59:LYS:O	3:AD:63:ILE:HG13	2.12	0.49
4:AE:111:ARG:HG3	4:AE:112:ALA:N	2.27	0.49
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.13	0.49
11:AL:26:CYS:SG	11:AL:29:LYS:HE2	2.52	0.49
15:AP:67:ILE:HG23	15:AP:67:ILE:O	2.13	0.49
17:AR:44:THR:C	17:AR:46:THR:H	2.15	0.49
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.13	0.49
23:BB:452:G:OP1	29:BE:53:THR:HG23	2.13	0.49
23:BB:516:C:O2'	23:BB:517:C:H5'	2.13	0.49
23:BB:659:G:H4'	29:BE:95:LYS:HB3	1.95	0.49
23:BB:736:C:H2'	23:BB:737:C:C6	2.48	0.49
23:BB:851:C:O2'	30:BY:45:GLY:HA3	2.12	0.49
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.27	0.49
23:BB:1613:G:H2'	23:BB:1617:C:H42	1.77	0.49
23:BB:2147:A:H5'	23:BB:2148:G:H4'	1.94	0.49
23:BB:2302:U:O2'	23:BB:2303:G:H5'	2.13	0.49
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.23	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:226:PRO:HA	25:BC:232:GLY:HA3	1.95	0.49
29:BE:37:ALA:C	29:BE:39:ALA:H	2.14	0.49
29:BE:60:TRP:CZ3	29:BE:62:GLN:HA	2.48	0.49
37:BL:90:VAL:CB	37:BL:122:VAL:HG12	2.42	0.49
40:BH:111:ALA:O	40:BH:114:GLU:HG2	2.12	0.49
41:BJ:75:TYR:CD1	41:BJ:86:GLN:HB3	2.48	0.49
42:BN:45:ARG:HG3	42:BN:95:THR:HG21	1.94	0.49
45:BS:8:ARG:HB3	45:BS:102:HIS:CE1	2.47	0.49
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.43	0.49
47:BF:177:ARG:HA	47:BF:177:ARG:CZ	2.43	0.49
48:BG:173:ALA:HB3	48:BG:175:LYS:NZ	2.28	0.49
49:BR:84:ARG:HH21	49:BR:84:ARG:HG3	1.77	0.49
50:BT:12:ARG:HB3	50:BT:12:ARG:HH11	1.74	0.49
50:BT:27:SER:O	50:BT:28:ASN:HB3	2.12	0.49
53:B6:42:LYS:HE2	53:B6:49:HIS:O	2.13	0.49
53:B6:68:VAL:HB	53:B6:99:LEU:CG	2.42	0.49
1:CA:399:G:H2'	1:CA:400:C:H6	1.78	0.49
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.48	0.49
3:CD:59:LYS:O	3:CD:63:ILE:HG13	2.12	0.49
4:CE:89:THR:HG22	4:CE:90:GLY:N	2.28	0.49
4:CE:152:VAL:HA	4:CE:155:LYS:HD3	1.93	0.49
12:CM:70:ARG:NH2	47:DF:142:TYR:HB3	2.27	0.49
12:CM:79:LEU:CD2	12:CM:86:ARG:HH21	2.26	0.49
20:CB:94:ARG:HG2	20:CB:94:ARG:O	2.13	0.49
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.28	0.49
22:DA:32:U:H4'	22:DA:52:A:H62	1.76	0.49
23:DB:143:C:H2'	23:DB:144:A:H8	1.78	0.49
23:DB:171:U:H2'	23:DB:172:A:H8	1.75	0.49
23:DB:231:A:H3'	23:DB:232:G:C8	2.48	0.49
23:DB:615:U:O4	29:DE:39:ALA:HB2	2.13	0.49
23:DB:688:U:O2'	23:DB:689:A:H5'	2.12	0.49
23:DB:945:A:OP2	23:DB:945:A:H4'	2.12	0.49
23:DB:1063:G:H4'	24:DI:135:MET:HG2	1.95	0.49
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.77	0.49
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.48	0.49
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.13	0.49
23:DB:2818:U:O2'	23:DB:2819:G:H5'	2.12	0.49
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.49
25:DC:6:LYS:C	25:DC:8:THR:H	2.16	0.49
25:DC:90:ILE:HD12	25:DC:102:TYR:HB3	1.95	0.49
26:DD:125:TRP:CD1	26:DD:160:LYS:HB3	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:109:SER:HB2	27:DK:111:LYS:HG2	1.93	0.49
34:D3:22:LYS:HB2	34:D3:48:MET:SD	2.53	0.49
36:D2:21:ARG:CD	36:D2:43:THR:HG21	2.42	0.49
44:DQ:109:VAL:CG1	44:DQ:113:LYS:HE3	2.40	0.49
46:DU:41:VAL:O	46:DU:42:LYS:HB2	2.13	0.49
51:DZ:76:GLU:HG3	51:DZ:77:LYS:N	2.23	0.49
1:AA:85:U:H2'	1:AA:85:U:O2	2.11	0.49
1:AA:393:A:O2'	1:AA:394:G:H5'	2.13	0.49
1:AA:585:G:H2'	1:AA:586:C:H6	1.78	0.49
4:AE:152:VAL:O	4:AE:156:ARG:HG2	2.12	0.49
5:AF:53:LYS:HB3	5:AF:54:LEU:HD22	1.95	0.49
6:AG:38:ALA:O	6:AG:42:VAL:HG23	2.13	0.49
6:AG:70:PRO:HA	6:AG:141:HIS:CE1	2.48	0.49
6:AG:106:ALA:HB1	6:AG:132:THR:HB	1.95	0.49
10:AK:70:ALA:O	10:AK:74:LYS:HB2	2.13	0.49
10:AK:77:GLY:O	10:AK:79:LYS:HE3	2.12	0.49
17:AR:38:ILE:HG23	17:AR:62:ARG:NH2	2.28	0.49
20:AB:22:TRP:HA	20:AB:188:THR:HB	1.95	0.49
20:AB:41:ASN:HD22	20:AB:44:LYS:HB3	1.78	0.49
22:BA:64:G:H2'	22:BA:65:U:H6	1.77	0.49
23:BB:38:A:HO2'	29:BE:43:THR:HA	1.77	0.49
23:BB:154:U:H2'	23:BB:155:A:C8	2.48	0.49
23:BB:783:A:H8	23:BB:784:G:H4'	1.77	0.49
23:BB:840:C:H2'	23:BB:841:G:H8	1.78	0.49
23:BB:852:U:H2'	23:BB:853:C:C6	2.48	0.49
23:BB:1051:G:H5"	23:BB:1052:C:OP2	2.13	0.49
23:BB:1369:G:O2'	23:BB:1370:C:H5'	2.13	0.49
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.13	0.49
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.48	0.49
23:BB:2189:U:H2'	23:BB:2190:G:H8	1.77	0.49
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.48	0.49
23:BB:2458:G:H1'	23:BB:2460:U:O4	2.12	0.49
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.48	0.49
23:BB:2559:C:H2'	23:BB:2560:A:H8	1.77	0.49
23:BB:2676:C:O2'	23:BB:2677:G:H5'	2.12	0.49
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.13	0.49
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.43	0.49
25:BC:131:MET:HE1	25:BC:143:VAL:HG13	1.94	0.49
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.12	0.49
26:BD:4:LEU:HD12	26:BD:32:ASN:HB2	1.94	0.49
29:BE:58:LYS:HB2	29:BE:60:TRP:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:60:TRP:HA	29:BE:60:TRP:CE3	2.48	0.49
35:BV:56:PHE:O	35:BV:61:LEU:HD21	2.13	0.49
35:BV:71:LYS:O	35:BV:94:ALA:HB2	2.13	0.49
35:BV:76:ASP:H	35:BV:90:ASP:HB2	1.78	0.49
35:BV:77:VAL:HG23	35:BV:89:ILE:HG22	1.94	0.49
39:BX:7:ARG:HB2	39:BX:7:ARG:HH11	1.77	0.49
39:BX:15:ASN:O	39:BX:19:LEU:HD13	2.13	0.49
42:BN:59:SER:O	42:BN:63:ARG:HB2	2.13	0.49
42:BN:87:PHE:C	42:BN:89:SER:H	2.15	0.49
44:BQ:73:ILE:HD11	44:BQ:77:LYS:HB3	1.95	0.49
46:BU:81:ARG:HH21	46:BU:81:ARG:N	2.09	0.49
48:BG:10:VAL:HG21	48:BG:49:LEU:HD13	1.94	0.49
48:BG:17:LYS:O	48:BG:23:ILE:HG23	2.13	0.49
51:BZ:56:MET:HA	51:BZ:59:ILE:HG12	1.94	0.49
53:B6:92:PRO:HG3	53:B6:101:ILE:HG23	1.95	0.49
1:CA:62:U:H2'	1:CA:63:C:H6	1.78	0.49
1:CA:204:G:O2'	1:CA:205:A:H5'	2.12	0.49
1:CA:386:C:C2'	1:CA:387:U:H5'	2.43	0.49
1:CA:511:C:O2'	1:CA:512:U:H5"	2.13	0.49
1:CA:1120:C:O2'	1:CA:1121:U:H5'	2.12	0.49
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.41	0.49
1:CA:1450:U:H2'	1:CA:1452:C:C4	2.48	0.49
7:CH:23:ALA:HB1	7:CH:61:THR:HA	1.95	0.49
9:CJ:52:LEU:HB2	13:CN:80:ARG:HD2	1.95	0.49
10:CK:35:ASP:OD1	10:CK:37:GLN:HB2	2.13	0.49
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.13	0.49
13:CN:60:ARG:NE	13:CN:69:PRO:HB3	2.27	0.49
14:CO:70:LEU:HD12	14:CO:78:TYR:CB	2.43	0.49
20:CB:8:MET:O	20:CB:9:LEU:HB3	2.13	0.49
23:DB:91:A:H1'	23:DB:92:U:C6	2.48	0.49
23:DB:734:A:O2'	23:DB:735:A:H5'	2.12	0.49
23:DB:853:C:H2'	23:DB:854:C:H6	1.77	0.49
23:DB:1099:G:H5"	24:DI:2:LYS:HB2	1.95	0.49
23:DB:1344:U:H4'	23:DB:1384:A:C5	2.48	0.49
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.47	0.49
23:DB:1681:G:H2'	23:DB:1757:A:N1	2.28	0.49
23:DB:2069:G:O2'	23:DB:2070:A:H5'	2.13	0.49
23:DB:2145:C:H3'	23:DB:2146:C:H5"	1.93	0.49
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.13	0.49
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.77	0.49
25:DC:183:VAL:HG22	25:DC:184:GLU:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:196:ASN:C	25:DC:198:GLU:H	2.15	0.49
26:DD:31:ALA:O	26:DD:52:THR:HG23	2.13	0.49
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.28	0.49
29:DE:154:ASP:OD1	29:DE:156:ASN:HB3	2.11	0.49
30:DY:8:GLN:HB3	30:DY:31:ILE:O	2.13	0.49
35:DV:1:MET:HG3	35:DV:2:PHE:N	2.28	0.49
38:DM:134:THR:HG22	38:DM:136:MET:H	1.78	0.49
39:DX:56:LEU:O	39:DX:57:LEU:HB3	2.12	0.49
41:DJ:42:ALA:O	41:DJ:44:TYR:N	2.46	0.49
46:DU:11:ILE:HD13	46:DU:11:ILE:O	2.12	0.49
47:DF:21:TYR:HD2	47:DF:27:VAL:HG12	1.78	0.49
1:AA:131:A:H2'	1:AA:132:C:C6	2.48	0.49
1:AA:490:C:H2'	1:AA:491:G:H8	1.77	0.49
1:AA:1329:A:H5"	12:AM:24:VAL:HA	1.93	0.49
1:AA:1503:A:C8	1:AA:1531:A:N3	2.81	0.49
6:AG:47:GLU:OE1	6:AG:57:GLU:HG2	2.12	0.49
9:AJ:35:GLN:HG2	9:AJ:78:GLU:OE1	2.13	0.49
10:AK:115:ILE:HD11	17:AR:72:ARG:HH12	1.78	0.49
11:AL:79:ILE:HD12	11:AL:96:THR:CG2	2.43	0.49
12:AM:52:ILE:HG23	12:AM:56:ARG:NH1	2.17	0.49
13:AN:16:ALA:HA	13:AN:54:SER:O	2.13	0.49
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.94	0.49
19:AT:79:THR:O	19:AT:82:ILE:HG12	2.13	0.49
20:AB:16:GLY:HA2	20:AB:40:ILE:CG1	2.42	0.49
20:AB:16:GLY:HA3	20:AB:39:ILE:HA	1.94	0.49
23:BB:516:C:H2'	23:BB:517:C:C6	2.48	0.49
23:BB:629:G:H5"	23:BB:650:C:O2'	2.12	0.49
23:BB:973:A:H8	23:BB:973:A:OP1	1.95	0.49
23:BB:981:A:H4'	23:BB:2037:A:H5'	1.95	0.49
23:BB:1131:G:N2	23:BB:2024:G:N2	2.60	0.49
23:BB:1407:G:H2'	23:BB:1408:G:C8	2.45	0.49
23:BB:1983:G:H4'	23:BB:2606:C:H4'	1.95	0.49
23:BB:2070:A:H2'	23:BB:2071:A:H8	1.78	0.49
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	2.12	0.49
23:BB:2816:G:O2'	23:BB:2817:U:H5'	2.13	0.49
24:BI:2:LYS:HB3	24:BI:2:LYS:NZ	2.27	0.49
25:BC:14:HIS:O	25:BC:16:VAL:HG23	2.13	0.49
26:BD:55:LYS:C	26:BD:57:ALA:H	2.17	0.49
26:BD:122:VAL:HA	26:BD:127:PHE:N	2.28	0.49
28:BP:8:GLU:HG2	28:BP:54:LEU:HD23	1.94	0.49
29:BE:88:ARG:HH21	29:BE:88:ARG:HG3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:126:VAL:CG2	29:BE:133:LEU:HB2	2.43	0.49
30:BY:6:ILE:HG21	30:BY:47:ILE:HD12	1.94	0.49
30:BY:11:SER:HA	30:BY:31:ILE:HG22	1.95	0.49
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.13	0.49
33:B1:26:LYS:HB2	33:B1:52:LYS:HZ3	1.78	0.49
35:BV:42:LEU:HD23	35:BV:42:LEU:N	2.25	0.49
38:BM:32:GLY:HA2	38:BM:117:PHE:CZ	2.48	0.49
39:BX:28:LEU:HD13	39:BX:37:LEU:CD1	2.40	0.49
40:BH:30:LEU:O	40:BH:35:LYS:HB2	2.13	0.49
41:BJ:25:LEU:O	41:BJ:27:ARG:N	2.44	0.49
41:BJ:45:THR:OG1	41:BJ:48:VAL:HB	2.13	0.49
44:BQ:60:TRP:C	44:BQ:64:ILE:HG12	2.33	0.49
46:BU:21:ARG:HD3	46:BU:72:PHE:CD2	2.48	0.49
47:BF:74:ALA:HB1	47:BF:76:PHE:CD2	2.48	0.49
48:BG:8:VAL:HG22	48:BG:68:ARG:HD3	1.95	0.49
53:B6:14:MET:HG2	53:B6:129:ILE:HG23	1.95	0.49
1:CA:192:A:O2'	1:CA:193:C:H5'	2.12	0.49
1:CA:251:G:N3	1:CA:266:G:O6	2.46	0.49
1:CA:558:G:H8	1:CA:559:A:H2'	1.78	0.49
1:CA:811:C:H4'	1:CA:900:A:N6	2.27	0.49
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.27	0.49
2:CC:179:ALA:HB3	2:CC:181:ILE:HD11	1.95	0.49
6:CG:106:ALA:HB1	6:CG:132:THR:HB	1.94	0.49
17:CR:44:THR:OG1	17:CR:46:THR:HG22	2.13	0.49
23:DB:263:G:H2'	23:DB:264:C:O4'	2.12	0.49
23:DB:365:U:H2'	23:DB:366:C:H6	1.71	0.49
23:DB:483:A:O2'	46:DU:56:GLY:HA2	2.13	0.49
23:DB:672:C:H2'	23:DB:673:C:C6	2.47	0.49
23:DB:1025:G:H1'	23:DB:1135:C:O5'	2.13	0.49
23:DB:1532:A:H2'	23:DB:1532:A:N3	2.25	0.49
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.13	0.49
23:DB:2314:A:H2'	23:DB:2315:G:C8	2.47	0.49
23:DB:2559:C:H2'	23:DB:2560:A:H8	1.78	0.49
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.75	0.49
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.27	0.49
25:DC:116:GLN:O	25:DC:127:ASN:HA	2.13	0.49
27:DK:42:THR:O	27:DK:44:LYS:HG2	2.12	0.49
27:DK:58:LEU:CD1	27:DK:86:LEU:HB3	2.39	0.49
29:DE:37:ALA:C	29:DE:39:ALA:H	2.16	0.49
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.12	0.49
33:D1:28:THR:O	33:D1:29:LYS:HD2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:83:LEU:HD12	42:DN:84:GLY:N	2.28	0.49
46:DU:81:ARG:HH21	46:DU:81:ARG:N	2.10	0.49
47:DF:84:ILE:HG22	47:DF:84:ILE:O	2.12	0.49
48:DG:16:VAL:HG11	48:DG:44:HIS:CE1	2.47	0.49
48:DG:133:LYS:HD3	48:DG:133:LYS:H	1.78	0.49
1:AA:558:G:C8	1:AA:559:A:H2'	2.48	0.48
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.12	0.48
3:AD:123:MET:HA	3:AD:128:VAL:HA	1.95	0.48
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.94	0.48
9:AJ:92:LEU:HD22	9:AJ:92:LEU:N	2.26	0.48
10:AK:110:THR:CG2	21:AU:4:LYS:HA	2.43	0.48
12:AM:15:VAL:HG21	12:AM:40:GLU:HB3	1.95	0.48
12:AM:33:LEU:HD13	12:AM:39:ALA:O	2.13	0.48
12:AM:37:GLY:O	12:AM:38:ILE:HD13	2.13	0.48
13:AN:63:CYS:SG	13:AN:82:LYS:HG3	2.53	0.48
18:AS:11:ASP:HB2	18:AS:14:LEU:HD23	1.94	0.48
22:BA:103:U:O2'	22:BA:104:A:H5'	2.12	0.48
23:BB:141:G:H5"	23:BB:142:A:O4'	2.13	0.48
23:BB:1180:U:H2'	23:BB:1181:U:O4'	2.13	0.48
23:BB:1198:U:H2'	23:BB:1199:U:H6	1.78	0.48
23:BB:2201:G:O2'	23:BB:2202:U:H5'	2.12	0.48
23:BB:2327:A:H2'	23:BB:2328:A:C8	2.48	0.48
23:BB:2330:G:H1'	52:BW:38:ARG:HB3	1.95	0.48
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.28	0.48
29:BE:153:LEU:HG	29:BE:154:ASP:N	2.28	0.48
33:B1:3:GLY:C	33:B1:5:ARG:H	2.14	0.48
37:BL:70:LYS:O	37:BL:73:ILE:HG12	2.13	0.48
40:BH:97:ARG:HA	40:BH:112:LYS:CB	2.39	0.48
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.94	0.48
41:BJ:76:HIS:CE1	41:BJ:85:LYS:HB2	2.48	0.48
44:BQ:29:ARG:HG2	44:BQ:29:ARG:NH1	2.28	0.48
44:BQ:71:ASN:HD22	44:BQ:109:VAL:HG11	1.78	0.48
47:BF:16:MET:O	47:BF:20:ASN:HA	2.12	0.48
1:CA:201:G:H2'	1:CA:202:G:O4'	2.13	0.48
1:CA:1084:G:H2'	1:CA:1085:U:C6	2.48	0.48
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.77	0.48
3:CD:107:GLY:O	3:CD:157:ALA:HB1	2.12	0.48
3:CD:173:ASP:CB	3:CD:178:GLU:HB2	2.36	0.48
11:CL:41:PRO:HB2	11:CL:88:ASP:HB3	1.96	0.48
13:CN:52:ARG:C	13:CN:54:SER:H	2.15	0.48
16:CQ:32:ILE:HG23	16:CQ:33:TYR:CD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:62:GLU:HB2	16:CQ:72:TRP:CZ2	2.47	0.48
18:CS:6:LYS:HD2	18:CS:6:LYS:N	2.28	0.48
22:DA:32:U:H4'	22:DA:52:A:N6	2.28	0.48
22:DA:64:G:H2'	22:DA:65:U:C6	2.48	0.48
23:DB:245:G:H2'	23:DB:246:C:H6	1.78	0.48
23:DB:321:U:O4'	29:DE:159:LEU:HG	2.13	0.48
23:DB:527:C:O4'	23:DB:527:C:O2	2.30	0.48
23:DB:656:G:H2'	23:DB:657:U:C6	2.48	0.48
23:DB:736:C:H2'	23:DB:737:C:C6	2.48	0.48
23:DB:847:U:O2	23:DB:847:U:O4'	2.31	0.48
23:DB:873:C:H2'	23:DB:874:G:C8	2.43	0.48
23:DB:1000:A:H2'	23:DB:1001:A:H8	1.76	0.48
23:DB:1131:G:N2	23:DB:2024:G:N2	2.58	0.48
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.47	0.48
23:DB:1889:A:H2'	23:DB:1890:A:H8	1.75	0.48
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.78	0.48
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.48	0.48
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.48	0.48
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.20	0.48
24:DI:131:THR:O	24:DI:135:MET:HG3	2.13	0.48
25:DC:129:LEU:HB3	25:DC:134:ILE:HG22	1.93	0.48
26:DD:106:LYS:HD3	26:DD:106:LYS:N	2.28	0.48
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	1.95	0.48
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.28	0.48
29:DE:46:GLN:HB3	29:DE:86:ALA:CA	2.42	0.48
29:DE:102:ARG:O	29:DE:106:LYS:HG3	2.13	0.48
35:DV:2:PHE:HD2	35:DV:59:GLU:OE1	1.97	0.48
42:DN:65:LEU:O	42:DN:68:ALA:HB3	2.13	0.48
50:DT:39:THR:O	50:DT:40:LYS:HB2	2.12	0.48
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.94	0.48
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.12	0.48
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.13	0.48
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.78	0.48
2:AC:125:ARG:O	2:AC:126:ARG:HB2	2.13	0.48
3:AD:129:VAL:HG12	3:AD:130:ASN:N	2.28	0.48
6:AG:94:ARG:NH1	6:AG:98:LEU:HD21	2.28	0.48
7:AH:11:THR:HA	7:AH:14:ARG:CZ	2.42	0.48
9:AJ:52:LEU:HB2	13:AN:80:ARG:HD2	1.95	0.48
13:AN:17:ASP:HA	13:AN:21:ALA:HB2	1.94	0.48
13:AN:30:ILE:O	13:AN:40:ARG:HA	2.13	0.48
15:AP:12:LYS:C	15:AP:14:ARG:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:43:ALA:HA	15:AP:46:LYS:HE3	1.95	0.48
16:AQ:62:GLU:HB2	16:AQ:72:TRP:CZ2	2.48	0.48
20:AB:162:VAL:HG13	20:AB:184:ALA:CB	2.36	0.48
22:BA:49:C:O2'	22:BA:50:A:H5'	2.13	0.48
22:BA:49:C:OP1	43:BO:101:GLY:HA3	2.13	0.48
22:BA:93:C:H2'	22:BA:94:A:H8	1.78	0.48
23:BB:321:U:H1'	29:BE:162:ARG:NH1	2.25	0.48
23:BB:325:G:H2'	23:BB:326:G:H8	1.78	0.48
23:BB:540:C:O2'	23:BB:541:A:H5'	2.13	0.48
23:BB:779:U:H2'	23:BB:780:G:C8	2.48	0.48
23:BB:942:G:O2'	23:BB:943:A:H5'	2.12	0.48
23:BB:1234:U:H2'	23:BB:1235:G:O4'	2.12	0.48
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.48	0.48
23:BB:2076:U:O4'	23:BB:2076:U:O2	2.28	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.40	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.28	0.48
25:BC:106:PRO:O	25:BC:109:LEU:HD13	2.14	0.48
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.28	0.48
29:BE:3:LEU:CB	29:BE:12:LEU:HB2	2.43	0.48
29:BE:41:GLN:O	29:BE:42:GLY:O	2.31	0.48
37:BL:4:ASN:N	37:BL:4:ASN:HD22	2.10	0.48
37:BL:136:GLU:HA	37:BL:140:GLY:HA3	1.94	0.48
41:BJ:13:ARG:O	41:BJ:14:ASP:HB2	2.12	0.48
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.28	0.48
46:BU:39:ASN:CG	46:BU:62:ALA:HB3	2.33	0.48
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.13	0.48
47:BF:71:LYS:O	47:BF:72:SER:HB3	2.13	0.48
48:BG:94:ARG:HB2	48:BG:127:GLN:HG3	1.95	0.48
50:BT:1:MET:HB2	50:BT:2:ILE:HD13	1.94	0.48
53:B6:4:LYS:HA	53:B6:7:TYR:HD2	1.77	0.48
1:CA:80:A:H2'	1:CA:81:A:C8	2.48	0.48
1:CA:677:U:H2'	1:CA:678:U:H6	1.78	0.48
1:CA:1036:A:H2'	1:CA:1037:C:C6	2.48	0.48
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.13	0.48
4:CE:79:THR:OG1	4:CE:97:PRO:HA	2.13	0.48
4:CE:87:VAL:HG23	4:CE:92:ARG:HA	1.95	0.48
6:CG:68:VAL:CG1	6:CG:133:ALA:HB1	2.42	0.48
7:CH:23:ALA:CB	7:CH:61:THR:HA	2.44	0.48
7:CH:58:LEU:CD2	7:CH:60:LEU:HB2	2.43	0.48
11:CL:7:VAL:HG22	16:CQ:33:TYR:CD1	2.48	0.48
11:CL:106:VAL:HA	11:CL:107:LYS:NZ	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:39:ILE:HG21	18:CS:61:VAL:HG13	1.95	0.48
18:CS:46:LEU:O	18:CS:60:PHE:HA	2.12	0.48
20:CB:20:ARG:HA	20:CB:20:ARG:NE	2.28	0.48
22:DA:35:C:H2'	22:DA:36:C:H5'	1.95	0.48
23:DB:138:U:O5'	23:DB:138:U:H6	1.95	0.48
23:DB:379:G:O4'	23:DB:2232:C:H5"	2.14	0.48
23:DB:1038:G:O2'	23:DB:1039:A:H5'	2.13	0.48
23:DB:1155:A:O2'	23:DB:1156:A:H2'	2.13	0.48
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.12	0.48
23:DB:1693:U:H4'	23:DB:1694:C:OP2	2.13	0.48
23:DB:2611:C:O2'	23:DB:2612:C:H5'	2.12	0.48
23:DB:2699:C:H2'	23:DB:2700:A:H8	1.77	0.48
23:DB:2829:A:O2'	23:DB:2830:C:H5'	2.14	0.48
24:DI:89:SER:HA	24:DI:97:VAL:HG11	1.96	0.48
27:DK:43:ILE:CG2	27:DK:54:LYS:HA	2.42	0.48
29:DE:145:ASP:OD1	29:DE:183:PHE:HA	2.13	0.48
37:DL:2:ARG:HG2	37:DL:2:ARG:O	2.13	0.48
40:DH:25:TYR:O	40:DH:30:LEU:HG	2.13	0.48
41:DJ:84:ILE:O	41:DJ:84:ILE:HG23	2.13	0.48
46:DU:48:VAL:O	46:DU:48:VAL:HG13	2.13	0.48
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.78	0.48
49:DR:49:ILE:HG22	49:DR:54:VAL:HB	1.94	0.48
1:AA:17:U:O2'	1:AA:18:C:H5'	2.14	0.48
1:AA:66:A:H5"	1:AA:199:A:H4'	1.95	0.48
1:AA:169:C:O2'	1:AA:170:U:H5'	2.13	0.48
1:AA:309:A:O2'	1:AA:310:G:H5'	2.13	0.48
1:AA:363:A:P	11:AL:57:THR:HG21	2.54	0.48
1:AA:586:C:O2'	1:AA:587:G:H5'	2.14	0.48
1:AA:1277:C:H1'	1:AA:1282:C:O2	2.13	0.48
3:AD:154:VAL:HG23	3:AD:155:LYS:HD2	1.94	0.48
8:AI:33:SER:HB3	8:AI:36:GLN:HE21	1.78	0.48
8:AI:33:SER:HB3	8:AI:36:GLN:NE2	2.28	0.48
10:AK:17:ASP:HA	10:AK:80:ASN:O	2.13	0.48
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.94	0.48
12:AM:22:TYR:O	12:AM:68:LEU:HD12	2.13	0.48
18:AS:44:ILE:HA	18:AS:61:VAL:CG1	2.43	0.48
20:AB:122:ASP:O	20:AB:125:PHE:HD2	1.96	0.48
20:AB:164:ASP:OD1	20:AB:203:ASP:HB2	2.12	0.48
23:BB:231:A:H3'	23:BB:232:G:H8	1.78	0.48
23:BB:1327:A:H2'	23:BB:1328:A:O4'	2.13	0.48
23:BB:1495:A:O2'	23:BB:1496:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1810:A:H2'	23:BB:1811:G:O4'	2.13	0.48
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.48	0.48
23:BB:2074:U:O2'	23:BB:2075:U:H5'	2.13	0.48
23:BB:2732:G:H5'	23:BB:2733:A:O4'	2.13	0.48
25:BC:15:VAL:HA	25:BC:203:VAL:HG12	1.95	0.48
25:BC:119:VAL:HG13	25:BC:133:ASN:HD21	1.79	0.48
27:BK:25:LEU:HD11	27:BK:40:LYS:N	2.28	0.48
29:BE:56:GLY:O	29:BE:58:LYS:HD3	2.13	0.48
40:BH:27:ARG:O	40:BH:28:ASN:ND2	2.46	0.48
40:BH:81:ALA:HB2	40:BH:147:VAL:HG23	1.95	0.48
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CE1	2.47	0.48
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.27	0.48
45:BS:55:ILE:CD1	45:BS:107:VAL:HG21	2.43	0.48
46:BU:39:ASN:CB	46:BU:62:ALA:HB3	2.42	0.48
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.33	0.48
48:BG:91:VAL:HG23	48:BG:92:GLY:H	1.78	0.48
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.27	0.48
53:B6:77:LYS:HE2	53:B6:94:ASN:ND2	2.07	0.48
1:CA:338:A:H2'	1:CA:339:C:H6	1.78	0.48
1:CA:586:C:O2'	1:CA:587:G:H5'	2.13	0.48
1:CA:694:A:C2	1:CA:695:A:H1'	2.49	0.48
1:CA:1014:A:H5"	18:CS:13:HIS:HB3	1.95	0.48
1:CA:1124:G:H5"	9:CJ:37:ARG:O	2.13	0.48
2:CC:125:ARG:O	2:CC:126:ARG:HB2	2.13	0.48
3:CD:170:LEU:HB2	3:CD:180:THR:O	2.13	0.48
5:CF:32:ALA:O	5:CF:33:GLU:HB2	2.13	0.48
19:CT:70:LYS:HA	19:CT:73:ARG:NH1	2.28	0.48
20:CB:67:LEU:HA	20:CB:89:PHE:O	2.12	0.48
23:DB:100:U:OP1	23:DB:101:A:O5'	2.31	0.48
23:DB:106:C:H2'	23:DB:107:G:C8	2.47	0.48
23:DB:572:A:C2	23:DB:2033:A:C2	3.01	0.48
23:DB:769:U:H2'	23:DB:770:G:C8	2.49	0.48
23:DB:1047:G:H1'	23:DB:1111:A:N6	2.28	0.48
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.14	0.48
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.27	0.48
23:DB:2355:G:O3'	52:DW:20:LEU:HD13	2.13	0.48
23:DB:2597:G:C6	23:DB:2598:A:N6	2.81	0.48
23:DB:2798:U:O5'	23:DB:2798:U:H6	1.95	0.48
23:DB:2799:A:O3'	23:DB:2800:A:O4'	2.31	0.48
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.13	0.48
25:DC:188:ARG:HG2	25:DC:188:ARG:HH21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:14:ILE:O	26:DD:14:ILE:HG23	2.14	0.48
26:DD:54:ALA:HA	26:DD:76:GLY:N	2.29	0.48
27:DK:54:LYS:HD2	27:DK:54:LYS:N	2.20	0.48
28:DP:99:LEU:HD13	28:DP:99:LEU:O	2.13	0.48
29:DE:115:GLN:O	29:DE:117:ARG:HG3	2.13	0.48
40:DH:27:ARG:O	40:DH:28:ASN:ND2	2.46	0.48
42:DN:64:ARG:O	42:DN:67:PHE:HB3	2.12	0.48
44:DQ:71:ASN:HD22	44:DQ:109:VAL:HG11	1.77	0.48
44:DQ:91:ARG:NH1	49:DR:10:LYS:HB3	2.28	0.48
47:DF:142:TYR:CD1	47:DF:142:TYR:N	2.78	0.48
48:DG:17:LYS:O	48:DG:23:ILE:HG23	2.13	0.48
1:AA:236:A:H2'	1:AA:237:G:H8	1.78	0.48
1:AA:265:G:H4'	16:AQ:67:SER:HA	1.95	0.48
1:AA:448:A:H2'	1:AA:449:G:C8	2.48	0.48
1:AA:663:A:H5'	1:AA:836:G:OP1	2.13	0.48
1:AA:947:G:H4'	12:AM:107:THR:OG1	2.14	0.48
10:AK:63:GLN:O	10:AK:67:GLU:HG2	2.13	0.48
10:AK:80:ASN:CB	10:AK:105:ARG:HB3	2.44	0.48
20:AB:16:GLY:HA2	20:AB:40:ILE:HD12	1.95	0.48
20:AB:101:THR:HG23	20:AB:102:ASN:N	2.28	0.48
22:BA:88:C:O2'	22:BA:89:U:H5"	2.14	0.48
23:BB:429:A:H2'	23:BB:430:A:C8	2.48	0.48
23:BB:818:G:N1	23:BB:1187:G:H2'	2.28	0.48
23:BB:858:G:H21	23:BB:2268:A:H3'	1.78	0.48
23:BB:935:C:O2'	23:BB:936:A:H5'	2.14	0.48
23:BB:988:A:C8	30:BY:13:ILE:HD12	2.48	0.48
23:BB:1838:C:H4'	23:BB:1839:G:H8	1.78	0.48
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.13	0.48
23:BB:1999:C:O2'	23:BB:2000:C:H5'	2.14	0.48
23:BB:2100:G:C6	23:BB:2190:G:C6	3.02	0.48
23:BB:2365:G:O2'	52:BW:59:PHE:HE1	1.96	0.48
23:BB:2519:U:C6	23:BB:2542:A:N6	2.82	0.48
23:BB:2529:G:H4'	48:BG:174:LYS:HB2	1.94	0.48
23:BB:2547:A:H4'	27:BK:29:HIS:CE1	2.48	0.48
23:BB:2597:G:C6	23:BB:2598:A:N6	2.81	0.48
23:BB:2678:C:H2'	23:BB:2679:A:H8	1.77	0.48
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.78	0.48
23:BB:2821:A:OP2	26:BD:115:GLY:HA3	2.14	0.48
23:BB:2854:G:H2'	23:BB:2855:C:H6	1.77	0.48
25:BC:16:VAL:N	25:BC:203:VAL:HG12	2.28	0.48
25:BC:185:ALA:C	25:BC:187:CYS:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:99:ASN:O	37:BL:100:ILE:HB	2.13	0.48
38:BM:31:PHE:HB3	38:BM:130:PHE:CZ	2.48	0.48
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	1.95	0.48
41:BJ:100:VAL:O	41:BJ:104:ALA:HB2	2.14	0.48
42:BN:8:ARG:HB2	42:BN:43:GLU:OE1	2.13	0.48
48:BG:36:LEU:HD22	48:BG:36:LEU:N	2.29	0.48
49:BR:38:VAL:HG13	49:BR:54:VAL:HG12	1.94	0.48
50:BT:2:ILE:HG12	50:BT:3:ARG:H	1.79	0.48
1:CA:98:A:H2'	1:CA:99:C:H6	1.78	0.48
1:CA:401:C:H2'	1:CA:402:G:H8	1.79	0.48
1:CA:490:C:H2'	1:CA:491:G:H8	1.78	0.48
3:CD:123:MET:HA	3:CD:128:VAL:HA	1.95	0.48
4:CE:45:VAL:HG13	4:CE:117:ALA:HA	1.94	0.48
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.13	0.48
8:CI:9:GLY:HA2	8:CI:80:HIS:HD2	1.76	0.48
8:CI:42:THR:O	8:CI:45:MET:HG2	2.13	0.48
9:CJ:8:ILE:HD12	9:CJ:8:ILE:N	2.29	0.48
9:CJ:83:THR:O	9:CJ:86:ALA:HB3	2.13	0.48
9:CJ:92:LEU:N	9:CJ:92:LEU:HD13	2.28	0.48
10:CK:92:ARG:NH2	21:CU:24:LYS:HG2	2.27	0.48
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.13	0.48
14:CO:8:THR:O	14:CO:11:ILE:HG22	2.12	0.48
18:CS:61:VAL:HG12	18:CS:62:THR:N	2.27	0.48
18:CS:62:THR:H	18:CS:65:MET:HB3	1.78	0.48
20:CB:71:THR:HG23	20:CB:94:ARG:H	1.79	0.48
23:DB:67:U:H2'	23:DB:68:G:H8	1.77	0.48
23:DB:112:U:H2'	23:DB:113:U:H5'	1.96	0.48
23:DB:283:G:H2'	23:DB:284:U:O4'	2.13	0.48
23:DB:540:C:O2'	23:DB:541:A:H5'	2.13	0.48
23:DB:789:A:H5"	57:DB:3670:HOH:O	2.12	0.48
23:DB:919:U:H2'	23:DB:920:A:H8	1.72	0.48
23:DB:1047:G:H3'	23:DB:1048:A:H5'	1.96	0.48
23:DB:1798:U:OP1	25:DC:257:ARG:HB2	2.13	0.48
23:DB:2752:C:H2'	23:DB:2753:A:O4'	2.13	0.48
31:D0:32:THR:OG1	31:D0:50:GLY:HA2	2.13	0.48
36:D2:9:VAL:CG1	36:D2:10:LEU:N	2.77	0.48
39:DX:55:THR:O	39:DX:58:ASN:HB3	2.14	0.48
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.34	0.48
45:DS:50:VAL:HA	45:DS:53:SER:HB3	1.95	0.48
52:DW:66:VAL:HA	52:DW:81:ILE:HG22	1.95	0.48
1:AA:178:C:O2'	1:AA:179:A:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:474:G:H2'	1:AA:475:C:H6	1.78	0.48
1:AA:542:G:O2'	1:AA:543:U:H5'	2.12	0.48
1:AA:807:A:H2'	1:AA:808:C:C6	2.48	0.48
1:AA:906:A:C2'	1:AA:907:A:H5"	2.43	0.48
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.48	0.48
1:AA:1330:U:H2'	1:AA:1331:G:H5'	1.95	0.48
1:AA:1477:U:H2'	1:AA:1478:U:H6	1.78	0.48
5:AF:3:HIS:CE1	5:AF:95:ALA:H	2.31	0.48
6:AG:135:LYS:HE2	6:AG:139:ASP:OD2	2.14	0.48
7:AH:77:VAL:HG11	7:AH:124:ILE:HG21	1.95	0.48
7:AH:118:ALA:HB3	7:AH:120:LEU:CD2	2.43	0.48
8:AI:16:ALA:HA	8:AI:66:VAL:HA	1.96	0.48
13:AN:60:ARG:NE	13:AN:69:PRO:HB3	2.29	0.48
20:AB:15:PHE:CD1	20:AB:16:GLY:N	2.81	0.48
22:BA:101:A:H4'	23:BB:864:G:H4'	1.94	0.48
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.77	0.48
23:BB:2015:A:H2'	23:BB:2016:U:O4'	2.13	0.48
23:BB:2143:C:N3	23:BB:2148:G:O6	2.46	0.48
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.78	0.48
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.95	0.48
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.13	0.48
38:BM:26:VAL:HA	38:BM:66:ARG:HH21	1.78	0.48
38:BM:55:ARG:HH21	38:BM:55:ARG:CA	2.22	0.48
40:BH:67:ALA:HB1	40:BH:70:GLU:CG	2.43	0.48
40:BH:99:ILE:HD12	40:BH:130:VAL:HG11	1.96	0.48
41:BJ:44:TYR:CD2	41:BJ:44:TYR:C	2.86	0.48
45:BS:17:VAL:HG11	45:BS:103:ILE:HG12	1.96	0.48
49:BR:39:LEU:HD23	49:BR:39:LEU:N	2.29	0.48
53:B6:78:ALA:O	53:B6:82:ALA:HB2	2.13	0.48
53:B6:92:PRO:CG	53:B6:101:ILE:HG12	2.43	0.48
1:CA:64:G:OP1	1:CA:64:G:H3'	2.13	0.48
1:CA:224:U:H2'	1:CA:225:C:H6	1.78	0.48
1:CA:332:G:OP2	19:CT:4:LYS:HB2	2.14	0.48
1:CA:1460:C:H2'	1:CA:1461:G:C8	2.49	0.48
3:CD:115:GLN:HE21	3:CD:119:HIS:CE1	2.31	0.48
5:CF:86:ARG:HH11	17:CR:64:LEU:HD12	1.78	0.48
6:CG:89:GLU:OE1	6:CG:152:HIS:NE2	2.47	0.48
8:CI:87:MET:O	8:CI:87:MET:HE2	2.13	0.48
11:CL:54:VAL:HG12	11:CL:55:ARG:N	2.29	0.48
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.95	0.48
13:CN:30:ILE:CG2	13:CN:41:TRP:HB2	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:15:G:O2'	23:DB:16:C:H5'	2.14	0.48
23:DB:150:U:H2'	23:DB:151:C:H6	1.78	0.48
23:DB:496:G:H4'	45:DS:61:ASN:ND2	2.29	0.48
23:DB:876:C:H3'	23:DB:877:A:C8	2.48	0.48
23:DB:1799:G:H4'	23:DB:1800:C:O5'	2.14	0.48
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.14	0.48
23:DB:2011:U:H2'	23:DB:2012:G:O4'	2.14	0.48
23:DB:2545:G:O2'	23:DB:2546:U:H5'	2.13	0.48
23:DB:2588:G:H2'	23:DB:2589:A:O4'	2.13	0.48
33:D1:33:LEU:HD12	33:D1:34:GLU:H	1.77	0.48
35:DV:77:VAL:CG1	38:DM:136:MET:HB3	2.44	0.48
37:DL:3:LEU:O	37:DL:5:THR:N	2.45	0.48
37:DL:96:LYS:HD3	37:DL:103:ILE:HA	1.96	0.48
38:DM:4:PRO:HG2	38:DM:70:ASP:HA	1.94	0.48
41:DJ:72:LYS:CB	41:DJ:89:PHE:H	2.26	0.48
41:DJ:133:ALA:C	41:DJ:135:GLN:H	2.17	0.48
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	1.95	0.48
43:DO:100:HIS:CA	43:DO:104:GLN:HB2	2.44	0.48
44:DQ:94:LEU:HD21	49:DR:11:GLN:HB2	1.94	0.48
46:DU:21:ARG:HD3	46:DU:72:PHE:CD2	2.48	0.48
50:DT:61:LEU:HD12	50:DT:62:VAL:O	2.13	0.48
52:DW:30:VAL:HA	52:DW:60:ALA:O	2.13	0.48
1:AA:194:C:O2'	1:AA:195:A:H5'	2.14	0.48
1:AA:810:C:O2'	1:AA:811:C:H5'	2.14	0.48
1:AA:886:G:O2'	1:AA:887:G:H5'	2.13	0.48
1:AA:1048:G:H4'	13:AN:2:LYS:HZ2	1.76	0.48
1:AA:1124:G:H5"	9:AJ:37:ARG:O	2.13	0.48
1:AA:1283:U:O2'	1:AA:1284:C:H5'	2.13	0.48
3:AD:90:LEU:O	3:AD:93:LEU:HB2	2.14	0.48
4:AE:32:PHE:CE2	4:AE:55:VAL:HG22	2.49	0.48
4:AE:143:LEU:O	4:AE:146:MET:HG2	2.13	0.48
4:AE:151:MET:O	4:AE:154:ALA:HB3	2.13	0.48
13:AN:9:GLU:HB2	13:AN:62:ARG:NE	2.29	0.48
13:AN:20:PHE:CB	13:AN:24:ALA:HB2	2.44	0.48
16:AQ:60:ILE:HD13	16:AQ:60:ILE:H	1.78	0.48
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.79	0.48
23:BB:6:A:H2'	23:BB:7:G:C8	2.47	0.48
23:BB:56:A:H2'	23:BB:57:C:C6	2.48	0.48
23:BB:359:G:O2'	23:BB:360:U:H5'	2.14	0.48
23:BB:1076:C:H4'	24:BI:94:LYS:NZ	2.28	0.48
23:BB:1176:U:H2'	23:BB:1177:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1278:C:O3'	42:BN:34:ILE:HG23	2.13	0.48
23:BB:1570:A:H2'	23:BB:1571:A:C8	2.49	0.48
26:BD:106:LYS:HD3	26:BD:106:LYS:N	2.28	0.48
27:BK:75:SER:HB2	28:BP:73:PHE:HA	1.94	0.48
28:BP:56:SER:O	28:BP:74:GLN:HA	2.14	0.48
28:BP:94:ALA:C	28:BP:95:LYS:HD2	2.34	0.48
29:BE:21:ARG:HG3	29:BE:22:ASP:O	2.13	0.48
33:B1:7:LYS:HA	33:B1:23:THR:HG22	1.94	0.48
36:B2:21:ARG:CD	36:B2:43:THR:HG21	2.44	0.48
37:BL:119:PRO:HA	37:BL:138:ALA:O	2.13	0.48
39:BX:10:SER:HA	39:BX:57:LEU:HD13	1.94	0.48
44:BQ:20:ALA:HA	44:BQ:23:TYR:CE1	2.49	0.48
47:BF:91:ARG:O	47:BF:92:GLY:C	2.51	0.48
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.45	0.48
1:CA:26:A:H61	1:CA:558:G:H1'	1.79	0.48
1:CA:377:G:H2'	1:CA:378:G:H8	1.77	0.48
1:CA:719:C:H2'	17:CR:38:ILE:HD11	1.96	0.48
1:CA:1493:A:OP1	55:CA:1662:PAR:H51	2.12	0.48
2:CC:131:ARG:HG2	2:CC:131:ARG:NH1	2.25	0.48
7:CH:113:ARG:NH2	7:CH:114:ALA:HA	2.29	0.48
8:CI:120:ALA:O	8:CI:121:ARG:HG2	2.14	0.48
13:CN:17:ASP:HA	13:CN:21:ALA:HB2	1.94	0.48
18:CS:42:ASN:HD22	18:CS:42:ASN:N	2.10	0.48
20:CB:118:THR:O	20:CB:121:GLN:HB3	2.14	0.48
23:DB:6:A:H4'	41:DJ:131:ASN:O	2.14	0.48
23:DB:257:C:H2'	23:DB:258:G:O4'	2.14	0.48
23:DB:516:C:O2'	23:DB:517:C:H5'	2.14	0.48
23:DB:549:G:H2'	41:DJ:2:LYS:CE	2.43	0.48
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.14	0.48
23:DB:629:G:H5"	23:DB:650:C:O2'	2.13	0.48
23:DB:1579:A:H2'	23:DB:1580:A:H8	1.78	0.48
23:DB:1671:U:H2'	23:DB:1673:G:OP2	2.14	0.48
23:DB:1968:G:H5"	57:DB:3572:HOH:O	2.13	0.48
23:DB:2368:C:H2'	23:DB:2369:A:H8	1.77	0.48
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.48	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.48
31:D0:42:ILE:HG12	42:DN:99:LYS:O	2.13	0.48
35:DV:71:LYS:O	35:DV:94:ALA:HB2	2.14	0.48
37:DL:4:ASN:N	37:DL:4:ASN:ND2	2.60	0.48
43:DO:40:ILE:HG22	43:DO:44:GLY:HA2	1.95	0.48
45:DS:17:VAL:HG11	45:DS:103:ILE:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.13	0.48
47:DF:168:LEU:HD13	47:DF:172:PHE:HE2	1.79	0.48
48:DG:163:TYR:O	48:DG:165:ASP:N	2.47	0.48
53:D6:80:GLU:CA	53:D6:83:ILE:HG12	2.41	0.48
1:AA:212:G:H2'	1:AA:213:G:H8	1.78	0.48
1:AA:1009:U:H2'	1:AA:1009:U:O2	2.13	0.48
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.43	0.48
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.47	0.48
3:AD:169:TRP:CD1	3:AD:170:LEU:HD23	2.49	0.48
4:AE:80:LEU:HD13	4:AE:95:MET:HB3	1.96	0.48
7:AH:55:LYS:HA	7:AH:55:LYS:NZ	2.27	0.48
8:AI:5:TYR:HB3	8:AI:88:GLU:OE2	2.14	0.48
8:AI:75:ALA:HA	8:AI:78:ILE:HD12	1.96	0.48
16:AQ:32:ILE:HG23	16:AQ:33:TYR:CD2	2.48	0.48
20:AB:20:ARG:HA	20:AB:20:ARG:NE	2.28	0.48
22:BA:28:C:N4	22:BA:56:G:C6	2.82	0.48
23:BB:235:U:H2'	23:BB:236:C:C6	2.49	0.48
23:BB:620:G:N3	23:BB:620:G:H5'	2.27	0.48
23:BB:662:G:O2'	23:BB:663:G:H5'	2.13	0.48
23:BB:771:G:O2'	23:BB:772:C:H5'	2.14	0.48
23:BB:1029:A:H2'	23:BB:1030:C:O4'	2.13	0.48
23:BB:1045:C:H5"	23:BB:1047:G:O4'	2.14	0.48
23:BB:1652:A:OP1	42:BN:8:ARG:HD3	2.14	0.48
23:BB:1848:A:H2'	23:BB:1849:G:C8	2.49	0.48
23:BB:2244:U:H2'	23:BB:2245:U:O4'	2.14	0.48
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.76	0.48
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.60	0.48
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.49	0.48
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.12	0.48
26:BD:54:ALA:HA	26:BD:76:GLY:N	2.28	0.48
29:BE:37:ALA:HB1	29:BE:92:HIS:O	2.13	0.48
29:BE:97:ASN:ND2	29:BE:100:MET:HG3	2.29	0.48
37:BL:4:ASN:N	37:BL:4:ASN:ND2	2.61	0.48
41:BJ:31:GLU:O	41:BJ:34:ARG:HB2	2.13	0.48
41:BJ:43:GLU:O	41:BJ:45:THR:HG22	2.14	0.48
43:BO:35:ILE:HG21	43:BO:71:ALA:CB	2.43	0.48
47:BF:108:PRO:O	47:BF:110:ILE:HG23	2.13	0.48
47:BF:120:SER:OG	47:BF:129:MET:HB3	2.13	0.48
48:BG:68:ARG:NH1	48:BG:72:ASN:HD22	2.09	0.48
48:BG:133:LYS:HD3	48:BG:133:LYS:N	2.27	0.48
51:BZ:53:ALA:O	51:BZ:55:GLY:N	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:69:ALA:HA	51:BZ:72:ARG:NH1	2.28	0.48
1:CA:621:A:H2'	1:CA:622:A:H8	1.77	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.14	0.48
2:CC:13:ILE:C	2:CC:15:LYS:H	2.17	0.48
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.95	0.48
3:CD:11:SER:HA	3:CD:18:LEU:HD22	1.96	0.48
4:CE:151:MET:O	4:CE:154:ALA:HB3	2.13	0.48
6:CG:16:LYS:HD2	6:CG:43:TYR:CD1	2.49	0.48
9:CJ:26:VAL:HG12	9:CJ:30:LYS:HE2	1.95	0.48
9:CJ:55:PRO:HA	13:CN:80:ARG:HH22	1.72	0.48
10:CK:27:ASN:O	10:CK:56:LYS:HD2	2.12	0.48
20:CB:15:PHE:CD1	20:CB:16:GLY:N	2.82	0.48
20:CB:101:THR:HG23	20:CB:102:ASN:H	1.78	0.48
20:CB:102:ASN:O	20:CB:106:VAL:HG23	2.14	0.48
20:CB:129:THR:C	20:CB:131:LYS:N	2.67	0.48
22:DA:29:A:H2'	22:DA:30:C:O4'	2.14	0.48
23:DB:78:U:H2'	23:DB:79:C:C6	2.49	0.48
23:DB:265:A:O2'	23:DB:266:G:H4'	2.14	0.48
23:DB:1416:G:O2'	23:DB:1417:C:H6	1.96	0.48
23:DB:1439:A:N7	23:DB:1440:U:C6	2.82	0.48
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.14	0.48
23:DB:1747:U:H2'	23:DB:1748:C:C6	2.48	0.48
23:DB:2465:C:O2'	23:DB:2466:C:H5'	2.14	0.48
23:DB:2834:G:O6	23:DB:2879:A:H2'	2.13	0.48
24:DI:52:LEU:HD13	24:DI:81:LYS:HZ3	1.79	0.48
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.28	0.48
25:DC:43:ASN:ND2	25:DC:44:ASN:N	2.57	0.48
25:DC:202:ARG:NH1	25:DC:213:ARG:NE	2.60	0.48
26:DD:55:LYS:C	26:DD:57:ALA:H	2.17	0.48
29:DE:29:HIS:C	29:DE:32:VAL:HG22	2.34	0.48
29:DE:37:ALA:HB1	29:DE:92:HIS:O	2.13	0.48
29:DE:41:GLN:O	29:DE:42:GLY:O	2.32	0.48
29:DE:60:TRP:HA	29:DE:60:TRP:CE3	2.48	0.48
29:DE:126:VAL:HG22	29:DE:127:GLU:H	1.77	0.48
31:D0:31:LYS:HD2	31:D0:31:LYS:N	2.26	0.48
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.14	0.48
35:DV:30:ILE:HB	35:DV:38:LEU:HB3	1.95	0.48
38:DM:24:THR:HG23	38:DM:34:LYS:HE3	1.95	0.48
40:DH:86:ASP:C	40:DH:88:GLY:H	2.17	0.48
42:DN:9:GLN:O	42:DN:17:ARG:HD3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.14	0.48
43:DO:94:ARG:HD2	43:DO:97:PHE:O	2.14	0.48
44:DQ:29:ARG:HH11	44:DQ:29:ARG:HG2	1.77	0.48
44:DQ:105:PHE:HA	44:DQ:108:LEU:HG	1.95	0.48
47:DF:91:ARG:O	47:DF:92:GLY:C	2.51	0.48
48:DG:18:ILE:HA	48:DG:22:VAL:O	2.14	0.48
50:DT:50:LEU:C	50:DT:52:GLU:H	2.17	0.48
53:D6:1:MET:CG	53:D6:2:THR:H	2.26	0.48
1:AA:26:A:H61	1:AA:558:G:H1'	1.78	0.48
1:AA:591:U:H2'	1:AA:592:G:C8	2.49	0.48
1:AA:1074:G:O4'	20:AB:102:ASN:HB2	2.14	0.48
1:AA:1278:G:H4'	1:AA:1279:G:O4'	2.13	0.48
12:AM:71:GLU:HA	12:AM:74:MET:SD	2.54	0.48
13:AN:9:GLU:O	13:AN:13:VAL:HG23	2.13	0.48
13:AN:42:ASN:O	13:AN:45:LEU:HB3	2.14	0.48
13:AN:52:ARG:HD2	13:AN:58:ARG:HH21	1.78	0.48
14:AO:8:THR:O	14:AO:11:ILE:HG22	2.13	0.48
19:AT:70:LYS:HA	19:AT:73:ARG:NH1	2.29	0.48
22:BA:113:C:H2'	22:BA:114:C:C6	2.49	0.48
23:BB:18:U:OP1	44:BQ:29:ARG:NH2	2.47	0.48
23:BB:175:G:O2'	23:BB:176:A:H5'	2.14	0.48
23:BB:598:U:H2'	23:BB:599:A:C8	2.49	0.48
23:BB:656:G:H2'	23:BB:657:U:C6	2.49	0.48
23:BB:807:U:H2'	23:BB:808:G:C8	2.49	0.48
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.14	0.48
23:BB:1287:A:H3'	23:BB:1288:G:H21	1.76	0.48
23:BB:1708:C:H2'	23:BB:1709:U:H6	1.78	0.48
23:BB:1854:A:H61	23:BB:1888:G:H1'	1.78	0.48
23:BB:2645:G:H4'	23:BB:2732:G:H2'	1.96	0.48
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.77	0.48
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.13	0.48
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.27	0.48
26:BD:68:PHE:C	26:BD:73:VAL:HB	2.33	0.48
26:BD:176:ASP:HB2	26:BD:190:LYS:HG2	1.94	0.48
27:BK:43:ILE:HG21	27:BK:46:ALA:HB2	1.96	0.48
27:BK:79:PHE:HZ	27:BK:104:THR:HG23	1.78	0.48
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.14	0.48
29:BE:48:THR:O	29:BE:52:VAL:HG23	2.14	0.48
29:BE:138:LEU:O	29:BE:142:ALA:N	2.47	0.48
32:B4:13:ASN:O	32:B4:27:CYS:HA	2.13	0.48
32:B4:19:ARG:O	32:B4:20:ASP:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:36:LYS:HA	33:B1:46:VAL:O	2.13	0.48
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.29	0.48
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.43	0.48
42:BN:19:ALA:C	42:BN:21:PHE:N	2.67	0.48
43:BO:28:VAL:HG21	43:BO:106:LEU:HD21	1.96	0.48
43:BO:58:ILE:O	43:BO:62:LEU:HB2	2.13	0.48
45:BS:44:ALA:C	45:BS:46:LEU:H	2.16	0.48
46:BU:31:GLY:O	46:BU:66:VAL:HG12	2.14	0.48
47:BF:7:TYR:HA	47:BF:11:VAL:HB	1.95	0.48
52:BW:77:LYS:H	52:BW:77:LYS:HZ2	1.60	0.48
1:CA:472:U:H2'	1:CA:473:U:C6	2.49	0.48
1:CA:678:U:O2'	1:CA:679:C:H5'	2.14	0.48
2:CC:185:THR:HG22	2:CC:198:LYS:HA	1.95	0.48
5:CF:53:LYS:C	5:CF:54:LEU:HD22	2.33	0.48
7:CH:29:SER:OG	7:CH:32:LYS:HG3	2.13	0.48
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.13	0.48
7:CH:55:LYS:HA	7:CH:55:LYS:NZ	2.29	0.48
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	1.96	0.48
10:CK:125:LYS:O	21:CU:33:ARG:NH2	2.46	0.48
12:CM:109:LYS:HG3	12:CM:110:GLY:N	2.29	0.48
13:CN:63:CYS:SG	13:CN:82:LYS:HG3	2.53	0.48
19:CT:57:VAL:HB	19:CT:71:ALA:HB1	1.95	0.48
20:CB:16:GLY:HA3	20:CB:40:ILE:H	1.78	0.48
20:CB:38:HIS:O	20:CB:39:ILE:HD13	2.13	0.48
22:DA:13:G:H1'	22:DA:69:G:N2	2.29	0.48
23:DB:138:U:H2'	23:DB:140:C:C1'	2.44	0.48
23:DB:543:G:H21	23:DB:545:U:H5'	1.78	0.48
23:DB:553:G:O2'	23:DB:554:U:H5'	2.13	0.48
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.13	0.48
23:DB:1369:G:O2'	23:DB:1370:C:H5'	2.14	0.48
23:DB:2700:A:O2'	23:DB:2701:U:H5'	2.14	0.48
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.79	0.48
25:DC:159:THR:H	25:DC:194:VAL:CG1	2.27	0.48
29:DE:11:ALA:O	29:DE:12:LEU:HD22	2.13	0.48
31:D0:30:ASP:OD2	31:D0:31:LYS:HD2	2.13	0.48
35:DV:9:ARG:HH21	35:DV:12:GLN:HA	1.74	0.48
38:DM:33:LEU:HD22	38:DM:128:THR:OG1	2.14	0.48
43:DO:35:ILE:HG21	43:DO:71:ALA:HA	1.96	0.48
43:DO:55:GLU:HB2	43:DO:58:ILE:HD12	1.96	0.48
44:DQ:23:TYR:N	44:DQ:23:TYR:CD2	2.79	0.48
46:DU:4:ILE:HG13	46:DU:66:VAL:HG23	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:87:GLN:HE21	48:DG:164:ALA:HA	1.77	0.48
48:DG:133:LYS:HD3	48:DG:133:LYS:N	2.28	0.48
49:DR:20:VAL:HG12	49:DR:21:ARG:N	2.29	0.48
1:AA:37:U:H2'	1:AA:38:G:C8	2.49	0.48
1:AA:201:G:O2'	1:AA:469:C:H4'	2.13	0.48
1:AA:310:G:H5"	15:AP:31:ARG:HB2	1.96	0.48
1:AA:434:U:H3'	1:AA:435:A:H8	1.77	0.48
1:AA:590:U:H2'	1:AA:591:U:H6	1.79	0.48
1:AA:631:C:H3'	1:AA:632:U:H5'	1.96	0.48
3:AD:25:ARG:O	3:AD:26:ALA:HB3	2.14	0.48
3:AD:77:GLU:OE1	3:AD:80:ARG:HD3	2.14	0.48
6:AG:16:LYS:HD2	6:AG:43:TYR:CD1	2.49	0.48
6:AG:41:ILE:HG21	6:AG:115:MET:CG	2.43	0.48
7:AH:23:ALA:CB	7:AH:61:THR:HA	2.44	0.48
8:AI:11:ARG:CZ	8:AI:106:ASP:OD1	2.62	0.48
8:AI:24:ASN:CG	8:AI:25:GLY:H	2.17	0.48
9:AJ:15:HIS:O	9:AJ:18:ILE:HG22	2.14	0.48
20:AB:14:HIS:HB2	20:AB:208:ALA:CB	2.44	0.48
20:AB:187:ASP:HB3	20:AB:201:GLY:O	2.14	0.48
23:BB:26:G:H1'	23:BB:514:A:N6	2.28	0.48
23:BB:195:A:H61	23:BB:198:C:H3'	1.79	0.48
23:BB:705:A:N6	23:BB:726:G:O2'	2.46	0.48
23:BB:796:C:H2'	23:BB:797:G:C8	2.48	0.48
23:BB:811:U:OP2	37:BL:20:GLY:HA2	2.13	0.48
23:BB:912:C:H2'	23:BB:913:U:C6	2.49	0.48
23:BB:973:A:H1'	23:BB:1188:U:C5	2.48	0.48
23:BB:1432:G:H2'	23:BB:1433:A:H8	1.77	0.48
23:BB:1825:U:H2'	23:BB:1826:G:C8	2.49	0.48
23:BB:2081:U:H2'	23:BB:2082:A:C8	2.49	0.48
23:BB:2455:G:O2'	23:BB:2456:C:H5'	2.14	0.48
24:BI:62:ALA:C	24:BI:64:ARG:H	2.16	0.48
26:BD:114:LYS:HG2	26:BD:166:GLY:HA2	1.95	0.48
27:BK:43:ILE:CG2	27:BK:46:ALA:HB2	2.44	0.48
28:BP:6:GLN:NE2	28:BP:7:LEU:N	2.62	0.48
29:BE:61:ARG:HH12	29:BE:64:GLY:HA3	1.77	0.48
30:BY:7:THR:HA	30:BY:34:THR:HA	1.95	0.48
35:BV:78:GLN:O	35:BV:87:GLN:N	2.44	0.48
39:BX:7:ARG:O	39:BX:7:ARG:HG3	2.14	0.48
42:BN:24:MET:SD	42:BN:44:LEU:HD22	2.54	0.48
43:BO:104:GLN:O	43:BO:107:ALA:HB3	2.14	0.48
44:BQ:30:VAL:CG1	44:BQ:31:TYR:H	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:63:ARG:NH1	44:BQ:96:ASP:HB2	2.16	0.48
47:BF:39:VAL:CG2	47:BF:48:LEU:HG	2.43	0.48
51:BZ:33:LEU:HA	51:BZ:51:VAL:O	2.14	0.48
53:B6:7:TYR:OH	53:B6:157:ALA:HA	2.13	0.48
1:CA:54:C:H2'	1:CA:352:C:N4	2.29	0.48
1:CA:106:C:O2'	1:CA:107:G:H5'	2.14	0.48
1:CA:201:G:O2'	1:CA:202:G:H5'	2.14	0.48
1:CA:947:G:H2'	1:CA:948:C:C6	2.48	0.48
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.49	0.48
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.47	0.48
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.29	0.48
2:CC:128:MET:H	2:CC:128:MET:CE	2.26	0.48
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.14	0.48
6:CG:119:LEU:O	6:CG:123:LEU:HG	2.13	0.48
10:CK:28:ASN:HD22	10:CK:46:ALA:HB3	1.79	0.48
11:CL:23:LEU:O	11:CL:25:ALA:N	2.46	0.48
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.26	0.48
20:CB:33:ALA:HB2	20:CB:38:HIS:ND1	2.29	0.48
20:CB:162:VAL:HG13	20:CB:184:ALA:CB	2.36	0.48
20:CB:187:ASP:HB3	20:CB:201:GLY:O	2.14	0.48
22:DA:87:U:H2'	22:DA:88:C:H5"	1.95	0.48
23:DB:696:G:O2'	23:DB:697:G:H5'	2.14	0.48
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.14	0.48
23:DB:1339:G:H21	23:DB:1603:A:H1'	1.79	0.48
23:DB:1536:C:H4'	23:DB:1537:G:C4	2.49	0.48
23:DB:1868:C:H2'	23:DB:1869:G:O4'	2.13	0.48
23:DB:2297:A:N6	23:DB:2319:G:H1'	2.29	0.48
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.48	0.48
23:DB:2588:G:H3'	57:DB:3589:HOH:O	2.13	0.48
25:DC:181:ARG:HD3	25:DC:182:LYS:H	1.77	0.48
27:DK:11:ALA:O	27:DK:100:PHE:N	2.47	0.48
33:D1:36:LYS:HA	33:D1:46:VAL:O	2.12	0.48
37:DL:122:VAL:HG23	37:DL:143:GLU:OE1	2.13	0.48
38:DM:135:VAL:O	38:DM:136:MET:HG3	2.13	0.48
40:DH:125:THR:HA	40:DH:146:VAL:CG1	2.44	0.48
42:DN:19:ALA:C	42:DN:21:PHE:N	2.67	0.48
42:DN:49:GLU:HA	42:DN:94:TYR:HD2	1.77	0.48
42:DN:79:LEU:C	42:DN:81:ASN:H	2.17	0.48
43:DO:7:ARG:HA	43:DO:10:ARG:HD2	1.95	0.48
45:DS:13:SER:OG	45:DS:16:LYS:HB2	2.14	0.48
47:DF:87:LYS:CG	47:DF:88:VAL:H	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.34	0.48
48:DG:8:VAL:HG22	48:DG:68:ARG:HD3	1.96	0.48
51:DZ:39:TRP:HB2	51:DZ:46:PHE:CE2	2.49	0.48
53:D6:41:LEU:HD13	53:D6:52:LEU:HD13	1.95	0.48
1:AA:218:U:H2'	1:AA:219:U:C6	2.49	0.48
1:AA:323:U:H2'	1:AA:324:G:O4'	2.14	0.48
1:AA:462:G:H2'	1:AA:463:U:C6	2.49	0.48
1:AA:482:A:C2	1:AA:483:C:H1'	2.49	0.48
1:AA:610:U:O2	1:AA:610:U:O4'	2.32	0.48
1:AA:611:C:H2'	1:AA:612:C:C6	2.49	0.48
1:AA:947:G:H2'	1:AA:948:C:H6	1.78	0.48
1:AA:980:C:H4'	13:AN:58:ARG:HH12	1.78	0.48
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.48	0.48
1:AA:1389:C:H2'	1:AA:1390:U:H6	1.78	0.48
3:AD:22:SER:H	3:AD:109:THR:HG22	1.79	0.48
12:AM:2:ARG:CG	12:AM:6:ILE:H	2.25	0.48
12:AM:13:HIS:HB2	12:AM:16:ILE:HG22	1.96	0.48
13:AN:13:VAL:HG22	13:AN:59:GLN:HG2	1.96	0.48
21:AU:40:PRO:C	21:AU:42:THR:H	2.17	0.48
22:BA:97:C:H2'	22:BA:98:G:H5'	1.96	0.48
23:BB:257:C:H2'	23:BB:258:G:O4'	2.14	0.48
23:BB:1341:G:H5'	50:BT:61:LEU:HD22	1.96	0.48
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.48	0.48
23:BB:2267:A:C8	23:BB:2267:A:O5'	2.65	0.48
23:BB:2330:G:H1'	52:BW:38:ARG:CB	2.44	0.48
23:BB:2387:U:H1'	52:BW:38:ARG:CZ	2.44	0.48
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.44	0.48
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.49	0.48
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.29	0.48
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.43	0.48
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.54	0.48
25:BC:83:ASP:HB2	25:BC:90:ILE:HB	1.96	0.48
25:BC:91:ALA:HB3	25:BC:105:ALA:HB2	1.94	0.48
25:BC:226:PRO:HG3	25:BC:233:GLY:H	1.79	0.48
35:BV:78:GLN:HB2	35:BV:88:HIS:O	2.13	0.48
35:BV:80:HIS:CD2	35:BV:82:TYR:H	2.13	0.48
41:BJ:103:ILE:HD12	41:BJ:104:ALA:N	2.29	0.48
44:BQ:18:LYS:C	44:BQ:20:ALA:N	2.67	0.48
44:BQ:45:ALA:O	44:BQ:49:ARG:N	2.42	0.48
45:BS:26:GLY:O	45:BS:28:LYS:N	2.46	0.48
47:BF:141:ASP:O	47:BF:145:VAL:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:28:LYS:O	48:BG:29:ASN:HB3	2.14	0.48
50:BT:45:ALA:O	50:BT:48:GLN:HB2	2.14	0.48
53:B6:41:LEU:HD21	53:B6:88:LEU:CD1	2.44	0.48
1:CA:320:A:H2'	1:CA:321:A:H8	1.74	0.48
1:CA:394:G:O2'	1:CA:395:C:H5'	2.14	0.48
1:CA:672:U:H2'	1:CA:673:A:C8	2.49	0.48
1:CA:742:G:H2'	1:CA:743:A:H8	1.79	0.48
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.48	0.48
4:CE:80:LEU:HD13	4:CE:95:MET:HB3	1.96	0.48
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.44	0.48
10:CK:12:ARG:HD3	10:CK:76:TYR:CE1	2.49	0.48
20:CB:98:GLY:O	20:CB:102:ASN:N	2.46	0.48
20:CB:130:LYS:HA	20:CB:133:ALA:HB3	1.96	0.48
20:CB:218:ALA:HA	20:CB:221:ARG:HG2	1.96	0.48
21:CU:31:VAL:O	21:CU:31:VAL:HG12	2.13	0.48
23:DB:351:C:H2'	23:DB:352:A:C8	2.48	0.48
23:DB:1050:A:H2'	23:DB:1051:G:C8	2.49	0.48
23:DB:1570:A:H2'	23:DB:1571:A:C8	2.49	0.48
23:DB:1916:A:H2'	23:DB:1917:U:O4'	2.13	0.48
23:DB:2076:U:O2	23:DB:2076:U:O4'	2.28	0.48
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.49	0.48
23:DB:2466:C:OP1	32:D4:4:ARG:HB3	2.14	0.48
23:DB:2478:A:H5'	32:D4:32:LYS:HE3	1.96	0.48
25:DC:42:ARG:HG3	25:DC:46:GLY:O	2.14	0.48
25:DC:185:ALA:C	25:DC:187:CYS:H	2.16	0.48
28:DP:62:LYS:HE3	28:DP:64:SER:OG	2.14	0.48
31:D0:54:ILE:H	42:DN:118:ARG:HH12	1.62	0.48
32:D4:22:VAL:O	32:D4:24:ARG:HG3	2.14	0.48
35:DV:46:LYS:N	35:DV:46:LYS:HD2	2.29	0.48
37:DL:99:ASN:O	37:DL:100:ILE:HB	2.14	0.48
37:DL:142:ILE:N	37:DL:142:ILE:HD12	2.28	0.48
40:DH:115:VAL:HG23	40:DH:132:PHE:HA	1.95	0.48
40:DH:121:VAL:O	40:DH:122:LEU:HB2	2.14	0.48
41:DJ:75:TYR:CD1	41:DJ:86:GLN:HB3	2.49	0.48
45:DS:44:ALA:C	45:DS:46:LEU:H	2.16	0.48
47:DF:138:PRO:HA	47:DF:142:TYR:CE2	2.49	0.48
1:AA:106:C:H2'	1:AA:107:G:H8	1.79	0.47
1:AA:394:G:O2'	1:AA:395:C:H5'	2.12	0.47
1:AA:672:U:H2'	1:AA:673:A:C8	2.49	0.47
1:AA:1036:A:H2'	1:AA:1037:C:C6	2.48	0.47
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1450:U:H2'	1:AA:1452:C:C4	2.49	0.47
3:AD:16:THR:HG22	3:AD:17:ASP:H	1.79	0.47
3:AD:115:GLN:HE21	3:AD:119:HIS:CE1	2.32	0.47
3:AD:122:ILE:HG22	3:AD:123:MET:N	2.29	0.47
8:AI:62:LEU:N	8:AI:62:LEU:HD13	2.29	0.47
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.14	0.47
12:AM:3:ILE:HA	12:AM:56:ARG:CG	2.40	0.47
12:AM:52:ILE:HD12	12:AM:55:LEU:CD1	2.43	0.47
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.79	0.47
21:AU:35:GLU:HB3	21:AU:36:PHE:H	1.53	0.47
23:BB:553:G:O2'	23:BB:554:U:H5'	2.13	0.47
23:BB:734:A:O2'	23:BB:735:A:H5'	2.14	0.47
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.13	0.47
23:BB:2221:G:O2'	23:BB:2222:C:H5'	2.14	0.47
23:BB:2234:G:O2'	23:BB:2235:G:H5'	2.13	0.47
23:BB:2271:G:H2'	23:BB:2272:U:C6	2.48	0.47
23:BB:2461:A:N1	23:BB:2490:G:N2	2.61	0.47
37:BL:120:VAL:HG12	37:BL:121:THR:N	2.29	0.47
39:BX:51:ALA:O	39:BX:55:THR:N	2.41	0.47
40:BH:79:THR:HG22	40:BH:145:ASN:HB2	1.96	0.47
40:BH:83:LYS:CB	40:BH:91:PHE:HB2	2.39	0.47
45:BS:27:LYS:H	45:BS:27:LYS:CD	2.27	0.47
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.14	0.47
53:B6:76:LEU:HD23	53:B6:77:LYS:CE	2.44	0.47
53:B6:109:GLU:O	53:B6:112:LYS:HG3	2.14	0.47
53:B6:114:LEU:HG	53:B6:183:ILE:HD11	1.95	0.47
53:B6:141:LYS:HB3	53:B6:141:LYS:NZ	2.29	0.47
1:CA:265:G:H4'	16:CQ:67:SER:HA	1.96	0.47
1:CA:317:U:H2'	1:CA:318:G:C8	2.49	0.47
1:CA:505:G:H2'	1:CA:506:G:C8	2.49	0.47
1:CA:1014:A:H4'	18:CS:13:HIS:CD2	2.48	0.47
1:CA:1113:C:O2'	1:CA:1114:C:H5'	2.13	0.47
1:CA:1488:G:H2'	1:CA:1489:G:C8	2.49	0.47
2:CC:63:ILE:HD12	2:CC:98:ALA:CB	2.35	0.47
3:CD:2:ARG:HB3	3:CD:114:ARG:HH22	1.78	0.47
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.49	0.47
7:CH:54:THR:HG23	7:CH:55:LYS:N	2.29	0.47
12:CM:22:TYR:O	12:CM:68:LEU:HD12	2.14	0.47
20:CB:93:HIS:HB2	20:CB:145:ASN:O	2.14	0.47
20:CB:101:THR:HG23	20:CB:102:ASN:N	2.29	0.47
20:CB:205:ALA:O	20:CB:209:VAL:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:93:C:O2'	22:DA:94:A:H5'	2.14	0.47
23:DB:278:A:N7	23:DB:361:G:N1	2.62	0.47
23:DB:283:G:H2'	23:DB:284:U:C4'	2.44	0.47
23:DB:544:C:O2'	23:DB:545:U:O5'	2.32	0.47
23:DB:718:A:H5'	23:DB:719:C:C5	2.49	0.47
23:DB:1184:U:O2'	23:DB:1185:G:H5'	2.14	0.47
23:DB:1508:A:H5'	23:DB:1509:A:N6	2.29	0.47
23:DB:1958:C:H2'	23:DB:1959:G:H8	1.79	0.47
23:DB:2064:C:H1'	23:DB:2450:A:C6	2.49	0.47
23:DB:2146:C:H4'	23:DB:2148:G:O4'	2.13	0.47
23:DB:2444:G:OP2	29:DE:63:LYS:HD2	2.14	0.47
23:DB:2452:C:H2'	23:DB:2453:A:C8	2.49	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.49	0.47
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.96	0.47
25:DC:83:ASP:HB2	25:DC:90:ILE:HB	1.95	0.47
29:DE:21:ARG:HG3	29:DE:22:ASP:O	2.14	0.47
29:DE:56:GLY:O	29:DE:58:LYS:HD3	2.13	0.47
37:DL:89:VAL:O	37:DL:89:VAL:HG13	2.15	0.47
38:DM:12:MET:HB2	38:DM:72:PRO:HG2	1.96	0.47
47:DF:3:LEU:HB2	47:DF:100:GLU:OE1	2.14	0.47
47:DF:71:LYS:O	47:DF:72:SER:HB3	2.14	0.47
48:DG:53:PRO:HG3	48:DG:61:TRP:CD2	2.48	0.47
49:DR:14:VAL:HG21	49:DR:98:ILE:HG12	1.94	0.47
49:DR:49:ILE:HG21	49:DR:53:PHE:C	2.34	0.47
50:DT:67:VAL:HG23	50:DT:75:GLY:O	2.14	0.47
51:DZ:77:LYS:CD	51:DZ:78:TYR:H	2.27	0.47
53:D6:31:GLY:CA	53:D6:106:LEU:HD13	2.39	0.47
53:D6:38:LEU:CD1	53:D6:66:LEU:HD23	2.43	0.47
53:D6:45:TYR:CZ	53:D6:75:ALA:HB2	2.48	0.47
1:AA:555:U:H2'	1:AA:556:C:C6	2.49	0.47
1:AA:859:G:O2'	1:AA:860:A:H5'	2.14	0.47
1:AA:882:C:O2'	1:AA:883:C:H5'	2.14	0.47
1:AA:996:A:H2'	1:AA:997:U:C6	2.49	0.47
1:AA:1080:A:OP1	4:AE:51:LYS:HD2	2.13	0.47
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.40	0.47
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.78	0.47
12:AM:100:ARG:HH11	12:AM:103:THR:HB	1.79	0.47
13:AN:63:CYS:HB2	13:AN:79:SER:HB3	1.95	0.47
20:AB:218:ALA:HA	20:AB:221:ARG:HG2	1.96	0.47
21:AU:3:ILE:HG21	21:AU:19:LYS:CG	2.44	0.47
21:AU:3:ILE:HG23	21:AU:18:PHE:CD1	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:59:A:H2'	22:BA:60:C:O4'	2.13	0.47
23:BB:559:G:H2'	23:BB:560:C:O4'	2.15	0.47
23:BB:1111:A:N3	23:BB:1112:G:H1'	2.29	0.47
23:BB:1241:A:H2'	23:BB:1242:U:C5'	2.40	0.47
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.14	0.47
23:BB:2313:C:O3'	47:BF:87:LYS:HE2	2.14	0.47
23:BB:2798:U:H6	23:BB:2798:U:O5'	1.97	0.47
23:BB:2882:A:OP1	42:BN:96:ARG:HD2	2.14	0.47
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.44	0.47
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.95	0.47
26:BD:133:THR:HG23	26:BD:134:HIS:CD2	2.49	0.47
27:BK:105:ARG:HD2	27:BK:122:VAL:CG1	2.45	0.47
28:BP:29:VAL:HA	28:BP:79:VAL:O	2.13	0.47
35:BV:38:LEU:HG	35:BV:40:ILE:HG23	1.96	0.47
38:BM:63:ILE:HA	38:BM:104:GLU:O	2.14	0.47
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.79	0.47
43:BO:40:ILE:HG22	43:BO:44:GLY:HA2	1.96	0.47
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.14	0.47
47:BF:57:ALA:HB2	47:BF:64:PRO:HG2	1.96	0.47
47:BF:68:LYS:HD2	47:BF:68:LYS:N	2.29	0.47
48:BG:22:VAL:HG13	48:BG:36:LEU:HD13	1.95	0.47
48:BG:148:ARG:HA	48:BG:161:VAL:CG1	2.45	0.47
50:BT:29:THR:HB	50:BT:86:THR:HG22	1.96	0.47
50:BT:73:ARG:HB3	50:BT:73:ARG:NH2	2.29	0.47
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.54	0.47
51:BZ:39:TRP:HB2	51:BZ:46:PHE:CE2	2.48	0.47
53:B6:80:GLU:O	53:B6:83:ILE:HG12	2.14	0.47
1:CA:35:G:H2'	1:CA:36:C:H6	1.78	0.47
1:CA:392:C:H2'	1:CA:393:A:H8	1.78	0.47
1:CA:401:C:H1'	1:CA:622:A:H1'	1.96	0.47
1:CA:513:C:H2'	1:CA:514:C:H6	1.79	0.47
1:CA:599:C:H2'	1:CA:600:A:H8	1.79	0.47
1:CA:947:G:H4'	12:CM:107:THR:OG1	2.14	0.47
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.79	0.47
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.48	0.47
3:CD:12:ARG:O	3:CD:37:PRO:HG3	2.14	0.47
3:CD:90:LEU:O	3:CD:93:LEU:HB2	2.15	0.47
3:CD:158:LEU:HA	3:CD:161:ALA:CB	2.44	0.47
3:CD:171:GLU:O	3:CD:180:THR:N	2.47	0.47
10:CK:80:ASN:CB	10:CK:105:ARG:HB3	2.43	0.47
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.95	0.47
18:CS:11:ASP:HB2	18:CS:14:LEU:HD23	1.96	0.47
20:CB:147:LEU:O	20:CB:151:LYS:HB3	2.14	0.47
21:CU:24:LYS:HZ3	21:CU:25:ALA:N	2.11	0.47
22:DA:60:C:H2'	22:DA:61:G:C8	2.48	0.47
22:DA:114:C:H2'	22:DA:115:A:H8	1.78	0.47
23:DB:7:G:H4'	41:DJ:15:TRP:CZ2	2.49	0.47
23:DB:61:C:O2'	23:DB:62:U:H5'	2.14	0.47
23:DB:1551:A:H2'	23:DB:1552:A:O4'	2.14	0.47
23:DB:1689:A:H2'	23:DB:1690:A:C8	2.49	0.47
23:DB:1779:U:C5	23:DB:1784:A:N7	2.81	0.47
23:DB:1854:A:H61	23:DB:1888:G:H1'	1.77	0.47
23:DB:2199:A:H3'	23:DB:2200:C:C6	2.49	0.47
23:DB:2271:G:H2'	23:DB:2272:U:C6	2.49	0.47
23:DB:2369:A:H2'	23:DB:2370:G:C8	2.49	0.47
23:DB:2386:A:C2	52:DW:38:ARG:HD2	2.48	0.47
23:DB:2491:U:H5"	23:DB:2570:G:C5'	2.44	0.47
25:DC:20:ASN:OD1	25:DC:22:GLU:HG2	2.14	0.47
25:DC:226:PRO:HG3	25:DC:233:GLY:N	2.29	0.47
27:DK:54:LYS:H	27:DK:54:LYS:CD	2.21	0.47
28:DP:100:ARG:HB3	28:DP:101:GLU:H	1.49	0.47
40:DH:50:ARG:HA	40:DH:53:GLU:HB3	1.96	0.47
40:DH:94:ILE:CG2	40:DH:95:GLY:N	2.77	0.47
41:DJ:25:LEU:O	41:DJ:27:ARG:N	2.44	0.47
41:DJ:43:GLU:O	41:DJ:45:THR:HG22	2.14	0.47
42:DN:45:ARG:HG3	42:DN:95:THR:HG21	1.95	0.47
44:DQ:60:TRP:C	44:DQ:64:ILE:HG12	2.33	0.47
47:DF:12:VAL:O	47:DF:16:MET:HG2	2.14	0.47
48:DG:29:ASN:HD21	48:DG:81:GLY:HA2	1.80	0.47
48:DG:36:LEU:N	48:DG:36:LEU:HD22	2.29	0.47
49:DR:2:TYR:HB2	49:DR:42:ALA:N	2.29	0.47
1:AA:208:U:H6	1:AA:208:U:O5'	1.96	0.47
1:AA:511:C:O2'	1:AA:512:U:H5"	2.15	0.47
1:AA:825:A:H2'	1:AA:826:C:C6	2.48	0.47
1:AA:929:G:O2'	1:AA:930:C:H5'	2.14	0.47
1:AA:1246:A:H2'	1:AA:1247:U:C6	2.49	0.47
5:AF:5:GLU:HA	5:AF:63:ASN:HA	1.97	0.47
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.13	0.47
11:AL:54:VAL:HG12	11:AL:55:ARG:N	2.29	0.47
22:BA:115:A:O2'	22:BA:116:G:H5'	2.13	0.47
23:BB:807:U:OP2	37:BL:36:LYS:HD3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:851:C:O4'	30:BY:46:MET:HG2	2.14	0.47
23:BB:853:C:H2'	23:BB:854:C:C6	2.48	0.47
23:BB:963:U:O2'	23:BB:964:C:H5'	2.14	0.47
23:BB:1147:A:O2'	23:BB:1148:U:H5'	2.13	0.47
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.50	0.47
23:BB:2286:G:C8	23:BB:2286:G:H5'	2.49	0.47
23:BB:2315:G:H5'	47:BF:156:THR:HG21	1.95	0.47
23:BB:2856:A:H2'	23:BB:2857:G:C8	2.49	0.47
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.96	0.47
25:BC:159:THR:N	25:BC:194:VAL:CG1	2.77	0.47
25:BC:166:ARG:CB	25:BC:171:VAL:HG22	2.45	0.47
25:BC:180:MET:CB	25:BC:268:ARG:H	2.27	0.47
26:BD:91:THR:HG23	26:BD:92:VAL:N	2.25	0.47
28:BP:9:GLN:HA	28:BP:12:MET:SD	2.54	0.47
28:BP:92:ARG:HG3	28:BP:92:ARG:HH11	1.77	0.47
29:BE:18:THR:HG22	29:BE:106:LYS:NZ	2.29	0.47
30:BY:29:ARG:H	30:BY:33:HIS:HD2	1.58	0.47
41:BJ:24:THR:O	41:BJ:25:LEU:HB3	2.14	0.47
46:BU:14:THR:O	46:BU:18:LYS:HG2	2.13	0.47
46:BU:85:ARG:HA	46:BU:85:ARG:CZ	2.44	0.47
47:BF:11:VAL:O	47:BF:12:VAL:HB	2.14	0.47
47:BF:78:ILE:HA	47:BF:79:ARG:HH11	1.79	0.47
48:BG:115:GLN:CD	48:BG:115:GLN:N	2.63	0.47
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	1.96	0.47
51:BZ:14:THR:HA	51:BZ:28:ARG:HB2	1.95	0.47
52:BW:18:LYS:O	52:BW:34:SER:HA	2.14	0.47
1:CA:313:A:H2'	1:CA:314:C:H6	1.79	0.47
1:CA:342:C:O2'	1:CA:343:U:H5'	2.14	0.47
1:CA:401:C:H2'	1:CA:402:G:C8	2.48	0.47
1:CA:478:A:H2'	1:CA:479:U:O4'	2.14	0.47
1:CA:585:G:H2'	1:CA:586:C:C6	2.49	0.47
1:CA:737:C:O2'	1:CA:738:C:H5'	2.14	0.47
1:CA:766:A:H2'	1:CA:767:A:O4'	2.14	0.47
1:CA:1329:A:H5"	12:CM:24:VAL:HA	1.95	0.47
2:CC:42:LEU:O	2:CC:46:LEU:HD23	2.15	0.47
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.94	0.47
3:CD:126:GLY:O	3:CD:127:ARG:HD2	2.15	0.47
4:CE:33:THR:HB	4:CE:49:TYR:CE1	2.49	0.47
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.14	0.47
6:CG:94:ARG:NH1	6:CG:98:LEU:HD21	2.29	0.47
6:CG:144:ALA:O	6:CG:146:ALA:N	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:34:ALA:O	7:CH:38:VAL:HG23	2.13	0.47
8:CI:16:ALA:HA	8:CI:66:VAL:HA	1.96	0.47
8:CI:66:VAL:HG11	8:CI:78:ILE:HD11	1.96	0.47
16:CQ:28:VAL:O	16:CQ:36:PHE:HA	2.14	0.47
23:DB:139:U:H3	50:DT:49:LYS:NZ	2.12	0.47
23:DB:787:C:H5"	23:DB:788:A:H5'	1.96	0.47
23:DB:838:C:O2'	23:DB:839:U:H5'	2.15	0.47
23:DB:840:C:H2'	23:DB:841:G:C8	2.50	0.47
23:DB:935:C:O2'	23:DB:936:A:H5'	2.14	0.47
23:DB:1499:C:O2'	23:DB:1500:G:H5'	2.14	0.47
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.14	0.47
23:DB:1656:C:P	26:DD:141:ARG:HH11	2.37	0.47
23:DB:2201:G:O2'	23:DB:2202:U:H5'	2.14	0.47
23:DB:2330:G:N3	52:DW:38:ARG:HB3	2.30	0.47
23:DB:2733:A:H3'	23:DB:2733:A:C8	2.49	0.47
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.76	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
25:DC:34:GLU:O	25:DC:34:GLU:HG3	2.14	0.47
25:DC:180:MET:CB	25:DC:268:ARG:H	2.27	0.47
28:DP:92:ARG:HH11	28:DP:92:ARG:HG3	1.78	0.47
29:DE:58:LYS:CD	29:DE:58:LYS:N	2.77	0.47
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.78	0.47
39:DX:15:ASN:O	39:DX:19:LEU:HD13	2.14	0.47
41:DJ:3:THR:HB	41:DJ:44:TYR:OH	2.13	0.47
41:DJ:18:VAL:HG22	41:DJ:19:ASP:N	2.29	0.47
41:DJ:76:HIS:CE1	41:DJ:85:LYS:HB2	2.48	0.47
44:DQ:14:LYS:O	44:DQ:15:LYS:C	2.51	0.47
44:DQ:35:PHE:O	44:DQ:39:ILE:HG12	2.14	0.47
46:DU:3:LYS:NZ	46:DU:82:VAL:HB	2.30	0.47
47:DF:27:VAL:O	47:DF:29:ARG:HD2	2.14	0.47
49:DR:16:GLU:HG2	49:DR:101:ILE:HB	1.96	0.47
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.31	0.47
53:D6:40:HIS:O	53:D6:41:LEU:C	2.52	0.47
53:D6:71:TRP:CD1	53:D6:71:TRP:N	2.82	0.47
53:D6:146:GLU:HG3	53:D6:147:LEU:HG	1.95	0.47
1:AA:617:G:H4'	15:AP:46:LYS:HE2	1.94	0.47
1:AA:821:G:H2'	1:AA:822:U:H6	1.79	0.47
1:AA:947:G:H2'	1:AA:948:C:C6	2.49	0.47
1:AA:961:U:OP1	1:AA:1223:C:H4'	2.14	0.47
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.15	0.47
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:185:THR:HG22	2:AC:198:LYS:HA	1.97	0.47
3:AD:100:VAL:HG21	3:AD:136:VAL:HG21	1.97	0.47
6:AG:58:LEU:HA	6:AG:61:PHE:HB3	1.95	0.47
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	1.96	0.47
12:AM:56:ARG:O	12:AM:59:VAL:HG12	2.14	0.47
19:AT:50:PHE:HD2	19:AT:78:LEU:HD13	1.79	0.47
22:BA:60:C:O2'	22:BA:61:G:H5'	2.14	0.47
23:BB:62:U:H2'	23:BB:63:A:O4'	2.14	0.47
23:BB:226:A:H5"	23:BB:257:C:O2'	2.14	0.47
23:BB:672:C:O2'	23:BB:673:C:H5'	2.14	0.47
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.30	0.47
23:BB:847:U:O4'	23:BB:847:U:O2	2.30	0.47
23:BB:1064:C:H5'	24:BI:88:GLY:HA3	1.95	0.47
23:BB:1689:A:H2'	23:BB:1690:A:C8	2.49	0.47
23:BB:2078:C:O2'	23:BB:2079:U:H5'	2.14	0.47
23:BB:2153:C:O2	23:BB:2153:C:H2'	2.14	0.47
23:BB:2332:C:H4'	23:BB:2336:A:C6	2.49	0.47
23:BB:2420:C:O2'	23:BB:2421:G:H5'	2.14	0.47
23:BB:2494:G:H4'	38:BM:79:ALA:HB2	1.97	0.47
25:BC:42:ARG:HG3	25:BC:46:GLY:O	2.14	0.47
25:BC:86:ARG:HB3	25:BC:86:ARG:CZ	2.43	0.47
26:BD:109:VAL:HG11	26:BD:193:VAL:CG1	2.44	0.47
26:BD:193:VAL:HB	26:BD:194:PRO:HD2	1.95	0.47
29:BE:152:GLU:O	29:BE:153:LEU:HB3	2.14	0.47
37:BL:124:GLY:O	37:BL:125:LEU:HG	2.14	0.47
40:BH:57:LYS:HA	40:BH:60:GLU:OE2	2.14	0.47
44:BQ:79:ILE:C	44:BQ:79:ILE:HD13	2.35	0.47
46:BU:47:PRO:CD	46:BU:55:GLY:HA3	2.39	0.47
47:BF:169:LEU:HD22	47:BF:174:PHE:CE1	2.49	0.47
49:BR:59:ILE:HG23	49:BR:101:ILE:H	1.78	0.47
1:CA:624:C:H2'	1:CA:625:U:C6	2.50	0.47
1:CA:821:G:H2'	1:CA:822:U:C6	2.49	0.47
1:CA:1039:G:H2'	1:CA:1040:U:H6	1.80	0.47
1:CA:1330:U:H2'	1:CA:1331:G:H5'	1.96	0.47
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.14	0.47
2:CC:13:ILE:O	2:CC:15:LYS:N	2.48	0.47
6:CG:145:GLU:C	6:CG:147:ASN:N	2.68	0.47
8:CI:66:VAL:HG22	8:CI:67:LYS:N	2.30	0.47
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.29	0.47
17:CR:22:TYR:CE2	17:CR:23:LYS:HE3	2.50	0.47
20:CB:63:LYS:HB3	20:CB:87:ASP:OD2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:96:LEU:N	20:CB:99:MET:HE3	2.26	0.47
23:DB:30:G:H2'	23:DB:31:C:H6	1.74	0.47
23:DB:528:A:H3'	23:DB:528:A:H8	1.79	0.47
23:DB:844:A:C2	23:DB:845:A:N1	2.82	0.47
23:DB:1100:C:H41	24:DI:1:ALA:N	2.12	0.47
23:DB:1189:A:H2'	23:DB:1190:G:O4'	2.13	0.47
23:DB:1427:A:H4'	23:DB:1428:C:O5'	2.14	0.47
23:DB:1441:G:H2'	23:DB:1442:U:H6	1.79	0.47
23:DB:1535:A:H5"	23:DB:1536:C:C5	2.49	0.47
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.49	0.47
23:DB:2555:U:H2'	23:DB:2556:C:O4'	2.14	0.47
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.29	0.47
30:DY:29:ARG:H	30:DY:33:HIS:HD2	1.61	0.47
37:DL:65:GLY:O	37:DL:66:PHE:HB3	2.15	0.47
37:DL:70:LYS:O	37:DL:73:ILE:HG12	2.14	0.47
37:DL:78:ARG:HB3	37:DL:113:ALA:HB2	1.97	0.47
39:DX:17:GLU:HB3	39:DX:53:VAL:CG1	2.45	0.47
40:DH:47:PHE:HB3	40:DH:51:ARG:HH21	1.77	0.47
48:DG:29:ASN:ND2	48:DG:77:GLY:O	2.47	0.47
48:DG:75:VAL:O	48:DG:78:VAL:HG22	2.14	0.47
1:AA:68:G:H5'	1:AA:171:A:O2'	2.13	0.47
1:AA:77:A:H8	1:AA:77:A:O5'	1.97	0.47
1:AA:552:U:H2'	1:AA:553:A:C8	2.49	0.47
1:AA:833:G:H2'	1:AA:834:U:C6	2.49	0.47
1:AA:982:U:OP2	13:AN:60:ARG:NH1	2.47	0.47
1:AA:1014:A:H5"	18:AS:13:HIS:HB3	1.95	0.47
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.49	0.47
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.14	0.47
8:AI:24:ASN:O	8:AI:60:LEU:N	2.48	0.47
10:AK:113:THR:HG21	21:AU:28:LEU:HD12	1.96	0.47
13:AN:50:LEU:HB3	13:AN:51:PRO:HD3	1.95	0.47
15:AP:71:VAL:HG13	15:AP:72:ALA:N	2.30	0.47
20:AB:16:GLY:HA3	20:AB:40:ILE:H	1.79	0.47
20:AB:57:ASN:HD22	20:AB:223:GLY:CA	2.28	0.47
22:BA:29:A:H2'	22:BA:30:C:O4'	2.14	0.47
23:BB:314:C:O2'	23:BB:315:G:H5'	2.13	0.47
23:BB:397:U:H2'	23:BB:398:C:C6	2.49	0.47
23:BB:582:A:H2'	23:BB:583:G:C8	2.50	0.47
23:BB:947:A:H2'	23:BB:948:C:H6	1.77	0.47
23:BB:1155:A:O2'	23:BB:1156:A:H2'	2.15	0.47
23:BB:1175:A:H2'	23:BB:1175:A:N3	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1825:U:H2'	23:BB:1826:G:H8	1.79	0.47
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.49	0.47
26:BD:141:ARG:O	26:BD:141:ARG:HG3	2.15	0.47
37:BL:135:ILE:HG23	37:BL:136:GLU:N	2.29	0.47
43:BO:26:LEU:HD13	43:BO:39:VAL:HG23	1.96	0.47
47:BF:32:LYS:HA	47:BF:95:MET:CG	2.44	0.47
48:BG:103:ASN:HA	48:BG:113:ASP:OD1	2.14	0.47
49:BR:2:TYR:CB	49:BR:42:ALA:HB2	2.42	0.47
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.34	0.47
53:B6:93:SER:O	53:B6:99:LEU:HD22	2.14	0.47
1:CA:9:G:H5'	4:CE:107:GLY:CA	2.44	0.47
1:CA:204:G:H2'	1:CA:205:A:C8	2.48	0.47
1:CA:580:C:H2'	1:CA:581:G:O4'	2.14	0.47
1:CA:996:A:H2'	1:CA:997:U:C6	2.50	0.47
1:CA:1340:A:H2'	1:CA:1341:U:O4'	2.13	0.47
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.50	0.47
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.50	0.47
2:CC:26:LYS:HE2	2:CC:27:GLU:CG	2.44	0.47
2:CC:129:PHE:CE2	2:CC:165:GLU:HG2	2.42	0.47
3:CD:167:PRO:HG3	3:CD:170:LEU:HD11	1.96	0.47
4:CE:158:LYS:HZ3	7:CH:65:PHE:HA	1.80	0.47
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.14	0.47
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.25	0.47
12:CM:23:GLY:HA3	12:CM:68:LEU:CD1	2.44	0.47
13:CN:16:ALA:HA	13:CN:54:SER:O	2.14	0.47
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.29	0.47
21:CU:48:LYS:HA	21:CU:51:ALA:CB	2.41	0.47
23:DB:560:C:H3'	23:DB:561:G:C8	2.49	0.47
23:DB:642:U:O2'	23:DB:644:A:N7	2.44	0.47
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.29	0.47
23:DB:1163:G:O2'	23:DB:1164:C:H5'	2.14	0.47
23:DB:1454:C:H5'	42:DN:63:ARG:CZ	2.45	0.47
23:DB:1535:A:H5"	23:DB:1536:C:H5	1.80	0.47
23:DB:1809:A:H2'	23:DB:1810:A:C8	2.49	0.47
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.79	0.47
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.49	0.47
23:DB:2047:C:H2'	23:DB:2048:G:H8	1.80	0.47
23:DB:2103:C:H2'	23:DB:2104:C:O4'	2.14	0.47
23:DB:2187:U:H2'	23:DB:2188:U:H6	1.80	0.47
23:DB:2296:U:H4'	23:DB:2297:A:OP1	2.13	0.47
23:DB:2332:C:H4'	23:DB:2336:A:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:122:VAL:HA	26:DD:127:PHE:N	2.29	0.47
27:DK:43:ILE:CG2	27:DK:46:ALA:HB2	2.43	0.47
28:DP:6:GLN:NE2	28:DP:7:LEU:N	2.62	0.47
30:DY:12:ALA:HB2	30:DY:53:MET:HE1	1.95	0.47
32:D4:19:ARG:O	32:D4:20:ASP:HB2	2.14	0.47
35:DV:38:LEU:HG	35:DV:40:ILE:HG23	1.96	0.47
38:DM:19:GLY:H	38:DM:38:ARG:NH1	2.09	0.47
43:DO:104:GLN:O	43:DO:107:ALA:HB3	2.14	0.47
44:DQ:30:VAL:CG1	44:DQ:31:TYR:N	2.65	0.47
44:DQ:40:LYS:HD2	44:DQ:44:TYR:CE1	2.49	0.47
49:DR:39:LEU:N	49:DR:39:LEU:HD23	2.29	0.47
49:DR:59:ILE:HA	49:DR:101:ILE:H	1.78	0.47
50:DT:29:THR:CA	50:DT:86:THR:HA	2.40	0.47
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.14	0.47
51:DZ:56:MET:HA	51:DZ:59:ILE:HG12	1.96	0.47
53:D6:56:ALA:HB2	53:D6:79:ILE:CD1	2.39	0.47
1:AA:224:U:H2'	1:AA:225:C:H6	1.78	0.47
1:AA:465:A:N3	1:AA:465:A:H5'	2.30	0.47
1:AA:585:G:H2'	1:AA:586:C:C6	2.50	0.47
1:AA:723:U:O4'	21:AU:48:LYS:HD3	2.13	0.47
1:AA:777:A:H2'	1:AA:778:G:C8	2.49	0.47
4:AE:45:VAL:CG1	4:AE:116:VAL:HG23	2.45	0.47
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.14	0.47
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.95	0.47
10:AK:41:LEU:HD22	10:AK:76:TYR:CE2	2.50	0.47
13:AN:70:HIS:O	13:AN:72:PHE:N	2.48	0.47
17:AR:44:THR:OG1	17:AR:46:THR:HG22	2.14	0.47
19:AT:35:TYR:CG	19:AT:36:ALA:N	2.83	0.47
22:BA:8:C:O2'	43:BO:40:ILE:HD13	2.14	0.47
22:BA:105:G:O2'	22:BA:106:G:H5'	2.15	0.47
23:BB:585:G:H2'	23:BB:1251:C:H42	1.80	0.47
23:BB:640:C:H2'	23:BB:641:U:C6	2.49	0.47
23:BB:757:G:H2'	23:BB:758:C:H5'	1.97	0.47
23:BB:1023:U:H2'	23:BB:1024:G:C5'	2.44	0.47
23:BB:1275:A:N3	23:BB:1275:A:H2'	2.29	0.47
23:BB:1479:G:O2'	23:BB:1480:C:H5'	2.15	0.47
23:BB:1747:U:H2'	23:BB:1748:C:C6	2.49	0.47
23:BB:1854:A:H2	23:BB:2087:G:N3	2.12	0.47
23:BB:2270:A:H2'	23:BB:2271:G:O4'	2.13	0.47
25:BC:93:VAL:HG12	25:BC:101:ARG:O	2.14	0.47
25:BC:170:TYR:CE2	25:BC:184:GLU:HA	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:204:LEU:HD23	25:BC:209:ALA:CB	2.45	0.47
26:BD:55:LYS:H	26:BD:76:GLY:H	1.62	0.47
30:BY:7:THR:O	30:BY:54:VAL:HG12	2.14	0.47
34:B3:14:LYS:O	34:B3:21:PHE:O	2.32	0.47
34:B3:38:LYS:HG3	34:B3:41:ARG:NH1	2.30	0.47
38:BM:26:VAL:HG23	38:BM:104:GLU:OE2	2.14	0.47
40:BH:100:ALA:HB1	40:BH:132:PHE:CE1	2.44	0.47
41:BJ:16:TYR:O	41:BJ:55:ILE:HG12	2.15	0.47
42:BN:38:LEU:CB	42:BN:39:PRO:HD3	2.41	0.47
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.14	0.47
43:BO:26:LEU:HA	43:BO:39:VAL:HA	1.97	0.47
45:BS:4:ILE:CG2	45:BS:106:VAL:HG22	2.45	0.47
46:BU:9:GLU:CD	46:BU:21:ARG:HD2	2.35	0.47
49:BR:49:ILE:HG22	49:BR:54:VAL:HB	1.95	0.47
1:CA:238:A:C3'	1:CA:239:U:H5"	2.45	0.47
1:CA:599:C:H5"	7:CH:86:LYS:O	2.14	0.47
1:CA:948:C:O2'	1:CA:949:A:H5'	2.14	0.47
1:CA:960:U:O2	1:CA:960:U:H5"	2.15	0.47
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.78	0.47
3:CD:84:ASN:HD22	3:CD:85:THR:N	2.12	0.47
5:CF:3:HIS:CE1	5:CF:95:ALA:H	2.33	0.47
5:CF:53:LYS:HB3	5:CF:54:LEU:HD22	1.96	0.47
6:CG:91:ARG:HD2	6:CG:91:ARG:H	1.80	0.47
7:CH:44:PHE:HE2	7:CH:100:ILE:HG12	1.79	0.47
8:CI:33:SER:HB3	8:CI:36:GLN:NE2	2.30	0.47
13:CN:20:PHE:CB	13:CN:24:ALA:HB2	2.45	0.47
14:CO:16:GLY:HA2	14:CO:27:VAL:CG2	2.44	0.47
20:CB:14:HIS:HB2	20:CB:208:ALA:CB	2.43	0.47
20:CB:110:ILE:O	20:CB:113:LEU:HB3	2.15	0.47
20:CB:212:TYR:O	20:CB:216:VAL:HG13	2.15	0.47
23:DB:76:C:O2'	23:DB:77:G:H5'	2.14	0.47
23:DB:116:C:O2'	23:DB:126:A:C8	2.68	0.47
23:DB:167:A:H2'	23:DB:168:G:O4'	2.15	0.47
23:DB:192:C:C2'	23:DB:193:U:H5'	2.44	0.47
23:DB:902:C:H2'	23:DB:903:C:H6	1.80	0.47
23:DB:981:A:H4'	23:DB:2037:A:H5'	1.97	0.47
23:DB:986:C:O2'	23:DB:987:C:H5'	2.13	0.47
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.80	0.47
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.15	0.47
23:DB:1846:G:H2'	23:DB:1847:A:O4'	2.14	0.47
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2723:C:O3'	42:DN:1:MET:HE1	2.14	0.47
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.44	0.47
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.45	0.47
26:DD:55:LYS:H	26:DD:76:GLY:H	1.61	0.47
26:DD:114:LYS:HG2	26:DD:166:GLY:HA2	1.96	0.47
29:DE:88:ARG:HG3	29:DE:88:ARG:NH2	2.29	0.47
40:DH:3:VAL:HG12	40:DH:38:PRO:HA	1.96	0.47
48:DG:94:ARG:HB2	48:DG:127:GLN:HG3	1.96	0.47
48:DG:125:PRO:HB2	48:DG:129:GLU:OE2	2.14	0.47
48:DG:148:ARG:HD2	48:DG:149:ALA:N	2.30	0.47
53:D6:178:LYS:HA	53:D6:181:GLN:OE1	2.14	0.47
1:AA:86:G:H1'	1:AA:87:C:H5	1.78	0.47
1:AA:91:U:O5'	1:AA:91:U:H6	1.96	0.47
1:AA:201:G:H2'	1:AA:202:G:O4'	2.14	0.47
1:AA:410:G:P	3:AD:25:ARG:HE	2.38	0.47
1:AA:546:A:P	3:AD:68:GLU:HB3	2.54	0.47
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.96	0.47
1:AA:842:U:H2'	1:AA:843:U:O3'	2.15	0.47
1:AA:991:U:H2'	1:AA:1212:U:O2	2.15	0.47
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.49	0.47
1:AA:1147:C:H2'	1:AA:1148:U:C6	2.50	0.47
1:AA:1294:G:H2'	1:AA:1295:U:C6	2.49	0.47
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.50	0.47
1:AA:1460:C:H2'	1:AA:1461:G:C8	2.49	0.47
1:AA:1470:U:O2'	1:AA:1471:U:H5'	2.15	0.47
2:AC:54:ILE:O	2:AC:54:ILE:HG23	2.15	0.47
2:AC:80:GLY:O	2:AC:84:GLU:HB2	2.14	0.47
4:AE:158:LYS:HZ1	7:AH:65:PHE:HA	1.80	0.47
7:AH:72:GLU:CD	7:AH:72:GLU:H	2.18	0.47
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.14	0.47
10:AK:28:ASN:HD22	10:AK:29:THR:H	1.63	0.47
10:AK:28:ASN:HD22	10:AK:46:ALA:HB3	1.78	0.47
10:AK:83:VAL:CB	10:AK:109:ILE:HG23	2.40	0.47
12:AM:10:ASP:HA	12:AM:44:ILE:CD1	2.43	0.47
12:AM:72:ILE:O	12:AM:76:ILE:HG13	2.14	0.47
13:AN:25:GLU:O	13:AN:29:ILE:HG13	2.15	0.47
14:AO:25:THR:CB	14:AO:70:LEU:HD23	2.44	0.47
16:AQ:30:HIS:ND1	16:AQ:32:ILE:HG22	2.30	0.47
18:AS:46:LEU:O	18:AS:60:PHE:HA	2.14	0.47
18:AS:62:THR:H	18:AS:65:MET:HB3	1.79	0.47
20:AB:147:LEU:O	20:AB:151:LYS:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:172:ILE:HG23	20:AB:182:VAL:HG11	1.96	0.47
22:BA:11:C:H5"	52:BW:71:LYS:HE3	1.96	0.47
23:BB:200:U:H5"	51:BZ:22:LEU:O	2.15	0.47
23:BB:231:A:H3'	23:BB:232:G:C8	2.50	0.47
23:BB:269:C:H2'	23:BB:270:A:C8	2.47	0.47
23:BB:607:U:O4	23:BB:620:G:H5"	2.15	0.47
23:BB:659:G:H4'	29:BE:95:LYS:HD2	1.96	0.47
23:BB:704:G:C2'	23:BB:726:G:H22	2.26	0.47
23:BB:796:C:H2'	23:BB:797:G:H8	1.78	0.47
23:BB:832:U:OP1	37:BL:38:GLN:N	2.48	0.47
23:BB:921:C:H2'	23:BB:922:C:H6	1.80	0.47
23:BB:1007:C:H4'	41:BJ:110:PRO:HB3	1.96	0.47
23:BB:1025:G:H1'	23:BB:1135:C:O5'	2.15	0.47
23:BB:1063:G:H4'	24:BI:135:MET:HB3	1.96	0.47
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.48	0.47
23:BB:1776:G:O2'	23:BB:1777:U:H5'	2.15	0.47
23:BB:1811:G:O2'	23:BB:1812:U:H5'	2.15	0.47
23:BB:2324:U:H3'	23:BB:2325:G:C5'	2.45	0.47
23:BB:2543:G:H2'	23:BB:2544:G:H8	1.80	0.47
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.80	0.47
23:BB:2746:U:H5"	48:BG:137:LYS:HD2	1.97	0.47
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.29	0.47
25:BC:4:LYS:HD2	25:BC:5:CYS:H	1.79	0.47
25:BC:15:VAL:HG22	25:BC:204:LEU:O	2.15	0.47
25:BC:20:ASN:OD1	25:BC:22:GLU:HG2	2.14	0.47
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.32	0.47
25:BC:169:ALA:O	25:BC:185:ALA:HB3	2.15	0.47
25:BC:188:ARG:HG2	25:BC:188:ARG:HH21	1.80	0.47
26:BD:61:THR:O	26:BD:64:GLU:HB2	2.14	0.47
27:BK:11:ALA:O	27:BK:100:PHE:N	2.48	0.47
27:BK:15:GLY:HA2	27:BK:46:ALA:HA	1.96	0.47
28:BP:6:GLN:HA	28:BP:9:GLN:HG2	1.95	0.47
29:BE:58:LYS:N	29:BE:58:LYS:HD3	2.29	0.47
29:BE:88:ARG:HG3	29:BE:88:ARG:NH2	2.30	0.47
29:BE:126:VAL:HG21	29:BE:133:LEU:HB2	1.97	0.47
31:B0:2:VAL:HG12	31:B0:3:GLN:H	1.80	0.47
34:B3:9:ALA:HA	37:BL:58:TYR:HB2	1.97	0.47
34:B3:31:ILE:HG12	34:B3:31:ILE:O	2.15	0.47
37:BL:124:GLY:N	37:BL:143:GLU:CG	2.71	0.47
37:BL:129:LYS:HA	37:BL:132:ARG:HG2	1.95	0.47
39:BX:20:ASN:ND2	39:BX:20:ASN:H	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:41:LYS:CA	40:BH:44:ILE:HG13	2.44	0.47
40:BH:59:ALA:CA	40:BH:62:LEU:HG	2.45	0.47
40:BH:82:SER:HB2	40:BH:146:VAL:HG13	1.97	0.47
43:BO:34:HIS:HB3	43:BO:36:TYR:CE2	2.46	0.47
43:BO:51:ALA:HB3	43:BO:78:VAL:CG2	2.44	0.47
44:BQ:14:LYS:O	44:BQ:15:LYS:C	2.52	0.47
44:BQ:105:PHE:HA	44:BQ:108:LEU:HG	1.97	0.47
45:BS:50:VAL:HA	45:BS:53:SER:HB3	1.96	0.47
46:BU:10:VAL:HG21	46:BU:35:VAL:HG21	1.96	0.47
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.15	0.47
48:BG:39:ALA:HB1	48:BG:57:TYR:CG	2.50	0.47
48:BG:42:VAL:HG23	48:BG:50:THR:O	2.14	0.47
49:BR:29:THR:HG23	49:BR:65:ALA:HA	1.97	0.47
50:BT:23:ALA:C	50:BT:25:GLU:H	2.16	0.47
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.96	0.47
53:B6:28:LEU:HD11	53:B6:121:TYR:HE2	1.80	0.47
53:B6:68:VAL:CG1	53:B6:79:ILE:HD13	2.45	0.47
53:B6:134:ARG:NH1	53:B6:135:GLU:HG3	2.29	0.47
1:CA:93:U:O5'	1:CA:93:U:H6	1.97	0.47
1:CA:555:U:H2'	1:CA:556:C:H6	1.80	0.47
1:CA:631:C:H5"	1:CA:632:U:O4'	2.15	0.47
1:CA:842:U:H2'	1:CA:843:U:O3'	2.15	0.47
1:CA:1216:A:H5"	13:CN:4:SER:CB	2.42	0.47
1:CA:1367:C:O2'	1:CA:1368:A:H5'	2.15	0.47
1:CA:1381:U:O2'	1:CA:1382:C:H5'	2.15	0.47
2:CC:110:LEU:HD21	2:CC:140:ALA:O	2.14	0.47
2:CC:113:LYS:HB2	2:CC:184:ASN:OD1	2.14	0.47
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.79	0.47
2:CC:176:THR:HB	2:CC:179:ALA:HB2	1.96	0.47
2:CC:190:THR:CG2	2:CC:191:THR:N	2.77	0.47
3:CD:192:ALA:C	3:CD:194:ILE:H	2.18	0.47
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.49	0.47
6:CG:38:ALA:O	6:CG:42:VAL:HG23	2.14	0.47
7:CH:58:LEU:O	7:CH:60:LEU:N	2.48	0.47
8:CI:64:ILE:HD12	8:CI:64:ILE:N	2.28	0.47
11:CL:2:THR:OG1	11:CL:5:GLN:HG3	2.15	0.47
12:CM:89:ARG:HD3	12:CM:95:PRO:O	2.14	0.47
18:CS:48:ILE:HG22	18:CS:49:ALA:N	2.27	0.47
20:CB:65:LYS:HA	20:CB:89:PHE:HE1	1.79	0.47
20:CB:164:ASP:OD1	20:CB:203:ASP:HB2	2.14	0.47
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:21:A:H2'	23:DB:22:C:H6	1.76	0.47
23:DB:27:G:HO2'	23:DB:28:A:H8	1.55	0.47
23:DB:438:G:H2'	23:DB:439:A:H8	1.79	0.47
23:DB:591:U:O2'	23:DB:592:A:H5'	2.14	0.47
23:DB:705:A:N6	23:DB:726:G:H1'	2.29	0.47
23:DB:736:C:H2'	23:DB:737:C:H6	1.80	0.47
23:DB:832:U:OP1	37:DL:38:GLN:N	2.48	0.47
23:DB:962:G:H21	23:DB:2250:G:H1	1.60	0.47
23:DB:1098:A:O3'	24:DI:4:VAL:O	2.32	0.47
23:DB:1175:A:N3	23:DB:1175:A:H2'	2.29	0.47
23:DB:1252:G:H1'	44:DQ:32:ARG:NH2	2.29	0.47
23:DB:1356:G:O2'	23:DB:1357:C:H5'	2.15	0.47
23:DB:1573:G:H2'	23:DB:1574:C:H5'	1.97	0.47
23:DB:1587:G:H2'	23:DB:1588:G:H8	1.80	0.47
23:DB:1637:A:H2'	23:DB:1638:C:H6	1.78	0.47
23:DB:1712:U:H2'	23:DB:1713:A:C8	2.49	0.47
23:DB:1805:A:N3	25:DC:49:THR:HG23	2.29	0.47
23:DB:1810:A:H2'	23:DB:1811:G:O4'	2.15	0.47
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.49	0.47
23:DB:2028:U:O2'	23:DB:2029:G:H5'	2.14	0.47
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.50	0.47
23:DB:2336:A:N6	52:DW:40:ARG:HD2	2.29	0.47
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.50	0.47
23:DB:2773:C:H5"	26:DD:169:ARG:HB2	1.94	0.47
23:DB:2773:C:O2'	23:DB:2774:C:H5'	2.15	0.47
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.44	0.47
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.15	0.47
26:DD:16:THR:HG22	26:DD:17:GLU:H	1.80	0.47
27:DK:113:MET:HA	27:DK:116:ILE:HD11	1.95	0.47
28:DP:6:GLN:O	28:DP:10:GLU:HB2	2.15	0.47
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.28	0.47
30:DY:26:LEU:HB2	30:DY:28:LEU:HG	1.96	0.47
31:D0:50:GLY:C	31:D0:51:ARG:HG2	2.35	0.47
32:D4:16:ILE:HG12	32:D4:25:VAL:HG22	1.95	0.47
33:D1:49:LYS:HG3	33:D1:50:GLU:N	2.19	0.47
37:DL:127:VAL:HG22	37:DL:128:THR:N	2.29	0.47
37:DL:131:ALA:C	37:DL:133:ALA:N	2.68	0.47
39:DX:20:ASN:HD22	39:DX:20:ASN:H	1.60	0.47
39:DX:45:GLN:O	39:DX:46:VAL:HB	2.14	0.47
40:DH:126:GLY:H	40:DH:146:VAL:HB	1.80	0.47
40:DH:127:GLU:HB2	40:DH:143:ILE:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:12:ARG:HG2	42:DN:16:HIS:HB2	1.97	0.47
44:DQ:18:LYS:C	44:DQ:20:ALA:N	2.68	0.47
45:DS:55:ILE:CD1	45:DS:107:VAL:HG21	2.45	0.47
46:DU:39:ASN:CB	46:DU:62:ALA:HB3	2.43	0.47
46:DU:86:PHE:HB3	46:DU:90:LYS:O	2.15	0.47
47:DF:68:LYS:N	47:DF:68:LYS:HD2	2.30	0.47
47:DF:113:PHE:CZ	47:DF:175:PRO:HB2	2.50	0.47
48:DG:15:ASP:OD2	48:DG:17:LYS:HB2	2.14	0.47
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.30	0.47
48:DG:68:ARG:NH1	48:DG:72:ASN:HD22	2.11	0.47
49:DR:64:VAL:O	49:DR:65:ALA:HB3	2.14	0.47
50:DT:14:PRO:HA	50:DT:32:LEU:CB	2.45	0.47
50:DT:45:ALA:HA	50:DT:48:GLN:CG	2.45	0.47
51:DZ:49:LEU:HB2	51:DZ:51:VAL:HG23	1.97	0.47
53:D6:68:VAL:C	53:D6:70:SER:H	2.17	0.47
53:D6:73:GLN:O	53:D6:77:LYS:HE2	2.14	0.47
53:D6:174:GLN:NE2	53:D6:178:LYS:HE2	2.30	0.47
1:AA:170:U:O2'	1:AA:171:A:H5'	2.15	0.47
1:AA:182:A:O2'	1:AA:183:C:H3'	2.14	0.47
1:AA:201:G:O2'	1:AA:202:G:H5'	2.15	0.47
1:AA:401:C:H1'	1:AA:622:A:H1'	1.96	0.47
1:AA:470:C:H2'	1:AA:471:U:H6	1.80	0.47
1:AA:1299:A:H2'	1:AA:1301:U:C1'	2.42	0.47
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.14	0.47
2:AC:40:GLN:HG3	2:AC:41:TYR:H	1.78	0.47
3:AD:164:ARG:HH11	3:AD:164:ARG:HG2	1.80	0.47
4:AE:103:GLY:O	4:AE:121:ASN:HA	2.15	0.47
9:AJ:53:ILE:HG23	9:AJ:54:SER:N	2.30	0.47
11:AL:42:LYS:HB3	11:AL:43:LYS:H	1.48	0.47
16:AQ:58:VAL:HG12	16:AQ:77:VAL:HG13	1.97	0.47
20:AB:94:ARG:HD2	20:AB:142:LYS:HE2	1.96	0.47
23:BB:243:U:P	34:B3:5:THR:HG1	2.38	0.47
23:BB:582:A:H2'	23:BB:583:G:H8	1.80	0.47
23:BB:705:A:N6	23:BB:726:G:H1'	2.29	0.47
23:BB:754:U:H2'	23:BB:755:U:C6	2.50	0.47
23:BB:1210:G:H1'	23:BB:1212:G:C2	2.50	0.47
23:BB:1633:G:O2'	23:BB:1634:A:H5"	2.15	0.47
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.14	0.47
23:BB:2360:G:H4'	37:BL:61:LEU:HD11	1.96	0.47
23:BB:2686:G:H2'	23:BB:2687:U:C6	2.50	0.47
23:BB:2803:G:O2'	23:BB:2804:U:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2886:A:N6	31:B0:39:ARG:CZ	2.78	0.47
28:BP:114:ASN:HD22	28:BP:114:ASN:HA	1.50	0.47
29:BE:105:LEU:HA	29:BE:108:ILE:CG2	2.44	0.47
39:BX:23:ARG:O	39:BX:27:ASN:N	2.44	0.47
39:BX:55:THR:O	39:BX:58:ASN:HB3	2.14	0.47
40:BH:14:SER:CB	40:BH:17:ASP:HB2	2.41	0.47
41:BJ:82:GLY:O	41:BJ:84:ILE:HG22	2.15	0.47
44:BQ:91:ARG:HH21	44:BQ:94:LEU:HD21	1.79	0.47
47:BF:78:ILE:N	47:BF:79:ARG:NH1	2.62	0.47
52:BW:47:GLY:HA3	52:BW:80:SER:CB	2.44	0.47
53:B6:83:ILE:HG22	53:B6:90:LEU:N	2.30	0.47
53:B6:156:ARG:NH2	53:B6:160:GLU:HB2	2.30	0.47
1:CA:191:G:H2'	1:CA:192:A:H8	1.80	0.47
1:CA:332:G:P	19:CT:2:ASN:HB3	2.55	0.47
1:CA:770:C:O2'	1:CA:771:G:H5'	2.15	0.47
1:CA:825:A:H2'	1:CA:826:C:C6	2.50	0.47
1:CA:1486:G:H2'	1:CA:1487:G:C8	2.50	0.47
3:CD:145:ARG:HH21	3:CD:147:LYS:HE2	1.79	0.47
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.15	0.47
5:CF:98:GLU:HG2	5:CF:99:ALA:H	1.80	0.47
8:CI:94:ARG:HH11	8:CI:94:ARG:CB	2.21	0.47
13:CN:50:LEU:HB3	13:CN:51:PRO:HD3	1.96	0.47
20:CB:35:ASN:HD22	20:CB:35:ASN:HA	1.54	0.47
23:DB:459:U:C2'	23:DB:460:A:H5'	2.45	0.47
23:DB:483:A:H5'	46:DU:44:HIS:O	2.15	0.47
23:DB:754:U:H2'	23:DB:755:U:C6	2.49	0.47
23:DB:834:G:O2'	23:DB:835:C:H5'	2.15	0.47
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.15	0.47
23:DB:1098:A:O5'	24:DI:3:LYS:HG2	2.15	0.47
23:DB:1833:C:O2'	23:DB:1834:U:H5'	2.15	0.47
23:DB:2098:U:H2'	23:DB:2099:U:C6	2.49	0.47
23:DB:2880:C:O4'	42:DN:91:ALA:HB3	2.15	0.47
26:DD:69:ALA:N	26:DD:73:VAL:HB	2.30	0.47
31:D0:43:THR:HG23	31:D0:47:TYR:C	2.35	0.47
35:DV:42:LEU:HD23	35:DV:42:LEU:N	2.26	0.47
36:D2:21:ARG:HG2	36:D2:31:LEU:CG	2.40	0.47
38:DM:63:ILE:HA	38:DM:104:GLU:O	2.15	0.47
39:DX:56:LEU:O	39:DX:58:ASN:N	2.47	0.47
41:DJ:100:VAL:O	41:DJ:104:ALA:HB2	2.15	0.47
43:DO:9:ARG:HG3	43:DO:10:ARG:H	1.80	0.47
44:DQ:91:ARG:NH2	49:DR:11:GLN:O	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:111:LYS:HE3	49:DR:48:LYS:NZ	2.30	0.47
46:DU:18:LYS:HD2	46:DU:19:GLY:N	2.30	0.47
47:DF:1:ALA:O	47:DF:4:HIS:HB3	2.15	0.47
48:DG:103:ASN:HA	48:DG:113:ASP:OD1	2.15	0.47
48:DG:144:ALA:HB1	48:DG:163:TYR:HE1	1.80	0.47
1:AA:415:A:H3'	1:AA:416:G:H8	1.80	0.47
1:AA:954:G:H2'	1:AA:955:U:C6	2.49	0.47
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.45	0.47
2:AC:155:ARG:H	2:AC:162:ALA:CB	2.28	0.47
7:AH:48:PHE:HA	7:AH:59:GLU:O	2.14	0.47
8:AI:87:MET:HB2	8:AI:94:ARG:HD3	1.97	0.47
9:AJ:8:ILE:HD12	9:AJ:8:ILE:N	2.29	0.47
11:AL:7:VAL:HG22	16:AQ:33:TYR:CD1	2.49	0.47
14:AO:5:THR:O	14:AO:8:THR:HB	2.15	0.47
16:AQ:25:GLU:HA	16:AQ:39:ARG:O	2.14	0.47
20:AB:101:THR:HG23	20:AB:102:ASN:H	1.80	0.47
23:BB:516:C:H2'	23:BB:517:C:H6	1.80	0.47
23:BB:545:U:C5	23:BB:547:A:H5'	2.50	0.47
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.30	0.47
23:BB:1441:G:H4'	23:BB:1628:G:OP1	2.15	0.47
23:BB:1799:G:H4'	23:BB:1800:C:O5'	2.15	0.47
23:BB:1902:C:H4'	25:BC:241:LYS:O	2.15	0.47
23:BB:1946:U:H2'	23:BB:1947:C:H6	1.80	0.47
23:BB:2011:U:H2'	23:BB:2012:G:O4'	2.14	0.47
23:BB:2217:G:O2'	23:BB:2218:G:H5'	2.14	0.47
23:BB:2590:A:O2'	23:BB:2591:C:H5'	2.15	0.47
23:BB:2733:A:C8	23:BB:2733:A:H3'	2.50	0.47
23:BB:2799:A:O3'	23:BB:2800:A:O4'	2.32	0.47
25:BC:159:THR:H	25:BC:194:VAL:CG1	2.27	0.47
26:BD:31:ALA:O	26:BD:52:THR:HG23	2.13	0.47
37:BL:79:LEU:HB2	37:BL:113:ALA:N	2.25	0.47
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.45	0.47
40:BH:141:LYS:HD3	40:BH:141:LYS:N	2.30	0.47
41:BJ:38:GLY:HA3	41:BJ:50:THR:O	2.15	0.47
41:BJ:96:ARG:NE	41:BJ:99:ARG:HD2	2.29	0.47
41:BJ:96:ARG:O	41:BJ:99:ARG:HG3	2.15	0.47
43:BO:7:ARG:HA	43:BO:10:ARG:HD2	1.96	0.47
46:BU:81:ARG:CD	46:BU:96:LYS:HG3	2.44	0.47
47:BF:29:ARG:HD3	47:BF:29:ARG:H	1.79	0.47
48:BG:9:VAL:HA	48:BG:48:THR:CG2	2.43	0.47
48:BG:90:GLY:HA3	48:BG:93:TYR:CZ	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:23:GLU:O	49:BR:25:LEU:HD22	2.15	0.47
49:BR:59:ILE:HA	49:BR:101:ILE:H	1.79	0.47
50:BT:7:LEU:HD13	50:BT:7:LEU:O	2.15	0.47
51:BZ:6:GLN:HE22	51:BZ:77:LYS:CE	2.28	0.47
53:B6:140:LEU:O	53:B6:143:LEU:HB2	2.15	0.47
1:CA:34:C:H2'	1:CA:35:G:H8	1.80	0.47
1:CA:153:C:O2'	1:CA:154:U:H5'	2.15	0.47
1:CA:160:A:H2'	1:CA:161:A:O4'	2.14	0.47
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.14	0.47
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.79	0.47
1:CA:1180:A:OP1	8:CI:104:THR:HG22	2.13	0.47
1:CA:1278:G:H4'	1:CA:1279:G:O4'	2.15	0.47
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.80	0.47
3:CD:100:VAL:HG21	3:CD:136:VAL:HG21	1.97	0.47
6:CG:125:ASP:HA	6:CG:128:GLU:OE1	2.15	0.47
10:CK:90:PRO:C	10:CK:92:ARG:H	2.18	0.47
11:CL:66:ILE:HD12	11:CL:66:ILE:N	2.30	0.47
12:CM:103:THR:HG22	12:CM:104:ASN:OD1	2.14	0.47
23:DB:496:G:H4'	45:DS:61:ASN:HD21	1.80	0.47
23:DB:621:A:H2'	23:DB:622:G:O4'	2.14	0.47
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.15	0.47
23:DB:1175:A:C3'	23:DB:1176:U:H5'	2.45	0.47
23:DB:1275:A:H2'	23:DB:1275:A:N3	2.29	0.47
23:DB:1854:A:H2	23:DB:2087:G:N3	2.13	0.47
23:DB:2267:A:C8	23:DB:2267:A:O5'	2.65	0.47
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.80	0.47
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.80	0.47
25:DC:4:LYS:HD2	25:DC:5:CYS:H	1.79	0.47
25:DC:73:ILE:HG21	25:DC:97:ASP:HB2	1.97	0.47
25:DC:93:VAL:HG12	25:DC:101:ARG:O	2.15	0.47
25:DC:177:SER:O	25:DC:270:ARG:HG3	2.14	0.47
26:DD:90:PHE:O	26:DD:91:THR:C	2.53	0.47
27:DK:79:PHE:HZ	27:DK:104:THR:HG23	1.80	0.47
28:DP:6:GLN:HA	28:DP:9:GLN:HG2	1.96	0.47
33:D1:29:LYS:HE2	33:D1:31:GLU:OE1	2.15	0.47
45:DS:57:ASN:HD22	45:DS:57:ASN:HA	1.53	0.47
46:DU:81:ARG:HB2	46:DU:96:LYS:HG2	1.97	0.47
51:DZ:33:LEU:HA	51:DZ:51:VAL:O	2.14	0.47
52:DW:23:LYS:H	52:DW:68:PHE:HE2	1.62	0.47
53:D6:80:GLU:CG	53:D6:92:PRO:HB3	2.45	0.47
53:D6:106:LEU:HG	53:D6:111:ARG:HE	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:160:A:H2'	1:AA:161:A:O4'	2.15	0.47
1:AA:509:A:H3'	57:AA:1771:HOH:O	2.15	0.47
1:AA:548:G:H2'	1:AA:549:C:C6	2.49	0.47
1:AA:624:C:H2'	1:AA:625:U:C6	2.50	0.47
1:AA:656:G:O2'	1:AA:657:U:H5'	2.14	0.47
1:AA:1477:U:O2'	1:AA:1478:U:H5'	2.15	0.47
2:AC:16:PRO:CG	2:AC:53:ARG:HH22	2.28	0.47
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.49	0.47
4:AE:38:VAL:O	4:AE:45:VAL:HA	2.15	0.47
5:AF:45:ARG:HH22	17:AR:25:ILE:HD13	1.80	0.47
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.15	0.47
12:AM:23:GLY:HA3	12:AM:68:LEU:CD1	2.44	0.47
13:AN:52:ARG:C	13:AN:54:SER:H	2.19	0.47
15:AP:34:GLU:CD	15:AP:60:TRP:HE1	2.19	0.47
18:AS:2:ARG:O	18:AS:3:SER:C	2.54	0.47
19:AT:66:ILE:CG2	19:AT:70:LYS:HB3	2.44	0.47
23:BB:705:A:O2'	25:BC:6:LYS:HG3	2.15	0.47
23:BB:755:U:H2'	23:BB:756:A:C8	2.50	0.47
23:BB:838:C:O2'	23:BB:839:U:H5'	2.15	0.47
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.79	0.47
23:BB:1509:A:C8	23:BB:1509:A:H5"	2.50	0.47
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.80	0.47
25:BC:270:ARG:HB3	25:BC:270:ARG:CZ	2.45	0.47
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.97	0.47
29:BE:142:ALA:O	29:BE:143:LEU:HD23	2.15	0.47
30:BY:29:ARG:HB2	30:BY:33:HIS:HD2	1.80	0.47
32:B4:7:VAL:HG11	32:B4:23:ILE:O	2.14	0.47
40:BH:25:TYR:CD2	40:BH:30:LEU:HD11	2.49	0.47
40:BH:27:ARG:H	40:BH:31:VAL:HG23	1.79	0.47
40:BH:57:LYS:HZ3	40:BH:58:LEU:HD13	1.78	0.47
44:BQ:94:LEU:CD1	49:BR:13:ARG:HB2	2.44	0.47
45:BS:4:ILE:HG22	45:BS:106:VAL:HG22	1.96	0.47
45:BS:29:VAL:CA	45:BS:32:ALA:HB3	2.44	0.47
47:BF:13:LYS:HZ2	47:BF:13:LYS:C	2.18	0.47
47:BF:57:ALA:HB2	47:BF:64:PRO:CG	2.45	0.47
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.29	0.47
48:BG:9:VAL:HG12	48:BG:11:PRO:CD	2.41	0.47
50:BT:76:ARG:HB3	50:BT:76:ARG:NH1	2.30	0.47
51:BZ:68:LEU:O	51:BZ:72:ARG:HG2	2.15	0.47
1:CA:144:G:H2'	1:CA:145:G:O4'	2.15	0.47
1:CA:555:U:H2'	1:CA:556:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	2.15	0.47
6:CG:135:LYS:HE2	6:CG:139:ASP:OD2	2.15	0.47
7:CH:74:ILE:O	7:CH:74:ILE:HG23	2.15	0.47
8:CI:24:ASN:HD22	8:CI:25:GLY:H	1.59	0.47
9:CJ:35:GLN:HG2	9:CJ:78:GLU:OE1	2.15	0.47
10:CK:67:GLU:HG3	10:CK:68:ARG:N	2.30	0.47
21:CU:24:LYS:NZ	21:CU:24:LYS:HB3	2.30	0.47
22:DA:28:C:N4	22:DA:56:G:C6	2.82	0.47
22:DA:28:C:O2'	22:DA:29:A:H5'	2.15	0.47
23:DB:122:G:O2'	23:DB:123:G:H5'	2.15	0.47
23:DB:316:C:O2'	23:DB:317:G:H5'	2.15	0.47
23:DB:431:U:O2'	23:DB:432:A:H5'	2.15	0.47
23:DB:559:G:H2'	23:DB:560:C:O4'	2.15	0.47
23:DB:718:A:H2'	23:DB:719:C:H5'	1.96	0.47
23:DB:1707:G:O2'	23:DB:1708:C:H5'	2.14	0.47
23:DB:2345:G:H4'	23:DB:2346:A:O5'	2.15	0.47
23:DB:2519:U:C6	23:DB:2542:A:N6	2.83	0.47
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.79	0.47
23:DB:2903:U:O2	23:DB:2903:U:C2'	2.62	0.47
25:DC:171:VAL:HG23	25:DC:185:ALA:HB2	1.97	0.47
28:DP:20:ARG:CG	28:DP:21:PRO:HD2	2.45	0.47
28:DP:25:VAL:HA	28:DP:85:VAL:CA	2.45	0.47
29:DE:122:GLU:O	29:DE:123:LYS:CB	2.63	0.47
39:DX:7:ARG:O	39:DX:7:ARG:HG3	2.15	0.47
39:DX:20:ASN:ND2	39:DX:20:ASN:H	2.11	0.47
40:DH:54:LEU:HD22	40:DH:58:LEU:HD12	1.96	0.47
42:DN:102:PHE:N	42:DN:109:PRO:HA	2.26	0.47
43:DO:7:ARG:HA	43:DO:10:ARG:CD	2.45	0.47
47:DF:79:ARG:NE	47:DF:82:TYR:HD2	2.13	0.47
49:DR:70:GLU:CD	49:DR:70:GLU:N	2.68	0.47
50:DT:58:VAL:O	50:DT:58:VAL:HG13	2.15	0.47
51:DZ:14:THR:HA	51:DZ:28:ARG:HB2	1.96	0.47
1:AA:114:U:H2'	1:AA:115:G:C8	2.50	0.46
1:AA:502:A:H4'	1:AA:550:G:H4'	1.97	0.46
1:AA:955:U:H1'	1:AA:1227:A:N6	2.30	0.46
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.46	0.46
1:AA:1326:U:H2'	1:AA:1327:C:H6	1.77	0.46
2:AC:106:ARG:HG2	2:AC:106:ARG:O	2.15	0.46
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.96	0.46
6:AG:45:ALA:HB3	6:AG:119:LEU:HD23	1.96	0.46
8:AI:66:VAL:HG22	8:AI:67:LYS:N	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:27:ASN:O	10:AK:56:LYS:HD2	2.14	0.46
11:AL:2:THR:OG1	11:AL:5:GLN:HG3	2.15	0.46
13:AN:53:ASP:HA	13:AN:58:ARG:HD2	1.97	0.46
13:AN:61:ASN:O	13:AN:62:ARG:HB2	2.15	0.46
19:AT:27:MET:CE	19:AT:28:ARG:HG2	2.45	0.46
20:AB:23:ASN:OD1	20:AB:25:LYS:HB2	2.14	0.46
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.15	0.46
23:BB:1681:G:H2'	23:BB:1757:A:N1	2.29	0.46
23:BB:1719:G:O2'	23:BB:1720:U:H5'	2.14	0.46
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.14	0.46
23:BB:2105:U:H2'	23:BB:2106:U:C6	2.49	0.46
25:BC:11:GLY:O	25:BC:206:LYS:HB3	2.15	0.46
25:BC:90:ILE:HD12	25:BC:102:TYR:HB3	1.96	0.46
25:BC:226:PRO:HG3	25:BC:233:GLY:N	2.30	0.46
30:BY:26:LEU:HB2	30:BY:28:LEU:HG	1.97	0.46
35:BV:1:MET:HG3	35:BV:2:PHE:N	2.29	0.46
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.14	0.46
37:BL:93:ASN:HD22	37:BL:94:THR:H	1.63	0.46
38:BM:135:VAL:O	38:BM:136:MET:HG3	2.15	0.46
39:BX:56:LEU:C	39:BX:58:ASN:N	2.68	0.46
47:BF:21:TYR:HD2	47:BF:27:VAL:HG12	1.80	0.46
47:BF:79:ARG:NE	47:BF:82:TYR:HD2	2.13	0.46
47:BF:142:TYR:H	47:BF:142:TYR:HD1	1.58	0.46
48:BG:17:LYS:HZ2	48:BG:18:ILE:N	2.13	0.46
48:BG:18:ILE:HA	48:BG:22:VAL:O	2.14	0.46
52:BW:19:ARG:HD3	52:BW:36:ILE:HD11	1.97	0.46
52:BW:61:LYS:HB3	52:BW:62:ALA:H	1.42	0.46
53:B6:111:ARG:HD2	53:B6:111:ARG:HA	1.84	0.46
53:B6:115:VAL:HG22	53:B6:184:LEU:HD12	1.96	0.46
1:CA:338:A:H2'	1:CA:339:C:C6	2.50	0.46
1:CA:373:A:H3'	1:CA:373:A:OP2	2.14	0.46
1:CA:590:U:H2'	1:CA:591:U:H6	1.80	0.46
1:CA:617:G:H4'	15:CP:46:LYS:CE	2.46	0.46
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.15	0.46
1:CA:1144:G:N2	1:CA:1146:A:H62	2.12	0.46
1:CA:1316:G:H8	1:CA:1316:G:OP2	1.98	0.46
3:CD:197:HIS:HA	3:CD:200:VAL:HG22	1.97	0.46
4:CE:71:ILE:HD11	4:CE:144:GLU:HG3	1.96	0.46
5:CF:10:VAL:HG12	5:CF:11:HIS:N	2.31	0.46
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.96	0.46
5:CF:45:ARG:HG2	5:CF:46:GLN:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:24:ASN:O	8:CI:60:LEU:N	2.48	0.46
13:CN:9:GLU:O	13:CN:13:VAL:HG23	2.15	0.46
15:CP:12:LYS:C	15:CP:14:ARG:H	2.17	0.46
18:CS:35:ARG:HB3	18:CS:50:VAL:HG13	1.96	0.46
18:CS:52:ASN:O	18:CS:76:THR:HG23	2.14	0.46
23:DB:96:C:H2'	23:DB:97:C:H6	1.80	0.46
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.15	0.46
23:DB:850:U:H2'	23:DB:851:C:H6	1.81	0.46
23:DB:997:G:O2'	23:DB:998:C:H5'	2.16	0.46
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.50	0.46
23:DB:2015:A:C2	31:D0:2:VAL:HG22	2.50	0.46
23:DB:2281:A:O2'	23:DB:2282:G:H5'	2.15	0.46
23:DB:2461:A:H1'	23:DB:2492:U:C2	2.50	0.46
23:DB:2623:G:H4'	23:DB:2825:G:C8	2.50	0.46
23:DB:2626:C:H2'	23:DB:2627:G:C8	2.50	0.46
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.50	0.46
27:DK:5:GLN:HA	27:DK:20:MET:SD	2.55	0.46
28:DP:56:SER:O	28:DP:74:GLN:HA	2.14	0.46
29:DE:138:LEU:O	29:DE:142:ALA:N	2.48	0.46
39:DX:14:LEU:O	39:DX:18:LEU:HB2	2.15	0.46
40:DH:47:PHE:O	40:DH:51:ARG:HB2	2.15	0.46
40:DH:65:ALA:HB1	40:DH:138:VAL:HG11	1.97	0.46
47:DF:111:ARG:HE	47:DF:135:ILE:HG22	1.79	0.46
48:DG:112:VAL:O	48:DG:113:ASP:HB2	2.14	0.46
53:D6:28:LEU:HD21	53:D6:121:TYR:HE2	1.80	0.46
53:D6:74:ASN:N	53:D6:74:ASN:ND2	2.59	0.46
1:AA:128:G:H2'	1:AA:129:A:H8	1.80	0.46
1:AA:366:A:O2'	1:AA:394:G:N2	2.48	0.46
1:AA:787:A:O2'	1:AA:788:U:H5'	2.16	0.46
1:AA:1361:G:N2	1:AA:1362:A:N7	2.63	0.46
1:AA:1387:G:H2'	1:AA:1388:C:H6	1.79	0.46
2:AC:129:PHE:CE2	2:AC:165:GLU:HG2	2.44	0.46
4:AE:79:THR:OG1	4:AE:97:PRO:HA	2.16	0.46
5:AF:45:ARG:HG2	5:AF:46:GLN:N	2.29	0.46
5:AF:49:TYR:CE1	17:AR:65:SER:HA	2.50	0.46
10:AK:126:ARG:NE	10:AK:126:ARG:HA	2.30	0.46
13:AN:26:LEU:HD23	13:AN:26:LEU:C	2.36	0.46
13:AN:52:ARG:HG3	13:AN:53:ASP:N	2.30	0.46
21:AU:36:PHE:CZ	21:AU:44:ARG:NH2	2.83	0.46
22:BA:74:U:H2'	22:BA:75:G:O4'	2.15	0.46
22:BA:113:C:H2'	22:BA:114:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:354:A:H2'	23:BB:355:U:O4'	2.14	0.46
23:BB:630:G:H22	23:BB:632:A:H3'	1.79	0.46
23:BB:997:G:O2'	23:BB:998:C:H5'	2.15	0.46
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.30	0.46
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.50	0.46
23:BB:1082:U:C2	23:BB:1086:A:N1	2.84	0.46
23:BB:1189:A:H2'	23:BB:1190:G:O4'	2.15	0.46
23:BB:1201:U:H2'	23:BB:1202:G:C8	2.51	0.46
23:BB:1350:C:H2'	23:BB:1350:C:O2	2.16	0.46
23:BB:1849:G:H2'	23:BB:1850:G:C8	2.50	0.46
23:BB:1936:A:H2	23:BB:1943:U:O4	1.99	0.46
23:BB:2508:G:O2'	23:BB:2509:G:H5'	2.15	0.46
23:BB:2527:C:O2'	23:BB:2528:U:H5'	2.14	0.46
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.50	0.46
26:BD:3:GLY:C	26:BD:4:LEU:HD22	2.36	0.46
28:BP:25:VAL:HA	28:BP:85:VAL:CA	2.46	0.46
43:BO:28:VAL:HG11	43:BO:92:PHE:CZ	2.51	0.46
43:BO:31:THR:HG23	43:BO:34:HIS:O	2.15	0.46
44:BQ:59:LEU:HD13	44:BQ:59:LEU:C	2.36	0.46
46:BU:14:THR:HG21	46:BU:64:ILE:HD13	1.97	0.46
47:BF:103:ILE:HD11	47:BF:174:PHE:CD1	2.50	0.46
49:BR:16:GLU:HG2	49:BR:101:ILE:HB	1.96	0.46
53:B6:67:VAL:HA	53:B6:99:LEU:O	2.15	0.46
1:CA:230:G:O2'	1:CA:231:U:H5'	2.15	0.46
1:CA:376:G:O3'	15:CP:5:ARG:HD3	2.15	0.46
1:CA:631:C:H3'	1:CA:632:U:H5'	1.97	0.46
1:CA:925:G:O2'	1:CA:926:G:H5"	2.14	0.46
1:CA:1464:U:H2'	1:CA:1465:A:H8	1.79	0.46
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.14	0.46
3:CD:185:PRO:HB2	3:CD:190:LEU:HG	1.96	0.46
7:CH:101:ALA:O	7:CH:103:VAL:HG23	2.16	0.46
13:CN:26:LEU:HD23	13:CN:26:LEU:C	2.35	0.46
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.97	0.46
20:CB:16:GLY:HA2	20:CB:40:ILE:HD12	1.98	0.46
22:DA:27:C:C2'	22:DA:28:C:H5'	2.45	0.46
22:DA:60:C:O2'	22:DA:61:G:H5'	2.14	0.46
23:DB:48:G:HO2'	23:DB:49:A:H2	1.62	0.46
23:DB:1118:C:H2'	23:DB:1119:U:C6	2.50	0.46
23:DB:1130:U:C2	23:DB:2025:C:H5"	2.49	0.46
23:DB:1350:C:O2	23:DB:1350:C:H2'	2.15	0.46
23:DB:1843:C:H2'	23:DB:1844:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.50	0.46
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	1.96	0.46
24:DI:69:VAL:O	24:DI:69:VAL:HG23	2.14	0.46
27:DK:19:VAL:C	27:DK:41:ILE:HD11	2.36	0.46
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.97	0.46
28:DP:61:ARG:HD3	28:DP:70:GLU:HG3	1.97	0.46
29:DE:152:GLU:O	29:DE:153:LEU:HB3	2.16	0.46
35:DV:78:GLN:HB2	35:DV:88:HIS:O	2.14	0.46
39:DX:9:LYS:NZ	39:DX:60:LYS:HE3	2.30	0.46
40:DH:127:GLU:CA	40:DH:145:ASN:HA	2.40	0.46
41:DJ:3:THR:HG21	44:DQ:60:TRP:NE1	2.29	0.46
41:DJ:28:LEU:HG	41:DJ:32:LEU:CD1	2.46	0.46
45:DS:74:ILE:HD12	45:DS:104:THR:O	2.16	0.46
46:DU:9:GLU:CD	46:DU:21:ARG:HD2	2.36	0.46
46:DU:86:PHE:HD1	46:DU:88:ASP:N	2.14	0.46
47:DF:106:ALA:HA	47:DF:135:ILE:CD1	2.45	0.46
47:DF:108:PRO:O	47:DF:110:ILE:HG23	2.14	0.46
48:DG:86:LEU:HD23	48:DG:162:ARG:O	2.16	0.46
48:DG:106:LEU:O	48:DG:108:PHE:HD1	1.97	0.46
48:DG:108:PHE:C	48:DG:110:HIS:H	2.18	0.46
49:DR:2:TYR:CB	49:DR:42:ALA:HB2	2.44	0.46
1:AA:67:C:H4'	1:AA:172:A:H4'	1.97	0.46
1:AA:338:A:H2'	1:AA:339:C:H6	1.80	0.46
1:AA:373:A:H3'	1:AA:373:A:OP2	2.15	0.46
1:AA:478:A:H2'	1:AA:479:U:O4'	2.15	0.46
1:AA:925:G:O2'	1:AA:926:G:H5"	2.15	0.46
1:AA:935:A:O2'	1:AA:936:C:H5'	2.14	0.46
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.15	0.46
2:AC:156:LEU:HD12	2:AC:163:ARG:HG3	1.98	0.46
3:AD:25:ARG:HB2	3:AD:25:ARG:NH1	2.30	0.46
4:AE:82:HIS:CE1	4:AE:146:MET:HA	2.51	0.46
5:AF:3:HIS:ND1	5:AF:95:ALA:HB2	2.31	0.46
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.16	0.46
7:AH:54:THR:HG23	7:AH:55:LYS:N	2.30	0.46
13:AN:30:ILE:CG2	13:AN:44:VAL:HG11	2.45	0.46
14:AO:16:GLY:HA2	14:AO:27:VAL:CG2	2.45	0.46
20:AB:163:ILE:CG2	20:AB:164:ASP:H	2.09	0.46
23:BB:30:G:H2'	23:BB:31:C:H6	1.73	0.46
23:BB:350:G:H2'	23:BB:351:C:O4'	2.15	0.46
23:BB:379:G:O4'	23:BB:2232:C:H5"	2.15	0.46
23:BB:718:A:H2'	23:BB:719:C:H5'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:736:C:H2'	23:BB:737:C:H6	1.81	0.46
23:BB:919:U:H2'	23:BB:920:A:H8	1.73	0.46
23:BB:1174:U:H2'	23:BB:1175:A:H5"	1.97	0.46
23:BB:1258:U:O4'	29:BE:79:ARG:HD2	2.14	0.46
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.15	0.46
23:BB:1913:A:H4'	23:BB:1914:C:C5'	2.45	0.46
23:BB:2181:U:H2'	23:BB:2182:U:H6	1.80	0.46
23:BB:2498:C:H3'	57:BB:3587:HOH:O	2.15	0.46
23:BB:2511:U:H2'	23:BB:2512:C:C6	2.50	0.46
23:BB:2856:A:H2'	23:BB:2857:G:H8	1.79	0.46
25:BC:18:VAL:CG1	25:BC:202:ARG:HD2	2.45	0.46
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.29	0.46
30:BY:15:ARG:N	30:BY:15:ARG:HD2	2.30	0.46
38:BM:12:MET:HB2	38:BM:72:PRO:HG2	1.95	0.46
38:BM:110:GLU:HG2	38:BM:111:GLU:N	2.30	0.46
40:BH:124:THR:HG22	40:BH:126:GLY:H	1.80	0.46
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.80	0.46
48:BG:72:ASN:O	48:BG:76:ILE:HG12	2.16	0.46
50:BT:29:THR:CG2	50:BT:86:THR:HG22	2.45	0.46
52:BW:35:ILE:O	52:BW:35:ILE:CG1	2.64	0.46
52:BW:65:LYS:HG3	52:BW:84:GLU:CB	2.40	0.46
53:B6:84:ARG:O	53:B6:85:ASP:HB2	2.14	0.46
1:CA:474:G:H2'	1:CA:475:C:H6	1.75	0.46
1:CA:490:C:H2'	1:CA:491:G:C8	2.51	0.46
1:CA:560:A:H5'	1:CA:566:G:N2	2.29	0.46
1:CA:766:A:H2'	1:CA:767:A:C8	2.50	0.46
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.51	0.46
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.97	0.46
7:CH:79:ARG:HB2	7:CH:80:PRO:HD2	1.96	0.46
7:CH:118:ALA:HB3	7:CH:120:LEU:CD2	2.44	0.46
12:CM:33:LEU:HD13	12:CM:39:ALA:O	2.16	0.46
13:CN:42:ASN:O	13:CN:45:LEU:HB3	2.16	0.46
14:CO:43:PHE:CD1	14:CO:56:LEU:HD22	2.50	0.46
23:DB:235:U:H2'	23:DB:236:C:C6	2.49	0.46
23:DB:378:C:O2'	23:DB:379:G:H5'	2.14	0.46
23:DB:477:A:H2'	23:DB:478:A:C8	2.50	0.46
23:DB:677:A:O2'	23:DB:678:C:H5'	2.15	0.46
23:DB:822:G:H2'	23:DB:823:C:C6	2.50	0.46
23:DB:1047:G:C3'	23:DB:1048:A:H5'	2.44	0.46
23:DB:1118:C:H2'	23:DB:1119:U:H6	1.79	0.46
23:DB:1438:U:O2'	23:DB:1439:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1680:U:H2'	23:DB:1681:G:O4'	2.15	0.46
23:DB:1704:C:H2'	23:DB:1705:A:C8	2.51	0.46
23:DB:1804:C:P	25:DC:256:THR:HB	2.55	0.46
23:DB:1837:C:O2	23:DB:1927:A:H2	1.99	0.46
23:DB:1946:U:H2'	23:DB:1947:C:H6	1.80	0.46
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.68	0.46
23:DB:2528:U:O2'	23:DB:2529:G:H3'	2.16	0.46
26:DD:26:VAL:HG13	26:DD:188:LEU:CD2	2.45	0.46
26:DD:45:TYR:CD2	26:DD:83:ARG:HD3	2.49	0.46
26:DD:148:GLN:HG3	26:DD:152:PRO:CG	2.44	0.46
27:DK:15:GLY:HA2	27:DK:46:ALA:HA	1.97	0.46
28:DP:9:GLN:HA	28:DP:12:MET:CG	2.45	0.46
29:DE:18:THR:HG22	29:DE:106:LYS:NZ	2.31	0.46
29:DE:153:LEU:HG	29:DE:154:ASP:N	2.29	0.46
38:DM:53:MET:SD	38:DM:63:ILE:HG21	2.55	0.46
41:DJ:36:LEU:HD21	41:DJ:122:LEU:CD1	2.45	0.46
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	1.97	0.46
48:DG:87:GLN:H	48:DG:164:ALA:HB2	1.81	0.46
48:DG:89:VAL:CB	48:DG:159:LYS:HA	2.28	0.46
51:DZ:5:CYS:SG	51:DZ:8:THR:HG23	2.55	0.46
1:AA:116:A:H2'	1:AA:117:G:O4'	2.14	0.46
1:AA:144:G:H2'	1:AA:145:G:O4'	2.16	0.46
1:AA:555:U:H2'	1:AA:556:C:H6	1.79	0.46
1:AA:801:U:O2'	1:AA:802:A:H5'	2.14	0.46
1:AA:865:A:C2	1:AA:918:A:H4'	2.51	0.46
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.81	0.46
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.45	0.46
3:AD:2:ARG:HB3	3:AD:114:ARG:NH2	2.30	0.46
3:AD:84:ASN:HD22	3:AD:85:THR:N	2.13	0.46
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	2.15	0.46
4:AE:81:GLN:CD	4:AE:148:SER:HA	2.35	0.46
7:AH:87:ARG:H	7:AH:90:GLU:CB	2.29	0.46
8:AI:9:GLY:HA2	8:AI:80:HIS:HD2	1.77	0.46
12:AM:112:ARG:HB3	12:AM:114:PRO:HD3	1.98	0.46
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	1.97	0.46
20:AB:205:ALA:O	20:AB:209:VAL:HG22	2.16	0.46
23:BB:69:C:O2'	23:BB:70:G:H5'	2.14	0.46
23:BB:251:A:H2'	23:BB:252:G:O4'	2.15	0.46
23:BB:1313:U:O2	23:BB:1313:U:H2'	2.15	0.46
23:BB:1708:C:H2'	23:BB:1709:U:C6	2.51	0.46
23:BB:1723:G:N7	23:BB:1737:G:N2	2.60	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1942:C:C1'	53:B6:133:ARG:HH22	2.27	0.46
23:BB:2064:C:H1'	23:BB:2450:A:C6	2.50	0.46
23:BB:2135:A:H61	23:BB:2156:G:C2'	2.28	0.46
23:BB:2186:G:H2'	23:BB:2187:U:H6	1.79	0.46
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.81	0.46
23:BB:2853:C:O2'	23:BB:2854:G:H5'	2.15	0.46
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.50	0.46
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.46	0.46
25:BC:73:ILE:HG21	25:BC:97:ASP:HB2	1.97	0.46
26:BD:45:TYR:CD2	26:BD:83:ARG:HD3	2.50	0.46
27:BK:47:ILE:HG23	27:BK:48:PRO:CD	2.45	0.46
28:BP:99:LEU:HD13	28:BP:99:LEU:O	2.15	0.46
28:BP:101:GLU:OE2	28:BP:101:GLU:N	2.49	0.46
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.29	0.46
38:BM:2:LEU:HD23	38:BM:46:ILE:HD11	1.97	0.46
38:BM:4:PRO:HG2	38:BM:70:ASP:HA	1.97	0.46
38:BM:24:THR:HG23	38:BM:34:LYS:HE3	1.97	0.46
38:BM:96:ILE:HD11	38:BM:126:ILE:HG12	1.97	0.46
39:BX:23:ARG:HD3	50:BT:50:LEU:HD12	1.97	0.46
40:BH:44:ILE:O	40:BH:48:GLU:HB3	2.16	0.46
40:BH:44:ILE:CG1	40:BH:45:GLU:H	2.28	0.46
40:BH:89:LYS:NZ	40:BH:123:ARG:HB3	2.31	0.46
40:BH:133:GLN:HG2	40:BH:139:PHE:HB3	1.97	0.46
44:BQ:97:ILE:HD11	44:BQ:108:LEU:HD11	1.97	0.46
46:BU:35:VAL:HB	46:BU:38:ILE:HB	1.98	0.46
46:BU:40:LEU:HB3	46:BU:59:GLU:HG2	1.96	0.46
46:BU:86:PHE:HD1	46:BU:88:ASP:N	2.14	0.46
47:BF:106:ALA:HA	47:BF:135:ILE:CD1	2.46	0.46
49:BR:4:VAL:HB	49:BR:39:LEU:HG	1.96	0.46
50:BT:50:LEU:C	50:BT:52:GLU:H	2.16	0.46
50:BT:58:VAL:O	50:BT:58:VAL:HG13	2.16	0.46
52:BW:25:PHE:HD1	52:BW:26:GLY:H	1.64	0.46
1:CA:980:C:H4'	13:CN:58:ARG:HH12	1.81	0.46
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.81	0.46
2:CC:91:ALA:O	2:CC:95:GLY:N	2.49	0.46
2:CC:155:ARG:H	2:CC:162:ALA:CB	2.28	0.46
3:CD:89:LEU:CD2	3:CD:199:ILE:HD11	2.46	0.46
4:CE:38:VAL:O	4:CE:45:VAL:HA	2.15	0.46
5:CF:70:VAL:HG23	5:CF:71:ILE:H	1.81	0.46
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.15	0.46
14:CO:25:THR:CB	14:CO:70:LEU:HD23	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:62:GLN:O	14:CO:66:LEU:HD23	2.15	0.46
18:CS:61:VAL:HA	18:CS:65:MET:SD	2.56	0.46
21:CU:16:ARG:HG3	21:CU:19:LYS:HD2	1.97	0.46
21:CU:35:GLU:HB3	21:CU:36:PHE:H	1.53	0.46
21:CU:36:PHE:CZ	21:CU:44:ARG:NH2	2.83	0.46
23:DB:325:G:H2'	23:DB:326:G:H8	1.80	0.46
23:DB:332:A:O2'	23:DB:334:C:OP2	2.33	0.46
23:DB:518:G:H4'	45:DS:18:ARG:CZ	2.46	0.46
23:DB:685:A:H1'	23:DB:688:U:O4	2.15	0.46
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.15	0.46
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	2.15	0.46
23:DB:1248:G:OP1	29:DE:44:ARG:NH1	2.48	0.46
23:DB:1584:U:H3'	23:DB:1585:C:H5'	1.96	0.46
23:DB:2070:A:H2'	23:DB:2071:A:H8	1.77	0.46
23:DB:2408:U:H2'	23:DB:2409:G:C8	2.51	0.46
23:DB:2492:U:O2'	23:DB:2493:U:H5'	2.16	0.46
23:DB:2696:U:O2'	23:DB:2697:G:H5'	2.16	0.46
23:DB:2771:C:H1'	26:DD:208:LYS:HZ1	1.80	0.46
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.30	0.46
25:DC:159:THR:N	25:DC:194:VAL:CG1	2.79	0.46
27:DK:47:ILE:HG23	27:DK:48:PRO:CD	2.46	0.46
30:DY:16:LEU:O	30:DY:20:LYS:HG3	2.15	0.46
37:DL:42:SER:C	37:DL:44:GLY:N	2.68	0.46
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	1.97	0.46
40:DH:65:ALA:C	40:DH:138:VAL:HG11	2.35	0.46
41:DJ:45:THR:OG1	41:DJ:48:VAL:HB	2.16	0.46
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	1.98	0.46
47:DF:39:VAL:CG2	47:DF:48:LEU:HG	2.45	0.46
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.35	0.46
48:DG:66:THR:O	48:DG:70:LEU:HB2	2.15	0.46
49:DR:39:LEU:HA	49:DR:49:ILE:HG21	1.98	0.46
49:DR:40:MET:O	49:DR:41:ILE:HD13	2.16	0.46
50:DT:40:LYS:HD3	50:DT:58:VAL:O	2.15	0.46
51:DZ:77:LYS:CG	51:DZ:78:TYR:H	2.27	0.46
53:D6:18:LEU:HD22	53:D6:168:PHE:CE2	2.51	0.46
53:D6:22:GLU:HG2	53:D6:175:LEU:HD21	1.96	0.46
53:D6:41:LEU:O	53:D6:43:VAL:N	2.44	0.46
1:AA:109:A:H2'	1:AA:326:G:N2	2.30	0.46
1:AA:238:A:C3'	1:AA:239:U:H5"	2.46	0.46
1:AA:332:G:P	19:AT:2:ASN:HB3	2.55	0.46
1:AA:490:C:H2'	1:AA:491:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:586:C:C5'	7:AH:81:GLY:HA2	2.46	0.46
1:AA:821:G:O2'	1:AA:822:U:H5'	2.16	0.46
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.15	0.46
1:AA:1299:A:C2'	1:AA:1301:U:H1'	2.41	0.46
2:AC:112:ALA:HB1	2:AC:184:ASN:HB2	1.97	0.46
4:AE:158:LYS:HZ3	7:AH:65:PHE:HA	1.80	0.46
8:AI:71:ILE:HD12	8:AI:71:ILE:N	2.31	0.46
10:AK:36:ARG:HH11	10:AK:36:ARG:HG3	1.81	0.46
11:AL:28:GLN:HG3	11:AL:80:LEU:HD21	1.98	0.46
11:AL:33:CYS:H	11:AL:54:VAL:HG13	1.80	0.46
18:AS:50:VAL:HG23	18:AS:59:VAL:HG21	1.96	0.46
22:BA:8:C:H4'	43:BO:27:VAL:HG21	1.98	0.46
23:BB:139:U:H3'	23:BB:140:C:C4'	2.43	0.46
23:BB:165:A:H2'	23:BB:166:U:H6	1.79	0.46
23:BB:285:G:H2'	23:BB:286:U:C6	2.50	0.46
23:BB:320:A:H2'	29:BE:131:THR:OG1	2.16	0.46
23:BB:483:A:O2'	46:BU:56:GLY:HA2	2.15	0.46
23:BB:560:C:H2'	23:BB:561:G:O4'	2.16	0.46
23:BB:708:G:H2'	23:BB:709:U:C6	2.50	0.46
23:BB:730:A:H3'	57:BB:3597:HOH:O	2.15	0.46
23:BB:915:C:H3'	23:BB:916:G:H8	1.81	0.46
23:BB:1427:A:H4'	23:BB:1428:C:O5'	2.15	0.46
23:BB:1435:G:H2'	23:BB:1436:G:H8	1.80	0.46
23:BB:1462:C:O2'	23:BB:1463:C:H5'	2.16	0.46
23:BB:1711:A:O2'	23:BB:1712:U:H5'	2.16	0.46
23:BB:1724:G:H2'	23:BB:1725:U:H6	1.80	0.46
23:BB:1867:G:O2'	23:BB:1868:C:H5'	2.15	0.46
23:BB:2047:C:H2'	23:BB:2048:G:H8	1.80	0.46
23:BB:2093:G:O2'	23:BB:2094:A:H5'	2.15	0.46
25:BC:35:LYS:HD2	25:BC:36:ASN:H	1.80	0.46
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.15	0.46
27:BK:58:LEU:HD23	27:BK:58:LEU:H	1.80	0.46
27:BK:104:THR:HB	27:BK:106:GLU:OE1	2.16	0.46
28:BP:92:ARG:HG3	28:BP:92:ARG:NH1	2.31	0.46
31:B0:43:THR:HG23	31:B0:47:TYR:C	2.35	0.46
41:BJ:36:LEU:HD21	41:BJ:122:LEU:CD1	2.45	0.46
45:BS:42:LYS:O	45:BS:46:LEU:HG	2.16	0.46
46:BU:66:VAL:C	46:BU:68:ASN:H	2.19	0.46
46:BU:86:PHE:HD1	46:BU:88:ASP:H	1.59	0.46
48:BG:29:ASN:ND2	48:BG:77:GLY:O	2.49	0.46
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:2:SER:HB3	51:BZ:4:VAL:HG23	1.98	0.46
51:BZ:49:LEU:HB2	51:BZ:51:VAL:HG23	1.96	0.46
1:CA:212:G:H2'	1:CA:213:G:H8	1.80	0.46
1:CA:312:C:H2'	1:CA:313:A:H8	1.80	0.46
1:CA:539:A:H2'	1:CA:540:G:H8	1.77	0.46
1:CA:591:U:H2'	1:CA:592:G:C8	2.50	0.46
1:CA:807:A:H2'	1:CA:808:C:C6	2.50	0.46
1:CA:1246:A:H2'	1:CA:1247:U:C6	2.50	0.46
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.16	0.46
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.98	0.46
3:CD:77:GLU:OE1	3:CD:80:ARG:HD3	2.15	0.46
7:CH:72:GLU:CD	7:CH:72:GLU:H	2.19	0.46
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.81	0.46
15:CP:43:ALA:HA	15:CP:46:LYS:HE3	1.95	0.46
16:CQ:80:LYS:O	16:CQ:83:LEU:HD13	2.15	0.46
20:CB:22:TRP:CZ3	20:CB:24:PRO:HA	2.51	0.46
20:CB:23:ASN:OD1	20:CB:25:LYS:HB2	2.16	0.46
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.15	0.46
22:DA:57:A:OP2	22:DA:58:A:OP2	2.33	0.46
23:DB:56:A:H2'	23:DB:57:C:C6	2.49	0.46
23:DB:321:U:OP2	29:DE:130:LYS:HA	2.16	0.46
23:DB:876:C:H2'	23:DB:877:A:O4'	2.15	0.46
23:DB:996:A:H4'	44:DQ:91:ARG:CG	2.46	0.46
23:DB:1136:G:H2'	23:DB:1137:G:H8	1.80	0.46
23:DB:2109:U:N3	23:DB:2180:U:O4	2.47	0.46
23:DB:2602:A:OP1	23:DB:2602:A:H3'	2.15	0.46
23:DB:2730:C:H4'	26:DD:174:SER:HB3	1.96	0.46
25:DC:226:PRO:HG3	25:DC:233:GLY:H	1.81	0.46
37:DL:124:GLY:O	37:DL:125:LEU:HG	2.16	0.46
38:DM:2:LEU:HD23	38:DM:46:ILE:HD11	1.97	0.46
43:DO:28:VAL:HG11	43:DO:92:PHE:CZ	2.49	0.46
43:DO:110:ALA:O	43:DO:115:LEU:HB2	2.15	0.46
45:DS:4:ILE:HG22	45:DS:106:VAL:HG22	1.98	0.46
50:DT:11:LEU:CD2	50:DT:46:ALA:HB1	2.46	0.46
50:DT:29:THR:CG2	50:DT:86:THR:HG22	2.46	0.46
1:AA:212:G:H2'	1:AA:213:G:C8	2.51	0.46
1:AA:558:G:H8	1:AA:559:A:H2'	1.80	0.46
1:AA:906:A:O2'	1:AA:907:A:H5"	2.16	0.46
1:AA:957:U:H2'	1:AA:959:A:OP2	2.16	0.46
1:AA:1039:G:H2'	1:AA:1040:U:H6	1.79	0.46
4:AE:106:ALA:HB1	4:AE:110:MET:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:66:THR:HG22	15:AP:67:ILE:H	1.81	0.46
18:AS:35:ARG:HB3	18:AS:50:VAL:HG13	1.97	0.46
18:AS:39:ILE:HG21	18:AS:61:VAL:HG13	1.97	0.46
20:AB:95:TRP:HZ2	20:AB:100:LEU:HD13	1.79	0.46
22:BA:54:G:H21	47:BF:25:MET:CE	2.29	0.46
23:BB:72:U:H1'	39:BX:51:ALA:HA	1.97	0.46
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.16	0.46
23:BB:660:C:H2'	23:BB:661:A:C8	2.49	0.46
23:BB:1210:G:H5'	23:BB:1212:G:H5'	1.98	0.46
23:BB:2322:A:C6	23:BB:2333:A:N6	2.84	0.46
23:BB:2825:G:N3	23:BB:2825:G:H5"	2.31	0.46
25:BC:146:LYS:HB2	25:BC:149:LYS:HB2	1.97	0.46
30:BY:16:LEU:O	30:BY:20:LYS:HG3	2.16	0.46
32:B4:15:LYS:O	32:B4:15:LYS:HE2	2.16	0.46
32:B4:22:VAL:O	32:B4:24:ARG:HG3	2.16	0.46
33:B1:7:LYS:CD	34:B3:33:THR:HG21	2.43	0.46
34:B3:28:LEU:HD22	34:B3:43:LEU:HB2	1.97	0.46
40:BH:5:LEU:C	40:BH:6:LEU:HD12	2.36	0.46
40:BH:77:THR:HG22	40:BH:79:THR:HG23	1.97	0.46
41:BJ:3:THR:HG21	44:BQ:60:TRP:NE1	2.27	0.46
41:BJ:45:THR:O	41:BJ:45:THR:HG23	2.15	0.46
43:BO:47:VAL:O	43:BO:48:LEU:HD23	2.16	0.46
48:BG:4:ALA:HB3	48:BG:61:TRP:HZ3	1.81	0.46
48:BG:32:LEU:HB3	48:BG:34:ARG:CZ	2.45	0.46
1:CA:80:A:H2'	1:CA:81:A:H8	1.79	0.46
1:CA:160:A:H1'	1:CA:344:A:N7	2.29	0.46
1:CA:207:C:O2'	1:CA:208:U:H5'	2.15	0.46
1:CA:279:A:C5'	1:CA:280:C:H3'	2.43	0.46
1:CA:856:C:O2'	1:CA:857:C:H5'	2.16	0.46
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.48	0.46
1:CA:1148:U:H5'	8:CI:6:TYR:OH	2.16	0.46
1:CA:1354:U:H2'	1:CA:1355:G:H8	1.81	0.46
1:CA:1409:C:H2'	1:CA:1410:A:H8	1.81	0.46
2:CC:40:GLN:HG3	2:CC:41:TYR:H	1.81	0.46
2:CC:117:ASP:OD2	2:CC:186:SER:HB3	2.16	0.46
2:CC:140:ALA:HB3	2:CC:148:ILE:HD12	1.96	0.46
3:CD:16:THR:HG22	3:CD:17:ASP:H	1.78	0.46
19:CT:49:ALA:HA	19:CT:52:GLU:CD	2.36	0.46
20:CB:134:LEU:HD11	20:CB:138:ARG:HH12	1.79	0.46
23:DB:483:A:C8	46:DU:44:HIS:HB3	2.50	0.46
23:DB:674:G:H2'	23:DB:804:A:H61	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:826:U:O2'	37:DL:53:GLY:HA3	2.15	0.46
23:DB:828:U:H2'	23:DB:829:A:C8	2.51	0.46
23:DB:899:A:C5	23:DB:900:A:H1'	2.51	0.46
23:DB:927:A:O2'	23:DB:928:A:H5'	2.16	0.46
23:DB:996:A:H4'	44:DQ:91:ARG:HD2	1.98	0.46
23:DB:1535:A:O2'	23:DB:1536:C:H5'	2.15	0.46
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.57	0.46
23:DB:1676:A:C2	23:DB:1677:A:H1'	2.50	0.46
23:DB:1708:C:H2'	23:DB:1709:U:H6	1.79	0.46
23:DB:1776:G:O2'	23:DB:1777:U:H5'	2.16	0.46
23:DB:1924:C:H2'	23:DB:1925:C:H6	1.81	0.46
23:DB:1949:G:H2'	23:DB:1950:G:C8	2.51	0.46
23:DB:2038:G:H2'	23:DB:2039:U:C6	2.51	0.46
23:DB:2269:G:H4'	52:DW:19:ARG:HH11	1.80	0.46
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.78	0.46
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.51	0.46
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	1.97	0.46
25:DC:11:GLY:O	25:DC:206:LYS:HB3	2.16	0.46
30:DY:3:THR:HB	30:DY:36:GLU:HG2	1.98	0.46
32:D4:7:VAL:HG11	32:D4:23:ILE:O	2.15	0.46
36:D2:21:ARG:C	36:D2:23:ALA:H	2.18	0.46
39:DX:56:LEU:C	39:DX:58:ASN:N	2.67	0.46
40:DH:133:GLN:CB	40:DH:139:PHE:HB3	2.26	0.46
47:DF:7:TYR:HA	47:DF:11:VAL:HB	1.97	0.46
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.15	0.46
47:DF:100:GLU:O	47:DF:104:THR:HB	2.15	0.46
47:DF:169:LEU:HA	47:DF:172:PHE:HD2	1.80	0.46
48:DG:26:LYS:HB2	48:DG:32:LEU:HG	1.98	0.46
48:DG:28:LYS:O	48:DG:29:ASN:HB3	2.15	0.46
48:DG:30:GLY:O	48:DG:78:VAL:HG12	2.16	0.46
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.99	0.46
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.36	0.46
48:DG:90:GLY:HA3	48:DG:93:TYR:CZ	2.50	0.46
50:DT:45:ALA:HA	50:DT:48:GLN:HB2	1.96	0.46
50:DT:48:GLN:HA	50:DT:48:GLN:NE2	2.29	0.46
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	1.97	0.46
53:D6:22:GLU:HG2	53:D6:175:LEU:CD2	2.45	0.46
53:D6:60:ALA:HA	53:D6:66:LEU:HD12	1.98	0.46
1:AA:26:A:N6	1:AA:558:G:H1'	2.31	0.46
1:AA:317:U:H2'	1:AA:318:G:C8	2.50	0.46
1:AA:858:G:O6	1:AA:869:G:H3'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:998:C:H2'	1:AA:999:C:C6	2.51	0.46
1:AA:1049:U:O4'	1:AA:1201:A:N7	2.49	0.46
1:AA:1054:C:O2'	1:AA:1055:A:H5"	2.16	0.46
1:AA:1123:U:C2'	1:AA:1124:G:H5'	2.46	0.46
1:AA:1125:U:O2'	1:AA:1126:U:H2'	2.16	0.46
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.16	0.46
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.15	0.46
4:AE:17:VAL:HG23	4:AE:33:THR:O	2.16	0.46
5:AF:7:VAL:O	5:AF:7:VAL:HG13	2.16	0.46
7:AH:79:ARG:HB2	7:AH:80:PRO:HD2	1.96	0.46
8:AI:99:LYS:HE3	9:CJ:80:THR:HA	1.97	0.46
10:AK:12:ARG:HD3	10:AK:76:TYR:CE1	2.50	0.46
11:AL:42:LYS:HB2	11:AL:88:ASP:HA	1.98	0.46
12:AM:79:LEU:HD22	12:AM:86:ARG:HE	1.80	0.46
12:AM:89:ARG:CB	12:AM:96:VAL:HG22	2.46	0.46
18:AS:6:LYS:HD2	18:AS:6:LYS:N	2.30	0.46
18:AS:11:ASP:H	18:AS:14:LEU:HD21	1.81	0.46
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.45	0.46
21:AU:31:VAL:HG12	21:AU:31:VAL:O	2.15	0.46
22:BA:13:G:H1	22:BA:69:G:HO2'	1.64	0.46
23:BB:303:G:H2'	23:BB:304:U:C6	2.51	0.46
23:BB:1138:G:H21	41:BJ:108:MET:CE	2.29	0.46
23:BB:1139:G:O2'	23:BB:1143:A:N1	2.42	0.46
23:BB:1366:A:H2'	23:BB:1367:A:O4'	2.15	0.46
23:BB:1446:C:H2'	23:BB:1447:C:C6	2.50	0.46
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.98	0.46
23:BB:1664:A:H1'	23:BB:2726:A:N1	2.31	0.46
23:BB:2331:G:H4'	52:BW:39:GLN:HA	1.98	0.46
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.79	0.46
23:BB:2745:C:H4'	48:BG:141:GLY:O	2.16	0.46
25:BC:16:VAL:CB	25:BC:203:VAL:HB	2.40	0.46
29:BE:77:ILE:H	29:BE:77:ILE:HG13	1.57	0.46
37:BL:142:ILE:HD12	37:BL:142:ILE:N	2.31	0.46
38:BM:33:LEU:HD22	38:BM:128:THR:OG1	2.16	0.46
38:BM:65:ILE:HG23	38:BM:103:TYR:CE2	2.51	0.46
42:BN:79:LEU:C	42:BN:81:ASN:H	2.19	0.46
43:BO:26:LEU:HD13	43:BO:39:VAL:CG2	2.45	0.46
43:BO:35:ILE:HG21	43:BO:71:ALA:HA	1.96	0.46
44:BQ:108:LEU:O	44:BQ:111:LYS:HB3	2.16	0.46
45:BS:28:LYS:O	45:BS:71:VAL:HG12	2.16	0.46
48:BG:94:ARG:NH2	48:BG:104:LEU:HA	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:20:VAL:HG12	49:BR:21:ARG:N	2.30	0.46
49:BR:34:GLU:OE1	49:BR:60:LYS:HE2	2.14	0.46
1:CA:170:U:O2'	1:CA:171:A:H5'	2.16	0.46
1:CA:178:C:O2'	1:CA:179:A:H5'	2.16	0.46
1:CA:961:U:OP1	1:CA:1223:C:H4'	2.15	0.46
1:CA:975:A:H5"	1:CA:976:G:O5'	2.15	0.46
1:CA:1325:C:O2'	1:CA:1326:U:H5'	2.16	0.46
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.51	0.46
3:CD:122:ILE:HG22	3:CD:123:MET:N	2.31	0.46
5:CF:62:MET:O	5:CF:63:ASN:HB2	2.16	0.46
11:CL:49:ARG:HH12	11:CL:88:ASP:HB2	1.81	0.46
16:CQ:30:HIS:ND1	16:CQ:32:ILE:HG22	2.30	0.46
18:CS:42:ASN:HD21	18:CS:43:MET:HG2	1.78	0.46
19:CT:35:TYR:CG	19:CT:36:ALA:N	2.82	0.46
20:CB:16:GLY:HA2	20:CB:40:ILE:HG13	1.97	0.46
20:CB:186:VAL:O	20:CB:200:PRO:HA	2.16	0.46
22:DA:49:C:O2'	22:DA:50:A:H5'	2.16	0.46
23:DB:52:A:C5	23:DB:118:A:C2	3.04	0.46
23:DB:686:U:H2'	23:DB:788:A:N1	2.31	0.46
23:DB:1180:U:H2'	23:DB:1181:U:O4'	2.15	0.46
23:DB:1213:A:C6	23:DB:1237:A:H1'	2.50	0.46
23:DB:1248:G:C4	44:DQ:2:ARG:HD2	2.50	0.46
23:DB:1441:G:O2'	23:DB:1442:U:H5'	2.16	0.46
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.81	0.46
23:DB:1640:A:H2'	23:DB:1641:A:H8	1.80	0.46
23:DB:2297:A:H61	23:DB:2319:G:H1'	1.79	0.46
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.50	0.46
23:DB:2853:C:O2'	23:DB:2854:G:H5'	2.16	0.46
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.50	0.46
25:DC:35:LYS:HD2	25:DC:36:ASN:H	1.80	0.46
29:DE:108:ILE:HD11	29:DE:181:ILE:CB	2.37	0.46
29:DE:115:GLN:NE2	37:DL:2:ARG:HD3	2.31	0.46
29:DE:142:ALA:O	29:DE:143:LEU:HD23	2.16	0.46
30:DY:15:ARG:HD2	30:DY:15:ARG:N	2.31	0.46
31:D0:2:VAL:HG12	31:D0:3:GLN:H	1.81	0.46
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.36	0.46
35:DV:14:LYS:HE3	35:DV:18:ARG:NH2	2.31	0.46
35:DV:44:HIS:O	35:DV:45:ASP:C	2.54	0.46
37:DL:47:ARG:HH21	37:DL:47:ARG:HB3	1.80	0.46
37:DL:95:LEU:HB3	37:DL:100:ILE:CG2	2.45	0.46
41:DJ:16:TYR:O	41:DJ:55:ILE:HG12	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:38:LEU:CB	42:DN:39:PRO:HD3	2.41	0.46
46:DU:12:VAL:HG22	46:DU:69:VAL:CG1	2.41	0.46
49:DR:25:LEU:H	49:DR:94:THR:HG21	1.81	0.46
50:DT:15:HIS:O	50:DT:16:VAL:C	2.53	0.46
51:DZ:63:GLY:HA3	51:DZ:66:THR:OG1	2.16	0.46
53:D6:156:ARG:O	53:D6:159:ALA:HB3	2.16	0.46
1:AA:224:U:H2'	1:AA:225:C:C6	2.51	0.46
1:AA:513:C:H2'	1:AA:514:C:C6	2.50	0.46
1:AA:1461:G:O2'	1:AA:1462:C:H5'	2.15	0.46
2:AC:13:ILE:C	2:AC:15:LYS:H	2.18	0.46
3:AD:197:HIS:HA	3:AD:200:VAL:HG22	1.98	0.46
4:AE:80:LEU:CD1	4:AE:95:MET:HB3	2.45	0.46
5:AF:18:VAL:HG21	5:AF:58:HIS:CE1	2.50	0.46
5:AF:46:GLN:HA	5:AF:46:GLN:NE2	2.31	0.46
8:AI:87:MET:HB2	8:AI:94:ARG:CD	2.46	0.46
9:AJ:57:VAL:HG22	9:AJ:58:ASN:N	2.20	0.46
10:AK:80:ASN:H	10:AK:80:ASN:HD22	1.63	0.46
10:AK:125:LYS:O	21:AU:33:ARG:NH2	2.49	0.46
13:AN:5:MET:O	13:AN:8:ARG:HB3	2.16	0.46
16:AQ:74:LEU:HD22	16:AQ:75:VAL:H	1.81	0.46
20:AB:63:LYS:HB3	20:AB:87:ASP:OD2	2.16	0.46
22:BA:28:C:C5	22:BA:56:G:C2	3.04	0.46
23:BB:528:A:C2	23:BB:2043:C:H4'	2.51	0.46
23:BB:741:U:H2'	23:BB:742:A:H8	1.80	0.46
23:BB:1035:U:H2'	23:BB:1036:G:H8	1.81	0.46
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.79	0.46
23:BB:1591:A:H2'	23:BB:1592:C:C6	2.51	0.46
23:BB:1924:C:O2'	23:BB:1925:C:H5'	2.15	0.46
23:BB:2331:G:O2'	23:BB:2332:C:H5'	2.16	0.46
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.16	0.46
23:BB:2626:C:O2'	23:BB:2627:G:H5'	2.15	0.46
23:BB:2648:G:H2'	23:BB:2649:C:H6	1.79	0.46
23:BB:2751:G:H4'	23:BB:2752:C:OP1	2.15	0.46
24:BI:72:THR:HG21	24:BI:111:THR:O	2.16	0.46
25:BC:20:ASN:O	25:BC:23:LEU:HD13	2.16	0.46
26:BD:16:THR:O	28:BP:78:PRO:HG2	2.16	0.46
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.27	0.46
28:BP:6:GLN:O	28:BP:10:GLU:HB2	2.15	0.46
29:BE:200:LEU:O	29:BE:201:ALA:HB3	2.15	0.46
32:B4:15:LYS:O	32:B4:16:ILE:HB	2.16	0.46
35:BV:44:HIS:O	35:BV:45:ASP:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:9:VAL:CG1	36:B2:10:LEU:N	2.79	0.46
37:BL:42:SER:O	37:BL:44:GLY:N	2.49	0.46
37:BL:80:SER:HB3	37:BL:115:GLU:OE2	2.16	0.46
37:BL:131:ALA:C	37:BL:133:ALA:N	2.69	0.46
40:BH:79:THR:HA	40:BH:145:ASN:CB	2.44	0.46
41:BJ:18:VAL:HG22	41:BJ:19:ASP:N	2.31	0.46
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.15	0.46
51:BZ:71:LEU:CD1	51:BZ:76:GLU:HB3	2.44	0.46
52:BW:49:ASN:CB	52:BW:60:ALA:HA	2.45	0.46
53:B6:68:VAL:HG11	53:B6:79:ILE:CB	2.46	0.46
53:B6:70:SER:N	53:B6:97:ASP:O	2.47	0.46
53:B6:108:GLU:O	53:B6:112:LYS:HG3	2.16	0.46
1:CA:244:U:O4	1:CA:906:A:H1'	2.16	0.46
1:CA:430:A:P	3:CD:6:PRO:HA	2.56	0.46
1:CA:440:C:O2'	1:CA:441:A:H5'	2.16	0.46
1:CA:552:U:H2'	1:CA:553:A:H8	1.79	0.46
1:CA:610:U:O2	1:CA:610:U:O4'	2.33	0.46
1:CA:624:C:H2'	1:CA:625:U:H6	1.81	0.46
1:CA:842:U:H4'	1:CA:846:G:C2	2.51	0.46
1:CA:982:U:OP2	13:CN:60:ARG:NH1	2.48	0.46
1:CA:1147:C:H2'	1:CA:1148:U:C6	2.51	0.46
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.97	0.46
1:CA:1409:C:H2'	1:CA:1410:A:C8	2.51	0.46
4:CE:131:ASN:ND2	4:CE:134:ASN:H	2.14	0.46
6:CG:91:ARG:HD2	6:CG:91:ARG:N	2.31	0.46
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	1.98	0.46
13:CN:5:MET:HE2	13:CN:60:ARG:NH1	2.31	0.46
13:CN:78:LEU:HD23	13:CN:82:LYS:CB	2.45	0.46
15:CP:72:ALA:HA	15:CP:75:ILE:CD1	2.45	0.46
22:DA:76:G:P	35:DV:13:GLY:H	2.38	0.46
23:DB:17:G:H2'	23:DB:18:U:H6	1.81	0.46
23:DB:154:U:H2'	23:DB:155:A:C8	2.51	0.46
23:DB:236:C:O2'	23:DB:237:C:H5'	2.16	0.46
23:DB:370:G:O2'	23:DB:423:A:H3'	2.15	0.46
23:DB:646:U:H3'	23:DB:647:G:H8	1.81	0.46
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.51	0.46
23:DB:779:U:H2'	23:DB:780:G:C8	2.51	0.46
23:DB:970:U:H1'	23:DB:985:C:P	2.56	0.46
23:DB:994:C:O2	49:DR:10:LYS:HE3	2.16	0.46
23:DB:1228:G:H2'	23:DB:1229:C:H6	1.81	0.46
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1385:A:O2'	23:DB:1396:U:H6	1.99	0.46
23:DB:1435:G:H2'	23:DB:1436:G:H8	1.81	0.46
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.30	0.46
23:DB:1892:C:O2'	23:DB:1893:C:H5'	2.16	0.46
23:DB:1956:U:O2	23:DB:1985:C:H4'	2.16	0.46
23:DB:2244:U:H2'	23:DB:2245:U:O4'	2.15	0.46
23:DB:2330:G:N2	52:DW:38:ARG:O	2.49	0.46
23:DB:2515:C:O2'	23:DB:2516:A:H5'	2.15	0.46
23:DB:2626:C:O2'	23:DB:2627:G:H5'	2.15	0.46
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.81	0.46
23:DB:2893:A:H4'	23:DB:2894:G:O5'	2.15	0.46
25:DC:9:SER:HB2	25:DC:10:PRO:HD2	1.98	0.46
25:DC:24:HIS:CE1	25:DC:26:GLY:H	2.34	0.46
25:DC:146:LYS:HB2	25:DC:149:LYS:HB2	1.97	0.46
26:DD:116:LYS:HB3	26:DD:118:PHE:CE2	2.50	0.46
27:DK:25:LEU:HD11	27:DK:40:LYS:N	2.30	0.46
27:DK:76:VAL:HG12	27:DK:77:ILE:N	2.31	0.46
28:DP:77:SER:O	28:DP:80:VAL:HG12	2.15	0.46
28:DP:92:ARG:HG3	28:DP:92:ARG:NH1	2.31	0.46
30:DY:29:ARG:HB2	30:DY:33:HIS:HD2	1.81	0.46
35:DV:29:ILE:HD13	35:DV:31:TYR:HE2	1.81	0.46
37:DL:115:GLU:OE1	37:DL:115:GLU:N	2.48	0.46
38:DM:35:ALA:C	38:DM:37:GLY:H	2.19	0.46
40:DH:40:THR:O	40:DH:42:LYS:N	2.48	0.46
42:DN:58:ASP:OD2	42:DN:63:ARG:NH2	2.49	0.46
46:DU:18:LYS:O	46:DU:20:LYS:N	2.48	0.46
46:DU:86:PHE:HD1	46:DU:88:ASP:H	1.60	0.46
47:DF:115:GLY:CA	47:DF:177:ARG:HD2	2.30	0.46
49:DR:23:GLU:O	49:DR:25:LEU:HD22	2.16	0.46
50:DT:38:ALA:HB1	50:DT:43:ILE:CD1	2.45	0.46
53:D6:64:ARG:N	53:D6:64:ARG:HD2	2.31	0.46
1:AA:95:C:O2	1:AA:95:C:H2'	2.16	0.46
1:AA:223:A:H2'	1:AA:224:U:C6	2.51	0.46
1:AA:311:C:O2'	1:AA:312:C:H5'	2.16	0.46
1:AA:505:G:H2'	1:AA:506:G:C8	2.50	0.46
1:AA:624:C:H2'	1:AA:625:U:H6	1.79	0.46
1:AA:803:G:H2'	1:AA:804:U:C6	2.51	0.46
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.16	0.46
1:AA:1074:G:C1'	20:AB:102:ASN:HB2	2.46	0.46
2:AC:11:LEU:HD11	13:AN:87:ALA:O	2.16	0.46
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:176:THR:HB	2:AC:179:ALA:HB2	1.96	0.46
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.98	0.46
7:AH:7:ALA:O	7:AH:11:THR:HG23	2.16	0.46
7:AH:74:ILE:HG23	7:AH:74:ILE:O	2.16	0.46
20:AB:22:TRP:CG	20:AB:23:ASN:N	2.82	0.46
20:AB:131:LYS:O	20:AB:135:MET:HB2	2.16	0.46
22:BA:27:C:C2'	22:BA:28:C:H5'	2.46	0.46
23:BB:558:U:O3'	41:BJ:111:LYS:HD3	2.15	0.46
23:BB:646:U:H3'	23:BB:647:G:H8	1.81	0.46
23:BB:685:A:H1'	23:BB:688:U:O4	2.16	0.46
23:BB:1309:G:OP1	36:B2:9:VAL:N	2.48	0.46
23:BB:1386:C:H1'	23:BB:1470:A:H1'	1.97	0.46
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.79	0.46
23:BB:1918:A:O2'	23:BB:1920:C:C4	2.68	0.46
23:BB:2213:U:O2	23:BB:2213:U:H2'	2.15	0.46
23:BB:2415:G:C4'	37:BL:66:PHE:HB2	2.45	0.46
23:BB:2466:C:OP1	32:B4:4:ARG:HB3	2.15	0.46
23:BB:2545:G:O2'	23:BB:2546:U:H5'	2.15	0.46
23:BB:2677:G:H2'	23:BB:2678:C:H6	1.79	0.46
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.50	0.46
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.16	0.46
28:BP:64:SER:O	28:BP:66:GLY:N	2.48	0.46
29:BE:102:ARG:HH21	29:BE:102:ARG:HG3	1.81	0.46
32:B4:16:ILE:HG12	32:B4:25:VAL:HG22	1.97	0.46
38:BM:54:THR:C	38:BM:56:ALA:H	2.20	0.46
40:BH:11:ASN:O	40:BH:12:LEU:HB3	2.15	0.46
40:BH:69:ALA:HA	40:BH:141:LYS:HZ2	1.81	0.46
40:BH:132:PHE:HB2	40:BH:142:VAL:CG2	2.45	0.46
43:BO:6:ALA:HB1	43:BO:10:ARG:HH11	1.81	0.46
46:BU:3:LYS:NZ	46:BU:82:VAL:HB	2.30	0.46
47:BF:111:ARG:HE	47:BF:135:ILE:HG22	1.81	0.46
47:BF:113:PHE:CZ	47:BF:175:PRO:HB2	2.51	0.46
47:BF:138:PRO:HA	47:BF:142:TYR:CE2	2.51	0.46
48:BG:112:VAL:O	48:BG:113:ASP:HB2	2.15	0.46
48:BG:163:TYR:O	48:BG:165:ASP:N	2.49	0.46
50:BT:15:HIS:O	50:BT:16:VAL:C	2.53	0.46
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.81	0.46
53:B6:52:LEU:HA	53:B6:55:ILE:CG2	2.46	0.46
1:CA:116:A:H2'	1:CA:117:G:O4'	2.16	0.46
1:CA:205:A:H2'	1:CA:206:C:O4'	2.16	0.46
1:CA:236:A:H2'	1:CA:237:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:448:A:H2'	1:CA:449:G:H8	1.80	0.46
1:CA:728:A:H2'	1:CA:729:A:C8	2.51	0.46
1:CA:803:G:H2'	1:CA:804:U:H6	1.80	0.46
1:CA:828:U:O2'	20:CB:24:PRO:HB3	2.16	0.46
2:CC:57:GLU:HB2	2:CC:64:ARG:HB2	1.97	0.46
2:CC:80:GLY:O	2:CC:84:GLU:HB2	2.16	0.46
5:CF:5:GLU:HA	5:CF:63:ASN:HA	1.98	0.46
7:CH:65:PHE:CE2	7:CH:66:GLN:HG3	2.51	0.46
8:CI:75:ALA:HA	8:CI:78:ILE:HD12	1.98	0.46
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.97	0.46
9:CJ:53:ILE:HG23	9:CJ:54:SER:N	2.31	0.46
9:CJ:76:ILE:O	9:CJ:76:ILE:HD12	2.16	0.46
12:CM:89:ARG:CB	12:CM:96:VAL:HG22	2.46	0.46
18:CS:44:ILE:HA	18:CS:61:VAL:CG1	2.46	0.46
22:DA:6:G:H2'	22:DA:7:G:C8	2.51	0.46
23:DB:26:G:H1'	23:DB:514:A:H61	1.81	0.46
23:DB:138:U:H2'	23:DB:140:C:O4'	2.16	0.46
23:DB:480:A:H3'	23:DB:481:G:H5"	1.98	0.46
23:DB:673:C:H4'	29:DE:77:ILE:HD11	1.96	0.46
23:DB:802:A:H4'	57:DB:3287:HOH:O	2.15	0.46
23:DB:858:G:H21	23:DB:2268:A:H3'	1.81	0.46
23:DB:1031:G:C4'	32:D4:6:SER:HB3	2.45	0.46
23:DB:1404:C:O2'	23:DB:1405:U:H5'	2.16	0.46
23:DB:1597:A:C5'	23:DB:1598:A:H5'	2.42	0.46
23:DB:1685:C:O2'	23:DB:1686:C:H5'	2.15	0.46
23:DB:1693:U:O2'	25:DC:13:ARG:NH2	2.49	0.46
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.16	0.46
23:DB:2693:G:H2'	23:DB:2694:G:H8	1.80	0.46
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.51	0.46
23:DB:2840:C:O2'	23:DB:2841:C:H5'	2.15	0.46
23:DB:2848:G:H1'	23:DB:2868:A:N6	2.31	0.46
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	1.97	0.46
25:DC:221:GLY:O	25:DC:223:ALA:N	2.49	0.46
26:DD:61:THR:O	26:DD:64:GLU:HB2	2.15	0.46
27:DK:29:HIS:O	27:DK:30:ARG:C	2.54	0.46
27:DK:107:LEU:C	27:DK:109:SER:H	2.18	0.46
28:DP:101:GLU:N	28:DP:101:GLU:OE2	2.48	0.46
35:DV:83:LYS:O	35:DV:85:LYS:N	2.49	0.46
37:DL:141:LYS:HZ3	37:DL:143:GLU:HA	1.81	0.46
38:DM:65:ILE:HG23	38:DM:103:TYR:CE2	2.51	0.46
39:DX:33:ALA:CB	50:DT:14:PRO:HD2	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:88:THR:HG22	41:DJ:91:GLU:OE1	2.16	0.46
46:DU:66:VAL:C	46:DU:68:ASN:H	2.19	0.46
47:DF:43:ILE:HB	47:DF:82:TYR:CZ	2.51	0.46
48:DG:88:LEU:HD12	48:DG:88:LEU:O	2.16	0.46
49:DR:39:LEU:CA	49:DR:53:PHE:HA	2.43	0.46
52:DW:47:GLY:HA3	52:DW:80:SER:CB	2.46	0.46
1:AA:386:C:C2'	1:AA:387:U:H5'	2.46	0.46
1:AA:559:A:H5'	57:AA:1807:HOH:O	2.16	0.46
1:AA:764:C:H2'	1:AA:765:G:C5'	2.46	0.46
1:AA:926:G:H3'	1:AA:1505:G:H21	1.80	0.46
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.79	0.46
1:AA:1269:A:H2	1:AA:1312:G:N3	2.13	0.46
2:AC:179:ALA:HB3	2:AC:181:ILE:HD11	1.97	0.46
2:AC:190:THR:CG2	2:AC:191:THR:N	2.78	0.46
3:AD:196:GLU:O	3:AD:200:VAL:HG13	2.16	0.46
5:AF:10:VAL:HG12	5:AF:11:HIS:N	2.31	0.46
11:AL:33:CYS:N	11:AL:54:VAL:HG13	2.30	0.46
18:AS:44:ILE:O	18:AS:44:ILE:HG23	2.16	0.46
23:BB:78:U:H2'	23:BB:79:C:C6	2.50	0.46
23:BB:437:U:H2'	23:BB:438:G:C8	2.50	0.46
23:BB:902:C:H2'	23:BB:903:C:H6	1.81	0.46
23:BB:1344:U:H4'	23:BB:1384:A:C5	2.51	0.46
23:BB:1535:A:O2'	23:BB:1536:C:H5'	2.16	0.46
23:BB:2000:C:O2'	23:BB:2001:C:H5'	2.16	0.46
23:BB:2028:U:O2'	23:BB:2029:G:H5'	2.15	0.46
23:BB:2345:G:H4'	23:BB:2346:A:O5'	2.16	0.46
23:BB:2563:U:H2'	23:BB:2565:A:OP2	2.16	0.46
23:BB:2611:C:O2'	23:BB:2612:C:H5'	2.15	0.46
23:BB:2886:A:H3'	23:BB:2887:A:C8	2.46	0.46
25:BC:244:VAL:HA	25:BC:249:VAL:O	2.16	0.46
26:BD:113:SER:HB3	26:BD:167:ASN:HA	1.97	0.46
26:BD:113:SER:HB3	26:BD:167:ASN:H	1.78	0.46
29:BE:122:GLU:O	29:BE:123:LYS:CB	2.62	0.46
29:BE:126:VAL:HG22	29:BE:127:GLU:H	1.80	0.46
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.36	0.46
40:BH:133:GLN:NE2	40:BH:135:HIS:O	2.49	0.46
43:BO:58:ILE:HG22	43:BO:62:LEU:CD2	2.40	0.46
46:BU:11:ILE:HD13	46:BU:11:ILE:O	2.16	0.46
46:BU:47:PRO:HB3	46:BU:55:GLY:CA	2.46	0.46
47:BF:100:GLU:O	47:BF:104:THR:HB	2.15	0.46
48:BG:38:ASP:CG	48:BG:39:ALA:N	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:77:GLY:HA3	48:BG:135:ALA:O	2.16	0.46
1:CA:378:G:H2'	1:CA:379:C:C6	2.51	0.46
1:CA:656:G:O2'	1:CA:657:U:H5'	2.16	0.46
1:CA:912:C:O2'	1:CA:913:A:H5'	2.16	0.46
1:CA:1037:C:H2'	1:CA:1038:C:H6	1.81	0.46
1:CA:1361:G:N2	1:CA:1362:A:N7	2.64	0.46
3:CD:43:ARG:HH11	3:CD:43:ARG:HB3	1.80	0.46
4:CE:80:LEU:CD1	4:CE:95:MET:HB3	2.46	0.46
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.16	0.46
8:CI:11:ARG:CZ	8:CI:106:ASP:OD1	2.64	0.46
8:CI:22:PRO:HA	8:CI:60:LEU:HB2	1.97	0.46
9:CJ:37:ARG:HA	9:CJ:37:ARG:CZ	2.46	0.46
10:CK:126:ARG:HA	10:CK:126:ARG:NE	2.30	0.46
13:CN:13:VAL:HG22	13:CN:59:GLN:HG2	1.97	0.46
16:CQ:31:PRO:O	16:CQ:32:ILE:HB	2.16	0.46
20:CB:57:ASN:HD22	20:CB:223:GLY:CA	2.29	0.46
22:DA:97:C:H2'	22:DA:98:G:H5'	1.98	0.46
23:DB:314:C:O2'	23:DB:315:G:H5'	2.16	0.46
23:DB:322:A:C2	23:DB:340:A:C6	3.03	0.46
23:DB:335:C:O2'	23:DB:336:C:H5'	2.16	0.46
23:DB:670:A:H4'	23:DB:671:C:C5'	2.37	0.46
23:DB:876:C:N3	23:DB:901:C:N4	2.63	0.46
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.16	0.46
23:DB:2313:C:H4'	47:DF:87:LYS:HB3	1.98	0.46
23:DB:2420:C:O2'	23:DB:2421:G:H5'	2.16	0.46
23:DB:2460:U:O2'	23:DB:2461:A:H5'	2.15	0.46
23:DB:2543:G:H2'	23:DB:2544:G:H8	1.79	0.46
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.16	0.46
25:DC:131:MET:CE	25:DC:189:ALA:HB2	2.46	0.46
27:DK:58:LEU:HD23	27:DK:58:LEU:H	1.81	0.46
35:DV:42:LEU:H	35:DV:42:LEU:CD2	2.21	0.46
37:DL:124:GLY:H	37:DL:143:GLU:HG3	1.75	0.46
38:DM:103:TYR:HB2	38:DM:117:PHE:CE1	2.51	0.46
40:DH:127:GLU:HA	40:DH:144:VAL:O	2.16	0.46
41:DJ:24:THR:O	41:DJ:25:LEU:HB3	2.16	0.46
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.88	0.46
45:DS:4:ILE:CG2	45:DS:106:VAL:HG22	2.46	0.46
46:DU:5:ARG:NH2	46:DU:93:ARG:HD3	2.31	0.46
47:DF:120:SER:OG	47:DF:129:MET:HB3	2.16	0.46
47:DF:137:PHE:N	47:DF:137:PHE:CD2	2.84	0.46
50:DT:57:VAL:HG22	50:DT:58:VAL:N	2.21	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:19:ARG:HD3	52:DW:36:ILE:HD11	1.98	0.46
53:D6:24:ASN:HB3	53:D6:121:TYR:CE1	2.51	0.46
1:AA:159:G:H5'	1:AA:160:A:OP2	2.16	0.45
3:AD:77:GLU:O	3:AD:81:LEU:HG	2.16	0.45
5:AF:98:GLU:CG	5:AF:99:ALA:N	2.74	0.45
7:AH:58:LEU:O	7:AH:60:LEU:N	2.48	0.45
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.25	0.45
20:AB:148:GLY:C	20:AB:150:ILE:H	2.19	0.45
20:AB:216:VAL:O	20:AB:220:VAL:HG23	2.16	0.45
23:BB:589:U:H2'	23:BB:590:A:H8	1.80	0.45
23:BB:591:U:O2'	23:BB:592:A:H5'	2.16	0.45
23:BB:720:U:O2'	23:BB:721:A:H5'	2.16	0.45
23:BB:970:U:H1'	23:BB:985:C:P	2.56	0.45
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.16	0.45
23:BB:1123:C:O2'	23:BB:1124:G:H5'	2.16	0.45
23:BB:1597:A:C5'	23:BB:1598:A:H5'	2.45	0.45
23:BB:1956:U:O2	23:BB:1985:C:H4'	2.16	0.45
23:BB:2886:A:H62	31:B0:39:ARG:CD	2.29	0.45
25:BC:75:ALA:CB	25:BC:93:VAL:HG22	2.46	0.45
25:BC:115:ILE:HA	25:BC:127:ASN:OD1	2.15	0.45
26:BD:15:PHE:CD1	26:BD:15:PHE:N	2.81	0.45
26:BD:16:THR:HG22	26:BD:17:GLU:H	1.80	0.45
26:BD:27:ILE:HG23	26:BD:201:LEU:HD12	1.98	0.45
27:BK:87:LEU:HB2	27:BK:93:GLN:C	2.36	0.45
29:BE:3:LEU:O	29:BE:12:LEU:HD23	2.16	0.45
33:B1:28:THR:O	33:B1:29:LYS:HD2	2.16	0.45
35:BV:1:MET:HE2	35:BV:2:PHE:H	1.80	0.45
35:BV:62:THR:CB	35:BV:71:LYS:HG2	2.44	0.45
38:BM:24:THR:HG23	38:BM:34:LYS:CE	2.46	0.45
38:BM:40:ARG:HB2	38:BM:93:VAL:HG21	1.99	0.45
39:BX:20:ASN:HD22	39:BX:20:ASN:H	1.63	0.45
48:BG:94:ARG:HH21	48:BG:104:LEU:HA	1.81	0.45
49:BR:2:TYR:HB2	49:BR:42:ALA:CB	2.46	0.45
53:B6:17:SER:O	53:B6:20:VAL:HB	2.16	0.45
1:CA:17:U:H4'	1:CA:1079:G:O2'	2.16	0.45
1:CA:821:G:O2'	1:CA:822:U:H5'	2.15	0.45
1:CA:1239:A:H4'	1:CA:1240:U:C5'	2.47	0.45
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.51	0.45
1:CA:1330:U:C2'	1:CA:1331:G:H5'	2.46	0.45
3:CD:169:TRP:CD1	3:CD:170:LEU:HD23	2.50	0.45
5:CF:3:HIS:ND1	5:CF:95:ALA:HB2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:4:TYR:CE2	5:CF:71:ILE:HG21	2.51	0.45
9:CJ:51:VAL:HG22	13:CN:80:ARG:HB2	1.98	0.45
13:CN:70:HIS:O	13:CN:71:GLY:C	2.54	0.45
15:CP:22:ALA:HA	15:CP:33:ILE:HG13	1.97	0.45
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.15	0.45
23:DB:173:A:H2'	23:DB:174:U:H6	1.81	0.45
23:DB:728:G:O2'	23:DB:730:A:H8	1.98	0.45
23:DB:921:C:H2'	23:DB:922:C:H6	1.80	0.45
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.37	0.45
23:DB:1360:G:H2'	23:DB:1361:G:O4'	2.17	0.45
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	1.97	0.45
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.51	0.45
23:DB:2081:U:H2'	23:DB:2082:A:C8	2.51	0.45
23:DB:2256:G:H2'	23:DB:2257:U:H6	1.81	0.45
23:DB:2449:U:H4'	23:DB:2450:A:OP1	2.16	0.45
23:DB:2843:G:O2'	23:DB:2844:G:H5'	2.15	0.45
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.28	0.45
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.16	0.45
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.32	0.45
27:DK:79:PHE:CD2	28:DP:69:VAL:HG12	2.51	0.45
29:DE:4:VAL:HG12	29:DE:6:LYS:H	1.81	0.45
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.16	0.45
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.16	0.45
33:D1:33:LEU:HD12	33:D1:34:GLU:N	2.32	0.45
35:DV:1:MET:CE	35:DV:2:PHE:H	2.29	0.45
37:DL:129:LYS:HA	37:DL:132:ARG:CD	2.46	0.45
41:DJ:25:LEU:HB2	41:DJ:62:VAL:CG2	2.46	0.45
41:DJ:96:ARG:CZ	41:DJ:99:ARG:HD2	2.45	0.45
41:DJ:98:GLU:CD	41:DJ:98:GLU:H	2.19	0.45
46:DU:26:ASN:ND2	46:DU:34:ILE:HD12	2.30	0.45
47:DF:3:LEU:HD11	47:DF:172:PHE:CD1	2.51	0.45
47:DF:74:ALA:HB3	47:DF:77:LYS:O	2.16	0.45
48:DG:60:GLY:O	48:DG:62:ALA:N	2.49	0.45
49:DR:1:MET:HG3	49:DR:101:ILE:HG21	1.98	0.45
53:D6:46:TYR:OH	53:D6:74:ASN:HB3	2.15	0.45
53:D6:111:ARG:O	53:D6:115:VAL:HG22	2.15	0.45
1:AA:264:C:H2'	1:AA:265:G:O4'	2.16	0.45
1:AA:389:A:H3'	1:AA:390:U:H6	1.81	0.45
1:AA:784:A:N6	1:AA:799:G:C6	2.84	0.45
1:AA:1120:C:O2'	1:AA:1121:U:H5'	2.16	0.45
1:AA:1426:G:O2'	1:AA:1427:C:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:184:ASN:HD22	2:AC:185:THR:H	1.64	0.45
3:AD:12:ARG:O	3:AD:37:PRO:HG3	2.16	0.45
3:AD:57:LYS:HD3	3:AD:57:LYS:C	2.37	0.45
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.44	0.45
8:AI:83:THR:OG1	8:AI:97:LEU:HD13	2.14	0.45
9:AJ:67:ILE:HA	13:AN:94:GLY:O	2.16	0.45
12:AM:109:LYS:HG3	12:AM:110:GLY:N	2.30	0.45
19:AT:85:LEU:HD23	19:AT:86:ALA:H	1.81	0.45
20:AB:27:LYS:C	20:AB:27:LYS:HD2	2.37	0.45
23:BB:528:A:H3'	23:BB:528:A:H8	1.81	0.45
23:BB:1041:G:H2'	23:BB:1042:G:C8	2.51	0.45
23:BB:1704:C:H2'	23:BB:1705:A:C8	2.52	0.45
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.51	0.45
23:BB:2308:G:O6	23:BB:2311:A:N7	2.49	0.45
23:BB:2626:C:H2'	23:BB:2627:G:C8	2.51	0.45
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.81	0.45
26:BD:9:VAL:O	26:BD:9:VAL:HG22	2.16	0.45
27:BK:29:HIS:O	27:BK:30:ARG:C	2.53	0.45
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	1.97	0.45
27:BK:109:SER:C	27:BK:111:LYS:H	2.19	0.45
34:B3:16:THR:HG21	34:B3:48:MET:CE	2.46	0.45
37:BL:111:ILE:HD13	37:BL:128:THR:HG23	1.97	0.45
37:BL:141:LYS:HD3	37:BL:141:LYS:C	2.36	0.45
38:BM:35:ALA:C	38:BM:37:GLY:H	2.20	0.45
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.16	0.45
42:BN:64:ARG:O	42:BN:67:PHE:HB3	2.16	0.45
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.69	0.45
48:BG:66:THR:O	48:BG:70:LEU:HB2	2.16	0.45
50:BT:40:LYS:HD3	50:BT:58:VAL:O	2.16	0.45
52:BW:49:ASN:HB2	52:BW:61:LYS:N	2.26	0.45
53:B6:140:LEU:HD23	53:B6:158:GLU:HG2	1.98	0.45
53:B6:184:LEU:O	53:B6:184:LEU:HD23	2.16	0.45
1:CA:366:A:O2'	1:CA:394:G:N2	2.48	0.45
1:CA:429:U:H3'	3:CD:8:LEU:CD2	2.41	0.45
1:CA:978:A:H5'	1:CA:1362:A:H61	1.77	0.45
1:CA:1299:A:C2'	1:CA:1301:U:H1'	2.43	0.45
1:CA:1499:A:H2'	1:CA:1500:A:H8	1.81	0.45
4:CE:82:HIS:CE1	4:CE:146:MET:HA	2.51	0.45
5:CF:16:GLU:CD	5:CF:16:GLU:N	2.68	0.45
7:CH:62:LEU:HB3	7:CH:64:TYR:CE1	2.52	0.45
9:CJ:21:ALA:O	9:CJ:25:ILE:HG13	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:60:PHE:O	10:CK:63:GLN:HB3	2.16	0.45
11:CL:33:CYS:N	11:CL:54:VAL:HG13	2.32	0.45
11:CL:42:LYS:HB2	11:CL:88:ASP:HA	1.98	0.45
11:CL:86:VAL:CG1	11:CL:89:LEU:HD23	2.46	0.45
13:CN:52:ARG:HD2	13:CN:58:ARG:HH21	1.80	0.45
16:CQ:60:ILE:HG12	16:CQ:72:TRP:HE3	1.80	0.45
18:CS:39:ILE:HG13	18:CS:68:HIS:O	2.16	0.45
19:CT:77:ASN:O	19:CT:81:GLN:HG3	2.16	0.45
20:CB:129:THR:O	20:CB:131:LYS:N	2.48	0.45
22:DA:28:C:C5	22:DA:56:G:C2	3.04	0.45
23:DB:131:A:H2'	23:DB:132:G:C8	2.52	0.45
23:DB:137:U:H1'	50:DT:1:MET:H2	1.80	0.45
23:DB:437:U:H2'	23:DB:438:G:C8	2.52	0.45
23:DB:506:G:H1'	23:DB:507:A:C8	2.50	0.45
23:DB:707:G:O2'	23:DB:708:G:H5'	2.16	0.45
23:DB:1059:G:H2'	23:DB:1060:U:C5	2.51	0.45
23:DB:1082:U:C2	23:DB:1086:A:N1	2.84	0.45
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.99	0.45
23:DB:1248:G:C5	29:DE:46:GLN:NE2	2.78	0.45
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.52	0.45
23:DB:1902:C:H2'	23:DB:1903:G:O4'	2.16	0.45
23:DB:1987:A:O2'	23:DB:1988:G:H5'	2.16	0.45
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.15	0.45
23:DB:2105:U:H2'	23:DB:2106:U:C6	2.50	0.45
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.81	0.45
23:DB:2408:U:O2'	23:DB:2409:G:H5'	2.16	0.45
23:DB:2523:G:O2'	23:DB:2524:G:H5'	2.15	0.45
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.16	0.45
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.31	0.45
25:DC:151:GLY:C	25:DC:152:GLN:HG3	2.37	0.45
26:DD:9:VAL:O	26:DD:9:VAL:HG22	2.16	0.45
29:DE:18:THR:HG22	29:DE:106:LYS:HE2	1.97	0.45
30:DY:6:ILE:HG21	30:DY:47:ILE:HD12	1.97	0.45
35:DV:32:GLY:C	35:DV:93:ARG:HG3	2.36	0.45
37:DL:77:ILE:HB	37:DL:109:LYS:O	2.17	0.45
37:DL:96:LYS:HE2	37:DL:102:GLY:O	2.16	0.45
40:DH:9:VAL:HB	40:DH:12:LEU:O	2.16	0.45
40:DH:30:LEU:O	40:DH:35:LYS:HB2	2.16	0.45
44:DQ:23:TYR:HB2	44:DQ:27:ARG:HB3	1.99	0.45
45:DS:27:LYS:H	45:DS:27:LYS:CD	2.28	0.45
45:DS:66:ILE:HG12	45:DS:67:ASP:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:4:ALA:HB3	48:DG:61:TRP:HZ3	1.80	0.45
50:DT:10:VAL:O	50:DT:11:LEU:C	2.54	0.45
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.80	0.45
53:D6:33:ALA:HB2	53:D6:63:PRO:HA	1.97	0.45
53:D6:181:GLN:O	53:D6:184:LEU:N	2.49	0.45
1:AA:54:C:H2'	1:AA:352:C:N4	2.32	0.45
1:AA:440:C:O2'	1:AA:441:A:H5'	2.15	0.45
1:AA:966:G:H2'	1:AA:967:C:C6	2.52	0.45
1:AA:1316:G:H8	1:AA:1316:G:OP2	2.00	0.45
1:AA:1491:G:N3	1:AA:1491:G:H2'	2.32	0.45
3:AD:7:LYS:O	3:AD:20:LEU:HD12	2.17	0.45
4:AE:29:ILE:O	4:AE:29:ILE:HG22	2.17	0.45
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.52	0.45
8:AI:22:PRO:HA	8:AI:60:LEU:HB2	1.97	0.45
9:AJ:10:LEU:HD11	9:AJ:25:ILE:CD1	2.46	0.45
9:AJ:83:THR:O	9:AJ:86:ALA:HB3	2.17	0.45
10:AK:89:GLY:O	10:AK:92:ARG:HB2	2.17	0.45
16:AQ:18:LYS:HG2	16:AQ:48:GLU:HA	1.98	0.45
17:AR:63:TYR:N	17:AR:63:TYR:HD2	2.14	0.45
20:AB:35:ASN:O	20:AB:37:VAL:HG12	2.17	0.45
20:AB:166:ASP:OD2	20:AB:190:SER:HA	2.17	0.45
21:AU:11:PHE:O	21:AU:11:PHE:CD1	2.69	0.45
23:BB:696:G:O2'	23:BB:697:G:H5'	2.16	0.45
23:BB:823:C:H2'	23:BB:824:U:C6	2.52	0.45
23:BB:1892:C:O2'	23:BB:1893:C:H5'	2.16	0.45
23:BB:2104:C:H2'	23:BB:2105:U:C6	2.52	0.45
23:BB:2247:A:H2'	23:BB:2248:C:H6	1.81	0.45
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.15	0.45
23:BB:2538:C:O2'	23:BB:2539:C:H5'	2.16	0.45
23:BB:2700:A:O2'	23:BB:2701:U:H5'	2.16	0.45
23:BB:2794:C:O2'	23:BB:2795:C:H5'	2.16	0.45
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.16	0.45
24:BI:63:ASP:C	24:BI:65:SER:H	2.19	0.45
25:BC:79:ARG:HD2	25:BC:81:GLU:HG3	1.98	0.45
28:BP:50:ARG:O	28:BP:51:ASN:HB2	2.16	0.45
29:BE:18:THR:HG22	29:BE:106:LYS:CE	2.47	0.45
29:BE:32:VAL:HG23	29:BE:33:VAL:N	2.32	0.45
40:BH:54:LEU:HA	40:BH:58:LEU:HB2	1.99	0.45
42:BN:38:LEU:HD11	42:BN:42:LYS:HD2	1.98	0.45
45:BS:13:SER:CB	45:BS:16:LYS:HE3	2.46	0.45
50:BT:11:LEU:CD2	50:BT:46:ALA:HB1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:45:ALA:HA	50:BT:48:GLN:HB2	1.98	0.45
52:BW:54:ARG:C	52:BW:56:HIS:H	2.20	0.45
1:CA:33:A:O2'	1:CA:34:C:H5'	2.16	0.45
1:CA:102:G:H2'	1:CA:103:U:H6	1.81	0.45
1:CA:167:A:O2'	1:CA:168:G:H5'	2.16	0.45
1:CA:264:C:H4'	16:CQ:64:ARG:HD2	1.98	0.45
1:CA:723:U:O4'	21:CU:48:LYS:HD3	2.16	0.45
1:CA:1009:U:O2	1:CA:1009:U:H2'	2.15	0.45
1:CA:1091:U:H5"	6:CG:3:ARG:NH2	2.32	0.45
1:CA:1216:A:O2'	1:CA:1217:C:H5'	2.17	0.45
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.81	0.45
1:CA:1294:G:H2'	1:CA:1295:U:C6	2.51	0.45
1:CA:1426:G:H2'	1:CA:1427:C:H6	1.80	0.45
2:CC:112:ALA:HB1	2:CC:184:ASN:HB2	1.99	0.45
2:CC:180:ASP:OD1	2:CC:203:LYS:HB2	2.16	0.45
4:CE:17:VAL:HA	4:CE:33:THR:O	2.16	0.45
5:CF:61:LEU:HD12	5:CF:63:ASN:OD1	2.17	0.45
8:CI:38:PHE:HB3	8:CI:43:ALA:HB3	1.98	0.45
11:CL:13:ARG:HB2	11:CL:14:LYS:H	1.44	0.45
11:CL:20:VAL:HB	11:CL:94:TYR:CE1	2.51	0.45
15:CP:45:GLU:C	15:CP:47:GLU:H	2.20	0.45
20:CB:148:GLY:C	20:CB:150:ILE:H	2.19	0.45
23:DB:250:G:H2'	23:DB:251:A:C8	2.50	0.45
23:DB:355:U:H2'	23:DB:356:G:H8	1.80	0.45
23:DB:584:C:H2'	23:DB:585:G:C8	2.52	0.45
23:DB:1169:A:H2'	23:DB:1170:C:C6	2.50	0.45
23:DB:1349:C:H2'	23:DB:1350:C:C6	2.50	0.45
23:DB:1509:A:H5"	23:DB:1509:A:C8	2.51	0.45
23:DB:1708:C:H2'	23:DB:1709:U:C6	2.51	0.45
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.49	0.45
23:DB:2247:A:H3'	57:DB:3578:HOH:O	2.16	0.45
23:DB:2559:C:O2'	23:DB:2560:A:H5'	2.17	0.45
23:DB:2667:C:H2'	23:DB:2668:G:O4'	2.16	0.45
23:DB:2867:G:HO2'	23:DB:2868:A:H8	1.63	0.45
29:DE:18:THR:HG22	29:DE:106:LYS:CE	2.46	0.45
29:DE:61:ARG:HH12	29:DE:64:GLY:HA3	1.82	0.45
37:DL:23:ILE:HG13	49:DR:82:HIS:CE1	2.51	0.45
38:DM:24:THR:HG23	38:DM:34:LYS:CE	2.45	0.45
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.30	0.45
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.80	0.45
43:DO:34:HIS:HB3	43:DO:36:TYR:CE2	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:52:SER:C	43:DO:54:VAL:H	2.19	0.45
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.16	0.45
47:DF:113:PHE:CE1	47:DF:116:LEU:HB2	2.51	0.45
52:DW:27:GLY:O	52:DW:63:ASP:HA	2.16	0.45
52:DW:65:LYS:HG3	52:DW:84:GLU:CB	2.42	0.45
1:AA:342:C:O2'	1:AA:343:U:H5'	2.16	0.45
1:AA:714:G:H2'	1:AA:715:A:C8	2.52	0.45
1:AA:775:G:O2'	1:AA:776:G:H5'	2.16	0.45
1:AA:865:A:H2	1:AA:918:A:H4'	1.80	0.45
2:AC:13:ILE:O	2:AC:15:LYS:N	2.49	0.45
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.17	0.45
12:AM:63:VAL:HB	12:AM:68:LEU:HD21	1.97	0.45
20:AB:110:ILE:O	20:AB:113:LEU:HB3	2.17	0.45
22:BA:53:A:O2'	22:BA:54:G:H5'	2.15	0.45
23:BB:61:C:O2'	23:BB:62:U:H5'	2.17	0.45
23:BB:192:C:C2'	23:BB:193:U:H5'	2.45	0.45
23:BB:526:A:N6	23:BB:2626:C:C4'	2.77	0.45
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.98	0.45
23:BB:769:U:H2'	23:BB:770:G:C8	2.51	0.45
23:BB:921:C:H2'	23:BB:922:C:C6	2.51	0.45
23:BB:927:A:H2'	23:BB:928:A:C8	2.51	0.45
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.51	0.45
23:BB:1301:A:O2'	23:BB:1302:A:H2'	2.15	0.45
23:BB:1499:C:O2'	23:BB:1500:G:H5'	2.16	0.45
23:BB:1751:U:H2'	23:BB:1752:C:C5	2.52	0.45
23:BB:1843:C:H5'	25:BC:250:GLN:HE21	1.80	0.45
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.81	0.45
23:BB:2152:G:H2'	23:BB:2152:G:N3	2.32	0.45
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.38	0.45
23:BB:2555:U:H2'	23:BB:2556:C:O4'	2.17	0.45
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.79	0.45
31:B0:8:THR:HG23	31:B0:10:SER:HB3	1.99	0.45
31:B0:38:LEU:HD13	31:B0:41:HIS:NE2	2.31	0.45
33:B1:33:LEU:HD12	33:B1:34:GLU:H	1.80	0.45
35:BV:46:LYS:HD2	35:BV:46:LYS:N	2.31	0.45
35:BV:83:LYS:O	35:BV:85:LYS:N	2.49	0.45
36:B2:22:MET:SD	36:B2:28:ARG:HG2	2.56	0.45
39:BX:28:LEU:HB3	39:BX:43:LEU:CD2	2.47	0.45
45:BS:12:SER:O	45:BS:13:SER:HB3	2.17	0.45
46:BU:5:ARG:NH2	46:BU:93:ARG:HD3	2.30	0.45
47:BF:56:LEU:HD22	47:BF:59:ILE:HD12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:78:ILE:HA	47:BF:79:ARG:HE	1.80	0.45
47:BF:113:PHE:CE1	47:BF:116:LEU:HB2	2.51	0.45
48:BG:29:ASN:HD21	48:BG:81:GLY:HA2	1.79	0.45
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.31	0.45
48:BG:144:ALA:O	48:BG:147:LEU:HB2	2.17	0.45
52:BW:49:ASN:C	52:BW:50:VAL:HG22	2.37	0.45
53:B6:30:THR:H	53:B6:37:LEU:HD21	1.81	0.45
53:B6:167:GLU:O	53:B6:170:ALA:HB3	2.16	0.45
1:CA:37:U:H2'	1:CA:38:G:C8	2.51	0.45
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.17	0.45
1:CA:1007:U:H2'	1:CA:1008:U:H6	1.78	0.45
1:CA:1426:G:H2'	1:CA:1427:C:C6	2.50	0.45
2:CC:148:ILE:HA	2:CC:200:TRP:O	2.16	0.45
7:CH:49:LYS:HG3	7:CH:50:VAL:N	2.31	0.45
7:CH:87:ARG:H	7:CH:90:GLU:CB	2.29	0.45
8:CI:20:ILE:CD1	8:CI:85:ALA:HB3	2.44	0.45
8:CI:119:LYS:C	8:CI:121:ARG:H	2.20	0.45
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HG13	1.99	0.45
18:CS:11:ASP:H	18:CS:14:LEU:HD21	1.81	0.45
19:CT:43:LYS:HB3	19:CT:85:LEU:HD21	1.98	0.45
20:CB:128:LEU:HD12	20:CB:132:GLU:HB2	1.98	0.45
20:CB:212:TYR:HA	20:CB:215:ALA:HB3	1.98	0.45
23:DB:153:U:O2'	23:DB:154:U:H5'	2.16	0.45
23:DB:742:A:O2'	23:DB:743:A:H5'	2.17	0.45
23:DB:853:C:H2'	23:DB:854:C:C6	2.51	0.45
23:DB:900:A:C2'	23:DB:901:C:H5'	2.46	0.45
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.16	0.45
23:DB:1175:A:N3	23:DB:1175:A:C2'	2.80	0.45
23:DB:1370:C:H2'	23:DB:1371:G:C8	2.52	0.45
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.52	0.45
23:DB:1689:A:H2'	23:DB:1690:A:H8	1.81	0.45
23:DB:2057:G:H2'	23:DB:2058:A:O4'	2.16	0.45
23:DB:2108:A:H5'	23:DB:2150:C:O2'	2.17	0.45
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.51	0.45
23:DB:2249:U:N3	23:DB:2253:G:OP2	2.49	0.45
24:DI:70:THR:O	24:DI:70:THR:HG23	2.16	0.45
27:DK:7:MET:SD	27:DK:20:MET:HB2	2.56	0.45
34:D3:61:LEU:HB2	34:D3:64:ALA:HB2	1.98	0.45
40:DH:14:SER:CB	40:DH:17:ASP:HB2	2.41	0.45
40:DH:46:PHE:HA	40:DH:50:ARG:NH2	2.26	0.45
41:DJ:45:THR:O	41:DJ:45:THR:HG23	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:110:PRO:HB2	41:DJ:111:LYS:CE	2.46	0.45
42:DN:2:ARG:HH11	42:DN:2:ARG:HG2	1.81	0.45
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.98	0.45
47:DF:11:VAL:O	47:DF:12:VAL:HB	2.16	0.45
47:DF:29:ARG:HD3	47:DF:29:ARG:H	1.81	0.45
47:DF:43:ILE:O	47:DF:46:LYS:HE2	2.16	0.45
49:DR:79:ARG:C	49:DR:81:LYS:H	2.20	0.45
51:DZ:66:THR:O	51:DZ:70:GLU:HG3	2.17	0.45
1:AA:338:A:H2'	1:AA:339:C:C6	2.51	0.45
1:AA:421:U:H5'	1:AA:422:C:C5	2.51	0.45
1:AA:763:G:H2'	1:AA:764:C:H6	1.81	0.45
1:AA:829:G:H4'	20:AB:24:PRO:HG3	1.97	0.45
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.98	0.45
2:AC:87:ARG:HH21	2:AC:88:LYS:HA	1.81	0.45
2:AC:91:ALA:O	2:AC:95:GLY:N	2.49	0.45
6:AG:10:LYS:HA	6:AG:10:LYS:HZ1	1.81	0.45
7:AH:86:LYS:HB3	7:AH:90:GLU:HG2	1.99	0.45
8:AI:45:MET:SD	8:AI:45:MET:N	2.89	0.45
8:AI:126:PHE:O	8:AI:128:LYS:N	2.49	0.45
10:AK:82:GLU:HG2	10:AK:108:ASN:HB2	1.99	0.45
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.30	0.45
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.99	0.45
12:AM:95:PRO:HB2	12:AM:99:GLN:CD	2.37	0.45
15:AP:67:ILE:HD11	15:AP:71:VAL:HG22	1.99	0.45
19:AT:77:ASN:O	19:AT:81:GLN:HG3	2.16	0.45
20:AB:62:ARG:HH11	20:AB:62:ARG:HG3	1.81	0.45
20:AB:67:LEU:HA	20:AB:89:PHE:O	2.15	0.45
23:BB:142:A:O2'	23:BB:143:C:H5'	2.16	0.45
23:BB:370:G:O2'	23:BB:423:A:H3'	2.15	0.45
23:BB:459:U:O2'	23:BB:460:A:H5'	2.17	0.45
23:BB:592:A:H2'	23:BB:593:U:H6	1.80	0.45
23:BB:729:G:C8	25:BC:206:LYS:HE3	2.52	0.45
23:BB:797:G:H2'	23:BB:798:G:H8	1.82	0.45
23:BB:828:U:H2'	23:BB:829:A:C8	2.51	0.45
23:BB:955:U:H5"	38:BM:86:LYS:CD	2.45	0.45
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.82	0.45
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.51	0.45
23:BB:2523:G:O2'	23:BB:2524:G:H5'	2.17	0.45
23:BB:2534:A:C2	23:BB:2535:G:H1'	2.51	0.45
23:BB:2588:G:H2'	23:BB:2589:A:O4'	2.17	0.45
23:BB:2597:G:OP1	25:BC:240:GLY:HA3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.15	0.45
26:BD:92:VAL:O	26:BD:94:GLN:N	2.49	0.45
28:BP:24:THR:C	28:BP:25:VAL:HG13	2.36	0.45
35:BV:72:VAL:CG1	35:BV:93:ARG:HA	2.47	0.45
36:B2:21:ARG:C	36:B2:23:ALA:H	2.19	0.45
37:BL:85:VAL:HG22	37:BL:94:THR:CG2	2.47	0.45
38:BM:134:THR:HG22	38:BM:136:MET:H	1.80	0.45
41:BJ:9:GLU:CD	41:BJ:9:GLU:H	2.19	0.45
43:BO:27:VAL:HG12	43:BO:28:VAL:N	2.32	0.45
43:BO:55:GLU:HB2	43:BO:58:ILE:HD12	1.99	0.45
44:BQ:29:ARG:O	44:BQ:30:VAL:HB	2.17	0.45
46:BU:85:ARG:NH1	46:BU:86:PHE:H	2.13	0.45
48:BG:47:ASN:CG	48:BG:48:THR:N	2.70	0.45
48:BG:125:PRO:HB2	48:BG:129:GLU:OE2	2.16	0.45
52:BW:39:GLN:CG	52:BW:40:ARG:N	2.71	0.45
53:B6:32:ARG:NE	53:B6:37:LEU:HD23	2.09	0.45
1:CA:421:U:H5'	1:CA:422:C:C5	2.51	0.45
1:CA:600:A:O2'	1:CA:601:G:H5'	2.17	0.45
1:CA:719:C:H2'	17:CR:38:ILE:HD13	1.98	0.45
1:CA:900:A:H2'	1:CA:901:A:C8	2.50	0.45
1:CA:906:A:C2'	1:CA:907:A:H5"	2.46	0.45
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.80	0.45
3:CD:84:ASN:ND2	3:CD:84:ASN:C	2.69	0.45
6:CG:57:GLU:O	6:CG:61:PHE:N	2.47	0.45
12:CM:3:ILE:HA	12:CM:56:ARG:CG	2.41	0.45
16:CQ:25:GLU:HA	16:CQ:39:ARG:O	2.17	0.45
22:DA:8:C:O2'	43:DO:40:ILE:HD13	2.17	0.45
23:DB:553:G:H2'	23:DB:554:U:O4'	2.17	0.45
23:DB:610:C:O2'	23:DB:611:C:H5'	2.17	0.45
23:DB:841:G:O2'	23:DB:842:U:H5'	2.17	0.45
23:DB:921:C:H2'	23:DB:922:C:C6	2.52	0.45
23:DB:1064:C:H5'	24:DI:88:GLY:HA3	1.99	0.45
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.46	0.45
23:DB:1161:C:H4'	49:DR:8:GLY:O	2.17	0.45
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.52	0.45
23:DB:1952:A:N3	27:DK:22:ILE:HD12	2.32	0.45
23:DB:2208:C:H2'	23:DB:2209:G:C8	2.51	0.45
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.16	0.45
23:DB:2508:G:O2'	23:DB:2509:G:H5'	2.16	0.45
23:DB:2509:G:O2'	23:DB:2510:C:H5'	2.17	0.45
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:170:TYR:CE2	25:DC:184:GLU:HA	2.52	0.45
25:DC:207:ALA:O	25:DC:208:GLY:C	2.55	0.45
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.16	0.45
27:DK:109:SER:C	27:DK:111:LYS:H	2.20	0.45
35:DV:93:ARG:HG3	35:DV:93:ARG:HH11	1.82	0.45
38:DM:21:ALA:HB3	38:DM:99:GLY:O	2.16	0.45
40:DH:93:SER:C	40:DH:94:ILE:HD12	2.37	0.45
44:DQ:42:GLY:HA3	49:DR:75:VAL:HG21	1.99	0.45
44:DQ:59:LEU:HD13	44:DQ:59:LEU:C	2.37	0.45
45:DS:13:SER:CB	45:DS:16:LYS:HE3	2.46	0.45
47:DF:32:LYS:HA	47:DF:95:MET:CG	2.44	0.45
48:DG:39:ALA:HB1	48:DG:57:TYR:CG	2.50	0.45
49:DR:58:VAL:O	49:DR:58:VAL:HG13	2.17	0.45
1:AA:9:G:H5'	4:AE:107:GLY:CA	2.43	0.45
1:AA:191:G:H2'	1:AA:192:A:H8	1.80	0.45
1:AA:236:A:H2'	1:AA:237:G:C8	2.52	0.45
1:AA:244:U:O4	1:AA:906:A:H1'	2.16	0.45
1:AA:373:A:H1'	1:AA:481:G:H1'	1.98	0.45
1:AA:430:A:P	3:AD:6:PRO:HA	2.56	0.45
1:AA:922:G:N3	1:AA:1398:A:H2	2.13	0.45
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.16	0.45
3:AD:173:ASP:OD1	3:AD:176:LYS:HD3	2.16	0.45
5:AF:96:VAL:HG12	5:AF:97:THR:H	1.81	0.45
8:AI:10:ARG:HA	8:AI:77:ALA:HB1	1.99	0.45
13:AN:70:HIS:O	13:AN:71:GLY:C	2.53	0.45
14:AO:43:PHE:CD1	14:AO:56:LEU:HD22	2.51	0.45
15:AP:8:ARG:CZ	15:AP:15:PRO:HB3	2.47	0.45
16:AQ:16:MET:HB3	16:AQ:19:SER:HB2	1.95	0.45
16:AQ:45:VAL:HA	16:AQ:72:TRP:O	2.17	0.45
18:AS:39:ILE:HG13	18:AS:68:HIS:O	2.16	0.45
19:AT:49:ALA:HA	19:AT:52:GLU:OE2	2.17	0.45
21:AU:10:PRO:HB2	2:CC:71:ARG:NE	2.31	0.45
23:BB:490:C:H3'	23:BB:491:G:H5"	1.99	0.45
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.80	0.45
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.51	0.45
23:BB:1930:G:H22	23:BB:1969:A:P	2.39	0.45
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.17	0.45
23:BB:2150:C:H2'	23:BB:2151:U:C6	2.52	0.45
23:BB:2368:C:H2'	23:BB:2369:A:H8	1.81	0.45
23:BB:2397:G:H2'	23:BB:2398:U:H6	1.82	0.45
23:BB:2737:G:H2'	23:BB:2738:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2755:C:H6	23:BB:2755:C:O5'	1.99	0.45
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.31	0.45
25:BC:20:ASN:HB3	25:BC:23:LEU:HD22	1.98	0.45
25:BC:43:ASN:CG	25:BC:44:ASN:H	2.20	0.45
26:BD:48:ILE:HG23	26:BD:82:PHE:HB2	1.98	0.45
30:BY:25:GLY:HA3	30:BY:46:MET:HE3	1.99	0.45
38:BM:66:ARG:HE	38:BM:101:VAL:HG21	1.82	0.45
41:BJ:3:THR:HB	41:BJ:44:TYR:OH	2.17	0.45
41:BJ:110:PRO:HB2	41:BJ:111:LYS:CE	2.47	0.45
43:BO:100:HIS:CA	43:BO:104:GLN:HB2	2.47	0.45
44:BQ:107:ALA:HB1	49:BR:48:LYS:CE	2.46	0.45
45:BS:74:ILE:O	45:BS:75:PHE:HB3	2.16	0.45
47:BF:106:ALA:N	47:BF:108:PRO:HD2	2.32	0.45
49:BR:1:MET:HG3	49:BR:101:ILE:HG21	1.98	0.45
49:BR:79:ARG:C	49:BR:81:LYS:H	2.19	0.45
50:BT:31:VAL:HA	50:BT:84:TYR:H	1.81	0.45
52:BW:28:GLU:HG3	52:BW:29:SER:H	1.82	0.45
1:CA:224:U:H2'	1:CA:225:C:C6	2.51	0.45
1:CA:276:G:O2'	1:CA:277:C:H5'	2.17	0.45
1:CA:355:C:O2'	1:CA:356:A:H5'	2.16	0.45
1:CA:708:C:O2'	1:CA:709:U:H5'	2.16	0.45
3:CD:25:ARG:O	3:CD:26:ALA:HB3	2.16	0.45
4:CE:37:VAL:HG11	4:CE:113:VAL:CG1	2.38	0.45
8:CI:56:MET:CG	8:CI:57:VAL:N	2.79	0.45
10:CK:36:ARG:HH11	10:CK:36:ARG:HG3	1.82	0.45
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.16	0.45
14:CO:68:ASP:O	14:CO:72:ARG:HG3	2.17	0.45
20:CB:86:CYS:HB3	20:CB:88:GLN:CD	2.37	0.45
23:DB:26:G:H2'	23:DB:27:G:C1'	2.47	0.45
23:DB:397:U:H2'	23:DB:398:C:C6	2.52	0.45
23:DB:523:C:O2'	23:DB:524:G:H5'	2.17	0.45
23:DB:526:A:N6	23:DB:2626:C:C4'	2.80	0.45
23:DB:533:G:H5'	44:DQ:23:TYR:CD2	2.52	0.45
23:DB:639:U:H2'	23:DB:640:C:C6	2.52	0.45
23:DB:719:C:O2'	23:DB:720:U:H5'	2.16	0.45
23:DB:978:G:O2'	23:DB:979:A:H5'	2.16	0.45
23:DB:1025:G:OP1	23:DB:1025:G:H8	2.00	0.45
23:DB:1222:U:P	49:DR:90:ARG:HH12	2.40	0.45
23:DB:1445:G:O2'	23:DB:1446:C:H5'	2.16	0.45
23:DB:1465:G:H2'	23:DB:1466:U:O4'	2.16	0.45
23:DB:1561:C:H2'	23:DB:1562:U:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1562:U:H2'	23:DB:1563:U:H6	1.81	0.45
23:DB:2311:A:O4'	47:DF:76:PHE:HE2	1.99	0.45
23:DB:2590:A:O2'	23:DB:2591:C:H5'	2.17	0.45
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.15	0.45
25:DC:18:VAL:CG1	25:DC:202:ARG:HD2	2.47	0.45
25:DC:159:THR:O	25:DC:160:TYR:HB3	2.17	0.45
26:DD:109:VAL:HG11	26:DD:193:VAL:CG1	2.46	0.45
35:DV:77:VAL:HG12	38:DM:136:MET:CE	2.47	0.45
40:DH:68:ARG:NH2	40:DH:71:LYS:HD3	2.32	0.45
42:DN:61:ALA:C	42:DN:63:ARG:N	2.70	0.45
42:DN:81:ASN:O	42:DN:85:PRO:HD2	2.17	0.45
46:DU:41:VAL:HG22	46:DU:60:LYS:O	2.17	0.45
47:DF:169:LEU:HB3	47:DF:174:PHE:CD1	2.52	0.45
48:DG:38:ASP:CG	48:DG:39:ALA:N	2.70	0.45
48:DG:77:GLY:HA3	48:DG:135:ALA:O	2.16	0.45
49:DR:39:LEU:CA	49:DR:49:ILE:HG12	2.46	0.45
53:D6:1:MET:HB3	53:D6:143:LEU:CD2	2.42	0.45
1:AA:591:U:OP2	7:AH:30:LYS:HD2	2.16	0.45
1:AA:719:C:H2'	17:AR:38:ILE:HD11	1.99	0.45
1:AA:729:A:H2'	1:AA:730:G:H8	1.81	0.45
1:AA:833:G:H2'	1:AA:834:U:H6	1.80	0.45
1:AA:900:A:H2'	1:AA:901:A:C8	2.51	0.45
1:AA:984:C:O2'	1:AA:985:C:H5'	2.17	0.45
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.17	0.45
3:AD:122:ILE:HG22	3:AD:123:MET:H	1.82	0.45
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.50	0.45
7:AH:34:ALA:HB1	7:AH:109:VAL:HB	1.99	0.45
7:AH:65:PHE:CE2	7:AH:66:GLN:HG3	2.51	0.45
12:AM:2:ARG:O	12:AM:4:ALA:N	2.50	0.45
12:AM:5:GLY:O	12:AM:7:ASN:N	2.48	0.45
12:AM:103:THR:HG22	12:AM:104:ASN:OD1	2.17	0.45
13:AN:78:LEU:HD23	13:AN:82:LYS:CB	2.46	0.45
14:AO:25:THR:CG2	14:AO:70:LEU:HD23	2.47	0.45
16:AQ:60:ILE:HG12	16:AQ:72:TRP:HE3	1.81	0.45
20:AB:71:THR:HG23	20:AB:94:ARG:N	2.32	0.45
22:BA:42:C:C6	47:BF:65:LEU:HD13	2.51	0.45
23:BB:62:U:H2'	23:BB:63:A:H5'	1.96	0.45
23:BB:154:U:H2'	23:BB:155:A:H8	1.81	0.45
23:BB:380:G:O2'	23:BB:381:G:H5'	2.16	0.45
23:BB:728:G:O2'	23:BB:730:A:H8	2.00	0.45
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1445:G:H2'	23:BB:1446:C:H6	1.80	0.45
23:BB:1794:A:O2'	23:BB:1795:C:H5'	2.17	0.45
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.81	0.45
23:BB:1958:C:H2'	23:BB:1959:G:H8	1.80	0.45
23:BB:2150:C:H2'	23:BB:2151:U:O4'	2.17	0.45
23:BB:2197:U:H1'	23:BB:2198:A:C8	2.52	0.45
23:BB:2331:G:N2	23:BB:2336:A:H8	2.07	0.45
23:BB:2842:G:O2'	23:BB:2843:G:H5'	2.17	0.45
55:BB:3111:PAR:H322	55:BB:3111:PAR:H51	1.81	0.45
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.21	0.45
26:BD:90:PHE:O	26:BD:91:THR:C	2.54	0.45
29:BE:73:ILE:O	29:BE:73:ILE:HG12	2.17	0.45
31:B0:48:TYR:O	31:B0:50:GLY:N	2.50	0.45
37:BL:77:ILE:HB	37:BL:109:LYS:O	2.16	0.45
41:BJ:54:ILE:HD12	41:BJ:55:ILE:H	1.81	0.45
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	1.99	0.45
47:BF:106:ALA:HA	47:BF:135:ILE:HD11	1.99	0.45
47:BF:107:VAL:HB	47:BF:108:PRO:HD3	1.99	0.45
48:BG:26:LYS:HB2	48:BG:32:LEU:HG	1.98	0.45
53:B6:10:THR:HG22	53:B6:14:MET:HE2	1.98	0.45
1:CA:594:U:H2'	1:CA:595:A:C8	2.52	0.45
1:CA:652:U:H1'	1:CA:653:U:C5	2.52	0.45
1:CA:677:U:H3	1:CA:713:G:H22	1.64	0.45
1:CA:755:G:H2'	1:CA:756:C:C6	2.52	0.45
1:CA:755:G:H2'	1:CA:756:C:H6	1.82	0.45
1:CA:805:C:O2'	1:CA:806:C:H5'	2.16	0.45
1:CA:1054:C:O2'	1:CA:1055:A:H5"	2.16	0.45
1:CA:1241:G:O2'	1:CA:1242:G:H5'	2.17	0.45
1:CA:1253:G:N1	1:CA:1285:A:N6	2.65	0.45
1:CA:1432:G:H8	1:CA:1432:G:H5"	1.82	0.45
6:CG:70:PRO:HA	6:CG:141:HIS:CE1	2.52	0.45
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.31	0.45
9:CJ:15:HIS:O	9:CJ:18:ILE:HG22	2.17	0.45
10:CK:126:ARG:HA	10:CK:126:ARG:HE	1.82	0.45
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.98	0.45
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.31	0.45
16:CQ:18:LYS:HG2	16:CQ:48:GLU:HA	1.99	0.45
22:DA:54:G:H21	47:DF:25:MET:CE	2.30	0.45
22:DA:94:A:H2'	22:DA:95:U:O4'	2.17	0.45
23:DB:88:G:C2'	23:DB:89:A:H5'	2.46	0.45
23:DB:1212:G:H1'	23:DB:1236:G:N2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2047:C:H2'	23:DB:2048:G:C8	2.52	0.45
23:DB:2276:G:O2'	23:DB:2277:G:H5'	2.17	0.45
23:DB:2352:A:N1	52:DW:30:VAL:HG11	2.32	0.45
23:DB:2578:G:O2'	23:DB:2579:C:H5'	2.17	0.45
23:DB:2714:G:O2'	23:DB:2715:C:H5'	2.16	0.45
24:DI:128:ILE:HA	24:DI:131:THR:CG2	2.45	0.45
25:DC:90:ILE:HD11	25:DC:102:TYR:HB3	1.99	0.45
25:DC:188:ARG:HG2	25:DC:188:ARG:NH2	2.31	0.45
26:DD:25:THR:O	26:DD:189:VAL:HG22	2.17	0.45
26:DD:27:ILE:HG23	26:DD:201:LEU:HD12	1.98	0.45
27:DK:24:VAL:CG1	27:DK:33:ALA:HB2	2.46	0.45
29:DE:29:HIS:CE1	37:DL:8:PRO:HG3	2.52	0.45
29:DE:58:LYS:HD3	29:DE:58:LYS:N	2.32	0.45
29:DE:59:PRO:CB	29:DE:67:ARG:HH22	2.19	0.45
29:DE:126:VAL:HG22	29:DE:133:LEU:HD12	1.99	0.45
37:DL:10:GLU:OE2	37:DL:10:GLU:HA	2.15	0.45
37:DL:79:LEU:HB2	37:DL:113:ALA:N	2.23	0.45
38:DM:66:ARG:HE	38:DM:101:VAL:HG21	1.81	0.45
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.17	0.45
40:DH:5:LEU:C	40:DH:6:LEU:HD12	2.36	0.45
40:DH:126:GLY:O	40:DH:146:VAL:HG23	2.17	0.45
42:DN:101:GLY:CA	42:DN:109:PRO:HA	2.47	0.45
43:DO:26:LEU:HA	43:DO:39:VAL:HA	1.98	0.45
44:DQ:111:LYS:HZ2	49:DR:48:LYS:HD2	1.82	0.45
47:DF:78:ILE:HA	47:DF:79:ARG:HH11	1.82	0.45
47:DF:103:ILE:HD11	47:DF:174:PHE:CD1	2.52	0.45
47:DF:131:VAL:O	47:DF:133:GLU:N	2.47	0.45
1:AA:82:G:OP2	1:AA:83:C:H6	1.99	0.45
1:AA:204:G:H1'	1:AA:466:A:H62	1.82	0.45
1:AA:358:U:H2'	1:AA:359:G:H8	1.80	0.45
1:AA:584:G:O2'	1:AA:585:G:H5'	2.17	0.45
1:AA:676:A:H1'	10:AK:116:PRO:HB3	1.99	0.45
1:AA:970:C:N4	8:AI:128:LYS:HG2	2.32	0.45
1:AA:975:A:H5"	1:AA:976:G:O5'	2.17	0.45
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.82	0.45
1:AA:1384:C:O2'	1:AA:1385:G:H5'	2.16	0.45
2:AC:182:ASP:HB2	2:AC:203:LYS:HE2	1.98	0.45
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.57	0.45
4:AE:17:VAL:HA	4:AE:33:THR:O	2.17	0.45
4:AE:28:ARG:NH2	4:AE:30:PHE:HB3	2.32	0.45
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:30:LYS:HG3	12:AM:40:GLU:OE1	2.17	0.45
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.32	0.45
16:AQ:3:LYS:HG2	16:AQ:4:ILE:H	1.81	0.45
20:AB:212:TYR:O	20:AB:216:VAL:HG22	2.17	0.45
21:AU:16:ARG:HG3	21:AU:19:LYS:HD2	1.99	0.45
23:BB:459:U:C2'	23:BB:460:A:H5'	2.47	0.45
23:BB:523:C:O2'	23:BB:524:G:H5'	2.17	0.45
23:BB:688:U:O2'	23:BB:689:A:H5'	2.17	0.45
23:BB:849:A:H2'	23:BB:850:U:C6	2.51	0.45
23:BB:911:A:H2'	38:BM:9:PHE:CZ	2.52	0.45
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.17	0.45
23:BB:1159:U:H2'	23:BB:1160:G:H8	1.81	0.45
23:BB:1179:G:O2'	23:BB:1180:U:H5'	2.17	0.45
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.51	0.45
23:BB:1680:U:H2'	23:BB:1681:G:O4'	2.17	0.45
23:BB:1998:A:O2'	23:BB:1999:C:H5'	2.17	0.45
23:BB:2038:G:H2'	23:BB:2039:U:H6	1.81	0.45
23:BB:2729:G:H2'	23:BB:2730:C:H6	1.82	0.45
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.81	0.45
23:BB:2884:U:O4	31:B0:39:ARG:HD3	2.17	0.45
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.99	0.45
25:BC:70:LYS:HD3	25:BC:101:ARG:NH2	2.31	0.45
25:BC:151:GLY:C	25:BC:152:GLN:HG3	2.37	0.45
25:BC:188:ARG:HG2	25:BC:188:ARG:NH2	2.32	0.45
27:BK:64:ARG:O	27:BK:82:ASN:HA	2.17	0.45
27:BK:99:ILE:H	27:BK:118:LEU:HD23	1.82	0.45
35:BV:4:ILE:N	35:BV:62:THR:O	2.50	0.45
37:BL:93:ASN:ND2	37:BL:94:THR:H	2.14	0.45
41:BJ:13:ARG:HB3	41:BJ:53:TYR:HD2	1.82	0.45
41:BJ:58:ASN:O	41:BJ:59:ALA:HB3	2.17	0.45
45:BS:31:GLN:C	45:BS:33:LEU:N	2.69	0.45
47:BF:1:ALA:O	47:BF:2:LYS:C	2.55	0.45
47:BF:3:LEU:HB2	47:BF:100:GLU:OE1	2.16	0.45
47:BF:110:ILE:HB	47:BF:113:PHE:HB3	1.98	0.45
47:BF:137:PHE:CD2	47:BF:137:PHE:N	2.84	0.45
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.17	0.45
48:BG:148:ARG:HD2	48:BG:149:ALA:N	2.32	0.45
48:BG:172:GLU:O	48:BG:173:ALA:HB2	2.17	0.45
49:BR:64:VAL:O	49:BR:65:ALA:HB3	2.17	0.45
49:BR:84:ARG:HG3	49:BR:84:ARG:NH2	2.32	0.45
53:B6:48:ALA:C	53:B6:50:VAL:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:50:VAL:O	53:B6:55:ILE:HG21	2.16	0.45
1:CA:93:U:C2'	1:CA:94:G:H5'	2.47	0.45
1:CA:200:G:O2'	1:CA:381:C:N4	2.50	0.45
1:CA:441:A:N6	1:CA:493:A:N6	2.65	0.45
1:CA:454:G:H2'	1:CA:455:G:H8	1.81	0.45
1:CA:553:A:H2'	1:CA:554:A:C8	2.51	0.45
1:CA:761:G:H2'	1:CA:762:U:H6	1.81	0.45
2:CC:172:VAL:O	2:CC:174:LEU:HD12	2.17	0.45
5:CF:49:TYR:CE1	17:CR:65:SER:HA	2.52	0.45
7:CH:74:ILE:HG13	7:CH:128:VAL:HG22	1.98	0.45
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.16	0.45
12:CM:72:ILE:O	12:CM:76:ILE:HG13	2.16	0.45
18:CS:20:LYS:O	18:CS:20:LYS:HD2	2.16	0.45
20:CB:64:GLY:HA2	20:CB:158:ASP:OD1	2.16	0.45
22:DA:102:G:O2'	22:DA:103:U:H5'	2.17	0.45
23:DB:123:G:H2'	23:DB:124:G:C8	2.52	0.45
23:DB:459:U:O2'	23:DB:460:A:H5'	2.17	0.45
23:DB:622:G:H2'	23:DB:623:C:H6	1.81	0.45
23:DB:849:A:H2'	23:DB:850:U:C6	2.51	0.45
23:DB:973:A:OP1	23:DB:973:A:H8	1.99	0.45
23:DB:996:A:H4'	44:DQ:91:ARG:HG2	1.98	0.45
23:DB:1210:G:H1'	23:DB:1212:G:C2	2.52	0.45
23:DB:2560:A:H2'	23:DB:2561:U:C6	2.52	0.45
23:DB:2561:U:O3'	27:DK:40:LYS:HE2	2.17	0.45
23:DB:2602:A:N3	23:DB:2602:A:C2'	2.78	0.45
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.82	0.45
23:DB:2846:G:OP1	28:DP:51:ASN:HB2	2.17	0.45
25:DC:210:ALA:O	25:DC:213:ARG:HB3	2.17	0.45
26:DD:105:LYS:N	26:DD:106:LYS:HZ3	2.11	0.45
26:DD:113:SER:OG	26:DD:114:LYS:N	2.48	0.45
27:DK:121:GLU:O	27:DK:122:VAL:C	2.55	0.45
32:D4:5:ALA:HA	32:D4:37:GLN:NE2	2.32	0.45
34:D3:14:LYS:O	34:D3:21:PHE:O	2.35	0.45
35:DV:30:ILE:HA	35:DV:91:PHE:O	2.17	0.45
35:DV:80:HIS:CD2	35:DV:82:TYR:H	2.15	0.45
36:D2:10:LEU:HD11	36:D2:14:ARG:NH1	2.32	0.45
37:DL:93:ASN:HD22	37:DL:94:THR:H	1.64	0.45
43:DO:28:VAL:HG21	43:DO:106:LEU:HD21	1.99	0.45
46:DU:31:GLY:O	46:DU:66:VAL:HG12	2.16	0.45
47:DF:177:ARG:HA	47:DF:177:ARG:CZ	2.47	0.45
49:DR:4:VAL:H	49:DR:38:VAL:HG23	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:13:ALA:O	50:DT:32:LEU:HB2	2.17	0.45
50:DT:76:ARG:NH1	50:DT:76:ARG:HB3	2.32	0.45
51:DZ:65:ASP:O	51:DZ:69:ALA:N	2.48	0.45
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.82	0.45
1:AA:106:C:O2'	1:AA:107:G:H5'	2.17	0.45
1:AA:376:G:H5"	15:AP:5:ARG:HB2	1.98	0.45
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.44	0.45
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.16	0.45
4:AE:87:VAL:HG23	4:AE:92:ARG:HA	1.98	0.45
5:AF:62:MET:O	5:AF:63:ASN:HB2	2.17	0.45
18:AS:20:LYS:O	18:AS:23:GLU:HG3	2.17	0.45
19:AT:53:MET:HA	19:AT:56:ILE:HD12	1.98	0.45
22:BA:114:C:H1'	43:BO:47:VAL:HG21	1.98	0.45
23:BB:39:G:H2'	23:BB:40:U:H6	1.81	0.45
23:BB:191:A:H2'	23:BB:192:C:H6	1.76	0.45
23:BB:647:G:H2'	23:BB:648:G:C8	2.52	0.45
23:BB:1376:C:H5"	57:BB:3502:HOH:O	2.16	0.45
23:BB:2015:A:C2	31:B0:2:VAL:HG22	2.52	0.45
23:BB:2081:U:H2'	23:BB:2082:A:H8	1.82	0.45
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.17	0.45
23:BB:2393:U:H2'	23:BB:2394:C:O4'	2.17	0.45
23:BB:2602:A:OP1	23:BB:2602:A:H3'	2.17	0.45
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.52	0.45
23:BB:2746:U:O4	23:BB:2755:C:H5'	2.17	0.45
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	1.99	0.45
25:BC:245:THR:C	25:BC:247:TRP:N	2.70	0.45
32:B4:3:VAL:HG23	32:B4:4:ARG:N	2.31	0.45
35:BV:29:ILE:HD13	35:BV:31:TYR:HE2	1.81	0.45
35:BV:89:ILE:HD12	35:BV:89:ILE:O	2.17	0.45
37:BL:47:ARG:HH21	37:BL:47:ARG:HB3	1.82	0.45
37:BL:65:GLY:O	37:BL:66:PHE:HB3	2.17	0.45
39:BX:45:GLN:O	39:BX:46:VAL:HB	2.16	0.45
40:BH:44:ILE:C	40:BH:46:PHE:N	2.70	0.45
43:BO:52:SER:OG	43:BO:54:VAL:HG12	2.17	0.45
44:BQ:23:TYR:HB2	44:BQ:27:ARG:HB3	1.99	0.45
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.98	0.45
47:BF:94:ARG:O	47:BF:98:PHE:N	2.49	0.45
47:BF:168:LEU:HD13	47:BF:172:PHE:HE2	1.82	0.45
48:BG:30:GLY:O	48:BG:78:VAL:HG12	2.16	0.45
48:BG:108:PHE:HD1	48:BG:108:PHE:H	1.65	0.45
50:BT:45:ALA:HA	50:BT:48:GLN:CG	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:64:ARG:HA	53:B6:103:ILE:O	2.17	0.45
1:CA:175:C:O2'	1:CA:176:C:H5'	2.17	0.45
1:CA:241:G:O2'	1:CA:242:G:H5'	2.17	0.45
1:CA:435:A:H2'	1:CA:435:A:N3	2.32	0.45
1:CA:764:C:H2'	1:CA:765:G:C5'	2.45	0.45
1:CA:921:U:O2	4:CE:23:THR:HG23	2.17	0.45
1:CA:922:G:N3	1:CA:1398:A:H2	2.15	0.45
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	2.32	0.45
1:CA:1207:G:O2'	1:CA:1208:C:H5'	2.17	0.45
1:CA:1269:A:H2	1:CA:1312:G:N3	2.15	0.45
2:CC:11:LEU:HD11	13:CN:87:ALA:O	2.16	0.45
2:CC:23:ALA:HB1	2:CC:27:GLU:OE2	2.17	0.45
5:CF:47:LEU:HD21	5:CF:57:ALA:CB	2.46	0.45
7:CH:79:ARG:NH1	7:CH:82:LEU:HB3	2.32	0.45
8:CI:6:TYR:C	8:CI:85:ALA:HB2	2.37	0.45
11:CL:29:LYS:HB3	11:CL:56:LEU:HD22	1.98	0.45
12:CM:2:ARG:O	12:CM:4:ALA:N	2.50	0.45
15:CP:66:THR:HG22	15:CP:67:ILE:H	1.82	0.45
16:CQ:3:LYS:HG2	16:CQ:4:ILE:H	1.81	0.45
16:CQ:45:VAL:HA	16:CQ:72:TRP:O	2.17	0.45
17:CR:57:ALA:HA	17:CR:60:ARG:HD2	1.99	0.45
18:CS:44:ILE:O	18:CS:44:ILE:HG23	2.16	0.45
20:CB:116:LEU:HA	20:CB:119:GLN:HG2	1.99	0.45
22:DA:19:C:O2'	22:DA:20:G:H5'	2.17	0.45
22:DA:115:A:O2'	22:DA:116:G:H5'	2.17	0.45
23:DB:362:A:N3	23:DB:362:A:C2'	2.80	0.45
23:DB:818:G:N1	23:DB:1187:G:H2'	2.32	0.45
23:DB:845:A:C2'	23:DB:846:U:H5"	2.42	0.45
23:DB:1099:G:H4'	24:DI:4:VAL:HG12	1.99	0.45
23:DB:1198:U:H2'	23:DB:1199:U:H6	1.82	0.45
23:DB:1252:G:H5"	57:DB:3463:HOH:O	2.15	0.45
23:DB:1454:C:H5'	42:DN:63:ARG:NE	2.32	0.45
23:DB:1753:G:N2	23:DB:1755:A:H3'	2.32	0.45
23:DB:1848:A:H2'	23:DB:1849:G:C8	2.52	0.45
23:DB:1885:A:H2'	23:DB:1886:U:O4'	2.16	0.45
23:DB:2213:U:O2	23:DB:2213:U:H2'	2.15	0.45
23:DB:2305:U:H1'	47:DF:132:ARG:HA	1.99	0.45
23:DB:2415:G:O2'	23:DB:2416:C:H5'	2.17	0.45
23:DB:2508:G:O3'	23:DB:2555:U:H5'	2.17	0.45
23:DB:2788:C:H1'	23:DB:2809:A:C2	2.52	0.45
27:DK:104:THR:HB	27:DK:106:GLU:OE1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:107:ALA:O	28:DP:108:ARG:C	2.56	0.45
31:D0:33:SER:OG	31:D0:35:GLU:HG2	2.17	0.45
35:DV:9:ARG:HA	35:DV:41:GLU:OE2	2.17	0.45
36:D2:12:ARG:HG3	36:D2:12:ARG:NH2	2.32	0.45
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.17	0.45
41:DJ:96:ARG:O	41:DJ:99:ARG:HG3	2.16	0.45
43:DO:24:THR:HG1	43:DO:90:VAL:HG12	1.81	0.45
45:DS:81:SER:CA	45:DS:99:ARG:HA	2.43	0.45
46:DU:84:PHE:HB3	46:DU:91:LYS:HG3	1.97	0.45
47:DF:120:SER:O	47:DF:127:TYR:HA	2.16	0.45
48:DG:6:ALA:HB3	48:DG:68:ARG:CD	2.47	0.45
48:DG:15:ASP:HA	48:DG:26:LYS:NZ	2.32	0.45
48:DG:147:LEU:O	48:DG:150:TYR:HB2	2.17	0.45
49:DR:84:ARG:HG3	49:DR:84:ARG:NH2	2.32	0.45
51:DZ:40:VAL:O	51:DZ:42:SER:N	2.49	0.45
1:AA:90:C:H2'	1:AA:91:U:H5	1.82	0.45
1:AA:138:G:C6	1:AA:226:G:C6	3.05	0.45
1:AA:200:G:O2'	1:AA:381:C:N4	2.49	0.45
1:AA:220:G:O2'	1:AA:221:C:H5'	2.16	0.45
1:AA:805:C:O2'	1:AA:806:C:H5'	2.17	0.45
1:AA:912:C:H2'	1:AA:913:A:C8	2.52	0.45
1:AA:981:U:H2'	1:AA:982:U:C5	2.52	0.45
1:AA:1015:G:H2'	1:AA:1016:A:C8	2.52	0.45
1:AA:1180:A:OP1	8:AI:104:THR:HG22	2.16	0.45
1:AA:1495:U:O2'	1:AA:1496:C:H5'	2.17	0.45
2:AC:26:LYS:HE2	2:AC:27:GLU:CG	2.46	0.45
4:AE:33:THR:HB	4:AE:49:TYR:CE1	2.52	0.45
5:AF:97:THR:O	5:AF:98:GLU:CD	2.55	0.45
10:AK:60:PHE:O	10:AK:63:GLN:HB3	2.17	0.45
12:AM:53:ASP:HA	12:AM:56:ARG:NH2	2.32	0.45
14:AO:70:LEU:HD12	14:AO:78:TYR:CB	2.42	0.45
19:AT:38:ILE:HG13	19:AT:82:ILE:HG22	1.98	0.45
19:AT:49:ALA:HA	19:AT:52:GLU:CD	2.36	0.45
23:BB:39:G:H2'	23:BB:40:U:C6	2.52	0.45
23:BB:480:A:H3'	23:BB:481:G:H5"	1.98	0.45
23:BB:681:G:H2'	23:BB:682:G:H8	1.81	0.45
23:BB:686:U:H2'	23:BB:788:A:N1	2.32	0.45
23:BB:845:A:C2'	23:BB:846:U:H5"	2.42	0.45
23:BB:1495:A:H2'	23:BB:1496:A:H8	1.80	0.45
23:BB:2277:G:H5"	38:BM:86:LYS:CB	2.47	0.45
23:BB:2883:A:OP1	31:B0:48:TYR:OH	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	1.98	0.45
25:BC:137:GLY:H	25:BC:163:ILE:HB	1.82	0.45
31:B0:50:GLY:C	31:B0:51:ARG:HG2	2.37	0.45
37:BL:95:LEU:HB3	37:BL:100:ILE:CG2	2.46	0.45
38:BM:21:ALA:HB3	38:BM:99:GLY:O	2.16	0.45
46:BU:48:VAL:O	46:BU:48:VAL:HG22	2.17	0.45
52:BW:35:ILE:O	52:BW:37:VAL:N	2.50	0.45
53:B6:147:LEU:N	53:B6:147:LEU:HD23	2.32	0.45
1:CA:212:G:H2'	1:CA:213:G:C8	2.52	0.45
1:CA:223:A:H2'	1:CA:224:U:H6	1.80	0.45
1:CA:279:A:H5"	1:CA:280:C:C3'	2.44	0.45
1:CA:951:G:OP2	12:CM:100:ARG:NH2	2.50	0.45
1:CA:974:A:OP1	1:CA:974:A:H8	1.98	0.45
1:CA:1047:G:H21	1:CA:1215:G:C4'	2.30	0.45
1:CA:1326:U:H2'	1:CA:1327:C:H6	1.79	0.45
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.17	0.45
1:CA:1480:A:H2'	1:CA:1481:U:H6	1.80	0.45
2:CC:184:ASN:HD22	2:CC:185:THR:H	1.64	0.45
3:CD:7:LYS:O	3:CD:20:LEU:HD12	2.17	0.45
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.17	0.45
6:CG:45:ALA:HB2	6:CG:116:ALA:O	2.17	0.45
7:CH:48:PHE:HA	7:CH:59:GLU:O	2.17	0.45
8:CI:21:LYS:HB3	8:CI:61:ASP:O	2.17	0.45
8:CI:126:PHE:O	8:CI:128:LYS:N	2.50	0.45
10:CK:80:ASN:HA	10:CK:105:ARG:HB3	1.99	0.45
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.17	0.45
20:CB:23:ASN:HB3	20:CB:188:THR:O	2.16	0.45
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.47	0.45
20:CB:162:VAL:CG1	20:CB:184:ALA:HB2	2.39	0.45
22:DA:113:C:H2'	22:DA:114:C:C6	2.52	0.45
23:DB:131:A:H2'	23:DB:132:G:H8	1.82	0.45
23:DB:158:U:H2'	23:DB:159:G:O4'	2.17	0.45
23:DB:299:A:H2'	23:DB:300:A:C8	2.52	0.45
23:DB:307:G:N2	23:DB:309:A:H3'	2.32	0.45
23:DB:592:A:H2'	23:DB:593:U:H6	1.78	0.45
23:DB:1210:G:H5'	23:DB:1212:G:H5'	1.98	0.45
23:DB:1350:C:H5'	23:DB:1351:C:OP2	2.17	0.45
23:DB:1353:A:O2'	23:DB:1354:A:H5'	2.17	0.45
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.52	0.45
23:DB:1458:U:O3'	23:DB:1459:G:O4'	2.34	0.45
23:DB:1664:A:H1'	23:DB:2726:A:C2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1789:A:OP1	25:DC:220:ARG:HD3	2.17	0.45
23:DB:1819:A:H1'	23:DB:1821:A:C6	2.52	0.45
23:DB:2033:A:H3'	57:DB:3319:HOH:O	2.15	0.45
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.17	0.45
23:DB:2352:A:H8	23:DB:2352:A:O5'	2.00	0.45
23:DB:2582:G:O2'	23:DB:2583:G:H5'	2.16	0.45
24:DI:59:THR:O	24:DI:59:THR:HG23	2.17	0.45
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.29	0.45
25:DC:75:ALA:CB	25:DC:93:VAL:HG22	2.46	0.45
26:DD:48:ILE:HG23	26:DD:82:PHE:HB2	1.98	0.45
27:DK:2:ILE:HG23	27:DK:33:ALA:O	2.17	0.45
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.29	0.45
33:D1:8:ILE:HG21	33:D1:51:ALA:CB	2.47	0.45
40:DH:111:ALA:O	40:DH:132:PHE:CZ	2.70	0.45
42:DN:48:VAL:O	42:DN:51:LEU:N	2.50	0.45
42:DN:79:LEU:HA	42:DN:83:LEU:HD12	1.98	0.45
43:DO:27:VAL:HG12	43:DO:28:VAL:N	2.30	0.45
43:DO:56:LYS:HA	43:DO:59:ALA:HB3	1.99	0.45
46:DU:14:THR:HG21	46:DU:64:ILE:HD13	1.99	0.45
49:DR:27:ILE:HG22	49:DR:28:ALA:N	2.32	0.45
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.16	0.45
50:DT:29:THR:HB	50:DT:86:THR:HG22	1.98	0.45
50:DT:81:LYS:HG3	50:DT:82:LYS:N	2.32	0.45
51:DZ:5:CYS:O	51:DZ:6:GLN:HB3	2.16	0.45
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.44	0.45
52:DW:35:ILE:O	52:DW:35:ILE:CG1	2.65	0.45
1:AA:153:C:O2'	1:AA:154:U:H5'	2.17	0.44
1:AA:325:A:H2'	1:AA:326:G:O4'	2.17	0.44
1:AA:376:G:O3'	15:AP:5:ARG:HD3	2.17	0.44
1:AA:376:G:H2'	1:AA:377:G:H8	1.80	0.44
1:AA:594:U:H2'	1:AA:595:A:C8	2.52	0.44
1:AA:618:C:N3	1:AA:622:A:N6	2.65	0.44
1:AA:814:A:O2'	1:AA:815:A:H3'	2.18	0.44
1:AA:1014:A:H4'	18:AS:13:HIS:CD2	2.52	0.44
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.52	0.44
1:AA:1363:A:N3	1:AA:1363:A:H2'	2.32	0.44
2:AC:16:PRO:HG2	2:AC:53:ARG:HH22	1.82	0.44
3:AD:81:LEU:C	3:AD:83:GLY:H	2.20	0.44
6:AG:91:ARG:HD2	6:AG:91:ARG:H	1.82	0.44
7:AH:29:SER:OG	7:AH:32:LYS:HG3	2.17	0.44
7:AH:79:ARG:NH1	7:AH:82:LEU:HB3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:9:GLY:CA	8:AI:80:HIS:HB3	2.47	0.44
8:AI:24:ASN:HD22	8:AI:25:GLY:H	1.60	0.44
8:AI:39:GLY:HA2	8:AI:44:ARG:HD3	1.99	0.44
11:AL:20:VAL:HB	11:AL:94:TYR:CE1	2.53	0.44
15:AP:72:ALA:HA	15:AP:75:ILE:CD1	2.47	0.44
16:AQ:77:VAL:HG12	16:AQ:79:GLU:H	1.82	0.44
19:AT:71:ALA:O	19:AT:74:HIS:HB2	2.17	0.44
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.28	0.44
23:BB:6:A:O2'	23:BB:7:G:H5'	2.18	0.44
23:BB:182:A:H2'	23:BB:183:C:C6	2.52	0.44
23:BB:332:A:O2'	23:BB:334:C:OP2	2.34	0.44
23:BB:518:G:H4'	45:BS:18:ARG:CZ	2.47	0.44
23:BB:553:G:H2'	23:BB:554:U:O4'	2.16	0.44
23:BB:625:G:O2'	23:BB:626:A:H5'	2.16	0.44
23:BB:704:G:H1'	23:BB:727:A:H61	1.82	0.44
23:BB:855:G:C2	52:BW:23:LYS:HG2	2.50	0.44
23:BB:1042:G:H2'	23:BB:1043:C:H6	1.81	0.44
23:BB:1183:U:H2'	23:BB:1184:U:C6	2.52	0.44
23:BB:1416:G:O2'	23:BB:1417:C:H6	1.97	0.44
23:BB:1789:A:O2'	23:BB:1790:C:H5'	2.16	0.44
23:BB:2354:C:H4'	52:BW:31:LEU:HD22	1.99	0.44
23:BB:2358:A:H2'	23:BB:2359:C:C6	2.52	0.44
23:BB:2516:A:O2'	23:BB:2517:C:H5'	2.17	0.44
23:BB:2667:C:O2	48:BG:110:HIS:CE1	2.69	0.44
23:BB:2757:A:H2	48:BG:63:GLN:NE2	2.14	0.44
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.53	0.44
25:BC:107:LYS:N	25:BC:193:GLU:O	2.49	0.44
25:BC:157:ALA:HA	25:BC:194:VAL:CG2	2.47	0.44
26:BD:25:THR:O	26:BD:189:VAL:HG22	2.17	0.44
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.82	0.44
26:BD:169:ARG:O	26:BD:170:VAL:O	2.36	0.44
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.65	0.44
29:BE:184:ASP:O	29:BE:185:LYS:HG3	2.17	0.44
36:B2:34:ARG:O	36:B2:38:GLY:N	2.50	0.44
37:BL:96:LYS:HE2	37:BL:102:GLY:O	2.17	0.44
37:BL:96:LYS:HD3	37:BL:103:ILE:HA	1.98	0.44
37:BL:115:GLU:OE1	37:BL:115:GLU:N	2.50	0.44
39:BX:27:ASN:O	39:BX:28:LEU:C	2.55	0.44
43:BO:7:ARG:HA	43:BO:10:ARG:CD	2.47	0.44
44:BQ:7:VAL:O	44:BQ:11:ALA:HB2	2.16	0.44
45:BS:69:LEU:HG	45:BS:107:VAL:HG22	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:81:ARG:HB2	46:BU:96:LYS:HG2	1.98	0.44
47:BF:45:ASP:C	47:BF:47:LYS:H	2.20	0.44
47:BF:108:PRO:C	47:BF:110:ILE:H	2.21	0.44
48:BG:93:TYR:O	48:BG:94:ARG:HG3	2.17	0.44
49:BR:25:LEU:H	49:BR:94:THR:HG21	1.82	0.44
49:BR:39:LEU:CA	49:BR:53:PHE:HA	2.46	0.44
49:BR:70:GLU:CD	49:BR:70:GLU:N	2.69	0.44
1:CA:238:A:H3'	1:CA:239:U:H5"	1.99	0.44
1:CA:333:U:H2'	1:CA:334:C:H6	1.82	0.44
1:CA:796:C:H2'	1:CA:797:C:H6	1.81	0.44
1:CA:818:G:H3'	1:CA:819:A:C5'	2.47	0.44
1:CA:845:A:C5	1:CA:846:G:H1'	2.52	0.44
1:CA:1277:C:H1'	1:CA:1282:C:O2	2.18	0.44
1:CA:1320:C:OP2	18:CS:2:ARG:HG3	2.17	0.44
1:CA:1345:U:H2'	57:CA:1747:HOH:O	2.16	0.44
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.44
3:CD:152:SER:O	3:CD:155:LYS:HG2	2.17	0.44
3:CD:169:TRP:CD2	3:CD:185:PRO:HB3	2.51	0.44
6:CG:41:ILE:CG2	6:CG:115:MET:HG3	2.47	0.44
6:CG:110:ARG:HE	6:CG:122:GLU:HB2	1.81	0.44
7:CH:86:LYS:HB3	7:CH:90:GLU:HG2	1.99	0.44
10:CK:80:ASN:ND2	10:CK:80:ASN:H	2.14	0.44
13:CN:60:ARG:HH21	13:CN:69:PRO:HD3	1.82	0.44
14:CO:28:GLN:O	14:CO:32:LEU:HD23	2.16	0.44
16:CQ:18:LYS:HD3	16:CQ:48:GLU:HG2	1.98	0.44
16:CQ:30:HIS:HB3	16:CQ:33:TYR:HB2	1.97	0.44
17:CR:51:GLN:HE22	17:CR:54:LEU:HD22	1.82	0.44
17:CR:63:TYR:N	17:CR:63:TYR:HD2	2.15	0.44
20:CB:30:ILE:HD13	20:CB:38:HIS:CD2	2.52	0.44
23:DB:6:A:O2'	23:DB:7:G:H5'	2.17	0.44
23:DB:622:G:H2'	23:DB:623:C:C6	2.52	0.44
23:DB:936:A:H2'	23:DB:937:C:H6	1.80	0.44
23:DB:1100:C:H41	24:DI:1:ALA:H2	1.65	0.44
23:DB:1204:A:N1	23:DB:1241:A:N1	2.65	0.44
23:DB:1432:G:H2'	23:DB:1433:A:H8	1.82	0.44
23:DB:1449:G:O2'	23:DB:1450:G:H5'	2.17	0.44
23:DB:1684:G:O2'	23:DB:1685:C:H5'	2.18	0.44
23:DB:1700:A:C2'	23:DB:1701:A:H5'	2.43	0.44
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.17	0.44
23:DB:1973:G:O2'	23:DB:1974:C:H5'	2.17	0.44
23:DB:2595:G:N1	23:DB:2599:G:C6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2818:U:H4'	23:DB:2837:A:O4'	2.18	0.44
25:DC:57:HIS:ND1	25:DC:58:LYS:N	2.59	0.44
25:DC:131:MET:HE1	25:DC:189:ALA:HB2	1.98	0.44
25:DC:245:THR:OG1	25:DC:249:VAL:HG23	2.17	0.44
29:DE:151:GLY:HA2	29:DE:195:GLN:HE22	1.82	0.44
32:D4:2:LYS:HG2	32:D4:4:ARG:HG3	1.98	0.44
33:D1:8:ILE:CG2	33:D1:51:ALA:HA	2.47	0.44
33:D1:49:LYS:CG	33:D1:50:GLU:H	2.17	0.44
34:D3:36:ALA:HB3	34:D3:39:ARG:HB2	1.98	0.44
36:D2:3:ARG:HA	36:D2:3:ARG:NE	2.31	0.44
38:DM:69:PRO:HA	38:DM:94:ALA:HA	1.99	0.44
40:DH:11:ASN:O	40:DH:12:LEU:HB3	2.17	0.44
40:DH:89:LYS:N	40:DH:89:LYS:HD2	2.33	0.44
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.69	0.44
48:DG:22:VAL:C	48:DG:23:ILE:HG13	2.38	0.44
48:DG:91:VAL:HG23	48:DG:92:GLY:N	2.31	0.44
49:DR:38:VAL:HG22	49:DR:40:MET:H	1.83	0.44
1:AA:224:U:O2'	1:AA:225:C:H5'	2.17	0.44
1:AA:617:G:H4'	15:AP:46:LYS:CE	2.46	0.44
1:AA:1019:A:H2'	1:AA:1020:G:C8	2.53	0.44
1:AA:1023:U:O2'	1:AA:1024:G:H5'	2.18	0.44
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.31	0.44
2:AC:119:ILE:HD11	2:AC:133:MET:HA	1.98	0.44
2:AC:129:PHE:CE2	2:AC:156:LEU:HD13	2.52	0.44
7:AH:101:ALA:O	7:AH:103:VAL:HG23	2.17	0.44
8:AI:119:LYS:C	8:AI:121:ARG:H	2.21	0.44
10:AK:80:ASN:HA	10:AK:105:ARG:HB3	1.98	0.44
12:AM:1:ALA:CA	12:AM:8:ILE:HG22	2.48	0.44
23:BB:245:G:H2'	23:BB:246:C:H6	1.82	0.44
23:BB:599:A:O2'	23:BB:600:G:H5'	2.17	0.44
23:BB:918:A:C2'	23:BB:919:U:H5'	2.43	0.44
23:BB:1130:U:C2	23:BB:2025:C:H5"	2.52	0.44
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.82	0.44
23:BB:1317:G:H2'	23:BB:1318:U:H6	1.82	0.44
23:BB:1370:C:H2'	23:BB:1371:G:C8	2.52	0.44
23:BB:1470:A:H2'	23:BB:1471:G:O4'	2.17	0.44
23:BB:1727:C:H2'	23:BB:1728:C:O4'	2.17	0.44
23:BB:1765:U:H2'	23:BB:1766:G:H8	1.82	0.44
23:BB:2598:A:H5"	25:BC:233:GLY:CA	2.48	0.44
23:BB:2693:G:H2'	23:BB:2694:G:H8	1.82	0.44
23:BB:2789:C:H2'	23:BB:2893:A:N7	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2821:A:OP2	23:BB:2822:G:OP2	2.34	0.44
23:BB:2836:U:H2'	23:BB:2837:A:C8	2.53	0.44
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	1.98	0.44
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.32	0.44
26:BD:112:THR:O	26:BD:113:SER:HB2	2.16	0.44
26:BD:116:LYS:HB3	26:BD:118:PHE:CE2	2.53	0.44
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.38	0.44
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.98	0.44
37:BL:51:GLU:OE1	37:BL:57:LEU:HB2	2.17	0.44
42:BN:101:GLY:CA	42:BN:109:PRO:HA	2.46	0.44
45:BS:1:MET:SD	45:BS:62:ASP:HB3	2.57	0.44
46:BU:18:LYS:O	46:BU:20:LYS:N	2.50	0.44
48:BG:60:GLY:O	48:BG:62:ALA:N	2.49	0.44
53:B6:113:ASP:O	53:B6:116:ARG:HG2	2.17	0.44
1:CA:69:G:N2	1:CA:71:A:H62	2.15	0.44
1:CA:140:U:H2'	1:CA:141:G:H8	1.81	0.44
1:CA:482:A:C2	1:CA:483:C:H1'	2.51	0.44
1:CA:618:C:N3	1:CA:622:A:N6	2.65	0.44
1:CA:676:A:H1'	10:CK:116:PRO:HB3	1.99	0.44
1:CA:729:A:H2'	1:CA:730:G:H8	1.82	0.44
1:CA:922:G:H2'	1:CA:923:A:H8	1.81	0.44
1:CA:939:G:H2'	1:CA:940:C:C6	2.52	0.44
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.17	0.44
2:CC:106:ARG:HG2	2:CC:106:ARG:O	2.16	0.44
3:CD:57:LYS:HD3	3:CD:57:LYS:C	2.38	0.44
7:CH:34:ALA:HB1	7:CH:109:VAL:HB	1.98	0.44
10:CK:41:LEU:HD22	10:CK:76:TYR:CE2	2.52	0.44
12:CM:71:GLU:HA	12:CM:74:MET:SD	2.57	0.44
12:CM:90:HIS:CE1	12:CM:96:VAL:HG21	2.53	0.44
12:CM:106:ARG:NH1	12:CM:109:LYS:HD2	2.20	0.44
14:CO:36:ILE:HD11	14:CO:59:MET:HB2	2.00	0.44
16:CQ:45:VAL:HG11	16:CQ:60:ILE:CG2	2.46	0.44
19:CT:49:ALA:HA	19:CT:52:GLU:OE2	2.17	0.44
20:CB:62:ARG:HG3	20:CB:62:ARG:HH11	1.81	0.44
22:DA:44:G:N2	22:DA:48:U:C2	2.86	0.44
23:DB:288:U:O2	23:DB:288:U:H2'	2.16	0.44
23:DB:852:U:H2'	23:DB:853:C:H6	1.82	0.44
23:DB:871:U:H2'	23:DB:872:U:C6	2.52	0.44
23:DB:915:C:H3'	23:DB:916:G:H8	1.82	0.44
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.47	0.44
23:DB:1368:G:O2'	23:DB:1369:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1724:G:H2'	23:DB:1725:U:H6	1.80	0.44
23:DB:2187:U:H2'	23:DB:2188:U:C6	2.52	0.44
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.52	0.44
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.50	0.44
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.52	0.44
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.16	0.44
25:DC:14:HIS:O	25:DC:16:VAL:HG23	2.16	0.44
25:DC:245:THR:C	25:DC:247:TRP:N	2.70	0.44
26:DD:113:SER:HB3	26:DD:167:ASN:H	1.79	0.44
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.65	0.44
31:D0:2:VAL:HG12	31:D0:3:GLN:N	2.33	0.44
35:DV:55:GLU:H	35:DV:55:GLU:CD	2.20	0.44
37:DL:14:LYS:O	37:DL:16:GLY:N	2.50	0.44
37:DL:112:LEU:O	37:DL:112:LEU:HD23	2.17	0.44
37:DL:141:LYS:HD3	37:DL:141:LYS:C	2.38	0.44
38:DM:54:THR:C	38:DM:56:ALA:H	2.21	0.44
40:DH:89:LYS:O	40:DH:90:LEU:C	2.55	0.44
40:DH:96:THR:HG23	40:DH:97:ARG:N	2.29	0.44
42:DN:52:ILE:HD13	42:DN:87:PHE:CE2	2.52	0.44
42:DN:83:LEU:HA	42:DN:86:ARG:HG3	1.99	0.44
43:DO:31:THR:HG23	43:DO:34:HIS:O	2.17	0.44
45:DS:32:ALA:O	45:DS:36:LEU:HD23	2.17	0.44
46:DU:10:VAL:HG21	46:DU:35:VAL:HG21	1.98	0.44
47:DF:79:ARG:HE	47:DF:79:ARG:H	1.64	0.44
50:DT:42:GLU:O	50:DT:46:ALA:HB2	2.17	0.44
52:DW:49:ASN:HB2	52:DW:60:ALA:CA	2.46	0.44
53:D6:18:LEU:HD21	53:D6:171:LYS:HG3	1.99	0.44
1:AA:58:C:O2'	1:AA:59:A:H5'	2.17	0.44
1:AA:81:A:N3	1:AA:82:G:N7	2.65	0.44
1:AA:499:A:H1'	1:AA:500:G:C8	2.53	0.44
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.17	0.44
1:AA:1227:A:H4'	12:AM:113:LYS:HD3	1.99	0.44
2:AC:32:LEU:O	2:AC:35:ASP:HB2	2.17	0.44
2:AC:180:ASP:OD1	2:AC:203:LYS:HB2	2.18	0.44
3:AD:43:ARG:HB3	3:AD:43:ARG:NH1	2.32	0.44
4:AE:89:THR:HG21	4:AE:134:ASN:HD21	1.78	0.44
5:AF:46:GLN:HA	5:AF:46:GLN:HE21	1.81	0.44
13:AN:88:MET:C	13:AN:90:GLY:H	2.20	0.44
16:AQ:30:HIS:HB3	16:AQ:33:TYR:HB2	1.98	0.44
22:BA:94:A:O2'	22:BA:95:U:H5'	2.18	0.44
23:BB:285:G:O2'	23:BB:286:U:H5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:340:A:H2'	23:BB:341:C:O4'	2.18	0.44
23:BB:840:C:H2'	23:BB:841:G:C8	2.52	0.44
23:BB:936:A:H2'	23:BB:937:C:H6	1.78	0.44
23:BB:1749:A:H2'	23:BB:1750:G:C8	2.53	0.44
23:BB:1843:C:H2'	23:BB:1844:C:H6	1.82	0.44
23:BB:2109:U:C2'	23:BB:2110:G:H5'	2.47	0.44
23:BB:2369:A:H2'	23:BB:2370:G:C8	2.51	0.44
25:BC:90:ILE:HD13	25:BC:103:ILE:C	2.38	0.44
31:B0:12:ARG:HD2	31:B0:16:ARG:NH1	2.32	0.44
33:B1:8:ILE:HG21	33:B1:51:ALA:CB	2.47	0.44
35:BV:44:HIS:NE2	35:BV:85:LYS:HB2	2.33	0.44
38:BM:29:GLY:HA2	38:BM:106:ASP:HB2	1.99	0.44
40:BH:65:ALA:HB1	40:BH:68:ARG:NH1	2.32	0.44
40:BH:116:ARG:CB	40:BH:131:SER:HB2	2.37	0.44
41:BJ:25:LEU:HB2	41:BJ:62:VAL:CG2	2.47	0.44
42:BN:11:ASN:HD22	42:BN:11:ASN:HA	1.53	0.44
42:BN:83:LEU:HA	42:BN:86:ARG:HG3	1.98	0.44
44:BQ:8:ILE:O	44:BQ:11:ALA:HB3	2.17	0.44
45:BS:15:GLN:HA	45:BS:18:ARG:HG2	1.99	0.44
46:BU:18:LYS:HD2	46:BU:19:GLY:N	2.32	0.44
47:BF:134:GLN:HE21	47:BF:134:GLN:HB3	1.53	0.44
48:BG:3:VAL:O	48:BG:68:ARG:HG3	2.18	0.44
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.83	0.44
48:BG:144:ALA:HB1	48:BG:163:TYR:HE1	1.81	0.44
50:BT:38:ALA:HB1	50:BT:43:ILE:CD1	2.47	0.44
53:B6:61:PRO:HB2	53:B6:62:ASP:OD1	2.18	0.44
53:B6:83:ILE:HG22	53:B6:90:LEU:H	1.81	0.44
1:CA:26:A:N6	1:CA:558:G:H1'	2.32	0.44
1:CA:167:A:H2'	1:CA:168:G:H8	1.82	0.44
1:CA:376:G:H5"	15:CP:5:ARG:HB2	1.99	0.44
1:CA:814:A:O2'	1:CA:815:A:H3'	2.17	0.44
1:CA:923:A:OP1	4:CE:25:LYS:HB3	2.17	0.44
1:CA:1251:A:H1'	1:CA:1370:G:O4'	2.17	0.44
3:CD:160:LEU:HD23	3:CD:164:ARG:NH2	2.32	0.44
3:CD:164:ARG:HG2	3:CD:164:ARG:NH1	2.32	0.44
3:CD:173:ASP:OD1	3:CD:176:LYS:HD3	2.17	0.44
5:CF:97:THR:O	5:CF:98:GLU:CD	2.56	0.44
10:CK:25:SER:HG	10:CK:28:ASN:H	1.65	0.44
12:CM:10:ASP:HA	12:CM:44:ILE:CD1	2.46	0.44
12:CM:47:LEU:HD22	12:CM:51:GLN:HB3	1.98	0.44
16:CQ:18:LYS:H	16:CQ:50:ASN:HD21	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:22:TRP:CG	20:CB:23:ASN:N	2.82	0.44
22:DA:105:G:O2'	22:DA:106:G:H5'	2.17	0.44
23:DB:971:G:H2'	23:DB:972:A:O4'	2.17	0.44
23:DB:1098:A:H2'	24:DI:4:VAL:C	2.38	0.44
23:DB:1199:U:H5"	57:DB:3621:HOH:O	2.16	0.44
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.53	0.44
23:DB:1317:G:H2'	23:DB:1318:U:H6	1.81	0.44
23:DB:1845:G:C6	23:DB:1896:G:C6	3.06	0.44
23:DB:2135:A:C2'	23:DB:2136:G:H5'	2.47	0.44
23:DB:2355:G:H4'	52:DW:20:LEU:HD12	1.99	0.44
25:DC:52:HIS:NE2	25:DC:218:THR:HG23	2.33	0.44
25:DC:131:MET:C	25:DC:133:ASN:N	2.70	0.44
27:DK:20:MET:O	27:DK:41:ILE:HD12	2.18	0.44
29:DE:3:LEU:O	29:DE:12:LEU:HD23	2.17	0.44
30:DY:16:LEU:HD22	30:DY:16:LEU:N	2.16	0.44
39:DX:28:LEU:HD13	39:DX:37:LEU:CD1	2.38	0.44
39:DX:44:LYS:NZ	39:DX:48:ARG:CZ	2.81	0.44
41:DJ:13:ARG:HB3	41:DJ:53:TYR:HD2	1.83	0.44
41:DJ:44:TYR:CZ	44:DQ:59:LEU:HD11	2.52	0.44
41:DJ:59:ALA:O	41:DJ:62:VAL:HG12	2.17	0.44
46:DU:85:ARG:HA	46:DU:85:ARG:CZ	2.48	0.44
1:AA:15:G:H2'	1:AA:16:A:H8	1.82	0.44
1:AA:191:G:H8	1:AA:191:G:OP2	1.99	0.44
1:AA:711:G:O2'	1:AA:712:A:H5'	2.17	0.44
1:AA:845:A:C5	1:AA:846:G:H1'	2.53	0.44
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.52	0.44
1:AA:1265:C:O2'	1:AA:1266:G:H5'	2.17	0.44
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.51	0.44
1:AA:1361:G:C2'	1:AA:1362:A:H5"	2.44	0.44
1:AA:1439:G:H2'	1:AA:1440:U:O4'	2.17	0.44
1:AA:1517:G:H1'	23:BB:1919:A:O3'	2.18	0.44
3:AD:152:SER:O	3:AD:155:LYS:HG2	2.18	0.44
5:AF:55:HIS:O	5:AF:56:LYS:HG3	2.17	0.44
5:AF:61:LEU:HD12	5:AF:63:ASN:OD1	2.18	0.44
6:AG:57:GLU:O	6:AG:61:PHE:N	2.48	0.44
8:AI:90:ASP:O	8:AI:93:LEU:HG	2.16	0.44
11:AL:23:LEU:O	11:AL:25:ALA:N	2.51	0.44
11:AL:33:CYS:HB2	11:AL:77:SER:O	2.18	0.44
11:AL:89:LEU:N	11:AL:89:LEU:HD22	2.33	0.44
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.51	0.44
13:AN:5:MET:HE2	13:AN:60:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:81:LEU:O	14:AO:85:LEU:HD13	2.18	0.44
17:AR:22:TYR:CZ	17:AR:23:LYS:HE3	2.53	0.44
23:BB:673:C:H4'	29:BE:77:ILE:HD11	1.99	0.44
23:BB:1228:G:H2'	23:BB:1229:C:H6	1.83	0.44
23:BB:1712:U:H2'	23:BB:1713:A:C8	2.53	0.44
23:BB:1893:C:H2'	23:BB:1894:C:O4'	2.18	0.44
23:BB:2181:U:H2'	23:BB:2182:U:C6	2.51	0.44
23:BB:2217:G:H2'	23:BB:2218:G:H8	1.83	0.44
23:BB:2472:G:O6	23:BB:2476:A:H4'	2.18	0.44
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.17	0.44
25:BC:30:ALA:C	25:BC:32:LEU:H	2.21	0.44
25:BC:114:GLN:HE21	25:BC:114:GLN:HB3	1.62	0.44
26:BD:56:LYS:C	26:BD:58:ASN:N	2.71	0.44
26:BD:69:ALA:N	26:BD:73:VAL:HB	2.32	0.44
29:BE:48:THR:C	29:BE:50:ALA:N	2.71	0.44
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.43	0.44
31:B0:2:VAL:HG12	31:B0:3:GLN:N	2.32	0.44
34:B3:36:ALA:HB3	34:B3:39:ARG:HB2	1.99	0.44
37:BL:81:ASP:O	37:BL:83:ALA:N	2.44	0.44
38:BM:53:MET:SD	38:BM:63:ILE:HG21	2.57	0.44
40:BH:25:TYR:CZ	40:BH:30:LEU:HD21	2.52	0.44
44:BQ:24:TYR:CG	44:BQ:25:GLY:N	2.86	0.44
44:BQ:33:VAL:O	44:BQ:37:ALA:N	2.51	0.44
46:BU:94:PHE:HB3	46:BU:101:THR:HA	1.99	0.44
47:BF:3:LEU:HD11	47:BF:172:PHE:CD1	2.52	0.44
48:BG:75:VAL:O	48:BG:78:VAL:HG22	2.17	0.44
49:BR:91:GLN:HG3	49:BR:92:TRP:N	2.32	0.44
50:BT:10:VAL:O	50:BT:11:LEU:C	2.55	0.44
1:CA:600:A:H2'	1:CA:601:G:H8	1.82	0.44
1:CA:1076:U:H2'	1:CA:1077:G:C8	2.52	0.44
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.53	0.44
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.17	0.44
1:CA:1227:A:O3'	12:CM:113:LYS:HB2	2.18	0.44
2:CC:122:GLN:O	2:CC:127:VAL:HG22	2.17	0.44
3:CD:22:SER:N	3:CD:109:THR:HG22	2.32	0.44
4:CE:81:GLN:CD	4:CE:148:SER:HA	2.37	0.44
4:CE:106:ALA:HB1	4:CE:110:MET:CB	2.45	0.44
4:CE:158:LYS:HZ1	7:CH:65:PHE:HA	1.80	0.44
11:CL:33:CYS:H	11:CL:54:VAL:HG13	1.82	0.44
12:CM:3:ILE:CA	12:CM:56:ARG:HG2	2.44	0.44
12:CM:13:HIS:HB2	12:CM:16:ILE:HG22	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:53:ASP:HA	12:CM:56:ARG:NH2	2.32	0.44
12:CM:109:LYS:HG3	12:CM:110:GLY:H	1.83	0.44
13:CN:70:HIS:O	13:CN:72:PHE:N	2.49	0.44
14:CO:56:LEU:O	14:CO:59:MET:HG3	2.18	0.44
16:CQ:74:LEU:HD22	16:CQ:75:VAL:H	1.83	0.44
23:DB:51:G:O2'	23:DB:119:A:N1	2.44	0.44
23:DB:248:G:N7	23:DB:250:G:N3	2.66	0.44
23:DB:675:A:N3	23:DB:2443:C:O2'	2.50	0.44
23:DB:755:U:H2'	23:DB:756:A:H8	1.82	0.44
23:DB:866:A:H61	23:DB:913:U:C1'	2.30	0.44
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.56	0.44
23:DB:1144:A:O2'	23:DB:1145:C:H5'	2.18	0.44
23:DB:1201:U:H2'	23:DB:1202:G:C8	2.51	0.44
23:DB:1418:G:C2'	23:DB:1580:A:H61	2.30	0.44
23:DB:1462:C:O2'	23:DB:1463:C:H5'	2.17	0.44
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.17	0.44
23:DB:1996:C:OP1	27:DK:31:ARG:CZ	2.66	0.44
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.81	0.44
25:DC:202:ARG:HH21	25:DC:202:ARG:HB2	1.83	0.44
27:DK:110:GLU:HA	27:DK:113:MET:HG2	2.00	0.44
28:DP:31:VAL:HG13	28:DP:32:VAL:N	2.33	0.44
29:DE:154:ASP:C	29:DE:156:ASN:H	2.21	0.44
31:D0:16:ARG:O	31:D0:19:ASP:HB2	2.18	0.44
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.99	0.44
34:D3:9:ALA:C	34:D3:11:LYS:H	2.21	0.44
37:DL:85:VAL:HG22	37:DL:94:THR:HG21	1.99	0.44
39:DX:27:ASN:O	39:DX:28:LEU:C	2.56	0.44
41:DJ:106:LYS:HA	41:DJ:106:LYS:HD2	1.84	0.44
44:DQ:65:ASN:CB	44:DQ:75:TYR:HB2	2.47	0.44
44:DQ:79:ILE:HD13	44:DQ:79:ILE:C	2.38	0.44
44:DQ:108:LEU:O	44:DQ:111:LYS:HB3	2.18	0.44
46:DU:48:VAL:O	46:DU:48:VAL:HG22	2.18	0.44
47:DF:138:PRO:HA	47:DF:142:TYR:CZ	2.53	0.44
48:DG:17:LYS:HZ2	48:DG:18:ILE:H	1.65	0.44
48:DG:104:LEU:O	48:DG:111:PRO:HA	2.17	0.44
1:AA:441:A:N6	1:AA:493:A:N6	2.65	0.44
1:AA:472:U:H2'	1:AA:473:U:C6	2.51	0.44
1:AA:766:A:H2'	1:AA:767:A:C8	2.53	0.44
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.16	0.44
1:AA:1202:U:H2'	1:AA:1203:C:O4'	2.17	0.44
1:AA:1241:G:O2'	1:AA:1242:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.17	0.44
1:AA:1429:A:O2'	1:AA:1430:A:H5'	2.17	0.44
1:AA:1458:G:O3'	19:AT:22:SER:HA	2.17	0.44
2:AC:87:ARG:HG2	2:AC:98:ALA:O	2.17	0.44
3:AD:89:LEU:CD2	3:AD:199:ILE:HD11	2.48	0.44
3:AD:171:GLU:O	3:AD:180:THR:N	2.51	0.44
6:AG:11:ILE:H	6:AG:11:ILE:HD12	1.82	0.44
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.32	0.44
8:AI:15:ALA:O	8:AI:66:VAL:HG23	2.17	0.44
8:AI:120:ALA:O	8:AI:121:ARG:HG2	2.18	0.44
11:AL:14:LYS:CG	11:AL:15:VAL:N	2.80	0.44
13:AN:40:ARG:O	13:AN:41:TRP:HE3	2.01	0.44
18:AS:47:THR:HA	18:AS:60:PHE:CD1	2.53	0.44
23:BB:17:G:H2'	23:BB:18:U:H6	1.81	0.44
23:BB:397:U:OP1	51:BZ:31:PRO:HA	2.18	0.44
23:BB:419:U:H2'	23:BB:420:C:H6	1.80	0.44
23:BB:557:C:H2'	23:BB:558:U:H6	1.80	0.44
23:BB:958:U:H3	38:BM:16:ARG:HB3	1.82	0.44
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.17	0.44
23:BB:1107:G:O2'	23:BB:1108:U:H5'	2.18	0.44
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.81	0.44
23:BB:1573:G:C2'	23:BB:1574:C:H5'	2.47	0.44
23:BB:2462:C:H2'	23:BB:2463:C:H6	1.83	0.44
23:BB:2485:G:O2'	23:BB:2486:C:H5'	2.17	0.44
23:BB:2667:C:H2'	23:BB:2668:G:O4'	2.17	0.44
27:BK:5:GLN:HA	27:BK:20:MET:SD	2.58	0.44
34:B3:9:ALA:C	34:B3:11:LYS:H	2.20	0.44
37:BL:78:ARG:HB3	37:BL:113:ALA:HB2	1.98	0.44
37:BL:127:VAL:HG22	37:BL:128:THR:N	2.32	0.44
40:BH:84:ALA:HA	40:BH:91:PHE:N	2.31	0.44
40:BH:133:GLN:HG2	40:BH:139:PHE:CD2	2.51	0.44
41:BJ:28:LEU:HG	41:BJ:32:LEU:HD12	1.99	0.44
49:BR:58:VAL:O	49:BR:58:VAL:HG13	2.16	0.44
52:BW:23:LYS:H	52:BW:68:PHE:HE2	1.66	0.44
53:B6:80:GLU:OE1	53:B6:91:ASN:ND2	2.50	0.44
53:B6:83:ILE:CG2	53:B6:90:LEU:HD12	2.46	0.44
1:CA:96:U:H2'	1:CA:97:G:H8	1.82	0.44
1:CA:248:C:O2'	1:CA:249:U:H5'	2.18	0.44
1:CA:375:U:O2'	1:CA:376:G:H5'	2.17	0.44
1:CA:389:A:H3'	1:CA:390:U:H6	1.82	0.44
1:CA:584:G:O2'	1:CA:585:G:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1048:G:OP1	13:CN:3:GLN:HB2	2.17	0.44
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.52	0.44
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.51	0.44
3:CD:81:LEU:C	3:CD:83:GLY:H	2.19	0.44
3:CD:104:MET:CE	3:CD:170:LEU:HD13	2.48	0.44
6:CG:72:VAL:HA	6:CG:89:GLU:HA	2.00	0.44
8:CI:87:MET:HB2	8:CI:94:ARG:CD	2.47	0.44
8:CI:114:LYS:H	8:CI:120:ALA:HA	1.83	0.44
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.16	0.44
10:CK:28:ASN:HD22	10:CK:29:THR:H	1.64	0.44
15:CP:10:GLY:HA3	15:CP:15:PRO:HA	1.99	0.44
15:CP:34:GLU:CD	15:CP:60:TRP:HE1	2.21	0.44
19:CT:27:MET:CE	19:CT:28:ARG:HG2	2.48	0.44
22:DA:8:C:H4'	43:DO:27:VAL:HG21	2.00	0.44
22:DA:80:U:H2'	22:DA:81:G:C8	2.52	0.44
23:DB:234:U:O2'	23:DB:235:U:H5'	2.17	0.44
23:DB:531:C:O2'	23:DB:563:A:H5"	2.17	0.44
23:DB:692:C:H2'	23:DB:693:A:H8	1.83	0.44
23:DB:783:A:H4'	23:DB:1779:U:O2	2.17	0.44
23:DB:955:U:OP1	38:DM:86:LYS:HE3	2.18	0.44
23:DB:1023:U:H2'	23:DB:1024:G:C5'	2.47	0.44
23:DB:1260:A:H2'	23:DB:1261:C:H6	1.83	0.44
23:DB:1366:A:H2'	23:DB:1367:A:O4'	2.17	0.44
23:DB:1572:A:O2'	23:DB:1573:G:H5'	2.18	0.44
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.17	0.44
23:DB:1849:G:H2'	23:DB:1850:G:C8	2.51	0.44
23:DB:1883:U:H2'	23:DB:1884:G:O4'	2.18	0.44
23:DB:2312:U:H5'	47:DF:84:ILE:HD12	1.99	0.44
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.53	0.44
23:DB:2368:C:H2'	23:DB:2369:A:C8	2.53	0.44
23:DB:2787:C:H5'	26:DD:66:GLY:HA3	1.99	0.44
23:DB:2893:A:H4'	23:DB:2894:G:C5'	2.48	0.44
28:DP:24:THR:C	28:DP:25:VAL:HG13	2.37	0.44
34:D3:31:ILE:HG12	34:D3:31:ILE:O	2.17	0.44
40:DH:87:GLU:HB2	40:DH:89:LYS:HZ2	1.81	0.44
44:DQ:8:ILE:O	44:DQ:11:ALA:HB3	2.18	0.44
44:DQ:20:ALA:HA	44:DQ:23:TYR:CE1	2.52	0.44
47:DF:102:LEU:HD13	47:DF:102:LEU:C	2.38	0.44
47:DF:106:ALA:HA	47:DF:135:ILE:HD11	2.00	0.44
49:DR:16:GLU:HG2	49:DR:101:ILE:CG1	2.48	0.44
49:DR:74:ILE:HB	49:DR:87:GLN:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:35:ILE:O	52:DW:37:VAL:N	2.51	0.44
53:D6:81:LYS:HA	53:D6:84:ARG:HH22	1.80	0.44
53:D6:90:LEU:HB3	53:D6:101:ILE:CG2	2.47	0.44
1:AA:518:C:H2'	1:AA:530:G:H8	1.80	0.44
1:AA:900:A:O2'	1:AA:901:A:H5'	2.17	0.44
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.17	0.44
1:AA:1269:A:N3	1:AA:1326:U:H1'	2.32	0.44
1:AA:1348:U:H4'	8:AI:121:ARG:HE	1.82	0.44
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.52	0.44
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.18	0.44
3:AD:126:GLY:O	3:AD:127:ARG:HD2	2.18	0.44
8:AI:21:LYS:HB3	8:AI:61:ASP:O	2.17	0.44
8:AI:56:MET:CG	8:AI:57:VAL:N	2.81	0.44
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	2.00	0.44
14:AO:59:MET:HG2	14:AO:59:MET:H	1.49	0.44
17:AR:27:THR:HG22	17:AR:31:TYR:HE1	1.83	0.44
23:BB:265:A:O2'	23:BB:266:G:H4'	2.17	0.44
23:BB:506:G:H1'	23:BB:507:A:C8	2.52	0.44
23:BB:673:C:H5"	29:BE:76:PRO:HD2	2.00	0.44
23:BB:690:G:N3	25:BC:42:ARG:NH2	2.66	0.44
23:BB:820:A:H2'	23:BB:821:A:O4'	2.18	0.44
23:BB:1025:G:OP1	23:BB:1025:G:H8	2.00	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.44
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.52	0.44
23:BB:1136:G:H2'	23:BB:1137:G:H8	1.81	0.44
23:BB:1372:U:H1'	23:BB:2214:C:C4	2.53	0.44
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.82	0.44
23:BB:2818:U:O2'	23:BB:2819:G:H5'	2.18	0.44
25:BC:131:MET:CE	25:BC:189:ALA:HB2	2.47	0.44
25:BC:245:THR:HG23	25:BC:249:VAL:HB	2.00	0.44
27:BK:76:VAL:HG12	27:BK:77:ILE:N	2.32	0.44
27:BK:121:GLU:O	27:BK:122:VAL:C	2.55	0.44
30:BY:12:ALA:HB2	30:BY:53:MET:HE1	1.99	0.44
32:B4:27:CYS:CB	32:B4:33:HIS:HB2	2.48	0.44
39:BX:44:LYS:NZ	39:BX:48:ARG:CZ	2.80	0.44
47:BF:78:ILE:CA	47:BF:79:ARG:HH11	2.31	0.44
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.32	0.44
48:BG:30:GLY:HA3	48:BG:78:VAL:CA	2.41	0.44
48:BG:86:LEU:HD23	48:BG:162:ARG:O	2.18	0.44
48:BG:147:LEU:HA	48:BG:150:TYR:HD1	1.82	0.44
53:B6:107:THR:HG22	53:B6:108:GLU:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:159:G:H5'	1:CA:160:A:OP2	2.17	0.44
1:CA:900:A:O2'	1:CA:901:A:H5'	2.17	0.44
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.52	0.44
1:CA:1287:A:H1'	1:CA:1353:G:O2'	2.17	0.44
1:CA:1514:G:H2'	1:CA:1515:G:C8	2.52	0.44
3:CD:123:MET:HG3	3:CD:127:ARG:C	2.37	0.44
4:CE:52:ALA:N	4:CE:58:ALA:HB2	2.32	0.44
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.20	0.44
7:CH:77:VAL:HG12	7:CH:78:SER:N	2.32	0.44
8:CI:5:TYR:HB3	8:CI:88:GLU:OE2	2.18	0.44
8:CI:87:MET:HB2	8:CI:94:ARG:HD3	1.99	0.44
10:CK:89:GLY:O	10:CK:92:ARG:HB2	2.18	0.44
13:CN:26:LEU:CD1	13:CN:44:VAL:HG22	2.47	0.44
15:CP:46:LYS:C	15:CP:48:GLU:H	2.21	0.44
16:CQ:66:LEU:HD12	16:CQ:70:LYS:HG2	1.98	0.44
23:DB:357:C:H2'	23:DB:358:U:H6	1.80	0.44
23:DB:684:G:C6	23:DB:774:G:C4	3.05	0.44
23:DB:1052:C:H2'	23:DB:1053:C:H6	1.82	0.44
23:DB:1138:G:H21	41:DJ:108:MET:CE	2.30	0.44
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.81	0.44
23:DB:1870:C:H5"	23:DB:1871:A:C6	2.52	0.44
23:DB:2511:U:H2'	23:DB:2512:C:C6	2.53	0.44
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.45	0.44
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.47	0.44
23:DB:2882:A:OP1	42:DN:96:ARG:HD2	2.17	0.44
25:DC:107:LYS:N	25:DC:193:GLU:O	2.50	0.44
25:DC:180:MET:HB2	25:DC:268:ARG:H	1.82	0.44
32:D4:15:LYS:O	32:D4:16:ILE:HB	2.17	0.44
37:DL:111:ILE:HD13	37:DL:128:THR:HG23	1.98	0.44
38:DM:110:GLU:HG2	38:DM:111:GLU:N	2.33	0.44
41:DJ:35:ARG:HG3	41:DJ:52:ASP:OD1	2.18	0.44
45:DS:12:SER:O	45:DS:13:SER:HB3	2.17	0.44
45:DS:61:ASN:HB3	45:DS:62:ASP:H	1.45	0.44
45:DS:69:LEU:HG	45:DS:107:VAL:HG22	1.98	0.44
48:DG:3:VAL:O	48:DG:68:ARG:HG3	2.17	0.44
52:DW:44:PHE:HB3	52:DW:78:PHE:CE1	2.53	0.44
52:DW:61:LYS:HB3	52:DW:62:ALA:H	1.43	0.44
53:D6:62:ASP:HB2	53:D6:64:ARG:NH1	2.32	0.44
53:D6:84:ARG:NH1	53:D6:92:PRO:HG2	2.32	0.44
1:AA:856:C:O2'	1:AA:857:C:H5'	2.18	0.44
4:AE:92:ARG:HH11	4:AE:92:ARG:HB3	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:10:VAL:HA	5:AF:84:VAL:HA	2.00	0.44
6:AG:30:MET:HA	6:AG:38:ALA:HB2	2.00	0.44
6:AG:68:VAL:CG1	6:AG:133:ALA:HB1	2.46	0.44
6:AG:91:ARG:HD2	6:AG:91:ARG:N	2.33	0.44
7:AH:86:LYS:CG	7:AH:124:ILE:HD11	2.47	0.44
10:AK:86:LYS:HB2	10:AK:113:THR:HA	2.00	0.44
11:AL:66:ILE:HG21	11:AL:71:HIS:CB	2.48	0.44
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.99	0.44
12:AM:47:LEU:HD22	12:AM:51:GLN:HB3	1.99	0.44
12:AM:113:LYS:N	12:AM:114:PRO:CD	2.81	0.44
14:AO:28:GLN:O	14:AO:32:LEU:HD23	2.18	0.44
20:AB:41:ASN:HD22	20:AB:44:LYS:CB	2.31	0.44
20:AB:118:THR:HA	20:AB:121:GLN:HB3	1.99	0.44
23:BB:146:A:H2'	23:BB:147:C:C6	2.53	0.44
23:BB:559:G:P	41:BJ:111:LYS:HD3	2.57	0.44
23:BB:622:G:H2'	23:BB:623:C:H6	1.83	0.44
23:BB:910:A:H2'	23:BB:911:A:C8	2.53	0.44
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.83	0.44
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.82	0.44
23:BB:1169:A:H2'	23:BB:1170:C:C6	2.52	0.44
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.32	0.44
23:BB:1273:U:H4'	23:BB:1275:A:OP2	2.18	0.44
23:BB:1465:G:H2'	23:BB:1466:U:O4'	2.17	0.44
23:BB:1637:A:H2'	23:BB:1638:C:H6	1.83	0.44
23:BB:2057:G:H2'	23:BB:2058:A:O4'	2.17	0.44
23:BB:2327:A:N7	23:BB:2388:A:N6	2.65	0.44
23:BB:2353:G:H1'	52:BW:30:VAL:CG1	2.48	0.44
23:BB:2408:U:H2'	23:BB:2409:G:C8	2.53	0.44
23:BB:2689:U:H4'	23:BB:2690:U:OP2	2.18	0.44
23:BB:2787:C:H2'	23:BB:2788:C:C6	2.52	0.44
23:BB:2829:A:O2'	23:BB:2830:C:H5'	2.18	0.44
23:BB:2840:C:O2'	23:BB:2841:C:H5'	2.17	0.44
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.47	0.44
25:BC:34:GLU:HG3	25:BC:34:GLU:O	2.17	0.44
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.17	0.44
35:BV:29:ILE:HD12	35:BV:90:ASP:HA	1.99	0.44
37:BL:3:LEU:O	37:BL:5:THR:N	2.50	0.44
38:BM:21:ALA:HB1	38:BM:100:LYS:HE2	1.99	0.44
38:BM:68:PHE:CD1	38:BM:69:PRO:HD2	2.53	0.44
39:BX:56:LEU:O	39:BX:58:ASN:N	2.50	0.44
40:BH:9:VAL:HB	40:BH:12:LEU:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:117:LEU:HD13	40:BH:121:VAL:HG23	1.99	0.44
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.86	0.44
44:BQ:65:ASN:CB	44:BQ:75:TYR:HB2	2.48	0.44
45:BS:28:LYS:HB3	45:BS:29:VAL:H	1.42	0.44
46:BU:58:VAL:HG12	46:BU:59:GLU:N	2.24	0.44
46:BU:87:GLU:OE2	46:BU:88:ASP:HB3	2.17	0.44
47:BF:119:LYS:N	47:BF:119:LYS:HD2	2.33	0.44
47:BF:138:PRO:HA	47:BF:142:TYR:CZ	2.52	0.44
50:BT:11:LEU:HD22	50:BT:11:LEU:N	2.27	0.44
53:B6:16:LYS:HA	53:B6:19:GLU:OE2	2.18	0.44
53:B6:44:GLU:CA	53:B6:49:HIS:HA	2.36	0.44
1:CA:128:G:H2'	1:CA:129:A:H8	1.81	0.44
1:CA:213:G:H2'	1:CA:213:G:N3	2.33	0.44
1:CA:454:G:O2'	1:CA:455:G:H5'	2.17	0.44
1:CA:912:C:H2'	1:CA:913:A:C8	2.52	0.44
1:CA:1346:A:H5"	8:CI:121:ARG:HH21	1.83	0.44
1:CA:1472:U:H2'	1:CA:1473:G:H8	1.83	0.44
9:CJ:31:ARG:HE	9:CJ:31:ARG:HB2	1.64	0.44
16:CQ:47:ASP:OD2	16:CQ:51:GLU:HG2	2.17	0.44
20:CB:41:ASN:HD22	20:CB:44:LYS:HB3	1.83	0.44
20:CB:119:GLN:HA	20:CB:124:THR:HG23	2.00	0.44
20:CB:204:ASP:O	20:CB:205:ALA:HB3	2.17	0.44
21:CU:19:LYS:CD	21:CU:20:ARG:HH21	2.29	0.44
23:DB:77:G:O2'	23:DB:78:U:H5'	2.17	0.44
23:DB:189:G:H2'	23:DB:205:G:N2	2.33	0.44
23:DB:607:U:O4	23:DB:620:G:H5"	2.17	0.44
23:DB:625:G:O2'	23:DB:626:A:H5'	2.18	0.44
23:DB:968:C:O2'	23:DB:969:G:H5'	2.18	0.44
23:DB:1057:A:H62	23:DB:1086:A:H2'	1.82	0.44
23:DB:1583:A:OP2	23:DB:1583:A:H2	2.01	0.44
23:DB:1591:A:H2'	23:DB:1592:C:C6	2.52	0.44
23:DB:1749:A:H2'	23:DB:1750:G:C8	2.52	0.44
23:DB:1749:A:H2'	23:DB:1750:G:H8	1.83	0.44
23:DB:1930:G:H2'	23:DB:1968:G:N1	2.33	0.44
23:DB:1936:A:H2	23:DB:1943:U:O4	2.01	0.44
23:DB:2219:U:O2'	23:DB:2220:U:H5'	2.18	0.44
23:DB:2266:A:H1'	23:DB:2267:A:N6	2.32	0.44
23:DB:2361:G:O2'	23:DB:2362:C:H5'	2.18	0.44
23:DB:2655:G:H1'	23:DB:2656:U:H5	1.83	0.44
23:DB:2730:C:O2'	23:DB:2731:G:H5'	2.17	0.44
23:DB:2749:A:H3'	23:DB:2750:A:H2'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:45:THR:O	24:DI:48:ILE:HG22	2.17	0.44
25:DC:30:ALA:C	25:DC:32:LEU:H	2.21	0.44
37:DL:85:VAL:HG22	37:DL:94:THR:CG2	2.47	0.44
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.17	0.44
40:DH:85:GLY:N	40:DH:89:LYS:H	2.15	0.44
40:DH:110:VAL:HG22	40:DH:110:VAL:O	2.18	0.44
40:DH:143:ILE:HG22	40:DH:144:VAL:N	2.33	0.44
41:DJ:25:LEU:HB2	41:DJ:62:VAL:HG22	2.00	0.44
41:DJ:28:LEU:HG	41:DJ:32:LEU:HD12	1.99	0.44
44:DQ:24:TYR:CG	44:DQ:25:GLY:N	2.86	0.44
44:DQ:29:ARG:HG2	44:DQ:29:ARG:NH1	2.33	0.44
45:DS:26:GLY:HA2	45:DS:71:VAL:O	2.18	0.44
45:DS:29:VAL:HG11	45:DS:55:ILE:CD1	2.47	0.44
46:DU:47:PRO:HB3	46:DU:55:GLY:CA	2.47	0.44
46:DU:58:VAL:HG12	46:DU:59:GLU:N	2.27	0.44
52:DW:54:ARG:C	52:DW:56:HIS:H	2.21	0.44
1:AA:204:G:C2'	1:AA:466:A:H62	2.30	0.44
1:AA:600:A:H2'	1:AA:601:G:H8	1.83	0.44
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.53	0.44
1:AA:1514:G:H2'	1:AA:1515:G:C8	2.52	0.44
6:AG:144:ALA:O	6:AG:146:ALA:N	2.46	0.44
6:AG:145:GLU:C	6:AG:147:ASN:N	2.69	0.44
8:AI:78:ILE:O	8:AI:82:ILE:HG13	2.18	0.44
9:AJ:37:ARG:HA	9:AJ:37:ARG:CZ	2.48	0.44
9:AJ:92:LEU:HB2	9:AJ:93:ALA:H	1.61	0.44
13:AN:30:ILE:O	13:AN:32:ASP:N	2.45	0.44
14:AO:43:PHE:CE1	14:AO:56:LEU:HD22	2.53	0.44
20:AB:95:TRP:HZ3	20:AB:174:GLU:OE2	2.00	0.44
21:AU:16:ARG:NH2	21:AU:19:LYS:NZ	2.66	0.44
23:BB:173:A:H2'	23:BB:174:U:H6	1.81	0.44
23:BB:316:C:O2'	23:BB:317:G:H5'	2.18	0.44
23:BB:425:G:O2'	23:BB:426:C:H5'	2.17	0.44
23:BB:438:G:H2'	23:BB:439:A:C8	2.53	0.44
23:BB:593:U:H2'	23:BB:594:U:H6	1.82	0.44
23:BB:675:A:O2'	29:BE:62:GLN:NE2	2.50	0.44
23:BB:800:A:H4'	23:BB:801:G:O5'	2.18	0.44
23:BB:1170:C:H2'	23:BB:1171:G:O4'	2.17	0.44
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.52	0.44
23:BB:1689:A:H2'	23:BB:1690:A:H8	1.82	0.44
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.51	0.44
23:BB:1824:G:H1'	25:BC:251:THR:CG2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.53	0.44
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.51	0.44
23:BB:2460:U:O2'	23:BB:2461:A:H5'	2.17	0.44
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.44	0.44
23:BB:2893:A:H4'	23:BB:2894:G:O5'	2.17	0.44
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.32	0.44
25:BC:121:ALA:HB3	25:BC:129:LEU:CD1	2.48	0.44
25:BC:184:GLU:O	25:BC:186:ASP:N	2.43	0.44
28:BP:107:ALA:O	28:BP:108:ARG:C	2.56	0.44
29:BE:157:LEU:HG	29:BE:169:VAL:HG11	2.00	0.44
29:BE:166:LYS:O	29:BE:167:VAL:HB	2.18	0.44
37:BL:82:LEU:O	37:BL:85:VAL:HG12	2.18	0.44
39:BX:9:LYS:HZ2	39:BX:60:LYS:HE3	1.81	0.44
40:BH:54:LEU:O	40:BH:58:LEU:N	2.51	0.44
40:BH:99:ILE:O	40:BH:103:VAL:HG13	2.18	0.44
40:BH:128:HIS:CG	40:BH:130:VAL:HG22	2.53	0.44
42:BN:52:ILE:O	42:BN:55:ALA:HB3	2.18	0.44
43:BO:14:ALA:C	43:BO:16:ARG:H	2.21	0.44
48:BG:108:PHE:C	48:BG:110:HIS:H	2.21	0.44
49:BR:59:ILE:H	49:BR:59:ILE:HG13	1.60	0.44
51:BZ:19:SER:OG	51:BZ:23:ASN:HB2	2.17	0.44
51:BZ:77:LYS:CG	51:BZ:78:TYR:H	2.29	0.44
52:BW:59:PHE:CD2	52:BW:61:LYS:HD2	2.53	0.44
53:B6:48:ALA:O	53:B6:50:VAL:HG22	2.17	0.44
1:CA:34:C:H2'	1:CA:35:G:C8	2.53	0.44
1:CA:220:G:O2'	1:CA:221:C:H5'	2.17	0.44
1:CA:716:A:N3	10:CK:118:ASN:O	2.50	0.44
1:CA:829:G:H4'	20:CB:24:PRO:HG3	1.99	0.44
1:CA:1036:A:H2'	1:CA:1037:C:H6	1.83	0.44
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.17	0.44
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.83	0.44
3:CD:32:LYS:O	3:CD:35:GLN:HB2	2.17	0.44
4:CE:98:ALA:HB3	4:CE:121:ASN:C	2.38	0.44
6:CG:30:MET:HA	6:CG:38:ALA:HB2	2.00	0.44
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.83	0.44
9:CJ:92:LEU:HB2	9:CJ:93:ALA:H	1.61	0.44
18:CS:62:THR:HG22	18:CS:63:ASP:N	2.30	0.44
19:CT:19:HIS:CE1	19:CT:23:ARG:HG3	2.53	0.44
21:CU:33:ARG:NH1	21:CU:34:ARG:HH11	2.15	0.44
21:CU:40:PRO:C	21:CU:42:THR:N	2.71	0.44
23:DB:139:U:H3	50:DT:49:LYS:HZ1	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:235:U:H2'	23:DB:236:C:H6	1.83	0.44
23:DB:299:A:N6	23:DB:322:A:O2'	2.50	0.44
23:DB:380:G:O2'	23:DB:381:G:H5'	2.18	0.44
23:DB:634:C:O5'	23:DB:634:C:H6	2.01	0.44
23:DB:675:A:C6	23:DB:676:A:C6	3.06	0.44
23:DB:719:C:H2'	23:DB:720:U:C6	2.53	0.44
23:DB:1345:C:H5'	23:DB:1396:U:C5	2.53	0.44
23:DB:1946:U:H2'	23:DB:1947:C:C6	2.52	0.44
23:DB:1984:G:O2'	23:DB:1985:C:H5'	2.17	0.44
23:DB:2252:G:H2'	23:DB:2253:G:C8	2.52	0.44
23:DB:2298:A:N1	23:DB:2321:U:C5	2.85	0.44
23:DB:2393:U:H2'	23:DB:2394:C:O4'	2.18	0.44
23:DB:2785:C:H2'	23:DB:2786:U:H6	1.82	0.44
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.47	0.44
25:DC:64:VAL:O	25:DC:102:TYR:O	2.36	0.44
26:DD:15:PHE:CD1	26:DD:15:PHE:N	2.82	0.44
26:DD:51:THR:HG22	26:DD:52:THR:H	1.83	0.44
29:DE:106:LYS:O	29:DE:110:SER:HB2	2.17	0.44
38:DM:18:ARG:HA	38:DM:18:ARG:HD2	1.59	0.44
38:DM:26:VAL:HG13	38:DM:133:LYS:HA	1.99	0.44
38:DM:26:VAL:HA	38:DM:66:ARG:HH21	1.82	0.44
38:DM:55:ARG:HH21	38:DM:55:ARG:CA	2.24	0.44
45:DS:25:ARG:CZ	45:DS:74:ILE:HG23	2.48	0.44
45:DS:42:LYS:O	45:DS:46:LEU:HG	2.18	0.44
46:DU:40:LEU:HB3	46:DU:59:GLU:HG2	1.99	0.44
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.17	0.44
47:DF:110:ILE:HB	47:DF:113:PHE:HB3	1.98	0.44
47:DF:174:PHE:HB3	47:DF:176:PHE:CE1	2.53	0.44
48:DG:10:VAL:CG2	48:DG:49:LEU:HD13	2.48	0.44
48:DG:172:GLU:O	48:DG:173:ALA:HB2	2.18	0.44
1:AA:34:C:H2'	1:AA:35:G:H8	1.82	0.44
1:AA:160:A:H1'	1:AA:344:A:C5	2.53	0.44
1:AA:175:C:O2'	1:AA:176:C:H5'	2.18	0.44
1:AA:190:A:H2'	1:AA:191:G:O4'	2.18	0.44
1:AA:333:U:H2'	1:AA:334:C:H6	1.83	0.44
1:AA:1074:G:C4'	20:AB:102:ASN:HB2	2.48	0.44
1:AA:1119:C:OP2	8:AI:10:ARG:NH2	2.51	0.44
1:AA:1234:C:H2'	1:AA:1235:U:C6	2.52	0.44
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.53	0.44
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.17	0.44
3:AD:24:VAL:HG12	3:AD:160:LEU:HD12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:32:LYS:O	3:AD:35:GLN:HB2	2.18	0.44
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.33	0.44
3:AD:153:ARG:HG3	3:AD:154:VAL:N	2.33	0.44
16:AQ:74:LEU:C	16:AQ:74:LEU:HD13	2.38	0.44
20:AB:13:VAL:CG1	20:AB:207:ARG:HG2	2.48	0.44
20:AB:162:VAL:HG21	20:AB:168:GLU:HB2	1.99	0.44
23:BB:153:U:O2'	23:BB:154:U:H5'	2.18	0.44
23:BB:276:U:O2'	23:BB:278:A:N7	2.51	0.44
23:BB:282:A:H2'	23:BB:283:G:C8	2.53	0.44
23:BB:737:C:O2'	23:BB:738:G:H5'	2.17	0.44
23:BB:834:G:O2'	23:BB:835:C:H5'	2.17	0.44
23:BB:866:A:H61	23:BB:913:U:C1'	2.31	0.44
23:BB:1313:U:O2	23:BB:1313:U:C2'	2.66	0.44
23:BB:1607:C:N4	23:BB:1622:G:OP2	2.51	0.44
23:BB:1737:G:H8	23:BB:1737:G:OP2	2.00	0.44
23:BB:2471:A:O2'	23:BB:2472:G:C8	2.58	0.44
23:BB:2491:U:H5"	23:BB:2570:G:C5'	2.47	0.44
23:BB:2818:U:H4'	23:BB:2837:A:C4'	2.47	0.44
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.18	0.44
25:BC:67:LYS:O	25:BC:188:ARG:HD3	2.18	0.44
26:BD:111:GLY:N	26:BD:194:PRO:HG2	2.31	0.44
27:BK:8:LEU:O	27:BK:19:VAL:HG22	2.17	0.44
27:BK:113:MET:HA	27:BK:116:ILE:HD11	1.99	0.44
29:BE:108:ILE:HD11	29:BE:181:ILE:CB	2.33	0.44
38:BM:74:THR:O	38:BM:75:GLU:HB2	2.18	0.44
40:BH:41:LYS:HA	40:BH:44:ILE:CG1	2.46	0.44
40:BH:99:ILE:HD12	40:BH:144:VAL:HG21	1.98	0.44
42:BN:58:ASP:OD2	42:BN:63:ARG:NH2	2.51	0.44
43:BO:83:LEU:HD12	43:BO:83:LEU:HA	1.84	0.44
47:BF:140:ILE:H	47:BF:140:ILE:HG13	1.58	0.44
48:BG:104:LEU:O	48:BG:111:PRO:HA	2.17	0.44
49:BR:86:GLN:HE21	49:BR:86:GLN:HB2	1.53	0.44
50:BT:57:VAL:O	50:BT:85:VAL:O	2.36	0.44
53:B6:36:ALA:O	53:B6:39:LEU:HG	2.17	0.44
53:B6:79:ILE:O	53:B6:83:ILE:HG12	2.18	0.44
1:CA:58:C:O2'	1:CA:59:A:H5'	2.18	0.44
1:CA:513:C:H2'	1:CA:514:C:C6	2.53	0.44
1:CA:575:G:H4'	1:CA:576:C:OP1	2.18	0.44
1:CA:821:G:H2'	1:CA:822:U:H6	1.82	0.44
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.18	0.44
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1439:G:H2'	1:CA:1440:U:O4'	2.17	0.44
4:CE:103:GLY:O	4:CE:121:ASN:HA	2.17	0.44
8:CI:90:ASP:O	8:CI:93:LEU:HG	2.17	0.44
10:CK:92:ARG:HE	21:CU:20:ARG:NH2	2.15	0.44
12:CM:15:VAL:HG21	12:CM:40:GLU:HB3	2.00	0.44
12:CM:89:ARG:HH22	12:CM:94:LEU:HD12	1.81	0.44
16:CQ:61:ARG:HD2	16:CQ:61:ARG:C	2.38	0.44
17:CR:22:TYR:HB2	17:CR:61:ALA:HB2	2.00	0.44
19:CT:68:LYS:HE2	19:CT:68:LYS:CA	2.48	0.44
20:CB:71:THR:HG23	20:CB:94:ARG:N	2.33	0.44
20:CB:166:ASP:OD2	20:CB:190:SER:HA	2.17	0.44
22:DA:69:G:H3'	22:DA:70:C:H6	1.83	0.44
23:DB:114:U:H2'	23:DB:114:U:O2	2.16	0.44
23:DB:150:U:H2'	23:DB:151:C:O4'	2.18	0.44
23:DB:218:A:H2'	23:DB:219:A:O4'	2.18	0.44
23:DB:459:U:H5"	36:D2:40:ALA:HB2	1.99	0.44
23:DB:573:U:N3	23:DB:2031:A:OP1	2.38	0.44
23:DB:666:A:H2'	23:DB:667:U:C6	2.53	0.44
23:DB:1273:U:H4'	23:DB:1275:A:OP2	2.17	0.44
23:DB:1773:A:H2'	23:DB:1774:C:O4'	2.18	0.44
23:DB:2020:A:O2'	23:DB:2021:C:H5'	2.18	0.44
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.44
25:DC:20:ASN:O	25:DC:23:LEU:HD13	2.18	0.44
25:DC:67:LYS:O	25:DC:188:ARG:HD3	2.18	0.44
25:DC:79:ARG:HD2	25:DC:81:GLU:HG3	2.00	0.44
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.83	0.44
29:DE:29:HIS:O	29:DE:33:VAL:HG23	2.16	0.44
35:DV:44:HIS:NE2	35:DV:85:LYS:HB2	2.33	0.44
35:DV:78:GLN:O	35:DV:87:GLN:N	2.43	0.44
40:DH:88:GLY:C	40:DH:89:LYS:HD2	2.38	0.44
41:DJ:112:GLY:N	41:DJ:113:PRO:HD2	2.32	0.44
42:DN:8:ARG:HB2	42:DN:43:GLU:OE1	2.17	0.44
44:DQ:80:ASN:O	44:DQ:84:LYS:HG3	2.17	0.44
46:DU:35:VAL:HB	46:DU:38:ILE:HB	2.00	0.44
47:DF:113:PHE:HE1	47:DF:116:LEU:HB2	1.83	0.44
47:DF:142:TYR:H	47:DF:142:TYR:HD1	1.61	0.44
49:DR:86:GLN:HE21	49:DR:86:GLN:HB2	1.53	0.44
52:DW:30:VAL:HG13	52:DW:30:VAL:O	2.18	0.44
52:DW:49:ASN:HB3	52:DW:81:ILE:CD1	2.48	0.44
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.17	0.44
1:AA:92:U:O2	1:AA:92:U:H2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:214:C:H2'	1:AA:215:C:H6	1.82	0.43
1:AA:327:A:O2'	1:AA:328:C:O4'	2.35	0.43
1:AA:404:G:OP1	3:AD:114:ARG:HD3	2.18	0.43
1:AA:450:G:N7	1:AA:481:G:O6	2.50	0.43
1:AA:499:A:O4'	1:AA:547:A:N6	2.51	0.43
1:AA:658:C:H2'	1:AA:659:U:H6	1.83	0.43
1:AA:771:G:H2'	1:AA:772:U:C6	2.53	0.43
1:AA:960:U:H5"	1:AA:960:U:O2	2.17	0.43
1:AA:1048:G:H5"	13:AN:2:LYS:HD2	1.99	0.43
2:AC:34:SER:O	2:AC:38:VAL:HG22	2.18	0.43
2:AC:155:ARG:HD2	2:AC:155:ARG:HA	1.88	0.43
3:AD:73:ASN:O	3:AD:76:LYS:HB2	2.18	0.43
3:AD:102:TYR:HE1	3:AD:108:ALA:O	2.01	0.43
3:AD:117:VAL:HG12	3:AD:130:ASN:HA	2.00	0.43
9:AJ:7:ARG:CZ	9:AJ:101:SER:HB2	2.48	0.43
11:AL:66:ILE:HD12	11:AL:66:ILE:N	2.33	0.43
20:AB:19:THR:HG23	20:AB:20:ARG:N	2.33	0.43
20:AB:86:CYS:C	20:AB:88:GLN:H	2.21	0.43
23:BB:282:A:H2'	23:BB:283:G:H8	1.83	0.43
23:BB:642:U:O2'	23:BB:644:A:N7	2.44	0.43
23:BB:797:G:OP2	29:BE:57:LYS:HB2	2.18	0.43
23:BB:822:G:H2'	23:BB:823:C:C6	2.53	0.43
23:BB:1339:G:H21	23:BB:1603:A:H1'	1.82	0.43
23:BB:1418:G:C2'	23:BB:1580:A:H61	2.31	0.43
23:BB:1885:A:H2'	23:BB:1886:U:O4'	2.18	0.43
23:BB:2007:U:O2'	23:BB:2008:C:H5'	2.18	0.43
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.53	0.43
23:BB:2110:G:N2	23:BB:2180:U:H3	2.15	0.43
23:BB:2461:A:H1'	23:BB:2492:U:C2	2.53	0.43
23:BB:2552:U:C2	23:BB:2554:U:H5'	2.53	0.43
23:BB:2746:U:C4'	48:BG:138:GLN:HA	2.48	0.43
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.81	0.43
23:BB:2873:A:O4'	42:BN:6:SER:HB3	2.18	0.43
23:BB:2893:A:H4'	23:BB:2894:G:C5'	2.48	0.43
23:BB:2893:A:H4'	23:BB:2894:G:H5'	2.00	0.43
24:BI:14:ALA:HA	24:BI:45:THR:HG21	1.98	0.43
24:BI:63:ASP:O	24:BI:65:SER:N	2.50	0.43
26:BD:40:LEU:HD12	26:BD:41:ALA:H	1.83	0.43
26:BD:125:TRP:HE1	26:BD:161:MET:N	2.16	0.43
28:BP:8:GLU:HG2	28:BP:54:LEU:CD2	2.48	0.43
29:BE:151:GLY:HA2	29:BE:195:GLN:HE22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:49:LYS:CG	33:B1:50:GLU:H	2.17	0.43
34:B3:16:THR:HG21	34:B3:48:MET:SD	2.57	0.43
35:BV:62:THR:CG2	35:BV:71:LYS:HG2	2.48	0.43
37:BL:14:LYS:O	37:BL:16:GLY:N	2.51	0.43
41:BJ:25:LEU:HB2	41:BJ:62:VAL:HG22	2.00	0.43
41:BJ:74:TYR:CD1	41:BJ:92:MET:HG3	2.54	0.43
45:BS:81:SER:CA	45:BS:99:ARG:HA	2.44	0.43
46:BU:41:VAL:HG22	46:BU:60:LYS:O	2.18	0.43
48:BG:22:VAL:C	48:BG:23:ILE:HG13	2.39	0.43
52:BW:12:GLY:O	52:BW:13:ARG:HB2	2.18	0.43
52:BW:49:ASN:HB3	52:BW:81:ILE:CD1	2.47	0.43
1:CA:176:C:H2'	1:CA:177:G:N3	2.34	0.43
1:CA:191:G:H8	1:CA:191:G:OP2	2.01	0.43
1:CA:620:C:C1'	3:CD:131:ILE:HD13	2.48	0.43
1:CA:664:G:H22	1:CA:741:G:H1	1.66	0.43
1:CA:711:G:O2'	1:CA:712:A:H5'	2.18	0.43
3:CD:117:VAL:HG12	3:CD:130:ASN:HA	2.00	0.43
5:CF:60:VAL:HG12	5:CF:61:LEU:N	2.33	0.43
10:CK:52:ARG:HA	10:CK:52:ARG:HD2	1.62	0.43
14:CO:43:PHE:CE1	14:CO:56:LEU:HD22	2.53	0.43
15:CP:23:ASP:CG	15:CP:25:ARG:HE	2.22	0.43
23:DB:6:A:O3'	41:DJ:132:HIS:CE1	2.71	0.43
23:DB:484:C:H2'	23:DB:485:C:H6	1.83	0.43
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.86	0.43
23:DB:1171:G:H2'	23:DB:1172:C:C6	2.53	0.43
23:DB:1310:G:H1'	23:DB:1611:C:H5'	1.99	0.43
23:DB:1313:U:O2	23:DB:1313:U:H2'	2.17	0.43
23:DB:1341:G:N2	23:DB:1398:C:H4'	2.33	0.43
23:DB:2597:G:OP1	25:DC:240:GLY:HA3	2.18	0.43
23:DB:2756:U:H4'	23:DB:2757:A:OP1	2.18	0.43
23:DB:2787:C:H2'	23:DB:2788:C:C6	2.53	0.43
23:DB:2854:G:H2'	23:DB:2855:C:H6	1.82	0.43
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.39	0.43
26:DD:125:TRP:NE1	26:DD:161:MET:N	2.65	0.43
26:DD:125:TRP:HE1	26:DD:161:MET:N	2.16	0.43
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.99	0.43
28:DP:33:GLU:HA	28:DP:33:GLU:OE1	2.18	0.43
34:D3:33:THR:HG23	34:D3:34:LYS:N	2.33	0.43
35:DV:1:MET:HE2	35:DV:2:PHE:H	1.82	0.43
37:DL:93:ASN:ND2	37:DL:94:THR:H	2.16	0.43
38:DM:69:PRO:HA	38:DM:94:ALA:CA	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:54:ILE:O	41:DJ:122:LEU:HA	2.17	0.43
42:DN:32:GLU:HB3	42:DN:115:LEU:HG	2.00	0.43
45:DS:74:ILE:O	45:DS:75:PHE:HB3	2.18	0.43
48:DG:9:VAL:HG12	48:DG:11:PRO:CD	2.42	0.43
48:DG:144:ALA:O	48:DG:147:LEU:HB2	2.17	0.43
50:DT:48:GLN:HE21	50:DT:48:GLN:CA	2.28	0.43
52:DW:25:PHE:HD1	52:DW:26:GLY:H	1.64	0.43
1:AA:87:C:H2'	1:AA:88:U:C4'	2.48	0.43
1:AA:238:A:H3'	1:AA:239:U:H5"	2.00	0.43
1:AA:454:G:H2'	1:AA:455:G:H8	1.82	0.43
1:AA:659:U:H2'	1:AA:660:C:C6	2.53	0.43
1:AA:771:G:O2'	1:AA:772:U:H5'	2.18	0.43
1:AA:1165:U:H2'	1:AA:1166:G:O4'	2.18	0.43
2:AC:42:LEU:O	2:AC:46:LEU:HD23	2.18	0.43
2:AC:172:VAL:O	2:AC:174:LEU:HD12	2.18	0.43
4:AE:92:ARG:HB3	4:AE:92:ARG:NH1	2.32	0.43
5:AF:99:ALA:O	5:AF:100:SER:CB	2.67	0.43
6:AG:125:ASP:HA	6:AG:128:GLU:OE1	2.19	0.43
11:AL:13:ARG:HB2	11:AL:14:LYS:H	1.44	0.43
12:AM:79:LEU:HD22	12:AM:86:ARG:HH21	1.84	0.43
20:AB:148:GLY:O	20:AB:151:LYS:HG2	2.18	0.43
20:AB:212:TYR:HA	20:AB:215:ALA:HB3	2.00	0.43
23:BB:337:C:OP1	46:BU:3:LYS:HG3	2.18	0.43
23:BB:362:A:C8	23:BB:363:G:N7	2.86	0.43
23:BB:428:A:O2'	23:BB:429:A:H5'	2.18	0.43
23:BB:526:A:H62	23:BB:2626:C:H4'	1.83	0.43
23:BB:1304:A:H2'	23:BB:1305:C:C6	2.54	0.43
23:BB:1445:G:O2'	23:BB:1446:C:H5'	2.16	0.43
23:BB:1818:U:C4	25:BC:152:GLN:HB3	2.53	0.43
23:BB:1883:U:H2'	23:BB:1884:G:O4'	2.17	0.43
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.82	0.43
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.49	0.43
23:BB:2559:C:O2'	23:BB:2560:A:H5'	2.18	0.43
23:BB:2794:C:H2'	23:BB:2795:C:H6	1.83	0.43
23:BB:2818:U:H4'	23:BB:2837:A:O4'	2.17	0.43
24:BI:4:VAL:O	24:BI:4:VAL:HG13	2.17	0.43
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.51	0.43
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.18	0.43
27:BK:110:GLU:HA	27:BK:113:MET:HG2	1.99	0.43
28:BP:61:ARG:HH21	28:BP:61:ARG:HB3	1.83	0.43
35:BV:4:ILE:HD11	35:BV:61:LEU:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:9:ARG:HA	35:BV:41:GLU:OE2	2.18	0.43
39:BX:15:ASN:ND2	39:BX:15:ASN:H	2.16	0.43
42:BN:101:GLY:HA2	42:BN:109:PRO:HA	2.00	0.43
44:BQ:33:VAL:CG2	44:BQ:34:ALA:N	2.81	0.43
44:BQ:80:ASN:O	44:BQ:84:LYS:HG3	2.18	0.43
44:BQ:87:VAL:HG12	44:BQ:89:ILE:HD13	1.99	0.43
45:BS:43:ALA:O	45:BS:46:LEU:HB2	2.19	0.43
45:BS:99:ARG:HB3	45:BS:99:ARG:HE	1.63	0.43
47:BF:116:LEU:HB3	47:BF:176:PHE:HA	1.99	0.43
50:BT:4:GLU:OE2	50:BT:5:GLU:HG2	2.18	0.43
52:BW:30:VAL:HG13	52:BW:30:VAL:O	2.18	0.43
1:CA:397:A:H3'	1:CA:397:A:N3	2.34	0.43
1:CA:908:A:O2'	1:CA:909:A:H5'	2.18	0.43
1:CA:984:C:O2'	1:CA:985:C:H5'	2.18	0.43
2:CC:34:SER:O	2:CC:38:VAL:HG22	2.18	0.43
5:CF:53:LYS:HA	5:CF:53:LYS:CE	2.48	0.43
6:CG:16:LYS:HD3	6:CG:17:PHE:CE1	2.54	0.43
8:CI:45:MET:SD	8:CI:45:MET:N	2.91	0.43
13:CN:30:ILE:CG2	13:CN:44:VAL:HG11	2.49	0.43
19:CT:53:MET:HA	19:CT:56:ILE:HD12	1.99	0.43
20:CB:8:MET:HG3	20:CB:9:LEU:H	1.81	0.43
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.82	0.43
20:CB:98:GLY:HA2	20:CB:101:THR:CG2	2.48	0.43
20:CB:160:LEU:HD21	20:CB:182:VAL:HG22	2.00	0.43
20:CB:162:VAL:HG21	20:CB:168:GLU:HB2	2.00	0.43
22:DA:64:G:H2'	22:DA:65:U:H6	1.83	0.43
23:DB:141:G:N3	23:DB:141:G:C3'	2.78	0.43
23:DB:226:A:H5"	23:DB:257:C:O2'	2.18	0.43
23:DB:512:G:P	23:DB:1215:G:N2	2.91	0.43
23:DB:673:C:C4'	29:DE:77:ILE:HD11	2.48	0.43
23:DB:720:U:O2'	23:DB:721:A:H5'	2.18	0.43
23:DB:822:G:H2'	23:DB:823:C:H6	1.83	0.43
23:DB:918:A:C2'	23:DB:919:U:H5'	2.43	0.43
23:DB:1098:A:C2'	24:DI:4:VAL:C	2.87	0.43
23:DB:1336:A:H3'	23:DB:1337:G:H8	1.83	0.43
23:DB:1422:G:H1'	23:DB:1495:A:H61	1.83	0.43
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.18	0.43
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.18	0.43
23:DB:1633:G:O2'	23:DB:1634:A:H5"	2.17	0.43
23:DB:1856:U:C2'	23:DB:1857:G:H5'	2.47	0.43
23:DB:2047:C:O2'	23:DB:2048:G:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.83	0.43
23:DB:2329:U:H2'	23:DB:2330:G:H8	1.82	0.43
23:DB:2496:C:H5'	38:DM:82:MET:HG3	2.00	0.43
23:DB:2754:U:H6	23:DB:2754:U:O5'	2.01	0.43
25:DC:170:TYR:HD2	25:DC:184:GLU:HA	1.82	0.43
25:DC:245:THR:HG23	25:DC:249:VAL:HB	2.00	0.43
28:DP:6:GLN:HE21	28:DP:7:LEU:N	2.16	0.43
34:D3:28:LEU:HD22	34:D3:43:LEU:HB2	2.00	0.43
35:DV:89:ILE:O	35:DV:89:ILE:HD12	2.18	0.43
37:DL:51:GLU:OE1	37:DL:57:LEU:HB2	2.18	0.43
38:DM:66:ARG:NE	38:DM:101:VAL:HG11	2.33	0.43
38:DM:74:THR:O	38:DM:75:GLU:HB2	2.18	0.43
38:DM:82:MET:HE3	38:DM:83:GLY:N	2.31	0.43
40:DH:27:ARG:H	40:DH:31:VAL:HG23	1.80	0.43
41:DJ:54:ILE:HD12	41:DJ:55:ILE:H	1.82	0.43
41:DJ:55:ILE:HG22	41:DJ:123:LYS:HB2	1.99	0.43
42:DN:24:MET:CE	42:DN:44:LEU:HD13	2.47	0.43
43:DO:66:GLY:O	43:DO:102:ARG:HD3	2.18	0.43
44:DQ:90:ASP:C	49:DR:11:GLN:HE22	2.22	0.43
47:DF:38:GLY:HA2	47:DF:85:GLY:HA3	2.00	0.43
47:DF:57:ALA:HB2	47:DF:64:PRO:HG2	1.99	0.43
47:DF:94:ARG:O	47:DF:98:PHE:N	2.49	0.43
48:DG:173:ALA:HB3	48:DG:175:LYS:HZ3	1.82	0.43
1:AA:15:G:H2'	1:AA:16:A:C8	2.53	0.43
1:AA:81:A:C2	1:AA:82:G:N7	2.87	0.43
1:AA:592:G:O2'	1:AA:593:U:H5'	2.18	0.43
1:AA:668:G:O2'	1:AA:669:G:H5'	2.18	0.43
1:AA:1020:G:H2'	1:AA:1020:G:N3	2.33	0.43
1:AA:1325:C:O2'	1:AA:1326:U:H5'	2.19	0.43
2:AC:149:LYS:HE3	2:AC:166:TRP:CH2	2.54	0.43
3:AD:22:SER:N	3:AD:109:THR:HG22	2.33	0.43
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.17	0.43
5:AF:53:LYS:HD3	5:AF:54:LEU:H	1.83	0.43
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.83	0.43
8:AI:74:GLN:O	8:AI:78:ILE:HG13	2.19	0.43
8:AI:114:LYS:H	8:AI:120:ALA:HA	1.84	0.43
10:AK:52:ARG:HA	10:AK:52:ARG:HD2	1.64	0.43
14:AO:68:ASP:O	14:AO:72:ARG:HG3	2.17	0.43
20:AB:86:CYS:HB3	20:AB:88:GLN:CD	2.39	0.43
23:BB:7:G:H4'	41:BJ:15:TRP:CH2	2.53	0.43
23:BB:527:C:O4'	23:BB:527:C:O2	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:639:U:H2'	23:BB:640:C:C6	2.54	0.43
23:BB:1227:G:O2'	23:BB:1228:G:H5'	2.18	0.43
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.19	0.43
23:BB:1309:G:H4'	36:B2:7:PRO:HB2	1.99	0.43
23:BB:1341:G:N2	23:BB:1398:C:H4'	2.33	0.43
23:BB:1356:G:O2'	23:BB:1357:C:H5'	2.18	0.43
23:BB:1383:A:H2	23:BB:1405:U:O2	2.00	0.43
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.83	0.43
23:BB:1582:C:H3'	23:BB:1583:A:N3	2.34	0.43
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.52	0.43
23:BB:2259:U:H2'	23:BB:2260:C:H6	1.83	0.43
23:BB:2657:A:H4'	48:BG:91:VAL:HG21	2.00	0.43
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.53	0.43
23:BB:2788:C:H1'	23:BB:2809:A:C2	2.52	0.43
25:BC:140:VAL:O	25:BC:141:HIS:HB2	2.18	0.43
25:BC:159:THR:O	25:BC:160:TYR:HB3	2.17	0.43
28:BP:9:GLN:HA	28:BP:12:MET:CG	2.49	0.43
34:B3:12:ARG:NE	37:BL:58:TYR:O	2.52	0.43
34:B3:33:THR:HG23	34:B3:34:LYS:N	2.33	0.43
35:BV:32:GLY:C	35:BV:93:ARG:HG3	2.39	0.43
40:BH:47:PHE:C	40:BH:50:ARG:HH21	2.21	0.43
41:BJ:17:VAL:CG2	41:BJ:137:PRO:HB2	2.31	0.43
41:BJ:33:ALA:O	41:BJ:34:ARG:C	2.56	0.43
41:BJ:88:THR:HG22	41:BJ:91:GLU:OE1	2.17	0.43
41:BJ:98:GLU:CD	41:BJ:98:GLU:H	2.22	0.43
42:BN:2:ARG:HG2	42:BN:2:ARG:HH11	1.84	0.43
43:BO:94:ARG:HD2	43:BO:97:PHE:O	2.19	0.43
45:BS:51:LEU:HD12	45:BS:105:VAL:HG11	1.98	0.43
45:BS:66:ILE:HG12	45:BS:67:ASP:N	2.33	0.43
47:BF:141:ASP:O	47:BF:144:LYS:N	2.52	0.43
50:BT:50:LEU:O	50:BT:52:GLU:N	2.45	0.43
53:B6:56:ALA:CB	53:B6:79:ILE:HD11	2.48	0.43
53:B6:68:VAL:O	53:B6:70:SER:N	2.51	0.43
53:B6:73:GLN:H	53:B6:73:GLN:HG3	1.64	0.43
53:B6:177:GLU:O	53:B6:177:GLU:HG2	2.16	0.43
1:CA:21:G:H2'	1:CA:22:G:H8	1.74	0.43
1:CA:264:C:H2'	1:CA:265:G:O4'	2.18	0.43
1:CA:291:U:H2'	1:CA:292:G:H8	1.84	0.43
1:CA:909:A:H1'	1:CA:1414:U:H5'	1.99	0.43
1:CA:991:U:H2'	1:CA:1212:U:O2	2.18	0.43
1:CA:1343:G:H4'	8:CI:123:ARG:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:87:ARG:HG2	2:CC:98:ALA:O	2.18	0.43
3:CD:153:ARG:HG3	3:CD:154:VAL:N	2.33	0.43
5:CF:81:ASN:O	5:CF:82:ASP:C	2.56	0.43
8:CI:33:SER:HB3	8:CI:36:GLN:HE21	1.82	0.43
8:CI:48:ARG:HA	8:CI:51:LEU:CD1	2.46	0.43
8:CI:71:ILE:HD12	8:CI:71:ILE:H	1.83	0.43
10:CK:63:GLN:O	10:CK:67:GLU:HG2	2.18	0.43
11:CL:115:LYS:O	11:CL:116:TYR:HB2	2.18	0.43
12:CM:84:CYS:SG	12:CM:86:ARG:HB2	2.59	0.43
12:CM:95:PRO:HB2	12:CM:99:GLN:CD	2.38	0.43
17:CR:38:ILE:HG22	17:CR:58:ILE:HD13	2.01	0.43
20:CB:95:TRP:HZ2	20:CB:100:LEU:HD13	1.84	0.43
20:CB:112:ARG:O	20:CB:116:LEU:HG	2.18	0.43
22:DA:39:A:H2	22:DA:46:A:N6	2.15	0.43
23:DB:443:A:C8	29:DE:40:ARG:HD3	2.53	0.43
23:DB:741:U:H2'	23:DB:742:A:H8	1.83	0.43
23:DB:1686:C:H2'	23:DB:1687:G:O4'	2.17	0.43
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.53	0.43
23:DB:2308:G:O6	23:DB:2311:A:N7	2.51	0.43
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.54	0.43
23:DB:2884:U:O4	31:D0:39:ARG:HD3	2.18	0.43
24:DI:126:ARG:NH1	24:DI:126:ARG:CB	2.81	0.43
25:DC:244:VAL:HA	25:DC:249:VAL:O	2.19	0.43
29:DE:33:VAL:HA	29:DE:36:ALA:HB3	2.01	0.43
29:DE:130:LYS:C	29:DE:132:LYS:N	2.70	0.43
34:D3:23:HIS:ND1	34:D3:24:LYS:N	2.66	0.43
35:DV:62:THR:CG2	35:DV:71:LYS:HG2	2.48	0.43
36:D2:12:ARG:HG3	36:D2:12:ARG:HH21	1.83	0.43
37:DL:23:ILE:H	37:DL:23:ILE:CD1	2.30	0.43
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.46	0.43
38:DM:63:ILE:HD12	38:DM:63:ILE:N	2.34	0.43
42:DN:9:GLN:C	42:DN:17:ARG:HD3	2.39	0.43
45:DS:28:LYS:O	45:DS:71:VAL:HG12	2.17	0.43
47:DF:57:ALA:HB2	47:DF:64:PRO:CG	2.48	0.43
47:DF:141:ASP:O	47:DF:144:LYS:N	2.51	0.43
48:DG:102:ILE:CD1	48:DG:116:LEU:HD11	2.48	0.43
50:DT:40:LYS:O	50:DT:43:ILE:HB	2.17	0.43
51:DZ:20:HIS:O	51:DZ:21:ALA:HB3	2.18	0.43
52:DW:59:PHE:CD2	52:DW:60:ALA:N	2.86	0.43
53:D6:80:GLU:HB2	53:D6:99:LEU:CD1	2.48	0.43
1:AA:12:U:H4'	1:AA:526:C:H4'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:56:U:H2'	1:AA:57:G:H8	1.83	0.43
1:AA:491:G:O2'	1:AA:492:C:H5'	2.19	0.43
1:AA:599:C:H2'	1:AA:600:A:H8	1.83	0.43
1:AA:652:U:H1'	1:AA:653:U:C5	2.52	0.43
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.19	0.43
1:AA:1426:G:H2'	1:AA:1427:C:C6	2.53	0.43
1:AA:1532:U:N1	1:AA:1534:A:H5'	2.33	0.43
2:AC:149:LYS:HE2	2:AC:200:TRP:CZ3	2.53	0.43
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.18	0.43
3:AD:167:PRO:HG3	3:AD:170:LEU:HD11	1.99	0.43
5:AF:25:TYR:O	5:AF:29:ILE:HG13	2.18	0.43
8:AI:118:ARG:HG2	8:AI:118:ARG:O	2.18	0.43
14:AO:43:PHE:C	14:AO:45:GLU:N	2.71	0.43
15:AP:45:GLU:C	15:AP:47:GLU:H	2.21	0.43
18:AS:10:ILE:HD13	18:AS:40:PHE:CE1	2.53	0.43
18:AS:52:ASN:O	18:AS:76:THR:HG23	2.19	0.43
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.82	0.43
20:AB:205:ALA:HB3	20:AB:208:ALA:HB3	2.00	0.43
22:BA:60:C:H2'	22:BA:61:G:C8	2.48	0.43
22:BA:80:U:H2'	22:BA:81:G:C8	2.53	0.43
23:BB:95:A:H4'	39:BX:38:GLN:O	2.19	0.43
23:BB:302:C:O2'	23:BB:303:G:H5'	2.18	0.43
23:BB:730:A:O2'	23:BB:731:C:H5'	2.17	0.43
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.83	0.43
23:BB:1326:U:H2'	23:BB:1327:A:C8	2.50	0.43
23:BB:1751:U:H2'	23:BB:1752:C:C6	2.53	0.43
23:BB:2560:A:H2'	23:BB:2561:U:C6	2.54	0.43
23:BB:2753:A:O2'	23:BB:2754:U:H5'	2.18	0.43
25:BC:9:SER:HB2	25:BC:10:PRO:HD2	2.00	0.43
28:BP:44:GLY:HA3	28:BP:60:VAL:HG12	2.01	0.43
35:BV:50:MET:O	35:BV:56:PHE:HB2	2.18	0.43
37:BL:19:LEU:HD23	37:BL:31:GLY:O	2.18	0.43
40:BH:89:LYS:HZ3	40:BH:89:LYS:HB3	1.83	0.43
42:BN:61:ALA:C	42:BN:63:ARG:N	2.71	0.43
45:BS:44:ALA:C	45:BS:46:LEU:N	2.72	0.43
46:BU:47:PRO:HB3	46:BU:55:GLY:HA3	2.01	0.43
47:BF:131:VAL:O	47:BF:133:GLU:N	2.50	0.43
49:BR:39:LEU:CA	49:BR:49:ILE:HG12	2.48	0.43
53:B6:24:ASN:HD22	53:B6:24:ASN:HA	1.54	0.43
1:CA:282:A:H2'	1:CA:282:A:N3	2.33	0.43
1:CA:1081:A:O2'	1:CA:1082:A:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1227:A:H4'	12:CM:113:LYS:HD2	2.00	0.43
2:CC:16:PRO:CG	2:CC:53:ARG:HH22	2.30	0.43
2:CC:70:ALA:HA	2:CC:105:VAL:HG22	2.01	0.43
5:CF:46:GLN:HA	5:CF:46:GLN:HE21	1.83	0.43
8:CI:24:ASN:CG	8:CI:25:GLY:H	2.21	0.43
8:CI:112:ARG:HH22	9:CJ:64:GLN:HE22	1.65	0.43
12:CM:30:LYS:HG3	12:CM:40:GLU:OE1	2.18	0.43
20:CB:17:HIS:CG	20:CB:202:ASN:ND2	2.87	0.43
20:CB:80:LYS:HG3	20:CB:81:ASP:N	2.33	0.43
21:CU:11:PHE:O	21:CU:11:PHE:CD1	2.70	0.43
23:DB:19:A:OP1	44:DQ:22:GLY:N	2.52	0.43
23:DB:704:G:H1'	23:DB:727:A:H61	1.83	0.43
23:DB:1117:C:O2'	23:DB:1118:C:H5'	2.17	0.43
23:DB:1424:G:H2'	23:DB:1425:G:C8	2.53	0.43
23:DB:1431:A:O2'	23:DB:1432:G:H5'	2.18	0.43
23:DB:1470:A:H2'	23:DB:1471:G:O4'	2.18	0.43
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.18	0.43
23:DB:2408:U:H2'	23:DB:2409:G:H8	1.83	0.43
23:DB:2563:U:H2'	23:DB:2565:A:OP2	2.19	0.43
23:DB:2847:U:H5"	28:DP:94:ALA:CB	2.49	0.43
26:DD:35:THR:N	26:DD:49:GLN:O	2.50	0.43
26:DD:104:VAL:HG13	26:DD:106:LYS:HE2	2.00	0.43
27:DK:8:LEU:O	27:DK:19:VAL:HG22	2.19	0.43
28:DP:13:LYS:HG2	28:DP:76:HIS:ND1	2.32	0.43
35:DV:53:LYS:HA	35:DV:53:LYS:HZ2	1.82	0.43
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.32	0.43
44:DQ:86:SER:OG	49:DR:51:VAL:HG12	2.19	0.43
44:DQ:105:PHE:HA	44:DQ:108:LEU:CD1	2.49	0.43
45:DS:17:VAL:C	45:DS:19:LEU:N	2.70	0.43
47:DF:108:PRO:C	47:DF:110:ILE:H	2.22	0.43
49:DR:59:ILE:H	49:DR:59:ILE:HG13	1.59	0.43
52:DW:19:ARG:O	52:DW:20:LEU:HD23	2.18	0.43
52:DW:49:ASN:C	52:DW:50:VAL:HG22	2.38	0.43
1:AA:620:C:C1'	3:AD:131:ILE:HD13	2.48	0.43
1:AA:755:G:H2'	1:AA:756:C:C6	2.53	0.43
1:AA:1064:G:OP1	1:AA:1386:G:H4'	2.18	0.43
1:AA:1320:C:N4	18:AS:36:ARG:HE	2.15	0.43
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.54	0.43
1:AA:1432:G:H5"	1:AA:1432:G:H8	1.83	0.43
2:AC:52:SER:HB3	2:AC:114:LEU:HG	2.00	0.43
3:AD:84:ASN:ND2	3:AD:84:ASN:C	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:131:ASN:ND2	4:AE:134:ASN:H	2.16	0.43
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	2.01	0.43
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.19	0.43
10:AK:25:SER:HG	10:AK:28:ASN:H	1.65	0.43
11:AL:88:ASP:C	11:AL:89:LEU:HD22	2.39	0.43
14:AO:45:GLU:O	14:AO:47:LYS:N	2.50	0.43
14:AO:69:TYR:HA	14:AO:72:ARG:NH1	2.34	0.43
17:AR:57:ALA:HA	17:AR:60:ARG:HD2	2.00	0.43
18:AS:42:ASN:ND2	18:AS:43:MET:N	2.66	0.43
20:AB:35:ASN:O	20:AB:37:VAL:N	2.52	0.43
21:AU:10:PRO:HB2	2:CC:71:ARG:HE	1.83	0.43
21:AU:24:LYS:HZ3	21:AU:25:ALA:N	2.15	0.43
22:BA:114:C:H2'	22:BA:115:A:H8	1.83	0.43
23:BB:67:U:H2'	23:BB:68:G:C8	2.54	0.43
23:BB:107:G:H21	23:BB:346:A:H62	1.65	0.43
23:BB:144:A:H2'	23:BB:145:C:H6	1.83	0.43
23:BB:672:C:H2'	23:BB:673:C:H6	1.83	0.43
23:BB:677:A:O2'	23:BB:678:C:H5'	2.18	0.43
23:BB:686:U:H1'	36:B2:6:GLN:O	2.17	0.43
23:BB:697:G:H2'	23:BB:698:C:C6	2.53	0.43
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.83	0.43
23:BB:1255:U:H5"	23:BB:1256:G:H5"	2.01	0.43
23:BB:1360:G:H2'	23:BB:1361:G:O4'	2.18	0.43
23:BB:1587:G:H2'	23:BB:1588:G:H8	1.82	0.43
23:BB:2060:A:H62	29:BE:69:ARG:HH12	1.64	0.43
23:BB:2231:U:H2'	23:BB:2232:C:C6	2.53	0.43
23:BB:2256:G:H2'	23:BB:2257:U:H6	1.83	0.43
23:BB:2303:G:C1'	47:BF:122:ASP:OD1	2.67	0.43
23:BB:2454:G:H1'	57:BB:3366:HOH:O	2.18	0.43
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.18	0.43
23:BB:2623:G:H4'	23:BB:2825:G:C8	2.52	0.43
23:BB:2771:C:H1'	26:BD:208:LYS:HZ1	1.83	0.43
23:BB:2773:C:O2'	23:BB:2774:C:H5'	2.19	0.43
24:BI:32:VAL:HG22	24:BI:60:VAL:CG2	2.49	0.43
24:BI:63:ASP:C	24:BI:65:SER:N	2.72	0.43
25:BC:52:HIS:NE2	25:BC:218:THR:HG23	2.32	0.43
25:BC:52:HIS:O	25:BC:53:ILE:HB	2.18	0.43
25:BC:75:ALA:HB1	25:BC:94:LEU:O	2.19	0.43
25:BC:90:ILE:HD13	25:BC:103:ILE:O	2.19	0.43
25:BC:121:ALA:HB3	25:BC:129:LEU:HD11	2.01	0.43
27:BK:79:PHE:CD2	28:BP:69:VAL:HG12	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:29:HIS:CE1	37:BL:8:PRO:HG3	2.52	0.43
36:B2:13:ASN:C	36:B2:15:SER:H	2.21	0.43
38:BM:64:TRP:HE3	38:BM:104:GLU:O	2.02	0.43
38:BM:111:GLU:O	38:BM:114:ARG:HB3	2.19	0.43
41:BJ:54:ILE:O	41:BJ:122:LEU:HA	2.18	0.43
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.18	0.43
47:BF:87:LYS:HG3	47:BF:88:VAL:N	2.23	0.43
47:BF:140:ILE:O	47:BF:145:VAL:HG12	2.19	0.43
47:BF:169:LEU:HA	47:BF:172:PHE:HD2	1.83	0.43
48:BG:47:ASN:CG	48:BG:48:THR:H	2.21	0.43
48:BG:120:ILE:HD13	48:BG:121:THR:N	2.34	0.43
53:B6:61:PRO:HD2	53:B6:65:THR:O	2.19	0.43
1:CA:360:G:O2'	1:CA:361:G:H5'	2.19	0.43
1:CA:591:U:O2'	1:CA:592:G:H5'	2.19	0.43
1:CA:642:A:H2'	1:CA:643:C:C6	2.51	0.43
1:CA:1082:A:O2'	1:CA:1083:U:H5'	2.19	0.43
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.33	0.43
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.19	0.43
4:CE:45:VAL:CG1	4:CE:116:VAL:HG23	2.48	0.43
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.81	0.43
5:CF:10:VAL:HA	5:CF:84:VAL:HA	2.01	0.43
6:CG:104:VAL:HG12	6:CG:108:ARG:HD2	2.01	0.43
7:CH:47:ASP:CG	7:CH:48:PHE:N	2.71	0.43
8:CI:17:ARG:O	8:CI:64:ILE:HA	2.18	0.43
8:CI:39:GLY:HA2	8:CI:44:ARG:HD3	1.99	0.43
8:CI:50:PRO:HD3	8:CI:79:ARG:CG	2.48	0.43
12:CM:79:LEU:HD22	12:CM:86:ARG:HE	1.82	0.43
15:CP:6:LEU:HD11	15:CP:71:VAL:HB	2.01	0.43
22:DA:14:U:H4'	22:DA:70:C:O2	2.19	0.43
22:DA:40:U:H1'	22:DA:43:C:C5	2.53	0.43
22:DA:54:G:O2'	22:DA:55:U:H5'	2.18	0.43
23:DB:28:A:N6	23:DB:512:G:O2'	2.52	0.43
23:DB:39:G:H2'	23:DB:40:U:H6	1.83	0.43
23:DB:285:G:C2'	23:DB:286:U:H5'	2.49	0.43
23:DB:308:G:H1'	23:DB:501:A:OP1	2.19	0.43
23:DB:340:A:H2'	23:DB:341:C:O4'	2.18	0.43
23:DB:425:G:O2'	23:DB:426:C:H5'	2.18	0.43
23:DB:765:C:H2'	23:DB:766:U:H6	1.83	0.43
23:DB:1050:A:H2'	23:DB:1051:G:H8	1.83	0.43
23:DB:1150:C:H2'	23:DB:1151:A:C8	2.47	0.43
23:DB:1410:G:H2'	23:DB:1411:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1790:C:H2'	23:DB:1791:A:N7	2.33	0.43
23:DB:1983:G:H4'	23:DB:2606:C:H4'	1.99	0.43
23:DB:2054:A:H2'	31:D0:4:GLN:OE1	2.19	0.43
23:DB:2203:U:H2'	23:DB:2204:G:OP2	2.18	0.43
24:DI:41:PHE:CE2	24:DI:45:THR:HG21	2.53	0.43
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	2.00	0.43
25:DC:53:ILE:O	25:DC:53:ILE:HG23	2.18	0.43
25:DC:75:ALA:HB1	25:DC:94:LEU:O	2.19	0.43
37:DL:136:GLU:HA	37:DL:140:GLY:CA	2.49	0.43
38:DM:40:ARG:HB2	38:DM:93:VAL:HG21	1.99	0.43
39:DX:13:GLU:OE2	39:DX:13:GLU:HA	2.19	0.43
40:DH:69:ALA:HB1	40:DH:140:ALA:HB2	2.00	0.43
44:DQ:89:ILE:HB	44:DQ:90:ASP:H	1.73	0.43
45:DS:76:VAL:HA	45:DS:102:HIS:O	2.18	0.43
48:DG:32:LEU:HB3	48:DG:34:ARG:CZ	2.49	0.43
53:D6:90:LEU:HB3	53:D6:101:ILE:HG21	2.00	0.43
1:AA:102:G:H2'	1:AA:103:U:H6	1.82	0.43
1:AA:291:U:H2'	1:AA:292:G:H8	1.84	0.43
1:AA:537:G:H2'	1:AA:538:G:C8	2.53	0.43
1:AA:677:U:H3	1:AA:713:G:H22	1.66	0.43
1:AA:770:C:O2'	1:AA:771:G:H5'	2.19	0.43
1:AA:921:U:O2	4:AE:23:THR:HG23	2.19	0.43
1:AA:933:G:N7	6:AG:2:ARG:NH1	2.67	0.43
1:AA:1045:C:H2'	1:AA:1046:A:O4'	2.18	0.43
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.99	0.43
1:AA:1258:G:C2	1:AA:1278:G:N2	2.87	0.43
1:AA:1287:A:H1'	1:AA:1353:G:O2'	2.18	0.43
1:AA:1346:A:H5"	8:AI:121:ARG:HH21	1.83	0.43
1:AA:1464:U:H2'	1:AA:1465:A:H8	1.83	0.43
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.82	0.43
7:AH:49:LYS:HG3	7:AH:50:VAL:N	2.33	0.43
7:AH:68:LYS:HD2	7:AH:68:LYS:HA	1.90	0.43
8:AI:26:LYS:HB2	8:AI:61:ASP:CB	2.49	0.43
9:AJ:15:HIS:HA	9:AJ:18:ILE:CG2	2.49	0.43
9:AJ:24:GLU:CD	9:AJ:90:LEU:HD11	2.39	0.43
11:AL:86:VAL:CG1	11:AL:89:LEU:HD23	2.48	0.43
12:AM:84:CYS:SG	12:AM:86:ARG:HB2	2.58	0.43
14:AO:56:LEU:O	14:AO:59:MET:HG3	2.19	0.43
18:AS:43:MET:O	18:AS:61:VAL:HB	2.18	0.43
18:AS:62:THR:HG22	18:AS:63:ASP:N	2.33	0.43
20:AB:23:ASN:HB3	20:AB:188:THR:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:212:TYR:O	20:AB:216:VAL:HG13	2.19	0.43
22:BA:42:C:O2'	47:BF:91:ARG:NH1	2.51	0.43
22:BA:97:C:C2'	22:BA:98:G:H5'	2.49	0.43
23:BB:28:A:O2'	23:BB:29:U:H5'	2.17	0.43
23:BB:340:A:O2'	29:BE:162:ARG:NH1	2.52	0.43
23:BB:483:A:H5'	46:BU:44:HIS:O	2.18	0.43
23:BB:958:U:N3	38:BM:16:ARG:HB3	2.33	0.43
23:BB:1057:A:H62	23:BB:1086:A:H2'	1.83	0.43
23:BB:1080:A:O2'	24:BI:126:ARG:CB	2.66	0.43
23:BB:2219:U:O2'	23:BB:2220:U:H5'	2.18	0.43
23:BB:2394:C:H2'	23:BB:2395:C:O4'	2.19	0.43
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.19	0.43
23:BB:2733:A:C8	23:BB:2733:A:C3'	3.01	0.43
23:BB:2756:U:OP2	32:B4:17:VAL:HG11	2.19	0.43
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.48	0.43
25:BC:6:LYS:HA	25:BC:7:PRO:HD3	1.91	0.43
25:BC:57:HIS:ND1	25:BC:58:LYS:N	2.58	0.43
28:BP:3:ILE:HG23	28:BP:4:ILE:H	1.81	0.43
37:BL:10:GLU:OE2	37:BL:10:GLU:HA	2.16	0.43
38:BM:66:ARG:NE	38:BM:101:VAL:HG11	2.34	0.43
39:BX:1:MET:CG	39:BX:4:LYS:HD3	2.48	0.43
41:BJ:13:ARG:HB3	41:BJ:53:TYR:CD2	2.53	0.43
41:BJ:28:LEU:HG	41:BJ:32:LEU:CD1	2.48	0.43
41:BJ:36:LEU:HD21	41:BJ:122:LEU:HD12	2.00	0.43
42:BN:34:ILE:HG22	42:BN:35:LYS:N	2.32	0.43
43:BO:53:THR:HG23	43:BO:74:VAL:HG21	2.00	0.43
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.52	0.43
46:BU:24:VAL:HA	46:BU:35:VAL:HA	2.01	0.43
48:BG:96:ALA:O	48:BG:97:VAL:HB	2.19	0.43
49:BR:49:ILE:HB	49:BR:53:PHE:O	2.19	0.43
53:B6:28:LEU:O	53:B6:37:LEU:HD21	2.18	0.43
53:B6:55:ILE:CG2	53:B6:56:ALA:H	2.13	0.43
53:B6:66:LEU:O	53:B6:100:TYR:HA	2.18	0.43
53:B6:134:ARG:CZ	53:B6:135:GLU:HG3	2.48	0.43
1:CA:323:U:H2'	1:CA:324:G:O4'	2.18	0.43
1:CA:327:A:H1'	1:CA:329:A:O4'	2.19	0.43
1:CA:411:A:O2'	1:CA:412:A:N3	2.42	0.43
1:CA:549:C:H2'	1:CA:550:G:C8	2.53	0.43
1:CA:659:U:H2'	1:CA:660:C:C6	2.54	0.43
1:CA:663:A:H5'	1:CA:836:G:OP1	2.18	0.43
1:CA:676:A:O2'	1:CA:677:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1269:A:N3	1:CA:1326:U:H1'	2.34	0.43
1:CA:1349:A:P	8:CI:119:LYS:HD2	2.58	0.43
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.86	0.43
3:CD:10:LEU:HD12	3:CD:20:LEU:HD11	2.01	0.43
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.19	0.43
10:CK:70:ALA:HA	10:CK:73:VAL:CG2	2.49	0.43
18:CS:30:LEU:HB2	18:CS:48:ILE:CG2	2.41	0.43
21:CU:33:ARG:NE	21:CU:34:ARG:HG2	2.33	0.43
22:DA:29:A:C4	22:DA:56:G:N2	2.86	0.43
23:DB:170:U:O2'	23:DB:171:U:H5'	2.18	0.43
23:DB:600:G:H1'	29:DE:100:MET:CG	2.48	0.43
23:DB:636:G:H4'	23:DB:638:G:O3'	2.17	0.43
23:DB:769:U:H2'	23:DB:770:G:H8	1.81	0.43
23:DB:1428:C:H2'	23:DB:1569:A:OP2	2.18	0.43
23:DB:1607:C:N4	23:DB:1622:G:OP2	2.51	0.43
23:DB:1765:U:H2'	23:DB:1766:G:H8	1.83	0.43
23:DB:1824:G:H1'	25:DC:251:THR:CG2	2.49	0.43
23:DB:2314:A:H2'	23:DB:2315:G:H8	1.82	0.43
23:DB:2789:C:H2'	23:DB:2893:A:N7	2.32	0.43
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.33	0.43
25:DC:76:VAL:O	25:DC:93:VAL:O	2.36	0.43
25:DC:270:ARG:HB3	25:DC:270:ARG:CZ	2.49	0.43
26:DD:40:LEU:HD12	26:DD:41:ALA:H	1.83	0.43
26:DD:56:LYS:C	26:DD:58:ASN:N	2.72	0.43
26:DD:92:VAL:O	26:DD:94:GLN:N	2.51	0.43
26:DD:182:ALA:O	26:DD:184:ARG:HG2	2.18	0.43
27:DK:71:ARG:HD2	27:DK:106:GLU:OE2	2.18	0.43
28:DP:80:VAL:CG1	28:DP:81:ASP:N	2.82	0.43
29:DE:6:LYS:HB3	29:DE:7:ASP:H	1.59	0.43
37:DL:42:SER:O	37:DL:44:GLY:N	2.51	0.43
39:DX:52:ARG:O	39:DX:55:THR:HB	2.18	0.43
41:DJ:36:LEU:HD21	41:DJ:122:LEU:HD12	2.00	0.43
44:DQ:29:ARG:O	44:DQ:30:VAL:HB	2.18	0.43
45:DS:6:LYS:HA	45:DS:50:VAL:HG11	2.01	0.43
46:DU:47:PRO:HB3	46:DU:55:GLY:HA3	2.01	0.43
48:DG:147:LEU:HA	48:DG:150:TYR:HD1	1.82	0.43
48:DG:152:ARG:HA	48:DG:152:ARG:HD2	1.80	0.43
51:DZ:2:SER:HB3	51:DZ:4:VAL:HG23	1.99	0.43
53:D6:2:THR:O	53:D6:3:LEU:C	2.55	0.43
53:D6:53:ASN:HD22	53:D6:53:ASN:N	2.10	0.43
53:D6:79:ILE:HG22	53:D6:80:GLU:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:213:G:N3	1:AA:213:G:H2'	2.33	0.43
1:AA:642:A:H2'	1:AA:643:C:C6	2.54	0.43
1:AA:747:A:H2'	1:AA:748:G:O4'	2.19	0.43
1:AA:1127:G:H5'	1:AA:1280:A:O2'	2.19	0.43
1:AA:1216:A:O2'	1:AA:1217:C:H5'	2.19	0.43
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.54	0.43
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.53	0.43
1:AA:1229:A:OP2	12:AM:112:ARG:HD2	2.18	0.43
1:AA:1479:C:H2'	1:AA:1480:A:C8	2.46	0.43
2:AC:178:ARG:HG2	2:AC:206:ILE:HA	2.00	0.43
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.27	0.43
9:AJ:7:ARG:NH1	9:AJ:7:ARG:HB2	2.33	0.43
10:AK:126:ARG:HA	10:AK:126:ARG:HE	1.83	0.43
11:AL:41:PRO:CB	11:AL:88:ASP:HB3	2.49	0.43
20:AB:16:GLY:HA2	20:AB:40:ILE:HG13	1.98	0.43
20:AB:22:TRP:CZ3	20:AB:24:PRO:HA	2.53	0.43
20:AB:64:GLY:HA2	20:AB:158:ASP:OD1	2.18	0.43
20:AB:204:ASP:O	20:AB:205:ALA:HB3	2.17	0.43
22:BA:14:U:H4'	22:BA:70:C:O2	2.19	0.43
22:BA:57:A:OP2	22:BA:58:A:OP2	2.36	0.43
23:BB:21:A:H2'	23:BB:22:C:H6	1.81	0.43
23:BB:26:G:H1'	23:BB:514:A:H61	1.82	0.43
23:BB:41:C:O2'	23:BB:42:A:H5'	2.18	0.43
23:BB:104:A:H2'	23:BB:105:C:O4'	2.17	0.43
23:BB:519:U:H2'	23:BB:520:G:H8	1.83	0.43
23:BB:622:G:H2'	23:BB:623:C:C6	2.54	0.43
23:BB:840:C:O2'	23:BB:841:G:H5'	2.19	0.43
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.49	0.43
23:BB:1244:A:H5"	37:BL:8:PRO:CD	2.38	0.43
23:BB:1310:G:H1'	23:BB:1611:C:H5'	2.01	0.43
23:BB:1353:A:O2'	23:BB:1354:A:H5'	2.19	0.43
23:BB:1385:A:O2'	23:BB:1396:U:H6	2.02	0.43
23:BB:1426:G:H8	23:BB:1426:G:OP2	2.02	0.43
23:BB:1561:C:H2'	23:BB:1562:U:H6	1.82	0.43
23:BB:1562:U:O2'	23:BB:1563:U:H5'	2.19	0.43
23:BB:1707:G:O2'	23:BB:1708:C:H5'	2.18	0.43
23:BB:1946:U:H2'	23:BB:1947:C:C6	2.53	0.43
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.52	0.43
23:BB:2281:A:O2'	23:BB:2282:G:H5'	2.18	0.43
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.19	0.43
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2734:A:H61	23:BB:2770:G:H1'	1.83	0.43
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.33	0.43
26:BD:54:ALA:N	26:BD:76:GLY:HA2	2.34	0.43
27:BK:2:ILE:HA	27:BK:33:ALA:H	1.83	0.43
27:BK:119:ALA:O	27:BK:120:PRO:O	2.37	0.43
29:BE:126:VAL:HG22	29:BE:133:LEU:HD12	1.99	0.43
29:BE:147:LEU:O	29:BE:168:ASP:O	2.37	0.43
30:BY:8:GLN:HB3	30:BY:31:ILE:O	2.18	0.43
36:B2:42:LEU:O	36:B2:43:THR:HG23	2.19	0.43
37:BL:85:VAL:HG22	37:BL:94:THR:HG21	2.00	0.43
40:BH:84:ALA:CA	40:BH:90:LEU:HA	2.37	0.43
40:BH:90:LEU:O	40:BH:123:ARG:HD3	2.18	0.43
41:BJ:12:LYS:O	41:BJ:13:ARG:HB2	2.18	0.43
41:BJ:112:GLY:N	41:BJ:113:PRO:HD2	2.31	0.43
47:BF:121:PHE:O	47:BF:122:ASP:OD1	2.37	0.43
47:BF:168:LEU:O	47:BF:169:LEU:CB	2.65	0.43
48:BG:6:ALA:HB3	48:BG:68:ARG:CD	2.49	0.43
49:BR:27:ILE:HG22	49:BR:28:ALA:N	2.33	0.43
49:BR:63:VAL:HG23	49:BR:63:VAL:O	2.19	0.43
52:BW:27:GLY:O	52:BW:63:ASP:HA	2.18	0.43
53:B6:61:PRO:HD2	53:B6:65:THR:C	2.39	0.43
1:CA:120:A:C5	1:CA:122:G:C6	3.07	0.43
1:CA:425:G:H2'	1:CA:426:U:H6	1.83	0.43
1:CA:598:U:H4'	7:CH:85:TYR:CD2	2.52	0.43
1:CA:914:A:O2'	1:CA:915:A:H5'	2.18	0.43
1:CA:916:U:H2'	1:CA:917:G:H8	1.84	0.43
1:CA:1020:G:N3	1:CA:1020:G:H2'	2.33	0.43
1:CA:1045:C:H2'	1:CA:1046:A:O4'	2.19	0.43
1:CA:1123:U:C2'	1:CA:1124:G:H5'	2.49	0.43
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.54	0.43
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.52	0.43
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.53	0.43
2:CC:111:ASP:OD2	2:CC:114:LEU:HG	2.19	0.43
3:CD:96:ARG:O	3:CD:99:ASN:HB3	2.19	0.43
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.32	0.43
9:CJ:35:GLN:HG2	9:CJ:77:VAL:HB	2.01	0.43
11:CL:107:LYS:C	11:CL:109:ARG:H	2.20	0.43
15:CP:76:LYS:HZ3	15:CP:80:LYS:HD3	1.81	0.43
16:CQ:77:VAL:HG12	16:CQ:79:GLU:H	1.84	0.43
17:CR:27:THR:HG22	17:CR:31:TYR:HE1	1.83	0.43
20:CB:86:CYS:C	20:CB:88:GLN:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:212:TYR:O	20:CB:216:VAL:HG22	2.19	0.43
22:DA:75:G:N1	22:DA:102:G:N2	2.67	0.43
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.99	0.43
23:DB:1383:A:H2	23:DB:1405:U:O2	2.01	0.43
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.83	0.43
23:DB:1434:A:H62	23:DB:1558:C:H42	1.66	0.43
23:DB:1445:G:H2'	23:DB:1446:C:H6	1.82	0.43
23:DB:1476:U:O2'	23:DB:1477:A:H8	2.02	0.43
23:DB:1582:C:H3'	23:DB:1583:A:N3	2.33	0.43
23:DB:1838:C:H4'	23:DB:1839:G:C8	2.54	0.43
23:DB:1893:C:H2'	23:DB:1894:C:O4'	2.19	0.43
23:DB:2217:G:H2'	23:DB:2218:G:H8	1.83	0.43
23:DB:2331:G:H4'	52:DW:39:GLN:HA	2.01	0.43
23:DB:2394:C:H2'	23:DB:2395:C:O4'	2.19	0.43
23:DB:2821:A:OP2	23:DB:2822:G:OP2	2.37	0.43
23:DB:2821:A:OP2	42:DN:3:HIS:NE2	2.51	0.43
23:DB:2830:C:H1'	23:DB:2836:U:O4'	2.19	0.43
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.54	0.43
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.19	0.43
28:DP:36:LYS:HA	28:DP:36:LYS:HD3	1.87	0.43
33:D1:8:ILE:HG23	33:D1:51:ALA:HA	1.99	0.43
35:DV:72:VAL:CG1	35:DV:93:ARG:HA	2.49	0.43
36:D2:31:LEU:HD22	36:D2:42:LEU:HD12	2.00	0.43
38:DM:11:LYS:HD2	38:DM:86:LYS:HG2	1.99	0.43
39:DX:15:ASN:ND2	39:DX:15:ASN:H	2.16	0.43
47:DF:3:LEU:HD11	47:DF:172:PHE:CE1	2.54	0.43
50:DT:11:LEU:HD22	50:DT:11:LEU:N	2.29	0.43
52:DW:59:PHE:CD2	52:DW:61:LYS:HD2	2.54	0.43
1:AA:205:A:H2'	1:AA:206:C:O4'	2.19	0.43
1:AA:241:G:O2'	1:AA:242:G:H5'	2.18	0.43
1:AA:271:C:O2'	1:AA:272:C:H5'	2.19	0.43
1:AA:411:A:O2'	1:AA:412:A:N3	2.43	0.43
1:AA:454:G:O2'	1:AA:455:G:H5'	2.19	0.43
1:AA:796:C:H2'	1:AA:797:C:H6	1.84	0.43
1:AA:903:G:H2'	1:AA:904:U:C6	2.53	0.43
1:AA:932:C:H4'	6:AG:3:ARG:NH2	2.34	0.43
1:AA:947:G:OP1	12:AM:106:ARG:HB3	2.18	0.43
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.53	0.43
1:AA:1307:U:H2'	1:AA:1308:U:O4'	2.19	0.43
2:AC:76:ILE:HD13	2:AC:83:VAL:HG21	2.00	0.43
2:AC:178:ARG:CG	2:AC:206:ILE:HA	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:121:ALA:O	3:AD:122:ILE:HD13	2.19	0.43
5:AF:4:TYR:CE2	5:AF:71:ILE:HG21	2.53	0.43
5:AF:81:ASN:O	5:AF:82:ASP:C	2.57	0.43
9:AJ:65:TYR:C	13:AN:98:ALA:HB2	2.39	0.43
13:AN:60:ARG:HH21	13:AN:69:PRO:HD3	1.82	0.43
16:AQ:18:LYS:HD3	16:AQ:48:GLU:HG2	2.01	0.43
20:AB:132:GLU:CD	20:AB:136:ARG:HH21	2.21	0.43
23:BB:19:A:OP1	44:BQ:22:GLY:N	2.52	0.43
23:BB:208:C:H2'	23:BB:209:C:C6	2.53	0.43
23:BB:346:A:H5'	23:BB:346:A:N3	2.33	0.43
23:BB:962:G:H21	23:BB:2250:G:H1	1.63	0.43
23:BB:1238:G:O2'	23:BB:1239:G:H5'	2.18	0.43
23:BB:1260:A:H2'	23:BB:1261:C:H6	1.83	0.43
23:BB:1300:G:H5'	23:BB:1301:A:N3	2.34	0.43
23:BB:1441:G:O2'	23:BB:1442:U:H5'	2.19	0.43
23:BB:1678:A:H2'	23:BB:1679:A:O4'	2.19	0.43
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.19	0.43
23:BB:2578:G:O2'	23:BB:2579:C:H5'	2.18	0.43
25:BC:202:ARG:HH11	25:BC:213:ARG:NH2	2.17	0.43
26:BD:35:THR:N	26:BD:49:GLN:O	2.51	0.43
28:BP:20:ARG:CG	28:BP:21:PRO:HD2	2.45	0.43
38:BM:47:GLU:O	38:BM:51:ARG:HG3	2.19	0.43
40:BH:111:ALA:HB3	40:BH:114:GLU:HG2	2.00	0.43
40:BH:116:ARG:HB2	40:BH:116:ARG:HH11	1.83	0.43
43:BO:40:ILE:CG2	43:BO:44:GLY:HA2	2.49	0.43
43:BO:75:GLY:HA3	43:BO:106:LEU:HA	1.99	0.43
45:BS:6:LYS:HA	45:BS:50:VAL:HG11	2.01	0.43
46:BU:25:LYS:CE	46:BU:36:GLU:HG3	2.49	0.43
48:BG:154:GLU:O	48:BG:156:TYR:N	2.51	0.43
49:BR:3:ALA:HB1	49:BR:59:ILE:HD13	2.01	0.43
50:BT:47:VAL:HG12	50:BT:47:VAL:O	2.19	0.43
51:BZ:66:THR:O	51:BZ:70:GLU:HG3	2.19	0.43
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.17	0.43
1:CA:138:G:C6	1:CA:226:G:C6	3.07	0.43
1:CA:177:G:N3	1:CA:177:G:O4'	2.52	0.43
1:CA:279:A:H5'	1:CA:281:G:H5'	1.99	0.43
1:CA:678:U:H4'	1:CA:778:G:OP1	2.19	0.43
1:CA:715:A:O2'	1:CA:716:A:H5'	2.18	0.43
1:CA:1460:C:H2'	1:CA:1461:G:H8	1.84	0.43
2:CC:65:VAL:HG21	2:CC:90:VAL:HG11	2.01	0.43
2:CC:120:THR:HA	2:CC:123:LEU:HD12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:22:LEU:O	6:CG:25:PHE:HB3	2.19	0.43
8:CI:118:ARG:HG2	8:CI:118:ARG:O	2.19	0.43
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.18	0.43
14:CO:45:GLU:HB3	14:CO:46:HIS:HD1	1.84	0.43
16:CQ:6:THR:O	16:CQ:7:LEU:HD23	2.19	0.43
18:CS:42:ASN:ND2	18:CS:43:MET:N	2.67	0.43
23:DB:79:C:HO2'	23:DB:346:A:H8	1.55	0.43
23:DB:483:A:H5"	46:DU:46:LYS:HG3	2.01	0.43
23:DB:708:G:H2'	23:DB:709:U:C6	2.53	0.43
23:DB:855:G:C2	52:DW:23:LYS:HE3	2.53	0.43
23:DB:1131:G:H22	23:DB:2024:G:H21	1.65	0.43
23:DB:1172:C:H2'	23:DB:1173:U:O4'	2.18	0.43
23:DB:1720:U:C2'	23:DB:1721:G:H5'	2.49	0.43
23:DB:2330:G:H1'	52:DW:38:ARG:CB	2.49	0.43
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.18	0.43
23:DB:2533:U:H2'	23:DB:2534:A:O4'	2.18	0.43
23:DB:2591:C:O2'	23:DB:2592:G:H5'	2.19	0.43
23:DB:2771:C:H1'	26:DD:208:LYS:NZ	2.33	0.43
25:DC:106:PRO:O	25:DC:109:LEU:HD13	2.18	0.43
27:DK:99:ILE:H	27:DK:118:LEU:HD23	1.83	0.43
28:DP:3:ILE:HG23	28:DP:4:ILE:H	1.83	0.43
29:DE:32:VAL:HG23	29:DE:33:VAL:N	2.33	0.43
29:DE:117:ARG:HA	29:DE:185:LYS:HE3	2.00	0.43
29:DE:184:ASP:O	29:DE:185:LYS:HG3	2.19	0.43
38:DM:47:GLU:O	38:DM:51:ARG:HG3	2.19	0.43
40:DH:44:ILE:O	40:DH:48:GLU:HG2	2.19	0.43
43:DO:6:ALA:O	43:DO:10:ARG:HG3	2.19	0.43
43:DO:75:GLY:HA3	43:DO:106:LEU:HA	2.00	0.43
44:DQ:63:ARG:NH2	44:DQ:96:ASP:CA	2.79	0.43
45:DS:28:LYS:HB3	45:DS:29:VAL:H	1.42	0.43
45:DS:36:LEU:HB3	45:DS:48:LYS:HB2	2.01	0.43
46:DU:85:ARG:NH1	46:DU:86:PHE:H	2.16	0.43
47:DF:65:LEU:CD2	47:DF:87:LYS:HD2	2.47	0.43
47:DF:106:ALA:N	47:DF:108:PRO:HD2	2.33	0.43
50:DT:7:LEU:HD13	50:DT:7:LEU:O	2.19	0.43
1:AA:908:A:H2'	1:AA:909:A:H8	1.84	0.43
1:AA:922:G:H2'	1:AA:923:A:H8	1.84	0.43
1:AA:1009:U:H1'	1:AA:1021:A:N1	2.34	0.43
1:AA:1406:U:H2'	1:AA:1407:C:H5'	2.00	0.43
9:AJ:87:LEU:N	9:AJ:87:LEU:HD13	2.33	0.43
12:AM:79:LEU:H	12:AM:79:LEU:HG	1.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:62:GLU:HB2	16:AQ:72:TRP:CE2	2.54	0.43
22:BA:94:A:H2'	22:BA:95:U:O4'	2.18	0.43
23:BB:211:C:O2'	23:BB:212:G:H5'	2.19	0.43
23:BB:218:A:H2'	23:BB:219:A:O4'	2.19	0.43
23:BB:381:G:OP1	51:BZ:16:ASN:ND2	2.52	0.43
23:BB:662:G:O4'	37:BL:14:LYS:HB2	2.19	0.43
23:BB:719:C:O2'	23:BB:720:U:H5'	2.19	0.43
23:BB:819:A:N6	23:BB:1189:A:H1'	2.33	0.43
23:BB:823:C:O2'	23:BB:824:U:H5'	2.19	0.43
23:BB:1203:U:C4'	37:BL:3:LEU:HD12	2.46	0.43
23:BB:1239:G:H5"	57:BB:3606:HOH:O	2.18	0.43
23:BB:1749:A:H2'	23:BB:1750:G:H8	1.84	0.43
23:BB:1835:G:H2'	23:BB:1836:C:H6	1.82	0.43
23:BB:1873:G:O2'	23:BB:1874:C:H5'	2.19	0.43
23:BB:2249:U:N3	23:BB:2253:G:OP2	2.52	0.43
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.53	0.43
23:BB:2807:U:H1'	23:BB:2892:G:N2	2.34	0.43
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.33	0.43
25:BC:207:ALA:O	25:BC:208:GLY:C	2.57	0.43
26:BD:46:ARG:HH12	26:BD:88:GLU:CG	2.32	0.43
26:BD:182:ALA:O	26:BD:184:ARG:HG2	2.19	0.43
29:BE:48:THR:HG23	29:BE:51:GLU:OE2	2.18	0.43
37:BL:42:SER:C	37:BL:44:GLY:N	2.67	0.43
37:BL:129:LYS:HA	37:BL:132:ARG:CD	2.49	0.43
37:BL:136:GLU:HA	37:BL:140:GLY:CA	2.48	0.43
40:BH:53:GLU:O	40:BH:54:LEU:HD23	2.19	0.43
45:BS:17:VAL:C	45:BS:19:LEU:N	2.70	0.43
45:BS:29:VAL:HG11	45:BS:55:ILE:CD1	2.49	0.43
45:BS:83:LYS:O	45:BS:84:ARG:NE	2.51	0.43
47:BF:141:ASP:O	47:BF:142:TYR:C	2.58	0.43
50:BT:48:GLN:HE21	50:BT:48:GLN:CA	2.27	0.43
53:B6:137:LEU:O	53:B6:140:LEU:HB3	2.19	0.43
1:CA:15:G:H2'	1:CA:16:A:H8	1.84	0.43
1:CA:224:U:O2'	1:CA:225:C:H5'	2.18	0.43
1:CA:251:G:N2	1:CA:266:G:O6	2.51	0.43
1:CA:311:C:O2'	1:CA:312:C:H5'	2.19	0.43
1:CA:491:G:O2'	1:CA:492:C:H5'	2.19	0.43
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.19	0.43
2:CC:16:PRO:HG2	2:CC:53:ARG:HH22	1.84	0.43
2:CC:42:LEU:HD21	2:CC:90:VAL:HG22	2.01	0.43
2:CC:119:ILE:HD11	2:CC:133:MET:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:29:THR:H	3:CD:33:ILE:HG22	1.83	0.43
3:CD:150:LYS:HD3	3:CD:150:LYS:HA	1.89	0.43
3:CD:172:VAL:HG23	3:CD:178:GLU:O	2.18	0.43
5:CF:45:ARG:HH22	17:CR:25:ILE:HD13	1.83	0.43
6:CG:14:ASP:O	6:CG:18:GLY:HA2	2.19	0.43
8:CI:51:LEU:HB3	8:CI:56:MET:HB2	2.01	0.43
9:CJ:10:LEU:HD11	9:CJ:25:ILE:CD1	2.48	0.43
10:CK:108:ASN:HD21	21:CU:6:ARG:HG3	1.84	0.43
14:CO:24:SER:O	14:CO:25:THR:C	2.57	0.43
16:CQ:17:GLU:C	16:CQ:19:SER:H	2.22	0.43
18:CS:14:LEU:HD22	18:CS:34:SER:OG	2.19	0.43
18:CS:47:THR:HG23	18:CS:60:PHE:CE1	2.47	0.43
20:CB:35:ASN:O	20:CB:37:VAL:HG12	2.19	0.43
20:CB:172:ILE:H	20:CB:172:ILE:HG13	1.69	0.43
21:CU:3:ILE:HG23	21:CU:18:PHE:CD1	2.54	0.43
23:DB:132:G:O2'	23:DB:133:U:H5'	2.18	0.43
23:DB:242:G:H5"	34:D3:63:TYR:CE2	2.52	0.43
23:DB:351:C:H2'	23:DB:352:A:H8	1.84	0.43
23:DB:550:C:OP1	41:DJ:2:LYS:HE3	2.19	0.43
23:DB:776:G:H4'	23:DB:777:G:C5'	2.49	0.43
23:DB:947:A:O2'	23:DB:984:A:H2	2.02	0.43
23:DB:1099:G:H4'	24:DI:4:VAL:HB	2.01	0.43
23:DB:1304:A:H2'	23:DB:1305:C:C6	2.54	0.43
23:DB:1678:A:H2'	23:DB:1679:A:O4'	2.19	0.43
23:DB:1683:U:H2'	23:DB:1684:G:H8	1.83	0.43
23:DB:1862:G:O2'	23:DB:1863:G:H5'	2.18	0.43
23:DB:2436:G:N3	23:DB:2598:A:H2	2.16	0.43
23:DB:2886:A:H62	31:D0:39:ARG:CD	2.31	0.43
26:DD:159:LYS:HZ2	26:DD:160:LYS:N	2.17	0.43
28:DP:50:ARG:O	28:DP:51:ASN:HB2	2.19	0.43
40:DH:80:ILE:CD1	40:DH:146:VAL:HG13	2.46	0.43
41:DJ:17:VAL:CG2	41:DJ:137:PRO:HB2	2.33	0.43
42:DN:52:ILE:O	42:DN:55:ALA:HB3	2.19	0.43
42:DN:87:PHE:CE1	42:DN:116:VAL:HG12	2.54	0.43
43:DO:34:HIS:CE1	43:DO:65:THR:HG21	2.53	0.43
43:DO:35:ILE:HG21	43:DO:71:ALA:HB1	2.01	0.43
43:DO:56:LYS:HG2	43:DO:60:GLU:CG	2.49	0.43
44:DQ:32:ARG:O	44:DQ:36:GLN:HG3	2.18	0.43
44:DQ:33:VAL:O	44:DQ:37:ALA:N	2.51	0.43
46:DU:84:PHE:CD2	46:DU:93:ARG:HG2	2.54	0.43
46:DU:94:PHE:HB3	46:DU:101:THR:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:33:ILE:HG22	47:DF:34:THR:N	2.34	0.43
47:DF:42:ALA:HB1	47:DF:46:LYS:NZ	2.34	0.43
47:DF:134:GLN:C	47:DF:136:ILE:N	2.72	0.43
49:DR:4:VAL:HG23	49:DR:39:LEU:N	2.29	0.43
49:DR:21:ARG:C	49:DR:22:LEU:HD23	2.39	0.43
53:D6:150:SER:O	53:D6:151:GLU:C	2.57	0.43
1:AA:553:A:H2'	1:AA:554:A:C8	2.53	0.43
1:AA:708:C:O2'	1:AA:709:U:H5'	2.18	0.43
1:AA:832:G:O2'	1:AA:833:G:H5'	2.19	0.43
1:AA:874:G:O2'	1:AA:875:U:H5'	2.19	0.43
1:AA:948:C:H2'	1:AA:949:A:H8	1.84	0.43
3:AD:29:THR:H	3:AD:33:ILE:HG22	1.84	0.43
3:AD:172:VAL:O	3:AD:172:VAL:HG13	2.19	0.43
6:AG:14:ASP:O	6:AG:18:GLY:HA2	2.18	0.43
6:AG:14:ASP:CB	6:AG:19:SER:H	2.31	0.43
8:AI:21:LYS:HG3	8:AI:22:PRO:HD2	2.01	0.43
8:AI:35:GLU:HG3	8:AI:44:ARG:HD2	2.01	0.43
9:AJ:91:ASP:C	9:AJ:92:LEU:HD13	2.39	0.43
14:AO:24:SER:O	14:AO:25:THR:C	2.57	0.43
23:BB:10:A:N6	23:BB:2895:G:H1'	2.34	0.43
23:BB:28:A:N6	23:BB:512:G:O2'	2.51	0.43
23:BB:327:G:O2'	23:BB:328:U:H5'	2.19	0.43
23:BB:401:A:H2'	23:BB:402:A:H8	1.84	0.43
23:BB:521:U:H2'	23:BB:522:A:H8	1.81	0.43
23:BB:610:C:O2'	23:BB:611:C:H5'	2.18	0.43
23:BB:996:A:H4'	44:BQ:91:ARG:HD2	2.01	0.43
23:BB:1047:G:O2'	23:BB:1048:A:OP2	2.36	0.43
23:BB:1245:G:OP1	37:BL:13:LYS:HE3	2.18	0.43
23:BB:1349:C:H2'	23:BB:1350:C:C6	2.53	0.43
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.54	0.43
23:BB:1819:A:H1'	23:BB:1821:A:C6	2.53	0.43
23:BB:1845:G:C6	23:BB:1896:G:C6	3.07	0.43
23:BB:2208:C:H2'	23:BB:2209:G:C8	2.54	0.43
23:BB:2301:C:O2'	23:BB:2302:U:H5'	2.19	0.43
23:BB:2329:U:H2'	23:BB:2330:G:H8	1.82	0.43
23:BB:2361:G:O2'	23:BB:2362:C:H5'	2.19	0.43
25:BC:245:THR:HG23	25:BC:249:VAL:O	2.19	0.43
28:BP:13:LYS:HG2	28:BP:76:HIS:ND1	2.34	0.43
29:BE:1:MET:HB2	29:BE:16:GLU:HB2	2.01	0.43
29:BE:4:VAL:HG12	29:BE:6:LYS:H	1.84	0.43
29:BE:18:THR:HG22	29:BE:106:LYS:HE2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:154:ASP:C	29:BE:156:ASN:H	2.21	0.43
32:B4:8:LYS:O	32:B4:35:GLN:NE2	2.52	0.43
33:B1:28:THR:C	33:B1:30:PRO:HD3	2.39	0.43
34:B3:44:ARG:N	34:B3:45:PRO:CD	2.82	0.43
37:BL:78:ARG:HB3	37:BL:78:ARG:NH2	2.34	0.43
38:BM:131:VAL:HG12	38:BM:132:THR:N	2.34	0.43
40:BH:44:ILE:HG13	40:BH:45:GLU:H	1.84	0.43
42:BN:8:ARG:NH2	42:BN:39:PRO:HA	2.34	0.43
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.39	0.43
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.19	0.43
47:BF:87:LYS:CG	47:BF:88:VAL:H	2.22	0.43
47:BF:102:LEU:HD13	47:BF:102:LEU:C	2.39	0.43
47:BF:113:PHE:HE1	47:BF:116:LEU:HB2	1.84	0.43
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.25	0.43
49:BR:5:PHE:N	49:BR:5:PHE:CD1	2.87	0.43
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.37	0.43
52:BW:19:ARG:O	52:BW:20:LEU:HD23	2.19	0.43
1:CA:16:A:C2'	1:CA:17:U:H5'	2.49	0.43
1:CA:333:U:H2'	1:CA:334:C:C6	2.54	0.43
1:CA:970:C:N4	8:CI:128:LYS:HG2	2.33	0.43
2:CC:111:ASP:HB3	2:CC:114:LEU:HD12	2.01	0.43
3:CD:73:ASN:O	3:CD:76:LYS:HB2	2.19	0.43
4:CE:28:ARG:NH2	4:CE:30:PHE:HB3	2.34	0.43
4:CE:59:ILE:H	4:CE:59:ILE:HG13	1.65	0.43
5:CF:69:GLU:O	5:CF:73:GLU:HG3	2.19	0.43
13:CN:5:MET:O	13:CN:8:ARG:HB3	2.19	0.43
13:CN:19:TYR:HB3	13:CN:20:PHE:H	1.66	0.43
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.84	0.43
13:CN:68:ARG:HH12	13:CN:71:GLY:N	2.16	0.43
14:CO:33:THR:OG1	14:CO:85:LEU:HD23	2.19	0.43
14:CO:59:MET:HG2	14:CO:59:MET:H	1.50	0.43
23:DB:544:C:O2'	23:DB:545:U:O4'	2.37	0.43
23:DB:608:A:H2'	23:DB:609:A:H8	1.81	0.43
23:DB:699:A:H2'	23:DB:700:G:O4'	2.19	0.43
23:DB:979:A:H2'	23:DB:982:C:N4	2.34	0.43
23:DB:1174:U:H1'	23:DB:1176:U:O2	2.18	0.43
23:DB:1174:U:OP2	23:DB:1174:U:H6	2.02	0.43
23:DB:1300:G:H5'	23:DB:1301:A:N3	2.34	0.43
23:DB:1439:A:C5	23:DB:1552:A:N6	2.86	0.43
23:DB:1675:C:H2'	23:DB:1676:A:O4'	2.19	0.43
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.83	0.43
23:DB:1830:C:O2'	23:DB:1831:G:H5'	2.19	0.43
23:DB:1880:U:H2'	23:DB:1881:C:C6	2.54	0.43
23:DB:2081:U:OP1	51:DZ:19:SER:HB3	2.18	0.43
23:DB:2208:C:H2'	23:DB:2209:G:H8	1.84	0.43
23:DB:2327:A:N7	23:DB:2388:A:N6	2.66	0.43
23:DB:2392:A:O3'	34:D3:26:ALA:HB1	2.18	0.43
23:DB:2553:G:H2'	23:DB:2554:U:H4'	1.99	0.43
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.54	0.43
25:DC:90:ILE:HD13	25:DC:103:ILE:C	2.39	0.43
27:DK:87:LEU:HB2	27:DK:93:GLN:C	2.38	0.43
27:DK:87:LEU:HD12	27:DK:92:GLU:CA	2.48	0.43
28:DP:86:LYS:HB3	28:DP:87:ARG:H	1.57	0.43
29:DE:146:VAL:HG12	29:DE:147:LEU:N	2.34	0.43
34:D3:6:VAL:HG23	34:D3:60:CYS:O	2.19	0.43
34:D3:32:LEU:HA	34:D3:35:LYS:HD2	2.01	0.43
34:D3:61:LEU:N	34:D3:62:PRO:HD3	2.34	0.43
35:DV:62:THR:HG21	35:DV:71:LYS:NZ	2.34	0.43
37:DL:81:ASP:O	37:DL:83:ALA:N	2.45	0.43
37:DL:143:GLU:CG	37:DL:144:GLU:N	2.79	0.43
42:DN:34:ILE:HG22	42:DN:35:LYS:N	2.33	0.43
42:DN:79:LEU:HA	42:DN:83:LEU:HD11	2.00	0.43
44:DQ:106:THR:O	44:DQ:109:VAL:HB	2.18	0.43
46:DU:81:ARG:CD	46:DU:96:LYS:HG3	2.49	0.43
47:DF:52:ALA:HA	47:DF:55:ASP:HB2	2.01	0.43
48:DG:94:ARG:NH2	48:DG:104:LEU:HA	2.34	0.43
49:DR:91:GLN:HG3	49:DR:92:TRP:N	2.33	0.43
53:D6:44:GLU:OE2	53:D6:47:GLY:N	2.52	0.43
53:D6:73:GLN:O	53:D6:76:LEU:HB2	2.18	0.43
1:AA:283:U:H2'	1:AA:284:C:H6	1.84	0.42
1:AA:591:U:O2'	1:AA:592:G:H5'	2.19	0.42
1:AA:755:G:H2'	1:AA:756:C:H6	1.84	0.42
1:AA:792:A:C4	1:AA:794:A:C6	3.08	0.42
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.54	0.42
1:AA:1460:C:H2'	1:AA:1461:G:H8	1.84	0.42
1:AA:1526:G:O2'	1:AA:1527:U:H5'	2.19	0.42
2:AC:117:ASP:OD2	2:AC:186:SER:HB3	2.19	0.42
3:AD:2:ARG:HB3	3:AD:114:ARG:HH22	1.83	0.42
4:AE:148:SER:OG	4:AE:151:MET:HB2	2.18	0.42
5:AF:81:ASN:O	5:AF:83:ALA:N	2.52	0.42
5:AF:85:ILE:CG2	5:AF:86:ARG:H	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:110:ARG:HE	6:AG:122:GLU:HB2	1.84	0.42
7:AH:17:GLN:NE2	7:AH:69:ALA:HB1	2.34	0.42
8:AI:33:SER:CB	8:AI:36:GLN:HB2	2.42	0.42
10:AK:80:ASN:ND2	10:AK:80:ASN:H	2.16	0.42
11:AL:20:VAL:HG12	11:AL:93:ARG:CB	2.47	0.42
15:AP:36:VAL:O	15:AP:36:VAL:HG13	2.19	0.42
17:AR:25:ILE:HG13	17:AR:26:ALA:N	2.34	0.42
21:AU:40:PRO:C	21:AU:42:THR:N	2.72	0.42
22:BA:116:G:H4'	43:BO:54:VAL:HG22	2.01	0.42
23:BB:308:G:H1'	23:BB:501:A:OP1	2.19	0.42
23:BB:571:U:H3'	49:BR:80:ARG:CZ	2.47	0.42
23:BB:1248:G:OP1	44:BQ:1:ALA:HB3	2.19	0.42
23:BB:1404:C:O2'	23:BB:1405:U:H5'	2.19	0.42
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.52	0.42
23:BB:1824:G:H1'	25:BC:251:THR:HG21	2.00	0.42
23:BB:1923:U:H2'	23:BB:1924:C:C6	2.54	0.42
23:BB:2181:U:H2'	23:BB:2182:U:O4'	2.19	0.42
23:BB:2305:U:C4	47:BF:151:LEU:HA	2.54	0.42
23:BB:2450:A:O2'	23:BB:2451:A:H5'	2.18	0.42
23:BB:2757:A:H2	48:BG:63:GLN:HE22	1.67	0.42
23:BB:2815:C:C2	23:BB:2816:G:C8	3.07	0.42
29:BE:130:LYS:C	29:BE:132:LYS:N	2.71	0.42
30:BY:3:THR:HB	30:BY:36:GLU:HG2	2.01	0.42
32:B4:2:LYS:HG2	32:B4:4:ARG:HG3	2.01	0.42
32:B4:3:VAL:O	32:B4:4:ARG:O	2.37	0.42
32:B4:5:ALA:HA	32:B4:37:GLN:NE2	2.34	0.42
38:BM:55:ARG:O	38:BM:55:ARG:HG3	2.19	0.42
38:BM:103:TYR:HB2	38:BM:117:PHE:CE1	2.54	0.42
40:BH:27:ARG:HE	51:BZ:64:ILE:HD11	1.83	0.42
40:BH:57:LYS:CG	40:BH:58:LEU:N	2.82	0.42
43:BO:15:ARG:HH21	43:BO:95:SER:HB3	1.84	0.42
43:BO:56:LYS:HG2	43:BO:60:GLU:CG	2.49	0.42
45:BS:22:ASP:HA	45:BS:25:ARG:HH12	1.80	0.42
46:BU:13:LEU:HA	46:BU:18:LYS:HD3	2.01	0.42
46:BU:73:ASN:HB3	46:BU:95:PHE:CD2	2.54	0.42
47:BF:116:LEU:HB3	47:BF:176:PHE:CA	2.49	0.42
48:BG:5:LYS:HE2	48:BG:61:TRP:CH2	2.54	0.42
48:BG:147:LEU:O	48:BG:150:TYR:HB2	2.19	0.42
51:BZ:5:CYS:O	51:BZ:6:GLN:HB3	2.19	0.42
51:BZ:36:HIS:HB3	51:BZ:38:PHE:CE2	2.54	0.42
1:CA:648:A:H2'	1:CA:649:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:921:U:H2'	1:CA:922:G:O4'	2.19	0.42
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.18	0.42
1:CA:1079:G:C6	1:CA:1080:A:N6	2.86	0.42
1:CA:1234:C:H2'	1:CA:1235:U:C6	2.54	0.42
1:CA:1250:A:C2	1:CA:1370:G:H1'	2.54	0.42
1:CA:1348:U:C4'	8:CI:121:ARG:HG3	2.31	0.42
5:CF:46:GLN:HA	5:CF:46:GLN:NE2	2.33	0.42
5:CF:99:ALA:O	5:CF:100:SER:CB	2.66	0.42
13:CN:20:PHE:HD2	13:CN:54:SER:O	2.02	0.42
13:CN:47:LEU:O	13:CN:49:THR:N	2.52	0.42
14:CO:71:LYS:HB2	14:CO:78:TYR:CD2	2.54	0.42
20:CB:19:THR:HG23	20:CB:20:ARG:N	2.33	0.42
22:DA:83:G:C6	22:DA:94:A:C6	3.07	0.42
23:DB:154:U:H2'	23:DB:155:A:H8	1.84	0.42
23:DB:253:C:P	34:D3:4:LYS:HZ2	2.42	0.42
23:DB:804:A:H5"	23:DB:805:G:OP1	2.19	0.42
23:DB:871:U:C2	23:DB:907:G:C6	3.07	0.42
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.84	0.42
23:DB:2015:A:H2'	23:DB:2016:U:O4'	2.18	0.42
23:DB:2285:C:OP2	33:D1:5:ARG:HD3	2.19	0.42
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.54	0.42
23:DB:2376:A:N1	43:DO:92:PHE:HD2	2.17	0.42
23:DB:2457:U:H2'	23:DB:2458:G:H5'	2.01	0.42
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.34	0.42
26:DD:15:PHE:CD2	28:DP:77:SER:HA	2.54	0.42
29:DE:2:GLU:OE1	29:DE:11:ALA:HB1	2.19	0.42
29:DE:28:VAL:HG23	29:DE:29:HIS:N	2.34	0.42
35:DV:29:ILE:HD12	35:DV:90:ASP:HA	2.01	0.42
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.19	0.42
38:DM:29:GLY:HA2	38:DM:106:ASP:HB2	2.01	0.42
40:DH:109:GLU:O	40:DH:110:VAL:HG12	2.18	0.42
40:DH:119:ASN:O	40:DH:121:VAL:HG22	2.19	0.42
41:DJ:58:ASN:O	41:DJ:59:ALA:HB3	2.19	0.42
43:DO:61:GLN:HE21	43:DO:61:GLN:HB3	1.70	0.42
44:DQ:87:VAL:HG12	44:DQ:89:ILE:HD13	2.01	0.42
45:DS:31:GLN:C	45:DS:33:LEU:N	2.71	0.42
47:DF:115:GLY:HA2	47:DF:177:ARG:NH1	2.34	0.42
48:DG:93:TYR:O	48:DG:94:ARG:HG3	2.19	0.42
48:DG:94:ARG:HH21	48:DG:104:LEU:HA	1.83	0.42
49:DR:16:GLU:HG2	49:DR:101:ILE:CB	2.49	0.42
52:DW:49:ASN:ND2	52:DW:50:VAL:N	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:33:ALA:HB1	53:D6:63:PRO:HA	2.00	0.42
53:D6:183:ILE:C	53:D6:185:GLY:H	2.21	0.42
1:AA:37:U:H2'	1:AA:38:G:H8	1.84	0.42
1:AA:313:A:O2'	1:AA:314:C:H5'	2.18	0.42
1:AA:378:G:H2'	1:AA:379:C:C6	2.53	0.42
1:AA:397:A:H3'	1:AA:397:A:N3	2.34	0.42
1:AA:1009:U:O2	1:AA:1009:U:C2'	2.67	0.42
1:AA:1251:A:O2'	1:AA:1252:A:H5'	2.19	0.42
4:AE:39:GLY:CA	4:AE:116:VAL:HB	2.46	0.42
4:AE:45:VAL:O	4:AE:70:MET:HB3	2.19	0.42
4:AE:52:ALA:N	4:AE:58:ALA:HB2	2.34	0.42
4:AE:87:VAL:HG21	4:AE:92:ARG:HD2	2.01	0.42
5:AF:74:LEU:HA	5:AF:77:THR:OG1	2.19	0.42
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.34	0.42
10:AK:92:ARG:HE	21:AU:20:ARG:NH2	2.14	0.42
15:AP:10:GLY:HA3	15:AP:15:PRO:HA	1.99	0.42
18:AS:50:VAL:O	18:AS:56:HIS:HA	2.20	0.42
22:BA:13:G:C5	22:BA:70:C:H4'	2.55	0.42
23:BB:193:U:O3'	23:BB:803:U:H4'	2.20	0.42
23:BB:520:G:O2'	23:BB:521:U:H5'	2.18	0.42
23:BB:699:A:H2'	23:BB:700:G:O4'	2.18	0.42
23:BB:707:G:O2'	23:BB:708:G:H5'	2.19	0.42
23:BB:787:C:H3'	23:BB:791:C:H41	1.84	0.42
23:BB:838:C:H2'	23:BB:839:U:H6	1.84	0.42
23:BB:927:A:O2'	23:BB:928:A:H5'	2.18	0.42
23:BB:1114:C:H2'	23:BB:1115:G:O4'	2.19	0.42
23:BB:1258:U:H4'	29:BE:79:ARG:HD2	2.02	0.42
23:BB:1900:A:N1	23:BB:1970:A:C5	2.87	0.42
23:BB:2146:C:H1'	23:BB:2147:A:C4'	2.48	0.42
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.53	0.42
23:BB:2315:G:H2'	23:BB:2316:G:H8	1.84	0.42
23:BB:2419:U:OP2	34:B3:32:LEU:HD13	2.19	0.42
23:BB:2876:G:H2'	23:BB:2877:G:O4'	2.19	0.42
28:BP:6:GLN:HE21	28:BP:7:LEU:N	2.17	0.42
34:B3:7:ARG:O	34:B3:8:GLY:C	2.57	0.42
37:BL:135:ILE:CG2	37:BL:136:GLU:N	2.82	0.42
38:BM:102:LEU:N	38:BM:102:LEU:HD22	2.34	0.42
39:BX:20:ASN:HA	39:BX:24:GLU:OE1	2.20	0.42
41:BJ:3:THR:O	41:BJ:4:PHE:O	2.36	0.42
42:BN:59:SER:C	42:BN:61:ALA:N	2.71	0.42
43:BO:6:ALA:CB	43:BO:10:ARG:HH11	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:30:ARG:HG3	43:BO:30:ARG:HH11	1.84	0.42
46:BU:45:GLN:HE21	46:BU:45:GLN:HB3	1.57	0.42
46:BU:84:PHE:CD2	46:BU:93:ARG:HG2	2.53	0.42
47:BF:40:GLY:O	47:BF:41:GLU:C	2.57	0.42
47:BF:42:ALA:HB1	47:BF:46:LYS:NZ	2.34	0.42
47:BF:66:ILE:HD11	47:BF:83:PRO:CB	2.44	0.42
48:BG:93:TYR:HE1	48:BG:160:GLY:HA2	1.84	0.42
49:BR:19:THR:CB	49:BR:97:LYS:HA	2.45	0.42
50:BT:54:GLU:H	50:BT:54:GLU:HG2	1.67	0.42
53:B6:57:THR:HB	53:B6:69:GLN:O	2.18	0.42
1:CA:65:A:C5	1:CA:381:C:N3	2.87	0.42
1:CA:327:A:O2'	1:CA:328:C:O4'	2.32	0.42
1:CA:537:G:H2'	1:CA:538:G:C8	2.54	0.42
1:CA:592:G:O2'	1:CA:593:U:H5'	2.19	0.42
1:CA:908:A:H2'	1:CA:909:A:H8	1.84	0.42
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.19	0.42
1:CA:1477:U:H2'	1:CA:1478:U:H6	1.81	0.42
4:CE:82:HIS:CD2	7:CH:95:MET:HG3	2.54	0.42
5:CF:55:HIS:O	5:CF:56:LYS:HG3	2.19	0.42
9:CJ:24:GLU:CD	9:CJ:90:LEU:HD11	2.39	0.42
14:CO:64:ARG:NH2	14:CO:88:ARG:NH1	2.67	0.42
16:CQ:74:LEU:C	16:CQ:74:LEU:HD13	2.40	0.42
20:CB:13:VAL:CG1	20:CB:207:ARG:HG2	2.48	0.42
20:CB:205:ALA:HB3	20:CB:208:ALA:HB3	2.01	0.42
21:CU:3:ILE:HG21	21:CU:19:LYS:CG	2.45	0.42
23:DB:118:A:N3	23:DB:178:G:H1'	2.34	0.42
23:DB:125:A:H2	36:D2:9:VAL:HG22	1.84	0.42
23:DB:408:G:H2'	23:DB:409:G:H8	1.84	0.42
23:DB:493:G:H2'	23:DB:494:G:O4'	2.19	0.42
23:DB:557:C:H2'	23:DB:558:U:H6	1.83	0.42
23:DB:603:A:H4'	23:DB:604:G:O5'	2.19	0.42
23:DB:760:G:C2'	23:DB:761:A:H5'	2.49	0.42
23:DB:784:G:H5"	25:DC:225:ASN:OD1	2.19	0.42
23:DB:809:G:O2'	23:DB:810:U:H5'	2.19	0.42
23:DB:1077:A:H4'	24:DI:93:ASN:OD1	2.19	0.42
23:DB:1271:G:C2	23:DB:1617:C:H4'	2.54	0.42
23:DB:1374:G:H2'	23:DB:1375:U:H6	1.82	0.42
23:DB:1723:G:N7	23:DB:1737:G:N2	2.61	0.42
23:DB:1824:G:H1'	25:DC:251:THR:HG21	2.02	0.42
23:DB:2302:U:O2'	23:DB:2303:G:H5'	2.19	0.42
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2538:C:O2'	23:DB:2539:C:H5'	2.18	0.42
26:DD:70:LYS:HD3	26:DD:70:LYS:C	2.39	0.42
27:DK:119:ALA:O	27:DK:120:PRO:O	2.37	0.42
29:DE:60:TRP:CZ3	29:DE:62:GLN:HA	2.55	0.42
34:D3:7:ARG:O	34:D3:8:GLY:C	2.57	0.42
36:D2:1:MET:HG2	36:D2:2:LYS:H	1.84	0.42
37:DL:30:THR:O	37:DL:31:GLY:C	2.57	0.42
41:DJ:33:ALA:O	41:DJ:34:ARG:C	2.57	0.42
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.34	0.42
43:DO:14:ALA:C	43:DO:16:ARG:H	2.22	0.42
44:DQ:30:VAL:HG22	44:DQ:31:TYR:N	2.34	0.42
47:DF:2:LYS:CD	47:DF:100:GLU:HG2	2.49	0.42
47:DF:87:LYS:HG3	47:DF:88:VAL:N	2.21	0.42
47:DF:119:LYS:C	47:DF:121:PHE:H	2.22	0.42
48:DG:24:THR:OG1	48:DG:32:LEU:HD21	2.19	0.42
52:DW:42:THR:O	52:DW:43:LYS:HE3	2.19	0.42
1:AA:392:C:H2'	1:AA:393:A:C8	2.54	0.42
1:AA:429:U:H3'	3:AD:8:LEU:CD2	2.45	0.42
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.19	0.42
1:AA:665:A:H2'	1:AA:725:G:N2	2.34	0.42
1:AA:1206:G:C4'	2:AC:192:TYR:HA	2.38	0.42
1:AA:1278:G:H4'	1:AA:1279:G:H5'	2.01	0.42
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.80	0.42
1:AA:1390:U:O2'	1:AA:1391:U:H5'	2.19	0.42
1:AA:1426:G:H2'	1:AA:1427:C:H6	1.84	0.42
3:AD:30:LYS:N	3:AD:30:LYS:HD3	2.34	0.42
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.82	0.42
6:AG:104:VAL:HG12	6:AG:108:ARG:HD2	2.01	0.42
8:AI:38:PHE:HB3	8:AI:43:ALA:HB3	2.01	0.42
8:AI:50:PRO:HD3	8:AI:79:ARG:CG	2.49	0.42
9:AJ:5:ARG:HD3	9:AJ:79:PRO:HG3	2.00	0.42
15:AP:40:ASN:HD21	15:AP:43:ALA:CA	2.31	0.42
18:AS:36:ARG:H	18:AS:36:ARG:HG2	1.59	0.42
20:AB:147:LEU:O	20:AB:151:LYS:N	2.52	0.42
23:BB:26:G:H2'	23:BB:27:G:C1'	2.48	0.42
23:BB:116:C:C2'	23:BB:117:G:H5'	2.50	0.42
23:BB:158:U:H2'	23:BB:159:G:O4'	2.18	0.42
23:BB:234:U:O2'	23:BB:235:U:H5'	2.19	0.42
23:BB:322:A:C2	23:BB:340:A:C6	3.06	0.42
23:BB:560:C:H3'	23:BB:561:G:C8	2.54	0.42
23:BB:994:C:O2'	49:BR:10:LYS:HE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1204:A:N1	23:BB:1241:A:N1	2.66	0.42
23:BB:1222:U:P	49:BR:90:ARG:HH12	2.42	0.42
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.54	0.42
23:BB:1372:U:H2'	23:BB:1373:A:H8	1.84	0.42
23:BB:1439:A:C8	23:BB:1440:U:C6	3.08	0.42
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.53	0.42
23:BB:1458:U:O3'	23:BB:1459:G:O4'	2.37	0.42
23:BB:1664:A:H1'	23:BB:2726:A:C2	2.55	0.42
23:BB:1745:A:O2'	23:BB:1746:A:H5'	2.19	0.42
23:BB:1891:G:H2'	23:BB:1892:C:H6	1.85	0.42
23:BB:2087:G:H2'	23:BB:2088:A:H8	1.84	0.42
23:BB:2311:A:O2'	47:BF:84:ILE:HG21	2.19	0.42
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.20	0.42
23:BB:2812:G:H2'	23:BB:2813:A:O4'	2.19	0.42
25:BC:90:ILE:HD11	25:BC:102:TYR:HB3	2.00	0.42
25:BC:131:MET:HE1	25:BC:189:ALA:HB2	2.01	0.42
26:BD:18:ASP:OD1	26:BD:19:GLY:N	2.52	0.42
29:BE:42:GLY:O	29:BE:43:THR:O	2.38	0.42
35:BV:55:GLU:CD	35:BV:55:GLU:H	2.22	0.42
36:B2:12:ARG:HG3	36:B2:12:ARG:NH2	2.34	0.42
38:BM:46:ILE:CG1	38:BM:47:GLU:N	2.81	0.42
38:BM:69:PRO:HA	38:BM:94:ALA:CA	2.49	0.42
40:BH:89:LYS:NZ	40:BH:89:LYS:HB3	2.34	0.42
40:BH:90:LEU:HD23	40:BH:123:ARG:HG2	2.01	0.42
42:BN:9:GLN:C	42:BN:17:ARG:HD3	2.38	0.42
42:BN:52:ILE:HD13	42:BN:87:PHE:CE2	2.54	0.42
44:BQ:54:ARG:HB3	44:BQ:58:GLN:HE22	1.85	0.42
44:BQ:81:GLY:C	44:BQ:83:LYS:N	2.73	0.42
44:BQ:90:ASP:C	49:BR:11:GLN:HE22	2.22	0.42
45:BS:36:LEU:HB3	45:BS:48:LYS:HB2	2.00	0.42
46:BU:84:PHE:HB3	46:BU:91:LYS:HG3	2.01	0.42
49:BR:38:VAL:HG22	49:BR:40:MET:H	1.84	0.42
50:BT:14:PRO:HA	50:BT:32:LEU:CB	2.49	0.42
53:B6:52:LEU:CD1	53:B6:58:VAL:HG23	2.48	0.42
53:B6:129:ILE:HA	53:B6:132:ILE:CD1	2.37	0.42
53:B6:179:LYS:HA	53:B6:179:LYS:HD3	1.90	0.42
1:CA:15:G:H2'	1:CA:16:A:C8	2.54	0.42
1:CA:56:U:H2'	1:CA:57:G:H8	1.85	0.42
1:CA:106:C:H2'	1:CA:107:G:C8	2.54	0.42
1:CA:554:A:H5'	11:CL:25:ALA:HB1	2.00	0.42
1:CA:958:A:C6	1:CA:959:A:N1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1028:C:O2	1:CA:1028:C:H2'	2.18	0.42
1:CA:1081:A:OP1	4:CE:22:LYS:HA	2.19	0.42
1:CA:1143:G:O2'	1:CA:1144:G:H5'	2.19	0.42
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.83	0.42
1:CA:1320:C:N4	18:CS:36:ARG:HE	2.16	0.42
1:CA:1336:C:H4'	1:CA:1337:G:O5'	2.20	0.42
1:CA:1354:U:H2'	1:CA:1355:G:C8	2.53	0.42
3:CD:196:GLU:O	3:CD:200:VAL:HG13	2.19	0.42
8:CI:46:VAL:HG23	8:CI:47:VAL:N	2.34	0.42
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.19	0.42
9:CJ:80:THR:HG21	9:CJ:82:LYS:HZ1	1.84	0.42
10:CK:86:LYS:HB2	10:CK:113:THR:HA	2.01	0.42
11:CL:89:LEU:N	11:CL:89:LEU:HD22	2.34	0.42
12:CM:52:ILE:HD12	12:CM:55:LEU:CD1	2.49	0.42
23:DB:110:G:O2'	23:DB:111:A:H5'	2.19	0.42
23:DB:137:U:O2	50:DT:1:MET:N	2.43	0.42
23:DB:520:G:O2'	23:DB:521:U:H5'	2.19	0.42
23:DB:672:C:H2'	23:DB:673:C:H6	1.83	0.42
23:DB:674:G:O3'	29:DE:60:TRP:CZ2	2.71	0.42
23:DB:681:G:H2'	23:DB:682:G:H8	1.84	0.42
23:DB:820:A:H2'	23:DB:821:A:O4'	2.19	0.42
23:DB:1818:U:HO2'	23:DB:1819:A:P	2.41	0.42
23:DB:1848:A:H2'	23:DB:1849:G:H8	1.84	0.42
23:DB:1902:C:H4'	25:DC:241:LYS:O	2.19	0.42
23:DB:1948:G:C6	23:DB:1959:G:C6	3.08	0.42
23:DB:1952:A:C6	23:DB:1953:A:N1	2.88	0.42
23:DB:2110:G:H8	23:DB:2110:G:OP2	2.02	0.42
23:DB:2358:A:H2'	23:DB:2359:C:H6	1.84	0.42
23:DB:2472:G:O6	23:DB:2476:A:H4'	2.19	0.42
23:DB:2689:U:H4'	23:DB:2690:U:OP2	2.19	0.42
23:DB:2873:A:O4'	42:DN:6:SER:HB3	2.20	0.42
25:DC:121:ALA:HB3	25:DC:129:LEU:CD1	2.49	0.42
25:DC:140:VAL:O	25:DC:141:HIS:HB2	2.20	0.42
28:DP:1:SER:H1	28:DP:4:ILE:HD12	1.84	0.42
31:D0:41:HIS:O	31:D0:42:ILE:O	2.36	0.42
35:DV:49:ASN:N	35:DV:49:ASN:ND2	2.65	0.42
39:DX:28:LEU:HB3	39:DX:43:LEU:HD21	2.01	0.42
40:DH:95:GLY:H	40:DH:98:ASP:HB2	1.83	0.42
40:DH:113:SER:C	40:DH:115:VAL:H	2.22	0.42
41:DJ:6:ALA:HB3	41:DJ:45:THR:CB	2.49	0.42
43:DO:15:ARG:HH21	43:DO:95:SER:HB3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.52	0.42
47:DF:42:ALA:O	47:DF:45:ASP:N	2.52	0.42
48:DG:26:LYS:HA	48:DG:32:LEU:N	2.35	0.42
49:DR:57:GLY:HA2	49:DR:102:SER:O	2.19	0.42
53:D6:143:LEU:HA	53:D6:146:GLU:HG2	2.01	0.42
1:AA:83:C:O3'	1:AA:84:U:C6	2.73	0.42
1:AA:327:A:H1'	1:AA:329:A:O4'	2.18	0.42
1:AA:366:A:O2'	1:AA:367:U:P	2.78	0.42
1:AA:584:G:H2'	1:AA:585:G:H8	1.84	0.42
1:AA:598:U:H4'	7:AH:85:TYR:CD2	2.55	0.42
1:AA:864:A:H2'	1:AA:865:A:C8	2.54	0.42
1:AA:1057:G:H5"	2:AC:153:SER:CB	2.49	0.42
1:AA:1343:G:H1'	8:AI:122:ARG:NH1	2.34	0.42
2:AC:50:SER:O	2:AC:114:LEU:HD21	2.20	0.42
2:AC:70:ALA:HA	2:AC:105:VAL:HG22	2.01	0.42
5:AF:69:GLU:O	5:AF:73:GLU:HG3	2.18	0.42
6:AG:10:LYS:HA	6:AG:10:LYS:NZ	2.33	0.42
6:AG:16:LYS:HD3	6:AG:17:PHE:CE1	2.54	0.42
6:AG:46:LEU:HG	6:AG:57:GLU:HB3	2.02	0.42
8:AI:43:ALA:O	8:AI:46:VAL:HG22	2.19	0.42
10:AK:109:ILE:HB	21:AU:16:ARG:HH12	1.84	0.42
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	2.00	0.42
12:AM:44:ILE:HD12	12:AM:45:SER:N	2.34	0.42
20:AB:80:LYS:HB2	20:AB:80:LYS:HE3	1.83	0.42
21:AU:9:GLU:OE2	2:CC:108:PRO:HG3	2.20	0.42
22:BA:7:G:O2'	22:BA:8:C:H5'	2.19	0.42
22:BA:94:A:C2'	22:BA:95:U:H5'	2.50	0.42
23:BB:325:G:H2'	23:BB:326:G:C8	2.54	0.42
23:BB:662:G:O3'	37:BL:16:GLY:HA2	2.19	0.42
23:BB:738:G:H2'	23:BB:739:A:C8	2.53	0.42
23:BB:1336:A:H3'	23:BB:1337:G:H8	1.84	0.42
23:BB:1360:G:H2'	23:BB:1361:G:C5'	2.49	0.42
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.19	0.42
23:BB:1584:U:H3'	23:BB:1585:C:H5'	2.00	0.42
23:BB:2256:G:H2'	23:BB:2257:U:C6	2.54	0.42
23:BB:2267:A:C8	23:BB:2267:A:C4'	3.02	0.42
23:BB:2307:G:O6	47:BF:40:GLY:HA3	2.19	0.42
23:BB:2347:C:O2'	33:B1:20:TYR:OH	2.34	0.42
23:BB:2723:C:H5"	42:BN:1:MET:CE	2.49	0.42
23:BB:2815:C:H2'	23:BB:2816:G:C8	2.51	0.42
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:87:LEU:HD12	27:BK:92:GLU:CA	2.49	0.42
28:BP:31:VAL:HG13	28:BP:32:VAL:N	2.34	0.42
30:BY:47:ILE:O	30:BY:48:ASN:C	2.58	0.42
33:B1:29:LYS:HE2	33:B1:31:GLU:OE1	2.20	0.42
36:B2:10:LEU:O	36:B2:14:ARG:HG2	2.19	0.42
37:BL:118:THR:HA	37:BL:119:PRO:HD3	1.91	0.42
39:BX:52:ARG:O	39:BX:55:THR:HB	2.19	0.42
40:BH:40:THR:N	40:BH:43:ASN:ND2	2.68	0.42
40:BH:143:ILE:O	40:BH:144:VAL:HG23	2.19	0.42
41:BJ:16:TYR:CD2	41:BJ:140:LEU:HD12	2.54	0.42
41:BJ:44:TYR:CZ	44:BQ:59:LEU:HD11	2.54	0.42
41:BJ:110:PRO:O	41:BJ:115:GLY:HA3	2.19	0.42
45:BS:76:VAL:HA	45:BS:102:HIS:O	2.19	0.42
48:BG:88:LEU:O	48:BG:88:LEU:HD12	2.19	0.42
49:BR:16:GLU:HG2	49:BR:101:ILE:CG1	2.48	0.42
50:BT:1:MET:HG3	50:BT:2:ILE:N	2.32	0.42
50:BT:81:LYS:HG3	50:BT:82:LYS:N	2.34	0.42
53:B6:114:LEU:CG	53:B6:183:ILE:HD11	2.50	0.42
1:CA:93:U:H2'	1:CA:94:G:H5'	2.00	0.42
1:CA:160:A:H1'	1:CA:344:A:C5	2.54	0.42
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.18	0.42
1:CA:981:U:H2'	1:CA:982:U:C5	2.54	0.42
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.19	0.42
1:CA:1103:C:H5"	20:CB:96:LEU:HD12	2.00	0.42
1:CA:1229:A:H2'	1:CA:1230:C:H6	1.84	0.42
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.83	0.42
2:CC:178:ARG:CG	2:CC:206:ILE:HA	2.49	0.42
3:CD:19:PHE:HB3	3:CD:22:SER:OG	2.19	0.42
3:CD:147:LYS:H	3:CD:147:LYS:HG3	1.66	0.42
8:CI:37:TYR:HE2	8:CI:74:GLN:HG2	1.85	0.42
11:CL:28:GLN:HA	11:CL:81:ILE:O	2.20	0.42
12:CM:28:ARG:CZ	12:CM:62:PHE:HB2	2.49	0.42
13:CN:30:ILE:O	13:CN:32:ASP:N	2.47	0.42
22:DA:67:G:O2'	22:DA:68:C:H5'	2.19	0.42
22:DA:75:G:H2'	22:DA:76:G:C8	2.55	0.42
22:DA:116:G:H4'	43:DO:54:VAL:HG22	2.01	0.42
23:DB:39:G:H2'	23:DB:40:U:C6	2.54	0.42
23:DB:67:U:H2'	23:DB:68:G:C8	2.54	0.42
23:DB:558:U:OP1	41:DJ:114:LEU:N	2.52	0.42
23:DB:577:G:O2'	23:DB:1254:A:OP1	2.36	0.42
23:DB:800:A:H4'	23:DB:801:G:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:819:A:N6	23:DB:1189:A:H1'	2.35	0.42
23:DB:1238:G:O2'	23:DB:1239:G:H5'	2.19	0.42
23:DB:1322:A:H2'	23:DB:1323:C:H5'	2.00	0.42
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.20	0.42
23:DB:1811:G:O2'	23:DB:1812:U:H5'	2.18	0.42
23:DB:1930:G:H22	23:DB:1969:A:P	2.41	0.42
23:DB:2256:G:H2'	23:DB:2257:U:C6	2.54	0.42
23:DB:2733:A:C8	23:DB:2733:A:C3'	3.01	0.42
23:DB:2751:G:OP2	48:DG:2:ARG:HD2	2.19	0.42
25:DC:23:LEU:HD21	25:DC:89:ASN:OD1	2.19	0.42
25:DC:102:TYR:O	25:DC:103:ILE:HG13	2.19	0.42
26:DD:169:ARG:O	26:DD:170:VAL:O	2.37	0.42
27:DK:115:ILE:HG23	27:DK:116:ILE:H	1.84	0.42
29:DE:48:THR:C	29:DE:50:ALA:N	2.72	0.42
34:D3:23:HIS:O	34:D3:46:LYS:HB3	2.18	0.42
36:D2:13:ASN:C	36:D2:15:SER:H	2.21	0.42
41:DJ:101:ILE:O	41:DJ:105:VAL:HG22	2.20	0.42
43:DO:6:ALA:CB	43:DO:10:ARG:HH11	2.33	0.42
43:DO:40:ILE:CG2	43:DO:44:GLY:HA2	2.49	0.42
43:DO:83:LEU:HD12	43:DO:83:LEU:HA	1.83	0.42
45:DS:43:ALA:O	45:DS:46:LEU:HB2	2.19	0.42
45:DS:59:GLU:OE2	45:DS:66:ILE:HG23	2.19	0.42
45:DS:73:LYS:HD2	45:DS:73:LYS:HA	1.80	0.42
47:DF:42:ALA:O	47:DF:44:ALA:N	2.52	0.42
47:DF:45:ASP:C	47:DF:47:LYS:H	2.21	0.42
47:DF:78:ILE:HA	47:DF:79:ARG:HE	1.84	0.42
47:DF:116:LEU:HB3	47:DF:176:PHE:HA	2.02	0.42
47:DF:122:ASP:HB3	47:DF:123:GLY:H	1.65	0.42
48:DG:5:LYS:HE2	48:DG:61:TRP:CH2	2.54	0.42
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.84	0.42
49:DR:49:ILE:HB	49:DR:53:PHE:O	2.20	0.42
52:DW:28:GLU:HG3	52:DW:29:SER:H	1.84	0.42
53:D6:149:LEU:HB2	53:D6:154:THR:HG22	2.02	0.42
53:D6:171:LYS:O	53:D6:174:GLN:HB3	2.19	0.42
1:AA:373:A:C1'	1:AA:481:G:H1'	2.49	0.42
1:AA:676:A:O2'	1:AA:677:U:H5'	2.19	0.42
1:AA:842:U:H4'	1:AA:846:G:C2	2.54	0.42
1:AA:924:C:H5'	1:AA:1399:C:OP2	2.20	0.42
1:AA:972:C:O2'	9:AJ:57:VAL:HA	2.19	0.42
1:AA:974:A:H8	1:AA:974:A:OP1	2.02	0.42
1:AA:1251:A:H1'	1:AA:1370:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.84	0.42
3:AD:100:VAL:HG21	3:AD:136:VAL:CG2	2.49	0.42
7:AH:86:LYS:HG3	7:AH:124:ILE:HD11	2.01	0.42
8:AI:55:ASP:CB	8:AI:59:LYS:HG3	2.49	0.42
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.54	0.42
11:AL:115:LYS:O	11:AL:116:TYR:HB2	2.19	0.42
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.84	0.42
15:AP:48:GLU:HG3	15:AP:49:GLY:H	1.83	0.42
16:AQ:47:ASP:OD2	16:AQ:51:GLU:HG2	2.19	0.42
18:AS:66:VAL:C	18:AS:68:HIS:H	2.22	0.42
22:BA:39:A:H2	22:BA:46:A:N6	2.15	0.42
22:BA:42:C:C6	47:BF:65:LEU:HD22	2.55	0.42
23:BB:118:A:H5'	23:BB:119:A:H8	1.84	0.42
23:BB:335:C:O2'	23:BB:336:C:H5'	2.19	0.42
23:BB:1207:C:H2'	23:BB:1208:C:H6	1.83	0.42
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.20	0.42
23:BB:1435:G:H2'	23:BB:1436:G:C8	2.54	0.42
23:BB:1449:G:O2'	23:BB:1450:G:H5'	2.19	0.42
23:BB:1729:U:H2'	23:BB:1730:C:H5'	2.01	0.42
23:BB:1830:C:O2'	23:BB:1831:G:H5'	2.19	0.42
23:BB:1856:U:C2'	23:BB:1857:G:H5'	2.50	0.42
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.55	0.42
23:BB:2276:G:O2'	23:BB:2277:G:H5'	2.20	0.42
23:BB:2301:C:H2'	23:BB:2302:U:H6	1.85	0.42
23:BB:2655:G:H1'	23:BB:2656:U:H5	1.84	0.42
23:BB:2730:C:H4'	26:BD:174:SER:HB3	2.01	0.42
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.49	0.42
24:BI:15:GLY:O	24:BI:16:MET:HB2	2.19	0.42
24:BI:37:PHE:HB2	24:BI:66:PHE:CZ	2.55	0.42
26:BD:40:LEU:HA	26:BD:45:TYR:N	2.35	0.42
26:BD:125:TRP:NE1	26:BD:161:MET:N	2.67	0.42
26:BD:152:PRO:C	26:BD:154:LYS:H	2.23	0.42
29:BE:146:VAL:HG12	29:BE:147:LEU:N	2.34	0.42
35:BV:42:LEU:H	35:BV:42:LEU:CD2	2.20	0.42
35:BV:77:VAL:HG23	35:BV:89:ILE:CG2	2.50	0.42
37:BL:30:THR:O	37:BL:31:GLY:C	2.58	0.42
40:BH:141:LYS:N	40:BH:141:LYS:CD	2.83	0.42
41:BJ:55:ILE:CG2	41:BJ:123:LYS:HB2	2.49	0.42
46:BU:5:ARG:HH22	46:BU:93:ARG:HD3	1.85	0.42
46:BU:84:PHE:O	46:BU:85:ARG:CB	2.53	0.42
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:77:LYS:CD	51:BZ:78:TYR:H	2.30	0.42
53:B6:11:ARG:O	53:B6:15:GLN:HB2	2.19	0.42
1:CA:19:A:OP1	4:CE:134:ASN:ND2	2.51	0.42
1:CA:313:A:O2'	1:CA:314:C:H5'	2.19	0.42
1:CA:469:C:O2'	1:CA:470:C:H5'	2.20	0.42
1:CA:591:U:OP2	7:CH:30:LYS:HD2	2.20	0.42
1:CA:865:A:C2	1:CA:918:A:H4'	2.54	0.42
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.84	0.42
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.19	0.42
1:CA:1420:U:H2'	1:CA:1421:G:C8	2.55	0.42
2:CC:156:LEU:HD12	2:CC:163:ARG:HG3	2.00	0.42
3:CD:202:LEU:O	3:CD:202:LEU:HD12	2.20	0.42
8:CI:9:GLY:CA	8:CI:80:HIS:HB3	2.49	0.42
13:CN:27:LYS:O	13:CN:32:ASP:HB2	2.19	0.42
14:CO:58:ARG:HH21	14:CO:62:GLN:HE22	1.67	0.42
19:CT:38:ILE:HG13	19:CT:82:ILE:HG22	2.02	0.42
21:CU:42:THR:CB	21:CU:46:ARG:HH21	2.32	0.42
23:DB:79:C:HO2'	23:DB:346:A:C1'	2.32	0.42
23:DB:193:U:O3'	23:DB:803:U:H4'	2.19	0.42
23:DB:245:G:O2'	23:DB:246:C:H5'	2.19	0.42
23:DB:438:G:H2'	23:DB:439:A:C8	2.55	0.42
23:DB:516:C:H2'	23:DB:517:C:C6	2.54	0.42
23:DB:931:U:O4	23:DB:1166:G:N2	2.53	0.42
23:DB:1353:A:C8	23:DB:1378:A:N6	2.88	0.42
23:DB:1835:G:H2'	23:DB:1836:C:H6	1.83	0.42
23:DB:2081:U:H2'	23:DB:2082:A:H8	1.85	0.42
23:DB:2199:A:H5"	23:DB:2200:C:H5	1.85	0.42
23:DB:2322:A:N6	23:DB:2333:A:H62	2.17	0.42
23:DB:2636:C:O5'	26:DD:81:GLU:HB2	2.19	0.42
23:DB:2729:G:H2'	23:DB:2730:C:H6	1.83	0.42
23:DB:2757:A:N3	23:DB:2757:A:H2'	2.34	0.42
23:DB:2838:G:H2'	23:DB:2839:G:H8	1.84	0.42
23:DB:2842:G:O2'	23:DB:2843:G:H5'	2.19	0.42
23:DB:2848:G:N3	23:DB:2849:U:H5	2.18	0.42
25:DC:114:GLN:HE21	25:DC:114:GLN:HB3	1.61	0.42
25:DC:140:VAL:CG2	25:DC:163:ILE:HG12	2.49	0.42
25:DC:169:ALA:O	25:DC:185:ALA:HB3	2.18	0.42
25:DC:203:VAL:O	25:DC:204:LEU:HB2	2.20	0.42
26:DD:54:ALA:N	26:DD:76:GLY:HA2	2.34	0.42
26:DD:125:TRP:HE1	26:DD:161:MET:H	1.68	0.42
26:DD:152:PRO:C	26:DD:154:LYS:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:99:LEU:HD22	28:DP:99:LEU:HA	1.89	0.42
28:DP:105:LYS:HA	28:DP:108:ARG:NE	2.35	0.42
29:DE:166:LYS:O	29:DE:167:VAL:HB	2.18	0.42
35:DV:4:ILE:N	35:DV:62:THR:O	2.52	0.42
38:DM:30:SER:OG	38:DM:106:ASP:HA	2.20	0.42
44:DQ:7:VAL:HG23	44:DQ:8:ILE:N	2.35	0.42
44:DQ:8:ILE:HG23	44:DQ:9:ALA:N	2.34	0.42
48:DG:47:ASN:CG	48:DG:48:THR:N	2.73	0.42
50:DT:29:THR:H	50:DT:91:GLN:NE2	2.17	0.42
50:DT:57:VAL:O	50:DT:85:VAL:O	2.37	0.42
53:D6:173:ASP:O	53:D6:174:GLN:C	2.58	0.42
1:AA:63:C:H2'	1:AA:64:G:H5'	2.02	0.42
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.85	0.42
1:AA:108:G:H5'	1:AA:109:A:C5'	2.45	0.42
1:AA:921:U:H2'	1:AA:922:G:O4'	2.20	0.42
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.54	0.42
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.53	0.42
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.20	0.42
1:AA:1225:A:OP1	12:AM:100:ARG:HA	2.20	0.42
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.83	0.42
1:AA:1270:G:H4'	1:AA:1313:U:O2'	2.20	0.42
3:AD:96:ARG:O	3:AD:99:ASN:HB3	2.19	0.42
5:AF:40:GLU:OE1	5:AF:100:SER:HB2	2.20	0.42
7:AH:4:ASP:OD1	7:AH:7:ALA:HB2	2.19	0.42
10:AK:101:ALA:C	10:AK:103:GLY:H	2.23	0.42
11:AL:28:GLN:HA	11:AL:81:ILE:O	2.19	0.42
11:AL:49:ARG:HH12	11:AL:88:ASP:HB2	1.83	0.42
20:AB:103:TRP:CZ3	20:AB:107:ARG:HD2	2.55	0.42
20:AB:187:ASP:O	20:AB:189:ASN:N	2.53	0.42
23:BB:103:A:H2'	23:BB:104:A:C8	2.55	0.42
23:BB:182:A:H2'	23:BB:183:C:H6	1.84	0.42
23:BB:586:A:H5'	29:BE:84:THR:OG1	2.19	0.42
23:BB:729:G:OP1	25:BC:12:ARG:HB2	2.19	0.42
23:BB:769:U:H2'	23:BB:770:G:H8	1.85	0.42
23:BB:1252:G:H1'	44:BQ:32:ARG:NH2	2.34	0.42
23:BB:1675:C:H2'	23:BB:1676:A:O4'	2.19	0.42
23:BB:1908:C:O2'	23:BB:1909:C:H5'	2.19	0.42
23:BB:1949:G:H2'	23:BB:1950:G:C8	2.54	0.42
23:BB:2231:U:H2'	23:BB:2232:C:H6	1.83	0.42
23:BB:2250:G:H8	23:BB:2250:G:O5'	2.03	0.42
23:BB:2299:U:H2'	23:BB:2300:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:2:ILE:H	26:BD:2:ILE:HG13	1.73	0.42
26:BD:113:SER:OG	26:BD:114:LYS:N	2.51	0.42
26:BD:148:GLN:O	26:BD:149:ASN:CB	2.67	0.42
28:BP:48:ALA:HB3	28:BP:59:THR:CB	2.50	0.42
28:BP:50:ARG:HB3	28:BP:57:ALA:H	1.84	0.42
29:BE:48:THR:N	29:BE:51:GLU:HG3	2.34	0.42
34:B3:61:LEU:N	34:B3:62:PRO:HD3	2.34	0.42
37:BL:23:ILE:H	37:BL:23:ILE:CD1	2.30	0.42
40:BH:80:ILE:CD1	40:BH:144:VAL:HG22	2.40	0.42
40:BH:82:SER:O	40:BH:92:GLY:N	2.50	0.42
40:BH:106:ALA:O	40:BH:108:VAL:N	2.53	0.42
41:BJ:41:LYS:O	44:BQ:66:ALA:HB1	2.19	0.42
45:BS:32:ALA:O	45:BS:36:LEU:HD23	2.19	0.42
45:BS:59:GLU:OE2	45:BS:66:ILE:HG23	2.20	0.42
48:BG:106:LEU:O	48:BG:108:PHE:N	2.47	0.42
49:BR:15:SER:OG	49:BR:18:GLN:HG2	2.20	0.42
49:BR:101:ILE:O	49:BR:101:ILE:HG22	2.20	0.42
52:BW:59:PHE:CD2	52:BW:60:ALA:N	2.88	0.42
53:B6:65:THR:CG2	53:B6:66:LEU:N	2.82	0.42
1:CA:373:A:H5'	1:CA:373:A:H8	1.84	0.42
1:CA:389:A:C6	1:CA:390:U:H1'	2.54	0.42
1:CA:515:G:O2'	1:CA:516:U:H5'	2.19	0.42
1:CA:655:A:H2'	1:CA:656:G:O4'	2.20	0.42
1:CA:1015:G:H2'	1:CA:1016:A:C8	2.53	0.42
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.54	0.42
1:CA:1221:G:OP1	18:CS:35:ARG:HD2	2.20	0.42
1:CA:1229:A:OP2	12:CM:112:ARG:HD2	2.19	0.42
1:CA:1299:A:H2'	1:CA:1301:U:C1'	2.44	0.42
1:CA:1429:A:O2'	1:CA:1430:A:H5'	2.20	0.42
2:CC:125:ARG:HB3	2:CC:127:VAL:HG13	2.01	0.42
3:CD:25:ARG:NH1	3:CD:25:ARG:HB2	2.33	0.42
3:CD:43:ARG:HB3	3:CD:43:ARG:NH1	2.34	0.42
3:CD:160:LEU:HA	3:CD:163:GLN:CG	2.50	0.42
5:CF:40:GLU:OE1	5:CF:100:SER:HB2	2.20	0.42
8:CI:29:ILE:HG12	8:CI:64:ILE:HB	2.01	0.42
8:CI:78:ILE:O	8:CI:82:ILE:HG13	2.20	0.42
12:CM:109:LYS:HB2	12:CM:113:LYS:NZ	2.34	0.42
15:CP:52:LEU:CD2	15:CP:75:ILE:HA	2.50	0.42
19:CT:31:ILE:O	19:CT:34:VAL:HG23	2.20	0.42
20:CB:202:ASN:HD22	20:CB:204:ASP:H	1.62	0.42
22:DA:93:C:H2'	22:DA:94:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:12:U:H1'	23:DB:2627:G:OP1	2.20	0.42
23:DB:322:A:H5'	23:DB:340:A:C1'	2.48	0.42
23:DB:349:U:O2	23:DB:349:U:H2'	2.19	0.42
23:DB:428:A:O2'	23:DB:429:A:H5'	2.18	0.42
23:DB:576:U:H2'	23:DB:577:G:H8	1.84	0.42
23:DB:619:G:H3'	23:DB:620:G:H21	1.85	0.42
23:DB:647:G:H2'	23:DB:648:G:C8	2.54	0.42
23:DB:797:G:OP2	29:DE:57:LYS:HB2	2.20	0.42
23:DB:840:C:O2'	23:DB:841:G:H5'	2.20	0.42
23:DB:850:U:O3'	30:DY:22:THR:HG22	2.20	0.42
23:DB:1041:G:C2	23:DB:1042:G:N7	2.88	0.42
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.84	0.42
23:DB:1107:G:O2'	23:DB:1108:U:H5'	2.18	0.42
23:DB:1370:C:H2'	23:DB:1371:G:O4'	2.20	0.42
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.19	0.42
23:DB:2102:G:O2'	23:DB:2103:C:H5'	2.19	0.42
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.19	0.42
23:DB:2359:C:O3'	34:D3:50:SER:HB3	2.19	0.42
23:DB:2578:G:H2'	23:DB:2579:C:H6	1.84	0.42
23:DB:2846:G:OP1	28:DP:52:ARG:NH1	2.52	0.42
24:DI:105:LEU:HD11	24:DI:139:VAL:CG2	2.44	0.42
25:DC:121:ALA:HB3	25:DC:129:LEU:HD11	2.02	0.42
26:DD:4:LEU:HD12	26:DD:32:ASN:CB	2.50	0.42
30:DY:47:ILE:O	30:DY:48:ASN:C	2.57	0.42
31:D0:56:LYS:HD3	31:D0:56:LYS:O	2.20	0.42
37:DL:121:THR:HG22	37:DL:141:LYS:CB	2.50	0.42
37:DL:135:ILE:CG2	37:DL:136:GLU:N	2.81	0.42
41:DJ:13:ARG:HB3	41:DJ:53:TYR:CD2	2.54	0.42
41:DJ:120:ARG:HE	41:DJ:120:ARG:HB3	1.69	0.42
42:DN:13:ASN:C	42:DN:15:SER:H	2.22	0.42
47:DF:79:ARG:N	47:DF:79:ARG:NE	2.68	0.42
48:DG:115:GLN:CD	48:DG:115:GLN:N	2.62	0.42
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.20	0.42
48:DG:154:GLU:O	48:DG:156:TYR:N	2.52	0.42
49:DR:39:LEU:O	49:DR:49:ILE:HG12	2.20	0.42
53:D6:84:ARG:HD2	53:D6:92:PRO:CG	2.50	0.42
1:AA:543:U:H2'	1:AA:544:G:H8	1.85	0.42
1:AA:835:U:O2'	1:AA:836:G:H5'	2.20	0.42
1:AA:1028:C:O2	1:AA:1028:C:H2'	2.19	0.42
1:AA:1277:C:H1'	1:AA:1282:C:C2	2.55	0.42
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.55	0.42
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.18	0.42
2:AC:105:VAL:HG23	2:AC:105:VAL:O	2.20	0.42
3:AD:16:THR:CG2	3:AD:17:ASP:N	2.83	0.42
3:AD:160:LEU:HD23	3:AD:164:ARG:HH21	1.85	0.42
8:AI:93:LEU:HD13	8:AI:97:LEU:HD11	2.02	0.42
12:AM:79:LEU:HA	12:AM:82:LEU:HB2	2.02	0.42
14:AO:36:ILE:HD11	14:AO:59:MET:HB2	2.01	0.42
21:AU:33:ARG:NE	21:AU:34:ARG:HG2	2.34	0.42
23:BB:77:G:O2'	23:BB:78:U:H5'	2.20	0.42
23:BB:116:C:N4	23:BB:117:G:C6	2.88	0.42
23:BB:552:U:H2'	23:BB:553:G:H8	1.84	0.42
23:BB:1998:A:H2'	23:BB:1999:C:C6	2.52	0.42
23:BB:2553:G:H2'	23:BB:2554:U:H4'	2.00	0.42
23:BB:2747:G:H8	23:BB:2747:G:O5'	2.03	0.42
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.19	0.42
26:BD:70:LYS:HD3	26:BD:70:LYS:C	2.39	0.42
29:BE:33:VAL:HA	29:BE:36:ALA:HB3	2.00	0.42
35:BV:93:ARG:HG3	35:BV:93:ARG:HH11	1.84	0.42
37:BL:100:ILE:O	37:BL:100:ILE:HG12	2.19	0.42
41:BJ:101:ILE:O	41:BJ:105:VAL:HG22	2.19	0.42
42:BN:81:ASN:O	42:BN:85:PRO:HD2	2.19	0.42
42:BN:92:GLY:HA2	42:BN:94:TYR:CZ	2.54	0.42
44:BQ:105:PHE:HA	44:BQ:108:LEU:CD1	2.49	0.42
46:BU:71:ILE:HD11	46:BU:81:ARG:O	2.19	0.42
47:BF:31:GLU:O	47:BF:32:LYS:O	2.38	0.42
47:BF:52:ALA:HA	47:BF:55:ASP:HB2	2.01	0.42
47:BF:79:ARG:N	47:BF:79:ARG:NE	2.67	0.42
48:BG:91:VAL:O	48:BG:93:TYR:N	2.51	0.42
48:BG:152:ARG:HG3	48:BG:153:PRO:HD2	2.01	0.42
49:BR:16:GLU:HG2	49:BR:101:ILE:CB	2.50	0.42
50:BT:55:VAL:HG22	50:BT:87:LEU:CD2	2.50	0.42
1:CA:366:A:O2'	1:CA:367:U:P	2.77	0.42
1:CA:766:A:H2'	1:CA:767:A:H8	1.84	0.42
1:CA:955:U:H1'	1:CA:1227:A:H62	1.84	0.42
1:CA:999:C:H2'	1:CA:1000:A:H8	1.84	0.42
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.20	0.42
1:CA:1307:U:H2'	1:CA:1308:U:O4'	2.20	0.42
1:CA:1390:U:O2'	1:CA:1391:U:H5'	2.20	0.42
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.84	0.42
4:CE:131:ASN:HD22	4:CE:134:ASN:H	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:136:VAL:HG13	4:CE:137:ARG:H	1.81	0.42
7:CH:66:GLN:HB3	7:CH:67:GLY:H	1.74	0.42
8:CI:56:MET:C	8:CI:58:GLU:N	2.73	0.42
9:CJ:26:VAL:O	9:CJ:30:LYS:HG3	2.18	0.42
10:CK:82:GLU:HG2	10:CK:108:ASN:HB2	2.02	0.42
18:CS:43:MET:O	18:CS:61:VAL:HB	2.20	0.42
20:CB:67:LEU:HD22	20:CB:91:VAL:HG23	2.02	0.42
20:CB:148:GLY:O	20:CB:151:LYS:HG2	2.19	0.42
20:CB:161:PHE:HA	20:CB:183:PHE:O	2.19	0.42
23:DB:40:U:H2'	23:DB:41:C:C6	2.55	0.42
23:DB:62:U:H2'	23:DB:63:A:H5'	1.98	0.42
23:DB:95:A:H1'	39:DX:40:SER:OG	2.19	0.42
23:DB:188:G:OP1	51:DZ:14:THR:HG23	2.20	0.42
23:DB:668:A:H2'	23:DB:670:A:H62	1.85	0.42
23:DB:703:U:H2'	23:DB:704:G:O4'	2.19	0.42
23:DB:754:U:H2'	23:DB:755:U:H6	1.84	0.42
23:DB:850:U:O2'	30:DY:22:THR:HA	2.19	0.42
23:DB:928:A:O2'	30:DY:37:ARG:HD3	2.20	0.42
23:DB:1169:A:H2'	23:DB:1170:C:H6	1.85	0.42
23:DB:1522:A:H4'	23:DB:1524:G:C8	2.55	0.42
23:DB:2354:C:H2'	23:DB:2355:G:H8	1.83	0.42
23:DB:2355:G:H4'	52:DW:20:LEU:HD13	2.00	0.42
23:DB:2803:G:O2'	23:DB:2804:U:H5'	2.20	0.42
24:DI:112:LYS:HB2	24:DI:116:MET:SD	2.60	0.42
25:DC:120:ASP:O	25:DC:121:ALA:C	2.58	0.42
29:DE:41:GLN:O	29:DE:42:GLY:C	2.58	0.42
29:DE:60:TRP:HB3	29:DE:61:ARG:H	1.42	0.42
29:DE:157:LEU:HG	29:DE:169:VAL:HG11	2.02	0.42
31:D0:30:ASP:HB3	31:D0:33:SER:O	2.19	0.42
31:D0:37:HIS:CD2	31:D0:43:THR:HG22	2.55	0.42
37:DL:19:LEU:HD23	37:DL:31:GLY:O	2.20	0.42
39:DX:5:GLU:OE2	39:DX:5:GLU:HA	2.19	0.42
42:DN:101:GLY:HA2	42:DN:109:PRO:HA	2.01	0.42
46:DU:14:THR:O	46:DU:18:LYS:HA	2.19	0.42
46:DU:24:VAL:HA	46:DU:35:VAL:HA	2.01	0.42
46:DU:73:ASN:N	46:DU:73:ASN:HD22	2.17	0.42
48:DG:9:VAL:N	48:DG:48:THR:HB	2.34	0.42
49:DR:2:TYR:HB2	49:DR:42:ALA:CB	2.48	0.42
49:DR:63:VAL:O	49:DR:63:VAL:HG23	2.20	0.42
52:DW:50:VAL:HG23	52:DW:61:LYS:CE	2.50	0.42
1:AA:130:A:H1'	1:AA:263:A:O2'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:167:A:H2'	1:AA:168:G:H8	1.85	0.42
1:AA:185:U:H2'	1:AA:186:C:C6	2.55	0.42
1:AA:279:A:H5'	1:AA:281:G:H5'	2.01	0.42
1:AA:552:U:H2'	1:AA:553:A:H8	1.84	0.42
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.88	0.42
6:AG:6:ILE:HB	6:AG:7:GLY:H	1.54	0.42
7:AH:29:SER:O	7:AH:30:LYS:C	2.58	0.42
9:AJ:21:ALA:O	9:AJ:25:ILE:HG13	2.19	0.42
9:AJ:76:ILE:H	9:AJ:76:ILE:HG13	1.71	0.42
13:AN:26:LEU:HD23	13:AN:27:LYS:N	2.35	0.42
15:AP:52:LEU:CD2	15:AP:75:ILE:HA	2.50	0.42
19:AT:43:LYS:HB3	19:AT:85:LEU:HD21	2.02	0.42
20:AB:160:LEU:HD21	20:AB:182:VAL:HG22	2.01	0.42
20:AB:161:PHE:HA	20:AB:183:PHE:O	2.19	0.42
23:BB:20:C:O2'	23:BB:21:A:H5'	2.20	0.42
23:BB:88:G:C2'	23:BB:89:A:H5'	2.50	0.42
23:BB:285:G:H2'	23:BB:286:U:H6	1.84	0.42
23:BB:635:C:O2'	23:BB:636:G:H5'	2.19	0.42
23:BB:787:C:H5"	23:BB:788:A:H5'	2.02	0.42
23:BB:816:C:O2'	23:BB:817:C:H5'	2.20	0.42
23:BB:841:G:H2'	23:BB:842:U:C6	2.55	0.42
23:BB:974:G:P	49:BR:78:ARG:HD3	2.60	0.42
23:BB:1063:G:O2'	23:BB:1064:C:H5'	2.20	0.42
23:BB:1199:U:C5'	44:BQ:4:LYS:HD3	2.49	0.42
23:BB:1410:G:H2'	23:BB:1411:U:C6	2.54	0.42
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.83	0.42
23:BB:1720:U:C2'	23:BB:1721:G:H5'	2.49	0.42
23:BB:1846:G:N2	23:BB:1848:A:N6	2.68	0.42
23:BB:1932:A:H2'	23:BB:1933:G:O4'	2.20	0.42
23:BB:2547:A:H2'	23:BB:2548:U:H6	1.80	0.42
23:BB:2653:U:H3'	23:BB:2654:A:H2'	2.01	0.42
23:BB:2743:U:H3'	23:BB:2744:G:H5"	2.01	0.42
25:BC:30:ALA:O	25:BC:32:LEU:N	2.50	0.42
25:BC:128:THR:CG2	25:BC:190:THR:HG22	2.49	0.42
25:BC:221:GLY:O	25:BC:223:ALA:N	2.51	0.42
26:BD:32:ASN:HD22	26:BD:50:VAL:HG21	1.85	0.42
27:BK:98:ARG:C	27:BK:99:ILE:HD12	2.40	0.42
29:BE:29:HIS:O	29:BE:32:VAL:HG22	2.19	0.42
29:BE:106:LYS:O	29:BE:110:SER:HB2	2.20	0.42
30:BY:11:SER:OG	30:BY:13:ILE:HG13	2.19	0.42
35:BV:30:ILE:HA	35:BV:91:PHE:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:61:LEU:HD12	37:BL:61:LEU:N	2.35	0.42
37:BL:125:LEU:HB2	37:BL:143:GLU:OE2	2.19	0.42
37:BL:136:GLU:HA	37:BL:140:GLY:N	2.35	0.42
39:BX:1:MET:HB3	39:BX:5:GLU:OE1	2.20	0.42
44:BQ:7:VAL:HG23	44:BQ:8:ILE:N	2.33	0.42
44:BQ:30:VAL:HG22	44:BQ:31:TYR:N	2.35	0.42
1:CA:103:U:H1'	1:CA:171:A:N1	2.35	0.42
1:CA:499:A:H1'	1:CA:500:G:C8	2.54	0.42
1:CA:503:C:O2'	1:CA:504:C:H5'	2.20	0.42
1:CA:586:C:C5'	7:CH:81:GLY:HA2	2.48	0.42
1:CA:880:C:O2'	1:CA:881:G:H5'	2.20	0.42
1:CA:1200:C:O5'	1:CA:1201:A:H3'	2.20	0.42
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	2.02	0.42
4:CE:92:ARG:HB3	4:CE:92:ARG:NH1	2.35	0.42
4:CE:104:ILE:HD11	4:CE:111:ARG:HA	2.02	0.42
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.35	0.42
5:CF:45:ARG:NH2	17:CR:25:ILE:HD13	2.35	0.42
6:CG:120:ALA:HA	6:CG:123:LEU:HD12	2.02	0.42
9:CJ:87:LEU:HD13	9:CJ:87:LEU:N	2.34	0.42
11:CL:42:LYS:HD2	11:CL:43:LYS:HG2	2.02	0.42
19:CT:14:GLU:O	19:CT:17:ARG:HB3	2.19	0.42
23:DB:77:G:H2'	23:DB:78:U:H6	1.85	0.42
23:DB:135:U:O2'	23:DB:136:G:H5'	2.20	0.42
23:DB:325:G:H2'	23:DB:326:G:C8	2.55	0.42
23:DB:337:C:H2'	23:DB:338:G:O4'	2.20	0.42
23:DB:519:U:H2'	23:DB:520:G:H8	1.84	0.42
23:DB:543:G:N2	23:DB:545:U:H5'	2.35	0.42
23:DB:851:C:H4'	30:DY:46:MET:HA	2.02	0.42
23:DB:957:C:N4	23:DB:2459:A:C8	2.88	0.42
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.37	0.42
23:DB:1372:U:H1'	23:DB:2214:C:C4	2.55	0.42
23:DB:1397:U:H5"	23:DB:1398:C:H5	1.85	0.42
23:DB:1748:C:H2'	23:DB:1749:A:C8	2.55	0.42
23:DB:1751:U:H2'	23:DB:1752:C:C5	2.54	0.42
23:DB:1789:A:O2'	23:DB:1790:C:H5'	2.20	0.42
23:DB:2000:C:O2'	23:DB:2001:C:H5'	2.19	0.42
23:DB:2742:G:OP1	32:D4:36:ARG:HD3	2.20	0.42
32:D4:3:VAL:HG23	32:D4:4:ARG:N	2.29	0.42
32:D4:30:GLU:HA	32:D4:31:PRO:HD3	1.91	0.42
36:D2:34:ARG:O	36:D2:38:GLY:N	2.53	0.42
37:DL:78:ARG:HB3	37:DL:78:ARG:NH2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:102:LEU:N	38:DM:102:LEU:HD22	2.35	0.42
42:DN:39:PRO:C	42:DN:41:ALA:H	2.23	0.42
44:DQ:73:ILE:HG13	44:DQ:74:SER:N	2.35	0.42
44:DQ:94:LEU:C	44:DQ:96:ASP:H	2.22	0.42
45:DS:44:ALA:C	45:DS:46:LEU:N	2.72	0.42
45:DS:51:LEU:HD12	45:DS:105:VAL:HG11	2.01	0.42
47:DF:137:PHE:O	47:DF:138:PRO:C	2.58	0.42
48:DG:10:VAL:HG13	48:DG:14:VAL:HB	2.01	0.42
49:DR:19:THR:CB	49:DR:97:LYS:HA	2.48	0.42
49:DR:38:VAL:O	49:DR:53:PHE:HB3	2.19	0.42
49:DR:101:ILE:O	49:DR:101:ILE:HG22	2.18	0.42
50:DT:4:GLU:OE2	50:DT:5:GLU:HG2	2.19	0.42
51:DZ:6:GLN:HE22	51:DZ:77:LYS:CE	2.32	0.42
51:DZ:27:ARG:H	51:DZ:27:ARG:HG3	1.68	0.42
51:DZ:77:LYS:CG	51:DZ:78:TYR:N	2.82	0.42
53:D6:15:GLN:HB3	53:D6:16:LYS:NZ	2.35	0.42
53:D6:57:THR:O	53:D6:68:VAL:HA	2.20	0.42
1:AA:408:A:OP1	3:AD:109:THR:OG1	2.36	0.42
1:AA:481:G:O2'	1:AA:482:A:H8	2.03	0.42
1:AA:582:C:O2'	1:AA:583:A:H5'	2.19	0.42
1:AA:599:C:O2'	1:AA:600:A:H5'	2.20	0.42
1:AA:728:A:H2'	1:AA:729:A:C8	2.55	0.42
1:AA:828:U:O2'	20:AB:24:PRO:HB3	2.18	0.42
1:AA:894:G:H2'	1:AA:895:G:H8	1.85	0.42
1:AA:993:G:H2'	1:AA:995:C:H41	1.84	0.42
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.20	0.42
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.84	0.42
2:AC:65:VAL:HG21	2:AC:90:VAL:HG11	2.02	0.42
2:AC:111:ASP:O	2:AC:115:VAL:HG23	2.20	0.42
2:AC:114:LEU:O	2:AC:115:VAL:C	2.58	0.42
4:AE:61:LYS:NZ	4:AE:61:LYS:HB3	2.35	0.42
4:AE:82:HIS:CD2	7:AH:95:MET:HG3	2.54	0.42
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.35	0.42
8:AI:6:TYR:C	8:AI:85:ALA:HB2	2.40	0.42
8:AI:25:GLY:HA3	8:AI:57:VAL:HA	2.02	0.42
8:AI:30:ASN:HD22	8:AI:65:THR:HA	1.84	0.42
8:AI:51:LEU:HB3	8:AI:56:MET:HB2	2.02	0.42
8:AI:56:MET:C	8:AI:58:GLU:N	2.73	0.42
8:AI:112:ARG:HH22	9:AJ:64:GLN:HE22	1.67	0.42
9:AJ:26:VAL:O	9:AJ:30:LYS:HG3	2.19	0.42
12:AM:2:ARG:HG3	12:AM:5:GLY:HA2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:68:ARG:HH12	13:AN:71:GLY:N	2.18	0.42
16:AQ:17:GLU:O	16:AQ:18:LYS:HB2	2.20	0.42
19:AT:14:GLU:O	19:AT:17:ARG:HB3	2.20	0.42
19:AT:56:ILE:O	19:AT:60:GLN:HG2	2.20	0.42
23:BB:96:C:H4'	39:BX:41:HIS:ND1	2.35	0.42
23:BB:512:G:P	23:BB:1215:G:N2	2.92	0.42
23:BB:546:U:H4'	23:BB:547:A:OP2	2.19	0.42
23:BB:1213:A:C6	23:BB:1237:A:H1'	2.53	0.42
23:BB:1237:A:N3	23:BB:1237:A:H2'	2.35	0.42
23:BB:1318:U:H2'	23:BB:1319:C:C6	2.55	0.42
23:BB:1927:A:H2'	23:BB:1928:A:C8	2.55	0.42
23:BB:2434:A:H8	23:BB:2434:A:H2'	1.72	0.42
23:BB:2530:A:H3'	48:BG:156:TYR:OH	2.20	0.42
25:BC:64:VAL:O	25:BC:102:TYR:O	2.38	0.42
25:BC:199:HIS:C	25:BC:201:LEU:H	2.23	0.42
27:BK:70:ARG:HH11	27:BK:70:ARG:CB	2.33	0.42
28:BP:104:GLY:O	28:BP:106:ALA:N	2.45	0.42
29:BE:60:TRP:HB3	29:BE:61:ARG:H	1.42	0.42
29:BE:102:ARG:HG3	29:BE:102:ARG:NH2	2.35	0.42
34:B3:23:HIS:ND1	34:B3:24:LYS:N	2.68	0.42
39:BX:13:GLU:HA	39:BX:13:GLU:OE2	2.20	0.42
41:BJ:26:GLY:C	41:BJ:28:LEU:N	2.74	0.42
41:BJ:75:TYR:HD1	41:BJ:86:GLN:HB3	1.84	0.42
43:BO:35:ILE:C	43:BO:36:TYR:HD2	2.23	0.42
44:BQ:91:ARG:NH2	49:BR:11:GLN:O	2.53	0.42
45:BS:13:SER:HG	45:BS:16:LYS:HB2	1.85	0.42
46:BU:85:ARG:HH11	46:BU:86:PHE:N	2.15	0.42
47:BF:29:ARG:HH11	47:BF:29:ARG:HB2	1.85	0.42
51:BZ:51:VAL:HG12	51:BZ:52:SER:N	2.35	0.42
52:BW:44:PHE:HB3	52:BW:78:PHE:CE1	2.54	0.42
52:BW:50:VAL:HG23	52:BW:61:LYS:CE	2.49	0.42
53:B6:38:LEU:HD21	53:B6:88:LEU:HD22	2.02	0.42
53:B6:76:LEU:HG	53:B6:94:ASN:OD1	2.19	0.42
1:CA:109:A:H2'	1:CA:326:G:N2	2.35	0.42
1:CA:775:G:O2'	1:CA:776:G:H5'	2.19	0.42
1:CA:1026:G:O2'	1:CA:1027:C:H5'	2.20	0.42
1:CA:1093:A:P	6:CG:3:ARG:HH12	2.42	0.42
1:CA:1119:C:OP2	8:CI:10:ARG:NH2	2.52	0.42
1:CA:1262:C:H2'	1:CA:1263:C:O4'	2.20	0.42
2:CC:49:ALA:O	2:CC:50:SER:HB2	2.20	0.42
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:184:ASN:ND2	2:CC:185:THR:H	2.18	0.42
3:CD:102:TYR:HE1	3:CD:108:ALA:O	2.02	0.42
5:CF:18:VAL:HG21	5:CF:58:HIS:CE1	2.54	0.42
5:CF:81:ASN:O	5:CF:83:ALA:N	2.53	0.42
8:CI:21:LYS:HG3	8:CI:22:PRO:HD2	2.01	0.42
11:CL:21:PRO:HG2	11:CL:94:TYR:OH	2.20	0.42
11:CL:49:ARG:HH12	11:CL:88:ASP:CB	2.33	0.42
13:CN:80:ARG:HG2	13:CN:80:ARG:HH11	1.85	0.42
14:CO:81:LEU:O	14:CO:85:LEU:HD13	2.20	0.42
19:CT:70:LYS:HA	19:CT:73:ARG:CZ	2.50	0.42
20:CB:103:TRP:CZ3	20:CB:107:ARG:HD2	2.53	0.42
20:CB:130:LYS:H	20:CB:130:LYS:HG2	1.51	0.42
23:DB:70:G:O4'	23:DB:73:A:H1'	2.19	0.42
23:DB:566:U:H2'	23:DB:567:U:C6	2.55	0.42
23:DB:690:G:N3	25:DC:42:ARG:NH2	2.68	0.42
23:DB:877:A:N6	23:DB:898:C:C2	2.88	0.42
23:DB:1047:G:O2'	23:DB:1109:C:N4	2.53	0.42
23:DB:1187:G:OP1	49:DR:85:LYS:NZ	2.51	0.42
23:DB:1359:A:H2'	23:DB:1360:G:O4'	2.20	0.42
23:DB:1420:A:C2'	23:DB:2211:A:H62	2.15	0.42
23:DB:1674:G:N2	23:DB:1677:A:N1	2.67	0.42
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.20	0.42
23:DB:1891:G:H2'	23:DB:1892:C:H6	1.85	0.42
23:DB:2267:A:C8	23:DB:2267:A:C4'	3.03	0.42
23:DB:2346:A:O4'	23:DB:2383:G:O4'	2.38	0.42
23:DB:2737:G:H2'	23:DB:2738:A:H8	1.83	0.42
24:DI:140:GLU:H	24:DI:140:GLU:CD	2.23	0.42
25:DC:144:GLU:OE2	25:DC:188:ARG:HG3	2.20	0.42
25:DC:152:GLN:HA	25:DC:155:ARG:CD	2.49	0.42
27:DK:73:ASP:OD2	27:DK:75:SER:HB3	2.19	0.42
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	2.00	0.42
31:D0:8:THR:HG23	31:D0:10:SER:HB3	2.02	0.42
34:D3:44:ARG:N	34:D3:45:PRO:CD	2.83	0.42
37:DL:47:ARG:HB3	37:DL:47:ARG:NH2	2.35	0.42
38:DM:77:PRO:O	38:DM:78:LEU:O	2.38	0.42
40:DH:90:LEU:HD12	40:DH:90:LEU:N	2.21	0.42
40:DH:90:LEU:HD11	40:DH:146:VAL:HG11	2.01	0.42
41:DJ:34:ARG:O	41:DJ:38:GLY:N	2.53	0.42
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.55	0.42
46:DU:23:LYS:HD2	46:DU:23:LYS:H	1.85	0.42
47:DF:40:GLY:O	47:DF:41:GLU:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:28:LYS:HE2	48:DG:28:LYS:HB2	1.91	0.42
52:DW:12:GLY:O	52:DW:13:ARG:HB2	2.19	0.42
53:D6:80:GLU:HA	53:D6:83:ILE:CG1	2.43	0.42
53:D6:80:GLU:CD	53:D6:99:LEU:HD13	2.40	0.42
53:D6:89:GLY:O	53:D6:90:LEU:HG	2.20	0.42
1:AA:34:C:H2'	1:AA:35:G:C8	2.54	0.42
1:AA:88:U:O2'	1:AA:89:U:C6	2.72	0.42
1:AA:370:C:H2'	1:AA:371:A:H8	1.85	0.42
1:AA:1288:A:H2	1:AA:1371:G:N3	2.17	0.42
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.55	0.42
5:AF:72:ASP:HA	5:AF:75:GLU:OE1	2.19	0.42
6:AG:71:THR:O	6:AG:89:GLU:HA	2.20	0.42
7:AH:45:ILE:HD13	7:AH:60:LEU:HD11	2.02	0.42
8:AI:37:TYR:HE2	8:AI:74:GLN:HG2	1.85	0.42
8:AI:56:MET:O	8:AI:58:GLU:N	2.45	0.42
9:AJ:51:VAL:HG22	13:AN:80:ARG:HB2	1.99	0.42
10:AK:30:ILE:O	10:AK:30:ILE:HG13	2.18	0.42
14:AO:17:ARG:HA	14:AO:17:ARG:NH1	2.35	0.42
17:AR:22:TYR:CE1	17:AR:23:LYS:HG3	2.55	0.42
18:AS:50:VAL:HG22	18:AS:70:LEU:HD23	2.01	0.42
22:BA:35:C:H2'	22:BA:36:C:H5'	2.00	0.42
23:BB:116:C:C4	23:BB:117:G:C5	3.08	0.42
23:BB:377:G:O2'	23:BB:378:C:H5'	2.20	0.42
23:BB:389:G:O2'	23:BB:390:U:H5'	2.20	0.42
23:BB:502:A:N6	23:BB:505:A:N1	2.67	0.42
23:BB:553:G:C2'	23:BB:554:U:H5'	2.50	0.42
23:BB:564:C:H1'	44:BQ:36:GLN:OE1	2.20	0.42
23:BB:818:G:C6	23:BB:1187:G:H2'	2.55	0.42
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.55	0.42
23:BB:1059:G:H2'	23:BB:1060:U:C6	2.54	0.42
23:BB:1064:C:C4'	24:BI:90:GLY:HA2	2.49	0.42
23:BB:1249:U:H4'	44:BQ:3:VAL:HG11	2.02	0.42
23:BB:1313:U:H4'	23:BB:1332:G:H4'	2.02	0.42
23:BB:1428:C:H2'	23:BB:1569:A:OP2	2.20	0.42
23:BB:1476:U:O2'	23:BB:1477:A:H8	2.02	0.42
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.19	0.42
23:BB:1883:U:H2'	23:BB:1884:G:C1'	2.50	0.42
23:BB:2200:C:OP1	51:BZ:37:ARG:N	2.53	0.42
23:BB:2343:U:H2'	23:BB:2344:U:C6	2.55	0.42
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.55	0.42
23:BB:2508:G:O3'	23:BB:2555:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.55	0.42
25:BC:53:ILE:O	25:BC:53:ILE:HG23	2.20	0.42
25:BC:61:TYR:CA	25:BC:85:ASN:HD21	2.31	0.42
25:BC:109:LEU:CD2	25:BC:109:LEU:N	2.82	0.42
26:BD:35:THR:OG1	26:BD:49:GLN:HG2	2.20	0.42
28:BP:36:LYS:HA	28:BP:36:LYS:HD3	1.85	0.42
32:B4:2:LYS:CG	32:B4:4:ARG:HE	2.23	0.42
32:B4:36:ARG:O	32:B4:37:GLN:C	2.58	0.42
33:B1:8:ILE:CG2	33:B1:51:ALA:HA	2.50	0.42
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.47	0.42
37:BL:47:ARG:HB3	37:BL:47:ARG:NH2	2.35	0.42
39:BX:18:LEU:O	39:BX:22:LEU:HB3	2.20	0.42
41:BJ:43:GLU:O	41:BJ:44:TYR:C	2.57	0.42
43:BO:9:ARG:HG3	43:BO:10:ARG:H	1.85	0.42
43:BO:52:SER:C	43:BO:54:VAL:H	2.23	0.42
43:BO:56:LYS:O	43:BO:60:GLU:HG2	2.20	0.42
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.85	0.42
46:BU:14:THR:O	46:BU:18:LYS:HA	2.20	0.42
46:BU:23:LYS:HD2	46:BU:23:LYS:H	1.85	0.42
47:BF:134:GLN:C	47:BF:136:ILE:N	2.73	0.42
49:BR:4:VAL:HG23	49:BR:39:LEU:N	2.31	0.42
51:BZ:32:ASN:C	51:BZ:33:LEU:HD12	2.41	0.42
51:BZ:65:ASP:O	51:BZ:69:ALA:N	2.52	0.42
1:CA:191:G:H2'	1:CA:192:A:C8	2.54	0.42
1:CA:197:A:H1'	1:CA:198:G:C1'	2.50	0.42
1:CA:692:U:O4	10:CK:53:GLY:HA2	2.19	0.42
1:CA:747:A:H2'	1:CA:748:G:O4'	2.19	0.42
1:CA:771:G:H2'	1:CA:772:U:C6	2.55	0.42
1:CA:782:A:N6	1:CA:801:U:C5	2.87	0.42
1:CA:832:G:O2'	1:CA:833:G:H5'	2.19	0.42
1:CA:947:G:OP1	12:CM:106:ARG:HB3	2.20	0.42
3:CD:104:MET:HE3	3:CD:170:LEU:HD13	2.02	0.42
4:CE:35:LEU:HD22	4:CE:133:ILE:HA	2.02	0.42
6:CG:152:HIS:O	6:CG:153:TYR:C	2.58	0.42
9:CJ:5:ARG:HD3	9:CJ:79:PRO:HG3	2.02	0.42
10:CK:110:THR:CG2	21:CU:4:LYS:HA	2.48	0.42
16:CQ:7:LEU:O	16:CQ:60:ILE:HD13	2.20	0.42
16:CQ:82:VAL:O	16:CQ:82:VAL:HG13	2.19	0.42
22:DA:42:C:O2'	47:DF:91:ARG:NH1	2.53	0.42
22:DA:49:C:OP1	43:DO:101:GLY:HA3	2.19	0.42
23:DB:246:C:C2'	23:DB:247:G:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:423:A:H5"	23:DB:424:G:C5'	2.50	0.42
23:DB:508:A:O2'	23:DB:509:C:OP1	2.34	0.42
23:DB:972:A:C3'	23:DB:973:A:H5"	2.38	0.42
23:DB:974:G:P	49:DR:78:ARG:HD3	2.59	0.42
23:DB:1060:U:H5	24:DI:131:THR:HG22	1.82	0.42
23:DB:1139:G:H2'	23:DB:1140:C:H6	1.85	0.42
23:DB:1176:U:O5'	23:DB:1176:U:H6	2.03	0.42
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.55	0.42
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.33	0.42
23:DB:2231:U:H2'	23:DB:2232:C:C6	2.55	0.42
23:DB:2512:C:OP2	26:DD:128:ARG:HD2	2.20	0.42
23:DB:2614:A:O4'	31:D0:1:ALA:HB3	2.20	0.42
23:DB:2653:U:H3'	23:DB:2654:A:H2'	2.02	0.42
23:DB:2815:C:H2'	23:DB:2816:G:C8	2.53	0.42
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.19	0.42
28:DP:44:GLY:HA3	28:DP:60:VAL:HG12	2.02	0.42
35:DV:40:ILE:N	35:DV:40:ILE:CD1	2.83	0.42
41:DJ:41:LYS:O	44:DQ:66:ALA:HB1	2.20	0.42
41:DJ:59:ALA:C	41:DJ:61:LYS:N	2.73	0.42
42:DN:55:ALA:HA	42:DN:80:PHE:CD1	2.55	0.42
42:DN:69:ARG:HD3	42:DN:69:ARG:H	1.84	0.42
45:DS:83:LYS:O	45:DS:84:ARG:NE	2.52	0.42
47:DF:19:PHE:CZ	47:DF:164:GLU:HG2	2.54	0.42
47:DF:42:ALA:HB1	47:DF:46:LYS:HZ3	1.85	0.42
47:DF:78:ILE:N	47:DF:78:ILE:CD1	2.83	0.42
48:DG:93:TYR:HE1	48:DG:160:GLY:HA2	1.84	0.42
49:DR:5:PHE:N	49:DR:5:PHE:CD1	2.88	0.42
50:DT:54:GLU:HG2	50:DT:90:GLY:HA3	2.02	0.42
50:DT:73:ARG:NH2	50:DT:73:ARG:HB3	2.34	0.42
52:DW:28:GLU:HB2	52:DW:31:LEU:HD21	2.02	0.42
53:D6:18:LEU:HD21	53:D6:171:LYS:CG	2.50	0.42
53:D6:61:PRO:CD	53:D6:66:LEU:HA	2.48	0.42
53:D6:177:GLU:O	53:D6:180:GLU:HB3	2.19	0.42
1:AA:628:G:H2'	1:AA:629:A:H8	1.83	0.41
1:AA:811:C:H4'	1:AA:900:A:H62	1.83	0.41
1:AA:818:G:H3'	1:AA:819:A:C5'	2.50	0.41
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.33	0.41
1:AA:1320:C:C2	18:AS:71:GLY:HA3	2.55	0.41
2:AC:78:LYS:HG3	2:AC:81:GLU:HB3	2.01	0.41
4:AE:36:THR:O	4:AE:48:GLY:N	2.52	0.41
4:AE:56:PRO:HG2	4:AE:57:ALA:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:98:GLU:HG2	5:AF:99:ALA:H	1.81	0.41
9:AJ:10:LEU:HD23	9:AJ:98:VAL:HG12	2.00	0.41
10:AK:108:ASN:ND2	21:AU:6:ARG:HB2	2.35	0.41
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	2.01	0.41
11:AL:107:LYS:O	11:AL:107:LYS:HD2	2.20	0.41
17:AR:22:TYR:HA	17:AR:57:ALA:HB1	2.02	0.41
22:BA:54:G:O2'	22:BA:55:U:H5'	2.20	0.41
23:BB:509:C:H5"	23:BB:510:C:OP2	2.20	0.41
23:BB:577:G:O2'	23:BB:1254:A:OP1	2.36	0.41
23:BB:674:G:H5"	29:BE:71:GLY:N	2.34	0.41
23:BB:779:U:H2'	23:BB:780:G:H8	1.84	0.41
23:BB:814:C:H2'	23:BB:815:C:H6	1.85	0.41
23:BB:844:A:C2	23:BB:845:A:N1	2.88	0.41
23:BB:1562:U:H2'	23:BB:1563:U:H6	1.84	0.41
23:BB:1563:U:O2'	23:BB:1564:C:H5'	2.20	0.41
23:BB:1686:C:H2'	23:BB:1687:G:O4'	2.19	0.41
23:BB:1795:C:O2'	23:BB:1796:U:H5'	2.20	0.41
23:BB:2028:U:H2'	23:BB:2029:G:O4'	2.20	0.41
23:BB:2046:G:H1'	31:B0:18:HIS:CD2	2.55	0.41
23:BB:2527:C:O4'	32:B4:1:MET:N	2.52	0.41
23:BB:2730:C:H2'	23:BB:2731:G:C8	2.55	0.41
23:BB:2745:C:H1'	48:BG:142:GLN:OE1	2.19	0.41
23:BB:2768:U:H2'	23:BB:2769:U:O4'	2.20	0.41
25:BC:180:MET:HB2	25:BC:268:ARG:H	1.85	0.41
25:BC:210:ALA:O	25:BC:213:ARG:HB3	2.20	0.41
31:B0:41:HIS:O	31:B0:42:ILE:O	2.38	0.41
43:BO:28:VAL:HG12	43:BO:93:ASP:O	2.20	0.41
45:BS:13:SER:HB3	45:BS:16:LYS:HE3	2.01	0.41
45:BS:73:LYS:HD2	45:BS:73:LYS:HA	1.83	0.41
47:BF:2:LYS:CD	47:BF:100:GLU:HG2	2.48	0.41
1:CA:543:U:H2'	1:CA:544:G:H8	1.84	0.41
1:CA:549:C:H2'	1:CA:550:G:H8	1.84	0.41
1:CA:813:U:O2	1:CA:813:U:H2'	2.20	0.41
1:CA:1009:U:O2	1:CA:1009:U:C2'	2.68	0.41
1:CA:1115:U:H1'	13:CN:100:TRP:O	2.20	0.41
2:CC:10:ARG:HH11	2:CC:10:ARG:HG3	1.85	0.41
2:CC:52:SER:HB3	2:CC:114:LEU:HG	2.02	0.41
2:CC:133:MET:HE1	2:CC:165:GLU:HG3	2.02	0.41
20:CB:46:VAL:N	20:CB:47:PRO:CD	2.83	0.41
22:DA:75:G:H2'	22:DA:76:G:H8	1.85	0.41
23:DB:107:G:C2	23:DB:108:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:182:A:H2'	23:DB:183:C:C6	2.54	0.41
23:DB:208:C:H2'	23:DB:209:C:C6	2.54	0.41
23:DB:362:A:H3'	23:DB:363:G:H8	1.85	0.41
23:DB:553:G:C2'	23:DB:554:U:H5'	2.50	0.41
23:DB:823:C:H2'	23:DB:824:U:C6	2.55	0.41
23:DB:825:A:O2'	37:DL:54:GLN:NE2	2.52	0.41
23:DB:1639:C:O2'	23:DB:1640:A:H5'	2.20	0.41
23:DB:1685:C:H2'	23:DB:1686:C:H6	1.85	0.41
23:DB:1693:U:H1'	25:DC:13:ARG:NH2	2.35	0.41
23:DB:1764:C:H2'	23:DB:1765:U:H6	1.86	0.41
23:DB:2322:A:N6	23:DB:2333:A:N6	2.68	0.41
23:DB:2376:A:H1'	43:DO:111:ARG:HH12	1.84	0.41
23:DB:2569:G:C2	23:DB:2570:G:C8	3.07	0.41
23:DB:2848:G:N3	23:DB:2849:U:C5	2.88	0.41
23:DB:2863:C:O2'	23:DB:2864:G:H5'	2.19	0.41
23:DB:2893:A:H4'	23:DB:2894:G:H5'	2.01	0.41
24:DI:108:ILE:CG2	24:DI:128:ILE:HD13	2.49	0.41
25:DC:30:ALA:O	25:DC:32:LEU:N	2.51	0.41
26:DD:69:ALA:CA	26:DD:73:VAL:HB	2.50	0.41
29:DE:132:LYS:O	29:DE:135:ALA:HB3	2.19	0.41
29:DE:157:LEU:HD12	29:DE:157:LEU:O	2.20	0.41
31:D0:48:TYR:CZ	31:D0:49:ARG:HG3	2.55	0.41
35:DV:31:TYR:CB	35:DV:37:PRO:HG3	2.48	0.41
36:D2:10:LEU:O	36:D2:14:ARG:HG2	2.20	0.41
37:DL:101:ILE:HG22	37:DL:102:GLY:N	2.35	0.41
38:DM:64:TRP:HE3	38:DM:104:GLU:O	2.03	0.41
39:DX:44:LYS:HD2	39:DX:44:LYS:HA	1.87	0.41
40:DH:62:LEU:HG	40:DH:66:ASN:HD22	1.83	0.41
41:DJ:43:GLU:O	41:DJ:44:TYR:C	2.57	0.41
44:DQ:84:LYS:O	44:DQ:86:SER:N	2.53	0.41
48:DG:50:THR:HG22	48:DG:51:PHE:N	2.35	0.41
1:AA:8:A:O4'	4:AE:106:ALA:C	2.59	0.41
1:AA:61:G:H2'	1:AA:62:U:C6	2.55	0.41
1:AA:251:G:N2	1:AA:266:G:O6	2.52	0.41
1:AA:435:A:N3	1:AA:435:A:H2'	2.33	0.41
1:AA:448:A:H2'	1:AA:449:G:H8	1.83	0.41
1:AA:489:C:O2'	1:AA:490:C:H5'	2.20	0.41
1:AA:691:G:H1'	1:AA:696:A:N6	2.35	0.41
1:AA:720:C:H5"	17:AR:40:PRO:HA	2.01	0.41
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.54	0.41
1:AA:1262:C:H2'	1:AA:1263:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1318:A:H5"	1:AA:1319:A:OP2	2.20	0.41
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.19	0.41
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	2.01	0.41
3:AD:96:ARG:HH12	3:AD:133:SER:CB	2.32	0.41
6:AG:15:PRO:HG2	6:AG:16:LYS:H	1.85	0.41
7:AH:49:LYS:HB3	7:AH:59:GLU:CB	2.42	0.41
8:AI:87:MET:HE2	8:AI:87:MET:O	2.19	0.41
14:AO:31:LEU:O	14:AO:34:ALA:HB3	2.19	0.41
15:AP:48:GLU:HG3	15:AP:49:GLY:N	2.35	0.41
15:AP:66:THR:HG22	15:AP:67:ILE:N	2.36	0.41
18:AS:48:ILE:HD11	18:AS:61:VAL:HG23	2.01	0.41
20:AB:98:GLY:HA2	20:AB:101:THR:CG2	2.50	0.41
23:BB:45:G:H2'	23:BB:215:G:C5	2.55	0.41
23:BB:235:U:H2'	23:BB:236:C:H6	1.83	0.41
23:BB:265:A:N6	23:BB:427:U:O2'	2.53	0.41
23:BB:275:C:H2'	23:BB:276:U:H5'	2.02	0.41
23:BB:718:A:H3'	23:BB:719:C:H6	1.85	0.41
23:BB:754:U:H2'	23:BB:755:U:H6	1.85	0.41
23:BB:1159:U:O2'	23:BB:1160:G:H5'	2.19	0.41
23:BB:1179:G:H2'	23:BB:1180:U:H6	1.84	0.41
23:BB:1438:U:O2'	23:BB:1439:A:H5'	2.19	0.41
23:BB:1505:A:H2'	23:BB:1506:U:H6	1.85	0.41
23:BB:1773:A:H2'	23:BB:1774:C:O4'	2.19	0.41
23:BB:2376:A:H2'	23:BB:2377:A:O4'	2.20	0.41
23:BB:2452:C:H2'	23:BB:2453:A:C8	2.54	0.41
23:BB:2543:G:H5'	23:BB:2543:G:H8	1.84	0.41
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.55	0.41
25:BC:121:ALA:HB3	25:BC:129:LEU:HG	2.02	0.41
26:BD:114:LYS:HG2	26:BD:114:LYS:H	1.53	0.41
27:BK:19:VAL:C	27:BK:41:ILE:HD11	2.40	0.41
29:BE:58:LYS:H	29:BE:58:LYS:CE	2.33	0.41
30:BY:16:LEU:HD23	30:BY:19:HIS:CD2	2.55	0.41
34:B3:32:LEU:HA	34:B3:35:LYS:HD2	2.01	0.41
40:BH:73:ASN:HD22	40:BH:74:ALA:N	2.13	0.41
41:BJ:4:PHE:O	41:BJ:44:TYR:CZ	2.73	0.41
42:BN:33:ILE:HA	42:BN:113:ILE:O	2.20	0.41
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.33	0.41
44:BQ:94:LEU:C	44:BQ:96:ASP:H	2.22	0.41
46:BU:13:LEU:HD12	46:BU:68:ASN:C	2.40	0.41
48:BG:28:LYS:HE2	48:BG:28:LYS:HB2	1.88	0.41
48:BG:154:GLU:HB3	48:BG:158:GLY:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:53:VAL:HG12	50:BT:54:GLU:N	2.35	0.41
51:BZ:77:LYS:CG	51:BZ:78:TYR:N	2.83	0.41
52:BW:67:LYS:O	52:BW:68:PHE:CB	2.61	0.41
52:BW:77:LYS:HZ3	52:BW:77:LYS:HB2	1.83	0.41
1:CA:283:U:H2'	1:CA:284:C:H6	1.83	0.41
1:CA:465:A:N3	1:CA:465:A:O4'	2.53	0.41
1:CA:499:A:O4'	1:CA:547:A:N6	2.53	0.41
1:CA:528:C:H41	11:CL:45:ASN:CG	2.23	0.41
1:CA:665:A:H2'	1:CA:732:C:O2	2.21	0.41
1:CA:687:A:C2	1:CA:704:A:C5	3.08	0.41
1:CA:817:C:C2	1:CA:819:A:O4'	2.73	0.41
1:CA:948:C:H2'	1:CA:949:A:H8	1.85	0.41
2:CC:85:LYS:O	2:CC:89:VAL:HG23	2.19	0.41
2:CC:178:ARG:HG2	2:CC:206:ILE:HA	2.02	0.41
3:CD:138:PRO:C	3:CD:140:ASP:H	2.24	0.41
3:CD:160:LEU:HA	3:CD:163:GLN:HG3	2.03	0.41
3:CD:172:VAL:O	3:CD:172:VAL:HG13	2.20	0.41
4:CE:87:VAL:HG21	4:CE:92:ARG:HD2	2.01	0.41
8:CI:26:LYS:HB2	8:CI:61:ASP:CB	2.49	0.41
10:CK:34:THR:HB	10:CK:40:ALA:CA	2.37	0.41
10:CK:113:THR:HG21	21:CU:28:LEU:HD12	2.02	0.41
13:CN:26:LEU:HD23	13:CN:27:LYS:N	2.35	0.41
17:CR:25:ILE:HG13	17:CR:26:ALA:N	2.34	0.41
18:CS:36:ARG:H	18:CS:36:ARG:HG2	1.60	0.41
18:CS:48:ILE:HD11	18:CS:61:VAL:HG23	2.02	0.41
20:CB:185:ILE:HG23	20:CB:199:ILE:O	2.21	0.41
20:CB:187:ASP:O	20:CB:189:ASN:N	2.53	0.41
22:DA:17:C:H2'	22:DA:18:G:H8	1.85	0.41
22:DA:77:U:O2'	22:DA:78:A:H5'	2.20	0.41
22:DA:106:G:H2'	22:DA:107:G:O4'	2.20	0.41
23:DB:77:G:H2'	23:DB:78:U:C6	2.55	0.41
23:DB:528:A:H3'	23:DB:528:A:C8	2.54	0.41
23:DB:903:C:H2'	23:DB:904:G:C8	2.55	0.41
23:DB:1084:A:H1'	23:DB:1106:G:H5'	2.01	0.41
23:DB:1098:A:H3'	24:DI:3:LYS:HB3	2.01	0.41
23:DB:1183:U:H2'	23:DB:1184:U:C6	2.56	0.41
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.50	0.41
23:DB:1330:C:H2'	23:DB:1331:G:H8	1.85	0.41
23:DB:1332:G:HO2'	23:DB:1609:A:H2	1.64	0.41
23:DB:1386:C:H1'	23:DB:1470:A:H1'	2.01	0.41
23:DB:1823:G:O2'	23:DB:1824:G:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2010:G:O2'	23:DB:2011:U:H5'	2.20	0.41
23:DB:2674:G:H2'	23:DB:2675:A:C8	2.55	0.41
23:DB:2779:U:OP1	23:DB:2780:G:H2'	2.20	0.41
23:DB:2812:G:H2'	23:DB:2813:A:O4'	2.20	0.41
23:DB:2876:G:H2'	23:DB:2877:G:O4'	2.20	0.41
23:DB:2903:U:O2	23:DB:2903:U:H2'	2.21	0.41
25:DC:109:LEU:H	25:DC:109:LEU:HD23	1.85	0.41
25:DC:115:ILE:HA	25:DC:127:ASN:OD1	2.20	0.41
25:DC:157:ALA:HA	25:DC:194:VAL:CG2	2.50	0.41
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.20	0.41
29:DE:1:MET:HB2	29:DE:16:GLU:HB2	2.02	0.41
29:DE:62:GLN:HG2	29:DE:63:LYS:HG3	2.02	0.41
33:D1:25:ASN:OD1	33:D1:27:ARG:HB2	2.20	0.41
33:D1:28:THR:C	33:D1:30:PRO:HD3	2.40	0.41
35:DV:21:ARG:HE	35:DV:87:GLN:HB3	1.85	0.41
35:DV:61:LEU:HD11	35:DV:74:ALA:HB2	2.02	0.41
36:D2:39:ARG:HG3	36:D2:39:ARG:HH11	1.85	0.41
40:DH:70:GLU:OE1	40:DH:71:LYS:HG3	2.20	0.41
40:DH:115:VAL:HB	40:DH:132:PHE:HD1	1.81	0.41
41:DJ:6:ALA:CB	41:DJ:45:THR:HG21	2.50	0.41
42:DN:33:ILE:HA	42:DN:113:ILE:O	2.19	0.41
42:DN:59:SER:C	42:DN:61:ALA:N	2.72	0.41
42:DN:65:LEU:HD11	42:DN:69:ARG:NH1	2.33	0.41
46:DU:10:VAL:HA	46:DU:70:ALA:O	2.21	0.41
46:DU:73:ASN:O	46:DU:75:ALA:N	2.53	0.41
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.20	0.41
48:DG:42:VAL:HA	48:DG:50:THR:O	2.20	0.41
49:DR:3:ALA:HB1	49:DR:59:ILE:HD13	2.01	0.41
49:DR:29:THR:HG23	49:DR:65:ALA:HA	2.02	0.41
50:DT:7:LEU:C	50:DT:9:LYS:HD3	2.41	0.41
52:DW:17:ALA:O	52:DW:18:LYS:HD2	2.19	0.41
1:AA:152:A:H2'	1:AA:153:C:O4'	2.20	0.41
1:AA:207:C:O2'	1:AA:208:U:H5'	2.21	0.41
1:AA:282:A:N3	1:AA:282:A:H2'	2.36	0.41
1:AA:291:U:H2'	1:AA:292:G:C8	2.55	0.41
1:AA:382:A:H2'	1:AA:383:A:C8	2.55	0.41
1:AA:719:C:H2'	17:AR:38:ILE:HD13	2.02	0.41
1:AA:908:A:O2'	1:AA:909:A:H5'	2.21	0.41
1:AA:1115:U:H1'	13:AN:100:TRP:O	2.20	0.41
2:AC:85:LYS:O	2:AC:89:VAL:HG23	2.19	0.41
4:AE:98:ALA:HB3	4:AE:121:ASN:C	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:45:ARG:NH2	17:AR:25:ILE:HD13	2.35	0.41
6:AG:96:ASN:O	6:AG:100:MET:HG3	2.20	0.41
7:AH:47:ASP:CG	7:AH:48:PHE:N	2.70	0.41
9:AJ:5:ARG:N	9:AJ:76:ILE:O	2.53	0.41
9:AJ:86:ALA:C	9:AJ:87:LEU:HD13	2.39	0.41
11:AL:35:ARG:HH21	11:AL:36:VAL:HG22	1.85	0.41
14:AO:71:LYS:HB2	14:AO:78:TYR:CD2	2.55	0.41
17:AR:38:ILE:HG22	17:AR:58:ILE:HD13	2.00	0.41
21:AU:3:ILE:CD1	21:AU:19:LYS:HA	2.47	0.41
23:BB:297:G:H2'	23:BB:298:G:C8	2.55	0.41
23:BB:811:U:C4	37:BL:21:ARG:NH2	2.88	0.41
23:BB:1064:C:C1'	24:BI:90:GLY:HA2	2.50	0.41
23:BB:1748:C:H2'	23:BB:1749:A:C8	2.55	0.41
23:BB:2049:G:O2'	23:BB:2050:C:H5'	2.19	0.41
23:BB:2061:G:H5"	23:BB:2503:A:C2	2.55	0.41
23:BB:2195:U:O2'	23:BB:2196:C:H5'	2.21	0.41
23:BB:2350:C:H2'	23:BB:2351:G:O4'	2.20	0.41
23:BB:2621:G:OP1	26:BD:124:ARG:NH2	2.53	0.41
23:BB:2901:C:O2	23:BB:2901:C:H2'	2.20	0.41
25:BC:131:MET:C	25:BC:133:ASN:N	2.73	0.41
26:BD:51:THR:HG22	26:BD:52:THR:H	1.83	0.41
27:BK:71:ARG:HD2	27:BK:106:GLU:OE2	2.19	0.41
29:BE:188:MET:CE	29:BE:193:VAL:HG22	2.50	0.41
31:B0:21:LEU:HB3	45:BS:23:LEU:HD21	2.03	0.41
34:B3:7:ARG:HH11	34:B3:7:ARG:CG	2.33	0.41
36:B2:39:ARG:HH11	36:B2:39:ARG:HG3	1.86	0.41
37:BL:79:LEU:CG	37:BL:112:LEU:HA	2.35	0.41
38:BM:20:LEU:N	38:BM:20:LEU:HD22	2.35	0.41
38:BM:64:TRP:O	38:BM:103:TYR:HA	2.21	0.41
38:BM:90:GLU:OE1	38:BM:90:GLU:HA	2.19	0.41
40:BH:90:LEU:HD22	40:BH:123:ARG:HA	2.03	0.41
41:BJ:32:LEU:HD22	41:BJ:122:LEU:HD11	2.02	0.41
41:BJ:34:ARG:O	41:BJ:38:GLY:N	2.53	0.41
43:BO:79:ALA:HB2	43:BO:110:ALA:HB1	2.02	0.41
44:BQ:111:LYS:HE3	49:BR:48:LYS:NZ	2.36	0.41
46:BU:26:ASN:ND2	46:BU:34:ILE:HD12	2.33	0.41
47:BF:3:LEU:HD11	47:BF:172:PHE:CE1	2.55	0.41
47:BF:141:ASP:O	47:BF:143:ASP:N	2.53	0.41
47:BF:163:GLU:O	47:BF:166:ARG:HB2	2.20	0.41
48:BG:10:VAL:CG2	48:BG:49:LEU:HD13	2.51	0.41
49:BR:57:GLY:HA2	49:BR:102:SER:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:58:VAL:O	49:BR:58:VAL:HG22	2.19	0.41
50:BT:41:ALA:C	50:BT:43:ILE:N	2.73	0.41
50:BT:68:LYS:O	50:BT:74:ILE:HD12	2.20	0.41
53:B6:5:GLU:O	53:B6:8:ALA:HB3	2.20	0.41
53:B6:68:VAL:CG2	53:B6:99:LEU:HD12	2.50	0.41
1:CA:266:G:O2'	1:CA:267:C:H3'	2.21	0.41
1:CA:1159:U:O4'	1:CA:1182:G:N2	2.53	0.41
1:CA:1287:A:N6	1:CA:1288:A:N6	2.67	0.41
1:CA:1314:C:N4	18:CS:3:SER:CB	2.83	0.41
5:CF:72:ASP:HA	5:CF:75:GLU:OE1	2.21	0.41
11:CL:29:LYS:CB	11:CL:56:LEU:HD22	2.51	0.41
12:CM:17:ALA:CB	12:CM:44:ILE:HG12	2.50	0.41
13:CN:3:GLN:OE1	13:CN:3:GLN:HA	2.21	0.41
14:CO:69:TYR:HA	14:CO:72:ARG:NH1	2.36	0.41
15:CP:8:ARG:CZ	15:CP:15:PRO:HB3	2.50	0.41
16:CQ:17:GLU:O	16:CQ:18:LYS:HB2	2.21	0.41
17:CR:38:ILE:CG2	17:CR:58:ILE:HD13	2.51	0.41
17:CR:52:ARG:HH11	17:CR:52:ARG:HG3	1.86	0.41
23:DB:95:A:H4'	39:DX:38:GLN:O	2.21	0.41
23:DB:111:A:O2'	23:DB:112:U:H5'	2.21	0.41
23:DB:136:G:H2'	23:DB:137:U:C6	2.56	0.41
23:DB:237:C:O2'	23:DB:238:C:H5'	2.20	0.41
23:DB:256:A:H2'	23:DB:257:C:H6	1.84	0.41
23:DB:269:C:C2	23:DB:270:A:C8	3.08	0.41
23:DB:729:G:C8	25:DC:206:LYS:HE3	2.55	0.41
23:DB:765:C:H2'	23:DB:766:U:C6	2.55	0.41
23:DB:981:A:H2'	23:DB:982:C:C5'	2.50	0.41
23:DB:996:A:O3'	44:DQ:91:ARG:HG3	2.20	0.41
23:DB:1032:A:OP1	32:D4:8:LYS:HG3	2.20	0.41
23:DB:1152:C:H4'	44:DQ:76:SER:HA	2.02	0.41
23:DB:1313:U:H4'	23:DB:1332:G:H4'	2.01	0.41
23:DB:1402:U:H2'	23:DB:1403:A:O5'	2.20	0.41
23:DB:1758:U:O4	23:DB:2695:U:H4'	2.21	0.41
23:DB:1764:C:O2'	23:DB:1765:U:H5'	2.20	0.41
23:DB:1867:G:O2'	23:DB:1868:C:H5'	2.21	0.41
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.20	0.41
23:DB:1998:A:H2'	23:DB:1999:C:C6	2.54	0.41
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.84	0.41
23:DB:2096:C:O2	23:DB:2096:C:H2'	2.21	0.41
23:DB:2818:U:H4'	23:DB:2837:A:C4'	2.50	0.41
23:DB:2856:A:H2'	23:DB:2857:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:226:PRO:HD3	25:DC:233:GLY:H	1.85	0.41
26:DD:114:LYS:HE3	26:DD:116:LYS:CE	2.51	0.41
27:DK:21:CYS:HB2	27:DK:39:ILE:HG21	2.01	0.41
27:DK:72:PRO:O	27:DK:74:GLY:N	2.53	0.41
30:DY:7:THR:O	30:DY:54:VAL:HG12	2.20	0.41
31:D0:48:TYR:O	31:D0:50:GLY:N	2.52	0.41
36:D2:31:LEU:O	36:D2:34:ARG:N	2.53	0.41
37:DL:118:THR:HA	37:DL:119:PRO:HD3	1.91	0.41
38:DM:23:GLY:HA3	38:DM:66:ARG:NH1	2.35	0.41
40:DH:141:LYS:CD	40:DH:141:LYS:H	2.34	0.41
41:DJ:16:TYR:CD2	41:DJ:140:LEU:HD12	2.55	0.41
43:DO:6:ALA:HB1	43:DO:10:ARG:HH11	1.86	0.41
43:DO:9:ARG:HA	43:DO:12:THR:OG1	2.20	0.41
43:DO:35:ILE:HG22	43:DO:35:ILE:O	2.19	0.41
44:DQ:105:PHE:HA	44:DQ:108:LEU:HD12	2.01	0.41
46:DU:73:ASN:HB3	46:DU:95:PHE:CD2	2.56	0.41
48:DG:96:ALA:O	48:DG:97:VAL:HB	2.21	0.41
53:D6:43:VAL:HG11	53:D6:79:ILE:HA	2.03	0.41
1:AA:28:A:C2	1:AA:296:U:H4'	2.55	0.41
1:AA:547:A:H4'	1:AA:548:G:O5'	2.20	0.41
1:AA:614:C:C2'	1:AA:615:G:H5'	2.51	0.41
1:AA:648:A:H2'	1:AA:649:A:C8	2.55	0.41
1:AA:655:A:H2'	1:AA:656:G:O4'	2.20	0.41
1:AA:757:U:O2'	1:AA:758:C:H5'	2.20	0.41
1:AA:920:U:C2	1:AA:921:U:C5	3.08	0.41
2:AC:104:GLU:HG2	2:AC:105:VAL:N	2.33	0.41
2:AC:202:PHE:HZ	2:AC:205:GLU:HG2	1.84	0.41
3:AD:110:ARG:HG3	3:AD:110:ARG:HH11	1.84	0.41
3:AD:145:ARG:HH21	3:AD:147:LYS:HE2	1.84	0.41
4:AE:132:PRO:HG2	4:AE:133:ILE:H	1.85	0.41
6:AG:45:ALA:HB2	6:AG:116:ALA:O	2.20	0.41
6:AG:67:ASN:ND2	6:AG:127:ALA:HA	2.34	0.41
7:AH:62:LEU:HB3	7:AH:64:TYR:CE1	2.55	0.41
10:AK:70:ALA:C	10:AK:72:ALA:N	2.74	0.41
11:AL:107:LYS:H	11:AL:107:LYS:HZ2	1.66	0.41
12:AM:3:ILE:CA	12:AM:56:ARG:HG2	2.43	0.41
13:AN:32:ASP:CG	13:AN:33:VAL:H	2.23	0.41
19:AT:31:ILE:O	19:AT:34:VAL:HG23	2.21	0.41
19:AT:68:LYS:HE2	19:AT:68:LYS:CA	2.50	0.41
19:AT:72:ALA:HA	19:AT:75:LYS:HD3	2.02	0.41
20:AB:120:SER:CA	20:AB:125:PHE:HB3	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:19:C:O2'	22:BA:20:G:H5'	2.19	0.41
23:BB:189:G:H2'	23:BB:205:G:N2	2.35	0.41
23:BB:220:G:N1	23:BB:427:U:H2'	2.34	0.41
23:BB:981:A:H2'	23:BB:982:C:C5'	2.50	0.41
23:BB:1045:C:C2	23:BB:1047:G:C2	3.08	0.41
23:BB:1439:A:C5	23:BB:1552:A:N6	2.88	0.41
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.21	0.41
23:BB:2083:G:H2'	23:BB:2084:C:H6	1.84	0.41
23:BB:2528:U:O2'	23:BB:2529:G:H3'	2.20	0.41
23:BB:2747:G:O6	23:BB:2754:U:H2'	2.20	0.41
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.54	0.41
23:BB:2846:G:OP1	28:BP:51:ASN:HB2	2.20	0.41
24:BI:32:VAL:HG22	24:BI:60:VAL:HG21	2.02	0.41
25:BC:203:VAL:O	25:BC:204:LEU:HB2	2.20	0.41
26:BD:67:HIS:ND1	26:BD:67:HIS:C	2.74	0.41
27:BK:47:ILE:HG23	27:BK:48:PRO:N	2.34	0.41
28:BP:44:GLY:HA3	28:BP:60:VAL:CG1	2.50	0.41
29:BE:69:ARG:HH11	29:BE:69:ARG:HG2	1.85	0.41
29:BE:171:ASP:CG	29:BE:172:ALA:N	2.74	0.41
29:BE:192:ALA:HA	29:BE:195:GLN:NE2	2.36	0.41
36:B2:12:ARG:HG3	36:B2:12:ARG:HH21	1.86	0.41
36:B2:31:LEU:HD22	36:B2:42:LEU:HD12	2.01	0.41
37:BL:57:LEU:HD13	37:BL:60:ARG:NH2	2.36	0.41
38:BM:11:LYS:HD2	38:BM:86:LYS:HG2	2.02	0.41
38:BM:82:MET:HE3	38:BM:83:GLY:N	2.34	0.41
39:BX:45:GLN:O	39:BX:47:ARG:N	2.46	0.41
40:BH:82:SER:HB2	40:BH:146:VAL:CG1	2.51	0.41
42:BN:96:ARG:HH11	42:BN:116:VAL:HA	1.85	0.41
44:BQ:105:PHE:HA	44:BQ:108:LEU:HD12	2.01	0.41
45:BS:24:ILE:O	45:BS:25:ARG:C	2.59	0.41
48:BG:17:LYS:HZ2	48:BG:17:LYS:CA	2.33	0.41
48:BG:42:VAL:HA	48:BG:50:THR:O	2.21	0.41
48:BG:83:THR:C	48:BG:84:LYS:HD3	2.41	0.41
48:BG:87:GLN:H	48:BG:164:ALA:HB2	1.84	0.41
48:BG:102:ILE:CD1	48:BG:116:LEU:HD11	2.51	0.41
51:BZ:14:THR:HA	51:BZ:28:ARG:CB	2.50	0.41
1:CA:271:C:O2'	1:CA:272:C:H5'	2.20	0.41
1:CA:548:G:H2'	1:CA:549:C:C6	2.55	0.41
1:CA:734:G:H2'	1:CA:735:C:C6	2.56	0.41
1:CA:861:G:O2'	1:CA:862:C:H5'	2.19	0.41
1:CA:958:A:N6	1:CA:959:A:N1	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1053:G:H4'	1:CA:1054:C:H5'	2.01	0.41
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.21	0.41
1:CA:1265:C:O2'	1:CA:1266:G:H5'	2.19	0.41
1:CA:1277:C:O2'	1:CA:1279:G:C8	2.73	0.41
1:CA:1324:A:H2'	1:CA:1325:C:C6	2.55	0.41
1:CA:1404:C:O4'	1:CA:1499:A:C2	2.73	0.41
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.21	0.41
2:CC:114:LEU:O	2:CC:115:VAL:C	2.58	0.41
3:CD:100:VAL:HG21	3:CD:136:VAL:CG2	2.49	0.41
7:CH:91:LEU:HD12	7:CH:116:ARG:HB2	2.03	0.41
8:CI:98:ARG:NE	8:CI:103:VAL:HG21	2.35	0.41
9:CJ:5:ARG:N	9:CJ:76:ILE:O	2.54	0.41
13:CN:9:GLU:HB2	13:CN:62:ARG:CZ	2.51	0.41
13:CN:68:ARG:HH12	13:CN:71:GLY:H	1.68	0.41
22:DA:83:G:H4'	30:DY:52:PHE:CD2	2.55	0.41
22:DA:91:C:O2'	22:DA:92:C:H5'	2.20	0.41
23:DB:137:U:C5	23:DB:138:U:N3	2.88	0.41
23:DB:377:G:O2'	23:DB:378:C:H5'	2.21	0.41
23:DB:455:C:N3	23:DB:473:G:H5'	2.35	0.41
23:DB:616:A:H4'	29:DE:101:TYR:CE2	2.55	0.41
23:DB:866:A:H61	23:DB:913:U:C4'	2.33	0.41
23:DB:948:C:H1'	23:DB:984:A:N3	2.35	0.41
23:DB:1313:U:O2	23:DB:1313:U:C2'	2.68	0.41
23:DB:1385:A:HO2'	23:DB:1396:U:H6	1.65	0.41
23:DB:1439:A:N3	23:DB:1553:A:C6	2.88	0.41
23:DB:1751:U:H2'	23:DB:1752:C:C6	2.56	0.41
23:DB:2013:A:C2'	23:DB:2014:A:H5'	2.50	0.41
23:DB:2087:G:H2'	23:DB:2088:A:H8	1.84	0.41
23:DB:2137:U:O2'	23:DB:2138:G:H5'	2.20	0.41
23:DB:2323:G:O2'	23:DB:2324:U:H5'	2.20	0.41
26:DD:112:THR:O	26:DD:113:SER:HB2	2.20	0.41
27:DK:104:THR:C	27:DK:106:GLU:H	2.24	0.41
29:DE:160:ALA:O	29:DE:161:ALA:HB3	2.20	0.41
29:DE:161:ALA:HB1	29:DE:167:VAL:HG13	2.02	0.41
30:DY:51:SER:HA	30:DY:54:VAL:CG2	2.51	0.41
32:D4:3:VAL:O	32:D4:4:ARG:O	2.38	0.41
35:DV:83:LYS:HA	35:DV:84:PRO:HD3	1.92	0.41
37:DL:100:ILE:O	37:DL:100:ILE:HG12	2.20	0.41
38:DM:66:ARG:HB2	38:DM:101:VAL:HG13	2.02	0.41
40:DH:37:VAL:HG23	40:DH:38:PRO:HD2	2.03	0.41
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:106:LEU:CA	43:DO:109:ALA:HB3	2.50	0.41
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.20	0.41
46:DU:78:LYS:HE3	46:DU:79:ALA:N	2.35	0.41
46:DU:85:ARG:N	46:DU:91:LYS:O	2.50	0.41
47:DF:91:ARG:HD3	47:DF:91:ARG:N	2.35	0.41
47:DF:131:VAL:C	47:DF:133:GLU:N	2.74	0.41
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	2.03	0.41
49:DR:58:VAL:O	49:DR:58:VAL:HG22	2.19	0.41
50:DT:49:LYS:HB2	50:DT:50:LEU:HD22	2.02	0.41
1:AA:142:G:N3	1:AA:196:A:H2	2.18	0.41
1:AA:177:G:O4'	1:AA:177:G:N3	2.52	0.41
1:AA:632:U:H5"	1:AA:633:G:C8	2.56	0.41
1:AA:818:G:C2'	1:AA:819:A:H5"	2.51	0.41
1:AA:880:C:H2'	1:AA:881:G:C8	2.51	0.41
1:AA:916:U:H2'	1:AA:917:G:H8	1.85	0.41
1:AA:1178:G:H2'	1:AA:1180:A:OP2	2.20	0.41
1:AA:1271:A:H5'	1:AA:1314:C:C5'	2.47	0.41
5:AF:3:HIS:ND1	5:AF:95:ALA:N	2.66	0.41
7:AH:77:VAL:HG12	7:AH:78:SER:N	2.36	0.41
10:AK:70:ALA:HA	10:AK:73:VAL:CG2	2.50	0.41
16:AQ:66:LEU:HD12	16:AQ:70:LYS:HG2	2.01	0.41
22:BA:44:G:N2	22:BA:48:U:C2	2.89	0.41
23:BB:62:U:HO2'	23:BB:63:A:H5'	1.84	0.41
23:BB:838:C:H2'	23:BB:839:U:C6	2.55	0.41
23:BB:1248:G:OP1	29:BE:44:ARG:NH1	2.54	0.41
23:BB:1368:G:O2'	23:BB:1369:G:H5'	2.20	0.41
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.20	0.41
23:BB:1838:C:H4'	23:BB:1839:G:C8	2.54	0.41
23:BB:2099:U:H2'	23:BB:2100:G:C8	2.53	0.41
23:BB:2415:G:O2'	23:BB:2416:C:H5'	2.19	0.41
23:BB:2578:G:C6	26:BD:145:SER:HB2	2.55	0.41
23:BB:2746:U:O4'	48:BG:138:GLN:HA	2.20	0.41
23:BB:2795:C:H2'	23:BB:2796:U:C1'	2.50	0.41
23:BB:2848:G:N3	23:BB:2849:U:C5	2.88	0.41
23:BB:2886:A:N7	31:B0:39:ARG:NH2	2.65	0.41
25:BC:109:LEU:H	25:BC:109:LEU:HD23	1.84	0.41
25:BC:156:SER:HB3	25:BC:159:THR:CG2	2.51	0.41
26:BD:113:SER:CB	26:BD:168:GLU:H	2.32	0.41
27:BK:34:GLY:O	27:BK:36:GLY:N	2.53	0.41
28:BP:29:VAL:O	28:BP:40:GLN:N	2.54	0.41
33:B1:18:HIS:ND1	33:B1:19:PHE:N	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:39:ASP:OD1	33:B1:41:VAL:HB	2.21	0.41
34:B3:23:HIS:O	34:B3:46:LYS:HB3	2.20	0.41
37:BL:13:LYS:O	37:BL:14:LYS:HG2	2.20	0.41
37:BL:57:LEU:C	37:BL:59:ARG:N	2.74	0.41
37:BL:132:ARG:C	37:BL:135:ILE:HG22	2.41	0.41
40:BH:59:ALA:HA	40:BH:62:LEU:CD2	2.51	0.41
43:BO:51:ALA:HB1	43:BO:77:ALA:CB	2.51	0.41
44:BQ:8:ILE:HG23	44:BQ:9:ALA:N	2.35	0.41
44:BQ:42:GLY:HA3	49:BR:75:VAL:CG2	2.50	0.41
46:BU:1:ALA:HB1	46:BU:84:PHE:CZ	2.56	0.41
46:BU:4:ILE:HG13	46:BU:66:VAL:HG23	2.02	0.41
48:BG:104:LEU:HB3	48:BG:106:LEU:HD21	2.02	0.41
48:BG:152:ARG:HD2	48:BG:152:ARG:HA	1.82	0.41
53:B6:52:LEU:HA	53:B6:55:ILE:HG23	2.01	0.41
53:B6:67:VAL:HG23	53:B6:67:VAL:O	2.20	0.41
1:CA:284:C:O2'	1:CA:285:C:H5'	2.20	0.41
1:CA:291:U:H2'	1:CA:292:G:C8	2.55	0.41
1:CA:374:A:H5"	1:CA:452:A:N1	2.36	0.41
1:CA:614:C:C2'	1:CA:615:G:H5'	2.51	0.41
1:CA:664:G:H22	1:CA:741:G:H22	1.69	0.41
1:CA:720:C:H5"	17:CR:40:PRO:HA	2.02	0.41
1:CA:753:A:OP1	14:CO:73:LYS:HE3	2.20	0.41
1:CA:835:U:O2'	1:CA:836:G:H5'	2.20	0.41
1:CA:972:C:O2'	9:CJ:57:VAL:HA	2.21	0.41
1:CA:1120:C:H2'	1:CA:1121:U:H6	1.85	0.41
1:CA:1320:C:H1'	18:CS:72:GLU:HB3	2.02	0.41
2:CC:32:LEU:O	2:CC:35:ASP:HB2	2.20	0.41
2:CC:116:ALA:HB1	2:CC:186:SER:OG	2.21	0.41
3:CD:24:VAL:HG12	3:CD:160:LEU:HD12	2.02	0.41
4:CE:157:GLY:O	4:CE:158:LYS:HB2	2.20	0.41
5:CF:7:VAL:O	5:CF:7:VAL:HG13	2.20	0.41
5:CF:74:LEU:HA	5:CF:77:THR:OG1	2.21	0.41
7:CH:86:LYS:CG	7:CH:124:ILE:HD11	2.50	0.41
8:CI:10:ARG:HA	8:CI:77:ALA:HB1	2.03	0.41
10:CK:17:ASP:HB3	10:CK:80:ASN:HD21	1.85	0.41
11:CL:107:LYS:HD2	11:CL:107:LYS:O	2.20	0.41
12:CM:2:ARG:HG3	12:CM:5:GLY:HA2	2.01	0.41
12:CM:2:ARG:CG	12:CM:6:ILE:H	2.29	0.41
12:CM:22:TYR:HB2	12:CM:65:GLU:HA	2.03	0.41
14:CO:82:ILE:O	14:CO:86:GLY:N	2.53	0.41
17:CR:22:TYR:HA	17:CR:57:ALA:HB1	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:40:PHE:O	18:CS:43:MET:HG3	2.20	0.41
20:CB:35:ASN:O	20:CB:37:VAL:N	2.53	0.41
20:CB:68:PHE:CG	20:CB:83:ALA:HB2	2.55	0.41
22:DA:97:C:C2'	22:DA:98:G:H5'	2.50	0.41
22:DA:114:C:H1'	43:DO:47:VAL:HG21	2.03	0.41
23:DB:138:U:H2'	23:DB:140:C:C6	2.55	0.41
23:DB:265:A:N6	23:DB:427:U:O2'	2.54	0.41
23:DB:388:G:N7	23:DB:390:U:H2'	2.35	0.41
23:DB:1179:G:H2'	23:DB:1180:U:H5'	2.01	0.41
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.85	0.41
23:DB:1541:C:H2'	23:DB:1542:U:H6	1.85	0.41
23:DB:2089:C:H2'	23:DB:2090:A:C8	2.55	0.41
23:DB:2105:U:H2'	23:DB:2106:U:H6	1.85	0.41
23:DB:2106:U:H2'	23:DB:2107:G:OP1	2.20	0.41
23:DB:2151:U:O2'	23:DB:2152:G:H5'	2.20	0.41
23:DB:2231:U:H2'	23:DB:2232:C:H6	1.85	0.41
23:DB:2259:U:H2'	23:DB:2260:C:H6	1.86	0.41
23:DB:2543:G:H5'	23:DB:2543:G:H8	1.86	0.41
23:DB:2708:G:H2'	23:DB:2709:G:C8	2.54	0.41
24:DI:72:THR:HG23	24:DI:112:LYS:HD2	2.02	0.41
25:DC:14:HIS:O	25:DC:15:VAL:C	2.59	0.41
26:DD:76:GLY:O	26:DD:77:ARG:C	2.58	0.41
26:DD:98:VAL:C	26:DD:100:LEU:N	2.74	0.41
32:D4:27:CYS:CB	32:D4:33:HIS:HB2	2.50	0.41
33:D1:3:GLY:O	33:D1:5:ARG:N	2.54	0.41
34:D3:24:LYS:HB2	37:DL:64:PHE:CD2	2.56	0.41
34:D3:30:HIS:HD2	34:D3:31:ILE:H	1.68	0.41
35:DV:32:GLY:O	35:DV:93:ARG:NH1	2.53	0.41
38:DM:64:TRP:C	38:DM:65:ILE:HG13	2.39	0.41
38:DM:114:ARG:HB2	38:DM:114:ARG:NH2	2.28	0.41
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.33	0.41
42:DN:70:THR:O	42:DN:70:THR:OG1	2.39	0.41
43:DO:69:ASP:O	43:DO:72:ALA:HB3	2.21	0.41
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.86	0.41
44:DQ:63:ARG:H	44:DQ:63:ARG:HG3	1.63	0.41
45:DS:22:ASP:HA	45:DS:25:ARG:HH12	1.83	0.41
47:DF:21:TYR:CD2	47:DF:27:VAL:HG12	2.56	0.41
47:DF:65:LEU:HD23	47:DF:87:LYS:CD	2.49	0.41
48:DG:93:TYR:CG	48:DG:106:LEU:HB3	2.55	0.41
48:DG:110:HIS:HA	48:DG:111:PRO:HD3	1.95	0.41
48:DG:148:ARG:HD3	48:DG:152:ARG:CD	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:15:SER:OG	49:DR:18:GLN:HG2	2.20	0.41
49:DR:39:LEU:HB3	49:DR:53:PHE:HA	2.02	0.41
53:D6:39:LEU:O	53:D6:53:ASN:N	2.54	0.41
1:AA:141:G:O2'	1:AA:142:G:H5'	2.21	0.41
1:AA:313:A:H2'	1:AA:314:C:H6	1.85	0.41
1:AA:537:G:H2'	1:AA:538:G:H8	1.86	0.41
1:AA:1249:C:H2'	1:AA:1250:A:H5'	2.03	0.41
1:AA:1315:U:H5	18:AS:5:LYS:CE	2.33	0.41
1:AA:1343:G:H4'	8:AI:123:ARG:HB2	2.03	0.41
1:AA:1526:G:OP2	21:AU:38:GLU:HB3	2.21	0.41
2:AC:10:ARG:HH11	2:AC:10:ARG:HG3	1.85	0.41
2:AC:23:ALA:HB1	2:AC:27:GLU:OE2	2.20	0.41
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.20	0.41
4:AE:131:ASN:HD22	4:AE:134:ASN:H	1.69	0.41
5:AF:70:VAL:HG23	5:AF:71:ILE:N	2.35	0.41
6:AG:121:ASN:N	6:AG:121:ASN:ND2	2.69	0.41
6:AG:146:ALA:CA	10:AK:55:ARG:HH12	2.33	0.41
10:AK:67:GLU:HG3	10:AK:68:ARG:N	2.34	0.41
14:AO:82:ILE:O	14:AO:86:GLY:N	2.53	0.41
15:AP:20:VAL:HG21	15:AP:32:PHE:CG	2.56	0.41
16:AQ:31:PRO:O	16:AQ:32:ILE:HB	2.20	0.41
20:AB:68:PHE:CG	20:AB:83:ALA:HB2	2.55	0.41
20:AB:80:LYS:HG3	20:AB:81:ASP:N	2.35	0.41
20:AB:122:ASP:C	20:AB:124:THR:H	2.23	0.41
22:BA:22:U:H2'	22:BA:23:G:C8	2.56	0.41
23:BB:4:U:O2'	23:BB:5:A:H5'	2.21	0.41
23:BB:116:C:O2	23:BB:127:A:H2	2.03	0.41
23:BB:150:U:O2'	23:BB:151:C:H5'	2.20	0.41
23:BB:322:A:H5'	23:BB:340:A:C1'	2.50	0.41
23:BB:496:G:H4'	45:BS:61:ASN:ND2	2.35	0.41
23:BB:597:G:H21	37:BL:12:SER:HA	1.86	0.41
23:BB:633:A:H2'	23:BB:634:C:O4'	2.20	0.41
23:BB:648:G:O2'	23:BB:649:G:H5'	2.20	0.41
23:BB:866:A:H61	23:BB:913:U:C4'	2.33	0.41
23:BB:1370:C:H2'	23:BB:1371:G:O4'	2.20	0.41
23:BB:1396:U:O2	23:BB:1396:U:O4'	2.38	0.41
23:BB:1439:A:N3	23:BB:1553:A:C6	2.89	0.41
23:BB:1461:C:H2'	23:BB:1462:C:C5	2.56	0.41
23:BB:1572:A:O2'	23:BB:1573:G:H5'	2.19	0.41
23:BB:1684:G:O2'	23:BB:1685:C:H5'	2.20	0.41
23:BB:1831:G:O2'	23:BB:1832:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.21	0.41
23:BB:2867:G:HO2'	23:BB:2868:A:H8	1.66	0.41
24:BI:35:MET:SD	24:BI:35:MET:C	2.98	0.41
25:BC:255:LYS:C	25:BC:257:ARG:H	2.24	0.41
26:BD:14:ILE:HA	28:BP:11:GLN:HE22	1.86	0.41
26:BD:26:VAL:HG13	26:BD:188:LEU:CD2	2.50	0.41
27:BK:54:LYS:C	27:BK:56:ASP:H	2.23	0.41
27:BK:88:ASN:HD22	27:BK:88:ASN:C	2.22	0.41
28:BP:54:LEU:HA	28:BP:76:HIS:CD2	2.56	0.41
29:BE:1:MET:HB2	29:BE:16:GLU:CA	2.50	0.41
30:BY:12:ALA:HB2	30:BY:53:MET:CE	2.51	0.41
35:BV:62:THR:HG21	35:BV:71:LYS:NZ	2.35	0.41
37:BL:121:THR:HG22	37:BL:141:LYS:CB	2.50	0.41
38:BM:66:ARG:CZ	38:BM:101:VAL:HG11	2.50	0.41
39:BX:38:GLN:H	39:BX:38:GLN:HG2	1.79	0.41
40:BH:119:ASN:HB2	40:BH:120:GLY:H	1.62	0.41
41:BJ:59:ALA:O	41:BJ:62:VAL:HG12	2.19	0.41
41:BJ:106:LYS:HA	41:BJ:106:LYS:HD2	1.85	0.41
42:BN:83:LEU:HA	42:BN:86:ARG:CG	2.51	0.41
43:BO:37:ALA:CB	43:BO:78:VAL:HG21	2.51	0.41
44:BQ:63:ARG:H	44:BQ:63:ARG:HG3	1.64	0.41
47:BF:56:LEU:HD13	47:BF:56:LEU:O	2.21	0.41
47:BF:76:PHE:HD2	47:BF:78:ILE:CD1	2.31	0.41
47:BF:169:LEU:HB3	47:BF:174:PHE:CD1	2.55	0.41
1:CA:142:G:H2'	1:CA:143:A:O4'	2.19	0.41
1:CA:536:C:H2'	1:CA:537:G:C8	2.55	0.41
1:CA:658:C:H2'	1:CA:659:U:H6	1.85	0.41
1:CA:923:A:H2'	1:CA:924:C:H6	1.85	0.41
1:CA:924:C:H5'	1:CA:1399:C:OP2	2.20	0.41
1:CA:1382:C:H4'	6:CG:78:ARG:HH21	1.86	0.41
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.20	0.41
1:CA:1491:G:C5	55:CA:1662:PAR:H21	2.56	0.41
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.55	0.41
3:CD:16:THR:CG2	3:CD:17:ASP:N	2.84	0.41
5:CF:67:PRO:O	5:CF:71:ILE:HG22	2.20	0.41
6:CG:37:THR:O	6:CG:41:ILE:HG13	2.21	0.41
6:CG:77:ARG:HG3	6:CG:79:VAL:CG2	2.49	0.41
8:CI:35:GLU:HG3	8:CI:44:ARG:HD2	2.02	0.41
9:CJ:10:LEU:HD12	9:CJ:72:ARG:HB2	2.03	0.41
10:CK:50:GLY:O	10:CK:51:PHE:C	2.59	0.41
11:CL:20:VAL:HG12	11:CL:93:ARG:CB	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:88:ASP:C	11:CL:89:LEU:HD22	2.40	0.41
13:CN:40:ARG:O	13:CN:41:TRP:HE3	2.02	0.41
13:CN:88:MET:C	13:CN:90:GLY:H	2.22	0.41
14:CO:25:THR:CG2	14:CO:70:LEU:HD23	2.50	0.41
15:CP:40:ASN:HD21	15:CP:43:ALA:CA	2.33	0.41
17:CR:21:ASP:OD2	17:CR:23:LYS:HD2	2.20	0.41
23:DB:528:A:C2	23:DB:2043:C:H4'	2.55	0.41
23:DB:1060:U:C1'	23:DB:1062:G:H5'	2.51	0.41
23:DB:1205:A:N1	29:DE:165:HIS:HB2	2.35	0.41
23:DB:1419:A:N6	23:DB:1494:A:N1	2.59	0.41
23:DB:1541:C:O2'	23:DB:1542:U:H5'	2.20	0.41
23:DB:1885:A:H3'	23:DB:1886:U:H6	1.83	0.41
23:DB:2016:U:C4	23:DB:2017:U:C4	3.08	0.41
23:DB:2365:G:O6	34:D3:42:HIS:HE1	2.03	0.41
23:DB:2578:G:C6	26:DD:145:SER:HB2	2.55	0.41
23:DB:2651:C:O2'	23:DB:2652:C:H5'	2.21	0.41
23:DB:2886:A:N7	31:D0:39:ARG:NH2	2.63	0.41
24:DI:10:LEU:HD12	24:DI:10:LEU:C	2.40	0.41
25:DC:89:ASN:HD22	25:DC:89:ASN:HA	1.58	0.41
26:DD:159:LYS:HZ3	26:DD:159:LYS:HA	1.86	0.41
27:DK:119:ALA:HB3	27:DK:120:PRO:HD3	2.03	0.41
28:DP:50:ARG:HB2	28:DP:56:SER:CB	2.50	0.41
29:DE:3:LEU:O	29:DE:12:LEU:N	2.53	0.41
30:DY:51:SER:C	30:DY:53:MET:N	2.74	0.41
35:DV:77:VAL:HG23	35:DV:89:ILE:CG2	2.51	0.41
35:DV:78:GLN:N	35:DV:88:HIS:O	2.53	0.41
37:DL:77:ILE:CG2	37:DL:78:ARG:N	2.83	0.41
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	2.02	0.41
47:DF:29:ARG:HH11	47:DF:29:ARG:HB2	1.85	0.41
48:DG:7:PRO:O	48:DG:8:VAL:HB	2.20	0.41
48:DG:83:THR:O	48:DG:84:LYS:HD3	2.21	0.41
48:DG:118:ALA:O	48:DG:120:ILE:N	2.52	0.41
50:DT:72:GLN:H	50:DT:72:GLN:HG2	1.64	0.41
52:DW:24:ARG:HA	52:DW:66:VAL:N	2.16	0.41
1:AA:140:U:H2'	1:AA:141:G:H8	1.83	0.41
1:AA:565:U:H3'	1:AA:566:G:H2'	2.03	0.41
1:AA:1036:A:H2'	1:AA:1037:C:H6	1.83	0.41
1:AA:1048:G:OP1	13:AN:3:GLN:HB2	2.20	0.41
1:AA:1087:G:O2'	1:AA:1088:G:H5'	2.21	0.41
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.21	0.41
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:164:ARG:HG2	3:AD:164:ARG:NH1	2.35	0.41
4:AE:78:GLY:O	4:AE:119:VAL:HA	2.20	0.41
4:AE:111:ARG:O	4:AE:112:ALA:C	2.59	0.41
4:AE:136:VAL:HG13	4:AE:137:ARG:H	1.86	0.41
7:AH:91:LEU:HD12	7:AH:116:ARG:HB2	2.02	0.41
8:AI:46:VAL:HG23	8:AI:47:VAL:N	2.36	0.41
9:AJ:6:ILE:HG23	9:AJ:101:SER:O	2.20	0.41
13:AN:68:ARG:HB2	13:AN:79:SER:HB3	2.02	0.41
22:BA:18:G:H2'	22:BA:19:C:C6	2.55	0.41
22:BA:67:G:O2'	22:BA:68:C:H5'	2.19	0.41
23:BB:141:G:C6	50:BT:2:ILE:HG21	2.55	0.41
23:BB:634:C:H6	23:BB:634:C:O5'	2.04	0.41
23:BB:753:A:O2'	23:BB:754:U:H5'	2.20	0.41
23:BB:857:G:H5'	52:BW:68:PHE:CD1	2.56	0.41
23:BB:947:A:O2'	23:BB:984:A:H2	2.00	0.41
23:BB:1341:G:O4'	50:BT:61:LEU:HD23	2.21	0.41
23:BB:1431:A:O2'	23:BB:1432:G:H5'	2.21	0.41
23:BB:1723:G:C2'	23:BB:1724:G:H5'	2.51	0.41
23:BB:1729:U:C2'	23:BB:1730:C:H5'	2.51	0.41
23:BB:1854:A:H62	23:BB:1888:G:H8	1.67	0.41
23:BB:2020:A:O2'	23:BB:2021:C:H5'	2.21	0.41
23:BB:2391:G:P	34:B3:34:LYS:HZ3	2.44	0.41
23:BB:2419:U:O5'	34:B3:32:LEU:HD12	2.20	0.41
25:BC:120:ASP:O	25:BC:121:ALA:C	2.59	0.41
26:BD:136:ASN:OD1	26:BD:139:SER:HB3	2.20	0.41
27:BK:107:LEU:C	27:BK:109:SER:N	2.73	0.41
27:BK:116:ILE:H	27:BK:116:ILE:HG13	1.74	0.41
29:BE:34:ALA:CB	29:BE:96:VAL:HG21	2.51	0.41
29:BE:149:ILE:O	29:BE:188:MET:HA	2.20	0.41
35:BV:21:ARG:HE	35:BV:87:GLN:HB3	1.86	0.41
35:BV:89:ILE:HD13	35:BV:91:PHE:CZ	2.56	0.41
37:BL:90:VAL:HG23	37:BL:120:VAL:CG1	2.50	0.41
38:BM:63:ILE:HD12	38:BM:63:ILE:N	2.35	0.41
40:BH:106:ALA:C	40:BH:108:VAL:N	2.73	0.41
42:BN:55:ALA:HA	42:BN:80:PHE:CD1	2.55	0.41
46:BU:73:ASN:N	46:BU:73:ASN:HD22	2.18	0.41
47:BF:8:LYS:HD3	47:BF:9:ASP:OD2	2.21	0.41
47:BF:33:ILE:HG22	47:BF:34:THR:N	2.35	0.41
47:BF:43:ILE:O	47:BF:46:LYS:HE2	2.20	0.41
48:BG:50:THR:HG22	48:BG:51:PHE:N	2.36	0.41
48:BG:86:LEU:HD23	48:BG:163:TYR:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:32:THR:HA	49:BR:61:ALA:O	2.20	0.41
49:BR:39:LEU:HA	49:BR:49:ILE:HG21	2.03	0.41
50:BT:54:GLU:HG2	50:BT:90:GLY:HA3	2.02	0.41
50:BT:73:ARG:HB3	50:BT:73:ARG:HH21	1.86	0.41
53:B6:61:PRO:HD2	53:B6:65:THR:HG22	2.02	0.41
53:B6:110:ARG:O	53:B6:114:LEU:HB2	2.21	0.41
1:CA:260:G:O2'	1:CA:261:U:H5'	2.21	0.41
1:CA:290:C:O2'	1:CA:291:U:H5'	2.20	0.41
1:CA:377:G:O2'	1:CA:378:G:H5'	2.20	0.41
1:CA:481:G:H4'	1:CA:481:G:OP1	2.21	0.41
1:CA:502:A:C4'	1:CA:550:G:H4'	2.51	0.41
1:CA:765:G:C6	1:CA:812:G:C5	3.09	0.41
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.55	0.41
1:CA:1122:U:H2'	1:CA:1123:U:C6	2.55	0.41
1:CA:1236:A:C4'	1:CA:1304:G:H4'	2.44	0.41
1:CA:1307:U:H2'	1:CA:1308:U:H6	1.84	0.41
2:CC:9:ILE:O	2:CC:9:ILE:HG13	2.20	0.41
2:CC:50:SER:O	2:CC:114:LEU:HD21	2.20	0.41
2:CC:128:MET:SD	2:CC:128:MET:N	2.88	0.41
2:CC:149:LYS:HE2	2:CC:200:TRP:CZ3	2.55	0.41
4:CE:52:ALA:HB3	4:CE:58:ALA:N	2.36	0.41
4:CE:92:ARG:HB3	4:CE:92:ARG:HH11	1.85	0.41
4:CE:104:ILE:HG23	4:CE:104:ILE:O	2.21	0.41
4:CE:132:PRO:HG2	4:CE:133:ILE:H	1.86	0.41
4:CE:156:ARG:HB3	7:CH:42:GLU:O	2.21	0.41
6:CG:15:PRO:HG2	6:CG:16:LYS:H	1.85	0.41
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.21	0.41
9:CJ:65:TYR:OH	13:CN:84:ARG:HG3	2.21	0.41
10:CK:23:HIS:HB3	10:CK:30:ILE:HG12	2.02	0.41
10:CK:70:ALA:C	10:CK:72:ALA:N	2.73	0.41
18:CS:66:VAL:C	18:CS:68:HIS:H	2.24	0.41
19:CT:67:HIS:CD2	19:CT:68:LYS:H	2.39	0.41
19:CT:78:LEU:HD23	19:CT:78:LEU:HA	1.93	0.41
20:CB:94:ARG:N	20:CB:94:ARG:NE	2.69	0.41
22:DA:53:A:C2'	22:DA:54:G:H5'	2.51	0.41
22:DA:76:G:O2'	22:DA:77:U:H5'	2.21	0.41
23:DB:255:A:H2'	23:DB:256:A:O4'	2.21	0.41
23:DB:362:A:H3'	23:DB:363:G:C8	2.55	0.41
23:DB:569:U:H1'	23:DB:947:A:O4'	2.21	0.41
23:DB:710:U:O2'	23:DB:711:G:H5'	2.20	0.41
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1441:G:H4'	23:DB:1628:G:OP1	2.20	0.41
23:DB:1517:G:H2'	23:DB:1518:C:H6	1.86	0.41
23:DB:1854:A:H62	23:DB:1888:G:H8	1.67	0.41
23:DB:2211:A:C2'	23:DB:2212:A:OP1	2.68	0.41
23:DB:2349:G:OP2	34:D3:41:ARG:HD3	2.20	0.41
24:DI:68:PHE:N	24:DI:68:PHE:CD1	2.89	0.41
29:DE:171:ASP:CG	29:DE:172:ALA:N	2.74	0.41
33:D1:26:LYS:HB2	33:D1:52:LYS:HZ3	1.84	0.41
34:D3:21:PHE:O	34:D3:22:LYS:O	2.39	0.41
34:D3:30:HIS:O	34:D3:31:ILE:C	2.59	0.41
35:DV:4:ILE:HD11	35:DV:61:LEU:HB3	2.03	0.41
35:DV:9:ARG:HG2	35:DV:40:ILE:C	2.41	0.41
35:DV:53:LYS:HA	35:DV:53:LYS:HZ3	1.82	0.41
38:DM:72:PRO:O	38:DM:73:ILE:HB	2.21	0.41
42:DN:96:ARG:HH11	42:DN:116:VAL:HA	1.85	0.41
47:DF:34:THR:CG2	47:DF:89:THR:HG22	2.48	0.41
47:DF:102:LEU:O	47:DF:103:ILE:CB	2.69	0.41
48:DG:8:VAL:CG1	48:DG:49:LEU:HB2	2.40	0.41
48:DG:154:GLU:HB3	48:DG:158:GLY:H	1.84	0.41
51:DZ:14:THR:HA	51:DZ:28:ARG:CB	2.50	0.41
53:D6:84:ARG:HD2	53:D6:92:PRO:HD3	2.01	0.41
1:AA:134:G:H1'	1:AA:325:A:C5	2.56	0.41
1:AA:142:G:H2'	1:AA:143:A:O4'	2.20	0.41
1:AA:230:G:O2'	1:AA:231:U:H5'	2.20	0.41
1:AA:302:G:N3	1:AA:556:C:H4'	2.35	0.41
1:AA:903:G:H2'	1:AA:904:U:H6	1.86	0.41
1:AA:993:G:H21	1:AA:996:A:H62	1.69	0.41
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.85	0.41
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.86	0.41
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.21	0.41
1:AA:1250:A:H4'	8:AI:69:GLY:O	2.21	0.41
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.21	0.41
3:AD:80:ARG:NH1	3:AD:81:LEU:HD23	2.36	0.41
6:AG:19:SER:HB2	6:AG:21:LEU:CD2	2.51	0.41
6:AG:37:THR:O	6:AG:41:ILE:HG13	2.19	0.41
6:AG:41:ILE:CG2	6:AG:115:MET:HG3	2.49	0.41
6:AG:70:PRO:HA	6:AG:141:HIS:NE2	2.36	0.41
6:AG:148:LYS:HG3	6:AG:151:ALA:HB3	2.03	0.41
8:AI:43:ALA:C	8:AI:45:MET:H	2.24	0.41
11:AL:29:LYS:HB3	11:AL:56:LEU:HD22	2.01	0.41
16:AQ:45:VAL:HG11	16:AQ:60:ILE:CG2	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:23:GLU:HG3	18:AS:23:GLU:H	1.71	0.41
18:AS:40:PHE:HB2	18:AS:42:ASN:ND2	2.35	0.41
20:AB:127:LYS:NZ	20:AB:127:LYS:HB3	2.36	0.41
22:BA:28:C:C2'	22:BA:29:A:H5'	2.51	0.41
23:BB:162:U:OP1	23:BB:162:U:H6	2.03	0.41
23:BB:247:G:H4'	23:BB:386:G:C4	2.55	0.41
23:BB:528:A:H3'	23:BB:528:A:C8	2.56	0.41
23:BB:962:G:H21	23:BB:2250:G:N2	2.17	0.41
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.21	0.41
23:BB:1549:A:H2'	23:BB:1550:C:H6	1.86	0.41
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.21	0.41
23:BB:1653:G:O6	42:BN:11:ASN:ND2	2.54	0.41
23:BB:1818:U:HO2'	23:BB:1819:A:P	2.42	0.41
23:BB:1904:G:N3	23:BB:1928:A:H2	2.19	0.41
23:BB:1951:U:H2'	23:BB:1952:A:H3'	2.03	0.41
23:BB:2104:C:C3'	23:BB:2104:C:C6	3.04	0.41
23:BB:2352:A:H8	23:BB:2352:A:O5'	2.03	0.41
23:BB:2368:C:H2'	23:BB:2369:A:C8	2.56	0.41
23:BB:2708:G:H2'	23:BB:2709:G:C8	2.52	0.41
23:BB:2849:U:OP2	28:BP:92:ARG:HG3	2.21	0.41
24:BI:48:ILE:O	24:BI:49:GLU:HB3	2.21	0.41
25:BC:140:VAL:CG2	25:BC:163:ILE:HG12	2.51	0.41
25:BC:212:TRP:CD1	25:BC:212:TRP:C	2.93	0.41
27:BK:18:ARG:HB2	27:BK:45:GLU:CG	2.51	0.41
28:BP:61:ARG:HD3	28:BP:70:GLU:HG3	2.02	0.41
28:BP:80:VAL:CG1	28:BP:81:ASP:N	2.83	0.41
29:BE:83:VAL:HG12	29:BE:86:ALA:HA	2.03	0.41
31:B0:33:SER:C	31:B0:35:GLU:N	2.74	0.41
35:BV:49:ASN:N	35:BV:49:ASN:ND2	2.68	0.41
37:BL:90:VAL:HG23	37:BL:120:VAL:HG11	2.03	0.41
37:BL:116:VAL:CG1	37:BL:117:THR:H	2.23	0.41
38:BM:23:GLY:HA3	38:BM:66:ARG:NH1	2.36	0.41
38:BM:66:ARG:NE	38:BM:101:VAL:HG21	2.36	0.41
42:BN:69:ARG:H	42:BN:69:ARG:HD3	1.86	0.41
44:BQ:89:ILE:HB	44:BQ:90:ASP:H	1.73	0.41
50:BT:13:ALA:O	50:BT:32:LEU:HB2	2.20	0.41
50:BT:68:LYS:O	50:BT:69:ARG:CB	2.68	0.41
53:B6:4:LYS:HE2	53:B6:4:LYS:HB3	1.89	0.41
1:CA:9:G:OP1	4:CE:125:LYS:HD2	2.20	0.41
1:CA:86:G:H1'	1:CA:87:C:C6	2.56	0.41
1:CA:142:G:N3	1:CA:196:A:H2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:598:U:H2'	1:CA:599:C:H6	1.86	0.41
1:CA:903:G:H2'	1:CA:904:U:C6	2.56	0.41
1:CA:957:U:H2'	1:CA:959:A:OP2	2.20	0.41
1:CA:986:U:H2'	1:CA:987:G:C8	2.55	0.41
1:CA:1028:C:H3'	1:CA:1029:U:C5	2.56	0.41
1:CA:1225:A:OP1	12:CM:100:ARG:HA	2.21	0.41
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.35	0.41
1:CA:1458:G:O3'	19:CT:22:SER:HA	2.20	0.41
2:CC:149:LYS:HE3	2:CC:166:TRP:CH2	2.56	0.41
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	2.03	0.41
6:CG:145:GLU:CA	6:CG:148:LYS:HB2	2.45	0.41
9:CJ:9:ARG:HB2	9:CJ:99:GLN:CB	2.30	0.41
12:CM:38:ILE:HG13	12:CM:55:LEU:CD2	2.45	0.41
20:CB:98:GLY:HA2	20:CB:101:THR:HG22	2.03	0.41
22:DA:113:C:H2'	22:DA:114:C:H6	1.84	0.41
23:DB:150:U:O2'	23:DB:151:C:H5'	2.21	0.41
23:DB:162:U:H6	23:DB:162:U:OP1	2.04	0.41
23:DB:280:U:H6	23:DB:280:U:O5'	2.04	0.41
23:DB:346:A:N3	23:DB:346:A:H5'	2.36	0.41
23:DB:348:A:H2'	23:DB:349:U:C1'	2.51	0.41
23:DB:584:C:O2'	23:DB:585:G:H5'	2.21	0.41
23:DB:816:C:O2'	23:DB:817:C:H5'	2.21	0.41
23:DB:1237:A:H2'	23:DB:1237:A:N3	2.35	0.41
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.85	0.41
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.85	0.41
23:DB:1517:G:H2'	23:DB:1518:C:C6	2.56	0.41
23:DB:1635:A:C2'	23:DB:1636:U:H5'	2.50	0.41
23:DB:1670:C:H3'	23:DB:1671:U:H6	1.86	0.41
23:DB:1704:C:H2'	23:DB:1705:A:H8	1.85	0.41
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.20	0.41
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.20	0.41
23:DB:2038:G:H2'	23:DB:2039:U:H6	1.86	0.41
23:DB:2079:U:H2'	23:DB:2080:A:O4'	2.21	0.41
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.56	0.41
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.41
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.85	0.41
24:DI:46:ASP:HA	24:DI:50:LYS:HE2	2.03	0.41
24:DI:91:LYS:N	24:DI:91:LYS:HD2	2.35	0.41
25:DC:6:LYS:HA	25:DC:7:PRO:HD3	1.91	0.41
25:DC:63:ILE:HD13	25:DC:63:ILE:HA	1.90	0.41
25:DC:121:ALA:HB3	25:DC:129:LEU:HG	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:153:LEU:HD13	25:DC:175:LEU:CD2	2.50	0.41
25:DC:212:TRP:CD1	25:DC:212:TRP:C	2.94	0.41
26:DD:91:THR:HG23	26:DD:92:VAL:N	2.27	0.41
26:DD:146:ILE:HG13	26:DD:147:GLY:H	1.86	0.41
27:DK:76:VAL:HG12	27:DK:77:ILE:H	1.85	0.41
27:DK:97:THR:C	27:DK:98:ARG:HE	2.24	0.41
28:DP:59:THR:H	28:DP:72:VAL:HA	1.86	0.41
29:DE:42:GLY:O	29:DE:43:THR:O	2.39	0.41
29:DE:83:VAL:HG12	29:DE:86:ALA:HA	2.03	0.41
32:D4:2:LYS:CG	32:D4:4:ARG:HE	2.25	0.41
37:DL:61:LEU:HA	37:DL:62:PRO:HD3	1.95	0.41
37:DL:132:ARG:C	37:DL:135:ILE:HG22	2.41	0.41
39:DX:27:ASN:HA	39:DX:30:MET:HG2	2.01	0.41
40:DH:110:VAL:O	40:DH:110:VAL:HG13	2.21	0.41
43:DO:53:THR:HG23	43:DO:74:VAL:HG21	2.02	0.41
45:DS:8:ARG:HB3	45:DS:102:HIS:ND1	2.36	0.41
46:DU:26:ASN:HD22	46:DU:26:ASN:H	1.65	0.41
47:DF:47:LYS:HA	47:DF:50:ASP:OD2	2.20	0.41
48:DG:30:GLY:HA3	48:DG:78:VAL:CA	2.41	0.41
48:DG:47:ASN:CG	48:DG:48:THR:H	2.24	0.41
1:AA:51:A:C2	1:AA:353:A:N7	2.89	0.41
1:AA:66:A:H5'	1:AA:173:U:O4	2.21	0.41
1:AA:93:U:H3'	1:AA:94:G:C5'	2.48	0.41
1:AA:355:C:O2'	1:AA:356:A:H5'	2.21	0.41
1:AA:377:G:H2'	1:AA:378:G:C8	2.53	0.41
1:AA:499:A:H1'	1:AA:500:G:O4'	2.20	0.41
1:AA:692:U:O4	10:AK:53:GLY:HA2	2.20	0.41
1:AA:716:A:N3	10:AK:118:ASN:O	2.54	0.41
1:AA:734:G:H2'	1:AA:735:C:C6	2.56	0.41
1:AA:846:G:H2'	1:AA:847:G:C8	2.56	0.41
1:AA:1073:U:H2'	1:AA:1074:G:O4'	2.20	0.41
1:AA:1082:A:O2'	1:AA:1083:U:H5'	2.21	0.41
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.21	0.41
2:AC:40:GLN:HG3	2:AC:41:TYR:N	2.36	0.41
3:AD:19:PHE:HB3	3:AD:22:SER:OG	2.20	0.41
3:AD:123:MET:HG3	3:AD:127:ARG:C	2.42	0.41
3:AD:138:PRO:C	3:AD:140:ASP:H	2.24	0.41
4:AE:104:ILE:O	4:AE:104:ILE:HG23	2.20	0.41
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.21	0.41
6:AG:148:LYS:N	10:AK:55:ARG:NH2	2.69	0.41
8:AI:35:GLU:C	8:AI:37:TYR:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:90:PRO:C	10:AK:92:ARG:N	2.73	0.41
10:AK:115:ILE:HD12	10:AK:115:ILE:O	2.21	0.41
13:AN:1:ALA:HB1	13:AN:6:LYS:CE	2.51	0.41
14:AO:11:ILE:HG13	14:AO:15:PHE:CE1	2.56	0.41
14:AO:45:GLU:HB3	14:AO:46:HIS:HD1	1.85	0.41
14:AO:58:ARG:HH21	14:AO:62:GLN:HE22	1.67	0.41
15:AP:23:ASP:CG	15:AP:25:ARG:HE	2.23	0.41
16:AQ:60:ILE:CG2	16:AQ:74:LEU:HA	2.42	0.41
16:AQ:61:ARG:HD2	16:AQ:61:ARG:C	2.40	0.41
18:AS:18:VAL:O	18:AS:22:VAL:HG23	2.20	0.41
18:AS:40:PHE:O	18:AS:43:MET:HG3	2.21	0.41
18:AS:48:ILE:HG22	18:AS:49:ALA:N	2.29	0.41
19:AT:27:MET:HE2	19:AT:28:ARG:HG2	2.03	0.41
19:AT:66:ILE:HG23	19:AT:70:LYS:CB	2.45	0.41
19:AT:70:LYS:HA	19:AT:73:ARG:CZ	2.51	0.41
20:AB:16:GLY:HA2	20:AB:40:ILE:CD1	2.51	0.41
20:AB:53:LEU:CD1	20:AB:216:VAL:HG12	2.41	0.41
20:AB:65:LYS:O	20:AB:157:PRO:HB2	2.20	0.41
21:AU:19:LYS:CD	21:AU:20:ARG:HH21	2.34	0.41
22:BA:46:A:H2'	22:BA:47:C:C6	2.56	0.41
23:BB:30:G:H4'	23:BB:1215:G:H5'	2.02	0.41
23:BB:122:G:O2'	23:BB:123:G:H5'	2.21	0.41
23:BB:268:C:O2	23:BB:268:C:H2'	2.21	0.41
23:BB:337:C:H2'	23:BB:338:G:O4'	2.20	0.41
23:BB:372:G:O2'	23:BB:373:U:P	2.78	0.41
23:BB:428:A:H2'	23:BB:429:A:O4'	2.21	0.41
23:BB:510:C:H2'	23:BB:511:U:O4'	2.20	0.41
23:BB:674:G:H4'	29:BE:69:ARG:HB3	2.03	0.41
23:BB:720:U:HO2'	23:BB:721:A:H5'	1.85	0.41
23:BB:779:U:O2'	23:BB:780:G:H5'	2.20	0.41
23:BB:783:A:H4'	23:BB:1779:U:O2	2.21	0.41
23:BB:832:U:P	37:BL:38:GLN:H	2.43	0.41
23:BB:971:G:H2'	23:BB:972:A:O4'	2.20	0.41
23:BB:1009:A:P	41:BJ:39:LYS:HZ2	2.44	0.41
23:BB:1027:A:N3	23:BB:2488:G:H5"	2.36	0.41
23:BB:1056:G:H4'	23:BB:1086:A:H8	1.85	0.41
23:BB:1141:U:H5"	41:BJ:27:ARG:HH21	1.85	0.41
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.85	0.41
23:BB:1670:C:H3'	23:BB:1671:U:H6	1.86	0.41
23:BB:1676:A:C2	23:BB:1677:A:H1'	2.55	0.41
23:BB:1739:A:H2'	23:BB:1740:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1806:C:C2'	23:BB:1807:G:H5'	2.51	0.41
23:BB:1843:C:O2'	23:BB:1844:C:H5'	2.20	0.41
23:BB:1885:A:H3'	23:BB:1886:U:H6	1.84	0.41
23:BB:1904:G:O2'	23:BB:1905:C:H5'	2.21	0.41
23:BB:1930:G:H2'	23:BB:1968:G:N1	2.35	0.41
23:BB:2292:U:O2'	23:BB:2293:G:H5'	2.21	0.41
23:BB:2317:A:H2'	23:BB:2318:G:O4'	2.20	0.41
23:BB:2346:A:O4'	23:BB:2383:G:O4'	2.38	0.41
23:BB:2582:G:O2'	23:BB:2583:G:H5'	2.20	0.41
23:BB:2603:G:O2'	23:BB:2604:U:H5'	2.21	0.41
23:BB:2674:G:H2'	23:BB:2675:A:C8	2.56	0.41
23:BB:2730:C:O2'	23:BB:2731:G:H5'	2.21	0.41
23:BB:2848:G:N3	23:BB:2849:U:H5	2.19	0.41
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.86	0.41
25:BC:29:PHE:CE2	25:BC:31:PRO:HG2	2.55	0.41
25:BC:76:VAL:O	25:BC:93:VAL:O	2.38	0.41
25:BC:109:LEU:O	25:BC:110:LYS:C	2.59	0.41
25:BC:123:ILE:HD13	25:BC:135:PRO:HD2	2.03	0.41
27:BK:88:ASN:ND2	27:BK:89:ASN:N	2.69	0.41
28:BP:23:ASP:O	28:BP:46:VAL:HG22	2.21	0.41
28:BP:33:GLU:HA	28:BP:33:GLU:OE1	2.20	0.41
31:B0:56:LYS:O	31:B0:56:LYS:HD3	2.20	0.41
33:B1:8:ILE:HA	33:B1:8:ILE:HD13	1.87	0.41
33:B1:22:THR:OG1	33:B1:23:THR:N	2.53	0.41
34:B3:6:VAL:HG23	34:B3:60:CYS:O	2.20	0.41
34:B3:57:VAL:C	34:B3:59:ALA:H	2.23	0.41
35:BV:30:ILE:HG13	35:BV:40:ILE:HD11	2.03	0.41
36:B2:31:LEU:O	36:B2:34:ARG:N	2.54	0.41
37:BL:77:ILE:HG22	37:BL:78:ARG:N	2.36	0.41
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.51	0.41
39:BX:5:GLU:OE2	39:BX:5:GLU:HA	2.21	0.41
40:BH:68:ARG:H	40:BH:68:ARG:HG2	1.60	0.41
40:BH:80:ILE:O	40:BH:146:VAL:HG22	2.21	0.41
40:BH:81:ALA:HB1	40:BH:147:VAL:HG23	2.03	0.41
41:BJ:72:LYS:CG	41:BJ:89:PHE:HB2	2.51	0.41
42:BN:13:ASN:C	42:BN:15:SER:H	2.24	0.41
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.21	0.41
44:BQ:63:ARG:NH2	44:BQ:96:ASP:CA	2.82	0.41
45:BS:25:ARG:CZ	45:BS:74:ILE:HG23	2.51	0.41
45:BS:61:ASN:HB3	45:BS:62:ASP:H	1.45	0.41
47:BF:19:PHE:CZ	47:BF:164:GLU:HG2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:38:GLY:HA2	47:BF:85:GLY:HA3	2.03	0.41
48:BG:26:LYS:HA	48:BG:32:LEU:N	2.34	0.41
48:BG:71:LEU:HD13	48:BG:74:MET:SD	2.61	0.41
50:BT:69:ARG:HH11	50:BT:69:ARG:CB	2.34	0.41
51:BZ:20:HIS:O	51:BZ:21:ALA:HB3	2.21	0.41
51:BZ:63:GLY:HA3	51:BZ:66:THR:OG1	2.21	0.41
52:BW:28:GLU:O	52:BW:30:VAL:N	2.54	0.41
52:BW:43:LYS:HD2	52:BW:79:ILE:CD1	2.42	0.41
53:B6:30:THR:C	53:B6:32:ARG:N	2.73	0.41
53:B6:57:THR:HG22	53:B6:58:VAL:N	2.35	0.41
53:B6:64:ARG:HD3	53:B6:104:PRO:HA	2.03	0.41
1:CA:384:G:H2'	1:CA:385:C:H6	1.85	0.41
1:CA:599:C:O2'	1:CA:600:A:H5'	2.20	0.41
1:CA:927:G:OP2	1:CA:1503:A:C4	2.74	0.41
1:CA:1009:U:H1'	1:CA:1021:A:N1	2.35	0.41
1:CA:1065:U:H1'	1:CA:1066:C:OP2	2.20	0.41
1:CA:1077:G:N1	1:CA:1081:A:C6	2.89	0.41
1:CA:1099:G:OP1	20:CB:94:ARG:HD3	2.21	0.41
1:CA:1459:G:O2'	1:CA:1460:C:H5'	2.21	0.41
2:CC:10:ARG:NH2	2:CC:181:ILE:HD13	2.35	0.41
4:CE:33:THR:HB	4:CE:49:TYR:CZ	2.56	0.41
10:CK:17:ASP:HB3	10:CK:80:ASN:CG	2.41	0.41
12:CM:79:LEU:HA	12:CM:82:LEU:HB2	2.02	0.41
13:CN:79:SER:HG	13:CN:82:LYS:HG2	1.85	0.41
13:CN:88:MET:HA	13:CN:88:MET:HE2	2.03	0.41
14:CO:45:GLU:O	14:CO:47:LYS:N	2.52	0.41
15:CP:1:MET:HA	15:CP:1:MET:HE3	2.03	0.41
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	2.03	0.41
16:CQ:62:GLU:HB2	16:CQ:72:TRP:CE2	2.56	0.41
16:CQ:67:SER:O	16:CQ:68:LYS:C	2.58	0.41
18:CS:5:LYS:HB2	18:CS:6:LYS:H	1.61	0.41
21:CU:3:ILE:CD1	21:CU:19:LYS:HA	2.46	0.41
23:DB:4:U:O2'	23:DB:5:A:H5'	2.21	0.41
23:DB:10:A:N6	23:DB:2895:G:H1'	2.35	0.41
23:DB:20:C:O2'	23:DB:21:A:H5'	2.21	0.41
23:DB:98:G:C3'	23:DB:99:U:H5"	2.51	0.41
23:DB:146:A:H2'	23:DB:147:C:C6	2.56	0.41
23:DB:279:A:N6	23:DB:361:G:O2'	2.44	0.41
23:DB:490:C:H3'	23:DB:491:G:H5"	2.03	0.41
23:DB:591:U:H1'	34:D3:1:PRO:H3	1.84	0.41
23:DB:814:C:H2'	23:DB:815:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:825:A:O2'	37:DL:54:GLN:HB3	2.21	0.41
23:DB:850:U:O2	30:DY:46:MET:HE3	2.21	0.41
23:DB:958:U:H3	38:DM:16:ARG:HB3	1.86	0.41
23:DB:963:U:H2'	23:DB:964:C:C6	2.56	0.41
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.86	0.41
23:DB:1068:G:C6	23:DB:1069:A:N6	2.89	0.41
23:DB:1317:G:H2'	23:DB:1318:U:C6	2.56	0.41
23:DB:1365:A:O3'	51:DZ:11:ARG:NH1	2.54	0.41
23:DB:1426:G:H8	23:DB:1426:G:OP2	2.04	0.41
23:DB:1435:G:H2'	23:DB:1436:G:C8	2.56	0.41
23:DB:1459:G:H8	23:DB:1459:G:P	2.44	0.41
23:DB:1795:C:O2'	23:DB:1796:U:H5'	2.21	0.41
23:DB:1883:U:H2'	23:DB:1884:G:C1'	2.51	0.41
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.20	0.41
23:DB:1924:C:H2'	23:DB:1925:C:C6	2.55	0.41
23:DB:2020:A:C2	23:DB:2022:U:O4'	2.74	0.41
23:DB:2028:U:H2'	23:DB:2029:G:O4'	2.20	0.41
23:DB:2146:C:H4'	23:DB:2148:G:H1'	2.01	0.41
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.56	0.41
23:DB:2301:C:H2'	23:DB:2302:U:H6	1.86	0.41
23:DB:2444:G:P	29:DE:63:LYS:HD2	2.60	0.41
23:DB:2468:A:H2'	23:DB:2476:A:C5	2.56	0.41
23:DB:2552:U:C2	23:DB:2554:U:H5'	2.56	0.41
23:DB:2568:U:H6	23:DB:2568:U:O5'	2.04	0.41
23:DB:2673:G:H2'	23:DB:2674:G:H8	1.85	0.41
23:DB:2751:G:H4'	48:DG:3:VAL:CG1	2.51	0.41
24:DI:14:ALA:HB3	24:DI:51:GLY:H	1.86	0.41
25:DC:86:ARG:HB3	25:DC:86:ARG:HH11	1.85	0.41
26:DD:4:LEU:HD22	26:DD:4:LEU:N	2.35	0.41
26:DD:35:THR:OG1	26:DD:49:GLN:HG2	2.20	0.41
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.41	0.41
26:DD:172:VAL:HG11	26:DD:175:LEU:HD11	2.03	0.41
27:DK:47:ILE:HG23	27:DK:48:PRO:N	2.34	0.41
27:DK:54:LYS:C	27:DK:56:ASP:H	2.24	0.41
28:DP:5:LYS:O	28:DP:9:GLN:HG2	2.21	0.41
28:DP:48:ALA:HB3	28:DP:59:THR:CB	2.50	0.41
32:D4:8:LYS:O	32:D4:35:GLN:NE2	2.51	0.41
33:D1:37:LYS:HB2	33:D1:48:TYR:CD2	2.55	0.41
34:D3:16:THR:HG21	34:D3:48:MET:CE	2.51	0.41
35:DV:24:ASN:O	35:DV:44:HIS:HB2	2.21	0.41
35:DV:50:MET:O	35:DV:56:PHE:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:57:LEU:C	37:DL:59:ARG:N	2.74	0.41
37:DL:77:ILE:HG22	37:DL:78:ARG:N	2.34	0.41
37:DL:90:VAL:HG23	37:DL:120:VAL:HG11	2.03	0.41
37:DL:136:GLU:HA	37:DL:140:GLY:N	2.35	0.41
38:DM:71:LYS:HA	38:DM:72:PRO:HD3	1.90	0.41
38:DM:124:LEU:HA	38:DM:125:PRO:HD3	1.89	0.41
39:DX:20:ASN:HA	39:DX:24:GLU:OE1	2.21	0.41
39:DX:59:GLU:CD	39:DX:60:LYS:H	2.24	0.41
40:DH:117:LEU:HA	40:DH:118:PRO:HD3	1.96	0.41
43:DO:30:ARG:HH11	43:DO:30:ARG:HG3	1.85	0.41
44:DQ:94:LEU:HG	49:DR:11:GLN:HE21	1.86	0.41
44:DQ:107:ALA:HB1	49:DR:48:LYS:CE	2.48	0.41
45:DS:95:ARG:O	45:DS:96:ILE:HG22	2.20	0.41
46:DU:5:ARG:HH22	46:DU:93:ARG:HD3	1.86	0.41
46:DU:71:ILE:HD11	46:DU:81:ARG:O	2.21	0.41
47:DF:48:LEU:HD23	47:DF:48:LEU:N	2.36	0.41
47:DF:51:ASN:HD22	47:DF:51:ASN:HA	1.66	0.41
47:DF:119:LYS:N	47:DF:119:LYS:HD2	2.36	0.41
47:DF:134:GLN:HE21	47:DF:134:GLN:HB3	1.53	0.41
47:DF:135:ILE:CD1	47:DF:137:PHE:HB3	2.51	0.41
47:DF:168:LEU:O	47:DF:169:LEU:CB	2.66	0.41
48:DG:10:VAL:CG1	48:DG:14:VAL:HG21	2.51	0.41
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.51	0.41
49:DR:81:LYS:HA	49:DR:81:LYS:HD3	1.84	0.41
50:DT:5:GLU:HA	50:DT:8:LEU:HD12	2.02	0.41
50:DT:50:LEU:O	50:DT:52:GLU:N	2.45	0.41
51:DZ:36:HIS:CG	51:DZ:37:ARG:N	2.89	0.41
51:DZ:68:LEU:O	51:DZ:72:ARG:HG2	2.20	0.41
52:DW:18:LYS:O	52:DW:34:SER:HA	2.20	0.41
52:DW:77:LYS:NZ	52:DW:77:LYS:N	2.62	0.41
53:D6:43:VAL:HG22	53:D6:82:ALA:HB3	2.02	0.41
1:AA:51:A:H4'	1:AA:52:C:H5'	2.03	0.41
1:AA:103:U:H1'	1:AA:171:A:N1	2.36	0.41
1:AA:123:U:H5"	1:AA:311:C:O2'	2.21	0.41
1:AA:167:A:O2'	1:AA:168:G:H5'	2.21	0.41
1:AA:173:U:H5	1:AA:198:G:N3	2.19	0.41
1:AA:884:U:H4'	1:AA:885:G:H5"	2.03	0.41
1:AA:1003:G:H21	1:AA:1005:A:H5'	1.86	0.41
1:AA:1030:U:O2	1:AA:1030:U:C2'	2.69	0.41
1:AA:1204:A:H2'	1:AA:1205:U:O4'	2.21	0.41
1:AA:1271:A:O2'	1:AA:1272:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1367:C:O2'	1:AA:1368:A:H5'	2.20	0.41
1:AA:1422:G:H5'	27:BK:48:PRO:HB3	2.03	0.41
2:AC:89:VAL:HG12	2:AC:93:ILE:HD11	2.03	0.41
7:AH:35:ILE:HG13	7:AH:35:ILE:H	1.70	0.41
10:AK:124:LYS:CA	21:AU:34:ARG:HB3	2.26	0.41
11:AL:21:PRO:HG2	11:AL:94:TYR:OH	2.20	0.41
11:AL:49:ARG:HH12	11:AL:88:ASP:CB	2.33	0.41
11:AL:107:LYS:C	11:AL:109:ARG:H	2.23	0.41
18:AS:20:LYS:O	18:AS:20:LYS:HD2	2.21	0.41
21:AU:36:PHE:O	21:AU:39:LYS:HE3	2.21	0.41
22:BA:24:G:C2	22:BA:28:C:C5	3.09	0.41
23:BB:93:G:O2'	23:BB:94:A:H5'	2.21	0.41
23:BB:125:A:C6	36:B2:10:LEU:HD23	2.56	0.41
23:BB:228:C:O2	23:BB:418:C:H4'	2.21	0.41
23:BB:388:G:N7	23:BB:390:U:H2'	2.36	0.41
23:BB:437:U:H2'	23:BB:438:G:H8	1.85	0.41
23:BB:580:U:O2'	23:BB:581:C:H5'	2.21	0.41
23:BB:636:G:H4'	23:BB:638:G:O3'	2.21	0.41
23:BB:804:A:H5"	23:BB:805:G:OP1	2.21	0.41
23:BB:852:U:H2'	23:BB:853:C:H6	1.86	0.41
23:BB:1104:C:O2'	23:BB:1105:U:H5'	2.20	0.41
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.36	0.41
23:BB:1880:U:H2'	23:BB:1881:C:C6	2.56	0.41
23:BB:2010:G:O2'	23:BB:2011:U:H5'	2.20	0.41
23:BB:2595:G:N1	23:BB:2599:G:C6	2.89	0.41
23:BB:2696:U:O2'	23:BB:2697:G:H5'	2.21	0.41
25:BC:93:VAL:CG2	25:BC:115:ILE:HD11	2.50	0.41
25:BC:117:SER:HA	25:BC:128:THR:O	2.20	0.41
27:BK:70:ARG:HB3	27:BK:70:ARG:HH11	1.85	0.41
29:BE:191:ASP:O	29:BE:194:LYS:HB3	2.21	0.41
30:BY:16:LEU:HD22	30:BY:16:LEU:N	2.17	0.41
35:BV:31:TYR:CB	35:BV:37:PRO:HG3	2.50	0.41
37:BL:40:SER:OG	37:BL:41:ARG:HG3	2.21	0.41
37:BL:101:ILE:HG22	37:BL:102:GLY:N	2.35	0.41
40:BH:84:ALA:HB3	40:BH:148:ALA:HB2	2.02	0.41
40:BH:116:ARG:HD3	40:BH:133:GLN:HB2	2.03	0.41
41:BJ:121:LYS:HB2	41:BJ:121:LYS:HE3	1.97	0.41
42:BN:6:SER:OG	42:BN:7:GLY:N	2.54	0.41
42:BN:79:LEU:HA	42:BN:83:LEU:HD12	2.02	0.41
42:BN:100:CYS:SG	42:BN:101:GLY:N	2.94	0.41
43:BO:14:ALA:C	43:BO:16:ARG:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:95:ARG:O	45:BS:96:ILE:HG22	2.21	0.41
47:BF:27:VAL:O	47:BF:27:VAL:HG23	2.21	0.41
47:BF:42:ALA:O	47:BF:45:ASP:N	2.53	0.41
47:BF:48:LEU:HD23	47:BF:48:LEU:N	2.36	0.41
48:BG:7:PRO:O	48:BG:8:VAL:HB	2.20	0.41
48:BG:8:VAL:CG1	48:BG:49:LEU:HB2	2.45	0.41
48:BG:15:ASP:HA	48:BG:26:LYS:NZ	2.36	0.41
48:BG:91:VAL:HG23	48:BG:92:GLY:N	2.35	0.41
48:BG:148:ARG:HD3	48:BG:152:ARG:CD	2.51	0.41
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.21	0.41
51:BZ:36:HIS:CG	51:BZ:37:ARG:N	2.89	0.41
52:BW:42:THR:O	52:BW:43:LYS:HE3	2.21	0.41
52:BW:49:ASN:HB2	52:BW:60:ALA:CA	2.45	0.41
52:BW:64:GLY:HA2	52:BW:84:GLU:HG2	2.02	0.41
53:B6:130:ARG:HH11	53:B6:130:ARG:HG3	1.86	0.41
53:B6:137:LEU:HD11	53:B6:158:GLU:CD	2.42	0.41
1:CA:373:A:H1'	1:CA:481:G:H1'	2.03	0.41
1:CA:628:G:H2'	1:CA:629:A:H8	1.86	0.41
1:CA:865:A:H2	1:CA:918:A:H4'	1.85	0.41
1:CA:954:G:H2'	1:CA:955:U:C6	2.55	0.41
1:CA:1023:U:O2'	1:CA:1024:G:H5'	2.21	0.41
1:CA:1118:U:H1'	1:CA:1179:A:C4	2.56	0.41
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.20	0.41
1:CA:1342:C:O2'	1:CA:1343:G:H5'	2.22	0.41
2:CC:155:ARG:HD2	2:CC:155:ARG:HA	1.88	0.41
3:CD:90:LEU:H	3:CD:90:LEU:HD22	1.86	0.41
4:CE:148:SER:OG	4:CE:151:MET:HB2	2.21	0.41
5:CF:10:VAL:HG12	5:CF:11:HIS:H	1.86	0.41
7:CH:45:ILE:HD13	7:CH:60:LEU:HD11	2.03	0.41
9:CJ:52:LEU:CA	9:CJ:62:ARG:HA	2.44	0.41
9:CJ:65:TYR:C	13:CN:98:ALA:HB2	2.41	0.41
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.56	0.41
20:CB:27:LYS:HD2	20:CB:27:LYS:C	2.40	0.41
20:CB:119:GLN:CD	20:CB:136:ARG:HH11	2.25	0.41
20:CB:161:PHE:CZ	20:CB:216:VAL:HG11	2.56	0.41
23:DB:121:G:H2'	23:DB:122:G:H8	1.86	0.41
23:DB:346:A:H3'	23:DB:347:A:H8	1.86	0.41
23:DB:360:U:H2'	23:DB:361:G:N9	2.35	0.41
23:DB:440:C:H2'	23:DB:441:U:H6	1.86	0.41
23:DB:510:C:H2'	23:DB:511:U:O4'	2.21	0.41
23:DB:543:G:H2'	23:DB:545:U:OP1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:599:A:O2'	23:DB:600:G:H5'	2.20	0.41
23:DB:747:U:OP2	45:DS:90:LYS:NZ	2.54	0.41
23:DB:862:G:H2'	23:DB:863:A:C8	2.56	0.41
23:DB:988:A:P	30:DY:11:SER:HB3	2.60	0.41
23:DB:1005:C:H1'	23:DB:1012:U:C4	2.55	0.41
23:DB:1053:C:C2'	23:DB:1054:A:H5'	2.50	0.41
23:DB:1099:G:C4'	24:DI:4:VAL:HB	2.51	0.41
23:DB:1228:G:H2'	23:DB:1229:C:C6	2.56	0.41
23:DB:1360:G:H2'	23:DB:1361:G:C5'	2.51	0.41
23:DB:1430:G:O2'	23:DB:1431:A:H5'	2.21	0.41
23:DB:1729:U:H2'	23:DB:1730:C:H5'	2.03	0.41
23:DB:1819:A:OP1	25:DC:154:ALA:HA	2.20	0.41
23:DB:1824:G:OP2	25:DC:52:HIS:CE1	2.74	0.41
23:DB:2544:G:O2'	23:DB:2545:G:H5'	2.21	0.41
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.84	0.41
24:DI:53:PRO:HG2	24:DI:77:VAL:HG11	2.01	0.41
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.47	0.41
25:DC:94:LEU:CD1	25:DC:100:ARG:HD3	2.46	0.41
25:DC:109:LEU:O	25:DC:110:LYS:C	2.59	0.41
25:DC:251:THR:O	25:DC:252:LYS:HD2	2.20	0.41
26:DD:40:LEU:HA	26:DD:45:TYR:N	2.36	0.41
26:DD:127:PHE:HB3	26:DD:128:ARG:H	1.70	0.41
26:DD:186:LEU:HD11	28:DP:3:ILE:CG1	2.45	0.41
27:DK:2:ILE:HA	27:DK:33:ALA:H	1.86	0.41
27:DK:34:GLY:O	27:DK:36:GLY:N	2.53	0.41
28:DP:44:GLY:HA3	28:DP:60:VAL:CG1	2.51	0.41
29:DE:69:ARG:HH11	29:DE:69:ARG:HG2	1.86	0.41
37:DL:29:LYS:CG	37:DL:30:THR:HG23	2.42	0.41
46:DU:25:LYS:CE	46:DU:36:GLU:HG3	2.49	0.41
47:DF:61:GLY:HA3	47:DF:94:ARG:HD2	2.03	0.41
51:DZ:31:PRO:HB2	51:DZ:33:LEU:CD1	2.44	0.41
53:D6:150:SER:HB3	53:D6:153:GLU:OE1	2.20	0.41
1:AA:309:A:H2'	1:AA:310:G:H8	1.87	0.40
1:AA:333:U:H2'	1:AA:334:C:C6	2.56	0.40
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.21	0.40
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.36	0.40
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.55	0.40
1:AA:1491:G:C5	55:AA:1661:PAR:H21	2.56	0.40
6:AG:120:ALA:HA	6:AG:123:LEU:HD12	2.02	0.40
8:AI:9:GLY:HA3	8:AI:81:GLY:H	1.84	0.40
9:AJ:31:ARG:HE	9:AJ:31:ARG:HB2	1.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.47	0.40
14:AO:89:ARG:HH22	23:BB:716:A:P	2.44	0.40
15:AP:51:ARG:NH1	15:AP:51:ARG:HG2	2.36	0.40
18:AS:11:ASP:N	18:AS:14:LEU:HD21	2.35	0.40
20:AB:35:ASN:HD22	20:AB:35:ASN:HA	1.53	0.40
22:BA:49:C:OP1	43:BO:102:ARG:N	2.45	0.40
23:BB:237:C:O2'	23:BB:238:C:H5'	2.21	0.40
23:BB:282:A:O2'	23:BB:283:G:H5'	2.21	0.40
23:BB:329:G:H1	46:BU:16:LYS:HZ3	1.69	0.40
23:BB:338:G:N2	23:BB:339:U:H1'	2.36	0.40
23:BB:839:U:H1'	23:BB:1191:G:H1'	2.04	0.40
23:BB:871:U:H2'	23:BB:872:U:C6	2.54	0.40
23:BB:996:A:O2'	23:BB:997:G:H5'	2.20	0.40
23:BB:1040:A:C2	23:BB:1116:G:N1	2.90	0.40
23:BB:1292:G:H2'	23:BB:1293:C:H6	1.83	0.40
23:BB:1360:G:H2'	23:BB:1361:G:H5'	2.03	0.40
23:BB:1454:C:O2	23:BB:1454:C:O4'	2.39	0.40
23:BB:1508:A:H5'	23:BB:1509:A:N6	2.36	0.40
23:BB:1914:C:H2'	23:BB:1915:U:O4'	2.21	0.40
23:BB:1993:U:H4'	26:BD:133:THR:HG21	2.01	0.40
23:BB:2001:C:H4'	23:BB:2689:U:C2'	2.51	0.40
23:BB:2277:G:O3'	38:BM:11:LYS:HE3	2.21	0.40
23:BB:2306:C:H6	23:BB:2306:C:O5'	2.04	0.40
23:BB:2320:U:O2'	23:BB:2322:A:N7	2.48	0.40
23:BB:2366:A:H4'	52:BW:61:LYS:HE2	2.02	0.40
23:BB:2818:U:H4'	23:BB:2837:A:H4'	2.02	0.40
25:BC:166:ARG:HA	25:BC:171:VAL:HA	2.03	0.40
27:BK:73:ASP:OD2	27:BK:75:SER:HB3	2.21	0.40
28:BP:61:ARG:NH1	28:BP:100:ARG:HA	2.35	0.40
28:BP:105:LYS:HA	28:BP:108:ARG:NE	2.35	0.40
30:BY:51:SER:C	30:BY:53:MET:N	2.74	0.40
33:B1:51:ALA:O	33:B1:52:LYS:C	2.60	0.40
34:B3:60:CYS:C	34:B3:61:LEU:HD23	2.41	0.40
35:BV:1:MET:CE	35:BV:2:PHE:H	2.35	0.40
38:BM:69:PRO:HA	38:BM:94:ALA:HA	2.02	0.40
42:BN:3:HIS:O	42:BN:4:ARG:HB2	2.22	0.40
42:BN:28:LEU:C	42:BN:28:LEU:HD13	2.42	0.40
42:BN:33:ILE:CG2	42:BN:114:GLU:HB2	2.45	0.40
44:BQ:79:ILE:HG23	44:BQ:80:ASN:N	2.36	0.40
46:BU:60:LYS:HE2	46:BU:60:LYS:HA	2.02	0.40
47:BF:120:SER:O	47:BF:127:TYR:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:137:PHE:O	47:BF:138:PRO:C	2.58	0.40
52:BW:77:LYS:NZ	52:BW:77:LYS:N	2.67	0.40
53:B6:2:THR:H	53:B6:5:GLU:CD	2.23	0.40
53:B6:66:LEU:O	53:B6:101:ILE:N	2.45	0.40
53:B6:164:ILE:O	53:B6:167:GLU:HB2	2.21	0.40
1:CA:704:A:C2	1:CA:705:G:H1'	2.56	0.40
1:CA:781:A:H2'	1:CA:782:A:C5'	2.48	0.40
1:CA:815:A:OP2	1:CA:816:A:H5"	2.21	0.40
1:CA:926:G:H3'	1:CA:1505:G:N2	2.36	0.40
1:CA:1120:C:H2'	1:CA:1121:U:C6	2.56	0.40
1:CA:1258:G:C2	1:CA:1278:G:N2	2.90	0.40
1:CA:1418:A:H2	23:DB:1948:G:N3	2.19	0.40
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.56	0.40
2:CC:153:SER:OG	2:CC:196:GLY:N	2.54	0.40
3:CD:106:PHE:CG	3:CD:144:ILE:HD11	2.56	0.40
5:CF:39:LEU:HD13	5:CF:40:GLU:N	2.35	0.40
6:CG:67:ASN:ND2	6:CG:127:ALA:HA	2.36	0.40
9:CJ:7:ARG:CZ	9:CJ:101:SER:HB2	2.51	0.40
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	2.03	0.40
10:CK:16:SER:HB3	10:CK:79:LYS:CG	2.52	0.40
11:CL:14:LYS:HG2	11:CL:16:ALA:H	1.86	0.40
14:CO:26:GLU:OE2	14:CO:77:ARG:HD2	2.22	0.40
15:CP:20:VAL:HG21	15:CP:32:PHE:CG	2.56	0.40
18:CS:50:VAL:HG22	18:CS:70:LEU:HD23	2.03	0.40
20:CB:65:LYS:O	20:CB:157:PRO:HB2	2.20	0.40
23:DB:9:G:H21	23:DB:10:A:N6	2.07	0.40
23:DB:509:C:H5"	23:DB:510:C:OP2	2.20	0.40
23:DB:637:A:OP2	37:DL:128:THR:HG21	2.21	0.40
23:DB:1027:A:N3	23:DB:2488:G:H5"	2.36	0.40
23:DB:1112:G:H2'	23:DB:1113:U:O4'	2.21	0.40
23:DB:1243:C:O2'	37:DL:4:ASN:O	2.37	0.40
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.21	0.40
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	2.03	0.40
23:DB:1396:U:O2	23:DB:1396:U:O4'	2.39	0.40
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.55	0.40
23:DB:1818:U:C4	25:DC:152:GLN:HB3	2.56	0.40
23:DB:2210:U:C4	23:DB:2212:A:N7	2.89	0.40
23:DB:2298:A:H2'	23:DB:2299:U:O4'	2.20	0.40
23:DB:2301:C:O2'	23:DB:2302:U:H5'	2.21	0.40
23:DB:2494:G:O2'	38:DM:79:ALA:HA	2.20	0.40
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2621:G:OP1	26:DD:124:ARG:NH2	2.54	0.40
23:DB:2727:A:O2'	23:DB:2728:U:H5'	2.21	0.40
23:DB:2856:A:H2'	23:DB:2857:G:H8	1.87	0.40
23:DB:2884:U:H4'	31:D0:49:ARG:NH2	2.36	0.40
24:DI:56:VAL:CG2	24:DI:68:PHE:HB2	2.51	0.40
25:DC:145:MET:CE	25:DC:153:LEU:HD11	2.51	0.40
25:DC:259:ASN:OD1	25:DC:262:THR:HG23	2.21	0.40
27:DK:111:LYS:HD3	27:DK:111:LYS:N	2.36	0.40
29:DE:1:MET:HB2	29:DE:16:GLU:CA	2.50	0.40
35:DV:24:ASN:HB3	35:DV:44:HIS:HB3	2.02	0.40
35:DV:89:ILE:HD13	35:DV:91:PHE:CZ	2.57	0.40
37:DL:108:ALA:HB3	37:DL:125:LEU:HD21	2.03	0.40
37:DL:121:THR:HB	37:DL:141:LYS:HD2	2.03	0.40
38:DM:20:LEU:HD22	38:DM:20:LEU:N	2.36	0.40
38:DM:131:VAL:HG12	38:DM:132:THR:N	2.36	0.40
40:DH:126:GLY:C	40:DH:146:VAL:H	2.20	0.40
45:DS:13:SER:HB3	45:DS:16:LYS:HE3	2.03	0.40
47:DF:13:LYS:HZ2	47:DF:13:LYS:C	2.25	0.40
47:DF:27:VAL:O	47:DF:27:VAL:HG23	2.21	0.40
47:DF:116:LEU:HB3	47:DF:176:PHE:CA	2.51	0.40
47:DF:141:ASP:O	47:DF:142:TYR:C	2.58	0.40
48:DG:152:ARG:HG3	48:DG:153:PRO:HD2	2.03	0.40
48:DG:155:PRO:C	48:DG:170:THR:HB	2.41	0.40
50:DT:1:MET:HG3	50:DT:2:ILE:N	2.33	0.40
52:DW:17:ALA:HA	52:DW:35:ILE:CG2	2.26	0.40
52:DW:32:ALA:C	52:DW:34:SER:N	2.74	0.40
53:D6:43:VAL:CG2	53:D6:52:LEU:HD12	2.47	0.40
1:AA:16:A:C2'	1:AA:17:U:H5'	2.51	0.40
1:AA:66:A:C2'	1:AA:67:C:H5'	2.51	0.40
1:AA:92:U:H6	1:AA:92:U:OP2	2.04	0.40
1:AA:237:G:H5"	16:AQ:26:ARG:NH2	2.36	0.40
1:AA:682:G:O2'	1:AA:683:G:H5'	2.21	0.40
1:AA:1037:C:H2'	1:AA:1038:C:H6	1.86	0.40
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.22	0.40
1:AA:1289:A:H61	8:AI:71:ILE:CD1	2.34	0.40
1:AA:1350:A:H2'	1:AA:1351:U:H6	1.86	0.40
1:AA:1489:G:OP2	55:AA:1661:PAR:H54	2.19	0.40
2:AC:120:THR:HA	2:AC:123:LEU:HD12	2.03	0.40
6:AG:87:PRO:HG2	6:AG:151:ALA:HB2	2.03	0.40
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HG12	2.03	0.40
10:AK:125:LYS:O	10:AK:126:ARG:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:122:LYS:HG3	11:AL:123:ALA:N	2.35	0.40
12:AM:89:ARG:HH22	12:AM:94:LEU:HD12	1.83	0.40
13:AN:47:LEU:O	13:AN:49:THR:N	2.54	0.40
13:AN:64:ARG:HB2	13:AN:77:GLY:O	2.21	0.40
16:AQ:67:SER:O	16:AQ:68:LYS:C	2.58	0.40
19:AT:19:HIS:CE1	19:AT:23:ARG:HG3	2.56	0.40
19:AT:78:LEU:HD23	19:AT:78:LEU:HA	1.93	0.40
23:BB:27:G:O2'	23:BB:28:A:H8	2.02	0.40
23:BB:35:G:H1'	23:BB:454:A:O4'	2.21	0.40
23:BB:103:A:H2'	23:BB:104:A:H8	1.86	0.40
23:BB:247:G:H5"	23:BB:386:G:H2'	2.03	0.40
23:BB:299:A:N6	23:BB:322:A:O2'	2.50	0.40
23:BB:322:A:P	29:BE:163:ASN:ND2	2.94	0.40
23:BB:409:G:H2'	23:BB:410:G:C8	2.57	0.40
23:BB:499:U:H5"	46:BU:42:LYS:HG2	2.03	0.40
23:BB:1139:G:OP1	41:BJ:103:ILE:HD12	2.21	0.40
23:BB:1461:C:H2'	23:BB:1462:C:C6	2.56	0.40
23:BB:1693:U:O2'	25:BC:13:ARG:NH2	2.54	0.40
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.21	0.40
23:BB:2199:A:H5"	23:BB:2200:C:H5	1.86	0.40
23:BB:2259:U:H2'	23:BB:2260:C:C6	2.56	0.40
23:BB:2643:G:O2'	23:BB:2644:G:H5'	2.21	0.40
23:BB:2771:C:H1'	26:BD:208:LYS:NZ	2.37	0.40
23:BB:2774:C:H2'	23:BB:2775:G:O4'	2.22	0.40
23:BB:2847:U:OP1	28:BP:95:LYS:HD3	2.21	0.40
24:BI:91:LYS:O	24:BI:91:LYS:HG3	2.21	0.40
25:BC:24:HIS:CE1	25:BC:26:GLY:H	2.39	0.40
26:BD:12:THR:HG22	26:BD:13:ARG:N	2.36	0.40
27:BK:112:PHE:O	27:BK:113:MET:C	2.60	0.40
27:BK:119:ALA:HB3	27:BK:120:PRO:HD3	2.03	0.40
28:BP:29:VAL:HG12	28:BP:80:VAL:HA	2.02	0.40
28:BP:51:ASN:O	28:BP:52:ARG:HD3	2.22	0.40
28:BP:57:ALA:HA	28:BP:73:PHE:O	2.20	0.40
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.21	0.40
29:BE:105:LEU:HD21	29:BE:177:PRO:CA	2.51	0.40
29:BE:176:ASP:O	29:BE:180:LEU:HG	2.22	0.40
41:BJ:64:VAL:HG11	41:BJ:69:ARG:HD2	2.03	0.40
41:BJ:83:GLY:O	41:BJ:84:ILE:C	2.60	0.40
43:BO:35:ILE:HG22	43:BO:35:ILE:O	2.20	0.40
44:BQ:71:ASN:HB3	44:BQ:72:GLY:H	1.70	0.40
47:BF:107:VAL:HA	47:BF:111:ARG:HH12	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:4:VAL:H	49:BR:38:VAL:HG23	1.85	0.40
49:BR:49:ILE:CG2	49:BR:54:VAL:HB	2.51	0.40
50:BT:13:ALA:O	50:BT:33:LYS:N	2.54	0.40
51:BZ:40:VAL:O	51:BZ:42:SER:N	2.51	0.40
52:BW:37:VAL:C	52:BW:39:GLN:H	2.24	0.40
53:B6:69:GLN:CD	53:B6:98:ALA:HB2	2.41	0.40
1:CA:1057:G:H5"	2:CC:153:SER:CB	2.51	0.40
1:CA:1157:A:H5'	1:CA:1158:C:C5	2.56	0.40
1:CA:1179:A:H2'	1:CA:1180:A:C8	2.56	0.40
5:CF:96:VAL:HG12	5:CF:97:THR:H	1.86	0.40
6:CG:20:GLU:O	6:CG:23:ALA:HB3	2.21	0.40
6:CG:94:ARG:HH12	6:CG:98:LEU:HD21	1.86	0.40
9:CJ:83:THR:O	9:CJ:87:LEU:HD22	2.22	0.40
10:CK:59:PRO:N	10:CK:90:PRO:HB2	2.36	0.40
10:CK:125:LYS:O	21:CU:33:ARG:CZ	2.69	0.40
11:CL:23:LEU:C	11:CL:25:ALA:N	2.75	0.40
14:CO:17:ARG:NH1	14:CO:17:ARG:HA	2.37	0.40
14:CO:31:LEU:O	14:CO:34:ALA:HB3	2.20	0.40
15:CP:66:THR:HG22	15:CP:67:ILE:N	2.36	0.40
16:CQ:30:HIS:CB	16:CQ:33:TYR:HB2	2.51	0.40
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.36	0.40
18:CS:20:LYS:O	18:CS:23:GLU:HG3	2.21	0.40
18:CS:33:TRP:N	18:CS:33:TRP:CE3	2.90	0.40
22:DA:87:U:C2'	22:DA:88:C:O5'	2.69	0.40
23:DB:182:A:H2'	23:DB:183:C:H6	1.87	0.40
23:DB:320:A:C2	29:DE:163:ASN:HB3	2.57	0.40
23:DB:419:U:H2'	23:DB:420:C:H6	1.84	0.40
23:DB:437:U:H2'	23:DB:438:G:H8	1.86	0.40
23:DB:483:A:H8	46:DU:44:HIS:HB3	1.86	0.40
23:DB:633:A:H2'	23:DB:634:C:O4'	2.21	0.40
23:DB:757:G:H2'	23:DB:758:C:H5'	2.03	0.40
23:DB:1059:G:H2'	23:DB:1060:U:C6	2.56	0.40
23:DB:1060:U:O4	24:DI:131:THR:HG22	2.21	0.40
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.56	0.40
23:DB:1635:A:H2'	23:DB:1636:U:C5'	2.51	0.40
23:DB:1900:A:N1	23:DB:1970:A:C5	2.88	0.40
23:DB:1967:C:C2'	23:DB:1968:G:H5'	2.52	0.40
23:DB:2417:C:H2'	23:DB:2418:A:H8	1.87	0.40
23:DB:2592:G:O2'	23:DB:2593:U:H5'	2.22	0.40
23:DB:2691:C:C4	23:DB:2719:G:N2	2.89	0.40
24:DI:2:LYS:HD2	24:DI:2:LYS:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:51:ARG:O	25:DC:52:HIS:C	2.60	0.40
27:DK:18:ARG:HB2	27:DK:45:GLU:CG	2.51	0.40
27:DK:112:PHE:O	27:DK:113:MET:C	2.58	0.40
28:DP:50:ARG:HB2	28:DP:56:SER:OG	2.20	0.40
28:DP:57:ALA:HA	28:DP:73:PHE:O	2.21	0.40
28:DP:60:VAL:O	28:DP:70:GLU:HA	2.21	0.40
29:DE:147:LEU:O	29:DE:168:ASP:O	2.39	0.40
29:DE:191:ASP:O	29:DE:194:LYS:HB3	2.21	0.40
35:DV:16:ALA:O	35:DV:19:ARG:HB2	2.22	0.40
39:DX:7:ARG:HB2	39:DX:7:ARG:CZ	2.51	0.40
39:DX:9:LYS:HZ2	39:DX:60:LYS:HE3	1.86	0.40
39:DX:44:LYS:HZ1	39:DX:48:ARG:CZ	2.34	0.40
40:DH:128:HIS:N	40:DH:144:VAL:O	2.49	0.40
41:DJ:96:ARG:NE	41:DJ:99:ARG:HD2	2.35	0.40
42:DN:92:GLY:HA2	42:DN:94:TYR:CZ	2.56	0.40
45:DS:15:GLN:HA	45:DS:18:ARG:HG2	2.02	0.40
50:DT:13:ALA:O	50:DT:33:LYS:N	2.54	0.40
1:AA:158:G:H2'	1:AA:159:G:O4'	2.21	0.40
1:AA:177:G:C5	1:AA:178:C:C5	3.09	0.40
1:AA:191:G:H2'	1:AA:192:A:C8	2.55	0.40
1:AA:448:A:O2'	1:AA:449:G:H5'	2.22	0.40
1:AA:600:A:O2'	1:AA:601:G:H5'	2.21	0.40
1:AA:715:A:O2'	1:AA:716:A:H5'	2.21	0.40
1:AA:958:A:N1	18:AS:53:GLY:C	2.75	0.40
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.86	0.40
1:AA:1237:C:H3'	1:AA:1336:C:N4	2.30	0.40
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.21	0.40
3:AD:172:VAL:HG23	3:AD:178:GLU:O	2.22	0.40
4:AE:104:ILE:HD11	4:AE:111:ARG:HA	2.03	0.40
6:AG:77:ARG:HG3	6:AG:79:VAL:CG2	2.50	0.40
13:AN:80:ARG:HH11	13:AN:80:ARG:HG2	1.86	0.40
13:AN:88:MET:HA	13:AN:88:MET:HE2	2.02	0.40
16:AQ:30:HIS:CB	16:AQ:33:TYR:HB2	2.51	0.40
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.85	0.40
19:AT:65:LEU:HD12	19:AT:65:LEU:HA	1.92	0.40
20:AB:46:VAL:N	20:AB:47:PRO:CD	2.83	0.40
22:BA:29:A:C4	22:BA:56:G:N2	2.89	0.40
22:BA:77:U:O2'	22:BA:78:A:H5'	2.21	0.40
23:BB:34:U:H4'	23:BB:35:G:OP2	2.22	0.40
23:BB:37:C:H4'	23:BB:451:U:OP1	2.21	0.40
23:BB:705:A:H61	23:BB:726:G:H1'	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:979:A:H2'	23:BB:982:C:N4	2.36	0.40
23:BB:1068:G:C6	23:BB:1069:A:N6	2.89	0.40
23:BB:1304:A:H2'	23:BB:1305:C:H6	1.86	0.40
23:BB:2144:G:N2	23:BB:2146:C:C2	2.89	0.40
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.86	0.40
23:BB:2295:C:O2'	23:BB:2296:U:H5'	2.21	0.40
23:BB:2408:U:H2'	23:BB:2409:G:H8	1.87	0.40
23:BB:2468:A:H2'	23:BB:2476:A:C5	2.56	0.40
23:BB:2757:A:N3	23:BB:2757:A:H2'	2.36	0.40
23:BB:2830:C:H1'	23:BB:2836:U:O4'	2.21	0.40
23:BB:2893:A:H5"	23:BB:2894:G:H5'	2.04	0.40
25:BC:254:LYS:HB3	25:BC:255:LYS:H	1.68	0.40
26:BD:114:LYS:HE3	26:BD:116:LYS:CE	2.52	0.40
28:BP:32:VAL:HG12	28:BP:33:GLU:O	2.21	0.40
28:BP:112:ARG:HB2	28:BP:112:ARG:NH1	2.36	0.40
29:BE:28:VAL:HG23	29:BE:29:HIS:N	2.36	0.40
33:B1:38:PHE:HB2	33:B1:45:HIS:CE1	2.55	0.40
36:B2:43:THR:O	36:B2:44:VAL:C	2.59	0.40
37:BL:132:ARG:HA	37:BL:135:ILE:CG2	2.52	0.40
40:BH:18:GLN:HE22	40:BH:44:ILE:HD13	1.87	0.40
40:BH:44:ILE:O	40:BH:46:PHE:N	2.54	0.40
41:BJ:59:ALA:C	41:BJ:61:LYS:N	2.75	0.40
42:BN:60:VAL:O	42:BN:63:ARG:HB3	2.21	0.40
43:BO:106:LEU:HA	43:BO:109:ALA:HB3	2.03	0.40
45:BS:55:ILE:CG2	45:BS:56:ALA:N	2.85	0.40
46:BU:10:VAL:HA	46:BU:70:ALA:O	2.21	0.40
47:BF:134:GLN:H	47:BF:150:GLY:N	2.16	0.40
48:BG:10:VAL:HG13	48:BG:14:VAL:HB	2.03	0.40
50:BT:4:GLU:O	50:BT:8:LEU:HG	2.21	0.40
50:BT:28:ASN:ND2	50:BT:29:THR:HG23	2.36	0.40
51:BZ:30:LEU:HA	51:BZ:31:PRO:HD3	1.95	0.40
1:CA:152:A:H2'	1:CA:153:C:O4'	2.22	0.40
1:CA:279:A:H5'	1:CA:281:G:O4'	2.21	0.40
1:CA:375:U:C2	1:CA:376:G:C8	3.10	0.40
1:CA:376:G:OP1	15:CP:5:ARG:HB2	2.21	0.40
1:CA:547:A:H4'	1:CA:548:G:O5'	2.21	0.40
1:CA:648:A:H2'	1:CA:649:A:H8	1.86	0.40
1:CA:691:G:H1'	1:CA:696:A:N6	2.35	0.40
1:CA:750:C:H4'	14:CO:21:ASP:HA	2.03	0.40
1:CA:792:A:C4	1:CA:794:A:C6	3.09	0.40
1:CA:952:U:H2'	1:CA:953:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.53	0.40
1:CA:1103:C:C4	1:CA:1104:G:N7	2.90	0.40
1:CA:1112:C:O2	2:CC:178:ARG:HB3	2.21	0.40
1:CA:1324:A:H2'	1:CA:1325:C:H6	1.86	0.40
1:CA:1328:C:H5"	12:CM:27:THR:CG2	2.37	0.40
3:CD:146:GLU:CD	3:CD:146:GLU:N	2.74	0.40
4:CE:39:GLY:CA	4:CE:116:VAL:HB	2.48	0.40
7:CH:29:SER:O	7:CH:30:LYS:C	2.59	0.40
9:CJ:76:ILE:H	9:CJ:76:ILE:HG13	1.70	0.40
13:CN:68:ARG:HH11	13:CN:68:ARG:CB	2.17	0.40
18:CS:18:VAL:O	18:CS:22:VAL:HG23	2.22	0.40
18:CS:49:ALA:HB1	18:CS:56:HIS:HB3	2.03	0.40
19:CT:2:ASN:ND2	19:CT:3:ILE:N	2.62	0.40
20:CB:26:MET:HB3	20:CB:26:MET:HE2	1.89	0.40
20:CB:67:LEU:HA	20:CB:67:LEU:HD23	1.91	0.40
23:DB:228:C:O2	23:DB:418:C:H4'	2.21	0.40
23:DB:360:U:H2'	23:DB:361:G:O4'	2.21	0.40
23:DB:679:C:H2'	23:DB:680:C:C6	2.56	0.40
23:DB:819:A:OP2	23:DB:1187:G:N2	2.54	0.40
23:DB:962:G:H21	23:DB:2250:G:N2	2.18	0.40
23:DB:1054:A:H2'	23:DB:1055:G:O4'	2.22	0.40
23:DB:1058:U:H1'	24:DI:117:THR:HG22	2.03	0.40
23:DB:1099:G:H3'	24:DI:2:LYS:HA	2.03	0.40
23:DB:1562:U:O2'	23:DB:1563:U:H5'	2.22	0.40
23:DB:1798:U:OP1	25:DC:255:LYS:HG2	2.21	0.40
23:DB:2219:U:H2'	23:DB:2220:U:C6	2.56	0.40
23:DB:2300:C:O2'	23:DB:2301:C:H5'	2.22	0.40
23:DB:2331:G:C4'	52:DW:39:GLN:HA	2.50	0.40
23:DB:2751:G:O4'	48:DG:2:ARG:HD3	2.21	0.40
23:DB:2869:G:H2'	23:DB:2870:C:O4'	2.21	0.40
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.56	0.40
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.40
25:DC:43:ASN:CG	25:DC:44:ASN:H	2.22	0.40
25:DC:76:VAL:O	25:DC:78:GLU:N	2.54	0.40
27:DK:19:VAL:HB	27:DK:41:ILE:CG1	2.51	0.40
27:DK:64:ARG:O	27:DK:82:ASN:HA	2.21	0.40
28:DP:50:ARG:HB3	28:DP:57:ALA:H	1.86	0.40
29:DE:6:LYS:HB2	29:DE:120:VAL:O	2.21	0.40
29:DE:31:VAL:HG21	29:DE:104:ALA:CB	2.51	0.40
29:DE:161:ALA:HA	29:DE:164:LEU:HD12	2.02	0.40
32:D4:36:ARG:O	32:D4:37:GLN:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:41:LEU:O	38:DM:94:ALA:N	2.53	0.40
42:DN:38:LEU:CD1	42:DN:42:LYS:HD2	2.51	0.40
42:DN:51:LEU:HD21	42:DN:70:THR:HG21	2.03	0.40
43:DO:14:ALA:C	43:DO:16:ARG:N	2.75	0.40
43:DO:106:LEU:HA	43:DO:109:ALA:HB3	2.03	0.40
44:DQ:63:ARG:CZ	44:DQ:96:ASP:HA	2.51	0.40
44:DQ:79:ILE:HG23	44:DQ:80:ASN:N	2.36	0.40
44:DQ:93:ILE:HG23	44:DQ:94:LEU:N	2.36	0.40
45:DS:46:LEU:O	45:DS:50:VAL:HG23	2.21	0.40
47:DF:8:LYS:HD3	47:DF:9:ASP:OD2	2.21	0.40
47:DF:56:LEU:HD13	47:DF:56:LEU:O	2.20	0.40
47:DF:140:ILE:H	47:DF:140:ILE:HG13	1.58	0.40
50:DT:41:ALA:C	50:DT:43:ILE:N	2.75	0.40
53:D6:30:THR:C	53:D6:32:ARG:N	2.75	0.40
53:D6:68:VAL:CG2	53:D6:99:LEU:HD12	2.50	0.40
1:AA:20:U:O2'	1:AA:21:G:H5'	2.22	0.40
1:AA:24:U:O2'	1:AA:25:C:H5'	2.21	0.40
1:AA:260:G:O2'	1:AA:261:U:H5'	2.21	0.40
1:AA:279:A:H5'	1:AA:281:G:C5'	2.51	0.40
1:AA:426:U:H2'	1:AA:427:U:C6	2.56	0.40
1:AA:503:C:O2'	1:AA:504:C:H5'	2.22	0.40
1:AA:761:G:H2'	1:AA:762:U:H6	1.82	0.40
1:AA:1119:C:O2'	1:AA:1120:C:H5'	2.21	0.40
1:AA:1259:C:O2	1:AA:1283:U:H1'	2.21	0.40
1:AA:1483:A:H1'	23:BB:1948:G:H1'	2.04	0.40
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.22	0.40
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.37	0.40
6:AG:19:SER:HB2	6:AG:21:LEU:HD21	2.03	0.40
6:AG:31:VAL:HG22	6:AG:32:ASP:N	2.36	0.40
6:AG:134:VAL:HG23	6:AG:135:LYS:N	2.36	0.40
6:AG:148:LYS:O	6:AG:151:ALA:HB3	2.22	0.40
8:AI:98:ARG:NE	8:AI:103:VAL:HG21	2.37	0.40
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.51	0.40
14:AO:36:ILE:HD13	14:AO:59:MET:HE2	2.03	0.40
22:BA:40:U:H1'	22:BA:43:C:C5	2.55	0.40
23:BB:138:U:O2'	50:BT:1:MET:HA	2.22	0.40
23:BB:150:U:H2'	23:BB:151:C:O4'	2.20	0.40
23:BB:247:G:C2	23:BB:252:G:C6	3.09	0.40
23:BB:408:G:H2'	23:BB:409:G:H8	1.85	0.40
23:BB:493:G:H2'	23:BB:494:G:O4'	2.22	0.40
23:BB:531:C:O2'	23:BB:563:A:H5"	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:963:U:H2'	23:BB:964:C:C6	2.55	0.40
23:BB:971:G:OP2	23:BB:974:G:N2	2.55	0.40
23:BB:1028:A:H1'	23:BB:2487:G:O5'	2.22	0.40
23:BB:1184:U:H2'	23:BB:1185:G:H8	1.87	0.40
23:BB:1300:G:N2	23:BB:1634:A:C2	2.89	0.40
23:BB:1374:G:H2'	23:BB:1375:U:H6	1.84	0.40
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.85	0.40
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.57	0.40
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.87	0.40
23:BB:2806:C:H2'	23:BB:2807:U:O4'	2.21	0.40
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.86	0.40
24:BI:52:LEU:O	24:BI:54:ILE:HG13	2.22	0.40
25:BC:221:GLY:C	25:BC:223:ALA:N	2.75	0.40
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.68	0.40
25:BC:251:THR:O	25:BC:252:LYS:HD2	2.22	0.40
26:BD:2:ILE:CG2	26:BD:84:LEU:HB3	2.51	0.40
26:BD:191:GLY:O	26:BD:192:ALA:HB3	2.22	0.40
29:BE:58:LYS:HZ3	29:BE:58:LYS:N	2.13	0.40
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.21	0.40
31:B0:10:SER:O	31:B0:11:LYS:C	2.60	0.40
33:B1:25:ASN:OD1	33:B1:27:ARG:HB2	2.22	0.40
35:BV:24:ASN:O	35:BV:26:PHE:N	2.53	0.40
35:BV:29:ILE:HD12	35:BV:29:ILE:O	2.21	0.40
37:BL:79:LEU:HD23	37:BL:79:LEU:HA	1.95	0.40
39:BX:27:ASN:HA	39:BX:30:MET:HG2	2.02	0.40
44:BQ:91:ARG:CB	44:BQ:94:LEU:HD23	2.50	0.40
48:BG:71:LEU:HD13	48:BG:74:MET:HE1	2.04	0.40
48:BG:84:LYS:HG3	48:BG:131:VAL:HB	2.03	0.40
52:BW:49:ASN:ND2	52:BW:50:VAL:N	2.70	0.40
1:CA:263:A:OP1	19:CT:73:ARG:NH1	2.55	0.40
1:CA:481:G:O2'	1:CA:482:A:H8	2.03	0.40
1:CA:692:U:O2	1:CA:694:A:C8	2.74	0.40
1:CA:723:U:H5'	21:CU:48:LYS:HG2	2.03	0.40
1:CA:884:U:H4'	1:CA:885:G:H5"	2.03	0.40
1:CA:998:C:H2'	1:CA:999:C:H6	1.85	0.40
1:CA:1101:A:N6	20:CB:101:THR:HG21	2.37	0.40
1:CA:1423:G:H2'	1:CA:1424:U:C6	2.56	0.40
2:CC:166:TRP:O	2:CC:167:TYR:CB	2.69	0.40
7:CH:79:ARG:HH11	7:CH:79:ARG:HG2	1.87	0.40
7:CH:83:ARG:C	7:CH:84:ILE:HG13	2.41	0.40
9:CJ:31:ARG:H	9:CJ:31:ARG:HG3	1.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:49:PHE:O	9:CJ:64:GLN:HA	2.21	0.40
10:CK:108:ASN:ND2	21:CU:6:ARG:HG3	2.36	0.40
11:CL:35:ARG:HH21	11:CL:36:VAL:HG22	1.86	0.40
12:CM:39:ALA:HB3	12:CM:42:VAL:HG13	2.02	0.40
13:CN:60:ARG:HD3	13:CN:62:ARG:CZ	2.52	0.40
20:CB:80:LYS:HG3	20:CB:81:ASP:H	1.86	0.40
20:CB:191:ASP:OD2	20:CB:193:ASP:HB2	2.21	0.40
22:DA:24:G:C2	22:DA:28:C:C5	3.10	0.40
22:DA:42:C:C6	47:DF:65:LEU:HD22	2.57	0.40
23:DB:199:A:C6	23:DB:2434:A:C6	3.09	0.40
23:DB:247:G:H4'	23:DB:386:G:C4	2.57	0.40
23:DB:591:U:H1'	34:D3:1:PRO:H2	1.84	0.40
23:DB:635:C:O2'	23:DB:636:G:H5'	2.20	0.40
23:DB:1190:G:P	37:DL:32:GLY:HA2	2.60	0.40
23:DB:1344:U:H5'	23:DB:1384:A:N1	2.36	0.40
23:DB:1499:C:H2'	23:DB:1500:G:C8	2.54	0.40
23:DB:1537:G:H3'	23:DB:1538:G:O4'	2.22	0.40
23:DB:1614:A:H8	23:DB:1614:A:O5'	2.04	0.40
23:DB:1692:U:O2'	23:DB:1693:U:H2'	2.22	0.40
23:DB:1926:U:H3'	23:DB:1928:A:OP2	2.21	0.40
23:DB:2250:G:H8	23:DB:2250:G:O5'	2.05	0.40
23:DB:2603:G:O2'	23:DB:2604:U:H5'	2.21	0.40
23:DB:2730:C:H2'	23:DB:2731:G:C8	2.57	0.40
23:DB:2768:U:H2'	23:DB:2769:U:O4'	2.21	0.40
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.86	0.40
24:DI:102:ARG:O	24:DI:106:GLN:HG3	2.22	0.40
25:DC:92:LEU:HD12	25:DC:101:ARG:O	2.21	0.40
25:DC:221:GLY:C	25:DC:223:ALA:N	2.73	0.40
26:DD:12:THR:HG22	26:DD:13:ARG:N	2.37	0.40
26:DD:18:ASP:OD1	26:DD:19:GLY:N	2.54	0.40
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.29	0.40
29:DE:126:VAL:HG22	29:DE:127:GLU:N	2.35	0.40
29:DE:192:ALA:HA	29:DE:195:GLN:NE2	2.36	0.40
32:D4:36:ARG:HE	32:D4:37:GLN:H	1.70	0.40
35:DV:24:ASN:O	35:DV:26:PHE:N	2.55	0.40
37:DL:90:VAL:HG23	37:DL:120:VAL:CG1	2.51	0.40
37:DL:127:VAL:CG2	37:DL:128:THR:N	2.83	0.40
38:DM:46:ILE:CG1	38:DM:47:GLU:N	2.84	0.40
40:DH:26:ALA:O	40:DH:27:ARG:C	2.60	0.40
41:DJ:4:PHE:O	41:DJ:44:TYR:CZ	2.74	0.40
41:DJ:40:HIS:ND1	41:DJ:41:LYS:HG3	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:41:LYS:HB3	41:DJ:42:ALA:H	1.65	0.40
41:DJ:65:THR:HG23	41:DJ:66:GLY:N	2.36	0.40
41:DJ:72:LYS:CG	41:DJ:89:PHE:HB2	2.52	0.40
43:DO:88:LYS:CE	43:DO:116:GLN:HB2	2.39	0.40
44:DQ:51:GLN:O	44:DQ:54:ARG:HB2	2.21	0.40
48:DG:86:LEU:HD23	48:DG:163:TYR:HA	2.04	0.40
48:DG:108:PHE:HD1	48:DG:108:PHE:H	1.70	0.40
48:DG:125:PRO:HB2	48:DG:129:GLU:CD	2.42	0.40
1:AA:14:U:O2	1:AA:17:U:H5	2.05	0.40
1:AA:92:U:H2'	1:AA:93:U:C6	2.56	0.40
1:AA:258:G:N3	1:AA:258:G:H2'	2.35	0.40
1:AA:266:G:O2'	1:AA:267:C:H3'	2.21	0.40
1:AA:528:C:H41	11:AL:45:ASN:CG	2.24	0.40
1:AA:598:U:H2'	1:AA:599:C:H6	1.87	0.40
1:AA:613:C:P	3:AD:80:ARG:HH21	2.44	0.40
1:AA:687:A:C2	1:AA:704:A:C5	3.09	0.40
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.22	0.40
1:AA:1103:C:C4	1:AA:1104:G:N7	2.90	0.40
1:AA:1210:C:H4'	1:AA:1214:C:C5	2.57	0.40
1:AA:1336:C:H4'	1:AA:1337:G:O5'	2.20	0.40
2:AC:6:PRO:HA	2:AC:9:ILE:CG2	2.49	0.40
2:AC:42:LEU:HD21	2:AC:90:VAL:HG22	2.02	0.40
2:AC:111:ASP:OD2	2:AC:114:LEU:HG	2.22	0.40
2:AC:166:TRP:O	2:AC:167:TYR:CB	2.69	0.40
3:AD:10:LEU:HD12	3:AD:20:LEU:HD13	2.03	0.40
3:AD:47:LEU:HD11	3:AD:51:GLY:HA3	2.04	0.40
4:AE:83:PRO:HA	4:AE:95:MET:O	2.22	0.40
4:AE:156:ARG:HB3	7:AH:42:GLU:O	2.21	0.40
5:AF:60:VAL:HG12	5:AF:61:LEU:N	2.35	0.40
5:AF:98:GLU:O	5:AF:99:ALA:HB3	2.22	0.40
7:AH:79:ARG:HG2	7:AH:79:ARG:HH11	1.87	0.40
10:AK:42:GLY:HA3	10:AK:73:VAL:HG13	2.03	0.40
10:AK:59:PRO:N	10:AK:90:PRO:HB2	2.36	0.40
10:AK:108:ASN:HD21	21:AU:6:ARG:HG3	1.86	0.40
11:AL:85:ARG:HE	11:AL:85:ARG:HB2	1.72	0.40
12:AM:15:VAL:CG2	12:AM:40:GLU:HB3	2.51	0.40
12:AM:106:ARG:HH12	12:AM:109:LYS:CD	2.20	0.40
13:AN:29:ILE:HB	13:AN:30:ILE:H	1.73	0.40
13:AN:60:ARG:HD3	13:AN:62:ARG:CZ	2.52	0.40
16:AQ:17:GLU:C	16:AQ:19:SER:H	2.25	0.40
18:AS:33:TRP:CE3	18:AS:33:TRP:N	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:117:GLU:O	20:AB:121:GLN:HB2	2.21	0.40
22:BA:87:U:C2'	22:BA:88:C:O5'	2.69	0.40
23:BB:115:C:H2'	23:BB:116:C:H6	1.87	0.40
23:BB:170:U:O2'	23:BB:171:U:H5'	2.21	0.40
23:BB:484:C:H2'	23:BB:485:C:H6	1.86	0.40
23:BB:619:G:H3'	23:BB:620:G:H21	1.86	0.40
23:BB:692:C:H2'	23:BB:693:A:H8	1.87	0.40
23:BB:765:C:H2'	23:BB:766:U:C6	2.57	0.40
23:BB:1131:G:H22	23:BB:2024:G:H21	1.68	0.40
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.86	0.40
23:BB:1423:G:H2'	23:BB:1424:G:H8	1.86	0.40
23:BB:1454:C:H5'	42:BN:63:ARG:NE	2.36	0.40
23:BB:1476:U:O2'	23:BB:1477:A:P	2.80	0.40
23:BB:1589:U:H2'	23:BB:1590:A:C8	2.56	0.40
23:BB:2047:C:O2'	23:BB:2048:G:H5'	2.22	0.40
23:BB:2298:A:H2'	23:BB:2299:U:O4'	2.22	0.40
23:BB:2344:U:H2'	33:B1:35:LEU:O	2.21	0.40
23:BB:2354:C:H2'	23:BB:2355:G:H8	1.87	0.40
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.87	0.40
23:BB:2883:A:OP1	31:B0:48:TYR:CE1	2.74	0.40
24:BI:7:TYR:CD1	24:BI:7:TYR:C	2.95	0.40
24:BI:73:PRO:HA	24:BI:74:PRO:HD3	1.99	0.40
25:BC:83:ASP:HA	25:BC:84:PRO:HD3	1.84	0.40
25:BC:161:VAL:HG13	25:BC:174:ARG:O	2.22	0.40
26:BD:51:THR:HG21	26:BD:75:ALA:O	2.21	0.40
26:BD:76:GLY:O	26:BD:77:ARG:C	2.60	0.40
26:BD:105:LYS:HE3	26:BD:176:ASP:HB3	2.04	0.40
26:BD:186:LEU:HD11	28:BP:3:ILE:CG1	2.47	0.40
28:BP:1:SER:H1	28:BP:4:ILE:HD12	1.86	0.40
29:BE:41:GLN:O	29:BE:42:GLY:C	2.58	0.40
29:BE:160:ALA:C	29:BE:162:ARG:H	2.24	0.40
35:BV:61:LEU:HD11	35:BV:74:ALA:HB2	2.03	0.40
40:BH:69:ALA:O	40:BH:141:LYS:NZ	2.51	0.40
40:BH:75:LEU:HD21	40:BH:104:THR:O	2.22	0.40
40:BH:90:LEU:HD11	40:BH:146:VAL:HG11	2.00	0.40
40:BH:116:ARG:HH11	40:BH:133:GLN:HB2	1.85	0.40
40:BH:144:VAL:HG12	40:BH:146:VAL:HG23	2.03	0.40
41:BJ:133:ALA:O	41:BJ:135:GLN:N	2.55	0.40
42:BN:87:PHE:CE1	42:BN:116:VAL:HG12	2.56	0.40
43:BO:106:LEU:CA	43:BO:109:ALA:HB3	2.51	0.40
44:BQ:2:ARG:HG3	44:BQ:3:VAL:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:42:ALA:O	47:BF:44:ALA:N	2.54	0.40
48:BG:106:LEU:N	48:BG:106:LEU:HD23	2.37	0.40
48:BG:162:ARG:O	48:BG:162:ARG:HG2	2.22	0.40
49:BR:23:GLU:O	49:BR:24:LYS:C	2.60	0.40
49:BR:39:LEU:HB3	49:BR:53:PHE:HA	2.03	0.40
49:BR:78:ARG:HG3	49:BR:78:ARG:NH2	2.36	0.40
50:BT:40:LYS:O	50:BT:43:ILE:HB	2.21	0.40
51:BZ:27:ARG:H	51:BZ:27:ARG:HG3	1.66	0.40
52:BW:28:GLU:HB2	52:BW:31:LEU:HD21	2.03	0.40
53:B6:16:LYS:N	53:B6:16:LYS:HE3	2.36	0.40
53:B6:65:THR:HG22	53:B6:66:LEU:N	2.36	0.40
1:CA:283:U:O2'	1:CA:284:C:H5'	2.22	0.40
1:CA:370:C:H2'	1:CA:371:A:C8	2.56	0.40
1:CA:411:A:O2'	1:CA:412:A:O4'	2.39	0.40
1:CA:411:A:O3'	1:CA:412:A:H4'	2.20	0.40
1:CA:787:A:O2'	1:CA:788:U:H5'	2.20	0.40
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.21	0.40
1:CA:1318:A:H5"	1:CA:1319:A:OP2	2.21	0.40
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.22	0.40
3:CD:35:GLN:HB2	3:CD:35:GLN:HE21	1.73	0.40
3:CD:105:GLY:HA3	3:CD:158:LEU:HG	2.03	0.40
4:CE:89:THR:HG21	4:CE:134:ASN:HD21	1.85	0.40
4:CE:111:ARG:O	4:CE:112:ALA:C	2.59	0.40
5:CF:86:ARG:CZ	17:CR:63:TYR:HB3	2.51	0.40
8:CI:56:MET:O	8:CI:58:GLU:N	2.45	0.40
9:CJ:65:TYR:HA	13:CN:96:LYS:O	2.22	0.40
9:CJ:86:ALA:C	9:CJ:87:LEU:HD13	2.42	0.40
10:CK:68:ARG:HG3	10:CK:68:ARG:HH11	1.86	0.40
18:CS:10:ILE:HD13	18:CS:40:PHE:CE1	2.56	0.40
20:CB:125:PHE:HE1	20:CB:136:ARG:HD2	1.87	0.40
22:DA:32:U:H2'	22:DA:33:G:C8	2.57	0.40
22:DA:109:A:H2'	22:DA:110:C:O4'	2.21	0.40
23:DB:311:A:H3'	23:DB:312:G:C8	2.57	0.40
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.57	0.40
23:DB:1051:G:H2'	23:DB:1052:C:C6	2.56	0.40
23:DB:1255:U:H5"	23:DB:1256:G:H5"	2.04	0.40
23:DB:1724:G:O2'	23:DB:1725:U:H5'	2.21	0.40
23:DB:1733:G:H2'	23:DB:1734:G:H8	1.86	0.40
23:DB:1778:U:N3	23:DB:1784:A:C8	2.89	0.40
23:DB:1885:A:H3'	23:DB:1886:U:C5	2.56	0.40
23:DB:2083:G:H2'	23:DB:2084:C:H6	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2139:U:H2'	23:DB:2140:G:H8	1.87	0.40
23:DB:2282:G:H5"	23:DB:2283:C:O4'	2.21	0.40
23:DB:2299:U:H2'	23:DB:2300:C:C6	2.57	0.40
23:DB:2307:G:O6	47:DF:40:GLY:HA3	2.21	0.40
23:DB:2313:C:O3'	47:DF:87:LYS:HE2	2.22	0.40
23:DB:2317:A:H2'	23:DB:2318:G:O4'	2.22	0.40
23:DB:2657:A:H2'	23:DB:2658:C:O4'	2.22	0.40
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.57	0.40
25:DC:90:ILE:HD13	25:DC:90:ILE:HA	1.92	0.40
25:DC:134:ILE:HD11	25:DC:163:ILE:HG13	2.04	0.40
25:DC:208:GLY:O	25:DC:209:ALA:C	2.59	0.40
26:DD:9:VAL:HA	26:DD:197:THR:CG2	2.52	0.40
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.22	0.40
28:DP:32:VAL:HG12	28:DP:33:GLU:O	2.21	0.40
29:DE:97:ASN:OD1	29:DE:97:ASN:N	2.54	0.40
34:D3:60:CYS:C	34:D3:61:LEU:HD23	2.41	0.40
38:DM:126:ILE:H	38:DM:126:ILE:CD1	2.18	0.40
40:DH:83:LYS:HG3	40:DH:149:GLU:CG	2.51	0.40
41:DJ:3:THR:CB	41:DJ:44:TYR:OH	2.70	0.40
42:DN:100:CYS:SG	42:DN:101:GLY:N	2.95	0.40
44:DQ:33:VAL:CG2	44:DQ:34:ALA:N	2.84	0.40
45:DS:24:ILE:CG1	45:DS:36:LEU:HD21	2.49	0.40
45:DS:26:GLY:CA	45:DS:71:VAL:HG13	2.51	0.40
46:DU:13:LEU:HD12	46:DU:68:ASN:C	2.42	0.40
46:DU:85:ARG:NH1	46:DU:86:PHE:O	2.53	0.40
47:DF:31:GLU:O	47:DF:32:LYS:O	2.38	0.40
47:DF:32:LYS:O	47:DF:32:LYS:HE2	2.21	0.40
47:DF:66:ILE:HD11	47:DF:83:PRO:CB	2.46	0.40
49:DR:14:VAL:HG22	49:DR:15:SER:H	1.86	0.40
50:DT:55:VAL:HG13	50:DT:85:VAL:CG1	2.52	0.40
51:DZ:51:VAL:HG12	51:DZ:52:SER:N	2.36	0.40
52:DW:49:ASN:CB	52:DW:60:ALA:HA	2.46	0.40
53:D6:84:ARG:C	53:D6:86:SER:N	2.74	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:53:A:OP1	23:DB:1592:C:O2'[1_655]	2.08	0.12

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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	AC	204/232 (88%)	150 (74%)	41 (20%)	13 (6%)	1	19
2	CC	204/232 (88%)	154 (76%)	36 (18%)	14 (7%)	1	17
3	AD	203/205 (99%)	151 (74%)	41 (20%)	11 (5%)	2	22
3	CD	203/205 (99%)	150 (74%)	41 (20%)	12 (6%)	1	20
4	AE	148/166 (89%)	113 (76%)	32 (22%)	3 (2%)	7	40
4	CE	148/166 (89%)	116 (78%)	28 (19%)	4 (3%)	5	34
5	AF	98/135 (73%)	66 (67%)	25 (26%)	7 (7%)	1	16
5	CF	98/135 (73%)	67 (68%)	24 (24%)	7 (7%)	1	16
6	AG	148/178 (83%)	121 (82%)	23 (16%)	4 (3%)	5	34
6	CG	150/178 (84%)	123 (82%)	23 (15%)	4 (3%)	5	34
7	AH	127/129 (98%)	96 (76%)	27 (21%)	4 (3%)	4	31
7	CH	127/129 (98%)	96 (76%)	28 (22%)	3 (2%)	6	36
8	AI	125/129 (97%)	96 (77%)	23 (18%)	6 (5%)	2	23
8	CI	125/129 (97%)	96 (77%)	22 (18%)	7 (6%)	2	21
9	AJ	96/103 (93%)	72 (75%)	16 (17%)	8 (8%)	1	13
9	CJ	96/103 (93%)	71 (74%)	17 (18%)	8 (8%)	1	13
10	AK	115/128 (90%)	86 (75%)	22 (19%)	7 (6%)	1	19
10	CK	115/128 (90%)	85 (74%)	23 (20%)	7 (6%)	1	19
11	AL	121/123 (98%)	76 (63%)	34 (28%)	11 (9%)	1	12
11	CL	121/123 (98%)	74 (61%)	36 (30%)	11 (9%)	1	12
12	AM	112/117 (96%)	77 (69%)	28 (25%)	7 (6%)	1	19
12	CM	111/117 (95%)	79 (71%)	25 (22%)	7 (6%)	1	19
13	AN	92/100 (92%)	58 (63%)	21 (23%)	13 (14%)	0	4
13	CN	92/100 (92%)	59 (64%)	21 (23%)	12 (13%)	0	5
14	AO	86/89 (97%)	66 (77%)	17 (20%)	3 (4%)	3	29

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CO	86/89 (97%)	67 (78%)	16 (19%)	3 (4%)	3	29
15	AP	80/82 (98%)	58 (72%)	18 (22%)	4 (5%)	2	23
15	CP	78/82 (95%)	56 (72%)	17 (22%)	5 (6%)	1	19
16	AQ	78/83 (94%)	58 (74%)	16 (20%)	4 (5%)	2	22
16	CQ	79/83 (95%)	59 (75%)	15 (19%)	5 (6%)	1	19
17	AR	53/74 (72%)	45 (85%)	8 (15%)	0	100	100
17	CR	53/74 (72%)	44 (83%)	9 (17%)	0	100	100
18	AS	77/91 (85%)	52 (68%)	24 (31%)	1 (1%)	12	48
18	CS	78/91 (86%)	53 (68%)	23 (30%)	2 (3%)	5	34
19	AT	83/86 (96%)	67 (81%)	13 (16%)	3 (4%)	3	28
19	CT	83/86 (96%)	67 (81%)	13 (16%)	3 (4%)	3	28
20	AB	216/240 (90%)	159 (74%)	36 (17%)	21 (10%)	0	11
20	CB	216/240 (90%)	156 (72%)	37 (17%)	23 (11%)	0	8
21	AU	49/70 (70%)	27 (55%)	14 (29%)	8 (16%)	0	3
21	CU	49/70 (70%)	26 (53%)	14 (29%)	9 (18%)	0	2
24	BI	139/141 (99%)	119 (86%)	15 (11%)	5 (4%)	3	28
24	DI	139/141 (99%)	114 (82%)	21 (15%)	4 (3%)	4	32
25	BC	269/272 (99%)	164 (61%)	63 (23%)	42 (16%)	0	4
25	DC	269/272 (99%)	161 (60%)	68 (25%)	40 (15%)	0	4
26	BD	207/209 (99%)	118 (57%)	55 (27%)	34 (16%)	0	3
26	DD	207/209 (99%)	115 (56%)	59 (28%)	33 (16%)	0	3
27	BK	119/123 (97%)	72 (60%)	30 (25%)	17 (14%)	0	4
27	DK	119/123 (97%)	71 (60%)	30 (25%)	18 (15%)	0	4
28	BP	112/114 (98%)	62 (55%)	37 (33%)	13 (12%)	0	6
28	DP	112/114 (98%)	63 (56%)	35 (31%)	14 (12%)	0	5
29	BE	199/201 (99%)	124 (62%)	56 (28%)	19 (10%)	0	11
29	DE	199/201 (99%)	121 (61%)	58 (29%)	20 (10%)	0	10
30	BY	56/58 (97%)	36 (64%)	15 (27%)	5 (9%)	1	13
30	DY	56/58 (97%)	37 (66%)	14 (25%)	5 (9%)	1	13
31	B0	54/56 (96%)	35 (65%)	13 (24%)	6 (11%)	0	8
31	D0	54/56 (96%)	36 (67%)	11 (20%)	7 (13%)	0	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	B4	36/38 (95%)	18 (50%)	11 (31%)	7 (19%)	0	2
32	D4	36/38 (95%)	18 (50%)	11 (31%)	7 (19%)	0	2
33	B1	48/54 (89%)	36 (75%)	7 (15%)	5 (10%)	0	9
33	D1	48/54 (89%)	36 (75%)	7 (15%)	5 (10%)	0	9
34	B3	62/64 (97%)	40 (64%)	16 (26%)	6 (10%)	0	11
34	D3	62/64 (97%)	41 (66%)	14 (23%)	7 (11%)	0	7
35	BV	92/94 (98%)	70 (76%)	16 (17%)	6 (6%)	1	18
35	DV	92/94 (98%)	69 (75%)	18 (20%)	5 (5%)	2	22
36	B2	44/46 (96%)	26 (59%)	15 (34%)	3 (7%)	1	17
36	D2	44/46 (96%)	26 (59%)	15 (34%)	3 (7%)	1	17
37	BL	141/144 (98%)	76 (54%)	42 (30%)	23 (16%)	0	3
37	DL	141/144 (98%)	76 (54%)	40 (28%)	25 (18%)	0	2
38	BM	134/136 (98%)	88 (66%)	31 (23%)	15 (11%)	0	8
38	DM	134/136 (98%)	89 (66%)	29 (22%)	16 (12%)	0	6
39	BX	61/63 (97%)	36 (59%)	18 (30%)	7 (12%)	0	7
39	DX	61/63 (97%)	37 (61%)	17 (28%)	7 (12%)	0	7
40	BH	147/149 (99%)	71 (48%)	49 (33%)	27 (18%)	0	2
40	DH	147/149 (99%)	96 (65%)	28 (19%)	23 (16%)	0	4
41	BJ	140/142 (99%)	89 (64%)	34 (24%)	17 (12%)	0	6
41	DJ	140/142 (99%)	88 (63%)	36 (26%)	16 (11%)	0	7
42	BN	118/127 (93%)	73 (62%)	34 (29%)	11 (9%)	0	12
42	DN	118/127 (93%)	71 (60%)	35 (30%)	12 (10%)	0	10
43	BO	114/117 (97%)	80 (70%)	25 (22%)	9 (8%)	1	14
43	DO	114/117 (97%)	79 (69%)	26 (23%)	9 (8%)	1	14
44	BQ	115/117 (98%)	70 (61%)	34 (30%)	11 (10%)	0	11
44	DQ	115/117 (98%)	69 (60%)	35 (30%)	11 (10%)	0	11
45	BS	108/110 (98%)	72 (67%)	22 (20%)	14 (13%)	0	5
45	DS	108/110 (98%)	70 (65%)	24 (22%)	14 (13%)	0	5
46	BU	100/103 (97%)	52 (52%)	28 (28%)	20 (20%)	0	2
46	DU	100/103 (97%)	50 (50%)	29 (29%)	21 (21%)	0	2
47	BF	176/178 (99%)	106 (60%)	43 (24%)	27 (15%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DF	176/178 (99%)	107 (61%)	42 (24%)	27 (15%)	0	4
48	BG	174/176 (99%)	100 (58%)	49 (28%)	25 (14%)	0	4
48	DG	174/176 (99%)	99 (57%)	49 (28%)	26 (15%)	0	4
49	BR	101/103 (98%)	67 (66%)	21 (21%)	13 (13%)	0	5
49	DR	101/103 (98%)	68 (67%)	20 (20%)	13 (13%)	0	5
50	BT	91/100 (91%)	51 (56%)	26 (29%)	14 (15%)	0	4
50	DT	91/100 (91%)	50 (55%)	27 (30%)	14 (15%)	0	4
51	BZ	75/78 (96%)	51 (68%)	18 (24%)	6 (8%)	1	14
51	DZ	75/78 (96%)	51 (68%)	18 (24%)	6 (8%)	1	14
52	BW	77/84 (92%)	31 (40%)	21 (27%)	25 (32%)	0	0
52	DW	77/84 (92%)	31 (40%)	21 (27%)	25 (32%)	0	0
53	B6	183/185 (99%)	151 (82%)	25 (14%)	7 (4%)	3	27
53	D6	183/185 (99%)	132 (72%)	40 (22%)	11 (6%)	1	19
All	All	11607/12284 (94%)	7747 (67%)	2693 (23%)	1167 (10%)	0	10

All (1167) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	54	ILE
2	AC	205	GLU
6	AG	6	ILE
8	AI	8	THR
9	AJ	36	VAL
9	AJ	57	VAL
12	AM	22	TYR
12	AM	105	ALA
13	AN	50	LEU
13	AN	61	ASN
14	AO	18	ASP
14	AO	34	ALA
15	AP	28	ARG
15	AP	44	SER
15	AP	67	ILE
16	AQ	32	ILE
20	AB	9	LEU
20	AB	15	PHE
20	AB	19	THR

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Mol	Chain	Res	Type
20	AB	22	TRP
21	AU	12	ASP
21	AU	34	ARG
24	BI	18	ASN
25	BC	65	ASP
25	BC	77	VAL
25	BC	141	HIS
26	BD	9	VAL
26	BD	14	ILE
26	BD	74	GLU
26	BD	91	THR
26	BD	122	VAL
26	BD	169	ARG
26	BD	170	VAL
27	BK	17	ARG
27	BK	18	ARG
27	BK	31	ARG
27	BK	35	VAL
27	BK	72	PRO
27	BK	120	PRO
28	BP	25	VAL
28	BP	38	ARG
28	BP	50	ARG
28	BP	64	SER
28	BP	65	ASN
28	BP	75	THR
28	BP	100	ARG
29	BE	43	THR
29	BE	60	TRP
29	BE	165	HIS
29	BE	167	VAL
30	BY	2	LYS
31	B0	42	ILE
31	B0	48	TYR
31	B0	51	ARG
34	B3	29	ARG
37	BL	89	VAL
37	BL	100	ILE
37	BL	111	ILE
37	BL	116	VAL
38	BM	13	HIS
38	BM	36	VAL

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Mol	Chain	Res	Type
38	BM	78	LEU
39	BX	2	LYS
40	BH	3	VAL
40	BH	10	ALA
40	BH	12	LEU
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	147	VAL
41	BJ	4	PHE
41	BJ	41	LYS
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	81	ILE
44	BQ	30	VAL
44	BQ	31	TYR
45	BS	13	SER
45	BS	27	LYS
45	BS	61	ASN
46	BU	6	ARG
46	BU	18	LYS
46	BU	42	LYS
46	BU	85	ARG
47	BF	32	LYS
47	BF	41	GLU
47	BF	43	ILE
47	BF	77	LYS
47	BF	92	GLY
47	BF	112	ASP
47	BF	135	ILE
47	BF	138	PRO
47	BF	148	VAL
47	BF	149	ARG
48	BG	9	VAL
48	BG	11	PRO
48	BG	84	LYS
48	BG	85	LYS
48	BG	91	VAL
48	BG	94	ARG
48	BG	117	PRO
48	BG	172	GLU
50	BT	38	ALA

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Mol	Chain	Res	Type
50	BT	39	THR
50	BT	58	VAL
50	BT	88	LYS
51	BZ	33	LEU
51	BZ	77	LYS
52	BW	9	THR
52	BW	14	ASP
52	BW	30	VAL
52	BW	36	ILE
52	BW	50	VAL
52	BW	59	PHE
52	BW	60	ALA
2	CC	54	ILE
2	CC	205	GLU
8	CI	8	THR
9	CJ	36	VAL
9	CJ	57	VAL
12	CM	22	TYR
12	CM	105	ALA
13	CN	50	LEU
13	CN	61	ASN
14	CO	18	ASP
14	CO	34	ALA
15	CP	28	ARG
15	CP	44	SER
15	CP	67	ILE
16	CQ	32	ILE
20	CB	15	PHE
20	CB	19	THR
20	CB	22	TRP
20	CB	94	ARG
20	CB	119	GLN
21	CU	12	ASP
21	CU	34	ARG
24	DI	5	GLN
24	DI	18	ASN
25	DC	51	ARG
25	DC	65	ASP
25	DC	77	VAL
25	DC	141	HIS
26	DD	9	VAL
26	DD	14	ILE

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Mol	Chain	Res	Type
26	DD	74	GLU
26	DD	91	THR
26	DD	122	VAL
26	DD	169	ARG
26	DD	170	VAL
27	DK	17	ARG
27	DK	18	ARG
27	DK	31	ARG
27	DK	35	VAL
27	DK	72	PRO
27	DK	119	ALA
27	DK	120	PRO
28	DP	25	VAL
28	DP	50	ARG
28	DP	64	SER
28	DP	65	ASN
28	DP	75	THR
28	DP	100	ARG
29	DE	60	TRP
29	DE	165	HIS
29	DE	167	VAL
30	DY	2	LYS
31	D0	42	ILE
31	D0	48	TYR
31	D0	51	ARG
33	D1	4	ILE
37	DL	89	VAL
37	DL	100	ILE
37	DL	111	ILE
37	DL	116	VAL
38	DM	13	HIS
38	DM	36	VAL
38	DM	78	LEU
39	DX	2	LYS
40	DH	3	VAL
40	DH	10	ALA
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	86	ASP
40	DH	121	VAL
40	DH	136	SER

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Mol	Chain	Res	Type
41	DJ	4	PHE
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	81	ILE
41	DJ	124	VAL
44	DQ	30	VAL
44	DQ	31	TYR
45	DS	3	THR
45	DS	13	SER
45	DS	27	LYS
45	DS	61	ASN
46	DU	6	ARG
46	DU	18	LYS
46	DU	42	LYS
46	DU	59	GLU
46	DU	85	ARG
47	DF	32	LYS
47	DF	41	GLU
47	DF	43	ILE
47	DF	77	LYS
47	DF	92	GLY
47	DF	112	ASP
47	DF	135	ILE
47	DF	138	PRO
47	DF	148	VAL
47	DF	149	ARG
48	DG	9	VAL
48	DG	11	PRO
48	DG	84	LYS
48	DG	85	LYS
48	DG	91	VAL
48	DG	94	ARG
48	DG	117	PRO
48	DG	172	GLU
50	DT	38	ALA
50	DT	39	THR
50	DT	58	VAL
50	DT	88	LYS
51	DZ	33	LEU
51	DZ	77	LYS
52	DW	9	THR
52	DW	14	ASP

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Mol	Chain	Res	Type
52	DW	30	VAL
52	DW	36	ILE
52	DW	50	VAL
52	DW	59	PHE
52	DW	60	ALA
53	D6	84	ARG
53	D6	88	LEU
2	AC	14	VAL
2	AC	60	ALA
2	AC	180	ASP
3	AD	24	VAL
3	AD	82	LYS
4	AE	20	VAL
5	AF	69	GLU
5	AF	85	ILE
5	AF	92	THR
5	AF	98	GLU
6	AG	112	ASP
7	AH	59	GLU
7	AH	65	PHE
7	AH	82	LEU
8	AI	127	SER
9	AJ	74	VAL
10	AK	88	PRO
10	AK	126	ARG
11	AL	13	ARG
11	AL	16	ALA
11	AL	23	LEU
11	AL	24	GLU
11	AL	42	LYS
11	AL	117	GLY
13	AN	2	LYS
13	AN	29	ILE
13	AN	71	GLY
15	AP	52	LEU
18	AS	27	LYS
19	AT	76	ALA
20	AB	86	CYS
20	AB	94	ARG
20	AB	163	ILE
20	AB	188	THR
21	AU	7	GLU

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Mol	Chain	Res	Type
24	BI	14	ALA
24	BI	64	ARG
25	BC	3	VAL
25	BC	36	ASN
25	BC	51	ARG
25	BC	52	HIS
25	BC	53	ILE
25	BC	64	VAL
25	BC	88	ALA
25	BC	93	VAL
25	BC	107	LYS
25	BC	145	MET
25	BC	222	THR
25	BC	239	PHE
25	BC	250	GLN
25	BC	255	LYS
26	BD	53	GLY
26	BD	93	GLY
26	BD	106	LYS
26	BD	107	VAL
26	BD	121	THR
26	BD	131	ASP
26	BD	136	ASN
26	BD	145	SER
26	BD	149	ASN
26	BD	159	LYS
26	BD	197	THR
27	BK	6	THR
27	BK	92	GLU
27	BK	119	ALA
29	BE	42	GLY
29	BE	79	ARG
29	BE	86	ALA
30	BY	4	ILE
32	B4	4	ARG
33	B1	4	ILE
34	B3	22	LYS
35	BV	25	LYS
36	B2	45	SER
37	BL	9	ALA
37	BL	28	GLY
37	BL	36	LYS

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Mol	Chain	Res	Type
37	BL	54	GLN
37	BL	99	ASN
37	BL	143	GLU
38	BM	20	LEU
38	BM	43	ALA
38	BM	69	PRO
38	BM	79	ALA
38	BM	134	THR
39	BX	9	LYS
39	BX	61	ALA
40	BH	73	ASN
40	BH	77	THR
40	BH	125	THR
41	BJ	2	LYS
41	BJ	43	GLU
41	BJ	73	VAL
41	BJ	124	VAL
41	BJ	134	ALA
42	BN	98	LEU
42	BN	100	CYS
42	BN	101	GLY
43	BO	51	ALA
43	BO	100	HIS
44	BQ	17	LEU
44	BQ	18	LYS
44	BQ	89	ILE
44	BQ	91	ARG
45	BS	3	THR
45	BS	14	ALA
45	BS	25	ARG
45	BS	96	ILE
46	BU	19	GLY
46	BU	41	VAL
46	BU	50	ALA
46	BU	59	GLU
46	BU	82	VAL
46	BU	89	GLY
46	BU	92	VAL
47	BF	11	VAL
47	BF	36	ASN
47	BF	78	ILE
47	BF	87	LYS

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Mol	Chain	Res	Type
47	BF	103	ILE
47	BF	110	ILE
47	BF	142	TYR
48	BG	31	GLU
48	BG	38	ASP
48	BG	46	ASP
48	BG	83	THR
48	BG	97	VAL
48	BG	164	ALA
48	BG	170	THR
49	BR	24	LYS
49	BR	43	ASN
49	BR	55	ASP
49	BR	57	GLY
49	BR	70	GLU
50	BT	2	ILE
50	BT	19	LYS
51	BZ	71	LEU
52	BW	12	GLY
52	BW	13	ARG
52	BW	17	ALA
52	BW	32	ALA
52	BW	34	SER
52	BW	53	GLY
52	BW	61	LYS
52	BW	62	ALA
53	B6	41	LEU
2	CC	14	VAL
2	CC	60	ALA
2	CC	180	ASP
3	CD	24	VAL
3	CD	82	LYS
4	CE	20	VAL
5	CF	69	GLU
5	CF	85	ILE
5	CF	92	THR
5	CF	98	GLU
6	CG	112	ASP
7	CH	59	GLU
7	CH	65	PHE
7	CH	82	LEU
8	CI	127	SER

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Mol	Chain	Res	Type
9	CJ	74	VAL
10	CK	88	PRO
10	CK	126	ARG
11	CL	13	ARG
11	CL	16	ALA
11	CL	23	LEU
11	CL	24	GLU
11	CL	42	LYS
11	CL	117	GLY
12	CM	49	GLU
13	CN	29	ILE
13	CN	71	GLY
15	CP	52	LEU
18	CS	27	LYS
19	CT	76	ALA
20	CB	18	GLN
20	CB	86	CYS
20	CB	163	ILE
20	CB	188	THR
25	DC	3	VAL
25	DC	36	ASN
25	DC	52	HIS
25	DC	53	ILE
25	DC	64	VAL
25	DC	88	ALA
25	DC	93	VAL
25	DC	94	LEU
25	DC	107	LYS
25	DC	145	MET
25	DC	222	THR
25	DC	239	PHE
25	DC	250	GLN
25	DC	255	LYS
26	DD	93	GLY
26	DD	106	LYS
26	DD	107	VAL
26	DD	121	THR
26	DD	145	SER
26	DD	149	ASN
26	DD	159	LYS
26	DD	196	ALA
26	DD	197	THR

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Mol	Chain	Res	Type
27	DK	6	THR
27	DK	92	GLU
28	DP	38	ARG
29	DE	42	GLY
29	DE	43	THR
29	DE	78	TRP
29	DE	79	ARG
29	DE	86	ALA
30	DY	4	ILE
30	DY	34	THR
32	D4	4	ARG
32	D4	8	LYS
34	D3	20	GLY
34	D3	22	LYS
34	D3	29	ARG
35	DV	25	LYS
36	D2	45	SER
37	DL	9	ALA
37	DL	28	GLY
37	DL	54	GLN
37	DL	99	ASN
37	DL	143	GLU
38	DM	20	LEU
38	DM	43	ALA
38	DM	69	PRO
38	DM	79	ALA
38	DM	134	THR
39	DX	9	LYS
39	DX	61	ALA
40	DH	12	LEU
40	DH	96	THR
40	DH	113	SER
40	DH	114	GLU
41	DJ	2	LYS
41	DJ	41	LYS
41	DJ	43	GLU
41	DJ	73	VAL
41	DJ	112	GLY
42	DN	11	ASN
42	DN	98	LEU
42	DN	100	CYS
42	DN	101	GLY

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Mol	Chain	Res	Type
43	DO	51	ALA
43	DO	100	HIS
44	DQ	18	LYS
44	DQ	89	ILE
44	DQ	91	ARG
45	DS	14	ALA
45	DS	25	ARG
45	DS	96	ILE
46	DU	19	GLY
46	DU	41	VAL
46	DU	50	ALA
46	DU	82	VAL
46	DU	89	GLY
46	DU	92	VAL
47	DF	11	VAL
47	DF	36	ASN
47	DF	78	ILE
47	DF	87	LYS
47	DF	103	ILE
47	DF	142	TYR
48	DG	31	GLU
48	DG	38	ASP
48	DG	46	ASP
48	DG	83	THR
48	DG	97	VAL
48	DG	164	ALA
48	DG	170	THR
49	DR	24	LYS
49	DR	43	ASN
49	DR	57	GLY
49	DR	70	GLU
50	DT	2	ILE
50	DT	19	LYS
51	DZ	71	LEU
52	DW	12	GLY
52	DW	13	ARG
52	DW	17	ALA
52	DW	32	ALA
52	DW	34	SER
52	DW	53	GLY
52	DW	61	LYS
52	DW	62	ALA

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Mol	Chain	Res	Type
53	D6	39	LEU
53	D6	41	LEU
2	AC	3	LYS
2	AC	59	PRO
2	AC	112	ALA
3	AD	22	SER
3	AD	25	ARG
3	AD	31	CYS
3	AD	191	SER
5	AF	54	LEU
5	AF	82	ASP
8	AI	24	ASN
9	AJ	34	ALA
9	AJ	56	HIS
9	AJ	75	ASP
10	AK	46	ALA
10	AK	124	LYS
11	AL	15	VAL
11	AL	47	ALA
11	AL	121	PRO
12	AM	49	GLU
12	AM	104	ASN
13	AN	27	LYS
13	AN	34	ASN
20	AB	14	HIS
20	AB	18	GLN
20	AB	36	LYS
20	AB	58	LYS
21	AU	25	ALA
24	BI	23	VAL
25	BC	37	SER
25	BC	59	GLN
25	BC	70	LYS
25	BC	94	LEU
25	BC	121	ALA
25	BC	140	VAL
25	BC	237	ARG
25	BC	246	PRO
26	BD	54	ALA
26	BD	113	SER
26	BD	144	GLY
26	BD	162	ALA

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Mol	Chain	Res	Type
26	BD	167	ASN
26	BD	181	ASP
26	BD	194	PRO
26	BD	196	ALA
27	BK	14	SER
27	BK	43	ILE
27	BK	73	ASP
27	BK	89	ASN
27	BK	110	GLU
28	BP	37	LYS
28	BP	101	GLU
29	BE	27	LEU
29	BE	46	GLN
29	BE	69	ARG
29	BE	70	SER
29	BE	188	MET
30	BY	34	THR
30	BY	50	VAL
31	B0	54	ILE
32	B4	8	LYS
32	B4	21	GLY
32	B4	36	ARG
33	B1	36	LYS
33	B1	50	GLU
34	B3	31	ILE
34	B3	58	ILE
37	BL	15	ALA
37	BL	19	LEU
37	BL	29	LYS
37	BL	51	GLU
37	BL	62	PRO
37	BL	65	GLY
37	BL	81	ASP
38	BM	21	ALA
38	BM	72	PRO
38	BM	77	PRO
39	BX	62	GLY
40	BH	7	ASP
40	BH	9	VAL
40	BH	11	ASN
40	BH	28	ASN
40	BH	45	GLU

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Mol	Chain	Res	Type
40	BH	54	LEU
40	BH	64	ALA
40	BH	83	LYS
41	BJ	84	ILE
41	BJ	112	GLY
42	BN	10	LEU
42	BN	11	ASN
42	BN	68	ALA
42	BN	82	GLU
42	BN	119	SER
44	BQ	10	ARG
46	BU	12	VAL
46	BU	47	PRO
46	BU	49	PRO
47	BF	9	ASP
47	BF	121	PHE
47	BF	136	ILE
47	BF	176	PHE
48	BG	2	ARG
48	BG	61	TRP
48	BG	89	VAL
49	BR	7	SER
49	BR	40	MET
49	BR	46	GLU
49	BR	56	GLY
49	BR	79	ARG
49	BR	98	ILE
50	BT	11	LEU
51	BZ	70	GLU
52	BW	29	SER
53	B6	30	THR
53	B6	69	GLN
2	CC	3	LYS
2	CC	59	PRO
2	CC	112	ALA
3	CD	22	SER
3	CD	25	ARG
3	CD	31	CYS
3	CD	68	GLU
3	CD	191	SER
5	CF	54	LEU
5	CF	82	ASP

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Mol	Chain	Res	Type
8	CI	24	ASN
9	CJ	34	ALA
9	CJ	56	HIS
9	CJ	75	ASP
10	CK	51	PHE
10	CK	124	LYS
11	CL	47	ALA
11	CL	121	PRO
12	CM	104	ASN
13	CN	2	LYS
18	CS	2	ARG
20	CB	14	HIS
20	CB	36	LYS
20	CB	58	LYS
20	CB	141	GLU
21	CU	7	GLU
21	CU	25	ALA
24	DI	23	VAL
25	DC	37	SER
25	DC	59	GLN
25	DC	70	LYS
25	DC	121	ALA
25	DC	123	ILE
25	DC	140	VAL
25	DC	195	GLY
25	DC	237	ARG
25	DC	246	PRO
25	DC	254	LYS
26	DD	53	GLY
26	DD	54	ALA
26	DD	127	PHE
26	DD	131	ASP
26	DD	136	ASN
26	DD	144	GLY
26	DD	162	ALA
26	DD	167	ASN
26	DD	181	ASP
26	DD	194	PRO
27	DK	14	SER
27	DK	43	ILE
27	DK	46	ALA
27	DK	73	ASP

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Mol	Chain	Res	Type
27	DK	89	ASN
27	DK	110	GLU
28	DP	101	GLU
29	DE	46	GLN
29	DE	69	ARG
29	DE	70	SER
30	DY	50	VAL
31	D0	54	ILE
32	D4	21	GLY
32	D4	36	ARG
33	D1	36	LYS
33	D1	50	GLU
33	D1	51	ALA
34	D3	31	ILE
34	D3	58	ILE
37	DL	3	LEU
37	DL	15	ALA
37	DL	19	LEU
37	DL	31	GLY
37	DL	36	LYS
37	DL	51	GLU
37	DL	81	ASP
37	DL	117	THR
38	DM	2	LEU
38	DM	21	ALA
38	DM	72	PRO
38	DM	77	PRO
39	DX	62	GLY
40	DH	7	ASP
40	DH	9	VAL
40	DH	11	ASN
40	DH	28	ASN
40	DH	40	THR
41	DJ	84	ILE
41	DJ	134	ALA
42	DN	10	LEU
42	DN	68	ALA
42	DN	82	GLU
42	DN	119	SER
43	DO	98	GLN
44	DQ	10	ARG
44	DQ	17	LEU

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Mol	Chain	Res	Type
46	DU	12	VAL
46	DU	47	PRO
46	DU	49	PRO
47	DF	136	ILE
47	DF	176	PHE
48	DG	2	ARG
48	DG	18	ILE
48	DG	61	TRP
48	DG	89	VAL
48	DG	109	SER
49	DR	7	SER
49	DR	46	GLU
49	DR	55	ASP
49	DR	56	GLY
49	DR	79	ARG
49	DR	98	ILE
50	DT	11	LEU
51	DZ	70	GLU
52	DW	10	ARG
52	DW	23	LYS
52	DW	29	SER
53	D6	70	SER
2	AC	100	ILE
2	AC	107	LYS
3	AD	68	GLU
4	AE	77	ASN
4	AE	156	ARG
5	AF	95	ALA
8	AI	44	ARG
8	AI	55	ASP
10	AK	51	PHE
13	AN	48	GLN
13	AN	51	PRO
13	AN	52	ARG
13	AN	67	GLY
16	AQ	70	LYS
16	AQ	81	ALA
20	AB	119	GLN
20	AB	121	GLN
20	AB	141	GLU
20	AB	149	GLY
20	AB	153	MET

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Mol	Chain	Res	Type
20	AB	200	PRO
20	AB	205	ALA
21	AU	9	GLU
21	AU	11	PHE
21	AU	17	ARG
21	AU	22	CYS
25	BC	35	LYS
25	BC	105	ALA
25	BC	123	ILE
25	BC	196	ASN
25	BC	257	ARG
26	BD	56	LYS
26	BD	127	PHE
27	BK	4	GLU
27	BK	46	ALA
28	BP	113	LEU
29	BE	78	TRP
29	BE	96	VAL
29	BE	131	THR
30	BY	9	THR
32	B4	9	LYS
32	B4	10	LEU
33	B1	51	ALA
34	B3	20	GLY
35	BV	71	LYS
36	B2	14	ARG
37	BL	31	GLY
37	BL	117	THR
38	BM	2	LEU
39	BX	37	LEU
40	BH	44	ILE
40	BH	62	LEU
40	BH	86	ASP
40	BH	97	ARG
40	BH	126	GLY
42	BN	70	THR
43	BO	65	THR
43	BO	68	LYS
43	BO	98	GLN
44	BQ	26	ALA
44	BQ	86	SER
44	BQ	88	GLU

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Mol	Chain	Res	Type
45	BS	71	VAL
45	BS	80	PRO
46	BU	51	LEU
46	BU	63	ALA
46	BU	67	SER
46	BU	78	LYS
46	BU	101	THR
48	BG	18	ILE
48	BG	109	SER
50	BT	28	ASN
50	BT	29	THR
50	BT	69	ARG
50	BT	86	THR
51	BZ	35	SER
52	BW	10	ARG
52	BW	23	LYS
52	BW	28	GLU
52	BW	56	HIS
52	BW	68	PHE
52	BW	77	LYS
53	B6	44	GLU
2	CC	100	ILE
2	CC	107	LYS
3	CD	192	ALA
4	CE	77	ASN
4	CE	156	ARG
5	CF	95	ALA
6	CG	152	HIS
8	CI	42	THR
8	CI	55	ASP
10	CK	46	ALA
11	CL	15	VAL
13	CN	27	LYS
13	CN	34	ASN
13	CN	48	GLN
13	CN	51	PRO
13	CN	52	ARG
13	CN	67	GLY
20	CB	129	THR
20	CB	130	LYS
20	CB	153	MET
20	CB	200	PRO

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Mol	Chain	Res	Type
20	CB	205	ALA
21	CU	9	GLU
21	CU	11	PHE
21	CU	17	ARG
25	DC	196	ASN
25	DC	257	ARG
26	DD	56	LYS
26	DD	109	VAL
26	DD	113	SER
27	DK	4	GLU
28	DP	37	LYS
28	DP	113	LEU
29	DE	27	LEU
29	DE	188	MET
30	DY	9	THR
31	D0	17	SER
32	D4	9	LYS
32	D4	10	LEU
33	D1	35	LEU
34	D3	50	SER
35	DV	45	ASP
35	DV	71	LYS
36	D2	14	ARG
37	DL	62	PRO
39	DX	37	LEU
40	DH	41	LYS
40	DH	148	ALA
42	DN	70	THR
43	DO	65	THR
43	DO	68	LYS
44	DQ	26	ALA
45	DS	80	PRO
46	DU	51	LEU
46	DU	63	ALA
46	DU	67	SER
46	DU	78	LYS
47	DF	9	ASP
47	DF	110	ILE
47	DF	121	PHE
48	DG	29	ASN
49	DR	40	MET
50	DT	28	ASN

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Mol	Chain	Res	Type
50	DT	29	THR
50	DT	69	ARG
50	DT	86	THR
51	DZ	35	SER
52	DW	28	GLU
52	DW	51	GLY
52	DW	77	LYS
53	D6	69	GLN
53	D6	106	LEU
2	AC	167	TYR
3	AD	29	THR
3	AD	192	ALA
8	AI	42	THR
10	AK	14	GLN
11	AL	70	GLY
12	AM	67	ASP
13	AN	31	SER
14	AO	74	ASP
19	AT	4	LYS
20	AB	50	ASN
20	AB	64	GLY
24	BI	49	GLU
25	BC	190	THR
25	BC	195	GLY
25	BC	200	MET
25	BC	254	LYS
26	BD	31	ALA
26	BD	109	VAL
26	BD	114	LYS
27	BK	93	GLN
29	BE	83	VAL
31	B0	26	SER
33	B1	35	LEU
34	B3	6	VAL
35	BV	45	ASP
35	BV	61	LEU
36	B2	44	VAL
37	BL	66	PHE
38	BM	56	ALA
39	BX	36	GLN
40	BH	29	PHE
40	BH	40	THR

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Mol	Chain	Res	Type
41	BJ	13	ARG
41	BJ	58	ASN
43	BO	62	LEU
43	BO	99	TYR
45	BS	30	SER
45	BS	40	ASN
45	BS	65	ASP
46	BU	83	GLY
47	BF	156	THR
48	BG	29	ASN
48	BG	155	PRO
49	BR	101	ILE
50	BT	8	LEU
51	BZ	28	ARG
52	BW	51	GLY
2	CC	153	SER
2	CC	167	TYR
8	CI	44	ARG
9	CJ	62	ARG
11	CL	70	GLY
12	CM	67	ASP
15	CP	46	LYS
16	CQ	70	LYS
16	CQ	81	ALA
16	CQ	82	VAL
19	CT	4	LYS
20	CB	9	LEU
20	CB	50	ASN
20	CB	64	GLY
20	CB	128	LEU
20	CB	149	GLY
21	CU	22	CYS
21	CU	41	THR
24	DI	14	ALA
25	DC	69	ASN
25	DC	105	ALA
25	DC	200	MET
26	DD	95	SER
26	DD	168	GLU
26	DD	184	ARG
27	DK	16	ALA
27	DK	93	GLN

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Mol	Chain	Res	Type
28	DP	23	ASP
29	DE	72	SER
29	DE	83	VAL
29	DE	96	VAL
29	DE	131	THR
31	D0	26	SER
35	DV	15	GLY
37	DL	5	THR
37	DL	29	LYS
37	DL	65	GLY
37	DL	66	PHE
38	DM	56	ALA
39	DX	36	GLN
39	DX	45	GLN
40	DH	29	PHE
41	DJ	13	ARG
41	DJ	14	ASP
42	DN	88	ALA
43	DO	62	LEU
43	DO	99	TYR
44	DQ	86	SER
44	DQ	88	GLU
45	DS	30	SER
45	DS	40	ASN
45	DS	65	ASP
45	DS	71	VAL
46	DU	101	THR
47	DF	40	GLY
47	DF	156	THR
48	DG	155	PRO
48	DG	157	LYS
49	DR	101	ILE
50	DT	8	LEU
51	DZ	28	ARG
52	DW	68	PHE
53	D6	42	LYS
53	D6	51	PRO
2	AC	47	ALA
2	AC	153	SER
3	AD	27	ILE
7	AH	47	ASP
9	AJ	62	ARG

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Mol	Chain	Res	Type
25	BC	18	VAL
25	BC	31	PRO
25	BC	69	ASN
26	BD	33	ARG
26	BD	95	SER
26	BD	184	ARG
28	BP	83	ILE
28	BP	108	ARG
32	B4	16	ILE
35	BV	15	GLY
35	BV	84	PRO
37	BL	52	GLY
37	BL	58	TYR
38	BM	73	ILE
39	BX	45	GLN
41	BJ	5	THR
41	BJ	14	ASP
42	BN	61	ALA
45	BS	18	ARG
47	BF	2	LYS
47	BF	40	GLY
48	BG	168	VAL
53	B6	49	HIS
53	B6	52	LEU
2	CC	104	GLU
3	CD	27	ILE
3	CD	29	THR
3	CD	165	GLU
8	CI	71	ILE
10	CK	14	GLN
14	CO	6	GLU
25	DC	18	VAL
25	DC	31	PRO
25	DC	135	PRO
25	DC	151	GLY
26	DD	114	LYS
28	DP	108	ARG
32	D4	16	ILE
34	D3	6	VAL
35	DV	84	PRO
36	D2	44	VAL
38	DM	73	ILE

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Mol	Chain	Res	Type
40	DH	85	GLY
40	DH	107	GLY
42	DN	61	ALA
45	DS	18	ARG
46	DU	5	ARG
47	DF	2	LYS
52	DW	56	HIS
53	D6	95	LYS
10	AK	89	GLY
11	AL	10	PRO
13	AN	94	GLY
19	AT	3	ILE
28	BP	4	ILE
29	BE	129	PRO
29	BE	148	ILE
38	BM	83	GLY
41	BJ	64	VAL
45	BS	29	VAL
47	BF	88	VAL
50	BT	55	VAL
10	CK	89	GLY
11	CL	10	PRO
12	CM	3	ILE
13	CN	94	GLY
25	DC	15	VAL
28	DP	83	ILE
29	DE	73	ILE
29	DE	129	PRO
29	DE	148	ILE
37	DL	22	GLY
38	DM	83	GLY
41	DJ	64	VAL
43	DO	8	ILE
45	DS	29	VAL
47	DF	88	VAL
48	DG	168	VAL
50	DT	55	VAL
12	AM	3	ILE
16	AQ	31	PRO
25	BC	15	VAL
25	BC	63	ILE
25	BC	135	PRO

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Mol	Chain	Res	Type
25	BC	151	GLY
25	BC	232	GLY
29	BE	73	ILE
37	BL	43	GLY
40	BH	34	GLY
43	BO	8	ILE
44	BQ	87	VAL
48	BG	16	VAL
48	BG	152	ARG
49	BR	52	PRO
53	B6	55	ILE
3	CD	107	GLY
16	CQ	31	PRO
19	CT	3	ILE
25	DC	63	ILE
28	DP	4	ILE
40	DH	34	GLY
43	DO	28	VAL
44	DQ	87	VAL
46	DU	83	GLY
48	DG	16	VAL
48	DG	152	ARG
49	DR	52	PRO
52	DW	33	GLY
3	AD	107	GLY
9	AJ	41	PRO
31	B0	24	VAL
42	BN	47	VAL
43	BO	28	VAL
47	BF	81	GLY
52	BW	70	VAL
12	CM	6	ILE
25	DC	232	GLY
37	DL	43	GLY
37	DL	52	GLY
52	DW	70	VAL
6	AG	15	PRO
6	AG	68	VAL
12	AM	6	ILE
50	BT	16	VAL
52	BW	33	GLY
2	CC	65	VAL

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Mol	Chain	Res	Type
4	CE	107	GLY
6	CG	68	VAL
9	CJ	41	PRO
31	D0	24	VAL
41	DJ	139	VAL
42	DN	47	VAL
47	DF	12	VAL
47	DF	81	GLY
50	DT	16	VAL
53	D6	105	PRO
40	BH	103	VAL
47	BF	12	VAL
6	CG	15	PRO
38	DM	19	GLY

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	AC	170/189 (90%)	142 (84%)	28 (16%)	2 14
2	CC	170/189 (90%)	142 (84%)	28 (16%)	2 14
3	AD	172/172 (100%)	147 (86%)	25 (14%)	3 17
3	CD	172/172 (100%)	148 (86%)	24 (14%)	3 19
4	AE	113/125 (90%)	96 (85%)	17 (15%)	3 17
4	CE	113/125 (90%)	96 (85%)	17 (15%)	3 17
5	AF	87/116 (75%)	71 (82%)	16 (18%)	1 11
5	CF	87/116 (75%)	70 (80%)	17 (20%)	1 9
6	AG	123/146 (84%)	106 (86%)	17 (14%)	3 19
6	CG	125/146 (86%)	109 (87%)	16 (13%)	4 21
7	AH	104/104 (100%)	96 (92%)	8 (8%)	13 39
7	CH	104/104 (100%)	96 (92%)	8 (8%)	13 39
8	AI	105/106 (99%)	88 (84%)	17 (16%)	2 15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	CI	105/106 (99%)	88 (84%)	17 (16%)	2	15
9	AJ	86/90 (96%)	73 (85%)	13 (15%)	3	16
9	CJ	86/90 (96%)	73 (85%)	13 (15%)	3	16
10	AK	90/98 (92%)	76 (84%)	14 (16%)	2	16
10	CK	90/98 (92%)	76 (84%)	14 (16%)	2	16
11	AL	103/103 (100%)	92 (89%)	11 (11%)	6	26
11	CL	103/103 (100%)	91 (88%)	12 (12%)	5	23
12	AM	92/95 (97%)	78 (85%)	14 (15%)	3	16
12	CM	91/95 (96%)	77 (85%)	14 (15%)	2	16
13	AN	79/83 (95%)	66 (84%)	13 (16%)	2	14
13	CN	79/83 (95%)	66 (84%)	13 (16%)	2	14
14	AO	76/77 (99%)	64 (84%)	12 (16%)	2	15
14	CO	76/77 (99%)	64 (84%)	12 (16%)	2	15
15	AP	65/65 (100%)	60 (92%)	5 (8%)	13	39
15	CP	65/65 (100%)	60 (92%)	5 (8%)	13	39
16	AQ	74/77 (96%)	66 (89%)	8 (11%)	6	26
16	CQ	75/77 (97%)	67 (89%)	8 (11%)	6	26
17	AR	48/64 (75%)	45 (94%)	3 (6%)	18	44
17	CR	48/64 (75%)	45 (94%)	3 (6%)	18	44
18	AS	70/78 (90%)	54 (77%)	16 (23%)	1	5
18	CS	71/78 (91%)	55 (78%)	16 (22%)	1	6
19	AT	65/65 (100%)	56 (86%)	9 (14%)	3	19
19	CT	65/65 (100%)	56 (86%)	9 (14%)	3	19
20	AB	180/198 (91%)	150 (83%)	30 (17%)	2	14
20	CB	180/198 (91%)	149 (83%)	31 (17%)	2	13
21	AU	44/60 (73%)	31 (70%)	13 (30%)	0	2
21	CU	44/60 (73%)	31 (70%)	13 (30%)	0	2
24	BI	109/109 (100%)	107 (98%)	2 (2%)	59	77
24	DI	109/109 (100%)	103 (94%)	6 (6%)	21	49
25	BC	216/217 (100%)	178 (82%)	38 (18%)	2	12
25	DC	216/217 (100%)	179 (83%)	37 (17%)	2	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	BD	164/164 (100%)	142 (87%)	22 (13%)	4	20
26	DD	164/164 (100%)	140 (85%)	24 (15%)	3	17
27	BK	102/104 (98%)	75 (74%)	27 (26%)	0	4
27	DK	102/104 (98%)	75 (74%)	27 (26%)	0	4
28	BP	99/99 (100%)	82 (83%)	17 (17%)	2	13
28	DP	99/99 (100%)	82 (83%)	17 (17%)	2	13
29	BE	165/165 (100%)	141 (86%)	24 (14%)	3	17
29	DE	165/165 (100%)	140 (85%)	25 (15%)	3	16
30	BY	48/48 (100%)	38 (79%)	10 (21%)	1	7
30	DY	48/48 (100%)	38 (79%)	10 (21%)	1	7
31	B0	47/47 (100%)	39 (83%)	8 (17%)	2	13
31	D0	47/47 (100%)	39 (83%)	8 (17%)	2	13
32	B4	34/34 (100%)	28 (82%)	6 (18%)	2	12
32	D4	34/34 (100%)	28 (82%)	6 (18%)	2	12
33	B1	45/48 (94%)	42 (93%)	3 (7%)	16	43
33	D1	45/48 (94%)	42 (93%)	3 (7%)	16	43
34	B3	51/51 (100%)	47 (92%)	4 (8%)	12	38
34	D3	51/51 (100%)	47 (92%)	4 (8%)	12	38
35	BV	78/78 (100%)	66 (85%)	12 (15%)	2	16
35	DV	78/78 (100%)	67 (86%)	11 (14%)	3	19
36	B2	38/38 (100%)	34 (90%)	4 (10%)	7	26
36	D2	38/38 (100%)	34 (90%)	4 (10%)	7	26
37	BL	102/103 (99%)	87 (85%)	15 (15%)	3	17
37	DL	102/103 (99%)	88 (86%)	14 (14%)	3	19
38	BM	109/109 (100%)	88 (81%)	21 (19%)	1	9
38	DM	109/109 (100%)	89 (82%)	20 (18%)	1	11
39	BX	55/55 (100%)	40 (73%)	15 (27%)	0	3
39	DX	55/55 (100%)	42 (76%)	13 (24%)	1	5
40	BH	114/114 (100%)	68 (60%)	46 (40%)	0	0
40	DH	114/114 (100%)	91 (80%)	23 (20%)	1	8
41	BJ	116/116 (100%)	99 (85%)	17 (15%)	3	17

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
41	DJ	116/116 (100%)	99 (85%)	17 (15%)	3	17
42	BN	100/103 (97%)	86 (86%)	14 (14%)	3	19
42	DN	100/103 (97%)	86 (86%)	14 (14%)	3	19
43	BO	86/87 (99%)	73 (85%)	13 (15%)	3	16
43	DO	86/87 (99%)	74 (86%)	12 (14%)	3	19
44	BQ	89/89 (100%)	76 (85%)	13 (15%)	3	17
44	DQ	89/89 (100%)	75 (84%)	14 (16%)	2	16
45	BS	93/93 (100%)	79 (85%)	14 (15%)	3	16
45	DS	93/93 (100%)	80 (86%)	13 (14%)	3	19
46	BU	83/84 (99%)	69 (83%)	14 (17%)	2	13
46	DU	83/84 (99%)	69 (83%)	14 (17%)	2	13
47	BF	149/149 (100%)	114 (76%)	35 (24%)	1	5
47	DF	149/149 (100%)	116 (78%)	33 (22%)	1	6
48	BG	137/137 (100%)	114 (83%)	23 (17%)	2	13
48	DG	137/137 (100%)	115 (84%)	22 (16%)	2	15
49	BR	84/84 (100%)	72 (86%)	12 (14%)	3	18
49	DR	84/84 (100%)	72 (86%)	12 (14%)	3	18
50	BT	80/84 (95%)	65 (81%)	15 (19%)	1	10
50	DT	80/84 (95%)	68 (85%)	12 (15%)	3	17
51	BZ	67/68 (98%)	53 (79%)	14 (21%)	1	7
51	DZ	67/68 (98%)	54 (81%)	13 (19%)	1	9
52	BW	59/62 (95%)	47 (80%)	12 (20%)	1	8
52	DW	59/62 (95%)	46 (78%)	13 (22%)	1	6
53	B6	157/157 (100%)	119 (76%)	38 (24%)	0	5
53	D6	157/157 (100%)	123 (78%)	34 (22%)	1	6
All	All	9647/10014 (96%)	8085 (84%)	1562 (16%)	2	15

All (1562) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	13	ILE
2	AC	17	TRP

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Mol	Chain	Res	Type
2	AC	19	SER
2	AC	27	GLU
2	AC	35	ASP
2	AC	41	TYR
2	AC	44	LYS
2	AC	48	LYS
2	AC	61	LYS
2	AC	62	SER
2	AC	69	THR
2	AC	71	ARG
2	AC	78	LYS
2	AC	84	GLU
2	AC	87	ARG
2	AC	88	LYS
2	AC	106	ARG
2	AC	125	ARG
2	AC	128	MET
2	AC	131	ARG
2	AC	138	GLN
2	AC	168	ARG
2	AC	171	ARG
2	AC	180	ASP
2	AC	184	ASN
2	AC	192	TYR
2	AC	206	ILE
3	AD	4	LEU
3	AD	18	LEU
3	AD	25	ARG
3	AD	28	ASP
3	AD	32	LYS
3	AD	35	GLN
3	AD	39	GLN
3	AD	55	ARG
3	AD	61	ARG
3	AD	84	ASN
3	AD	87	GLU
3	AD	114	ARG
3	AD	146	GLU
3	AD	147	LYS
3	AD	155	LYS
3	AD	160	LEU
3	AD	164	ARG

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Mol	Chain	Res	Type
3	AD	176	LYS
3	AD	183	ARG
3	AD	189	ASP
3	AD	190	LEU
3	AD	196	GLU
3	AD	197	HIS
3	AD	198	LEU
3	AD	203	TYR
4	AE	9	GLU
4	AE	23	THR
4	AE	28	ARG
4	AE	30	PHE
4	AE	45	VAL
4	AE	51	LYS
4	AE	55	VAL
4	AE	61	LYS
4	AE	64	GLU
4	AE	81	GLN
4	AE	95	MET
4	AE	115	GLU
4	AE	123	LEU
4	AE	127	TYR
4	AE	147	ASN
4	AE	151	MET
4	AE	156	ARG
5	AF	1	MET
5	AF	6	ILE
5	AF	13	ASP
5	AF	16	GLU
5	AF	39	LEU
5	AF	53	LYS
5	AF	54	LEU
5	AF	55	HIS
5	AF	61	LEU
5	AF	64	VAL
5	AF	71	ILE
5	AF	77	THR
5	AF	86	ARG
5	AF	87	SER
5	AF	90	MET
5	AF	98	GLU
6	AG	6	ILE

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Mol	Chain	Res	Type
6	AG	8	GLN
6	AG	10	LYS
6	AG	12	LEU
6	AG	21	LEU
6	AG	22	LEU
6	AG	26	VAL
6	AG	49	LEU
6	AG	55	LYS
6	AG	58	LEU
6	AG	62	GLU
6	AG	75	LYS
6	AG	78	ARG
6	AG	109	LYS
6	AG	110	ARG
6	AG	117	LEU
6	AG	129	ASN
7	AH	17	GLN
7	AH	55	LYS
7	AH	72	GLU
7	AH	76	ARG
7	AH	88	LYS
7	AH	107	LYS
7	AH	111	THR
7	AH	113	ARG
8	AI	36	GLN
8	AI	45	MET
8	AI	58	GLU
8	AI	59	LYS
8	AI	60	LEU
8	AI	61	ASP
8	AI	62	LEU
8	AI	67	LYS
8	AI	74	GLN
8	AI	84	ARG
8	AI	87	MET
8	AI	91	GLU
8	AI	94	ARG
8	AI	105	ARG
8	AI	106	ASP
8	AI	108	ARG
8	AI	109	GLN
9	AJ	14	ASP

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Mol	Chain	Res	Type
9	AJ	17	LEU
9	AJ	31	ARG
9	AJ	35	GLN
9	AJ	45	ARG
9	AJ	47	GLU
9	AJ	59	LYS
9	AJ	85	ASP
9	AJ	87	LEU
9	AJ	88	MET
9	AJ	89	ARG
9	AJ	90	LEU
9	AJ	92	LEU
10	AK	28	ASN
10	AK	29	THR
10	AK	34	THR
10	AK	51	PHE
10	AK	52	ARG
10	AK	55	ARG
10	AK	56	LYS
10	AK	80	ASN
10	AK	84	MET
10	AK	92	ARG
10	AK	100	ASN
10	AK	105	ARG
10	AK	117	HIS
10	AK	128	VAL
11	AL	13	ARG
11	AL	14	LYS
11	AL	15	VAL
11	AL	17	LYS
11	AL	19	ASN
11	AL	28	GLN
11	AL	43	LYS
11	AL	49	ARG
11	AL	93	ARG
11	AL	107	LYS
11	AL	114	SER
12	AM	2	ARG
12	AM	15	VAL
12	AM	28	ARG
12	AM	43	LYS
12	AM	44	ILE

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Mol	Chain	Res	Type
12	AM	46	GLU
12	AM	57	ASP
12	AM	64	VAL
12	AM	67	ASP
12	AM	71	GLU
12	AM	79	LEU
12	AM	82	LEU
12	AM	92	ARG
12	AM	102	LYS
13	AN	17	ASP
13	AN	19	TYR
13	AN	26	LEU
13	AN	30	ILE
13	AN	34	ASN
13	AN	40	ARG
13	AN	41	TRP
13	AN	45	LEU
13	AN	57	SER
13	AN	59	GLN
13	AN	65	GLN
13	AN	68	ARG
13	AN	97	LYS
14	AO	18	ASP
14	AO	25	THR
14	AO	37	ASN
14	AO	42	HIS
14	AO	54	ARG
14	AO	59	MET
14	AO	64	ARG
14	AO	68	ASP
14	AO	70	LEU
14	AO	71	LYS
14	AO	88	ARG
14	AO	89	ARG
15	AP	28	ARG
15	AP	31	ARG
15	AP	45	GLU
15	AP	51	ARG
15	AP	79	ASN
16	AQ	24	ILE
16	AQ	39	ARG
16	AQ	56	ASP

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Mol	Chain	Res	Type
16	AQ	60	ILE
16	AQ	61	ARG
16	AQ	67	SER
16	AQ	71	SER
16	AQ	80	LYS
17	AR	33	THR
17	AR	38	ILE
17	AR	73	HIS
18	AS	2	ARG
18	AS	4	LEU
18	AS	5	LYS
18	AS	12	LEU
18	AS	13	HIS
18	AS	14	LEU
18	AS	15	LEU
18	AS	17	LYS
18	AS	20	LYS
18	AS	23	GLU
18	AS	27	LYS
18	AS	28	LYS
18	AS	42	ASN
18	AS	43	MET
18	AS	46	LEU
18	AS	64	GLU
19	AT	4	LYS
19	AT	35	TYR
19	AT	38	ILE
19	AT	43	LYS
19	AT	51	ASN
19	AT	53	MET
19	AT	69	ASN
19	AT	74	HIS
19	AT	85	LEU
20	AB	20	ARG
20	AB	27	LYS
20	AB	35	ASN
20	AB	36	LYS
20	AB	38	HIS
20	AB	43	GLU
20	AB	46	VAL
20	AB	53	LEU
20	AB	57	ASN

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Mol	Chain	Res	Type
20	AB	62	ARG
20	AB	67	LEU
20	AB	84	LEU
20	AB	87	ASP
20	AB	88	GLN
20	AB	94	ARG
20	AB	95	TRP
20	AB	100	LEU
20	AB	104	LYS
20	AB	124	THR
20	AB	127	LYS
20	AB	128	LEU
20	AB	138	ARG
20	AB	166	ASP
20	AB	176	ASN
20	AB	196	ASP
20	AB	202	ASN
20	AB	203	ASP
20	AB	211	LEU
20	AB	213	LEU
20	AB	221	ARG
21	AU	7	GLU
21	AU	11	PHE
21	AU	15	LEU
21	AU	16	ARG
21	AU	20	ARG
21	AU	22	CYS
21	AU	24	LYS
21	AU	33	ARG
21	AU	34	ARG
21	AU	35	GLU
21	AU	38	GLU
21	AU	44	ARG
21	AU	48	LYS
24	BI	63	ASP
24	BI	96	LYS
25	BC	4	LYS
25	BC	12	ARG
25	BC	37	SER
25	BC	43	ASN
25	BC	44	ASN
25	BC	45	ASN

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Mol	Chain	Res	Type
25	BC	47	ARG
25	BC	52	HIS
25	BC	62	ARG
25	BC	65	ASP
25	BC	86	ARG
25	BC	89	ASN
25	BC	90	ILE
25	BC	100	ARG
25	BC	109	LEU
25	BC	123	ILE
25	BC	129	LEU
25	BC	134	ILE
25	BC	142	ASN
25	BC	155	ARG
25	BC	167	ASP
25	BC	172	THR
25	BC	173	LEU
25	BC	176	ARG
25	BC	180	MET
25	BC	181	ARG
25	BC	191	LEU
25	BC	196	ASN
25	BC	203	VAL
25	BC	211	ARG
25	BC	212	TRP
25	BC	224	MET
25	BC	239	PHE
25	BC	245	THR
25	BC	249	VAL
25	BC	250	GLN
25	BC	251	THR
25	BC	257	ARG
26	BD	16	THR
26	BD	30	GLU
26	BD	40	LEU
26	BD	56	LYS
26	BD	79	LEU
26	BD	81	GLU
26	BD	82	PHE
26	BD	84	LEU
26	BD	88	GLU
26	BD	95	SER

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Mol	Chain	Res	Type
26	BD	99	GLU
26	BD	114	LYS
26	BD	124	ARG
26	BD	137	SER
26	BD	138	LEU
26	BD	142	VAL
26	BD	148	GLN
26	BD	159	LYS
26	BD	179	ARG
26	BD	186	LEU
26	BD	197	THR
26	BD	204	LYS
27	BK	2	ILE
27	BK	8	LEU
27	BK	18	ARG
27	BK	21	CYS
27	BK	25	LEU
27	BK	32	TYR
27	BK	47	ILE
27	BK	53	LYS
27	BK	54	LYS
27	BK	58	LEU
27	BK	64	ARG
27	BK	67	LYS
27	BK	70	ARG
27	BK	72	PRO
27	BK	73	ASP
27	BK	79	PHE
27	BK	80	ASP
27	BK	86	LEU
27	BK	87	LEU
27	BK	88	ASN
27	BK	89	ASN
27	BK	98	ARG
27	BK	104	THR
27	BK	105	ARG
27	BK	107	LEU
27	BK	111	LYS
27	BK	120	PRO
28	BP	3	ILE
28	BP	6	GLN
28	BP	19	PHE

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Mol	Chain	Res	Type
28	BP	25	VAL
28	BP	33	GLU
28	BP	38	ARG
28	BP	43	GLU
28	BP	61	ARG
28	BP	65	ASN
28	BP	80	VAL
28	BP	83	ILE
28	BP	99	LEU
28	BP	100	ARG
28	BP	101	GLU
28	BP	111	GLU
28	BP	112	ARG
28	BP	114	ASN
29	BE	2	GLU
29	BE	3	LEU
29	BE	5	LEU
29	BE	7	ASP
29	BE	22	ASP
29	BE	24	ASN
29	BE	58	LYS
29	BE	60	TRP
29	BE	62	GLN
29	BE	67	ARG
29	BE	70	SER
29	BE	75	SER
29	BE	80	SER
29	BE	97	ASN
29	BE	107	SER
29	BE	108	ILE
29	BE	111	GLU
29	BE	116	ASP
29	BE	118	LEU
29	BE	122	GLU
29	BE	133	LEU
29	BE	150	THR
29	BE	159	LEU
29	BE	163	ASN
30	BY	2	LYS
30	BY	6	ILE
30	BY	8	GLN
30	BY	15	ARG

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Mol	Chain	Res	Type
30	BY	16	LEU
30	BY	19	HIS
30	BY	23	LEU
30	BY	30	ARG
30	BY	37	ARG
30	BY	43	ILE
31	B0	5	ASN
31	B0	27	LEU
31	B0	31	LYS
31	B0	38	LEU
31	B0	41	HIS
31	B0	51	ARG
31	B0	53	VAL
31	B0	56	LYS
32	B4	2	LYS
32	B4	9	LYS
32	B4	15	LYS
32	B4	22	VAL
32	B4	24	ARG
32	B4	35	GLN
33	B1	6	GLU
33	B1	9	LYS
33	B1	35	LEU
34	B3	7	ARG
34	B3	18	LYS
34	B3	49	VAL
34	B3	61	LEU
35	BV	35	GLU
35	BV	40	ILE
35	BV	41	GLU
35	BV	42	LEU
35	BV	45	ASP
35	BV	46	LYS
35	BV	51	GLN
35	BV	53	LYS
35	BV	66	ASP
35	BV	69	GLU
35	BV	70	ILE
35	BV	75	GLN
36	B2	19	ARG
36	B2	33	ARG
36	B2	35	ARG

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Mol	Chain	Res	Type
36	B2	39	ARG
37	BL	10	GLU
37	BL	39	LYS
37	BL	47	ARG
37	BL	55	MET
37	BL	60	ARG
37	BL	67	THR
37	BL	69	ARG
37	BL	82	LEU
37	BL	91	ASP
37	BL	92	LEU
37	BL	95	LEU
37	BL	99	ASN
37	BL	112	LEU
37	BL	118	THR
37	BL	123	ARG
38	BM	1	MET
38	BM	2	LEU
38	BM	7	THR
38	BM	10	ARG
38	BM	18	ARG
38	BM	20	LEU
38	BM	26	VAL
38	BM	47	GLU
38	BM	55	ARG
38	BM	65	ILE
38	BM	70	ASP
38	BM	78	LEU
38	BM	81	ARG
38	BM	88	ASN
38	BM	90	GLU
38	BM	108	VAL
38	BM	110	GLU
38	BM	111	GLU
38	BM	114	ARG
38	BM	115	GLU
38	BM	123	LYS
39	BX	1	MET
39	BX	7	ARG
39	BX	10	SER
39	BX	15	ASN
39	BX	18	LEU

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Mol	Chain	Res	Type
39	BX	20	ASN
39	BX	21	LEU
39	BX	28	LEU
39	BX	29	ARG
39	BX	30	MET
39	BX	38	GLN
39	BX	41	HIS
39	BX	48	ARG
39	BX	49	ASP
39	BX	59	GLU
40	BH	3	VAL
40	BH	4	ILE
40	BH	12	LEU
40	BH	15	LEU
40	BH	19	VAL
40	BH	28	ASN
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	41	LYS
40	BH	43	ASN
40	BH	44	ILE
40	BH	45	GLU
40	BH	46	PHE
40	BH	48	GLU
40	BH	50	ARG
40	BH	51	ARG
40	BH	54	LEU
40	BH	57	LYS
40	BH	58	LEU
40	BH	60	GLU
40	BH	62	LEU
40	BH	68	ARG
40	BH	70	GLU
40	BH	71	LYS
40	BH	73	ASN
40	BH	75	LEU
40	BH	79	THR
40	BH	82	SER
40	BH	87	GLU
40	BH	89	LYS
40	BH	110	VAL

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Mol	Chain	Res	Type
40	BH	112	LYS
40	BH	114	GLU
40	BH	116	ARG
40	BH	119	ASN
40	BH	125	THR
40	BH	128	HIS
40	BH	130	VAL
40	BH	134	VAL
40	BH	135	HIS
40	BH	138	VAL
40	BH	139	PHE
40	BH	141	LYS
40	BH	142	VAL
40	BH	147	VAL
41	BJ	3	THR
41	BJ	5	THR
41	BJ	9	GLU
41	BJ	12	LYS
41	BJ	28	LEU
41	BJ	30	THR
41	BJ	44	TYR
41	BJ	65	THR
41	BJ	71	ASP
41	BJ	73	VAL
41	BJ	95	ARG
41	BJ	106	LYS
41	BJ	120	ARG
41	BJ	124	VAL
41	BJ	129	GLU
41	BJ	131	ASN
41	BJ	138	GLN
42	BN	1	MET
42	BN	9	GLN
42	BN	11	ASN
42	BN	20	MET
42	BN	31	HIS
42	BN	35	LYS
42	BN	46	ARG
42	BN	51	LEU
42	BN	69	ARG
42	BN	71	ARG
42	BN	82	GLU

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Mol	Chain	Res	Type
42	BN	96	ARG
42	BN	114	GLU
42	BN	120	GLU
43	BO	31	THR
43	BO	35	ILE
43	BO	36	TYR
43	BO	43	ASN
43	BO	58	ILE
43	BO	62	LEU
43	BO	69	ASP
43	BO	74	VAL
43	BO	81	ARG
43	BO	89	ASP
43	BO	106	LEU
43	BO	115	LEU
43	BO	116	GLN
44	BQ	4	LYS
44	BQ	5	ARG
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	63	ARG
44	BQ	69	ARG
44	BQ	79	ILE
44	BQ	83	LYS
44	BQ	84	LYS
44	BQ	89	ILE
44	BQ	90	ASP
44	BQ	91	ARG
44	BQ	96	ASP
45	BS	7	HIS
45	BS	15	GLN
45	BS	22	ASP
45	BS	27	LYS
45	BS	57	ASN
45	BS	61	ASN
45	BS	66	ILE
45	BS	72	THR
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG
45	BS	92	ARG
45	BS	99	ARG

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Mol	Chain	Res	Type
45	BS	101	SER
46	BU	11	ILE
46	BU	13	LEU
46	BU	20	LYS
46	BU	26	ASN
46	BU	45	GLN
46	BU	49	PRO
46	BU	51	LEU
46	BU	53	GLN
46	BU	60	LYS
46	BU	73	ASN
46	BU	78	LYS
46	BU	81	ARG
46	BU	85	ARG
46	BU	88	ASP
47	BF	2	LYS
47	BF	13	LYS
47	BF	19	PHE
47	BF	22	ASN
47	BF	29	ARG
47	BF	32	LYS
47	BF	46	LYS
47	BF	50	ASP
47	BF	55	ASP
47	BF	56	LEU
47	BF	68	LYS
47	BF	70	ARG
47	BF	76	PHE
47	BF	79	ARG
47	BF	91	ARG
47	BF	96	TRP
47	BF	97	GLU
47	BF	100	GLU
47	BF	102	LEU
47	BF	103	ILE
47	BF	109	ARG
47	BF	111	ARG
47	BF	120	SER
47	BF	121	PHE
47	BF	124	ARG
47	BF	129	MET
47	BF	134	GLN

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Mol	Chain	Res	Type
47	BF	137	PHE
47	BF	138	PRO
47	BF	142	TYR
47	BF	149	ARG
47	BF	168	LEU
47	BF	173	ASP
47	BF	174	PHE
47	BF	178	LYS
48	BG	2	ARG
48	BG	14	VAL
48	BG	24	THR
48	BG	26	LYS
48	BG	31	GLU
48	BG	34	ARG
48	BG	46	ASP
48	BG	54	ARG
48	BG	61	TRP
48	BG	66	THR
48	BG	68	ARG
48	BG	70	LEU
48	BG	84	LYS
48	BG	94	ARG
48	BG	106	LEU
48	BG	120	ILE
48	BG	132	LEU
48	BG	133	LYS
48	BG	138	GLN
48	BG	152	ARG
48	BG	162	ARG
48	BG	166	GLU
48	BG	176	LYS
49	BR	4	VAL
49	BR	19	THR
49	BR	22	LEU
49	BR	39	LEU
49	BR	53	PHE
49	BR	55	ASP
49	BR	70	GLU
49	BR	71	LYS
49	BR	72	VAL
49	BR	79	ARG
49	BR	82	HIS

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Mol	Chain	Res	Type
49	BR	86	GLN
50	BT	2	ILE
50	BT	3	ARG
50	BT	4	GLU
50	BT	9	LYS
50	BT	11	LEU
50	BT	12	ARG
50	BT	25	GLU
50	BT	29	THR
50	BT	32	LEU
50	BT	50	LEU
50	BT	64	LYS
50	BT	68	LYS
50	BT	69	ARG
50	BT	70	HIS
50	BT	81	LYS
51	BZ	2	SER
51	BZ	14	THR
51	BZ	25	THR
51	BZ	27	ARG
51	BZ	28	ARG
51	BZ	30	LEU
51	BZ	33	LEU
51	BZ	37	ARG
51	BZ	46	PHE
51	BZ	50	ARG
51	BZ	60	ASP
51	BZ	66	THR
51	BZ	77	LYS
51	BZ	78	TYR
52	BW	10	ARG
52	BW	16	GLU
52	BW	19	ARG
52	BW	24	ARG
52	BW	25	PHE
52	BW	39	GLN
52	BW	44	PHE
52	BW	49	ASN
52	BW	50	VAL
52	BW	75	ASN
52	BW	77	LYS
52	BW	82	GLU

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Mol	Chain	Res	Type
53	B6	1	MET
53	B6	10	THR
53	B6	12	SER
53	B6	16	LYS
53	B6	22	GLU
53	B6	24	ASN
53	B6	39	LEU
53	B6	46	TYR
53	B6	50	VAL
53	B6	59	THR
53	B6	62	ASP
53	B6	64	ARG
53	B6	66	LEU
53	B6	71	TRP
53	B6	73	GLN
53	B6	77	LYS
53	B6	84	ARG
53	B6	86	SER
53	B6	88	LEU
53	B6	90	LEU
53	B6	97	ASP
53	B6	102	ASN
53	B6	106	LEU
53	B6	111	ARG
53	B6	112	LYS
53	B6	113	ASP
53	B6	134	ARG
53	B6	137	LEU
53	B6	141	LYS
53	B6	142	LYS
53	B6	147	LEU
53	B6	156	ARG
53	B6	162	GLN
53	B6	169	ILE
53	B6	174	GLN
53	B6	177	GLU
53	B6	180	GLU
53	B6	181	GLN
2	CC	2	GLN
2	CC	13	ILE
2	CC	17	TRP
2	CC	19	SER

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Mol	Chain	Res	Type
2	CC	27	GLU
2	CC	35	ASP
2	CC	41	TYR
2	CC	44	LYS
2	CC	48	LYS
2	CC	61	LYS
2	CC	62	SER
2	CC	69	THR
2	CC	71	ARG
2	CC	78	LYS
2	CC	84	GLU
2	CC	87	ARG
2	CC	88	LYS
2	CC	106	ARG
2	CC	125	ARG
2	CC	128	MET
2	CC	131	ARG
2	CC	138	GLN
2	CC	168	ARG
2	CC	171	ARG
2	CC	180	ASP
2	CC	184	ASN
2	CC	192	TYR
2	CC	206	ILE
3	CD	4	LEU
3	CD	18	LEU
3	CD	25	ARG
3	CD	28	ASP
3	CD	32	LYS
3	CD	35	GLN
3	CD	39	GLN
3	CD	55	ARG
3	CD	61	ARG
3	CD	84	ASN
3	CD	87	GLU
3	CD	114	ARG
3	CD	146	GLU
3	CD	147	LYS
3	CD	155	LYS
3	CD	160	LEU
3	CD	164	ARG
3	CD	176	LYS

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Mol	Chain	Res	Type
3	CD	183	ARG
3	CD	189	ASP
3	CD	190	LEU
3	CD	196	GLU
3	CD	198	LEU
3	CD	203	TYR
4	CE	9	GLU
4	CE	23	THR
4	CE	28	ARG
4	CE	30	PHE
4	CE	45	VAL
4	CE	51	LYS
4	CE	55	VAL
4	CE	61	LYS
4	CE	64	GLU
4	CE	81	GLN
4	CE	95	MET
4	CE	115	GLU
4	CE	123	LEU
4	CE	127	TYR
4	CE	147	ASN
4	CE	151	MET
4	CE	156	ARG
5	CF	1	MET
5	CF	6	ILE
5	CF	13	ASP
5	CF	16	GLU
5	CF	39	LEU
5	CF	53	LYS
5	CF	54	LEU
5	CF	55	HIS
5	CF	61	LEU
5	CF	62	MET
5	CF	64	VAL
5	CF	71	ILE
5	CF	77	THR
5	CF	86	ARG
5	CF	87	SER
5	CF	90	MET
5	CF	98	GLU
6	CG	2	ARG
6	CG	8	GLN

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Mol	Chain	Res	Type
6	CG	10	LYS
6	CG	12	LEU
6	CG	21	LEU
6	CG	22	LEU
6	CG	26	VAL
6	CG	49	LEU
6	CG	55	LYS
6	CG	58	LEU
6	CG	62	GLU
6	CG	75	LYS
6	CG	78	ARG
6	CG	109	LYS
6	CG	117	LEU
6	CG	129	ASN
7	CH	17	GLN
7	CH	55	LYS
7	CH	72	GLU
7	CH	76	ARG
7	CH	88	LYS
7	CH	107	LYS
7	CH	111	THR
7	CH	113	ARG
8	CI	36	GLN
8	CI	45	MET
8	CI	58	GLU
8	CI	59	LYS
8	CI	60	LEU
8	CI	61	ASP
8	CI	62	LEU
8	CI	67	LYS
8	CI	74	GLN
8	CI	84	ARG
8	CI	87	MET
8	CI	91	GLU
8	CI	94	ARG
8	CI	105	ARG
8	CI	106	ASP
8	CI	108	ARG
8	CI	109	GLN
9	CJ	14	ASP
9	CJ	17	LEU
9	CJ	31	ARG

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Mol	Chain	Res	Type
9	CJ	35	GLN
9	CJ	45	ARG
9	CJ	47	GLU
9	CJ	59	LYS
9	CJ	85	ASP
9	CJ	87	LEU
9	CJ	88	MET
9	CJ	89	ARG
9	CJ	90	LEU
9	CJ	92	LEU
10	CK	28	ASN
10	CK	29	THR
10	CK	34	THR
10	CK	51	PHE
10	CK	52	ARG
10	CK	55	ARG
10	CK	56	LYS
10	CK	80	ASN
10	CK	84	MET
10	CK	92	ARG
10	CK	100	ASN
10	CK	105	ARG
10	CK	117	HIS
10	CK	128	VAL
11	CL	13	ARG
11	CL	14	LYS
11	CL	15	VAL
11	CL	17	LYS
11	CL	19	ASN
11	CL	28	GLN
11	CL	33	CYS
11	CL	43	LYS
11	CL	49	ARG
11	CL	93	ARG
11	CL	107	LYS
11	CL	114	SER
12	CM	2	ARG
12	CM	15	VAL
12	CM	28	ARG
12	CM	43	LYS
12	CM	44	ILE
12	CM	46	GLU

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Mol	Chain	Res	Type
12	CM	57	ASP
12	CM	64	VAL
12	CM	67	ASP
12	CM	71	GLU
12	CM	79	LEU
12	CM	82	LEU
12	CM	92	ARG
12	CM	102	LYS
13	CN	17	ASP
13	CN	19	TYR
13	CN	26	LEU
13	CN	30	ILE
13	CN	34	ASN
13	CN	40	ARG
13	CN	41	TRP
13	CN	45	LEU
13	CN	57	SER
13	CN	59	GLN
13	CN	65	GLN
13	CN	68	ARG
13	CN	97	LYS
14	CO	18	ASP
14	CO	25	THR
14	CO	37	ASN
14	CO	42	HIS
14	CO	54	ARG
14	CO	59	MET
14	CO	64	ARG
14	CO	68	ASP
14	CO	70	LEU
14	CO	71	LYS
14	CO	88	ARG
14	CO	89	ARG
15	CP	28	ARG
15	CP	31	ARG
15	CP	45	GLU
15	CP	51	ARG
15	CP	79	ASN
16	CQ	24	ILE
16	CQ	39	ARG
16	CQ	56	ASP
16	CQ	60	ILE

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Mol	Chain	Res	Type
16	CQ	61	ARG
16	CQ	67	SER
16	CQ	71	SER
16	CQ	80	LYS
17	CR	33	THR
17	CR	38	ILE
17	CR	73	HIS
18	CS	2	ARG
18	CS	4	LEU
18	CS	5	LYS
18	CS	12	LEU
18	CS	13	HIS
18	CS	14	LEU
18	CS	15	LEU
18	CS	17	LYS
18	CS	20	LYS
18	CS	23	GLU
18	CS	27	LYS
18	CS	28	LYS
18	CS	42	ASN
18	CS	43	MET
18	CS	46	LEU
18	CS	64	GLU
19	CT	4	LYS
19	CT	35	TYR
19	CT	38	ILE
19	CT	43	LYS
19	CT	51	ASN
19	CT	53	MET
19	CT	69	ASN
19	CT	74	HIS
19	CT	85	LEU
20	CB	20	ARG
20	CB	27	LYS
20	CB	35	ASN
20	CB	36	LYS
20	CB	38	HIS
20	CB	43	GLU
20	CB	46	VAL
20	CB	53	LEU
20	CB	57	ASN
20	CB	62	ARG

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Mol	Chain	Res	Type
20	CB	67	LEU
20	CB	76	SER
20	CB	84	LEU
20	CB	87	ASP
20	CB	88	GLN
20	CB	94	ARG
20	CB	95	TRP
20	CB	100	LEU
20	CB	104	LYS
20	CB	125	PHE
20	CB	127	LYS
20	CB	130	LYS
20	CB	138	ARG
20	CB	166	ASP
20	CB	176	ASN
20	CB	196	ASP
20	CB	202	ASN
20	CB	203	ASP
20	CB	211	LEU
20	CB	213	LEU
20	CB	221	ARG
21	CU	11	PHE
21	CU	15	LEU
21	CU	16	ARG
21	CU	18	PHE
21	CU	20	ARG
21	CU	22	CYS
21	CU	24	LYS
21	CU	33	ARG
21	CU	34	ARG
21	CU	35	GLU
21	CU	38	GLU
21	CU	44	ARG
21	CU	48	LYS
24	DI	2	LYS
24	DI	54	ILE
24	DI	91	LYS
24	DI	99	LYS
24	DI	121	ILE
24	DI	140	GLU
25	DC	4	LYS
25	DC	12	ARG

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Mol	Chain	Res	Type
25	DC	37	SER
25	DC	43	ASN
25	DC	44	ASN
25	DC	45	ASN
25	DC	47	ARG
25	DC	52	HIS
25	DC	62	ARG
25	DC	65	ASP
25	DC	86	ARG
25	DC	89	ASN
25	DC	90	ILE
25	DC	100	ARG
25	DC	109	LEU
25	DC	123	ILE
25	DC	129	LEU
25	DC	134	ILE
25	DC	142	ASN
25	DC	155	ARG
25	DC	167	ASP
25	DC	172	THR
25	DC	173	LEU
25	DC	176	ARG
25	DC	180	MET
25	DC	181	ARG
25	DC	191	LEU
25	DC	203	VAL
25	DC	211	ARG
25	DC	212	TRP
25	DC	224	MET
25	DC	239	PHE
25	DC	245	THR
25	DC	249	VAL
25	DC	250	GLN
25	DC	251	THR
25	DC	257	ARG
26	DD	16	THR
26	DD	30	GLU
26	DD	40	LEU
26	DD	56	LYS
26	DD	79	LEU
26	DD	81	GLU
26	DD	82	PHE

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Mol	Chain	Res	Type
26	DD	84	LEU
26	DD	88	GLU
26	DD	91	THR
26	DD	95	SER
26	DD	99	GLU
26	DD	114	LYS
26	DD	124	ARG
26	DD	137	SER
26	DD	138	LEU
26	DD	141	ARG
26	DD	142	VAL
26	DD	148	GLN
26	DD	159	LYS
26	DD	179	ARG
26	DD	186	LEU
26	DD	197	THR
26	DD	204	LYS
27	DK	2	ILE
27	DK	8	LEU
27	DK	18	ARG
27	DK	21	CYS
27	DK	25	LEU
27	DK	32	TYR
27	DK	47	ILE
27	DK	53	LYS
27	DK	54	LYS
27	DK	58	LEU
27	DK	64	ARG
27	DK	67	LYS
27	DK	70	ARG
27	DK	72	PRO
27	DK	73	ASP
27	DK	79	PHE
27	DK	80	ASP
27	DK	86	LEU
27	DK	87	LEU
27	DK	88	ASN
27	DK	89	ASN
27	DK	98	ARG
27	DK	104	THR
27	DK	105	ARG
27	DK	107	LEU

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Mol	Chain	Res	Type
27	DK	111	LYS
27	DK	120	PRO
28	DP	3	ILE
28	DP	6	GLN
28	DP	19	PHE
28	DP	25	VAL
28	DP	33	GLU
28	DP	38	ARG
28	DP	43	GLU
28	DP	61	ARG
28	DP	65	ASN
28	DP	80	VAL
28	DP	83	ILE
28	DP	99	LEU
28	DP	100	ARG
28	DP	101	GLU
28	DP	111	GLU
28	DP	112	ARG
28	DP	114	ASN
29	DE	2	GLU
29	DE	3	LEU
29	DE	5	LEU
29	DE	7	ASP
29	DE	22	ASP
29	DE	24	ASN
29	DE	58	LYS
29	DE	60	TRP
29	DE	62	GLN
29	DE	67	ARG
29	DE	70	SER
29	DE	75	SER
29	DE	80	SER
29	DE	97	ASN
29	DE	98	LYS
29	DE	107	SER
29	DE	108	ILE
29	DE	111	GLU
29	DE	116	ASP
29	DE	118	LEU
29	DE	122	GLU
29	DE	133	LEU
29	DE	150	THR

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Mol	Chain	Res	Type
29	DE	159	LEU
29	DE	163	ASN
30	DY	2	LYS
30	DY	6	ILE
30	DY	8	GLN
30	DY	15	ARG
30	DY	16	LEU
30	DY	19	HIS
30	DY	23	LEU
30	DY	30	ARG
30	DY	37	ARG
30	DY	43	ILE
31	D0	5	ASN
31	D0	27	LEU
31	D0	31	LYS
31	D0	38	LEU
31	D0	41	HIS
31	D0	51	ARG
31	D0	53	VAL
31	D0	56	LYS
32	D4	2	LYS
32	D4	9	LYS
32	D4	15	LYS
32	D4	22	VAL
32	D4	24	ARG
32	D4	35	GLN
33	D1	6	GLU
33	D1	9	LYS
33	D1	35	LEU
34	D3	7	ARG
34	D3	18	LYS
34	D3	49	VAL
34	D3	61	LEU
35	DV	35	GLU
35	DV	40	ILE
35	DV	42	LEU
35	DV	45	ASP
35	DV	46	LYS
35	DV	51	GLN
35	DV	53	LYS
35	DV	66	ASP
35	DV	69	GLU

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Mol	Chain	Res	Type
35	DV	70	ILE
35	DV	75	GLN
36	D2	19	ARG
36	D2	33	ARG
36	D2	35	ARG
36	D2	39	ARG
37	DL	10	GLU
37	DL	39	LYS
37	DL	47	ARG
37	DL	55	MET
37	DL	67	THR
37	DL	69	ARG
37	DL	82	LEU
37	DL	91	ASP
37	DL	92	LEU
37	DL	95	LEU
37	DL	99	ASN
37	DL	112	LEU
37	DL	118	THR
37	DL	123	ARG
38	DM	1	MET
38	DM	7	THR
38	DM	10	ARG
38	DM	18	ARG
38	DM	20	LEU
38	DM	26	VAL
38	DM	47	GLU
38	DM	55	ARG
38	DM	65	ILE
38	DM	70	ASP
38	DM	78	LEU
38	DM	81	ARG
38	DM	88	ASN
38	DM	90	GLU
38	DM	108	VAL
38	DM	111	GLU
38	DM	114	ARG
38	DM	115	GLU
38	DM	123	LYS
38	DM	126	ILE
39	DX	1	MET
39	DX	7	ARG

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Mol	Chain	Res	Type
39	DX	10	SER
39	DX	15	ASN
39	DX	18	LEU
39	DX	20	ASN
39	DX	21	LEU
39	DX	28	LEU
39	DX	29	ARG
39	DX	30	MET
39	DX	41	HIS
39	DX	49	ASP
39	DX	59	GLU
40	DH	3	VAL
40	DH	4	ILE
40	DH	12	LEU
40	DH	15	LEU
40	DH	19	VAL
40	DH	28	ASN
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	47	PHE
40	DH	50	ARG
40	DH	55	GLU
40	DH	70	GLU
40	DH	83	LYS
40	DH	97	ARG
40	DH	112	LYS
40	DH	113	SER
40	DH	121	VAL
40	DH	124	THR
40	DH	129	GLU
40	DH	133	GLN
40	DH	137	GLU
40	DH	141	LYS
41	DJ	3	THR
41	DJ	5	THR
41	DJ	9	GLU
41	DJ	12	LYS
41	DJ	28	LEU
41	DJ	30	THR
41	DJ	44	TYR
41	DJ	65	THR

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Mol	Chain	Res	Type
41	DJ	71	ASP
41	DJ	92	MET
41	DJ	95	ARG
41	DJ	106	LYS
41	DJ	120	ARG
41	DJ	124	VAL
41	DJ	129	GLU
41	DJ	131	ASN
41	DJ	138	GLN
42	DN	1	MET
42	DN	9	GLN
42	DN	11	ASN
42	DN	20	MET
42	DN	31	HIS
42	DN	35	LYS
42	DN	46	ARG
42	DN	51	LEU
42	DN	69	ARG
42	DN	71	ARG
42	DN	82	GLU
42	DN	96	ARG
42	DN	114	GLU
42	DN	120	GLU
43	DO	31	THR
43	DO	35	ILE
43	DO	36	TYR
43	DO	58	ILE
43	DO	62	LEU
43	DO	69	ASP
43	DO	74	VAL
43	DO	81	ARG
43	DO	89	ASP
43	DO	106	LEU
43	DO	115	LEU
43	DO	116	GLN
44	DQ	4	LYS
44	DQ	5	ARG
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	63	ARG
44	DQ	69	ARG
44	DQ	79	ILE

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Mol	Chain	Res	Type
44	DQ	83	LYS
44	DQ	84	LYS
44	DQ	88	GLU
44	DQ	89	ILE
44	DQ	90	ASP
44	DQ	91	ARG
44	DQ	96	ASP
45	DS	7	HIS
45	DS	15	GLN
45	DS	22	ASP
45	DS	27	LYS
45	DS	57	ASN
45	DS	61	ASN
45	DS	66	ILE
45	DS	72	THR
45	DS	84	ARG
45	DS	86	MET
45	DS	88	ARG
45	DS	99	ARG
45	DS	101	SER
46	DU	11	ILE
46	DU	13	LEU
46	DU	20	LYS
46	DU	26	ASN
46	DU	45	GLN
46	DU	49	PRO
46	DU	51	LEU
46	DU	53	GLN
46	DU	60	LYS
46	DU	73	ASN
46	DU	78	LYS
46	DU	81	ARG
46	DU	85	ARG
46	DU	88	ASP
47	DF	2	LYS
47	DF	13	LYS
47	DF	19	PHE
47	DF	22	ASN
47	DF	29	ARG
47	DF	32	LYS
47	DF	46	LYS
47	DF	50	ASP

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Mol	Chain	Res	Type
47	DF	55	ASP
47	DF	68	LYS
47	DF	70	ARG
47	DF	76	PHE
47	DF	79	ARG
47	DF	91	ARG
47	DF	96	TRP
47	DF	97	GLU
47	DF	100	GLU
47	DF	102	LEU
47	DF	103	ILE
47	DF	109	ARG
47	DF	111	ARG
47	DF	120	SER
47	DF	121	PHE
47	DF	124	ARG
47	DF	129	MET
47	DF	134	GLN
47	DF	137	PHE
47	DF	138	PRO
47	DF	149	ARG
47	DF	168	LEU
47	DF	173	ASP
47	DF	174	PHE
47	DF	178	LYS
48	DG	14	VAL
48	DG	24	THR
48	DG	26	LYS
48	DG	31	GLU
48	DG	34	ARG
48	DG	46	ASP
48	DG	54	ARG
48	DG	61	TRP
48	DG	66	THR
48	DG	68	ARG
48	DG	70	LEU
48	DG	84	LYS
48	DG	94	ARG
48	DG	106	LEU
48	DG	120	ILE
48	DG	132	LEU
48	DG	133	LYS

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Mol	Chain	Res	Type
48	DG	138	GLN
48	DG	152	ARG
48	DG	162	ARG
48	DG	166	GLU
48	DG	176	LYS
49	DR	4	VAL
49	DR	19	THR
49	DR	22	LEU
49	DR	39	LEU
49	DR	53	PHE
49	DR	55	ASP
49	DR	70	GLU
49	DR	71	LYS
49	DR	72	VAL
49	DR	79	ARG
49	DR	82	HIS
49	DR	86	GLN
50	DT	2	ILE
50	DT	3	ARG
50	DT	4	GLU
50	DT	9	LYS
50	DT	11	LEU
50	DT	12	ARG
50	DT	32	LEU
50	DT	64	LYS
50	DT	68	LYS
50	DT	69	ARG
50	DT	70	HIS
50	DT	81	LYS
51	DZ	2	SER
51	DZ	25	THR
51	DZ	27	ARG
51	DZ	28	ARG
51	DZ	30	LEU
51	DZ	33	LEU
51	DZ	37	ARG
51	DZ	46	PHE
51	DZ	50	ARG
51	DZ	60	ASP
51	DZ	66	THR
51	DZ	77	LYS
51	DZ	78	TYR

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Mol	Chain	Res	Type
52	DW	10	ARG
52	DW	14	ASP
52	DW	16	GLU
52	DW	19	ARG
52	DW	24	ARG
52	DW	25	PHE
52	DW	39	GLN
52	DW	44	PHE
52	DW	49	ASN
52	DW	50	VAL
52	DW	75	ASN
52	DW	77	LYS
52	DW	82	GLU
53	D6	1	MET
53	D6	6	LEU
53	D6	9	GLU
53	D6	12	SER
53	D6	13	HIS
53	D6	16	LYS
53	D6	17	SER
53	D6	29	ARG
53	D6	41	LEU
53	D6	44	GLU
53	D6	52	LEU
53	D6	53	ASN
53	D6	54	GLN
53	D6	64	ARG
53	D6	71	TRP
53	D6	73	GLN
53	D6	74	ASN
53	D6	84	ARG
53	D6	85	ASP
53	D6	93	SER
53	D6	94	ASN
53	D6	107	THR
53	D6	108	GLU
53	D6	110	ARG
53	D6	114	LEU
53	D6	115	VAL
53	D6	121	TYR
53	D6	130	ARG
53	D6	137	LEU

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Mol	Chain	Res	Type
53	D6	138	ASP
53	D6	150	SER
53	D6	154	THR
53	D6	156	ARG
53	D6	174	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (336) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	5	HIS
2	AC	68	HIS
2	AC	99	GLN
2	AC	139	ASN
2	AC	184	ASN
2	AC	189	HIS
3	AD	35	GLN
3	AD	84	ASN
3	AD	135	GLN
3	AD	163	GLN
4	AE	18	ASN
4	AE	131	ASN
5	AF	17	GLN
5	AF	37	HIS
5	AF	46	GLN
6	AG	67	ASN
6	AG	121	ASN
7	AH	3	GLN
7	AH	17	GLN
7	AH	117	GLN
8	AI	24	ASN
8	AI	30	ASN
8	AI	31	GLN
8	AI	36	GLN
8	AI	74	GLN
8	AI	80	HIS
9	AJ	15	HIS
9	AJ	20	GLN
9	AJ	58	ASN
9	AJ	64	GLN
9	AJ	99	GLN
10	AK	21	HIS

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Mol	Chain	Res	Type
10	AK	28	ASN
10	AK	80	ASN
10	AK	118	ASN
11	AL	5	GLN
11	AL	19	ASN
11	AL	28	GLN
11	AL	45	ASN
12	AM	7	ASN
12	AM	13	HIS
12	AM	90	HIS
14	AO	28	GLN
14	AO	37	ASN
14	AO	40	GLN
14	AO	62	GLN
15	AP	26	ASN
15	AP	40	ASN
16	AQ	50	ASN
17	AR	53	GLN
18	AS	42	ASN
19	AT	2	ASN
19	AT	20	ASN
19	AT	67	HIS
20	AB	14	HIS
20	AB	17	HIS
20	AB	18	GLN
20	AB	23	ASN
20	AB	35	ASN
20	AB	41	ASN
20	AB	57	ASN
20	AB	93	HIS
20	AB	119	GLN
20	AB	121	GLN
20	AB	145	ASN
20	AB	169	HIS
20	AB	202	ASN
24	BI	11	GLN
24	BI	29	GLN
24	BI	33	ASN
25	BC	43	ASN
25	BC	45	ASN
25	BC	59	GLN
25	BC	85	ASN

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Mol	Chain	Res	Type
25	BC	114	GLN
25	BC	116	GLN
25	BC	133	ASN
25	BC	152	GLN
25	BC	196	ASN
25	BC	225	ASN
26	BD	32	ASN
26	BD	49	GLN
26	BD	126	ASN
26	BD	136	ASN
26	BD	173	GLN
27	BK	5	GLN
27	BK	13	ASN
27	BK	88	ASN
28	BP	6	GLN
28	BP	11	GLN
28	BP	114	ASN
29	BE	24	ASN
29	BE	30	GLN
29	BE	62	GLN
29	BE	136	GLN
29	BE	163	ASN
29	BE	195	GLN
30	BY	19	HIS
30	BY	33	HIS
30	BY	48	ASN
32	B4	35	GLN
32	B4	37	GLN
34	B3	30	HIS
34	B3	42	HIS
35	BV	44	HIS
35	BV	49	ASN
35	BV	80	HIS
35	BV	88	HIS
36	B2	6	GLN
36	B2	13	ASN
37	BL	4	ASN
37	BL	54	GLN
37	BL	93	ASN
37	BL	104	GLN
38	BM	17	ASN
38	BM	22	GLN

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Mol	Chain	Res	Type
39	BX	20	ASN
39	BX	25	GLN
39	BX	41	HIS
40	BH	18	GLN
40	BH	28	ASN
40	BH	43	ASN
40	BH	73	ASN
40	BH	133	GLN
41	BJ	130	HIS
41	BJ	135	GLN
41	BJ	136	GLN
41	BJ	138	GLN
42	BN	11	ASN
42	BN	107	ASN
43	BO	19	GLN
43	BO	29	HIS
43	BO	38	GLN
43	BO	61	GLN
44	BQ	19	GLN
44	BQ	51	GLN
44	BQ	58	GLN
44	BQ	71	ASN
44	BQ	80	ASN
46	BU	26	ASN
46	BU	45	GLN
46	BU	52	ASN
46	BU	65	GLN
46	BU	73	ASN
47	BF	51	ASN
47	BF	134	GLN
48	BG	29	ASN
48	BG	72	ASN
48	BG	87	GLN
49	BR	6	GLN
49	BR	11	GLN
49	BR	43	ASN
49	BR	86	GLN
49	BR	87	GLN
50	BT	48	GLN
50	BT	91	GLN
50	BT	92	ASN
51	BZ	6	GLN

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Mol	Chain	Res	Type
51	BZ	17	ASN
51	BZ	36	HIS
52	BW	39	GLN
52	BW	49	ASN
52	BW	75	ASN
53	B6	13	HIS
53	B6	24	ASN
53	B6	91	ASN
53	B6	102	ASN
53	B6	162	GLN
53	B6	174	GLN
2	CC	2	GLN
2	CC	5	HIS
2	CC	68	HIS
2	CC	99	GLN
2	CC	139	ASN
2	CC	184	ASN
2	CC	189	HIS
3	CD	35	GLN
3	CD	84	ASN
3	CD	135	GLN
3	CD	163	GLN
4	CE	18	ASN
4	CE	81	GLN
4	CE	131	ASN
5	CF	17	GLN
5	CF	37	HIS
5	CF	46	GLN
5	CF	55	HIS
6	CG	67	ASN
6	CG	121	ASN
7	CH	3	GLN
7	CH	17	GLN
7	CH	117	GLN
8	CI	24	ASN
8	CI	30	ASN
8	CI	31	GLN
8	CI	36	GLN
8	CI	74	GLN
8	CI	80	HIS
9	CJ	20	GLN
9	CJ	58	ASN

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Mol	Chain	Res	Type
9	CJ	64	GLN
9	CJ	99	GLN
10	CK	21	HIS
10	CK	28	ASN
10	CK	80	ASN
10	CK	118	ASN
11	CL	5	GLN
11	CL	19	ASN
11	CL	28	GLN
11	CL	45	ASN
12	CM	7	ASN
12	CM	13	HIS
12	CM	90	HIS
14	CO	28	GLN
14	CO	37	ASN
14	CO	40	GLN
14	CO	62	GLN
15	CP	26	ASN
15	CP	40	ASN
16	CQ	50	ASN
18	CS	42	ASN
18	CS	52	ASN
19	CT	2	ASN
19	CT	20	ASN
19	CT	67	HIS
20	CB	14	HIS
20	CB	17	HIS
20	CB	18	GLN
20	CB	23	ASN
20	CB	35	ASN
20	CB	41	ASN
20	CB	57	ASN
20	CB	93	HIS
20	CB	119	GLN
20	CB	145	ASN
20	CB	169	HIS
20	CB	202	ASN
24	DI	5	GLN
24	DI	11	GLN
24	DI	33	ASN
25	DC	43	ASN
25	DC	45	ASN

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Mol	Chain	Res	Type
25	DC	59	GLN
25	DC	85	ASN
25	DC	114	GLN
25	DC	116	GLN
25	DC	133	ASN
25	DC	152	GLN
25	DC	196	ASN
26	DD	32	ASN
26	DD	49	GLN
26	DD	126	ASN
26	DD	136	ASN
26	DD	173	GLN
27	DK	5	GLN
27	DK	13	ASN
27	DK	88	ASN
28	DP	6	GLN
28	DP	11	GLN
28	DP	114	ASN
29	DE	24	ASN
29	DE	29	HIS
29	DE	30	GLN
29	DE	62	GLN
29	DE	136	GLN
29	DE	163	ASN
29	DE	195	GLN
30	DY	33	HIS
30	DY	48	ASN
32	D4	35	GLN
32	D4	37	GLN
34	D3	30	HIS
34	D3	42	HIS
35	DV	44	HIS
35	DV	49	ASN
35	DV	80	HIS
36	D2	6	GLN
36	D2	13	ASN
37	DL	4	ASN
37	DL	54	GLN
37	DL	93	ASN
37	DL	104	GLN
38	DM	17	ASN
39	DX	20	ASN

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Mol	Chain	Res	Type
39	DX	25	GLN
39	DX	41	HIS
40	DH	28	ASN
40	DH	66	ASN
40	DH	133	GLN
40	DH	135	HIS
41	DJ	130	HIS
41	DJ	136	GLN
41	DJ	138	GLN
42	DN	11	ASN
42	DN	16	HIS
42	DN	107	ASN
43	DO	19	GLN
43	DO	29	HIS
43	DO	38	GLN
43	DO	61	GLN
44	DQ	19	GLN
44	DQ	51	GLN
44	DQ	58	GLN
44	DQ	71	ASN
44	DQ	80	ASN
46	DU	26	ASN
46	DU	45	GLN
46	DU	52	ASN
46	DU	65	GLN
46	DU	73	ASN
47	DF	51	ASN
47	DF	134	GLN
48	DG	29	ASN
48	DG	63	GLN
48	DG	72	ASN
48	DG	87	GLN
49	DR	6	GLN
49	DR	11	GLN
49	DR	43	ASN
49	DR	86	GLN
49	DR	87	GLN
50	DT	48	GLN
50	DT	72	GLN
50	DT	91	GLN
50	DT	92	ASN
51	DZ	6	GLN

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Mol	Chain	Res	Type
51	DZ	17	ASN
51	DZ	36	HIS
52	DW	39	GLN
52	DW	49	ASN
52	DW	75	ASN
53	D6	53	ASN
53	D6	54	GLN
53	D6	74	ASN
53	D6	174	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	246 (16%)	16 (1%)
1	CA	1529/1542 (99%)	244 (15%)	16 (1%)
22	BA	116/120 (96%)	18 (15%)	0
22	DA	116/120 (96%)	18 (15%)	0
23	BB	2837/2904 (97%)	446 (15%)	14 (0%)
23	DB	2837/2904 (97%)	447 (15%)	16 (0%)
All	All	8964/9132 (98%)	1419 (15%)	62 (0%)

All (1419) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	9	G
1	AA	14	U
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	52	C
1	AA	55	A
1	AA	65	A
1	AA	71	A
1	AA	72	A
1	AA	79	G
1	AA	83	C
1	AA	84	U

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Mol	Chain	Res	Type
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	89	U
1	AA	91	U
1	AA	93	U
1	AA	94	G
1	AA	95	C
1	AA	96	U
1	AA	119	A
1	AA	121	U
1	AA	131	A
1	AA	151	A
1	AA	182	A
1	AA	183	C
1	AA	191	G
1	AA	197	A
1	AA	202	G
1	AA	209	U
1	AA	210	C
1	AA	211	G
1	AA	213	G
1	AA	239	U
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	253	A
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
1	AA	301	G
1	AA	316	C
1	AA	321	A
1	AA	328	C
1	AA	329	A

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Mol	Chain	Res	Type
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	381	C
1	AA	382	A
1	AA	384	G
1	AA	397	A
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	438	U
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	464	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	493	A
1	AA	500	G
1	AA	511	C

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Mol	Chain	Res	Type
1	AA	518	C
1	AA	527	G
1	AA	532	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	607	A
1	AA	633	G
1	AA	653	U
1	AA	665	A
1	AA	687	A
1	AA	695	A
1	AA	700	G
1	AA	721	G
1	AA	724	G
1	AA	731	G
1	AA	747	A
1	AA	748	G
1	AA	755	G
1	AA	777	A
1	AA	781	A
1	AA	782	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	813	U
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	819	A
1	AA	821	G
1	AA	828	U
1	AA	829	G
1	AA	841	C
1	AA	843	U
1	AA	844	G
1	AA	845	A
1	AA	907	A

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Mol	Chain	Res	Type
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	1004	A
1	AA	1009	U
1	AA	1010	U
1	AA	1020	G
1	AA	1022	A
1	AA	1028	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1034	G
1	AA	1035	A
1	AA	1037	C
1	AA	1038	C
1	AA	1049	U
1	AA	1050	G
1	AA	1054	C
1	AA	1065	U
1	AA	1066	C
1	AA	1081	A
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C

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Mol	Chain	Res	Type
1	AA	1158	C
1	AA	1168	U
1	AA	1171	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	1209	C
1	AA	1211	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1225	A
1	AA	1226	C
1	AA	1240	U
1	AA	1250	A
1	AA	1256	A
1	AA	1279	G
1	AA	1280	A
1	AA	1281	C
1	AA	1285	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1323	G
1	AA	1336	C
1	AA	1363	A
1	AA	1364	U
1	AA	1381	U
1	AA	1398	A
1	AA	1409	C
1	AA	1410	A

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Mol	Chain	Res	Type
1	AA	1432	G
1	AA	1446	A
1	AA	1448	C
1	AA	1451	U
1	AA	1452	C
1	AA	1453	G
1	AA	1491	G
1	AA	1492	A
1	AA	1497	G
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1532	U
1	AA	1533	C
1	AA	1534	A
22	BA	16	G
22	BA	24	G
22	BA	25	U
22	BA	26	C
22	BA	30	C
22	BA	35	C
22	BA	42	C
22	BA	43	C
22	BA	44	G
22	BA	53	A
22	BA	88	C
22	BA	89	U
22	BA	90	C
22	BA	96	G
22	BA	99	A
22	BA	109	A
22	BA	112	G
22	BA	116	G
23	BB	2	G
23	BB	4	U
23	BB	34	U
23	BB	46	G
23	BB	51	G

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Mol	Chain	Res	Type
23	BB	63	A
23	BB	71	A
23	BB	72	U
23	BB	74	A
23	BB	75	G
23	BB	79	C
23	BB	91	A
23	BB	99	U
23	BB	101	A
23	BB	102	U
23	BB	103	A
23	BB	118	A
23	BB	119	A
23	BB	120	U
23	BB	125	A
23	BB	126	A
23	BB	128	C
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	144	A
23	BB	149	A
23	BB	160	A
23	BB	162	U
23	BB	163	C
23	BB	180	G
23	BB	181	A
23	BB	196	A
23	BB	199	A
23	BB	203	A
23	BB	215	G
23	BB	216	A
23	BB	221	A
23	BB	222	A
23	BB	230	G
23	BB	233	A
23	BB	248	G
23	BB	250	G
23	BB	255	A
23	BB	265	A
23	BB	266	G
23	BB	267	C

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Mol	Chain	Res	Type
23	BB	271	G
23	BB	278	A
23	BB	279	A
23	BB	281	C
23	BB	299	A
23	BB	302	C
23	BB	311	A
23	BB	323	C
23	BB	329	G
23	BB	330	A
23	BB	333	G
23	BB	346	A
23	BB	349	U
23	BB	353	C
23	BB	369	U
23	BB	371	A
23	BB	372	G
23	BB	386	G
23	BB	387	U
23	BB	395	U
23	BB	396	G
23	BB	405	U
23	BB	411	G
23	BB	412	A
23	BB	424	G
23	BB	435	C
23	BB	455	C
23	BB	456	C
23	BB	457	A
23	BB	479	A
23	BB	480	A
23	BB	481	G
23	BB	491	G
23	BB	504	A
23	BB	505	A
23	BB	508	A
23	BB	509	C
23	BB	510	C
23	BB	512	G
23	BB	527	C
23	BB	531	C
23	BB	532	A

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Mol	Chain	Res	Type
23	BB	546	U
23	BB	547	A
23	BB	548	G
23	BB	549	G
23	BB	550	C
23	BB	563	A
23	BB	572	A
23	BB	573	U
23	BB	574	A
23	BB	575	A
23	BB	603	A
23	BB	613	A
23	BB	614	A
23	BB	615	U
23	BB	616	A
23	BB	627	A
23	BB	632	A
23	BB	637	A
23	BB	645	C
23	BB	646	U
23	BB	647	G
23	BB	654	A
23	BB	655	A
23	BB	671	C
23	BB	686	U
23	BB	718	A
23	BB	719	C
23	BB	730	A
23	BB	746	U
23	BB	747	U
23	BB	764	A
23	BB	775	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	789	A
23	BB	805	G
23	BB	812	C
23	BB	819	A
23	BB	827	U
23	BB	828	U
23	BB	847	U

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Mol	Chain	Res	Type
23	BB	859	G
23	BB	876	C
23	BB	877	A
23	BB	899	A
23	BB	910	A
23	BB	912	C
23	BB	932	U
23	BB	933	A
23	BB	941	A
23	BB	946	C
23	BB	961	C
23	BB	962	G
23	BB	973	A
23	BB	974	G
23	BB	983	A
23	BB	990	A
23	BB	991	C
23	BB	995	C
23	BB	996	A
23	BB	1012	U
23	BB	1013	C
23	BB	1022	G
23	BB	1023	U
23	BB	1024	G
23	BB	1025	G
23	BB	1033	U
23	BB	1043	C
23	BB	1047	G
23	BB	1051	G
23	BB	1062	G
23	BB	1070	A
23	BB	1088	A
23	BB	1090	A
23	BB	1106	G
23	BB	1110	G
23	BB	1111	A
23	BB	1112	G
23	BB	1126	A
23	BB	1129	A
23	BB	1132	U
23	BB	1133	A
23	BB	1135	C

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Mol	Chain	Res	Type
23	BB	1136	G
23	BB	1141	U
23	BB	1142	A
23	BB	1157	G
23	BB	1171	G
23	BB	1172	C
23	BB	1173	U
23	BB	1174	U
23	BB	1186	G
23	BB	1195	G
23	BB	1204	A
23	BB	1205	A
23	BB	1211	C
23	BB	1212	G
23	BB	1237	A
23	BB	1238	G
23	BB	1247	A
23	BB	1248	G
23	BB	1250	G
23	BB	1251	C
23	BB	1253	A
23	BB	1256	G
23	BB	1266	G
23	BB	1271	G
23	BB	1272	A
23	BB	1273	U
23	BB	1275	A
23	BB	1276	A
23	BB	1301	A
23	BB	1302	A
23	BB	1321	A
23	BB	1324	G
23	BB	1325	U
23	BB	1330	C
23	BB	1337	G
23	BB	1341	G
23	BB	1345	C
23	BB	1365	A
23	BB	1368	G
23	BB	1378	A
23	BB	1379	U
23	BB	1383	A

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Mol	Chain	Res	Type
23	BB	1384	A
23	BB	1386	C
23	BB	1396	U
23	BB	1397	U
23	BB	1416	G
23	BB	1419	A
23	BB	1427	A
23	BB	1428	C
23	BB	1451	C
23	BB	1453	A
23	BB	1454	C
23	BB	1455	G
23	BB	1459	G
23	BB	1460	U
23	BB	1461	C
23	BB	1476	U
23	BB	1477	A
23	BB	1482	G
23	BB	1486	U
23	BB	1490	A
23	BB	1493	C
23	BB	1494	A
23	BB	1504	A
23	BB	1505	A
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1510	G
23	BB	1524	G
23	BB	1532	A
23	BB	1535	A
23	BB	1537	G
23	BB	1538	G
23	BB	1540	G
23	BB	1552	A
23	BB	1559	U
23	BB	1569	A
23	BB	1578	U
23	BB	1584	U
23	BB	1585	C
23	BB	1588	G
23	BB	1607	C

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Mol	Chain	Res	Type
23	BB	1608	A
23	BB	1610	A
23	BB	1616	A
23	BB	1634	A
23	BB	1635	A
23	BB	1647	U
23	BB	1648	U
23	BB	1674	G
23	BB	1700	A
23	BB	1701	A
23	BB	1706	C
23	BB	1713	A
23	BB	1715	G
23	BB	1724	G
23	BB	1725	U
23	BB	1727	C
23	BB	1729	U
23	BB	1730	C
23	BB	1732	C
23	BB	1733	G
23	BB	1738	G
23	BB	1758	U
23	BB	1764	C
23	BB	1773	A
23	BB	1800	C
23	BB	1816	C
23	BB	1829	A
23	BB	1833	C
23	BB	1870	C
23	BB	1872	A
23	BB	1884	G
23	BB	1906	G
23	BB	1927	A
23	BB	1929	G
23	BB	1930	G
23	BB	1936	A
23	BB	1937	A
23	BB	1938	A
23	BB	1939	U
23	BB	1940	U
23	BB	1955	U
23	BB	1967	C

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Mol	Chain	Res	Type
23	BB	1970	A
23	BB	1971	U
23	BB	1972	G
23	BB	1991	U
23	BB	1993	U
23	BB	1997	C
23	BB	2022	U
23	BB	2023	C
23	BB	2030	A
23	BB	2031	A
23	BB	2032	G
23	BB	2033	A
23	BB	2043	C
23	BB	2055	C
23	BB	2056	G
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2072	C
23	BB	2096	C
23	BB	2102	G
23	BB	2103	C
23	BB	2109	U
23	BB	2137	U
23	BB	2138	G
23	BB	2143	C
23	BB	2144	G
23	BB	2145	C
23	BB	2147	A
23	BB	2148	G
23	BB	2149	U
23	BB	2151	U
23	BB	2153	C
23	BB	2154	A
23	BB	2155	U
23	BB	2157	G
23	BB	2181	U
23	BB	2183	A
23	BB	2184	A
23	BB	2192	U
23	BB	2198	A

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Mol	Chain	Res	Type
23	BB	2199	A
23	BB	2203	U
23	BB	2204	G
23	BB	2211	A
23	BB	2212	A
23	BB	2213	U
23	BB	2225	A
23	BB	2238	G
23	BB	2239	G
23	BB	2250	G
23	BB	2266	A
23	BB	2283	C
23	BB	2287	A
23	BB	2288	A
23	BB	2305	U
23	BB	2307	G
23	BB	2308	G
23	BB	2309	A
23	BB	2311	A
23	BB	2320	U
23	BB	2321	U
23	BB	2322	A
23	BB	2325	G
23	BB	2333	A
23	BB	2337	G
23	BB	2345	G
23	BB	2347	C
23	BB	2361	G
23	BB	2372	U
23	BB	2379	G
23	BB	2383	G
23	BB	2385	C
23	BB	2396	G
23	BB	2402	U
23	BB	2403	C
23	BB	2406	A
23	BB	2423	U
23	BB	2425	A
23	BB	2426	A
23	BB	2427	C
23	BB	2429	G
23	BB	2430	A

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Mol	Chain	Res	Type
23	BB	2431	U
23	BB	2441	U
23	BB	2448	A
23	BB	2449	U
23	BB	2472	G
23	BB	2476	A
23	BB	2491	U
23	BB	2502	G
23	BB	2505	G
23	BB	2506	U
23	BB	2518	A
23	BB	2535	G
23	BB	2554	U
23	BB	2555	U
23	BB	2556	C
23	BB	2566	A
23	BB	2567	G
23	BB	2572	A
23	BB	2582	G
23	BB	2586	U
23	BB	2602	A
23	BB	2609	U
23	BB	2611	C
23	BB	2613	U
23	BB	2629	U
23	BB	2630	G
23	BB	2634	A
23	BB	2646	C
23	BB	2654	A
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2739	U
23	BB	2744	G
23	BB	2748	A
23	BB	2750	A
23	BB	2751	G
23	BB	2752	C
23	BB	2753	A
23	BB	2757	A
23	BB	2765	A

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Mol	Chain	Res	Type
23	BB	2778	A
23	BB	2791	G
23	BB	2798	U
23	BB	2799	A
23	BB	2800	A
23	BB	2802	G
23	BB	2808	G
23	BB	2820	A
23	BB	2821	A
23	BB	2823	A
23	BB	2831	G
23	BB	2836	U
23	BB	2850	A
23	BB	2866	U
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A
23	BB	2894	G
23	BB	2901	C
23	BB	2903	U
1	CA	7	A
1	CA	9	G
1	CA	14	U
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	49	U
1	CA	51	A
1	CA	52	C
1	CA	55	A
1	CA	71	A
1	CA	72	A
1	CA	84	U
1	CA	85	U
1	CA	86	G
1	CA	87	C
1	CA	88	U
1	CA	93	U
1	CA	94	G

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Mol	Chain	Res	Type
1	CA	119	A
1	CA	121	U
1	CA	131	A
1	CA	151	A
1	CA	182	A
1	CA	183	C
1	CA	191	G
1	CA	197	A
1	CA	202	G
1	CA	209	U
1	CA	210	C
1	CA	211	G
1	CA	213	G
1	CA	239	U
1	CA	240	G
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	253	A
1	CA	257	G
1	CA	258	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	301	G
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	346	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C

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Mol	Chain	Res	Type
1	CA	373	A
1	CA	381	C
1	CA	382	A
1	CA	384	G
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	482	A
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	493	A
1	CA	500	G
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	527	G
1	CA	532	A
1	CA	547	A
1	CA	559	A
1	CA	562	U
1	CA	572	A

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Mol	Chain	Res	Type
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	607	A
1	CA	633	G
1	CA	653	U
1	CA	665	A
1	CA	687	A
1	CA	695	A
1	CA	700	G
1	CA	721	G
1	CA	724	G
1	CA	731	G
1	CA	747	A
1	CA	748	G
1	CA	755	G
1	CA	777	A
1	CA	781	A
1	CA	782	A
1	CA	793	U
1	CA	794	A
1	CA	812	G
1	CA	813	U
1	CA	814	A
1	CA	815	A
1	CA	817	C
1	CA	819	A
1	CA	821	G
1	CA	828	U
1	CA	829	G
1	CA	841	C
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	907	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	969	A

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Mol	Chain	Res	Type
1	CA	971	G
1	CA	974	A
1	CA	976	G
1	CA	977	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	1004	A
1	CA	1009	U
1	CA	1010	U
1	CA	1020	G
1	CA	1022	A
1	CA	1028	C
1	CA	1029	U
1	CA	1030	U
1	CA	1031	C
1	CA	1034	G
1	CA	1035	A
1	CA	1037	C
1	CA	1038	C
1	CA	1049	U
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
1	CA	1066	C
1	CA	1081	A
1	CA	1091	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1158	C
1	CA	1160	G
1	CA	1168	U
1	CA	1171	A
1	CA	1181	G
1	CA	1183	U

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Mol	Chain	Res	Type
1	CA	1184	G
1	CA	1196	A
1	CA	1197	A
1	CA	1201	A
1	CA	1202	U
1	CA	1209	C
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1215	G
1	CA	1225	A
1	CA	1226	C
1	CA	1240	U
1	CA	1241	G
1	CA	1250	A
1	CA	1256	A
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1285	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	C
1	CA	1303	C
1	CA	1305	G
1	CA	1316	G
1	CA	1317	C
1	CA	1319	A
1	CA	1320	C
1	CA	1323	G
1	CA	1336	C
1	CA	1363	A
1	CA	1364	U
1	CA	1381	U
1	CA	1398	A
1	CA	1419	G
1	CA	1432	G
1	CA	1446	A
1	CA	1448	C
1	CA	1451	U
1	CA	1452	C

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Mol	Chain	Res	Type
1	CA	1453	G
1	CA	1490	U
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1534	A
22	DA	4	C
22	DA	16	G
22	DA	24	G
22	DA	25	U
22	DA	26	C
22	DA	30	C
22	DA	35	C
22	DA	42	C
22	DA	43	C
22	DA	44	G
22	DA	53	A
22	DA	88	C
22	DA	89	U
22	DA	90	C
22	DA	96	G
22	DA	99	A
22	DA	109	A
22	DA	112	G
23	DB	2	G
23	DB	34	U
23	DB	46	G
23	DB	51	G
23	DB	63	A
23	DB	71	A
23	DB	72	U
23	DB	74	A
23	DB	75	G
23	DB	79	C
23	DB	91	A

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Mol	Chain	Res	Type
23	DB	99	U
23	DB	100	U
23	DB	101	A
23	DB	102	U
23	DB	103	A
23	DB	118	A
23	DB	119	A
23	DB	120	U
23	DB	125	A
23	DB	126	A
23	DB	128	C
23	DB	139	U
23	DB	140	C
23	DB	142	A
23	DB	149	A
23	DB	160	A
23	DB	162	U
23	DB	163	C
23	DB	180	G
23	DB	181	A
23	DB	196	A
23	DB	199	A
23	DB	215	G
23	DB	216	A
23	DB	221	A
23	DB	222	A
23	DB	230	G
23	DB	233	A
23	DB	248	G
23	DB	250	G
23	DB	255	A
23	DB	265	A
23	DB	266	G
23	DB	267	C
23	DB	271	G
23	DB	273	G
23	DB	276	U
23	DB	277	G
23	DB	278	A
23	DB	281	C
23	DB	282	A
23	DB	284	U

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Mol	Chain	Res	Type
23	DB	287	G
23	DB	288	U
23	DB	289	G
23	DB	299	A
23	DB	302	C
23	DB	311	A
23	DB	323	C
23	DB	329	G
23	DB	330	A
23	DB	333	G
23	DB	346	A
23	DB	349	U
23	DB	352	A
23	DB	353	C
23	DB	363	G
23	DB	369	U
23	DB	371	A
23	DB	372	G
23	DB	386	G
23	DB	387	U
23	DB	395	U
23	DB	396	G
23	DB	405	U
23	DB	411	G
23	DB	412	A
23	DB	424	G
23	DB	435	C
23	DB	455	C
23	DB	456	C
23	DB	457	A
23	DB	479	A
23	DB	480	A
23	DB	481	G
23	DB	491	G
23	DB	492	A
23	DB	504	A
23	DB	505	A
23	DB	508	A
23	DB	509	C
23	DB	510	C
23	DB	512	G
23	DB	527	C

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Mol	Chain	Res	Type
23	DB	531	C
23	DB	532	A
23	DB	544	C
23	DB	545	U
23	DB	546	U
23	DB	547	A
23	DB	548	G
23	DB	549	G
23	DB	563	A
23	DB	572	A
23	DB	573	U
23	DB	575	A
23	DB	586	A
23	DB	588	U
23	DB	603	A
23	DB	613	A
23	DB	614	A
23	DB	615	U
23	DB	616	A
23	DB	627	A
23	DB	632	A
23	DB	637	A
23	DB	645	C
23	DB	646	U
23	DB	647	G
23	DB	654	A
23	DB	655	A
23	DB	671	C
23	DB	686	U
23	DB	718	A
23	DB	719	C
23	DB	730	A
23	DB	747	U
23	DB	764	A
23	DB	775	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	805	G
23	DB	812	C
23	DB	819	A
23	DB	827	U

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Mol	Chain	Res	Type
23	DB	828	U
23	DB	847	U
23	DB	859	G
23	DB	899	A
23	DB	910	A
23	DB	912	C
23	DB	932	U
23	DB	933	A
23	DB	941	A
23	DB	946	C
23	DB	961	C
23	DB	962	G
23	DB	973	A
23	DB	974	G
23	DB	983	A
23	DB	990	A
23	DB	991	C
23	DB	995	C
23	DB	996	A
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1023	U
23	DB	1024	G
23	DB	1025	G
23	DB	1033	U
23	DB	1045	C
23	DB	1048	A
23	DB	1070	A
23	DB	1088	A
23	DB	1090	A
23	DB	1098	A
23	DB	1110	G
23	DB	1112	G
23	DB	1116	G
23	DB	1126	A
23	DB	1129	A
23	DB	1132	U
23	DB	1133	A
23	DB	1135	C
23	DB	1136	G
23	DB	1141	U

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Mol	Chain	Res	Type
23	DB	1142	A
23	DB	1157	G
23	DB	1174	U
23	DB	1176	U
23	DB	1179	G
23	DB	1186	G
23	DB	1195	G
23	DB	1204	A
23	DB	1205	A
23	DB	1211	C
23	DB	1212	G
23	DB	1237	A
23	DB	1238	G
23	DB	1247	A
23	DB	1248	G
23	DB	1250	G
23	DB	1251	C
23	DB	1253	A
23	DB	1256	G
23	DB	1266	G
23	DB	1271	G
23	DB	1272	A
23	DB	1273	U
23	DB	1275	A
23	DB	1276	A
23	DB	1301	A
23	DB	1302	A
23	DB	1321	A
23	DB	1324	G
23	DB	1325	U
23	DB	1330	C
23	DB	1337	G
23	DB	1341	G
23	DB	1345	C
23	DB	1365	A
23	DB	1368	G
23	DB	1378	A
23	DB	1379	U
23	DB	1383	A
23	DB	1384	A
23	DB	1386	C
23	DB	1396	U

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Mol	Chain	Res	Type
23	DB	1397	U
23	DB	1416	G
23	DB	1419	A
23	DB	1427	A
23	DB	1428	C
23	DB	1434	A
23	DB	1451	C
23	DB	1453	A
23	DB	1454	C
23	DB	1455	G
23	DB	1459	G
23	DB	1460	U
23	DB	1461	C
23	DB	1476	U
23	DB	1477	A
23	DB	1482	G
23	DB	1486	U
23	DB	1490	A
23	DB	1493	C
23	DB	1494	A
23	DB	1504	A
23	DB	1505	A
23	DB	1507	C
23	DB	1508	A
23	DB	1509	A
23	DB	1510	G
23	DB	1524	G
23	DB	1532	A
23	DB	1535	A
23	DB	1537	G
23	DB	1538	G
23	DB	1540	G
23	DB	1552	A
23	DB	1559	U
23	DB	1569	A
23	DB	1578	U
23	DB	1584	U
23	DB	1585	C
23	DB	1588	G
23	DB	1607	C
23	DB	1608	A
23	DB	1610	A

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Mol	Chain	Res	Type
23	DB	1616	A
23	DB	1634	A
23	DB	1635	A
23	DB	1647	U
23	DB	1648	U
23	DB	1674	G
23	DB	1700	A
23	DB	1701	A
23	DB	1706	C
23	DB	1713	A
23	DB	1715	G
23	DB	1724	G
23	DB	1725	U
23	DB	1727	C
23	DB	1729	U
23	DB	1730	C
23	DB	1732	C
23	DB	1733	G
23	DB	1738	G
23	DB	1758	U
23	DB	1764	C
23	DB	1773	A
23	DB	1800	C
23	DB	1816	C
23	DB	1829	A
23	DB	1833	C
23	DB	1870	C
23	DB	1872	A
23	DB	1884	G
23	DB	1906	G
23	DB	1913	A
23	DB	1914	C
23	DB	1915	U
23	DB	1927	A
23	DB	1929	G
23	DB	1930	G
23	DB	1936	A
23	DB	1937	A
23	DB	1938	A
23	DB	1939	U
23	DB	1940	U
23	DB	1955	U

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Mol	Chain	Res	Type
23	DB	1967	C
23	DB	1970	A
23	DB	1971	U
23	DB	1972	G
23	DB	1991	U
23	DB	1993	U
23	DB	1997	C
23	DB	2022	U
23	DB	2023	C
23	DB	2030	A
23	DB	2031	A
23	DB	2032	G
23	DB	2033	A
23	DB	2043	C
23	DB	2055	C
23	DB	2056	G
23	DB	2060	A
23	DB	2061	G
23	DB	2062	A
23	DB	2069	G
23	DB	2096	C
23	DB	2097	A
23	DB	2107	G
23	DB	2108	A
23	DB	2110	G
23	DB	2134	A
23	DB	2135	A
23	DB	2138	G
23	DB	2143	C
23	DB	2144	G
23	DB	2145	C
23	DB	2147	A
23	DB	2148	G
23	DB	2155	U
23	DB	2156	G
23	DB	2157	G
23	DB	2180	U
23	DB	2183	A
23	DB	2189	U
23	DB	2190	G
23	DB	2193	G
23	DB	2198	A

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Mol	Chain	Res	Type
23	DB	2199	A
23	DB	2203	U
23	DB	2204	G
23	DB	2211	A
23	DB	2212	A
23	DB	2213	U
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
23	DB	2250	G
23	DB	2266	A
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2309	A
23	DB	2311	A
23	DB	2320	U
23	DB	2321	U
23	DB	2322	A
23	DB	2325	G
23	DB	2333	A
23	DB	2337	G
23	DB	2345	G
23	DB	2347	C
23	DB	2361	G
23	DB	2372	U
23	DB	2379	G
23	DB	2383	G
23	DB	2385	C
23	DB	2396	G
23	DB	2402	U
23	DB	2403	C
23	DB	2406	A
23	DB	2423	U
23	DB	2425	A
23	DB	2426	A
23	DB	2427	C
23	DB	2429	G
23	DB	2430	A

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Mol	Chain	Res	Type
23	DB	2441	U
23	DB	2448	A
23	DB	2449	U
23	DB	2472	G
23	DB	2476	A
23	DB	2491	U
23	DB	2501	C
23	DB	2502	G
23	DB	2505	G
23	DB	2506	U
23	DB	2518	A
23	DB	2535	G
23	DB	2554	U
23	DB	2555	U
23	DB	2556	C
23	DB	2566	A
23	DB	2567	G
23	DB	2572	A
23	DB	2582	G
23	DB	2586	U
23	DB	2602	A
23	DB	2609	U
23	DB	2611	C
23	DB	2613	U
23	DB	2619	C
23	DB	2629	U
23	DB	2630	G
23	DB	2634	A
23	DB	2646	C
23	DB	2654	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2739	U
23	DB	2744	G
23	DB	2748	A
23	DB	2757	A
23	DB	2765	A
23	DB	2778	A
23	DB	2798	U
23	DB	2799	A

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Mol	Chain	Res	Type
23	DB	2800	A
23	DB	2802	G
23	DB	2808	G
23	DB	2820	A
23	DB	2821	A
23	DB	2823	A
23	DB	2831	G
23	DB	2836	U
23	DB	2850	A
23	DB	2866	U
23	DB	2867	G
23	DB	2872	A
23	DB	2873	A
23	DB	2883	A
23	DB	2894	G
23	DB	2903	U

All (62) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	239	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	428	G
1	AA	429	U
1	AA	960	U
1	AA	975	A
1	AA	1049	U
1	AA	1065	U
1	AA	1201	A
1	AA	1302	C
1	AA	1397	C
23	BB	3	U
23	BB	162	U
23	BB	508	A
23	BB	546	U
23	BB	670	A
23	BB	1210	G

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Mol	Chain	Res	Type
23	BB	1419	A
23	BB	1509	A
23	BB	2282	G
23	BB	2336	A
23	BB	2425	A
23	BB	2756	U
23	BB	2832	U
23	BB	2894	G
1	CA	51	A
1	CA	239	U
1	CA	243	A
1	CA	279	A
1	CA	328	C
1	CA	366	A
1	CA	372	C
1	CA	428	G
1	CA	429	U
1	CA	960	U
1	CA	975	A
1	CA	1049	U
1	CA	1065	U
1	CA	1201	A
1	CA	1302	C
1	CA	1397	C
23	DB	139	U
23	DB	162	U
23	DB	508	A
23	DB	544	C
23	DB	546	U
23	DB	670	A
23	DB	1126	A
23	DB	1210	G
23	DB	1419	A
23	DB	1509	A
23	DB	2282	G
23	DB	2336	A
23	DB	2425	A
23	DB	2756	U
23	DB	2832	U
23	DB	2894	G

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 349 ligands modelled in this entry, 345 are monoatomic - leaving 4 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	PAR	DB	3112	-	45,45,45	1.98	12 (26%)	64,67,67	1.18	6 (9%)
55	PAR	CA	1662	-	45,45,45	1.94	11 (24%)	64,67,67	1.16	5 (7%)
55	PAR	BB	3111	-	45,45,45	1.94	11 (24%)	64,67,67	1.13	6 (9%)
55	PAR	AA	1661	-	45,45,45	1.85	10 (22%)	64,67,67	1.14	5 (7%)

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	PAR	DB	3112	-	-	3/18/94/94	0/4/4/4
55	PAR	CA	1662	-	-	4/18/94/94	0/4/4/4
55	PAR	BB	3111	-	-	4/18/94/94	0/4/4/4
55	PAR	AA	1661	-	-	6/18/94/94	0/4/4/4

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DB	3112	PAR	C64-C54	5.26	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BB	3111	PAR	C64-C54	5.25	1.59	1.52
55	AA	1661	PAR	C64-C54	5.07	1.58	1.52
55	CA	1662	PAR	C64-C54	5.00	1.58	1.52
55	CA	1662	PAR	C31-C21	4.73	1.59	1.53
55	BB	3111	PAR	C31-C21	4.71	1.59	1.53
55	DB	3112	PAR	C31-C21	4.66	1.59	1.53
55	CA	1662	PAR	O54-C14	4.66	1.53	1.41
55	BB	3111	PAR	O54-C14	4.53	1.53	1.41
55	DB	3112	PAR	O54-C14	4.51	1.53	1.41
55	AA	1661	PAR	O54-C14	4.43	1.53	1.41
55	AA	1661	PAR	C31-C21	4.33	1.59	1.53
55	CA	1662	PAR	O51-C11	3.65	1.51	1.41
55	AA	1661	PAR	O51-C11	3.58	1.51	1.41
55	DB	3112	PAR	O51-C11	3.49	1.50	1.41
55	BB	3111	PAR	O51-C11	3.44	1.50	1.41
55	DB	3112	PAR	O54-C54	2.78	1.51	1.44
55	DB	3112	PAR	C24-N24	2.76	1.51	1.47
55	CA	1662	PAR	C24-N24	2.76	1.51	1.47
55	CA	1662	PAR	O54-C54	2.66	1.50	1.44
55	BB	3111	PAR	O54-C54	2.65	1.50	1.44
55	BB	3111	PAR	C24-N24	2.59	1.51	1.47
55	AA	1661	PAR	C24-N24	2.59	1.51	1.47
55	CA	1662	PAR	C23-C33	2.48	1.58	1.52
55	AA	1661	PAR	O54-C54	2.44	1.50	1.44
55	AA	1661	PAR	C23-C33	2.42	1.58	1.52
55	CA	1662	PAR	O51-C51	2.36	1.50	1.44
55	BB	3111	PAR	O51-C51	2.36	1.50	1.44
55	AA	1661	PAR	O51-C51	2.35	1.50	1.44
55	BB	3111	PAR	C41-C51	2.34	1.58	1.53
55	DB	3112	PAR	C41-C51	2.34	1.58	1.53
55	CA	1662	PAR	C62-C12	2.32	1.58	1.53
55	DB	3112	PAR	O51-C51	2.32	1.50	1.44
55	DB	3112	PAR	C44-C34	2.29	1.58	1.52
55	CA	1662	PAR	C41-C51	2.29	1.57	1.53
55	AA	1661	PAR	C62-C12	2.29	1.58	1.53
55	DB	3112	PAR	O43-C13	2.28	1.45	1.41
55	BB	3111	PAR	C62-C12	2.27	1.58	1.53
55	BB	3111	PAR	C44-C34	2.26	1.58	1.52
55	AA	1661	PAR	C41-C51	2.21	1.57	1.53
55	BB	3111	PAR	C23-C33	2.20	1.57	1.52
55	CA	1662	PAR	C44-C34	2.14	1.57	1.52
55	DB	3112	PAR	C23-C33	2.07	1.57	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DB	3112	PAR	C62-C12	2.07	1.58	1.53

All (22) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	DB	3112	PAR	O33-C14-C24	3.65	114.50	108.22
55	BB	3111	PAR	O33-C14-C24	3.49	114.23	108.22
55	DB	3112	PAR	O52-C13-O43	3.33	115.04	111.43
55	CA	1662	PAR	O33-C14-C24	3.27	113.85	108.22
55	DB	3112	PAR	O54-C54-C64	3.23	112.02	106.01
55	AA	1661	PAR	O54-C54-C64	3.22	112.00	106.01
55	CA	1662	PAR	O54-C54-C64	3.12	111.81	106.01
55	BB	3111	PAR	O54-C54-C64	3.12	111.81	106.01
55	AA	1661	PAR	O33-C14-C24	2.98	113.35	108.22
55	CA	1662	PAR	C14-O54-C54	2.82	119.22	113.69
55	AA	1661	PAR	O43-C13-C23	2.78	108.56	104.98
55	BB	3111	PAR	C14-O54-C54	2.77	119.12	113.69
55	DB	3112	PAR	O23-C23-C33	2.72	118.89	111.17
55	AA	1661	PAR	C14-O54-C54	2.72	119.02	113.69
55	DB	3112	PAR	C14-O54-C54	2.67	118.92	113.69
55	CA	1662	PAR	O43-C13-C23	2.55	108.26	104.98
55	BB	3111	PAR	O23-C23-C33	2.47	118.19	111.17
55	BB	3111	PAR	O52-C13-O43	2.34	113.96	111.43
55	DB	3112	PAR	O52-C13-C23	2.33	112.79	107.96
55	AA	1661	PAR	O23-C23-C33	2.23	117.51	111.17
55	BB	3111	PAR	O52-C13-C23	2.18	112.48	107.96
55	CA	1662	PAR	O23-C23-C33	2.06	117.02	111.17

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	AA	1661	PAR	C23-C13-O52-C52
55	BB	3111	PAR	C24-C14-O33-C33
55	CA	1662	PAR	C23-C13-O52-C52
55	CA	1662	PAR	O43-C13-O52-C52
55	DB	3112	PAR	C24-C14-O33-C33
55	AA	1661	PAR	O43-C43-C53-O53
55	AA	1661	PAR	C33-C43-C53-O53
55	CA	1662	PAR	O51-C51-C61-O61
55	AA	1661	PAR	O51-C51-C61-O61
55	AA	1661	PAR	C41-C51-C61-O61

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Mol	Chain	Res	Type	Atoms
55	CA	1662	PAR	C41-C51-C61-O61
55	DB	3112	PAR	O54-C14-O33-C33
55	BB	3111	PAR	O43-C13-O52-C52
55	AA	1661	PAR	O43-C13-O52-C52
55	BB	3111	PAR	O54-C14-O33-C33
55	DB	3112	PAR	O51-C11-O11-C42
55	BB	3111	PAR	C23-C33-O33-C14

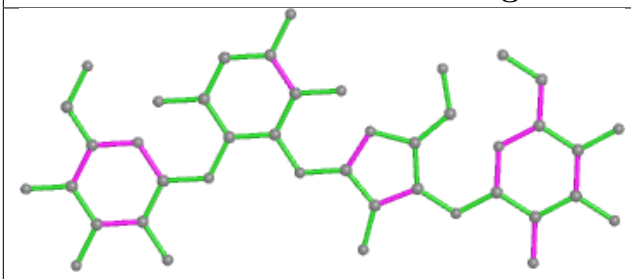
There are no ring outliers.

4 monomers are involved in 7 short contacts:

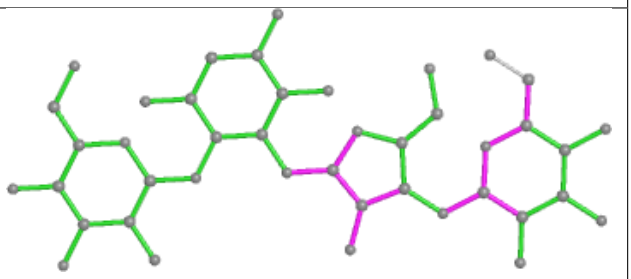
Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	DB	3112	PAR	1	0
55	CA	1662	PAR	2	0
55	BB	3111	PAR	1	0
55	AA	1661	PAR	3	0

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 then 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.

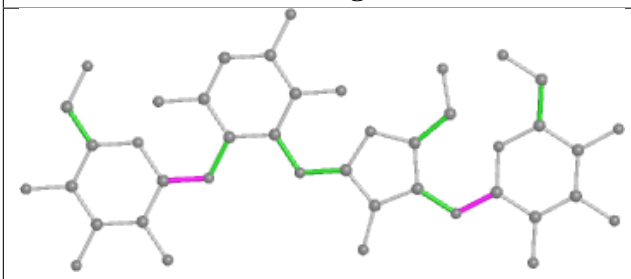
Ligand PAR DB 3112



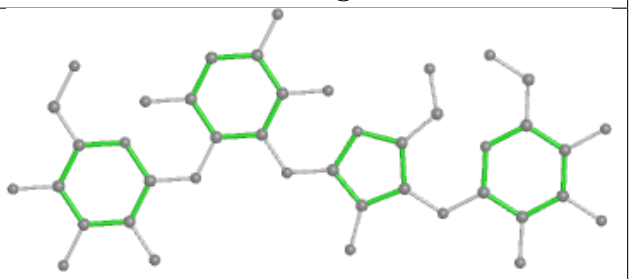
Bond lengths



Bond angles

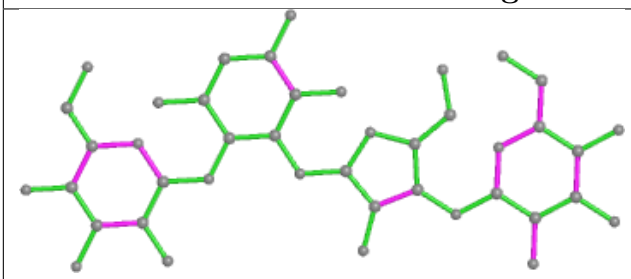


Torsions

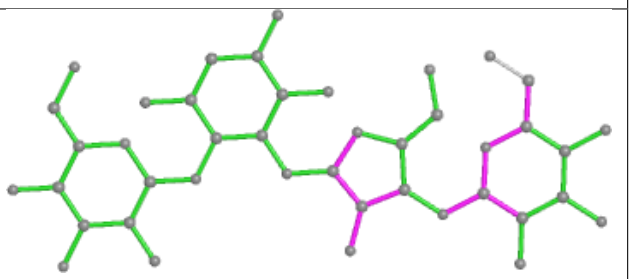


Rings

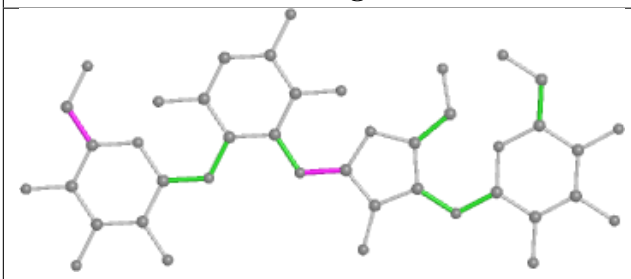
Ligand PAR CA 1662



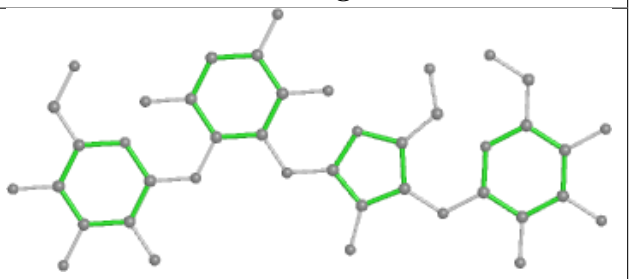
Bond lengths



Bond angles

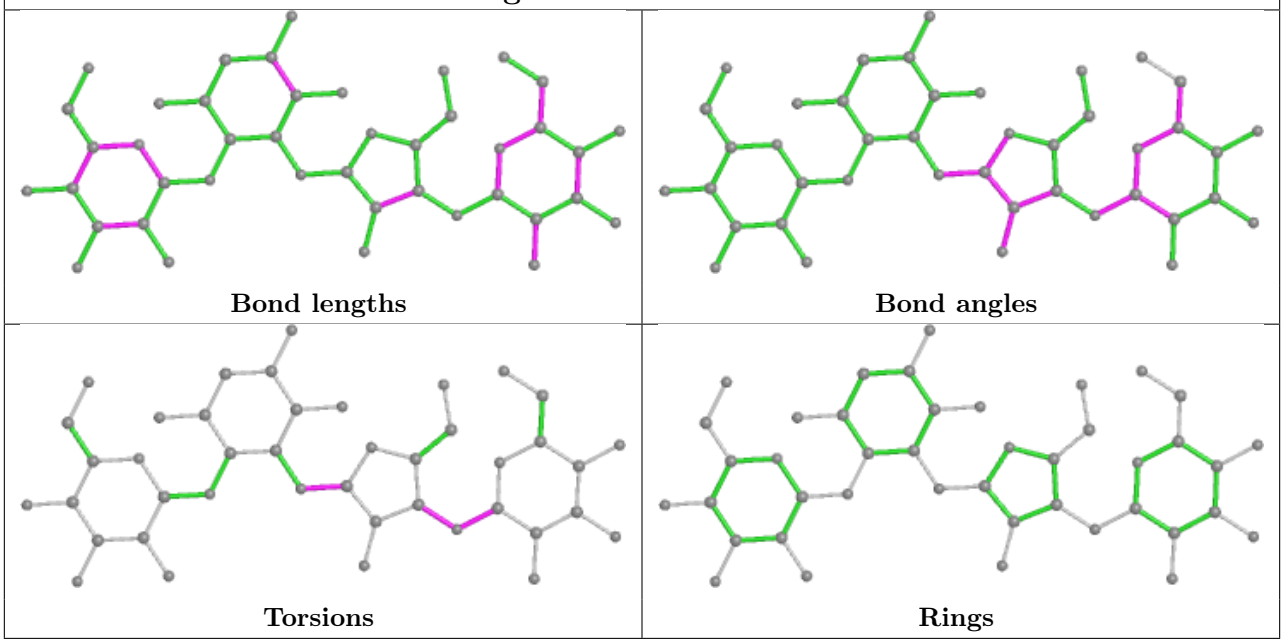


Torsions

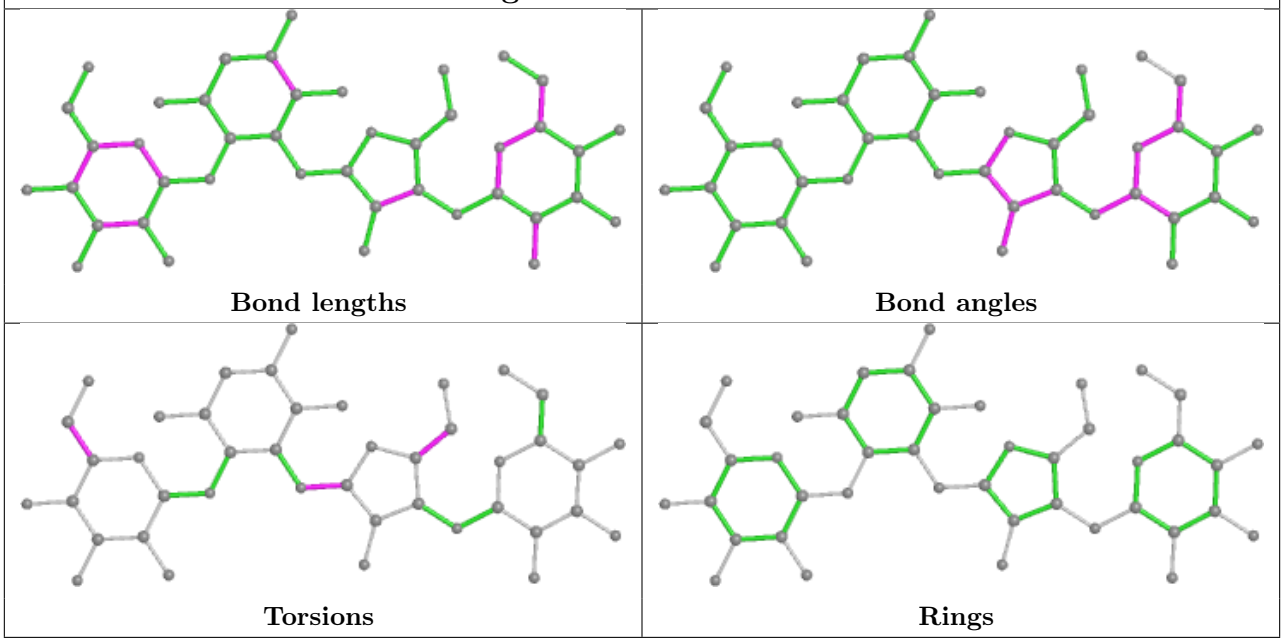


Rings

Ligand PAR BB 3111



Ligand PAR AA 1661



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

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	1530/1542 (99%)	0.03	16 (1%)	82	74	8, 88, 162, 180	0
1	CA	1530/1542 (99%)	-0.12	9 (0%)	89	84	5, 54, 146, 180	0
2	AC	206/232 (88%)	-0.03	5 (2%)	59	49	9, 89, 158, 180	0
2	CC	206/232 (88%)	-0.33	2 (0%)	82	74	9, 83, 141, 180	0
3	AD	205/205 (100%)	-0.10	3 (1%)	73	64	5, 97, 172, 180	0
3	CD	205/205 (100%)	-0.39	0	100	100	5, 59, 151, 180	0
4	AE	150/166 (90%)	-0.17	0	100	100	5, 85, 159, 180	0
4	CE	150/166 (90%)	-0.14	1 (0%)	87	82	5, 52, 137, 180	0
5	AF	100/135 (74%)	-0.15	1 (1%)	82	74	8, 73, 146, 172	0
5	CF	100/135 (74%)	-0.35	0	100	100	5, 84, 153, 180	0
6	AG	150/178 (84%)	-0.20	4 (2%)	54	45	10, 110, 170, 180	0
6	CG	152/178 (85%)	0.08	5 (3%)	46	37	28, 93, 162, 180	0
7	AH	129/129 (100%)	-0.04	3 (2%)	60	51	15, 85, 159, 180	0
7	CH	129/129 (100%)	-0.23	2 (1%)	72	63	5, 50, 128, 175	0
8	AI	127/129 (98%)	0.06	4 (3%)	49	39	5, 98, 163, 180	0
8	CI	127/129 (98%)	-0.22	1 (0%)	86	79	5, 102, 180, 180	0
9	AJ	98/103 (95%)	0.21	4 (4%)	37	30	5, 105, 174, 180	0
9	CJ	98/103 (95%)	0.30	5 (5%)	28	24	10, 93, 158, 180	0
10	AK	117/128 (91%)	-0.27	0	100	100	9, 67, 129, 146	0
10	CK	117/128 (91%)	-0.41	2 (1%)	70	61	5, 63, 134, 180	0
11	AL	123/123 (100%)	-0.01	1 (0%)	86	79	19, 84, 158, 180	0
11	CL	123/123 (100%)	-0.43	0	100	100	5, 54, 113, 180	0
12	AM	114/117 (97%)	0.08	3 (2%)	56	46	55, 122, 180, 180	0
12	CM	113/117 (96%)	0.15	4 (3%)	44	35	31, 114, 180, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
13	AN	96/100 (96%)	0.32	8 (8%)	11	10	5, 108, 170, 180	0
13	CN	96/100 (96%)	0.16	5 (5%)	27	24	6, 99, 162, 180	0
14	AO	88/89 (98%)	-0.26	0	100	100	7, 86, 156, 180	0
14	CO	88/89 (98%)	-0.52	0	100	100	5, 60, 132, 175	0
15	AP	82/82 (100%)	0.26	3 (3%)	41	33	35, 106, 173, 180	0
15	CP	80/82 (97%)	0.27	5 (6%)	20	16	5, 47, 142, 180	0
16	AQ	80/83 (96%)	-0.13	0	100	100	48, 104, 180, 180	0
16	CQ	81/83 (97%)	-0.22	0	100	100	5, 53, 140, 173	0
17	AR	55/74 (74%)	-0.14	1 (1%)	68	59	5, 65, 143, 180	0
17	CR	55/74 (74%)	0.28	2 (3%)	42	34	13, 68, 130, 180	0
18	AS	79/91 (86%)	0.35	4 (5%)	28	24	55, 129, 180, 180	0
18	CS	80/91 (87%)	0.11	1 (1%)	77	68	46, 108, 180, 180	0
19	AT	85/86 (98%)	-0.19	0	100	100	44, 105, 154, 180	0
19	CT	85/86 (98%)	-0.20	1 (1%)	79	70	5, 56, 117, 161	0
20	AB	218/240 (90%)	-0.15	4 (1%)	68	59	7, 105, 171, 180	0
20	CB	218/240 (90%)	0.33	10 (4%)	32	27	23, 111, 172, 180	0
21	AU	51/70 (72%)	-0.03	1 (1%)	65	56	23, 104, 180, 180	0
21	CU	51/70 (72%)	-0.08	2 (3%)	39	31	24, 96, 173, 180	0
22	BA	117/120 (97%)	-0.27	0	100	100	37, 82, 145, 178	0
22	DA	117/120 (97%)	-0.02	2 (1%)	70	61	18, 84, 143, 180	0
23	BB	2841/2904 (97%)	-0.05	26 (0%)	84	77	6, 58, 150, 180	0
23	DB	2841/2904 (97%)	-0.15	9 (0%)	94	90	5, 38, 149, 180	0
24	BI	141/141 (100%)	0.61	9 (6%)	19	16	63, 161, 180, 180	0
24	DI	141/141 (100%)	0.48	13 (9%)	9	8	65, 157, 180, 180	0
25	BC	271/272 (99%)	-0.28	1 (0%)	92	87	5, 48, 108, 166	0
25	DC	271/272 (99%)	-0.26	0	100	100	5, 30, 102, 180	0
26	BD	209/209 (100%)	0.07	6 (2%)	51	41	5, 79, 148, 180	0
26	DD	209/209 (100%)	-0.38	0	100	100	5, 51, 123, 180	0
27	BK	121/123 (98%)	0.07	1 (0%)	86	79	5, 74, 149, 180	0
27	DK	121/123 (98%)	-0.32	0	100	100	5, 33, 106, 180	0
28	BP	114/114 (100%)	-0.08	0	100	100	18, 89, 153, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
28	DP	114/114 (100%)	-0.32	0	100	100	5, 48, 124, 180	0
29	BE	201/201 (100%)	-0.35	2 (0%)	82	74	5, 67, 146, 180	0
29	DE	201/201 (100%)	-0.28	1 (0%)	91	85	5, 67, 142, 177	0
30	BY	58/58 (100%)	-0.05	0	100	100	18, 82, 151, 171	0
30	DY	58/58 (100%)	-0.27	1 (1%)	70	61	5, 68, 126, 162	0
31	B0	56/56 (100%)	-0.21	0	100	100	5, 73, 153, 164	0
31	D0	56/56 (100%)	-0.22	0	100	100	5, 56, 147, 180	0
32	B4	38/38 (100%)	1.71	12 (31%)	0	1	45, 115, 169, 180	0
32	D4	38/38 (100%)	1.82	13 (34%)	0	0	36, 110, 169, 180	0
33	B1	50/54 (92%)	0.40	5 (10%)	7	7	22, 95, 157, 180	0
33	D1	50/54 (92%)	0.32	0	100	100	19, 73, 122, 161	0
34	B3	64/64 (100%)	-0.19	0	100	100	20, 63, 125, 145	0
34	D3	64/64 (100%)	-0.09	0	100	100	5, 35, 88, 129	0
35	BV	94/94 (100%)	-0.19	0	100	100	24, 96, 156, 180	0
35	DV	94/94 (100%)	-0.18	0	100	100	11, 93, 151, 180	0
36	B2	46/46 (100%)	-0.10	0	100	100	5, 75, 137, 180	0
36	D2	46/46 (100%)	-0.19	0	100	100	5, 44, 101, 180	0
37	BL	143/144 (99%)	-0.15	1 (0%)	87	82	5, 71, 133, 180	0
37	DL	143/144 (99%)	-0.25	0	100	100	5, 51, 116, 180	0
38	BM	136/136 (100%)	-0.12	1 (0%)	87	82	9, 70, 149, 180	0
38	DM	136/136 (100%)	-0.20	1 (0%)	87	82	5, 50, 131, 176	0
39	BX	63/63 (100%)	0.06	5 (7%)	12	11	7, 84, 165, 180	0
39	DX	63/63 (100%)	-0.03	2 (3%)	47	37	47, 108, 173, 180	0
40	BH	149/149 (100%)	0.49	12 (8%)	12	11	5, 130, 180, 180	0
40	DH	149/149 (100%)	0.08	5 (3%)	45	36	12, 97, 172, 180	0
41	BJ	142/142 (100%)	-0.14	2 (1%)	75	66	6, 81, 147, 180	0
41	DJ	142/142 (100%)	-0.26	0	100	100	5, 58, 135, 180	0
42	BN	120/127 (94%)	-0.15	0	100	100	5, 68, 139, 178	0
42	DN	120/127 (94%)	-0.46	0	100	100	5, 38, 101, 180	0
43	BO	116/117 (99%)	0.23	9 (7%)	13	11	21, 91, 147, 180	0
43	DO	116/117 (99%)	0.34	12 (10%)	6	7	8, 86, 164, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
44	BQ	117/117 (100%)	-0.40	0	100	100	5, 66, 135, 176	0
44	DQ	117/117 (100%)	-0.19	2 (1%)	70	61	5, 48, 134, 180	0
45	BS	110/110 (100%)	-0.11	0	100	100	6, 58, 139, 180	0
45	DS	110/110 (100%)	-0.33	0	100	100	5, 50, 121, 180	0
46	BU	102/103 (99%)	0.28	4 (3%)	39	31	5, 89, 144, 180	0
46	DU	102/103 (99%)	0.06	0	100	100	24, 99, 159, 180	0
47	BF	178/178 (100%)	-0.28	0	100	100	36, 111, 174, 180	0
47	DF	178/178 (100%)	-0.08	1 (0%)	89	84	8, 103, 177, 180	0
48	BG	176/176 (100%)	0.19	2 (1%)	80	72	9, 114, 179, 180	0
48	DG	176/176 (100%)	0.00	5 (2%)	53	43	15, 91, 167, 180	0
49	BR	103/103 (100%)	0.12	0	100	100	16, 93, 157, 180	0
49	DR	103/103 (100%)	0.07	0	100	100	5, 88, 145, 180	0
50	BT	93/100 (93%)	-0.10	2 (2%)	62	52	5, 88, 180, 180	0
50	DT	93/100 (93%)	0.07	1 (1%)	80	72	7, 90, 180, 180	0
51	BZ	77/78 (98%)	-0.03	3 (3%)	39	31	5, 52, 127, 154	0
51	DZ	77/78 (98%)	-0.21	1 (1%)	77	68	5, 43, 95, 135	0
52	BW	79/84 (94%)	0.25	4 (5%)	28	24	10, 85, 145, 179	0
52	DW	79/84 (94%)	0.26	2 (2%)	57	48	5, 66, 152, 180	0
53	B6	185/185 (100%)	0.56	31 (16%)	1	2	5, 125, 180, 180	0
53	D6	185/185 (100%)	0.03	10 (5%)	25	22	5, 90, 180, 180	0
All	All	20787/21416 (97%)	-0.07	341 (1%)	72	63	5, 70, 162, 180	0

All (341) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
39	DX	63	ALA	10.6
23	BB	2147	A	10.0
24	BI	1	ALA	7.5
24	BI	2	LYS	6.9
23	DB	1175	A	6.0
23	BB	140	C	6.0
32	B4	7	VAL	5.7
32	D4	35	GLN	5.4
23	DB	2133	G	5.2
52	BW	84	GLU	5.0

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Mol	Chain	Res	Type	RSRZ
23	BB	2145	C	5.0
53	B6	93	SER	4.9
53	B6	95	LYS	4.8
52	DW	84	GLU	4.8
24	BI	3	LYS	4.8
40	BH	124	THR	4.8
20	CB	216	VAL	4.7
17	CR	19	GLU	4.7
32	B4	24	ARG	4.6
33	B1	52	LYS	4.5
24	BI	4	VAL	4.5
39	DX	62	GLY	4.5
23	BB	139	U	4.4
53	B6	69	GLN	4.4
43	BO	37	ALA	4.3
15	AP	81	ALA	4.3
23	BB	2146	C	4.3
24	DI	52	LEU	4.3
32	B4	35	GLN	4.3
32	B4	31	PRO	4.3
40	DH	149	GLU	4.2
15	AP	80	LYS	4.1
29	BE	155	GLU	4.1
46	BU	52	ASN	4.1
39	BX	62	GLY	4.1
32	D4	21	GLY	4.0
15	AP	82	ALA	4.0
24	DI	44	LYS	4.0
53	B6	89	GLY	4.0
23	BB	2148	G	4.0
32	B4	30	GLU	4.0
18	AS	29	PRO	3.9
1	CA	1297	G	3.9
24	DI	81	LYS	3.8
32	D4	25	VAL	3.8
24	DI	49	GLU	3.8
17	CR	31	TYR	3.7
13	AN	54	SER	3.7
53	B6	34	ASN	3.6
43	DO	37	ALA	3.6
53	D6	46	TYR	3.6
53	B6	35	PRO	3.5

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Mol	Chain	Res	Type	RSRZ
12	CM	44	ILE	3.5
15	CP	47	GLU	3.5
39	BX	63	ALA	3.5
10	CK	12	ARG	3.4
44	DQ	117	ALA	3.4
52	BW	64	GLY	3.4
23	BB	1095	A	3.4
1	CA	1032	G	3.4
53	B6	87	ASP	3.4
24	BI	115	ASP	3.4
17	AR	19	GLU	3.4
1	AA	78	A	3.4
1	AA	86	G	3.4
11	AL	123	ALA	3.4
53	B6	47	GLY	3.4
32	D4	23	ILE	3.4
13	AN	30	ILE	3.3
13	CN	42	ASN	3.3
24	DI	7	TYR	3.3
43	BO	28	VAL	3.3
32	B4	36	ARG	3.3
1	CA	1001	C	3.3
43	DO	28	VAL	3.3
53	B6	96	GLY	3.3
1	CA	1362	A	3.3
20	CB	163	ILE	3.2
1	AA	461	A	3.2
1	AA	466	A	3.2
26	BD	186	LEU	3.2
20	CB	36	LYS	3.2
23	DB	2148	G	3.2
23	BB	405	U	3.2
9	AJ	72	ARG	3.2
32	B4	17	VAL	3.2
1	AA	79	G	3.1
33	B1	51	ALA	3.1
53	B6	36	ALA	3.1
23	DB	846	U	3.1
40	DH	82	SER	3.1
2	CC	167	TYR	3.1
1	AA	94	G	3.1
23	BB	901	C	3.0

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Mol	Chain	Res	Type	RSRZ
24	DI	84	GLY	3.0
23	BB	1175	A	3.0
32	D4	7	VAL	3.0
48	BG	42	VAL	3.0
53	B6	62	ASP	3.0
6	AG	79	VAL	3.0
23	BB	2141	G	3.0
32	D4	24	ARG	3.0
32	B4	25	VAL	3.0
53	B6	84	ARG	3.0
40	BH	126	GLY	3.0
53	D6	38	LEU	3.0
53	D6	98	ALA	2.9
24	BI	5	GLN	2.9
53	D6	37	LEU	2.9
23	BB	1731	G	2.9
32	D4	22	VAL	2.9
1	AA	121	U	2.9
23	BB	2140	G	2.9
48	DG	88	LEU	2.9
53	B6	98	ALA	2.9
9	CJ	35	GLN	2.9
41	BJ	83	GLY	2.9
40	BH	27	ARG	2.9
40	BH	45	GLU	2.9
40	BH	85	GLY	2.9
6	AG	78	ARG	2.9
20	CB	38	HIS	2.9
7	CH	120	LEU	2.9
27	BK	46	ALA	2.8
38	BM	103	TYR	2.8
3	AD	22	SER	2.8
32	D4	17	VAL	2.8
53	B6	48	ALA	2.8
18	AS	30	LEU	2.8
24	DI	29	GLN	2.8
32	B4	29	ALA	2.8
46	BU	61	GLU	2.8
24	BI	70	THR	2.8
53	B6	41	LEU	2.8
43	BO	38	GLN	2.8
53	B6	67	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
39	BX	57	LEU	2.8
32	B4	23	ILE	2.7
23	DB	613	A	2.7
24	DI	53	PRO	2.7
18	AS	42	ASN	2.7
23	BB	1870	C	2.7
46	BU	93	ARG	2.7
20	CB	35	ASN	2.7
13	AN	23	ARG	2.7
53	B6	75	ALA	2.7
18	AS	40	PHE	2.7
48	DG	40	VAL	2.7
12	AM	4	ALA	2.7
43	DO	53	THR	2.7
3	AD	83	GLY	2.7
7	AH	129	ALA	2.7
32	D4	18	LYS	2.7
6	CG	74	VAL	2.7
53	B6	74	ASN	2.7
1	AA	972	C	2.7
4	CE	50	GLY	2.6
32	D4	36	ARG	2.6
43	BO	92	PHE	2.6
43	BO	99	TYR	2.6
39	BX	60	LYS	2.6
53	B6	94	ASN	2.6
43	DO	59	ALA	2.6
47	DF	173	ASP	2.6
51	BZ	78	TYR	2.6
10	CK	13	LYS	2.6
53	B6	40	HIS	2.6
23	BB	715	A	2.6
9	CJ	79	PRO	2.6
1	CA	1033	G	2.6
53	B6	86	SER	2.6
53	D6	45	TYR	2.6
43	DO	38	GLN	2.6
39	BX	5	GLU	2.6
53	D6	95	LYS	2.6
20	CB	212	TYR	2.6
23	BB	1537	G	2.5
43	BO	93	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
32	D4	37	GLN	2.5
50	BT	65	GLY	2.5
6	CG	5	VAL	2.5
23	BB	2149	U	2.5
2	CC	165	GLU	2.5
48	DG	172	GLU	2.5
40	BH	125	THR	2.5
53	B6	38	LEU	2.5
12	AM	91	ARG	2.5
20	CB	184	ALA	2.5
24	BI	117	THR	2.5
2	AC	159	ALA	2.5
43	BO	107	ALA	2.5
53	B6	59	THR	2.5
22	DA	88	C	2.5
43	DO	27	VAL	2.5
23	BB	2157	G	2.5
12	CM	12	LYS	2.5
13	CN	60	ARG	2.5
23	BB	645	C	2.4
23	BB	1087	G	2.4
20	CB	79	VAL	2.4
8	AI	99	LYS	2.4
1	AA	93	U	2.4
6	CG	70	PRO	2.4
26	BD	25	THR	2.4
12	AM	92	ARG	2.4
32	D4	33	HIS	2.4
50	BT	3	ARG	2.4
53	B6	63	PRO	2.4
23	BB	141	G	2.4
7	AH	128	VAL	2.4
22	DA	52	A	2.4
32	D4	19	ARG	2.4
41	BJ	82	GLY	2.4
7	AH	102	VAL	2.4
53	B6	88	LEU	2.4
9	CJ	80	THR	2.4
44	DQ	90	ASP	2.4
40	BH	18	GLN	2.4
12	CM	42	VAL	2.4
13	CN	46	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
43	BO	95	SER	2.3
1	AA	77	A	2.3
40	DH	83	LYS	2.3
24	BI	6	ALA	2.3
23	DB	645	C	2.3
43	DO	26	LEU	2.3
23	BB	1057	A	2.3
7	CH	122	GLY	2.3
53	B6	97	ASP	2.3
1	AA	1150	A	2.3
2	AC	155	ARG	2.3
9	CJ	34	ALA	2.3
20	AB	100	LEU	2.3
52	BW	65	LYS	2.3
52	DW	65	LYS	2.3
1	CA	999	C	2.3
15	CP	9	HIS	2.3
13	CN	62	ARG	2.3
26	BD	187	LEU	2.3
43	DO	92	PHE	2.3
40	DH	81	ALA	2.3
26	BD	27	ILE	2.3
23	BB	2139	U	2.3
33	B1	16	THR	2.3
40	BH	127	GLU	2.3
24	DI	48	ILE	2.2
6	CG	4	ARG	2.2
50	DT	14	PRO	2.2
5	AF	8	PHE	2.2
1	AA	1355	G	2.2
6	CG	113	LYS	2.2
23	DB	2110	G	2.2
6	AG	81	GLY	2.2
23	DB	2799	A	2.2
53	D6	72	ASP	2.2
32	B4	38	GLY	2.2
40	BH	88	GLY	2.2
24	DI	82	ALA	2.2
18	CS	23	GLU	2.2
1	AA	1004	A	2.2
24	DI	80	LYS	2.2
38	DM	1	MET	2.2

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Mol	Chain	Res	Type	RSRZ
6	AG	150	PHE	2.2
53	D6	75	ALA	2.2
2	AC	158	GLY	2.2
23	DB	2903	U	2.2
15	CP	10	GLY	2.2
8	CI	31	GLN	2.2
43	DO	52	SER	2.2
53	D6	94	ASN	2.2
51	BZ	76	GLU	2.2
15	CP	17	TYR	2.1
20	CB	130	LYS	2.1
8	AI	102	PHE	2.1
13	AN	31	SER	2.1
43	DO	97	PHE	2.1
24	DI	6	ALA	2.1
20	CB	186	VAL	2.1
53	B6	44	GLU	2.1
13	CN	59	GLN	2.1
23	BB	2142	A	2.1
37	BL	45	GLY	2.1
2	AC	48	LYS	2.1
9	CJ	81	GLU	2.1
9	AJ	89	ARG	2.1
53	B6	104	PRO	2.1
1	CA	998	C	2.1
33	B1	15	GLY	2.1
20	AB	8	MET	2.1
43	BO	106	LEU	2.1
8	AI	16	ALA	2.1
51	DZ	78	TYR	2.1
53	B6	49	HIS	2.1
20	AB	158	ASP	2.1
21	CU	34	ARG	2.1
1	CA	1296	C	2.1
13	AN	51	PRO	2.1
21	CU	35	GLU	2.1
26	BD	183	GLU	2.1
29	DE	96	VAL	2.1
43	DO	60	GLU	2.1
48	BG	160	GLY	2.1
53	B6	91	ASN	2.1
13	AN	28	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
1	CA	121	U	2.1
2	AC	178	ARG	2.1
48	DG	176	LYS	2.1
1	AA	995	C	2.1
40	BH	12	LEU	2.1
40	BH	89	LYS	2.1
48	DG	160	GLY	2.1
13	AN	34	ASN	2.1
25	BC	34	GLU	2.1
1	AA	65	A	2.0
8	AI	100	ALA	2.0
43	DO	61	GLN	2.0
53	B6	58	VAL	2.0
20	AB	63	LYS	2.0
13	AN	20	PHE	2.0
24	DI	83	ALA	2.0
33	B1	14	ALA	2.0
1	AA	971	G	2.0
40	DH	80	ILE	2.0
9	AJ	10	LEU	2.0
52	BW	26	GLY	2.0
23	BB	2144	G	2.0
40	BH	19	VAL	2.0
21	AU	35	GLU	2.0
26	BD	188	LEU	2.0
30	DY	1	ALA	2.0
29	BE	124	PHE	2.0
12	CM	43	LYS	2.0
46	BU	83	GLY	2.0
15	CP	15	PRO	2.0
32	B4	33	HIS	2.0
19	CT	66	ILE	2.0
53	D6	79	ILE	2.0
9	AJ	42	LEU	2.0
3	AD	203	TYR	2.0
23	BB	436	C	2.0
51	BZ	77	LYS	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(Å^2)	Q<0.9
54	MG	AA	1625	1/1	0.01	0.18	144,144,144,144	1
54	MG	DB	3060	1/1	0.24	0.12	160,160,160,160	0
54	MG	DB	3059	1/1	0.41	0.13	152,152,152,152	0
54	MG	AA	1659	1/1	0.41	0.55	127,127,127,127	0
54	MG	AA	1608	1/1	0.55	0.52	136,136,136,136	0
54	MG	AA	1657	1/1	0.57	1.78	155,155,155,155	0
54	MG	AA	1626	1/1	0.57	0.63	28,28,28,28	1
54	MG	CE	201	1/1	0.61	0.91	145,145,145,145	0
54	MG	DB	3045	1/1	0.65	0.12	108,108,108,108	0
54	MG	AA	1639	1/1	0.66	1.94	126,126,126,126	0
54	MG	CA	1608	1/1	0.66	0.57	178,178,178,178	0
54	MG	CA	1657	1/1	0.68	0.57	97,97,97,97	0
54	MG	AA	1632	1/1	0.69	0.43	80,80,80,80	0
54	MG	CA	1616	1/1	0.70	0.24	94,94,94,94	0
54	MG	BB	3079	1/1	0.71	0.19	43,43,43,43	0
55	PAR	BB	3111	42/42	0.71	0.41	100,100,100,100	42
54	MG	AA	1650	1/1	0.73	0.17	116,116,116,116	0
54	MG	BB	3042	1/1	0.74	0.06	100,100,100,100	0
54	MG	AA	1613	1/1	0.75	0.30	82,82,82,82	0
54	MG	BB	3053	1/1	0.76	0.12	38,38,38,38	0
54	MG	CA	1660	1/1	0.77	0.22	58,58,58,58	0
54	MG	CA	1623	1/1	0.77	0.36	180,180,180,180	0
54	MG	AA	1658	1/1	0.77	0.11	97,97,97,97	0
54	MG	DB	3052	1/1	0.78	0.56	166,166,166,166	0
54	MG	BB	3064	1/1	0.78	0.19	78,78,78,78	0
55	PAR	DB	3112	42/42	0.78	0.40	55,55,55,55	42
54	MG	AA	1656	1/1	0.79	0.26	50,50,50,50	0
54	MG	AA	1617	1/1	0.80	0.22	138,138,138,138	0
54	MG	AA	1603	1/1	0.80	0.17	38,38,38,38	0
54	MG	CA	1649	1/1	0.81	0.34	134,134,134,134	0
54	MG	DB	3037	1/1	0.81	0.14	45,45,45,45	0
54	MG	BB	3108	1/1	0.81	0.30	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1647	1/1	0.81	1.42	180,180,180,180	0
54	MG	CA	1619	1/1	0.82	0.24	78,78,78,78	0
54	MG	AA	1660	1/1	0.83	0.21	75,75,75,75	0
54	MG	DB	3083	1/1	0.83	0.33	72,72,72,72	0
54	MG	AA	1637	1/1	0.83	1.21	146,146,146,146	0
54	MG	AA	1627	1/1	0.83	0.29	46,46,46,46	0
54	MG	CA	1622	1/1	0.84	0.18	38,38,38,38	0
54	MG	CA	1614	1/1	0.84	0.19	85,85,85,85	0
54	MG	CA	1629	1/1	0.84	0.49	96,96,96,96	1
54	MG	BB	3031	1/1	0.84	0.19	44,44,44,44	0
54	MG	BB	3033	1/1	0.84	0.55	125,125,125,125	0
54	MG	CA	1648	1/1	0.85	0.20	17,17,17,17	0
54	MG	BB	3093	1/1	0.85	0.44	98,98,98,98	0
54	MG	BB	3077	1/1	0.85	0.17	64,64,64,64	0
54	MG	CA	1606	1/1	0.85	0.22	103,103,103,103	0
54	MG	AA	1601	1/1	0.85	0.22	10,10,10,10	0
54	MG	DB	3013	1/1	0.85	0.21	35,35,35,35	0
54	MG	BB	3081	1/1	0.85	0.16	31,31,31,31	0
54	MG	DB	3072	1/1	0.86	0.09	48,48,48,48	0
54	MG	BB	3097	1/1	0.86	0.33	95,95,95,95	0
54	MG	AA	1615	1/1	0.86	0.46	171,171,171,171	0
54	MG	AA	1635	1/1	0.86	0.20	120,120,120,120	0
54	MG	BB	3047	1/1	0.87	0.18	92,92,92,92	0
54	MG	AA	1633	1/1	0.87	0.41	56,56,56,56	0
54	MG	BB	3099	1/1	0.87	0.11	40,40,40,40	0
54	MG	AA	1651	1/1	0.87	0.19	55,55,55,55	0
54	MG	CA	1634	1/1	0.87	0.17	30,30,30,30	0
54	MG	BB	3080	1/1	0.88	0.59	131,131,131,131	0
54	MG	AA	1619	1/1	0.88	1.61	180,180,180,180	0
54	MG	BB	3010	1/1	0.88	0.12	38,38,38,38	0
54	MG	CA	1658	1/1	0.88	0.37	70,70,70,70	0
54	MG	CA	1626	1/1	0.88	0.31	23,23,23,23	1
54	MG	DB	3064	1/1	0.88	0.12	23,23,23,23	0
54	MG	AA	1602	1/1	0.88	0.18	105,105,105,105	0
54	MG	BB	3049	1/1	0.88	0.27	25,25,25,25	0
54	MG	DB	3026	1/1	0.88	0.20	54,54,54,54	0
54	MG	DB	3035	1/1	0.88	0.23	52,52,52,52	0
54	MG	BB	3012	1/1	0.89	0.16	71,71,71,71	0
54	MG	BB	3019	1/1	0.89	0.17	56,56,56,56	0
54	MG	AA	1622	1/1	0.89	0.34	111,111,111,111	0
54	MG	BB	3051	1/1	0.89	0.37	75,75,75,75	0
54	MG	DB	3080	1/1	0.89	0.11	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1652	1/1	0.89	0.22	126,126,126,126	0
55	PAR	AA	1661	42/42	0.89	0.22	62,62,62,62	0
54	MG	DB	3003	1/1	0.89	0.19	5,5,5,5	0
54	MG	DB	3058	1/1	0.89	0.56	157,157,157,157	0
54	MG	AA	1620	1/1	0.90	0.06	95,95,95,95	0
54	MG	AA	1621	1/1	0.90	0.26	27,27,27,27	0
54	MG	CA	1625	1/1	0.90	0.31	46,46,46,46	0
54	MG	AA	1610	1/1	0.90	0.32	82,82,82,82	0
54	MG	CA	1609	1/1	0.90	0.16	81,81,81,81	0
54	MG	CA	1630	1/1	0.90	0.23	65,65,65,65	0
54	MG	BB	3095	1/1	0.90	0.11	65,65,65,65	0
54	MG	BB	3013	1/1	0.90	0.28	86,86,86,86	0
54	MG	AA	1623	1/1	0.90	0.63	33,33,33,33	1
55	PAR	CA	1662	42/42	0.90	0.21	45,45,45,45	0
54	MG	CA	1620	1/1	0.90	0.26	104,104,104,104	0
54	MG	DB	3054	1/1	0.91	0.12	69,69,69,69	0
54	MG	CA	1654	1/1	0.91	0.13	72,72,72,72	0
54	MG	BB	3043	1/1	0.91	0.23	97,97,97,97	0
54	MG	BB	3063	1/1	0.91	0.09	5,5,5,5	0
54	MG	DB	3050	1/1	0.91	0.11	118,118,118,118	0
54	MG	CA	1615	1/1	0.91	0.25	180,180,180,180	0
56	ZN	D4	101	1/1	0.91	0.30	96,96,96,96	0
54	MG	DB	3022	1/1	0.92	0.17	85,85,85,85	0
54	MG	DB	3053	1/1	0.92	0.26	65,65,65,65	0
54	MG	BB	3006	1/1	0.92	0.09	37,37,37,37	0
54	MG	DB	3094	1/1	0.92	0.10	81,81,81,81	0
54	MG	DB	3100	1/1	0.92	0.13	22,22,22,22	0
54	MG	BB	3004	1/1	0.92	0.31	44,44,44,44	0
54	MG	CA	1643	1/1	0.92	0.13	11,11,11,11	0
54	MG	CA	1624	1/1	0.92	0.20	48,48,48,48	0
54	MG	DB	3016	1/1	0.92	0.12	5,5,5,5	0
54	MG	DB	3066	1/1	0.92	0.18	123,123,123,123	0
54	MG	DB	3061	1/1	0.93	0.17	95,95,95,95	0
54	MG	CA	1652	1/1	0.93	0.22	58,58,58,58	0
54	MG	DB	3027	1/1	0.93	0.17	11,11,11,11	0
54	MG	CA	1621	1/1	0.93	0.56	67,67,67,67	0
54	MG	DB	3073	1/1	0.93	0.12	25,25,25,25	0
54	MG	AA	1606	1/1	0.93	0.04	73,73,73,73	0
54	MG	CA	1632	1/1	0.93	0.14	34,34,34,34	0
54	MG	BB	3071	1/1	0.93	0.21	63,63,63,63	0
54	MG	CA	1635	1/1	0.93	0.16	105,105,105,105	0
54	MG	CA	1637	1/1	0.93	0.13	116,116,116,116	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BB	3026	1/1	0.93	0.23	44,44,44,44	0
54	MG	DB	3015	1/1	0.93	0.10	39,39,39,39	0
54	MG	BB	3078	1/1	0.93	0.33	92,92,92,92	0
54	MG	BB	3027	1/1	0.93	0.18	83,83,83,83	0
54	MG	BB	3046	1/1	0.94	0.19	64,64,64,64	0
54	MG	DB	3049	1/1	0.94	0.12	11,11,11,11	0
54	MG	AA	1638	1/1	0.94	0.10	45,45,45,45	0
54	MG	DB	3051	1/1	0.94	0.15	20,20,20,20	0
54	MG	BB	3020	1/1	0.94	0.48	23,23,23,23	0
54	MG	BB	3083	1/1	0.94	0.14	51,51,51,51	0
54	MG	BB	3091	1/1	0.94	0.11	81,81,81,81	0
54	MG	AA	1634	1/1	0.94	0.11	79,79,79,79	0
54	MG	AA	1644	1/1	0.94	0.22	69,69,69,69	0
54	MG	CA	1659	1/1	0.94	0.13	70,70,70,70	0
54	MG	BB	3054	1/1	0.94	0.10	55,55,55,55	0
54	MG	CA	1661	1/1	0.94	0.12	40,40,40,40	0
54	MG	DB	3065	1/1	0.94	0.32	68,68,68,68	0
54	MG	AA	1646	1/1	0.94	0.12	98,98,98,98	0
54	MG	DB	3067	1/1	0.94	0.15	13,13,13,13	0
54	MG	BB	3100	1/1	0.94	0.20	109,109,109,109	0
54	MG	DB	3008	1/1	0.94	0.19	11,11,11,11	0
54	MG	AA	1624	1/1	0.94	0.20	76,76,76,76	0
54	MG	BB	3066	1/1	0.94	0.05	34,34,34,34	0
54	MG	DB	3090	1/1	0.94	0.22	35,35,35,35	0
54	MG	CA	1607	1/1	0.94	0.11	20,20,20,20	0
54	MG	DB	3097	1/1	0.94	0.14	32,32,32,32	0
54	MG	BB	3037	1/1	0.94	0.15	63,63,63,63	0
54	MG	AA	1612	1/1	0.94	0.15	96,96,96,96	0
54	MG	CA	1636	1/1	0.94	0.21	90,90,90,90	0
54	MG	DB	3030	1/1	0.94	0.23	30,30,30,30	0
54	MG	BB	3017	1/1	0.94	0.15	46,46,46,46	0
56	ZN	B4	101	1/1	0.94	0.20	68,68,68,68	0
54	MG	CA	1640	1/1	0.94	0.11	35,35,35,35	0
54	MG	AA	1642	1/1	0.95	0.20	63,63,63,63	0
54	MG	BB	3041	1/1	0.95	0.12	15,15,15,15	0
54	MG	BB	3011	1/1	0.95	0.16	68,68,68,68	0
54	MG	AA	1648	1/1	0.95	0.10	5,5,5,5	0
54	MG	AA	1649	1/1	0.95	0.09	93,93,93,93	0
54	MG	AA	1605	1/1	0.95	0.09	54,54,54,54	0
54	MG	BB	3088	1/1	0.95	0.08	11,11,11,11	0
54	MG	BB	3090	1/1	0.95	0.17	115,115,115,115	0
54	MG	BB	3018	1/1	0.95	0.25	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1645	1/1	0.95	0.17	138,138,138,138	0
54	MG	DB	3010	1/1	0.95	0.14	5,5,5,5	0
54	MG	BB	3002	1/1	0.95	0.09	18,18,18,18	0
54	MG	AA	1604	1/1	0.95	0.12	37,37,37,37	0
54	MG	BB	3059	1/1	0.95	0.16	39,39,39,39	0
54	MG	DB	3075	1/1	0.95	0.16	10,10,10,10	0
54	MG	DB	3017	1/1	0.95	0.13	23,23,23,23	0
54	MG	BB	3061	1/1	0.95	0.14	46,46,46,46	0
54	MG	AA	1655	1/1	0.95	0.22	83,83,83,83	0
54	MG	CA	1604	1/1	0.95	0.28	11,11,11,11	0
54	MG	DB	3029	1/1	0.95	0.16	70,70,70,70	0
54	MG	BB	3029	1/1	0.95	0.10	12,12,12,12	0
54	MG	DB	3108	1/1	0.95	0.24	13,13,13,13	0
54	MG	BB	3065	1/1	0.95	0.10	30,30,30,30	0
54	MG	DB	3036	1/1	0.95	0.31	51,51,51,51	0
54	MG	BB	3008	1/1	0.95	0.13	81,81,81,81	0
54	MG	CA	1646	1/1	0.95	0.34	78,78,78,78	0
54	MG	BB	3070	1/1	0.95	0.18	40,40,40,40	0
54	MG	BB	3009	1/1	0.95	0.11	76,76,76,76	0
54	MG	DB	3048	1/1	0.96	0.24	8,8,8,8	0
54	MG	BB	3069	1/1	0.96	0.11	5,5,5,5	0
54	MG	AA	1611	1/1	0.96	0.09	75,75,75,75	0
54	MG	AA	1630	1/1	0.96	0.11	118,118,118,118	0
54	MG	BB	3072	1/1	0.96	0.18	64,64,64,64	0
54	MG	CA	1627	1/1	0.96	0.20	35,35,35,35	1
54	MG	CA	1628	1/1	0.96	0.21	82,82,82,82	0
54	MG	BB	3001	1/1	0.96	0.08	14,14,14,14	0
54	MG	DB	3006	1/1	0.96	0.07	15,15,15,15	0
54	MG	DB	3007	1/1	0.96	0.15	27,27,27,27	0
54	MG	AA	1636	1/1	0.96	0.16	38,38,38,38	0
54	MG	DB	3009	1/1	0.96	0.09	22,22,22,22	0
54	MG	BB	3035	1/1	0.96	0.14	60,60,60,60	0
54	MG	DB	3011	1/1	0.96	0.12	22,22,22,22	0
54	MG	BB	3057	1/1	0.96	0.72	65,65,65,65	0
54	MG	DB	3014	1/1	0.96	0.33	39,39,39,39	0
54	MG	BB	3003	1/1	0.96	0.21	60,60,60,60	0
54	MG	BB	3040	1/1	0.96	0.12	47,47,47,47	0
54	MG	AA	1631	1/1	0.96	0.08	61,61,61,61	0
54	MG	DB	3082	1/1	0.96	0.07	37,37,37,37	0
54	MG	CA	1638	1/1	0.96	0.06	56,56,56,56	0
54	MG	DB	3088	1/1	0.96	0.07	31,31,31,31	0
54	MG	DB	3023	1/1	0.96	0.07	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DB	3092	1/1	0.96	0.14	60,60,60,60	0
54	MG	DB	3093	1/1	0.96	0.12	9,9,9,9	0
54	MG	AA	1614	1/1	0.96	0.54	131,131,131,131	0
54	MG	DB	3095	1/1	0.96	0.24	62,62,62,62	0
54	MG	CA	1617	1/1	0.96	0.11	12,12,12,12	0
54	MG	CA	1645	1/1	0.96	0.07	82,82,82,82	0
54	MG	DB	3102	1/1	0.96	0.17	20,20,20,20	0
54	MG	CA	1618	1/1	0.96	0.12	23,23,23,23	0
54	MG	DB	3110	1/1	0.96	0.14	44,44,44,44	0
54	MG	DB	3111	1/1	0.96	0.23	68,68,68,68	0
54	MG	AA	1607	1/1	0.96	0.10	35,35,35,35	0
54	MG	BB	3092	1/1	0.96	0.08	60,60,60,60	0
54	MG	AA	1640	1/1	0.96	0.09	77,77,77,77	0
54	MG	DB	3041	1/1	0.96	0.12	9,9,9,9	0
54	MG	BB	3068	1/1	0.96	0.14	102,102,102,102	0
54	MG	DB	3046	1/1	0.96	0.14	38,38,38,38	0
54	MG	AA	1654	1/1	0.97	0.08	52,52,52,52	0
54	MG	DB	3002	1/1	0.97	0.09	14,14,14,14	0
54	MG	BB	3109	1/1	0.97	0.12	49,49,49,49	0
54	MG	DB	3055	1/1	0.97	0.16	26,26,26,26	0
54	MG	BB	3110	1/1	0.97	0.17	41,41,41,41	0
54	MG	CA	1601	1/1	0.97	0.15	9,9,9,9	0
54	MG	BB	3032	1/1	0.97	0.12	31,31,31,31	0
54	MG	CA	1605	1/1	0.97	0.12	5,5,5,5	0
54	MG	DB	3063	1/1	0.97	0.06	23,23,23,23	0
54	MG	CA	1633	1/1	0.97	0.17	106,106,106,106	0
54	MG	BB	3044	1/1	0.97	0.09	29,29,29,29	0
54	MG	AA	1618	1/1	0.97	0.04	105,105,105,105	0
54	MG	BB	3086	1/1	0.97	0.13	5,5,5,5	0
54	MG	DB	3068	1/1	0.97	0.19	16,16,16,16	0
54	MG	DB	3069	1/1	0.97	0.19	5,5,5,5	0
54	MG	DB	3070	1/1	0.97	0.08	28,28,28,28	0
54	MG	DB	3071	1/1	0.97	0.09	41,41,41,41	0
54	MG	BB	3034	1/1	0.97	0.18	41,41,41,41	0
54	MG	CA	1610	1/1	0.97	0.11	65,65,65,65	0
54	MG	CA	1611	1/1	0.97	0.09	114,114,114,114	0
54	MG	DB	3076	1/1	0.97	0.15	27,27,27,27	0
54	MG	DB	3078	1/1	0.97	0.11	31,31,31,31	0
54	MG	CA	1641	1/1	0.97	0.12	76,76,76,76	0
54	MG	DB	3081	1/1	0.97	0.09	20,20,20,20	0
54	MG	CA	1642	1/1	0.97	0.08	85,85,85,85	0
54	MG	BB	3048	1/1	0.97	0.18	8,8,8,8	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DB	3085	1/1	0.97	0.20	49,49,49,49	0
54	MG	CA	1644	1/1	0.97	0.11	69,69,69,69	0
54	MG	BB	3024	1/1	0.97	0.08	76,76,76,76	0
54	MG	AA	1609	1/1	0.97	0.06	11,11,11,11	0
54	MG	DB	3031	1/1	0.97	0.10	29,29,29,29	0
54	MG	DB	3032	1/1	0.97	0.18	21,21,21,21	0
54	MG	DB	3034	1/1	0.97	0.11	52,52,52,52	0
54	MG	BB	3038	1/1	0.97	0.12	157,157,157,157	0
54	MG	BB	3039	1/1	0.97	0.12	12,12,12,12	0
54	MG	BB	3073	1/1	0.97	0.14	70,70,70,70	0
54	MG	DB	3103	1/1	0.97	0.10	37,37,37,37	0
54	MG	DB	3038	1/1	0.97	0.09	23,23,23,23	0
54	MG	CA	1653	1/1	0.97	0.05	43,43,43,43	0
54	MG	DB	3043	1/1	0.97	0.12	7,7,7,7	0
54	MG	BB	3098	1/1	0.97	0.14	10,10,10,10	0
54	MG	AA	1629	1/1	0.97	0.09	44,44,44,44	0
54	MG	AA	1653	1/1	0.97	0.10	51,51,51,51	0
54	MG	BB	3103	1/1	0.97	0.08	20,20,20,20	0
54	MG	BB	3106	1/1	0.97	0.10	45,45,45,45	0
54	MG	BB	3107	1/1	0.97	0.06	13,13,13,13	0
54	MG	AA	1616	1/1	0.98	0.12	15,15,15,15	0
54	MG	BB	3030	1/1	0.98	0.05	83,83,83,83	0
54	MG	BB	3075	1/1	0.98	0.12	55,55,55,55	0
54	MG	BB	3102	1/1	0.98	0.13	76,76,76,76	0
54	MG	DB	3062	1/1	0.98	0.04	44,44,44,44	0
54	MG	BB	3076	1/1	0.98	0.09	48,48,48,48	0
54	MG	DB	3018	1/1	0.98	0.15	17,17,17,17	0
54	MG	DB	3019	1/1	0.98	0.07	8,8,8,8	0
54	MG	DB	3020	1/1	0.98	0.14	5,5,5,5	0
54	MG	BB	3105	1/1	0.98	0.10	21,21,21,21	0
54	MG	CA	1647	1/1	0.98	0.12	58,58,58,58	0
54	MG	DB	3024	1/1	0.98	0.14	47,47,47,47	0
54	MG	DB	3025	1/1	0.98	0.09	18,18,18,18	0
54	MG	BB	3055	1/1	0.98	0.26	78,78,78,78	0
54	MG	BB	3005	1/1	0.98	0.11	9,9,9,9	0
54	MG	DB	3028	1/1	0.98	0.30	33,33,33,33	0
54	MG	CA	1651	1/1	0.98	0.09	37,37,37,37	0
54	MG	AA	1628	1/1	0.98	0.22	49,49,49,49	0
54	MG	BB	3060	1/1	0.98	0.15	43,43,43,43	0
54	MG	BB	3007	1/1	0.98	0.21	103,103,103,103	0
54	MG	DB	3033	1/1	0.98	0.16	20,20,20,20	0
54	MG	BB	3045	1/1	0.98	0.12	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1602	1/1	0.98	0.21	16,16,16,16	0
54	MG	BB	3023	1/1	0.98	0.11	6,6,6,6	0
54	MG	DB	3086	1/1	0.98	0.19	25,25,25,25	0
54	MG	BB	3087	1/1	0.98	0.18	102,102,102,102	0
54	MG	DB	3089	1/1	0.98	0.22	75,75,75,75	0
54	MG	CA	1631	1/1	0.98	0.14	55,55,55,55	0
54	MG	DB	3039	1/1	0.98	0.09	34,34,34,34	0
54	MG	AA	1641	1/1	0.98	0.05	32,32,32,32	0
54	MG	DB	3042	1/1	0.98	0.10	36,36,36,36	0
54	MG	BB	3014	1/1	0.98	0.19	46,46,46,46	0
54	MG	DB	3096	1/1	0.98	0.15	37,37,37,37	0
54	MG	DB	3044	1/1	0.98	0.10	16,16,16,16	0
54	MG	DB	3098	1/1	0.98	0.07	69,69,69,69	0
54	MG	DB	3099	1/1	0.98	0.15	21,21,21,21	0
54	MG	BB	3067	1/1	0.98	0.07	25,25,25,25	0
54	MG	DB	3101	1/1	0.98	0.25	7,7,7,7	0
54	MG	DB	3004	1/1	0.98	0.26	40,40,40,40	0
54	MG	DB	3047	1/1	0.98	0.17	31,31,31,31	0
54	MG	DB	3104	1/1	0.98	0.11	21,21,21,21	0
54	MG	DB	3105	1/1	0.98	0.06	24,24,24,24	0
54	MG	DB	3106	1/1	0.98	0.11	17,17,17,17	0
54	MG	DB	3107	1/1	0.98	0.08	51,51,51,51	0
54	MG	DB	3005	1/1	0.98	0.06	52,52,52,52	0
54	MG	BB	3016	1/1	0.98	0.17	94,94,94,94	0
54	MG	BB	3050	1/1	0.98	0.09	16,16,16,16	0
54	MG	BB	3028	1/1	0.98	0.23	95,95,95,95	0
54	MG	BB	3096	1/1	0.98	0.13	69,69,69,69	0
54	MG	CA	1639	1/1	0.98	0.15	5,5,5,5	0
54	MG	BB	3052	1/1	0.98	0.09	59,59,59,59	0
54	MG	DB	3012	1/1	0.98	0.12	8,8,8,8	0
54	MG	DB	3057	1/1	0.98	0.05	17,17,17,17	0
54	MG	DB	3056	1/1	0.99	0.16	16,16,16,16	0
54	MG	DB	3087	1/1	0.99	0.22	67,67,67,67	0
54	MG	BB	3085	1/1	0.99	0.10	76,76,76,76	0
54	MG	BB	3021	1/1	0.99	0.12	62,62,62,62	0
54	MG	BB	3074	1/1	0.99	0.08	7,7,7,7	0
54	MG	DB	3091	1/1	0.99	0.09	11,11,11,11	0
54	MG	BB	3104	1/1	0.99	0.13	43,43,43,43	0
54	MG	CA	1650	1/1	0.99	0.05	5,5,5,5	0
54	MG	CA	1612	1/1	0.99	0.11	97,97,97,97	0
54	MG	CA	1613	1/1	0.99	0.12	24,24,24,24	0
54	MG	BB	3056	1/1	0.99	0.05	61,61,61,61	0

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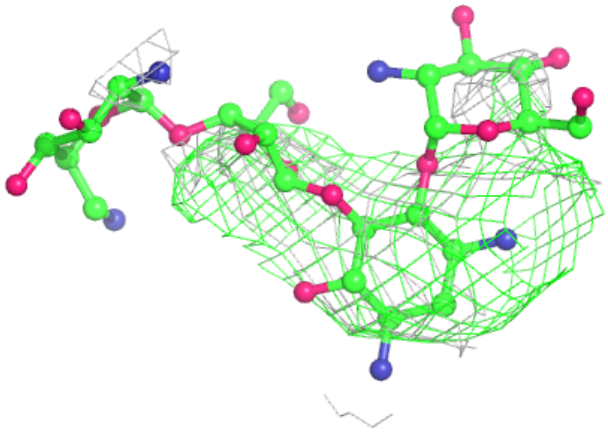
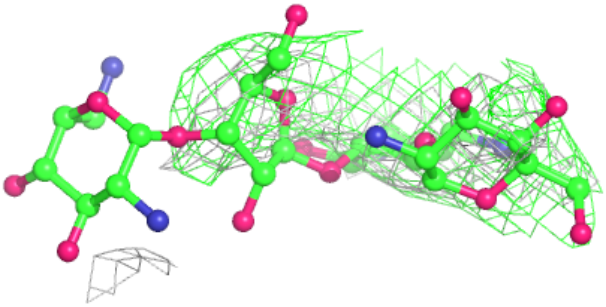
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BB	3089	1/1	0.99	0.06	30,30,30,30	0
54	MG	DB	3040	1/1	0.99	0.10	5,5,5,5	0
54	MG	CA	1655	1/1	0.99	0.06	22,22,22,22	0
54	MG	CA	1656	1/1	0.99	0.06	7,7,7,7	0
54	MG	BB	3022	1/1	0.99	0.03	34,34,34,34	0
54	MG	BB	3058	1/1	0.99	0.09	17,17,17,17	0
54	MG	BB	3015	1/1	0.99	0.05	9,9,9,9	0
54	MG	DB	3021	1/1	0.99	0.11	18,18,18,18	0
54	MG	AA	1643	1/1	0.99	0.18	118,118,118,118	0
54	MG	DB	3074	1/1	0.99	0.15	17,17,17,17	0
54	MG	BB	3094	1/1	0.99	0.12	55,55,55,55	0
54	MG	BB	3025	1/1	0.99	0.07	22,22,22,22	0
54	MG	DB	3109	1/1	0.99	0.20	27,27,27,27	0
54	MG	DB	3077	1/1	0.99	0.11	17,17,17,17	0
54	MG	DB	3001	1/1	0.99	0.10	5,5,5,5	0
54	MG	DB	3079	1/1	0.99	0.16	30,30,30,30	0
54	MG	CA	1603	1/1	0.99	0.12	37,37,37,37	0
54	MG	BB	3062	1/1	0.99	0.15	5,5,5,5	0
54	MG	BB	3082	1/1	0.99	0.33	22,22,22,22	0
54	MG	BB	3036	1/1	0.99	0.22	68,68,68,68	0
54	MG	BB	3084	1/1	0.99	0.14	60,60,60,60	0
54	MG	DB	3084	1/1	1.00	0.16	14,14,14,14	0
54	MG	BB	3101	1/1	1.00	0.23	64,64,64,64	0

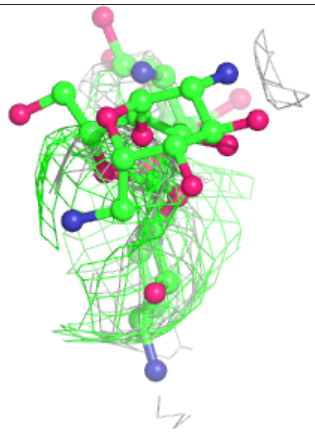
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around PAR BB 3111:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

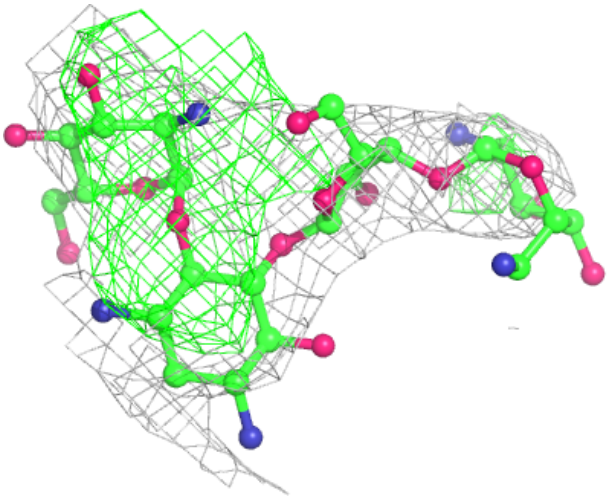


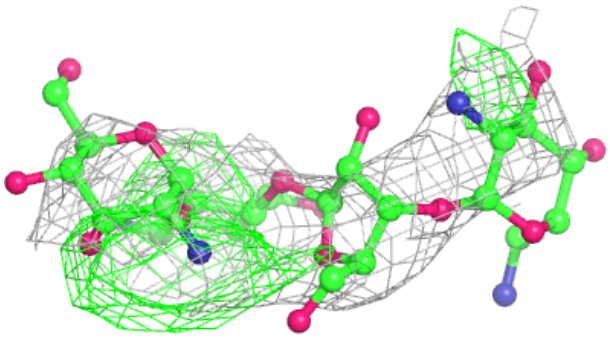


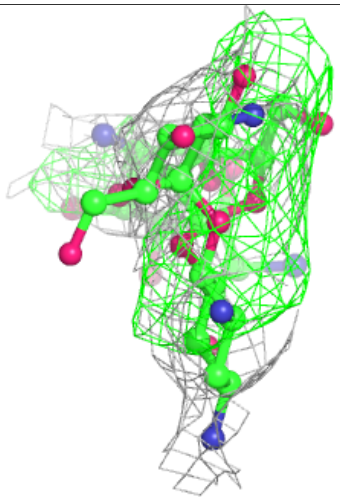


Electron density around PAR DB 3112:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

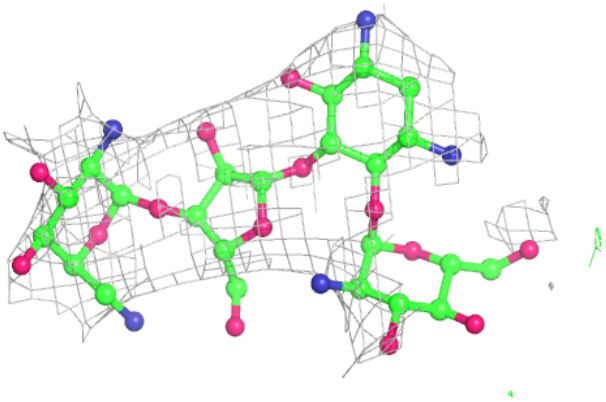


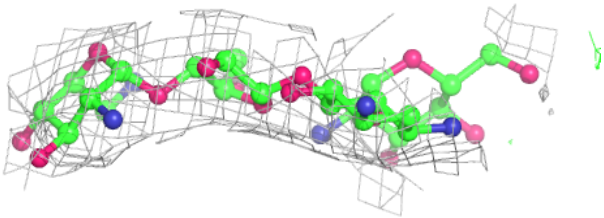


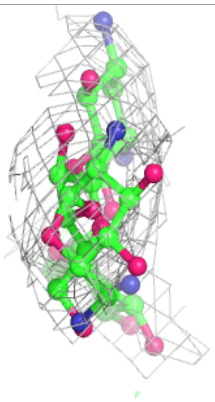


Electron density around PAR AA 1661:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

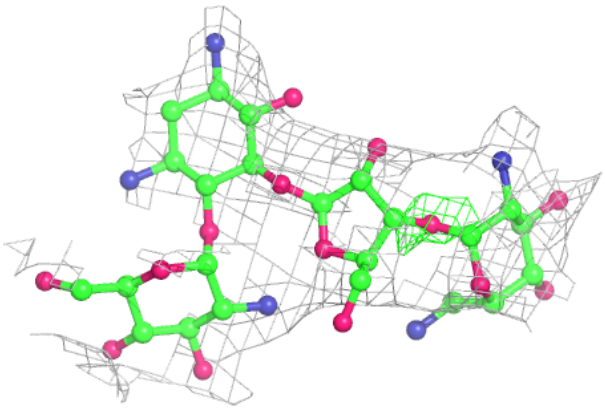


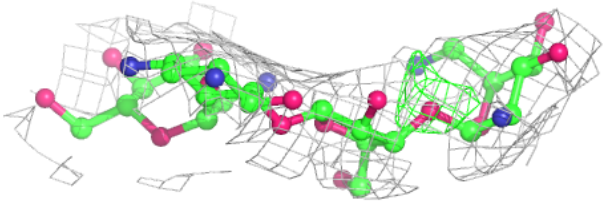


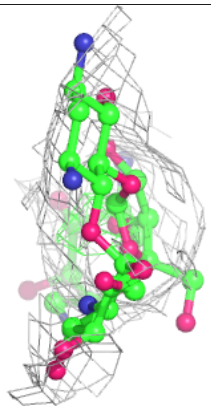


Electron density around PAR CA 1662:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)







6.5 Other polymers (i)

There are no such residues in this entry.