Full wwPDB X-ray Structure Validation Report ⓘ

Dec 17, 2023 – 01:07 PM EST

PDB ID	:	4U20
Title	:	Crystal structure of the E. coli ribosome bound to flopristin.
Authors	:	Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.
Deposited on	:	2014-07-16
Resolution	:	2.90 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

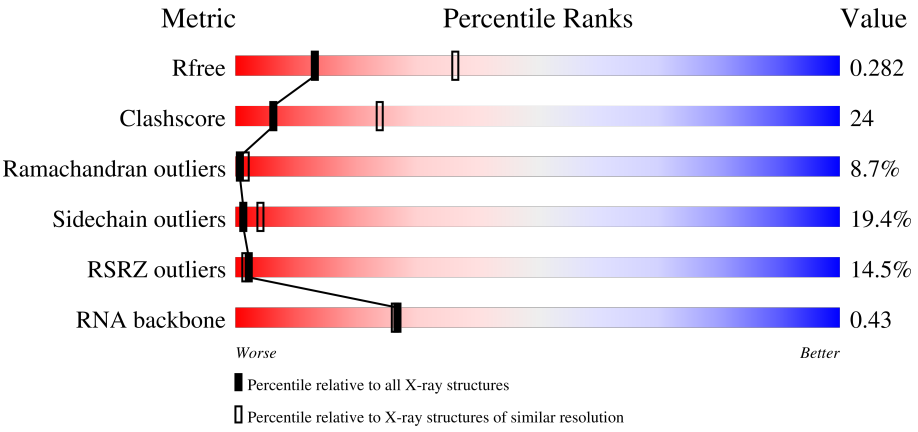
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 2.90 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	1957 (2.90-2.90)
Clashscore	141614	2172 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)
RNA backbone	3102	1007 (3.16-2.64)

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	1539	3% 30% 52% 17%
1	CA	1539	5% 31% 53% 16%
2	AB	218	19% 16% 46% 30% 7%
2	CB	218	29% 24% 48% 25% .

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Mol	Chain	Length	Quality of chain
3	AC	206	4% 41% 45% 13%
3	CC	206	23% 36% 49% 14%
4	AD	205	6% 32% 47% 20%
4	CD	205	4% 42% 42% 14%
5	AE	150	4% 35% 46% 17%
5	CE	150	6% 36% 39% 23%
6	AF	100	% 29% 42% 26%
6	CF	100	8% 31% 44% 20% 5%
7	AG	151	18% 36% 46% 17%
7	CG	151	58% 42% 44% 12%
8	AH	129	2% 41% 42% 17%
8	CH	129	9% 43% 42% 14%
9	AI	127	17% 26% 50% 23%
9	CI	127	36% 32% 50% 16%
10	AJ	98	15% 20% 47% 28% 5%
10	CJ	98	58% 42% 43% 12%
11	AK	117	13% 35% 43% 21%
11	CK	117	5% 32% 52% 14%
12	AL	123	4% 51% 34% 12%
12	CL	123	7% 41% 37% 19%
13	AM	114	9% 39% 44% 13%
13	CM	114	69% 39% 43% 18%
14	AN	100	17% 25% 52% 15%
14	CN	100	50% 33% 46% 16%
15	AO	88	6% 33% 48% 19%

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Mol	Chain	Length	Quality of chain
15	CO	88	6% 41% 44% 14%
16	AP	82	13% 26% 43% 26% 6%
16	CP	82	24% 49% 38% 12%
17	AQ	80	8% 35% 38% 24%
17	CQ	80	31% 32% 41% 24%
18	AR	55	7% 53% 38% 7%
18	CR	55	5% 29% 58% 11%
19	AS	79	22% 47% 38% 13%
19	CS	79	78% 46% 49%
20	AT	85	8% 40% 48% 12%
20	CT	85	40% 38% 41% 20%
21	AU	51	25% 27% 35% 33%
21	CU	51	16% 18% 43% 29% 10%
22	BA	2903	4% 32% 46% 19%
22	DA	2903	6% 31% 53% 16%
23	BB	119	50% 37% 13%
23	DB	119	3% 34% 52% 13%
24	BC	271	47% 42% 11%
24	DC	271	15% 40% 48% 11%
25	BD	209	47% 46% 6%
25	DD	209	19% 56% 37% 6%
26	BE	201	% 54% 37% 9%
26	DE	201	40% 42% 43% 13%
27	BF	177	6% 50% 37% 11%
27	DF	177	78% 43% 48% 8%

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Mol	Chain	Length	Quality of chain
28	BG	176	3% 55% 37% 7%
28	DG	176	56% 50% 41% 9%
29	BH	149	64% 27% 50% 19%
29	DH	149	42% 36% 51% 11%
30	BI	141	67% 30% 45% 25%
30	DI	141	94% 41% 42% 16%
31	BJ	142	61% 31% 7%
31	DJ	142	21% 49% 44% 6%
32	BK	122	50% 37% 11%
32	DK	122	20% 56% 38% 6%
33	BL	143	52% 34% 15%
33	DL	143	45% 45% 43% 11%
34	BM	136	54% 40%
34	DM	136	24% 63% 31% 5%
35	BN	120	45% 43% 11%
35	DN	120	24% 40% 44% 14%
36	BO	116	% 49% 41% 9%
36	DO	116	67% 46% 44% 10%
37	BP	114	56% 39%
37	DP	114	18% 46% 47% 5%
38	BQ	117	53% 37% 10%
38	DQ	117	18% 53% 42% 5%
39	BR	103	% 38% 50% 11%
39	DR	103	34% 50% 42% 7%
40	BS	110	% 50% 36% 12%

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Mol	Chain	Length	Quality of chain
40	DS	110	45% 44% 48% 8%
41	BT	93	2% 46% 41% 12%
41	DT	93	69% 32% 51% 15%
42	BU	102	2% 54% 34% 11%
42	DU	102	63% 30% 50% 17%
43	BV	94	% 51% 38% 11%
43	DV	94	23% 56% 41%
44	BW	76	% 55% 42%
44	DW	76	46% 64% 26% 8%
45	BX	77	% 53% 36% 10%
45	DX	77	18% 25% 62% 13%
46	BY	63	8% 37% 49% 14%
46	DY	63	48% 24% 63% 11%
47	BZ	58	59% 34% 7%
47	DZ	58	21% 48% 38% 14%
48	B0	56	45% 43% 12%
48	D0	56	30% 55% 36% 9%
49	B1	50	2% 58% 32% 8%
49	D1	50	26% 46% 38% 16%
50	B2	46	2% 59% 33% 9%
50	D2	46	37% 41% 48% 9%
51	B3	64	64% 28% 8%
51	D3	64	25% 44% 50% 6%
52	B4	38	55% 42%
52	D4	38	55% 45% 32% 24%

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Mol	Chain	Length	Quality of chain
53	B5	228	

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	1645	-	-	-	X
54	MG	AA	1658	-	-	-	X
54	MG	BA	3193	-	-	-	X
54	MG	CA	1641	-	-	-	X
54	MG	DA	3005	-	-	-	X
54	MG	DA	3008	-	-	-	X
54	MG	DA	3027	-	-	-	X
54	MG	DA	3073	-	-	-	X
54	MG	DA	3093	-	-	-	X
54	MG	DA	3100	-	-	-	X
54	MG	DA	3120	-	-	-	X
54	MG	DA	3125	-	-	-	X
54	MG	DA	3132	-	-	-	X
54	MG	DA	3134	-	-	-	X
54	MG	DA	3144	-	-	-	X
54	MG	DA	3154	-	-	-	X
56	ZN	B4	101	-	-	X	-

2 Entry composition (i)

There are 57 unique types of molecules in this entry. The entry contains 288258 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
1	AA	1538	Total	C	N	O	P	0	0	0
			32995	14716	6050	10691	1538			
1	CA	1539	Total	C	N	O	P	0	0	0
			33015	14725	6052	10699	1539			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			
2	CB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			
3	CC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			
5	CE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			
6	CF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			
7	CG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			
13	CM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			
15	CO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
16	CP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			
17	CQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	55	Total	C	N	O	0	0	0
			456	288	86	82			
18	CR	55	Total	C	N	O	0	0	0
			456	288	86	82			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			
19	CS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			
21	CU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			
22	DA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	119	Total	C	N	O	P	0	0	0
			2549	1135	466	829	119			
23	DB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 24 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			
24	DC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			

- Molecule 25 is a protein called 50S ribosomal protein L3.

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

- Molecule 26 is a protein called 50S ribosomal protein L4.

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

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

- Molecule 27 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			
27	DF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			

- Molecule 28 is a protein called 50S ribosomal protein L6.

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

- Molecule 29 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			
29	DH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			

- Molecule 30 is a protein called 50S ribosomal protein L11.

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

- Molecule 31 is a protein called 50S ribosomal protein L13.

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

- Molecule 32 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			
32	DK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			

- Molecule 33 is a protein called 50S ribosomal protein L15.

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

- Molecule 34 is a protein called 50S ribosomal protein L16.

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

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			
35	DN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			

- Molecule 36 is a protein called 50S ribosomal protein L18.

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

- Molecule 37 is a protein called 50S ribosomal protein L19.

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

- Molecule 38 is a protein called 50S ribosomal protein L20.

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

- Molecule 39 is a protein called 50S ribosomal protein L21.

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

- Molecule 40 is a protein called 50S ribosomal protein L22.

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

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			
41	DT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BU	102	Total	C	N	O	0	0	0
			780	492	146	142			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DU	102	Total	C	N	O	0	0	0
			780	492	146	142			

- Molecule 43 is a protein called 50S ribosomal protein L25.

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

- Molecule 44 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BW	76	Total	C	N	O	S	0	0	0
			580	359	117	103	1			
44	DW	75	Total	C	N	O	S	0	0	0
			569	353	113	102	1			

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
45	DX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
46	DY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
47	DZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 48 is a protein called 50S ribosomal protein L32.

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

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	B1	50	Total	C	N	O	0	0	0
			410	263	75	72			
49	D1	50	Total	C	N	O	0	0	0
			410	263	75	72			

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

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

- Molecule 51 is a protein called 50S ribosomal protein L35.

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

- Molecule 52 is a protein called 50S ribosomal protein L36.

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

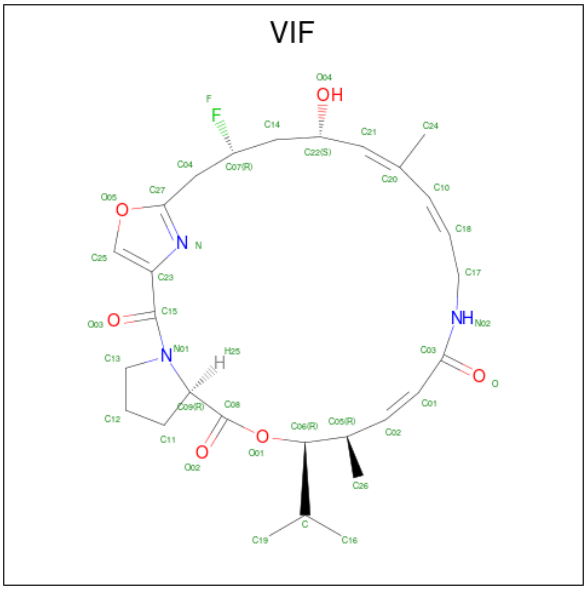
- Molecule 53 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
53	B5	191	Total	C	N	O	0	0	1
			1142	691	221	230			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	72	Total	Mg	0	0
			72	72		
54	BA	194	Total	Mg	0	0
			194	194		
54	BB	4	Total	Mg	0	0
			4	4		
54	BN	1	Total	Mg	0	0
			1	1		
54	CA	55	Total	Mg	0	0
			55	55		
54	CM	1	Total	Mg	0	0
			1	1		
54	DA	166	Total	Mg	0	0
			166	166		
54	DB	3	Total	Mg	0	0
			3	3		
54	DQ	1	Total	Mg	0	0
			1	1		
54	D2	1	Total	Mg	0	0
			1	1		

- Molecule 55 is Flopristin (three-letter code: VIF) (formula: $C_{28}H_{38}FN_3O_6$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
55	BA	1	Total 38	C 28	F 1	N 3	O 6	0	0
55	DA	1	Total 38	C 28	F 1	N 3	O 6	0	0

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

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

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AA	195	Total 195	O 195	0	0
57	AL	1	Total 1	O 1	0	0
57	AN	5	Total 5	O 5	0	0
57	AT	1	Total 1	O 1	0	0
57	AU	1	Total 1	O 1	0	0
57	BA	620	Total 620	O 620	0	0
57	BB	13	Total 13	O 13	0	0
57	BC	6	Total 6	O 6	0	0
57	BD	3	Total 3	O 3	0	0
57	BE	4	Total 4	O 4	0	0
57	BF	1	Total 1	O 1	0	0
57	BG	1	Total 1	O 1	0	0
57	BL	8	Total 8	O 8	0	0
57	BN	4	Total 4	O 4	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	BS	1	Total O 1 1	0	0
57	BV	1	Total O 1 1	0	0
57	B2	1	Total O 1 1	0	0
57	B3	2	Total O 2 2	0	0
57	B4	1	Total O 1 1	0	0
57	CA	189	Total O 189 189	0	0
57	CL	1	Total O 1 1	0	0
57	CN	3	Total O 3 3	0	0
57	CT	4	Total O 4 4	0	0
57	CU	1	Total O 1 1	0	0
57	DA	613	Total O 613 613	0	0
57	DB	13	Total O 13 13	0	0
57	DC	9	Total O 9 9	0	0
57	DD	4	Total O 4 4	0	0
57	DE	2	Total O 2 2	0	0
57	DJ	1	Total O 1 1	0	0
57	DL	3	Total O 3 3	0	0
57	DN	1	Total O 1 1	0	0
57	DT	2	Total O 2 2	0	0
57	DV	1	Total O 1 1	0	0
57	D0	1	Total O 1 1	0	0

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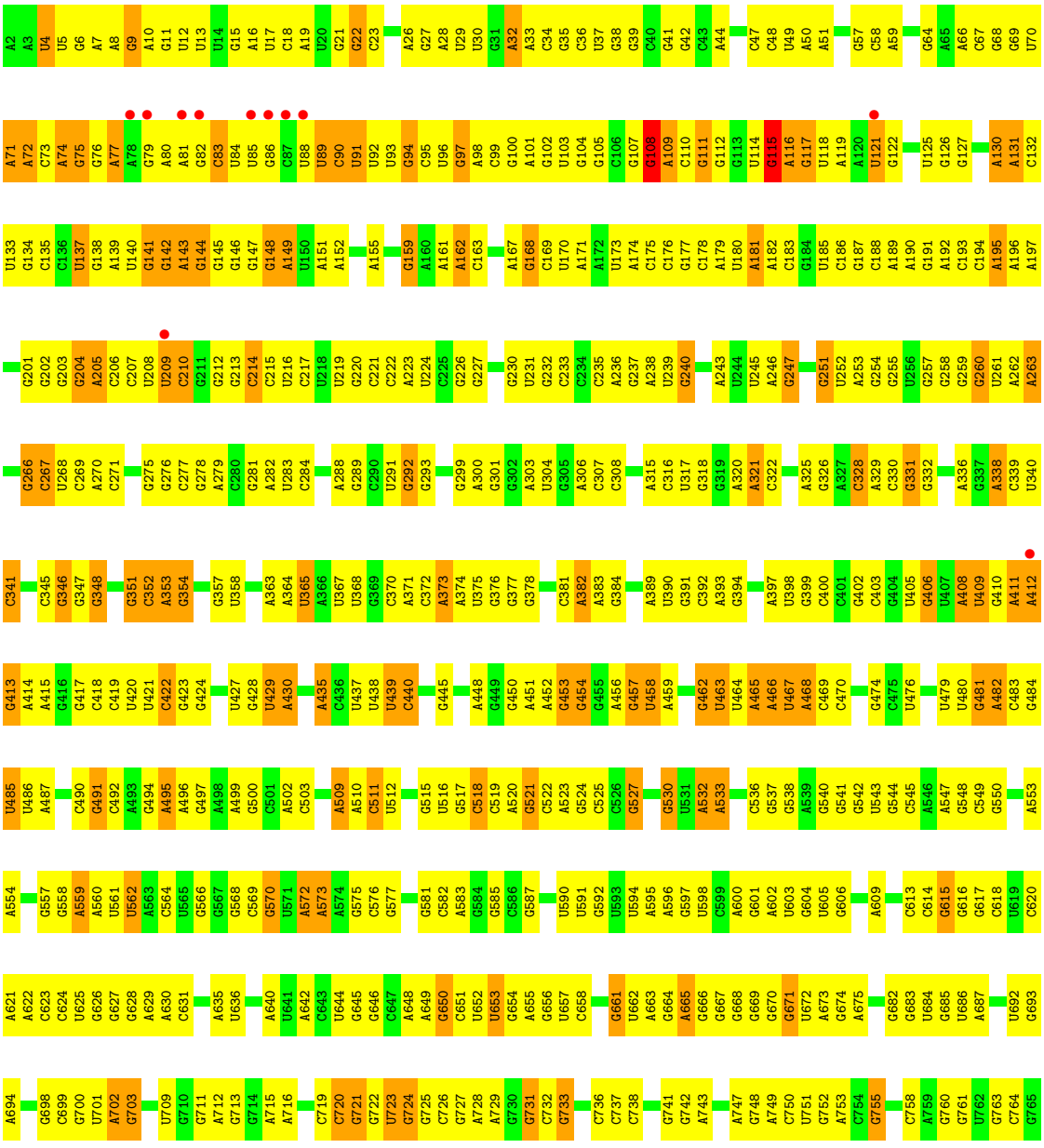
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	D2	3	Total O 3 3	0	0
57	D3	2	Total O 2 2	0	0
57	D4	1	Total O 1 1	0	0

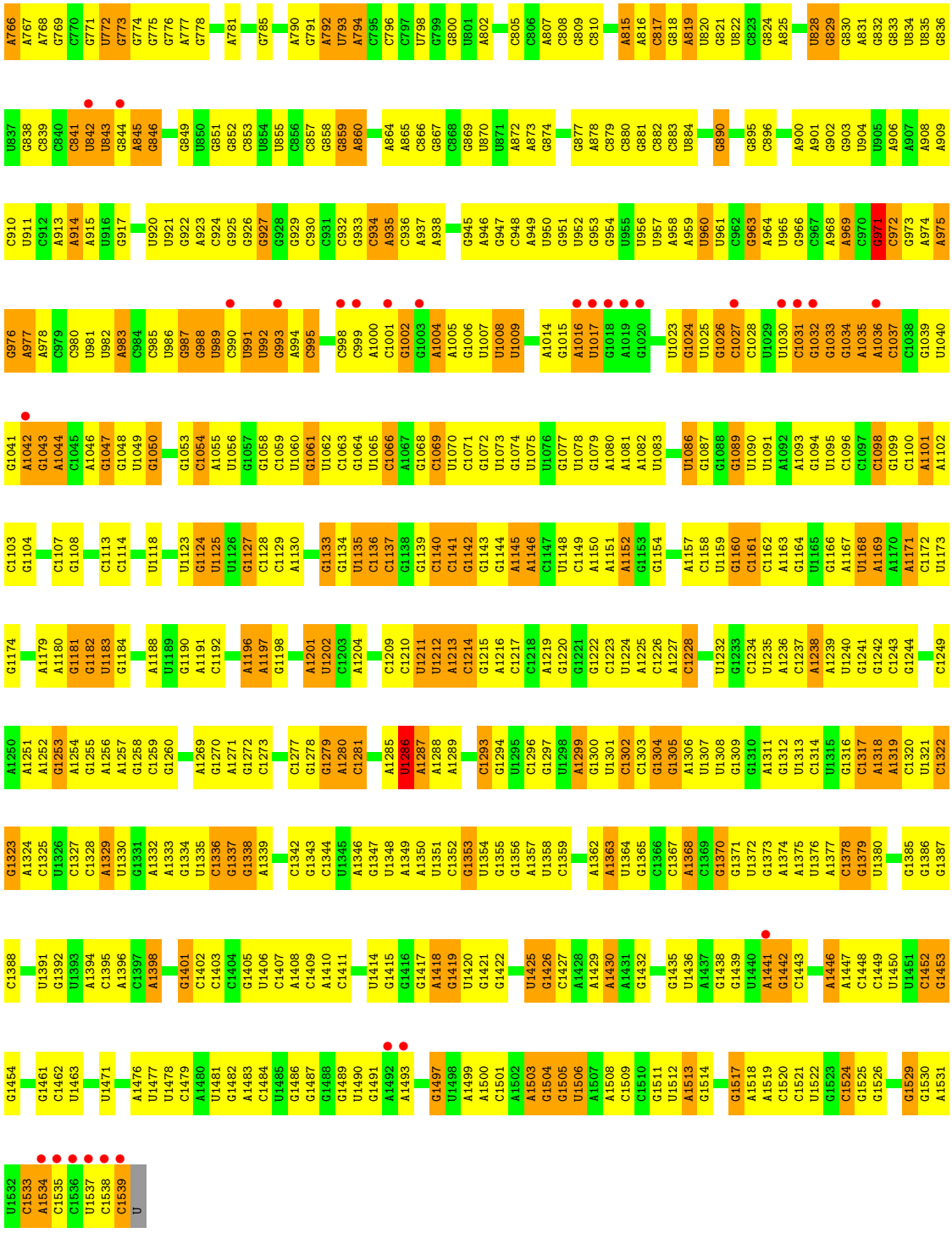
3 Residue-property plots (i)

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

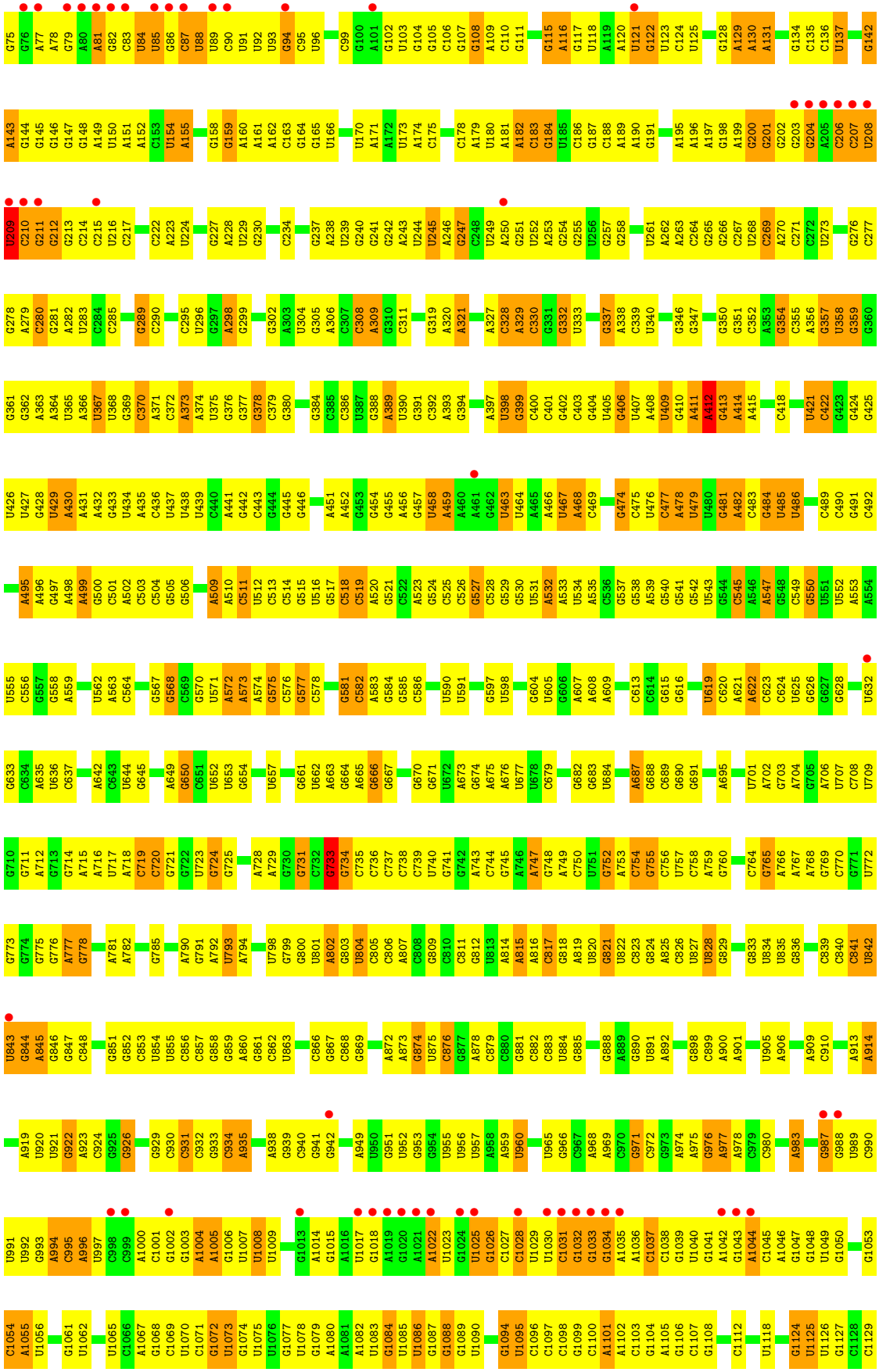
Chain AA: 

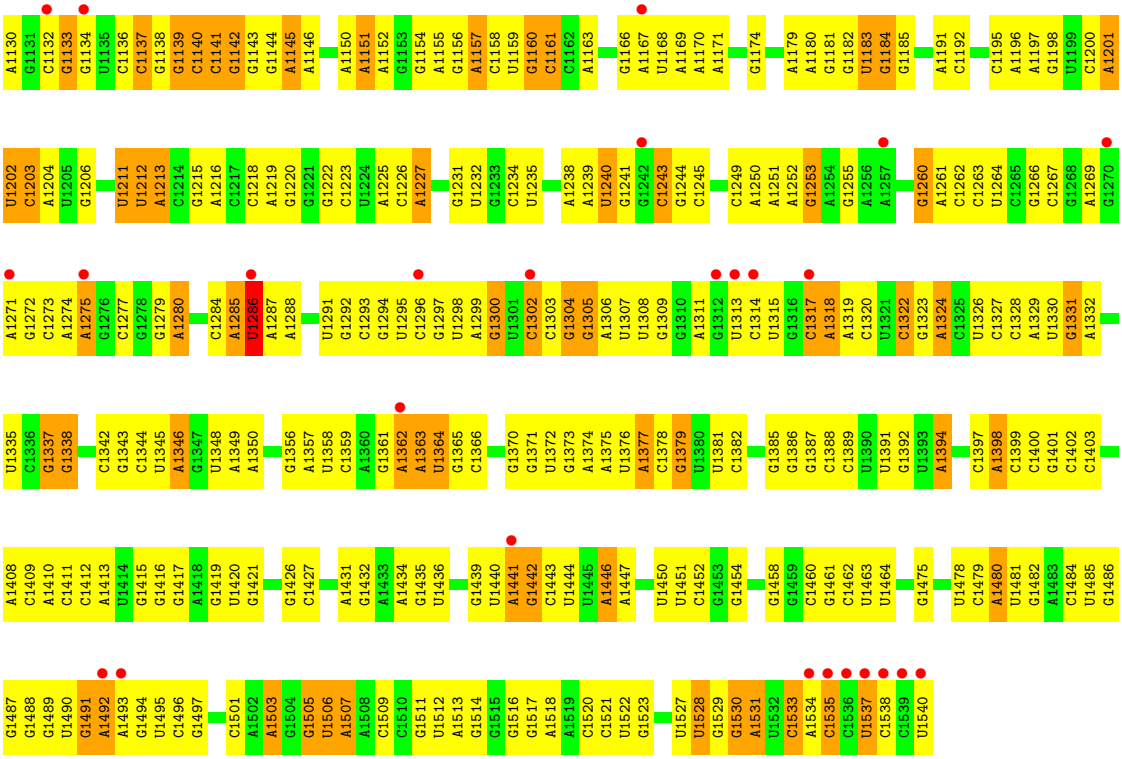




• Molecule 1: 16S rRNA

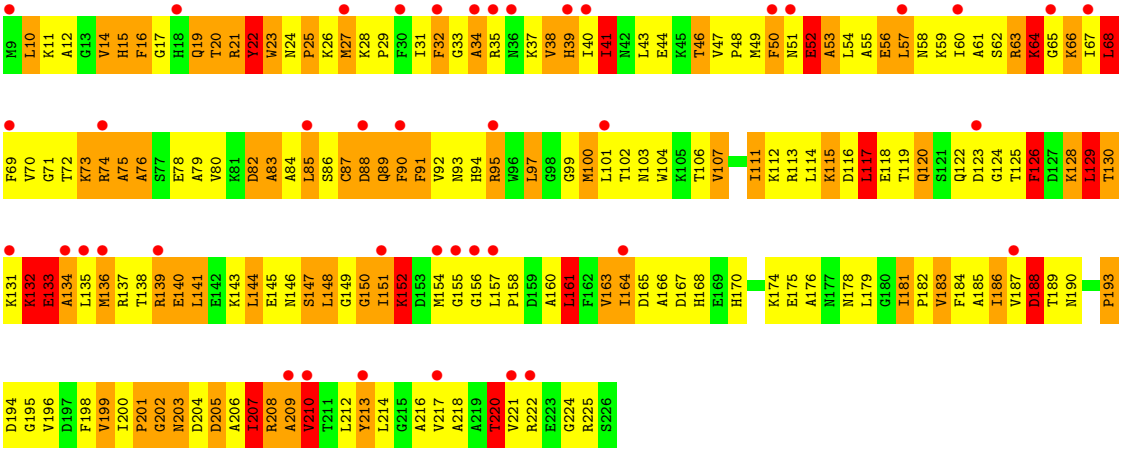
Chain CA:


G75 G76 A77 A78 G79 A80 A81 G82 C83 U84 U85 G86 C87 U88 U89 C90 U91 U92 U93 G94 C95 U96 C99 G100 A101 G102 U103 G104 G105 C106 G107 G108 A109 C110 G111 G115 A116 G117 U118 A119 A120 U121 G122 U123 C124 U125 G128 A129 A130 A131 G134 C135 C136 U137 G142
A143 G144 G145 G146 G147 G148 A149 U150 A151 A152 C153 U154 A155 G158 G159 A160 A161 A162 C163 G164 G165 U166 U170 A171 A172 U173 A174 C175 C178 A179 U180 A181 A182 C183 G184 U185 C186 G187 C188 A189 A190 G191 A195 A196 A197 G198 A199 G200 G201 G202 G203 G204 A205 C206 C207 U208
U209 C210 G211 G212 C213 C214 C215 U216 C217 C222 A223 U224 G227 A228 U229 G230 C234 G237 A238 U239 G240 G241 G242 A243 U244 U245 A246 G247 G248 U249 A250 G251 U252 A253 G254 G255 U256 G257 G258 U261 A262 A263 C264 G265 G266 C267 U268 C269 A270 C271 C272 U273 G276 C277
G278 A279 C280 G281 A282 U283 C284 C285 G289 C290 C295 U296 G297 A298 G299 G302 A303 U304 G305 A306 C307 C308 A309 G310 C311 G319 A320 A321 A327 C328 A329 C330 G331 G332 U333 G337 A338 C339 U340 G346 G347 G350 G351 C352 A353 G354 C355 A356 G357 U358 G359 G360
G361 G362 A363 A364 U365 A366 U367 U368 G369 C370 A371 C372 A373 A374 U375 G376 G377 G378 C379 G380 G384 C385 C386 U387 G388 A389 U390 G391 C392 A393 G394 A397 U398 G399 C400 C401 G402 C403 G404 U405 G406 U407 A408 U409 G410 A411 A412 G413 A414 A415 C418 U421 C422 G423 G424 G425
U426 U427 C428 U429 A430 A431 A432 G433 U434 A435 C436 U437 U438 U439 C440 A441 G442 C443 G444 G445 G446 A451 A452 G453 G454 G455 A456 G457 U458 A459 A460 A461 G462 U463 U464 A465 A466 U467 A468 C469 G474 C475 U476 C477 A478 U479 U480 G481 A482 C483 G484 U485 U486 C489 C490 G491 C492
A495 A496 G497 A498 A499 G500 C501 A502 C503 C504 C505 G506 A509 A510 C511 U512 C513 C514 G515 U516 G517 C518 C519 A520 G521 C522 A523 G524 C525 C526 G527 C528 G529 G530 U531 A532 A533 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 U562 A563 C564 G567 G568 C569 G570 U571 A572 A573 A574 G575 G576 G577 C578 G581 C582 A583 G584 G585 C586 U590 U591 G597 U598 G604 U605 G606 A607 A608 A609 C613 C614 G615 G616 U619 C620 A621 A622 C623 C624 U625 G626 G627 G628 U632
G633 C634 A635 U636 C637 A642 C643 U644 G645 A649 G650 C651 U652 U653 G654 U657 G661 U662 A663 G664 A665 G666 G667 G670 G671 U672 A673 G674 A675 A676 U677 U678 C679 G682 G683 U684 A687 G688 C689 G690 G691 A695 U701 A702 G703 A704 G705 A706 U707 C708 U709
G710 G711 A712 G713 G714 A715 A716 U717 A718 C719 C720 G721 G722 U723 G724 G725 A728 A729 G730 G731 C732 G733 G734 C735 C736 C737 C738 C739 U740 G741 G742 A743 C744 G745 A746 A747 G748 A749 C750 U751 G752 A753 C754 G755 C756 U757 C758 A759 G760 C764 G765 A766 A767 A768 G769 C770 G771 U772
G773 G774 G775 G776 A777 G778 A781 A782 G785 A790 G791 A792 U793 A794 U798 G799 G800 U801 A802 G803 U804 C805 C806 A807 C808 C809 C810 C811 G812 U813 A814 A815 A816 C817 G818 A819 U820 G821 U822 C823 G824 A825 C826 U827 U828 G829 G833 U834 U835 G836 C839 C840 C841 U842
U843 G844 A845 G846 G847 C848 G851 G852 C853 U854 U855 C856 C857 G858 G859 A860 G861 C862 U863 C866 G867 C868 G869 A872 A873 G874 U875 C876 G877 A878 C879 C880 G881 C882 C883 U884 G885 G888 A889 G890 U891 A892 G898 C899 A900 A901 U905 A906 A909 C910 A913 A914
A919 U920 U921 G922 A923 C924 G925 G926 G929 C930 C931 C932 G933 C934 A935 A938 G939 C940 G941 G942 A949 U950 G951 U952 G953 G954 U955 U956 U957 A958 A959 U960 U965 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 A978 C979 C980 A983 G987 G988 U989 C990
U991 U992 C993 A994 C995 A996 U997 C998 C999 A1000 C1001 G1002 G1003 A1004 A1005 G1006 U1007 U1008 U1009 G1013 A1014 G1015 A1016 U1017 G1018 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 G1061 U1062 U1065 C1066 A1067 G1068 C1069 U1070 C1071 G1072 U1073 G1074 U1075 U1076 G1077 U1078 G1079 A1080 A1081 A1082 U1083 G1084 U1085 U1086 G1087 G1088 U1089 U1090 G1094 U1095 C1096 C1097 C1098 G1099 C1100 A1101 A1102 C1103 G1104 A1105 G1106 C1107 G1108 C1112 U1118 G1124 U1125 U1126 G1127 C1128 C1129



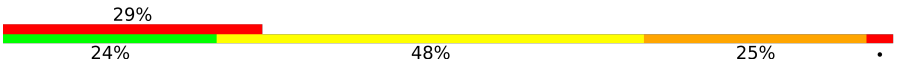
• Molecule 2: 30S ribosomal protein S2

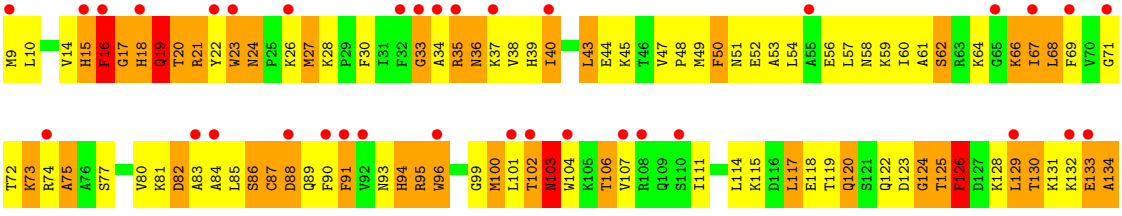
Chain AB:

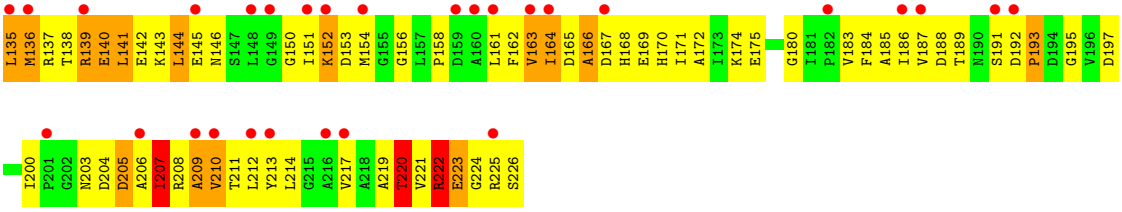


• Molecule 2: 30S ribosomal protein S2

Chain CB:

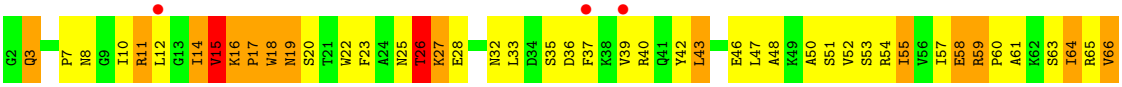


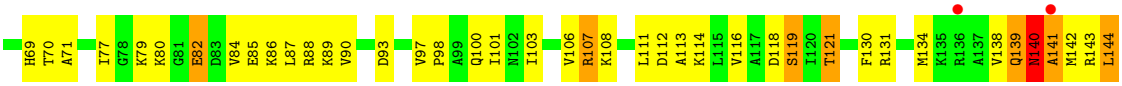


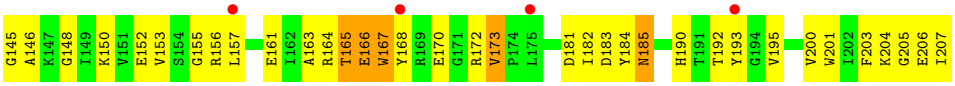


• Molecule 3: 30S ribosomal protein S3

Chain AC:

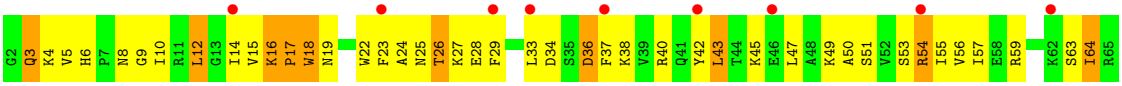


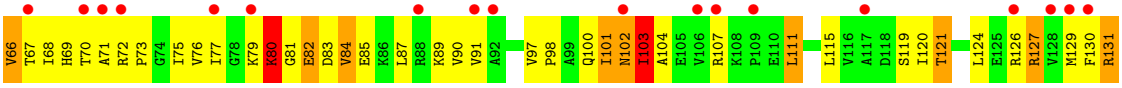


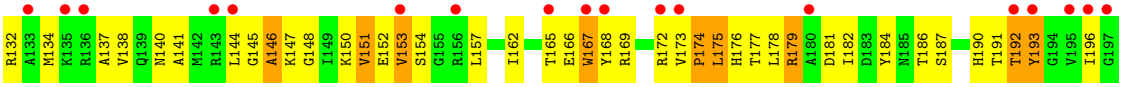


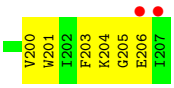
• Molecule 3: 30S ribosomal protein S3

Chain CC:



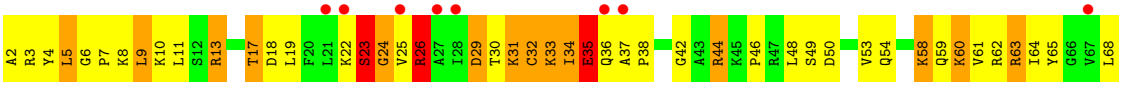


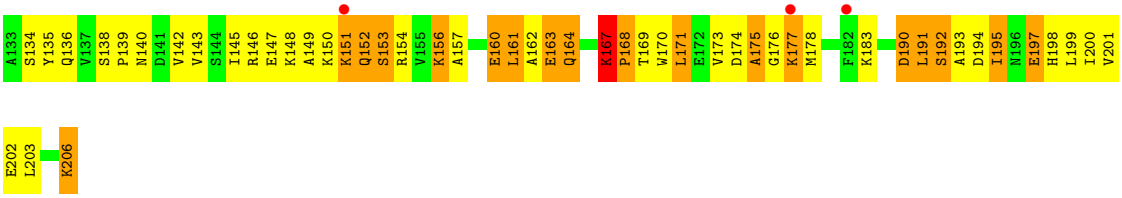




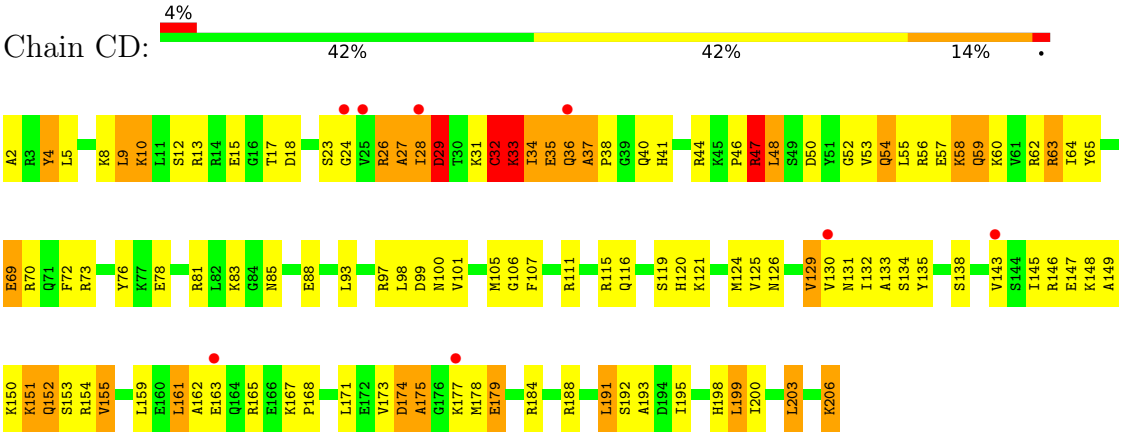
• Molecule 4: 30S ribosomal protein S4

Chain AD:

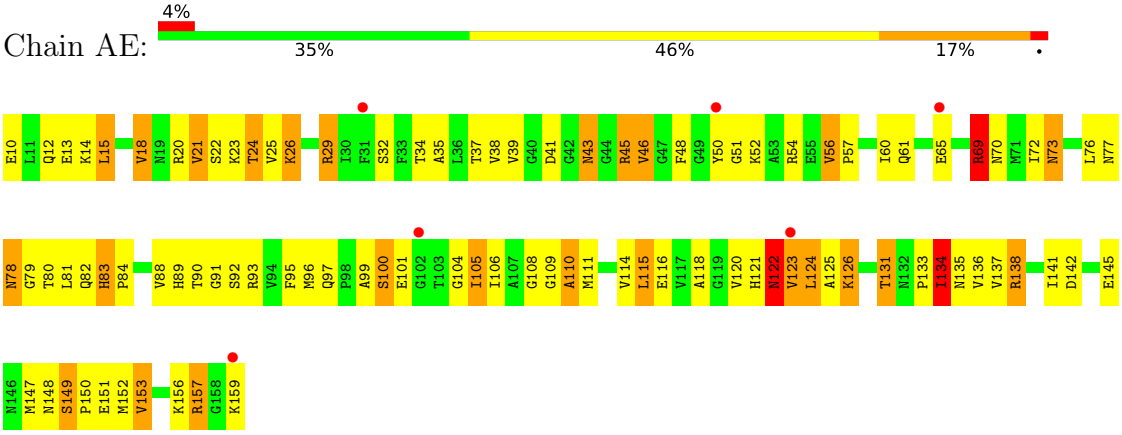




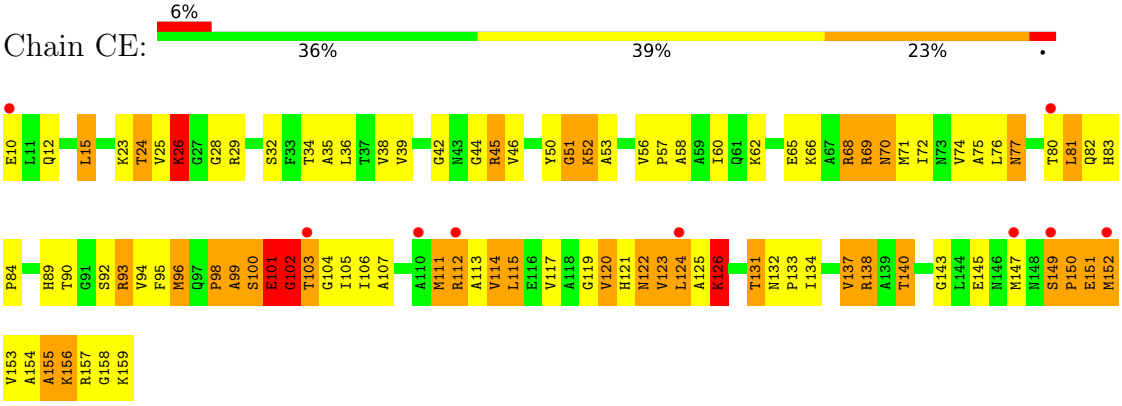
• Molecule 4: 30S ribosomal protein S4



• Molecule 5: 30S ribosomal protein S5

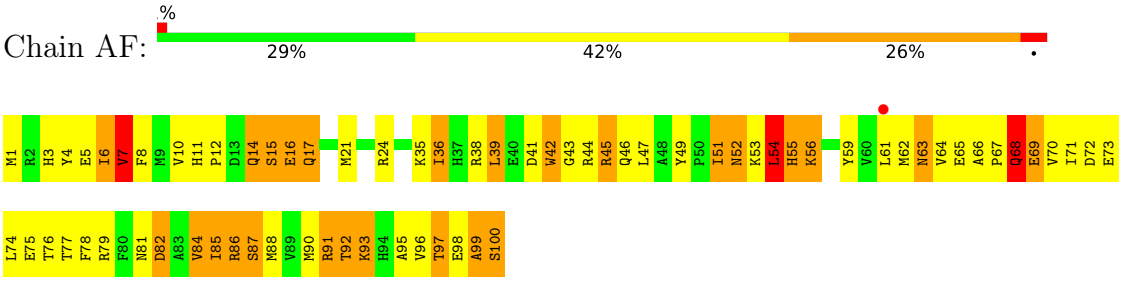


• Molecule 5: 30S ribosomal protein S5



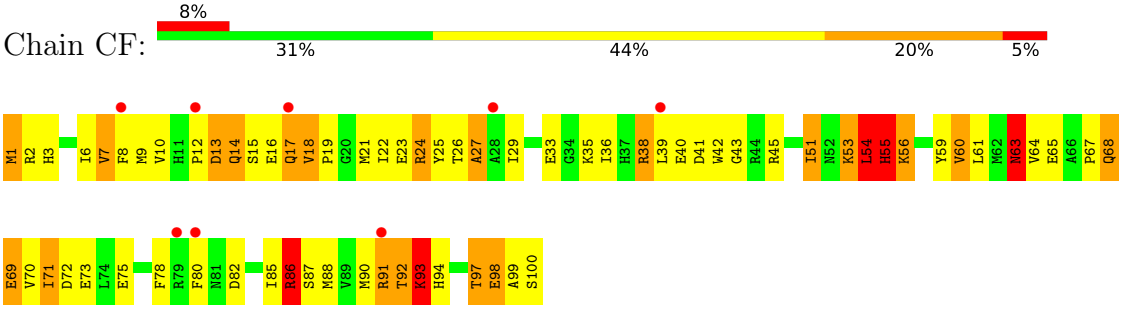
• Molecule 6: 30S ribosomal protein S6

Chain AF:



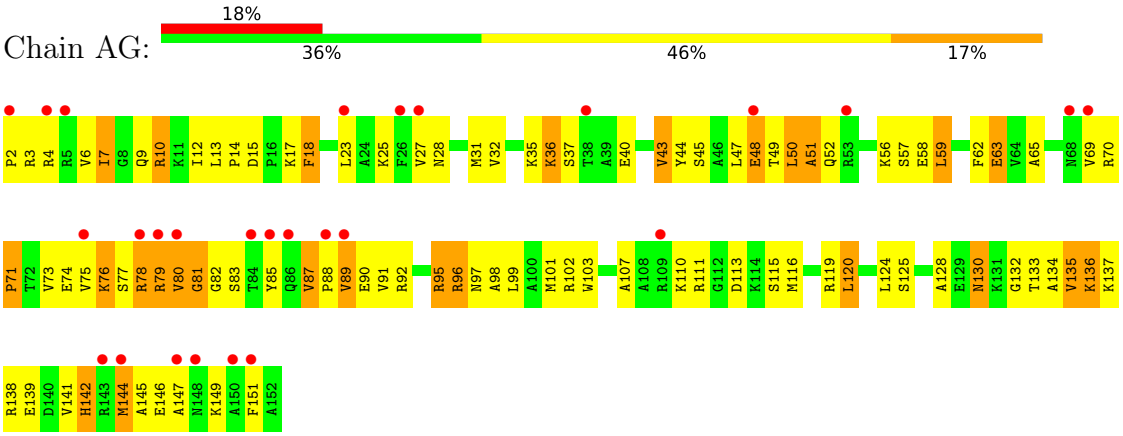
• Molecule 6: 30S ribosomal protein S6

Chain CF:



• Molecule 7: 30S ribosomal protein S7

Chain AG:



• Molecule 7: 30S ribosomal protein S7

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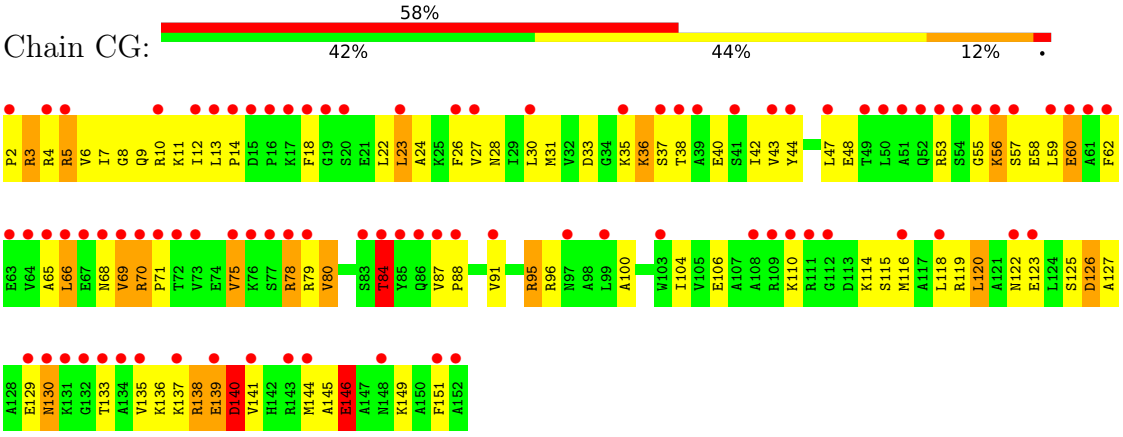
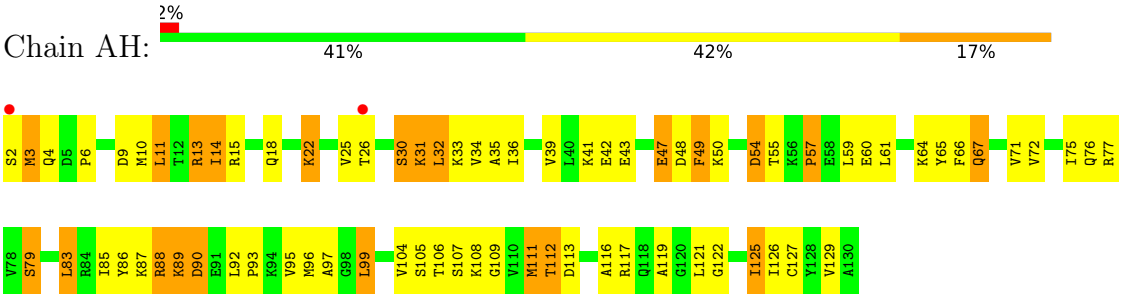


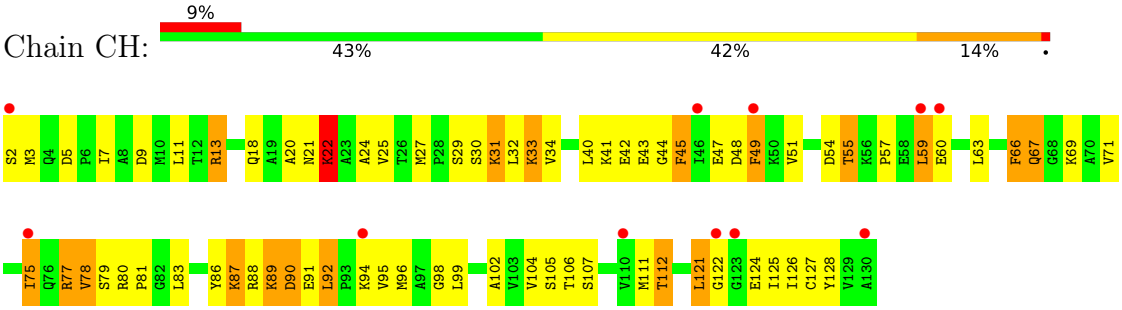
• Molecule 8: 30S ribosomal protein S8

Chain AH:



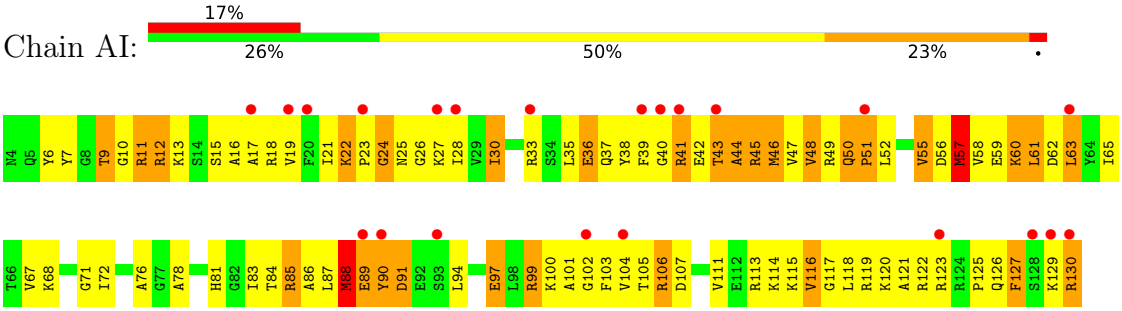
• Molecule 8: 30S ribosomal protein S8

Chain CH:



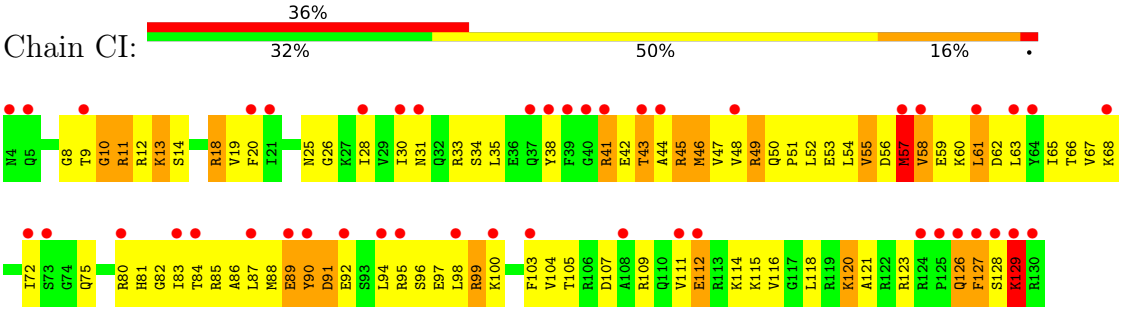
• Molecule 9: 30S ribosomal protein S9

Chain AI:



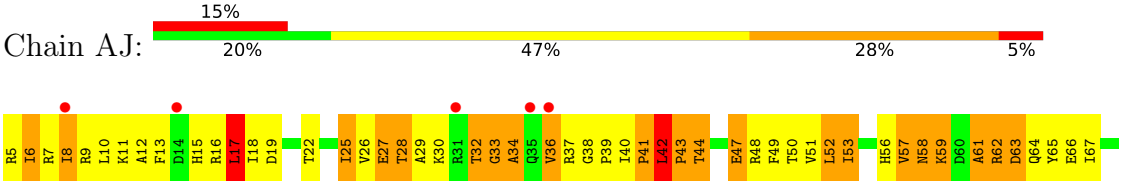
• Molecule 9: 30S ribosomal protein S9

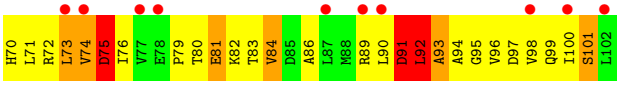
Chain CI:



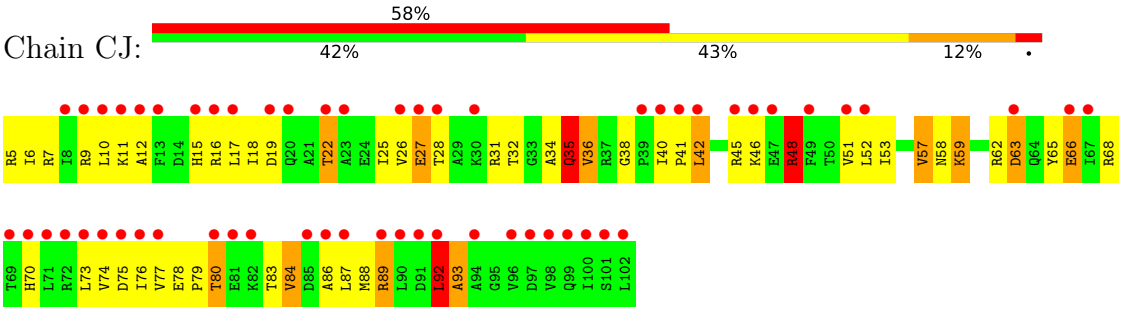
• Molecule 10: 30S ribosomal protein S10

Chain AJ:

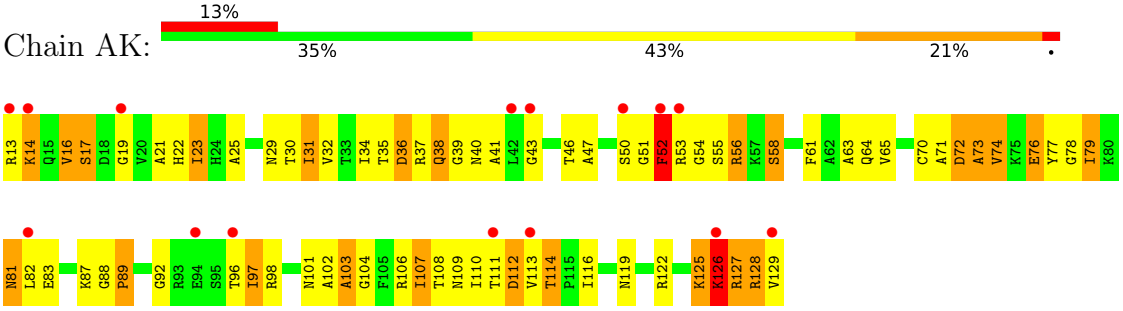




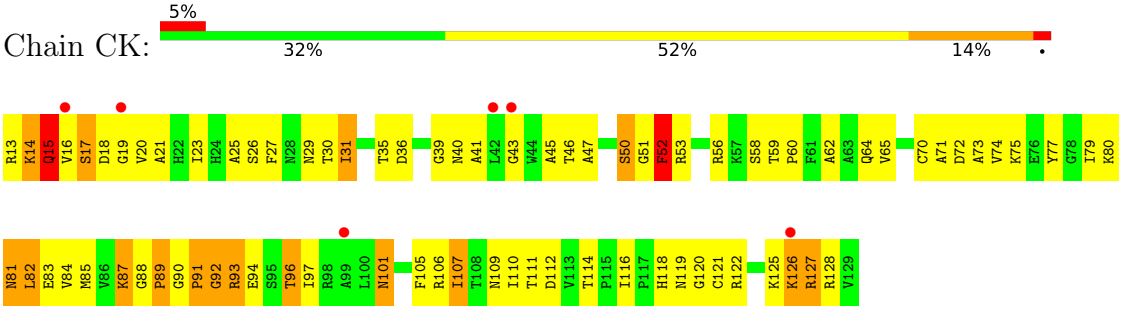
• Molecule 10: 30S ribosomal protein S10



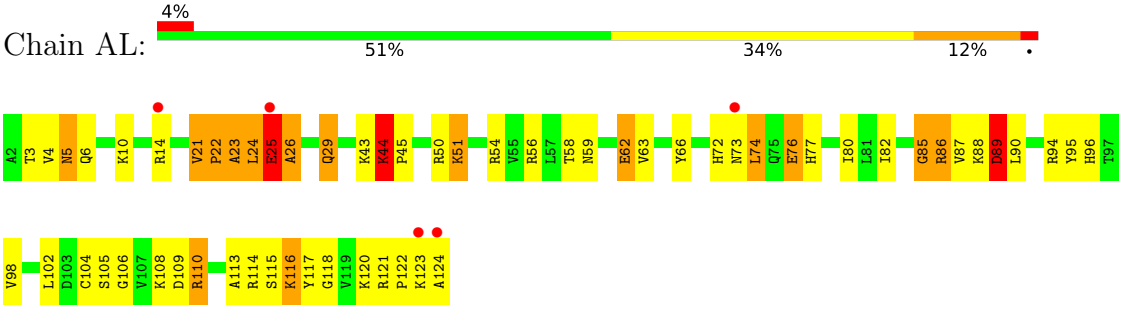
• Molecule 11: 30S ribosomal protein S11



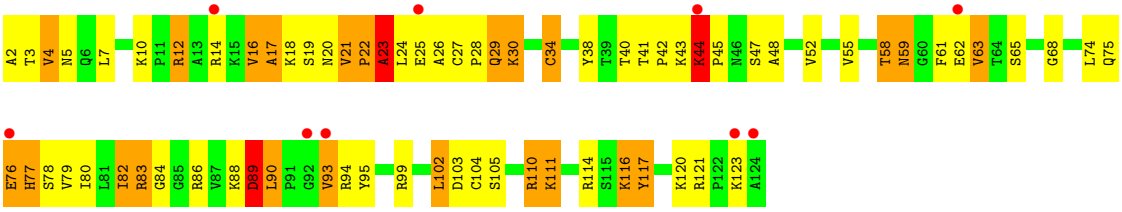
• Molecule 11: 30S ribosomal protein S11



• Molecule 12: 30S ribosomal protein S12

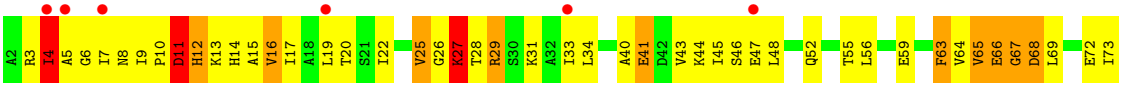


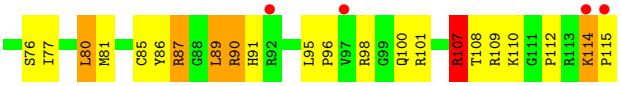
• Molecule 12: 30S ribosomal protein S12



• Molecule 13: 30S ribosomal protein S13

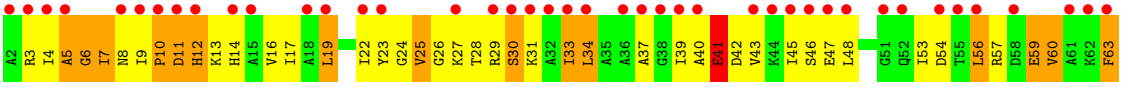
Chain AM:

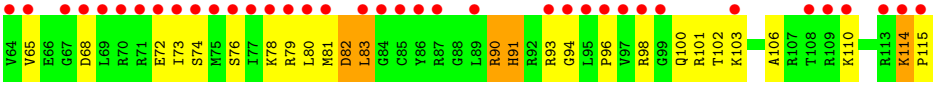




• Molecule 13: 30S ribosomal protein S13

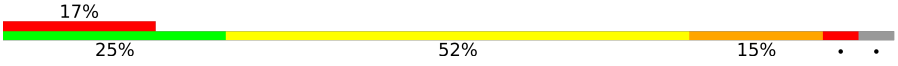
Chain CM:

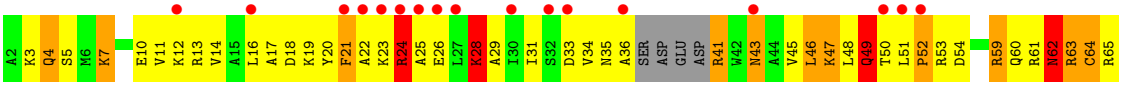




• Molecule 14: 30S ribosomal protein S14

Chain AN:





• Molecule 14: 30S ribosomal protein S14

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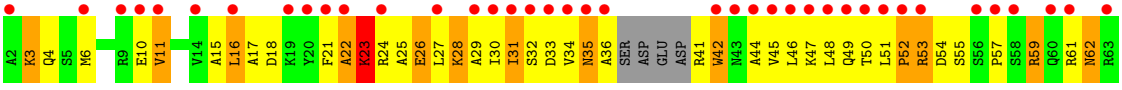
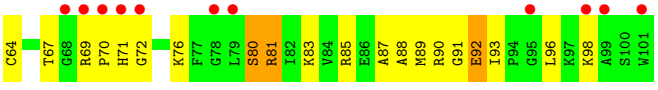
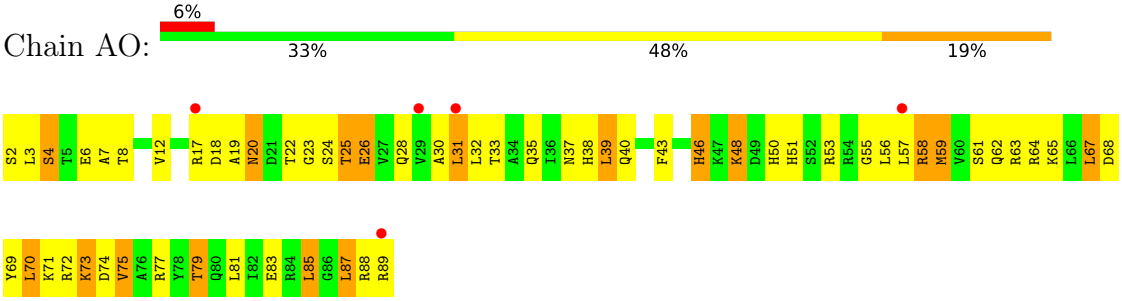




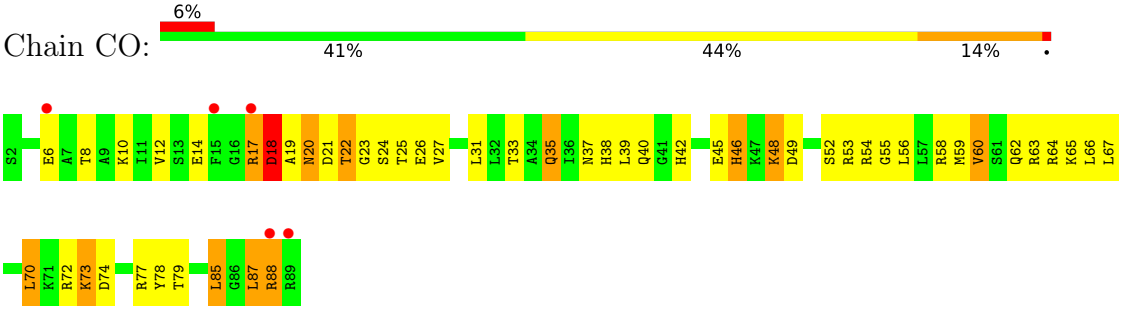
• Molecule 15: 30S ribosomal protein S15

Chain AO:



• Molecule 15: 30S ribosomal protein S15

Chain CO:



• Molecule 16: 30S ribosomal protein S16

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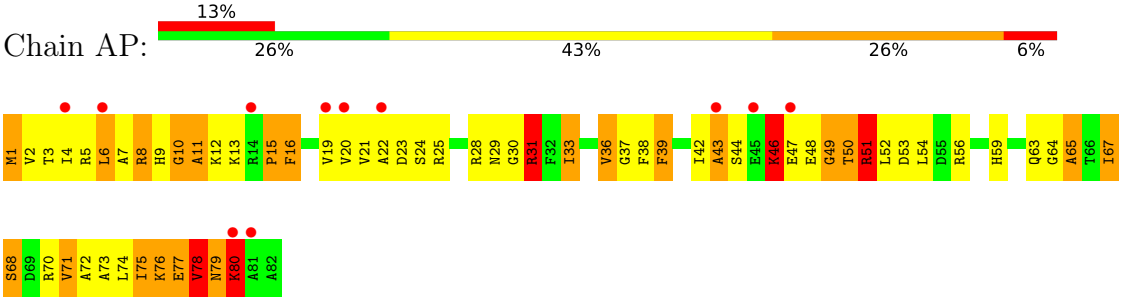
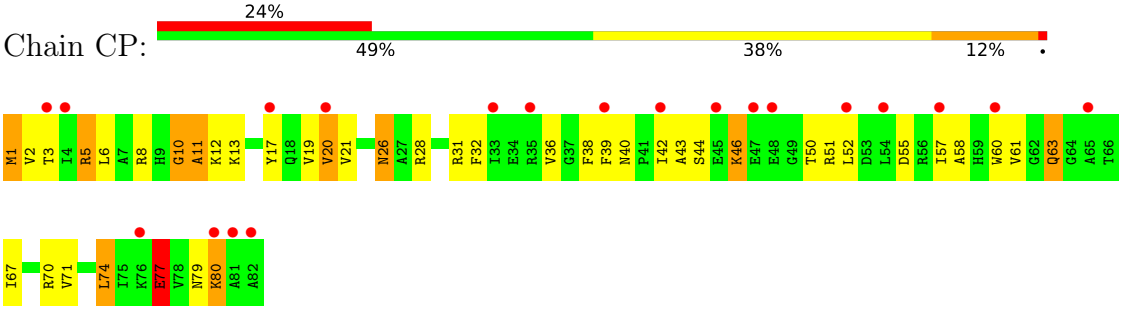


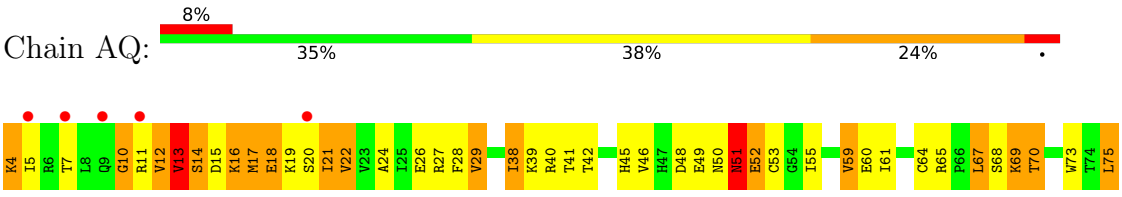
• Molecule 16: 30S ribosomal protein S16

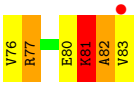
Chain CP:



• Molecule 17: 30S ribosomal protein S17

Chain AQ:





• Molecule 17: 30S ribosomal protein S17

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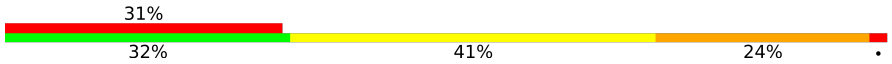
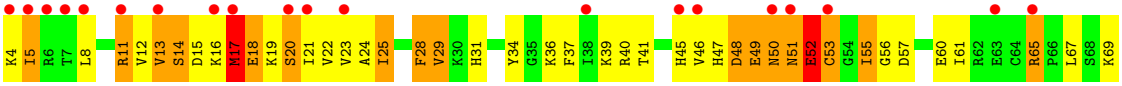
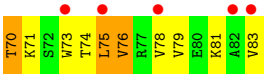
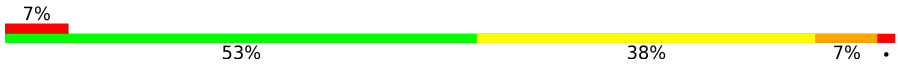


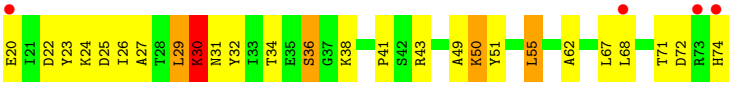




• Molecule 18: 30S ribosomal protein S18

Chain AR:





• Molecule 18: 30S ribosomal protein S18

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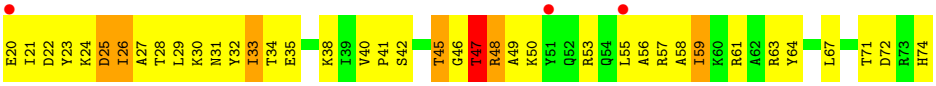

• Molecule 19: 30S ribosomal protein S19

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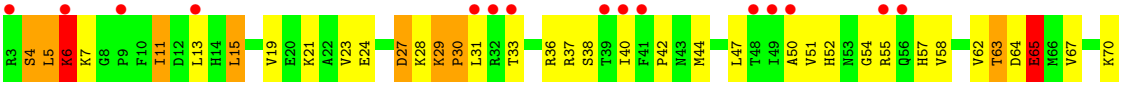

• Molecule 19: 30S ribosomal protein S19

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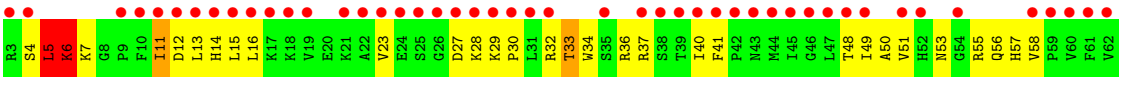
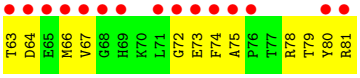
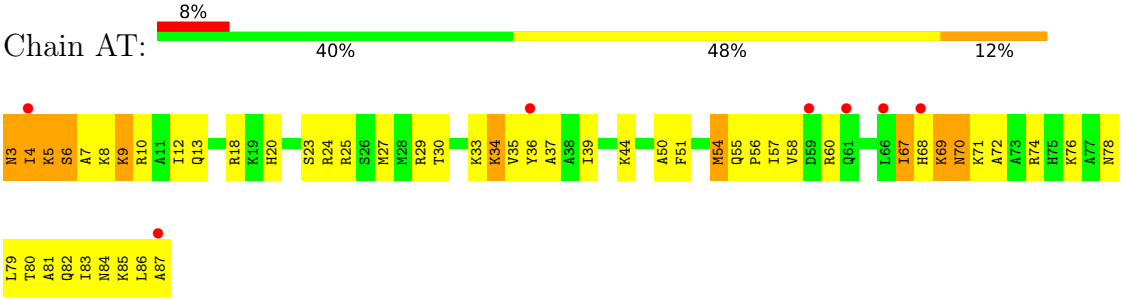




• Molecule 20: 30S ribosomal protein S20

Chain AT:



• Molecule 20: 30S ribosomal protein S20

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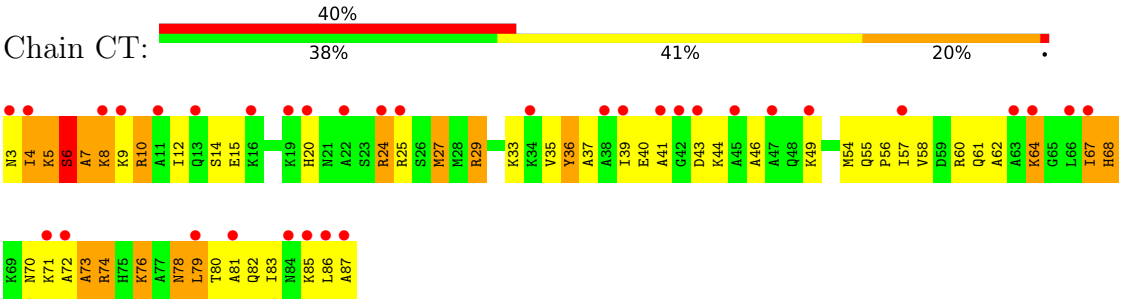
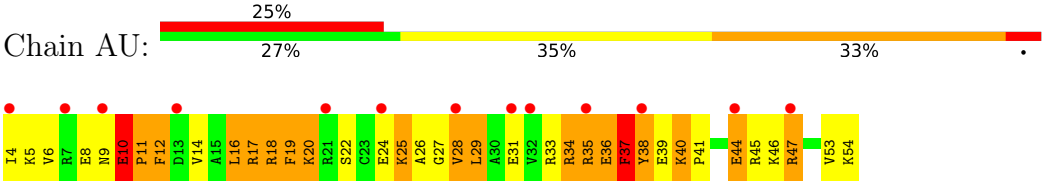


• Molecule 21: 30S ribosomal protein S21

Chain AU:



• Molecule 21: 30S ribosomal protein S21

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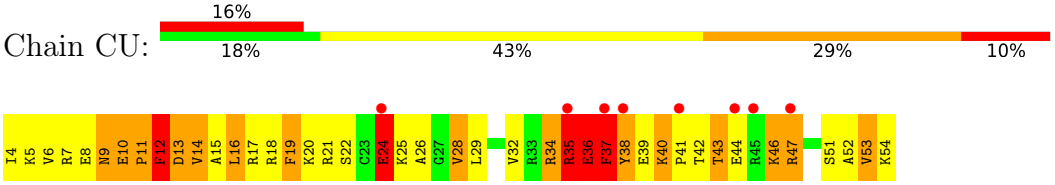
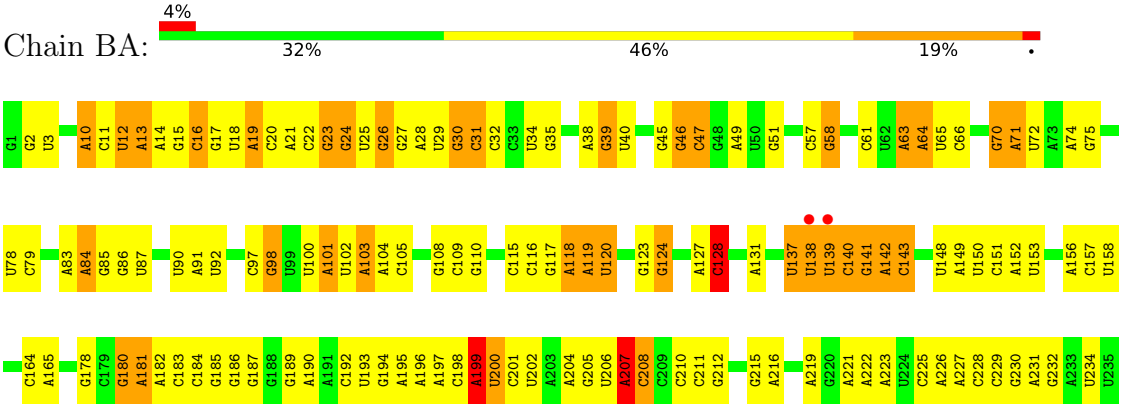
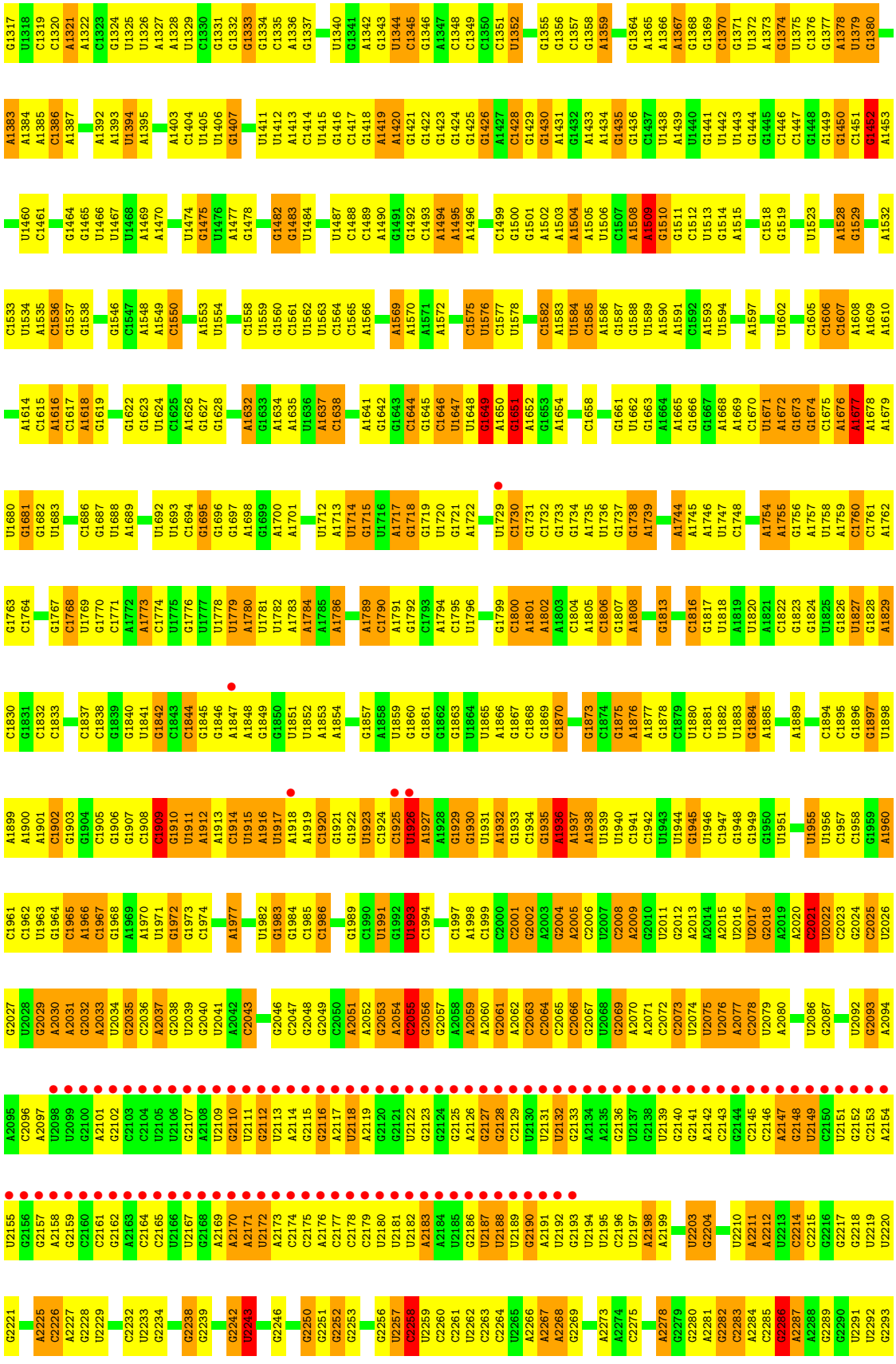


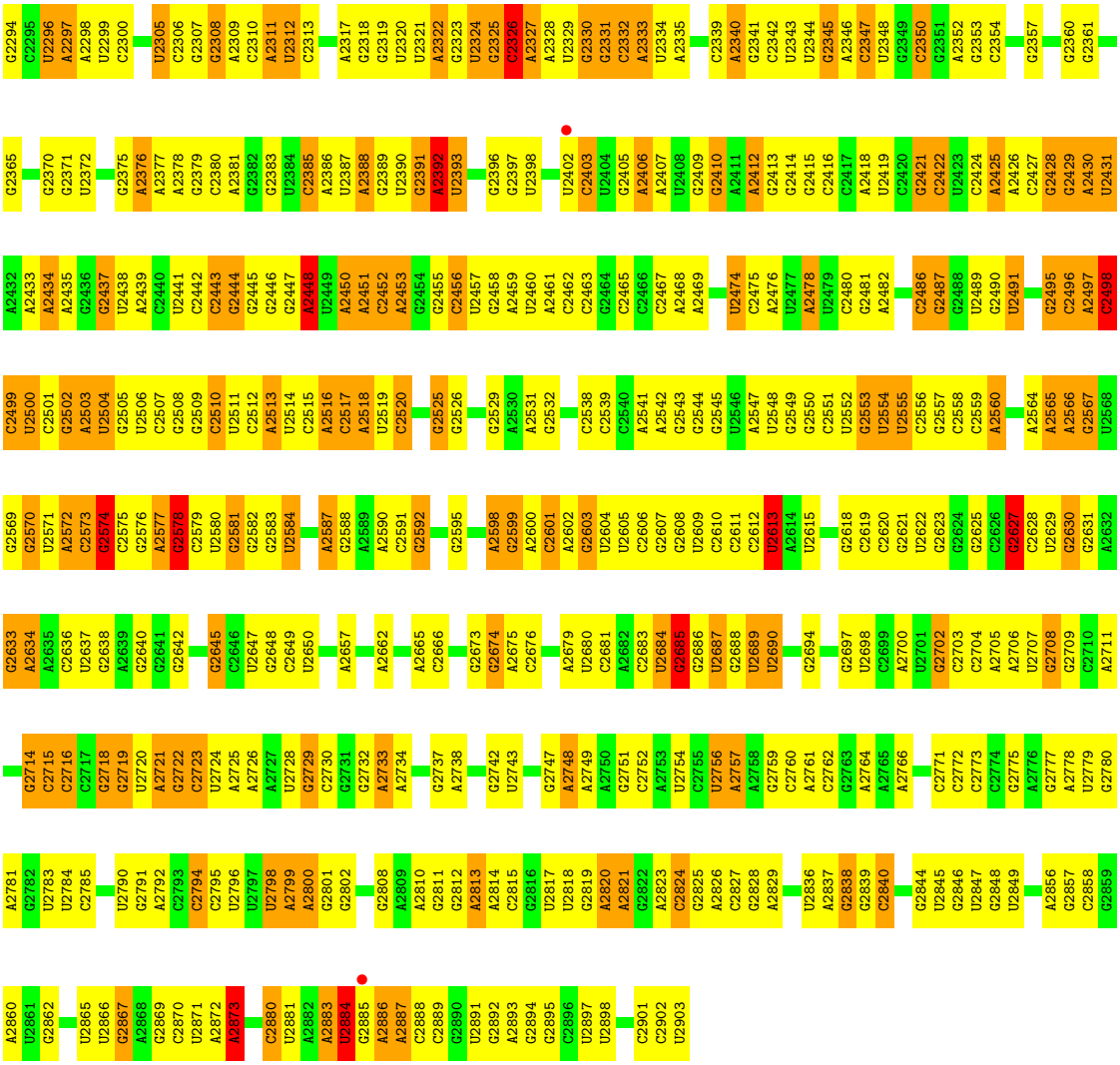
• Molecule 22: 23S rRNA

Chain BA:



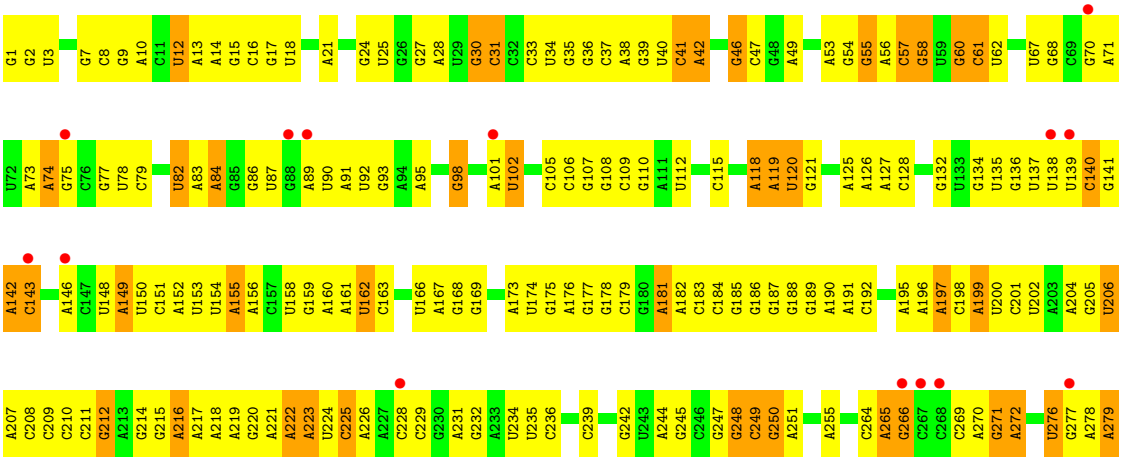
WORLDWIDE
PDB
PROTEIN DATA BANK

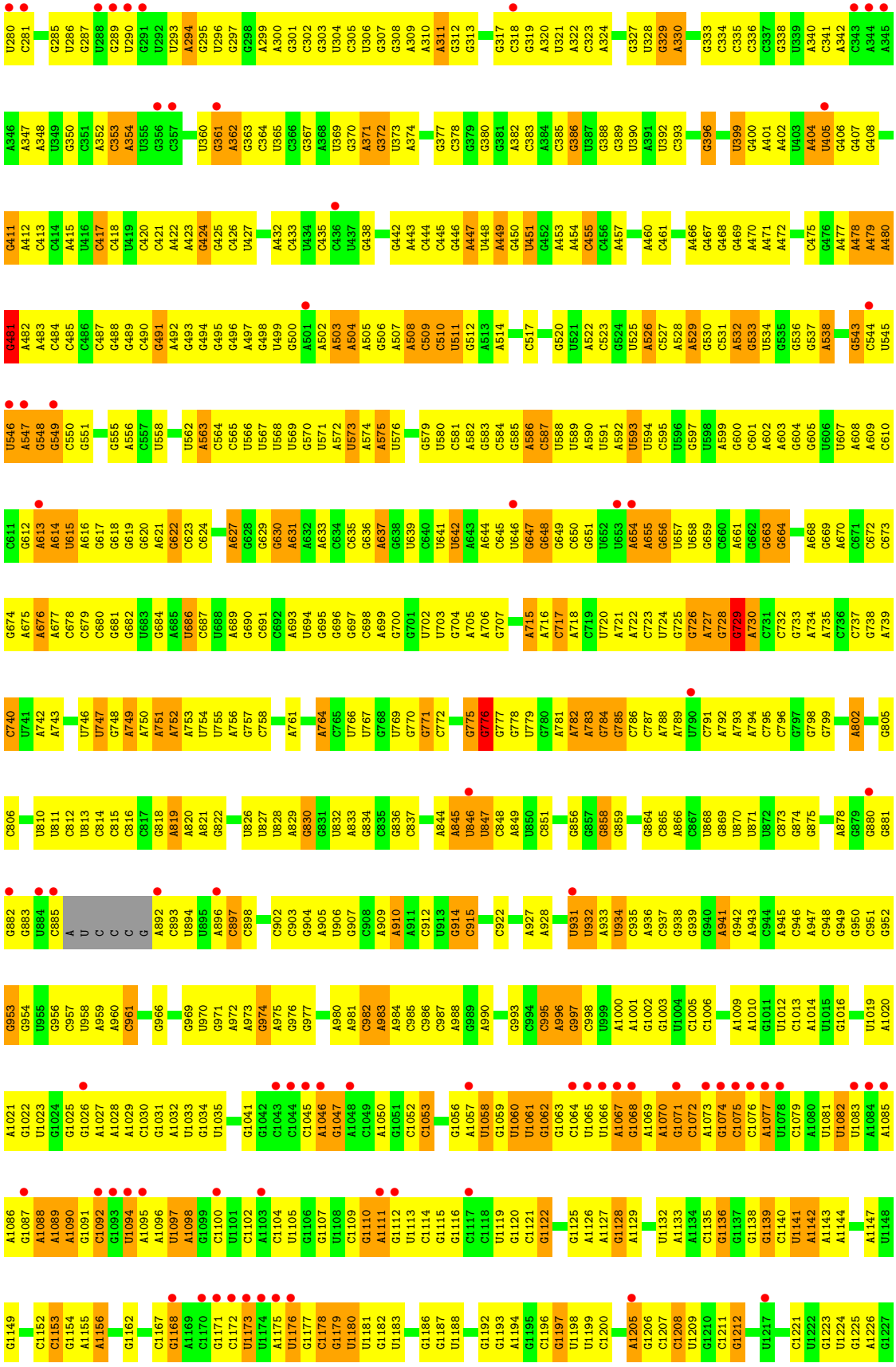


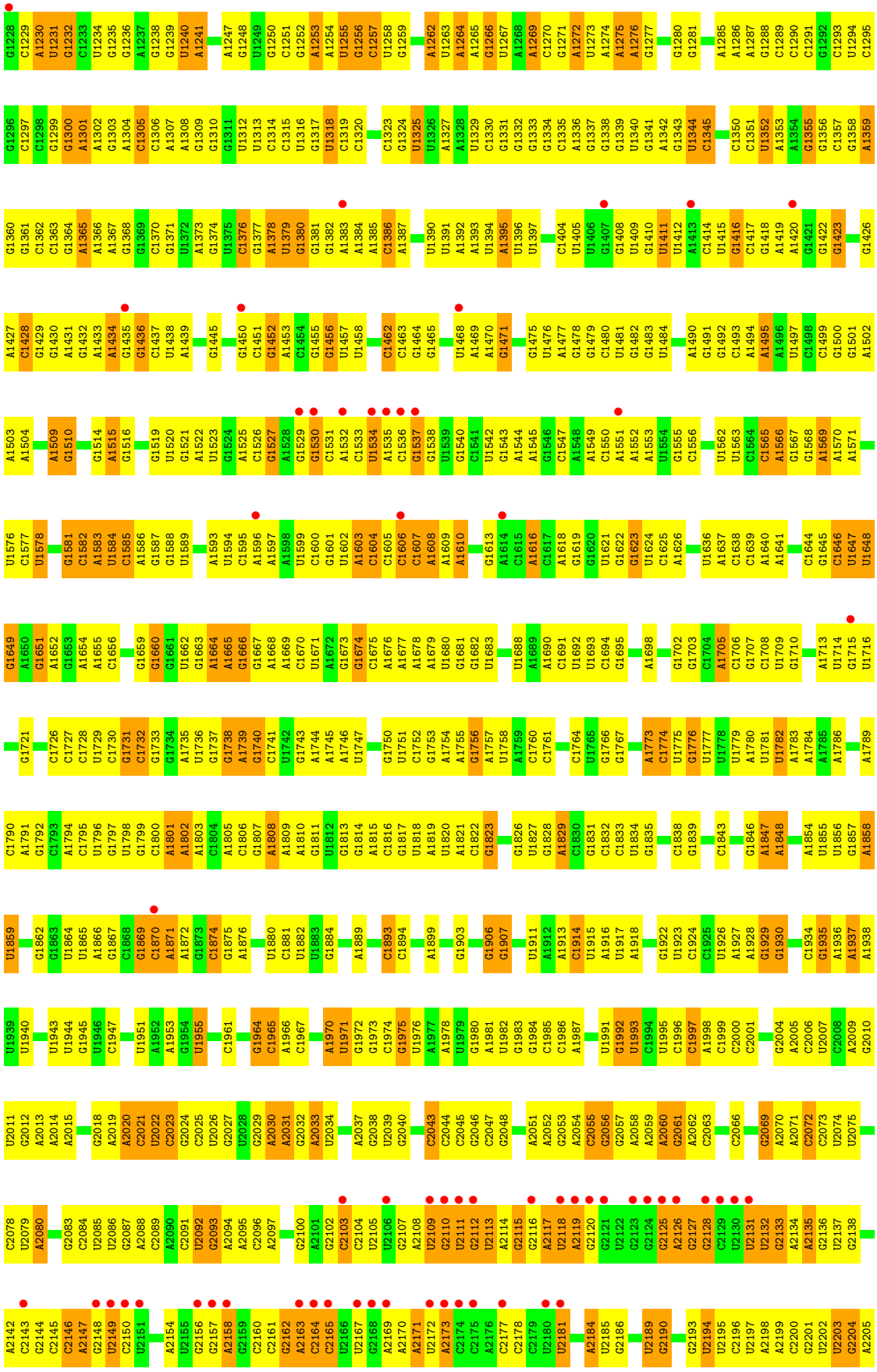


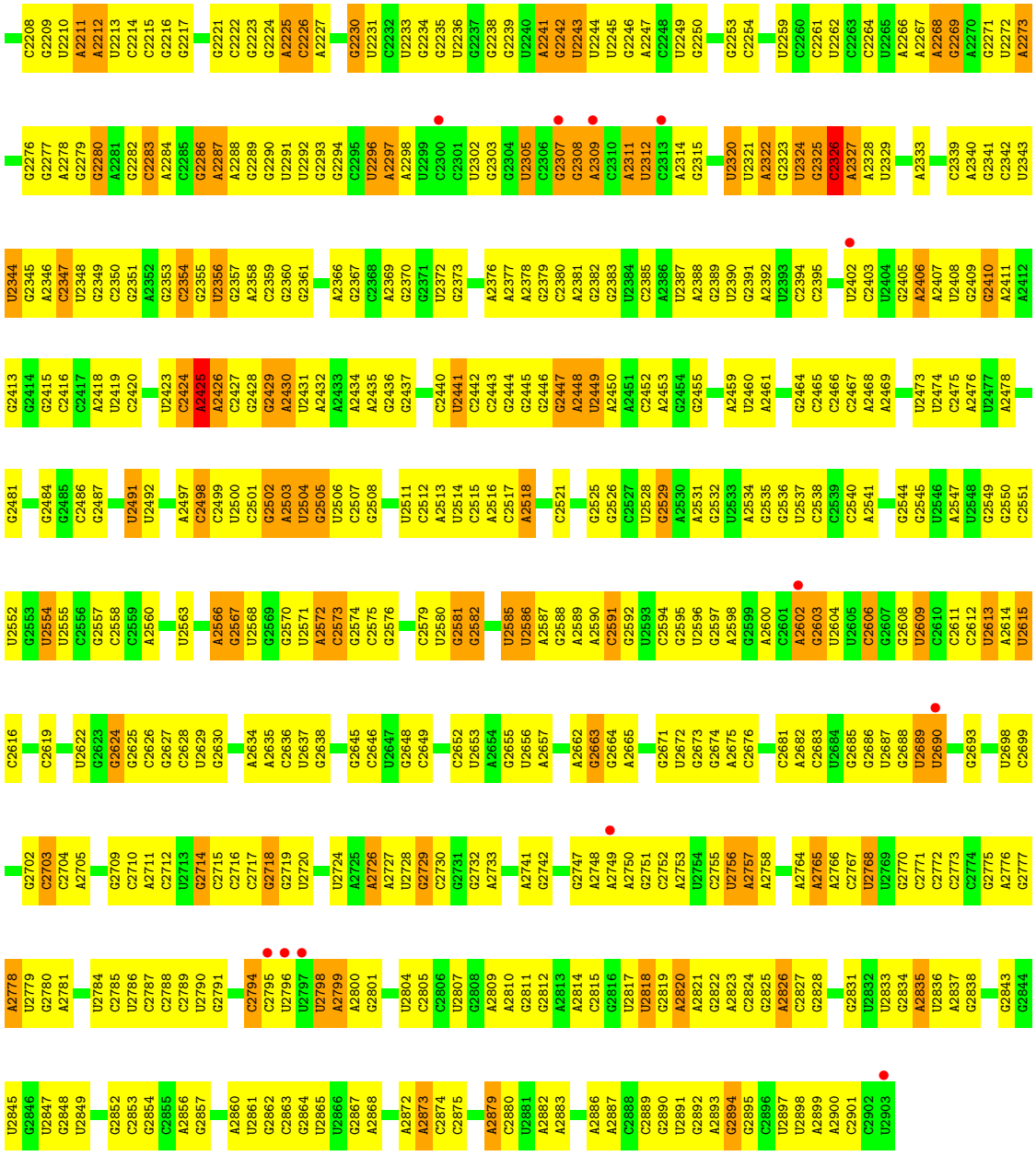
• Molecule 22: 23S rRNA

Chain DA:



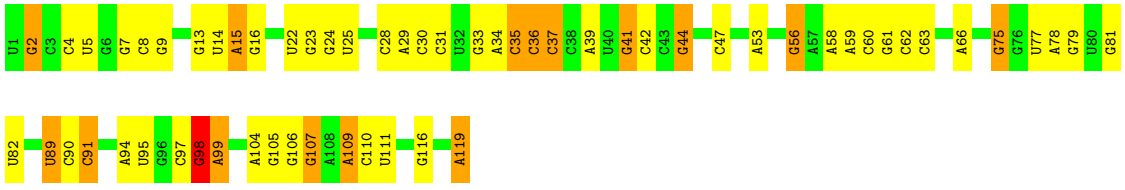






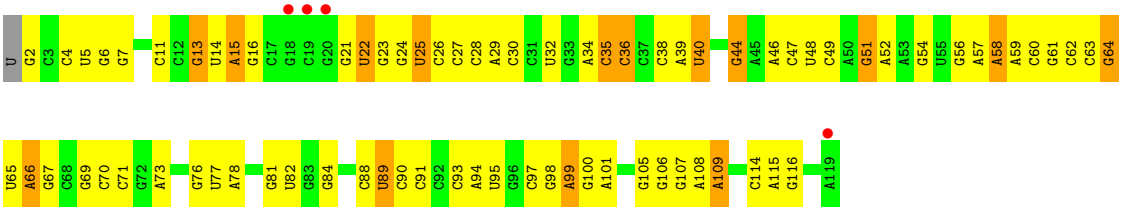
• Molecule 23: 5S rRNA

Chain BB:



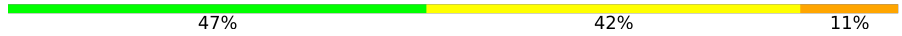
• Molecule 23: 5S rRNA

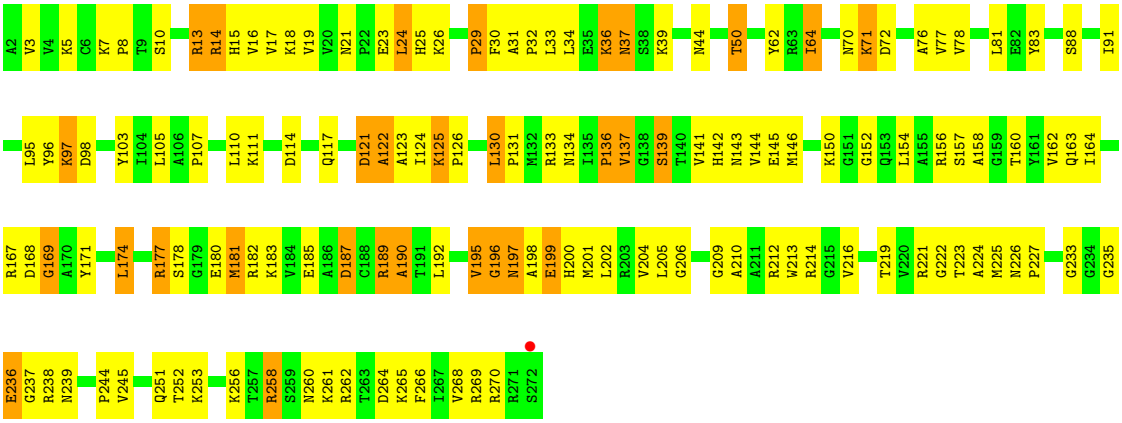
Chain DB:



• Molecule 24: 50S ribosomal protein L2

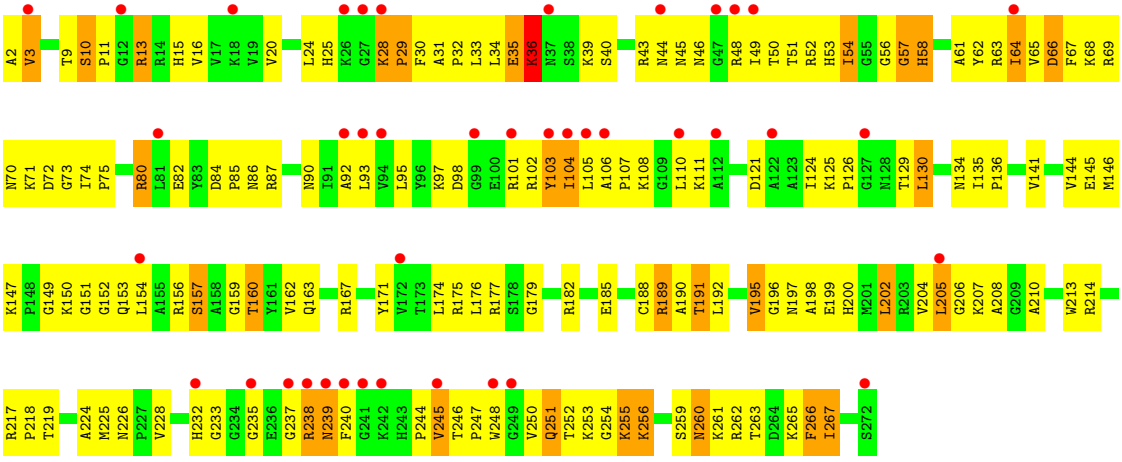
Chain BC:





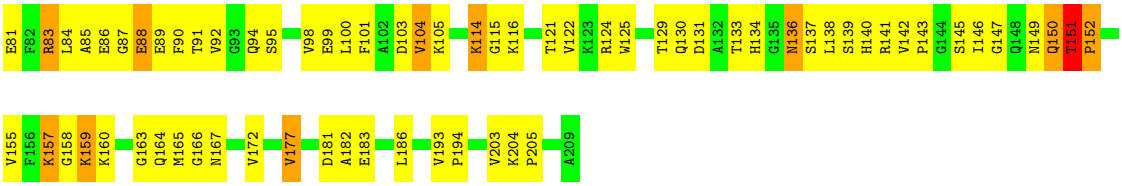
• Molecule 24: 50S ribosomal protein L2

Chain DC:



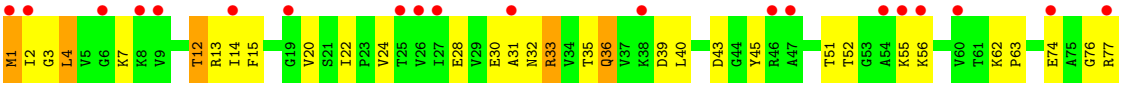
• Molecule 25: 50S ribosomal protein L3

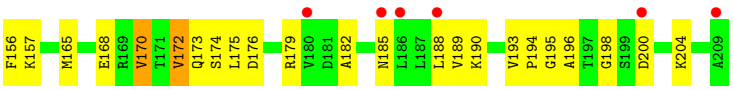
Chain BD:



• Molecule 25: 50S ribosomal protein L3

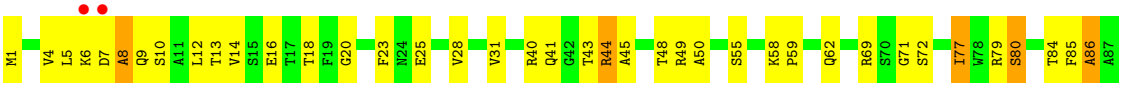
Chain DD:

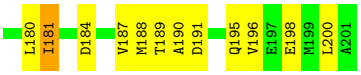




• Molecule 26: 50S ribosomal protein L4

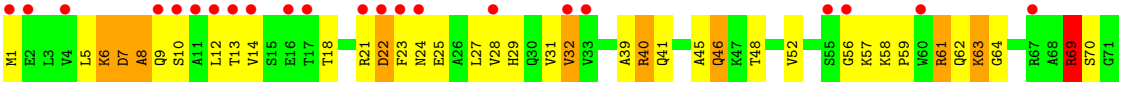
Chain BE:

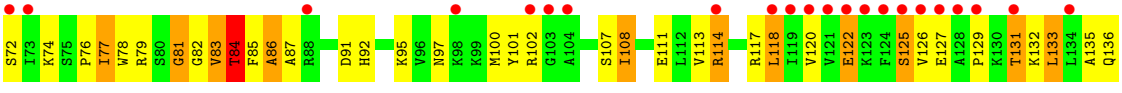


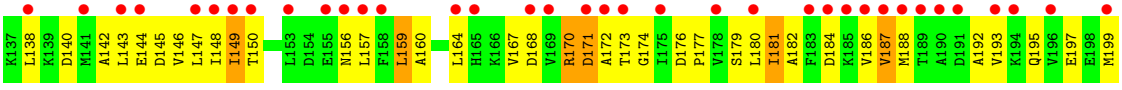


• Molecule 26: 50S ribosomal protein L4

Chain DE:

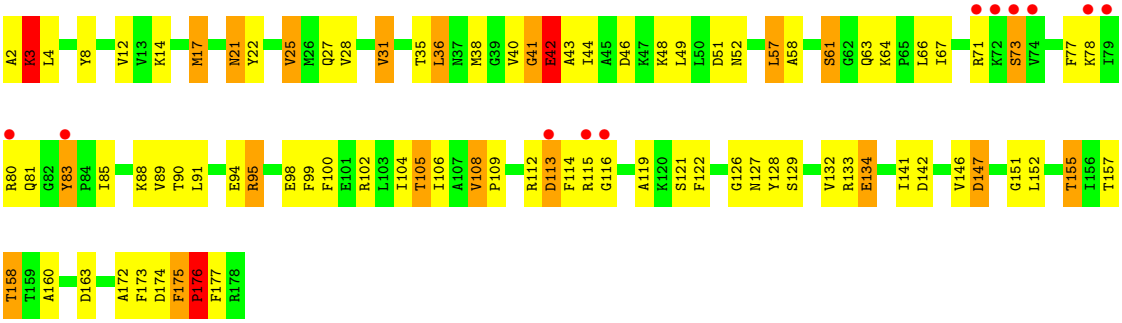






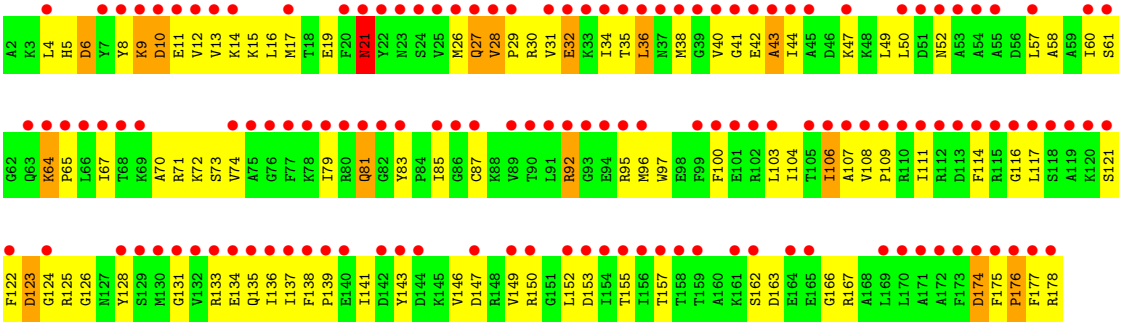
• Molecule 27: 50S ribosomal protein L5

Chain BF:



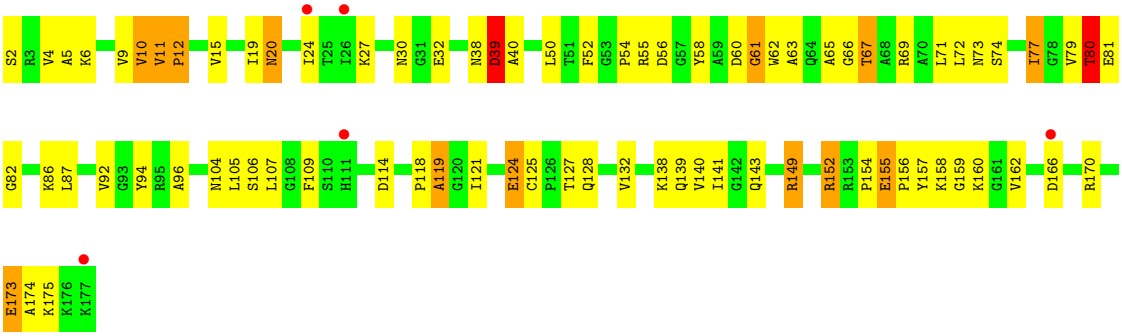
• Molecule 27: 50S ribosomal protein L5

Chain DF:



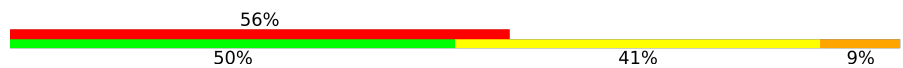
• Molecule 28: 50S ribosomal protein L6

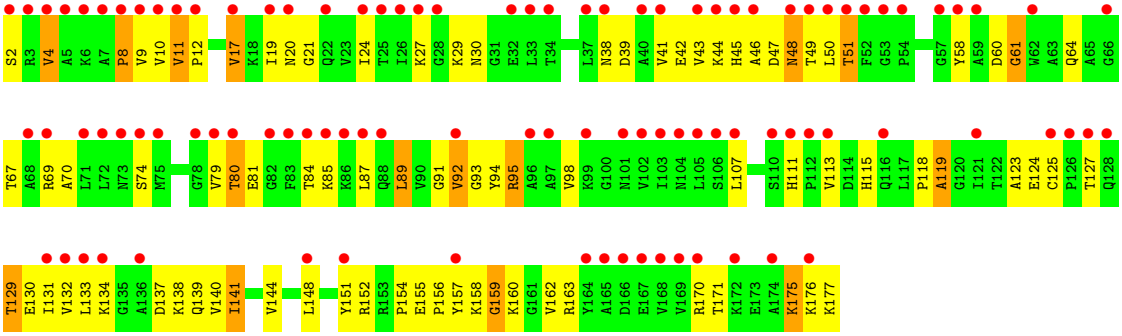
Chain BG:



• Molecule 28: 50S ribosomal protein L6

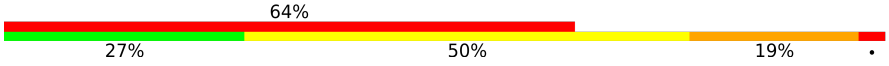
Chain DG:

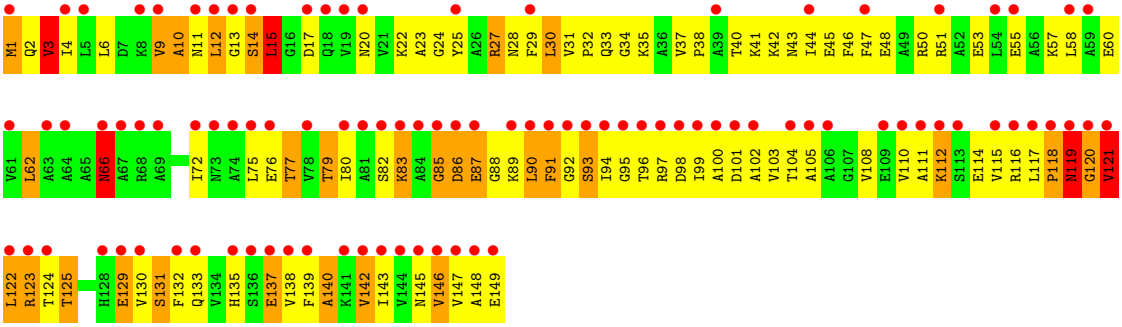




• Molecule 29: 50S ribosomal protein L9

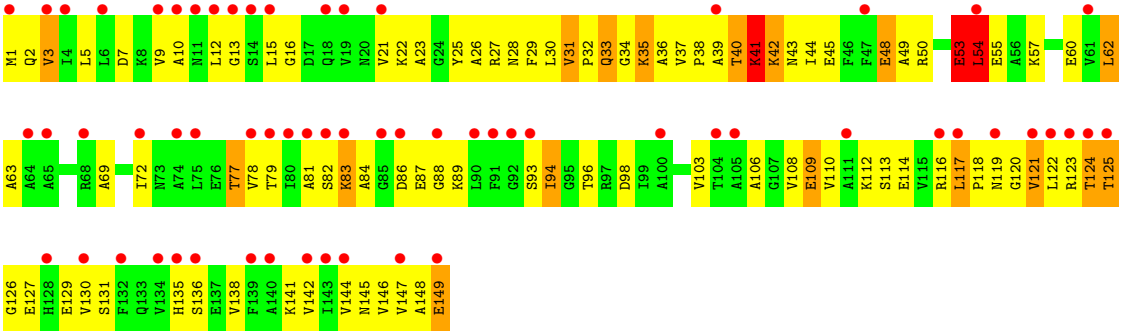
Chain BH:





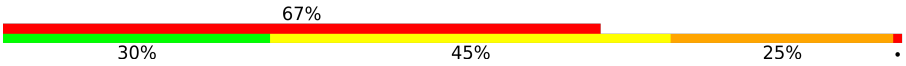
• Molecule 29: 50S ribosomal protein L9

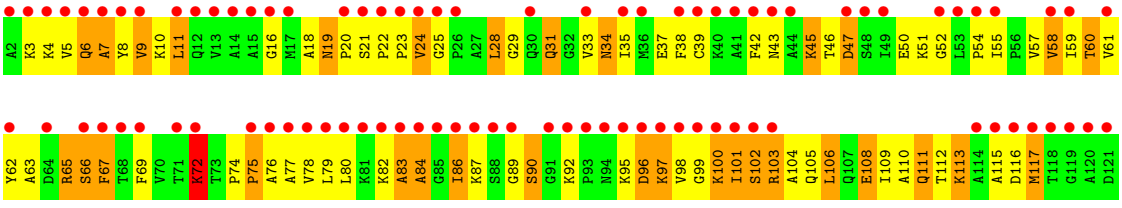
Chain DH:

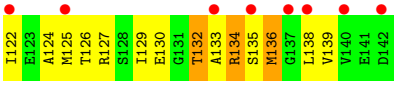


• Molecule 30: 50S ribosomal protein L11

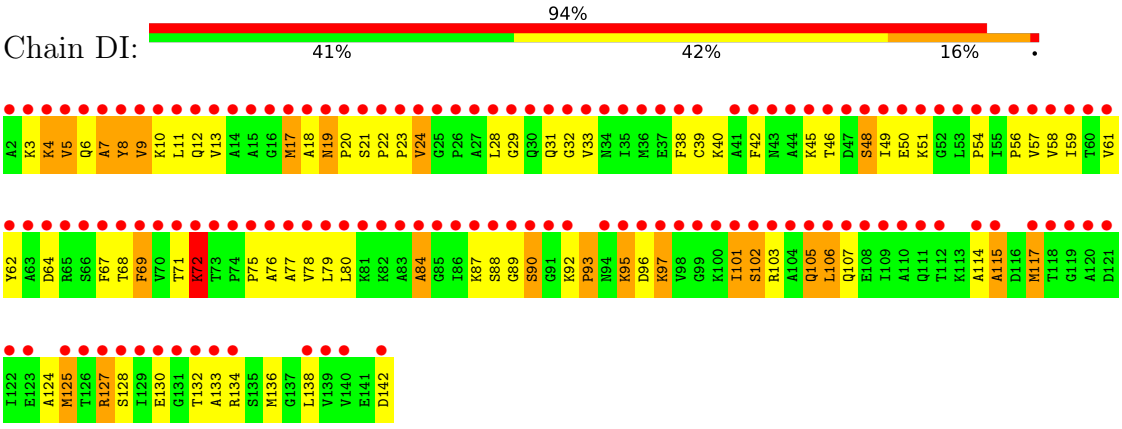
Chain BI:



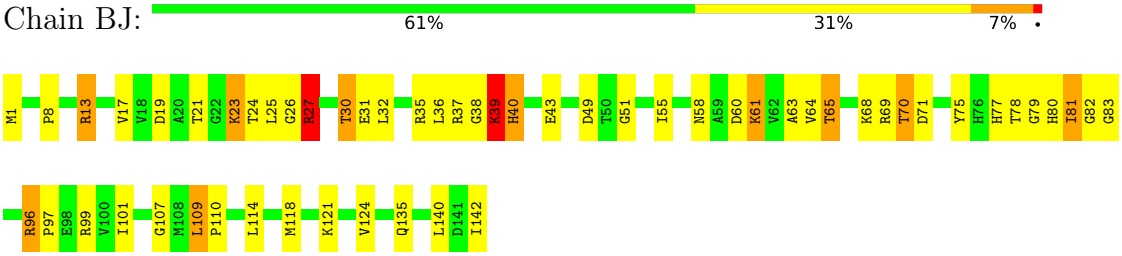




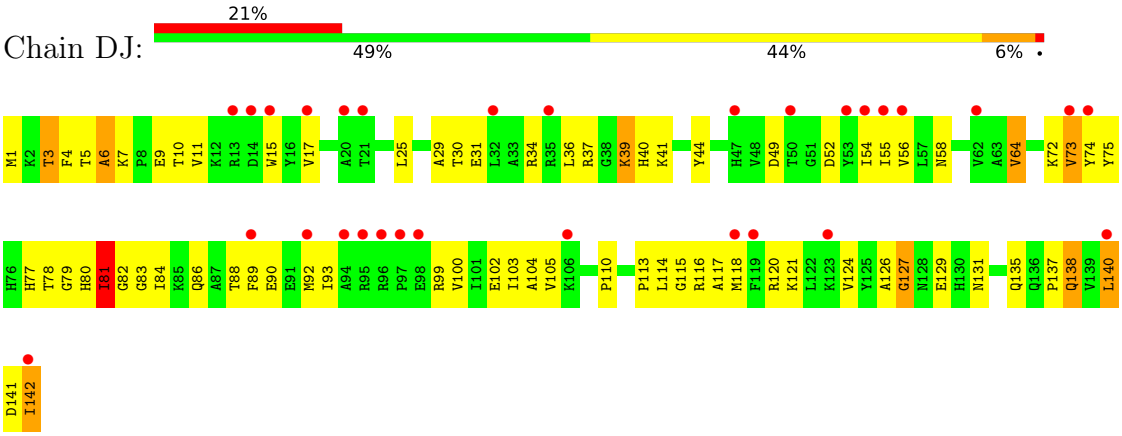
• Molecule 30: 50S ribosomal protein L11



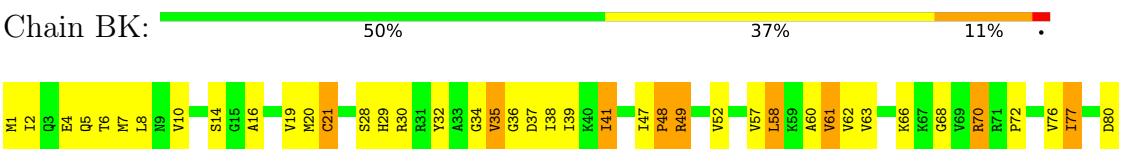
• Molecule 31: 50S ribosomal protein L13



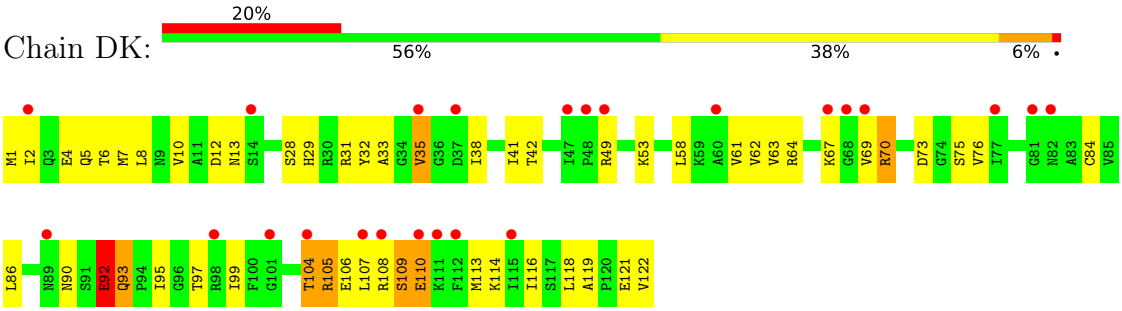
• Molecule 31: 50S ribosomal protein L13



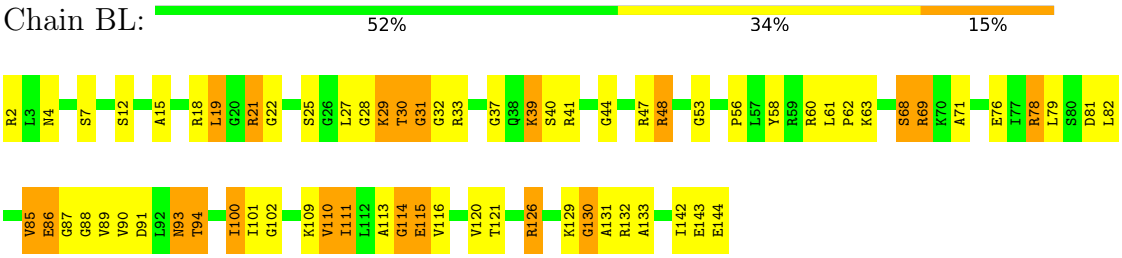
• Molecule 32: 50S ribosomal protein L14



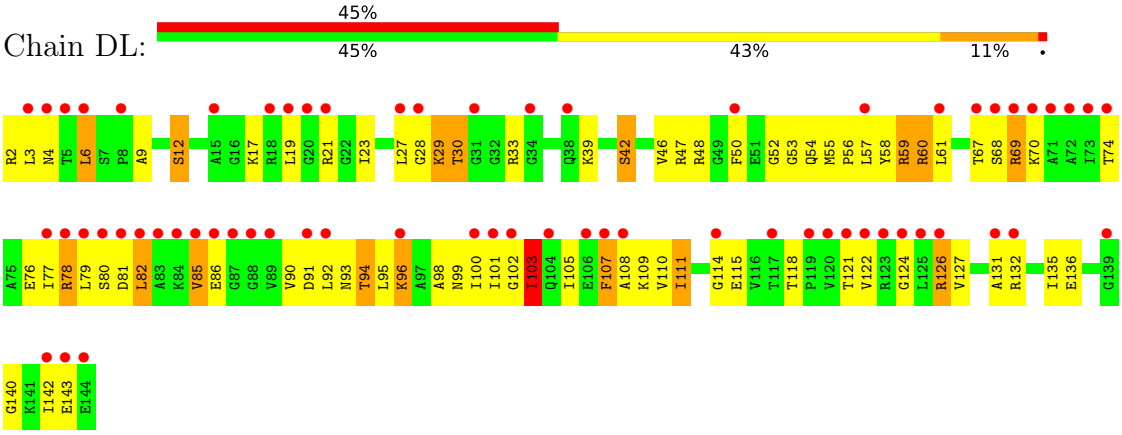
• Molecule 32: 50S ribosomal protein L14



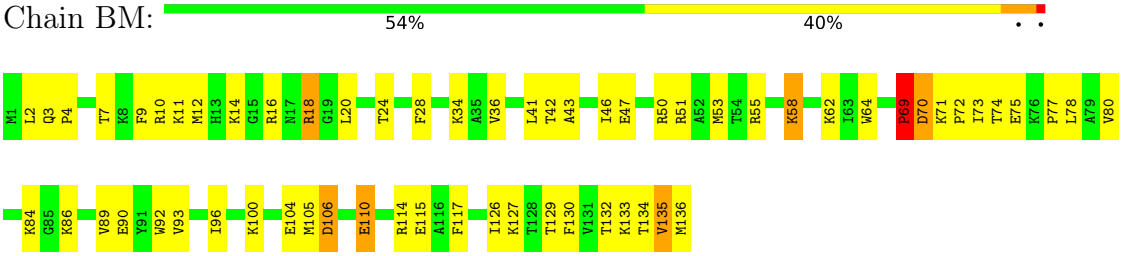
• Molecule 33: 50S ribosomal protein L15



• Molecule 33: 50S ribosomal protein L15

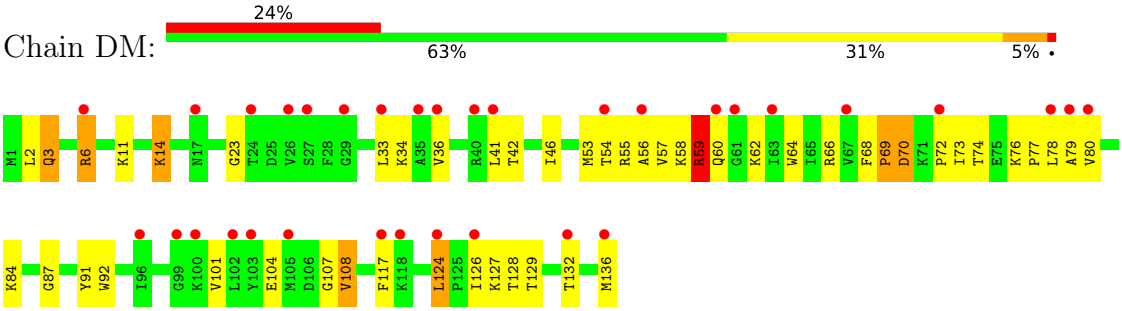


• Molecule 34: 50S ribosomal protein L16



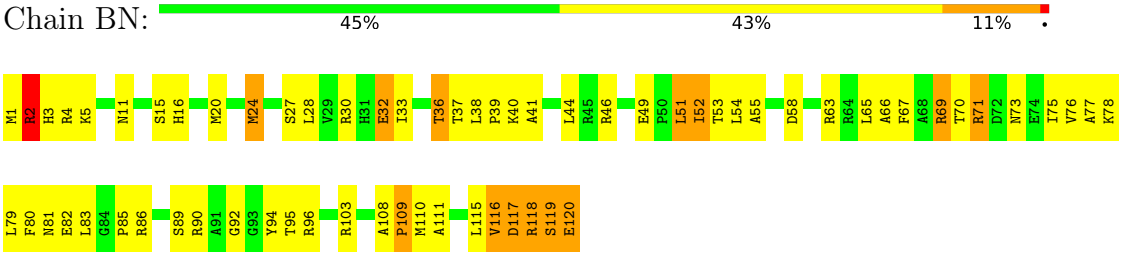
• Molecule 34: 50S ribosomal protein L16

Chain DM:



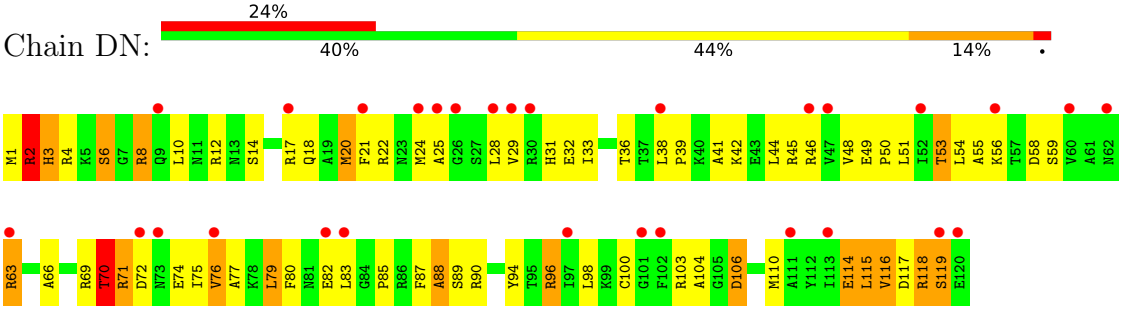
• Molecule 35: 50S ribosomal protein L17

Chain BN:



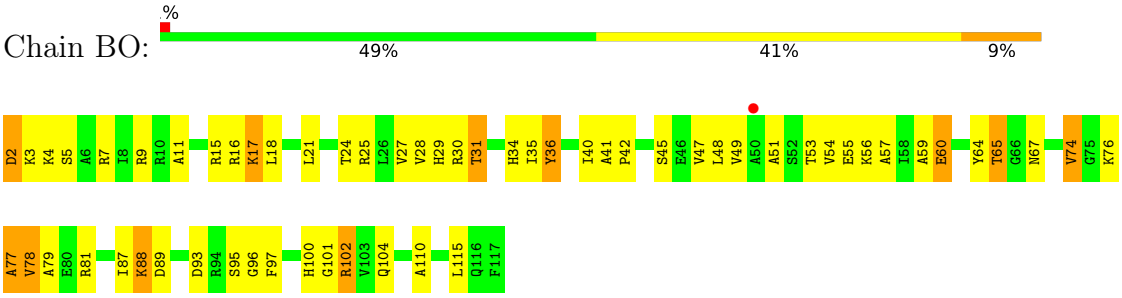
• Molecule 35: 50S ribosomal protein L17

Chain DN:



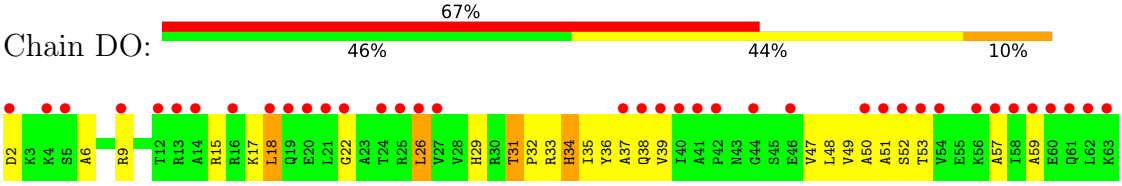
• Molecule 36: 50S ribosomal protein L18

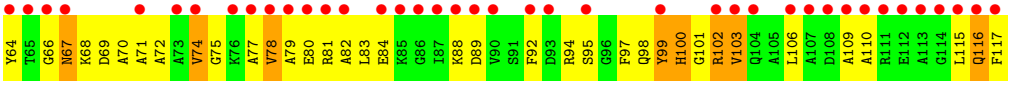
Chain BO:



• Molecule 36: 50S ribosomal protein L18

Chain DO:



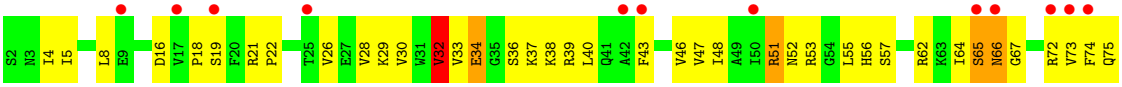


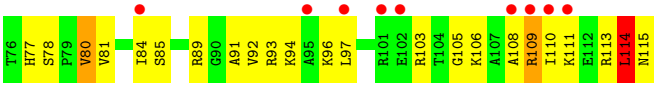
• Molecule 37: 50S ribosomal protein L19

Chain BP:

• Molecule 37: 50S ribosomal protein L19

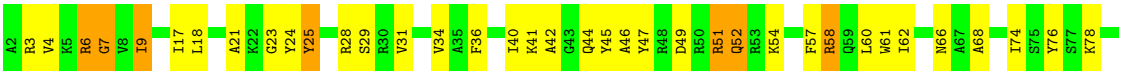
Chain DP:

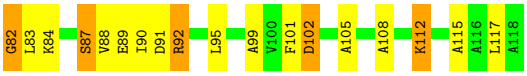




• Molecule 38: 50S ribosomal protein L20

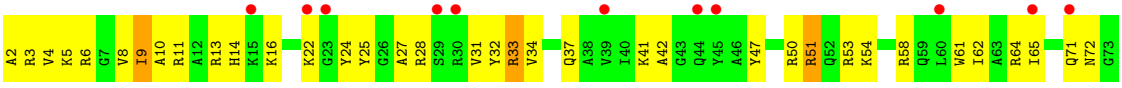
Chain BQ:





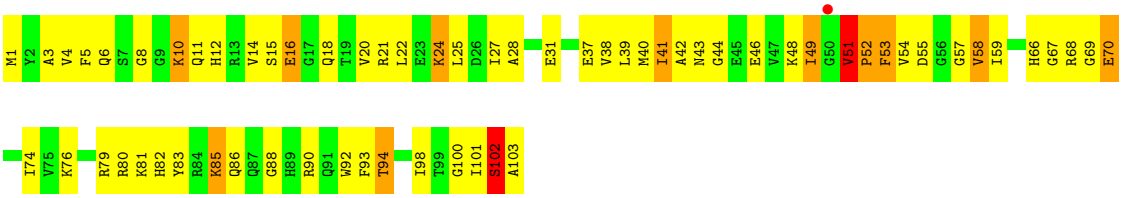
• Molecule 38: 50S ribosomal protein L20

Chain DQ:



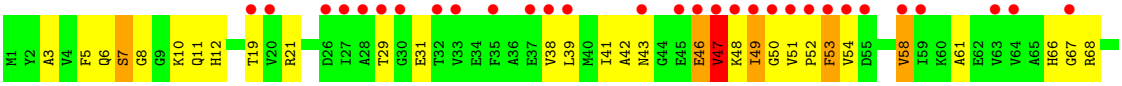
• Molecule 39: 50S ribosomal protein L21

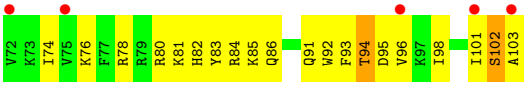
Chain BR:



• Molecule 39: 50S ribosomal protein L21

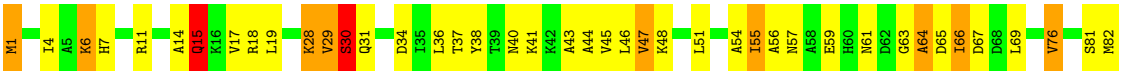
Chain DR:





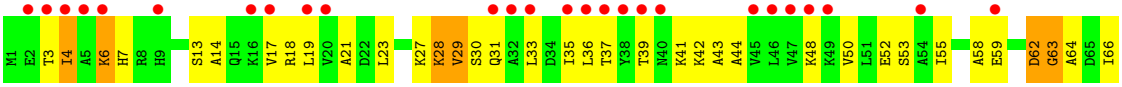
• Molecule 40: 50S ribosomal protein L22

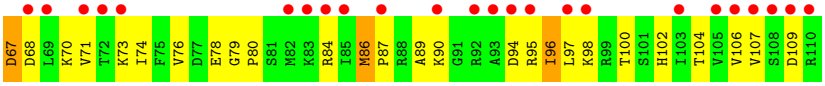
Chain BS:



• Molecule 40: 50S ribosomal protein L22

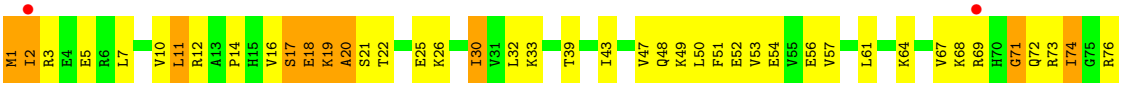
Chain DS:

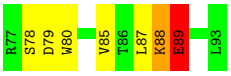




• Molecule 41: 50S ribosomal protein L23

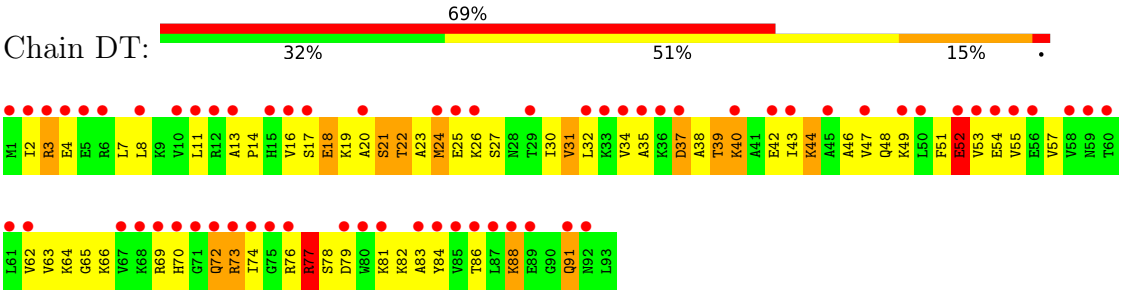
Chain BT:





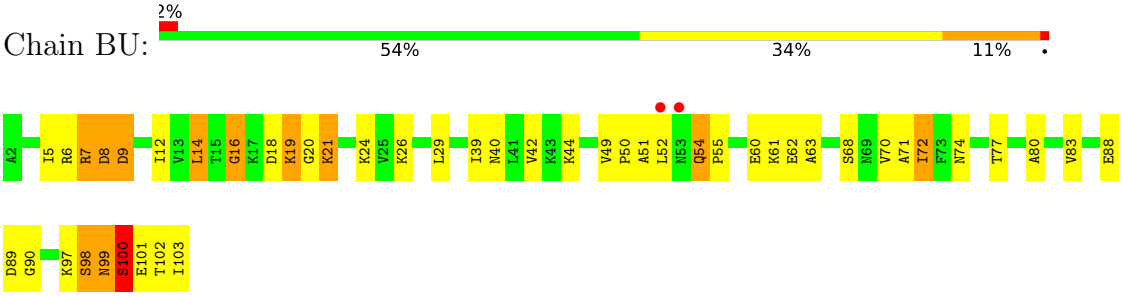
• Molecule 41: 50S ribosomal protein L23

Chain DT:



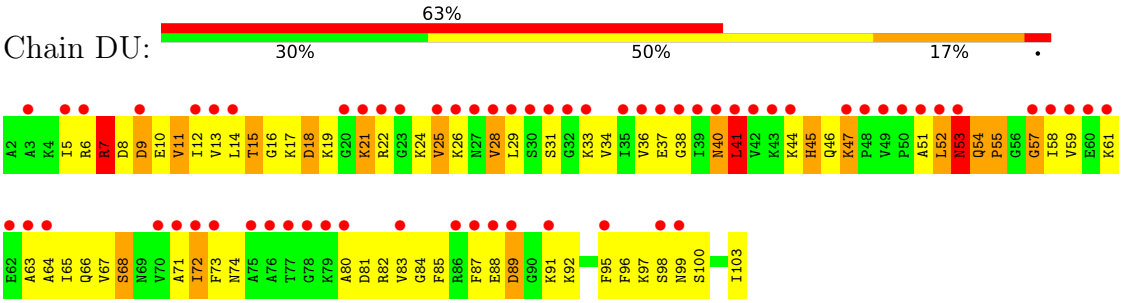
• Molecule 42: 50S ribosomal protein L24

Chain BU:



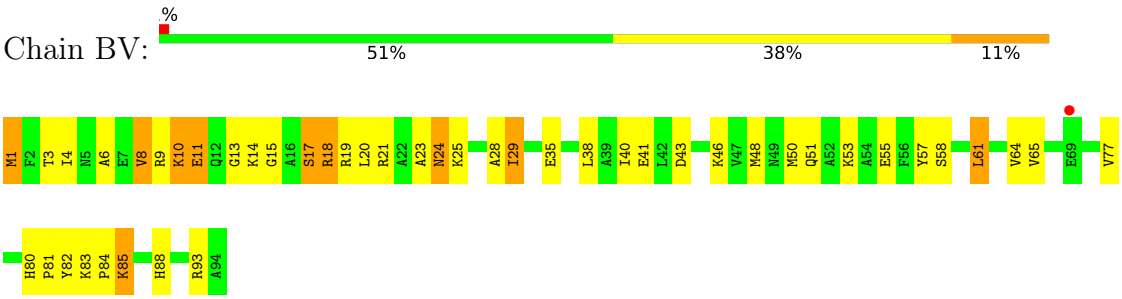
• Molecule 42: 50S ribosomal protein L24

Chain DU:



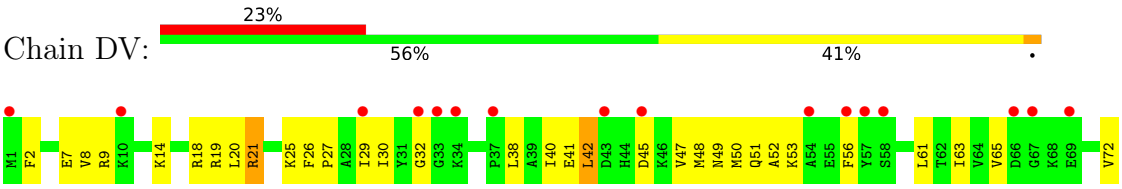
• Molecule 43: 50S ribosomal protein L25

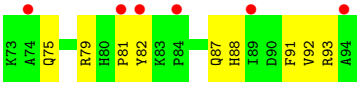
Chain BV:



• Molecule 43: 50S ribosomal protein L25

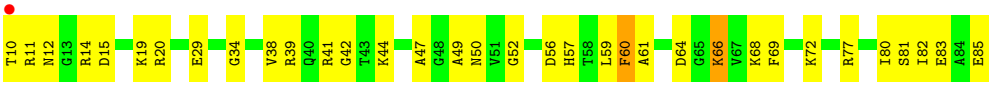
Chain DV:





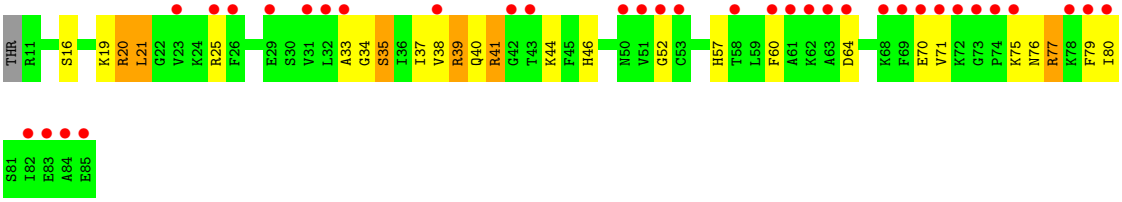
• Molecule 44: 50S ribosomal protein L27

Chain BW:



• Molecule 44: 50S ribosomal protein L27

Chain DW:

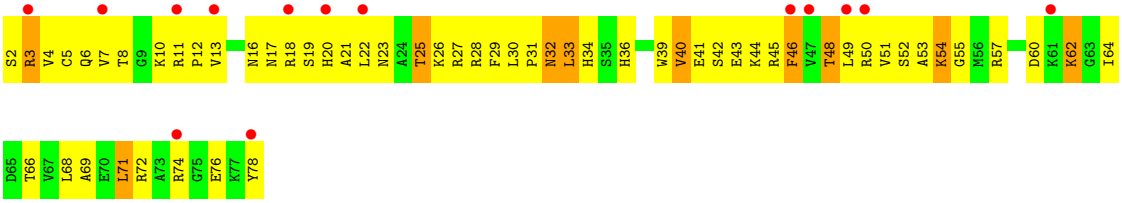


• Molecule 45: 50S ribosomal protein L28

Chain BX:

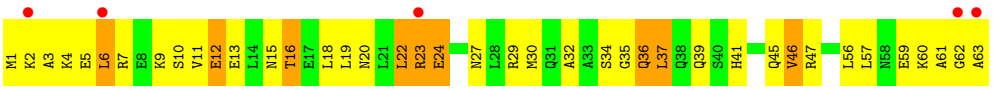
• Molecule 45: 50S ribosomal protein L28

Chain DX:



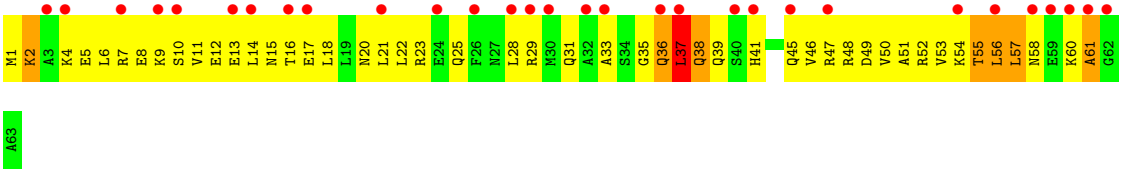
• Molecule 46: 50S ribosomal protein L29

Chain BY:

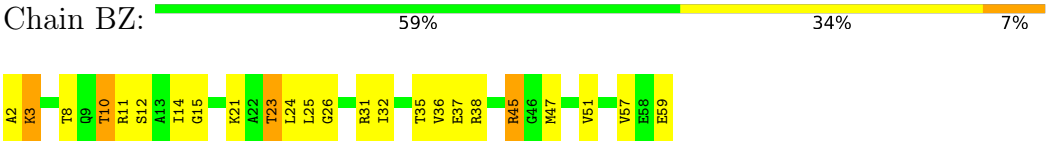


• Molecule 46: 50S ribosomal protein L29

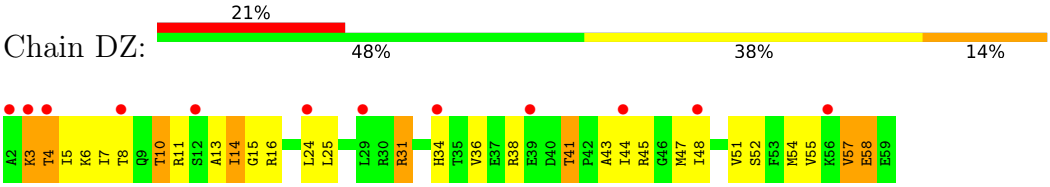
Chain DY:



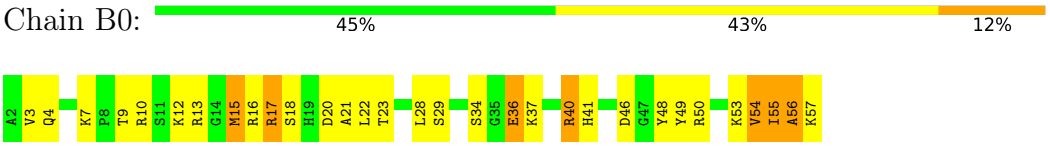
• Molecule 47: 50S ribosomal protein L30



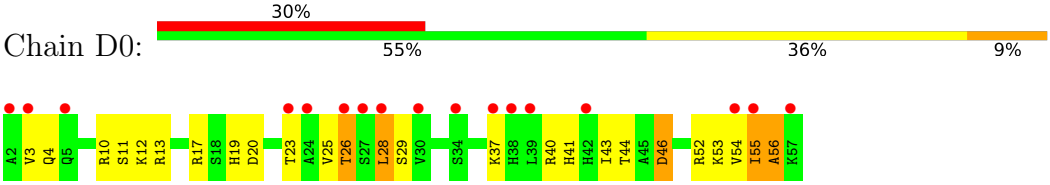
• Molecule 47: 50S ribosomal protein L30



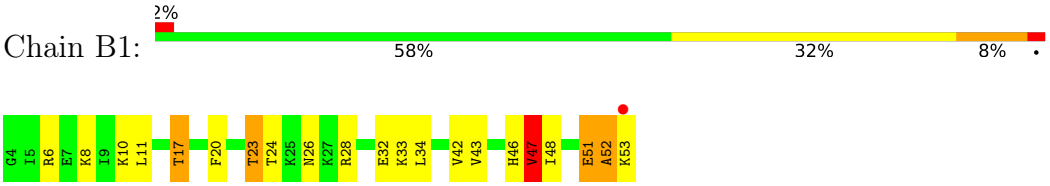
• Molecule 48: 50S ribosomal protein L32



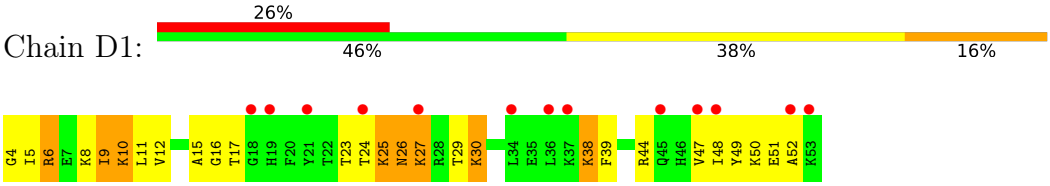
• Molecule 48: 50S ribosomal protein L32



• Molecule 49: 50S ribosomal protein L33

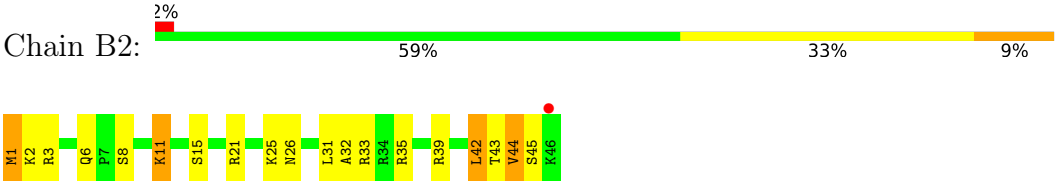


• Molecule 49: 50S ribosomal protein L33



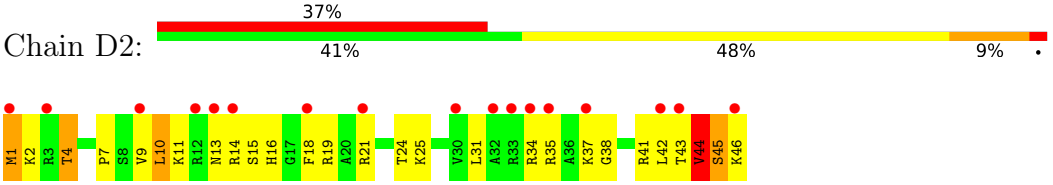
• Molecule 50: 50S ribosomal protein L34

Chain B2:



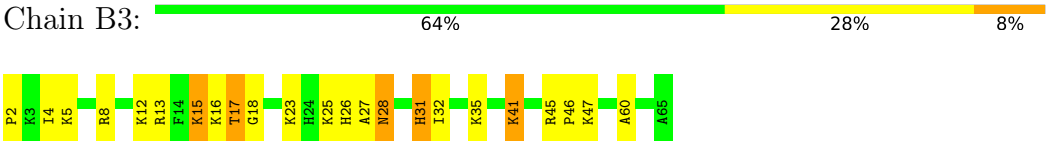
• Molecule 50: 50S ribosomal protein L34

Chain D2:



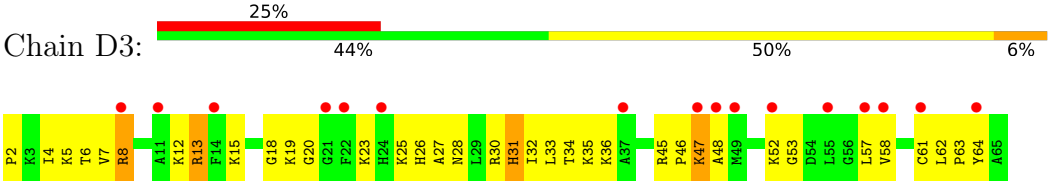
• Molecule 51: 50S ribosomal protein L35

Chain B3:



• Molecule 51: 50S ribosomal protein L35

Chain D3:

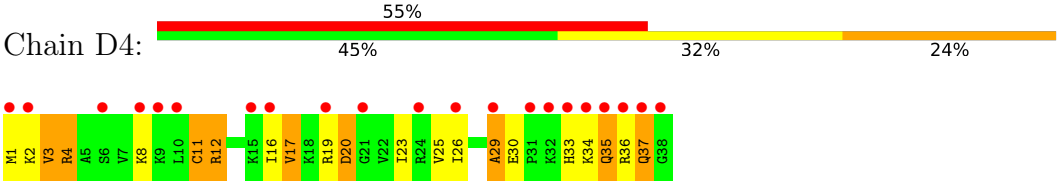


• Molecule 52: 50S ribosomal protein L36

Chain B4:

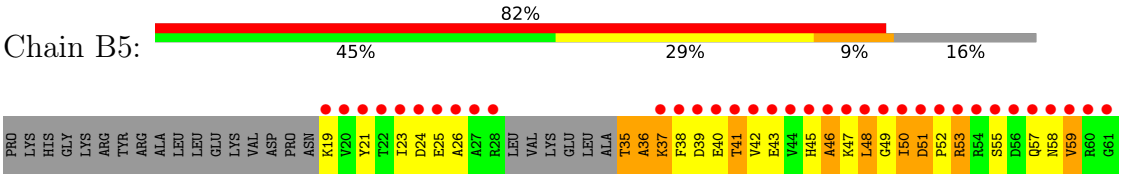
• Molecule 52: 50S ribosomal protein L36

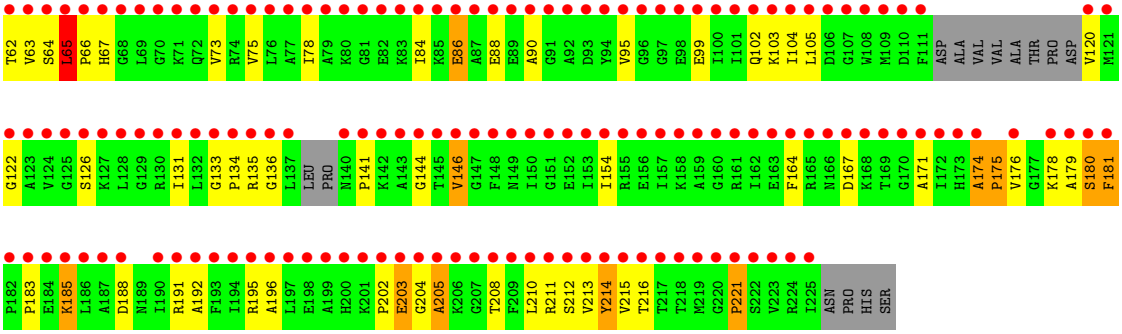
Chain D4:



• Molecule 53: 50S ribosomal protein L1

Chain B5:




T62 V63 S64 L65 P66 H67 G68 L69 G70 K71 Q72 V73 R74 V75 L76 A77 I78 A79 K80 G81 E82 K83 I84 K85 E86 A87 E88 E89 A90 G91 A92 D93 Y94 V95 G96 G97 E98 E99 I100 I101 Q102 K103 I104 L105 D106 G107 W108 M109 D110 F111 ASP ALA VAL VAL ALA THR PRO ASP V120 M121
G122 A123 V124 G125 S126 K127 L128 G129 R130 I131 L132 G133 P134 R135 G136 L137 LEU PRO N140 P141 K142 A143 G144 T145 V146 G147 F148 N149 I150 G151 E152 I153 I154 R155 E156 I157 K158 A159 G160 R161 I162 E163 F164 R165 N166 D167 K168 T169 G170 A171 I172 H173 A174 P175 V176 G177 K178 A179 S180 F181
P182 P183 E184 K185 L186 A187 D188 N189 I190 R191 A192 F193 I194 R195 A196 L197 E198 A199 H200 K201 P202 E203 G204 A205 K206 G207 T208 F209 L210 R211 S212 V213 Y214 V215 T216 T217 T218 M219 G220 P221 S222 V223 R224 I225 ASN PRO HIS SER

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.79Å 433.06Å 623.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.33 – 2.90 69.33 – 2.90	Depositor EDS
% Data completeness (in resolution range)	87.4 (69.33-2.90) 87.4 (69.33-2.90)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.50 (at 2.91Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.235 , 0.279 0.240 , 0.282	Depositor DCC
R_{free} test set	4412 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å^2)	48.9	Xtriage
Anisotropy	0.742	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 56.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	288258	wwPDB-VP
Average B, all atoms (Å^2)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.85% 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: VIF, ZN, MG

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	0.47	0/36944	0.95	29/57632 (0.1%)
1	CA	0.40	0/36966	0.90	9/57666 (0.0%)
2	AB	0.36	0/1736	0.64	0/2338
2	CB	0.33	0/1736	0.60	0/2338
3	AC	0.35	0/1652	0.61	0/2225
3	CC	0.31	0/1652	0.57	0/2225
4	AD	0.35	0/1665	0.63	0/2227
4	CD	0.40	0/1665	0.66	0/2227
5	AE	0.39	0/1119	0.70	0/1504
5	CE	0.36	0/1119	0.70	0/1504
6	AF	0.39	0/836	0.65	0/1128
6	CF	0.33	0/836	0.63	1/1128 (0.1%)
7	AG	0.34	0/1196	0.59	0/1602
7	CG	0.32	0/1196	0.55	0/1602
8	AH	0.34	0/989	0.58	0/1326
8	CH	0.32	0/989	0.59	0/1326
9	AI	0.33	0/1034	0.62	0/1375
9	CI	0.32	0/1034	0.62	0/1375
10	AJ	0.34	0/797	0.61	0/1077
10	CJ	0.31	0/797	0.62	1/1077 (0.1%)
11	AK	0.35	0/893	0.60	0/1205
11	CK	0.34	0/893	0.60	0/1205
12	AL	0.39	0/969	0.65	0/1300
12	CL	0.36	0/969	0.70	0/1300
13	AM	0.33	0/893	0.71	1/1193 (0.1%)
13	CM	0.34	0/893	0.59	0/1193
14	AN	0.34	0/785	0.63	0/1043
14	CN	0.30	0/785	0.54	0/1043
15	AO	0.33	0/718	0.60	0/959
15	CO	0.32	0/718	0.56	0/959
16	AP	0.36	0/659	0.70	1/884 (0.1%)
16	CP	0.35	0/659	0.58	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.37	0/658	0.66	1/881 (0.1%)
17	CQ	0.36	0/658	0.61	0/881
18	AR	0.33	0/463	0.57	0/621
18	CR	0.32	0/463	0.58	0/621
19	AS	0.34	0/653	0.63	0/877
19	CS	0.33	0/653	0.54	0/877
20	AT	0.34	0/671	0.60	0/888
20	CT	0.32	0/671	0.57	0/888
21	AU	0.45	0/431	0.72	0/570
21	CU	0.45	0/431	0.73	0/570
22	BA	0.80	22/69659 (0.0%)	1.31	570/108672 (0.5%)
22	DA	0.40	0/69659	0.90	13/108672 (0.0%)
23	BB	0.68	0/2850	1.17	9/4444 (0.2%)
23	DB	0.35	0/2828	0.85	0/4410
24	BC	0.48	0/2122	0.72	0/2852
24	DC	0.34	0/2122	0.60	0/2852
25	BD	0.54	0/1586	0.78	1/2134 (0.0%)
25	DD	0.33	0/1586	0.57	0/2134
26	BE	0.46	0/1571	0.66	0/2113
26	DE	0.35	0/1571	0.59	0/2113
27	BF	0.37	0/1435	0.59	0/1926
27	DF	0.32	0/1435	0.52	0/1926
28	BG	0.37	0/1343	0.65	0/1816
28	DG	0.32	0/1343	0.53	0/1816
29	BH	0.36	0/1121	0.66	1/1515 (0.1%)
29	DH	0.35	0/1121	0.56	0/1515
30	BI	0.37	0/1046	0.59	0/1410
30	DI	0.37	0/1046	0.61	0/1410
31	BJ	0.53	0/1152	0.74	1/1551 (0.1%)
31	DJ	0.32	0/1152	0.59	0/1551
32	BK	0.52	0/948	0.77	0/1268
32	DK	0.34	0/948	0.56	0/1268
33	BL	0.50	0/1054	0.81	1/1403 (0.1%)
33	DL	0.34	0/1054	0.61	0/1403
34	BM	0.53	0/1093	0.72	0/1460
34	DM	0.31	0/1093	0.54	0/1460
35	BN	0.54	0/974	0.75	0/1301
35	DN	0.35	0/974	0.58	0/1301
36	BO	0.40	0/902	0.64	0/1209
36	DO	0.30	0/902	0.51	0/1209
37	BP	0.49	0/929	0.72	1/1242 (0.1%)
37	DP	0.35	0/929	0.58	0/1242
38	BQ	0.65	0/960	0.83	0/1278

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DQ	0.33	0/960	0.53	0/1278
39	BR	0.60	0/829	0.79	1/1107 (0.1%)
39	DR	0.34	0/829	0.58	0/1107
40	BS	0.63	0/864	0.82	0/1156
40	DS	0.34	0/864	0.59	0/1156
41	BT	0.43	0/745	0.62	0/994
41	DT	0.35	0/745	0.60	0/994
42	BU	0.43	0/788	0.66	0/1051
42	DU	0.37	0/788	0.59	0/1051
43	BV	0.44	0/766	0.65	0/1025
43	DV	0.30	0/766	0.50	0/1025
44	BW	0.55	0/587	0.73	0/776
44	DW	0.31	0/576	0.49	0/762
45	BX	0.43	0/635	0.72	0/848
45	DX	0.34	0/635	0.60	0/848
46	BY	0.40	0/510	0.69	0/677
46	DY	0.34	0/510	0.58	0/677
47	BZ	0.55	0/453	0.82	0/605
47	DZ	0.31	0/453	0.55	0/605
48	B0	0.55	0/450	0.76	0/599
48	D0	0.35	0/450	0.61	0/599
49	B1	0.40	0/417	0.62	0/554
49	D1	0.34	0/417	0.56	0/554
50	B2	0.50	0/380	0.77	0/498
50	D2	0.36	0/380	0.59	0/498
51	B3	0.48	0/513	0.67	0/676
51	D3	0.31	0/513	0.54	0/676
52	B4	0.56	0/303	0.68	0/397
52	D4	0.46	0/303	0.64	0/397
53	B5	0.33	0/1145	0.55	0/1556
All	All	0.52	22/310626 (0.0%)	0.97	641/464366 (0.1%)

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
2	CB	0	1
5	CE	0	1
6	CF	0	1
11	AK	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	CK	0	1
12	CL	0	1
21	AU	0	2
21	CU	0	1
25	BD	0	1
25	DD	0	1
33	BL	0	1
47	BZ	0	1
All	All	0	13

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	984	A	N9-C4	-9.47	1.32	1.37
22	BA	1977	A	N9-C4	-7.26	1.33	1.37
22	BA	1142	A	N9-C4	-7.11	1.33	1.37
22	BA	528	A	N7-C5	-7.06	1.35	1.39
22	BA	2071	A	N9-C4	-6.99	1.33	1.37
22	BA	783	A	N9-C4	-6.85	1.33	1.37
22	BA	528	A	N9-C4	-6.62	1.33	1.37
22	BA	1679	A	N7-C5	-6.49	1.35	1.39
22	BA	2266	A	N9-C4	-6.16	1.34	1.37
22	BA	1032	A	N3-C4	-5.74	1.31	1.34
22	BA	997	G	C2-N3	-5.68	1.28	1.32
22	BA	2273	A	N7-C5	-5.61	1.35	1.39
22	BA	1020	A	N9-C4	-5.57	1.34	1.37
22	BA	571	U	C2-N3	-5.43	1.33	1.37
22	BA	1253	A	N9-C4	-5.42	1.34	1.37
22	BA	529	A	N9-C4	-5.38	1.34	1.37
22	BA	941	A	N3-C4	-5.34	1.31	1.34
22	BA	2278	A	N9-C4	-5.34	1.34	1.37
22	BA	1677	A	C5-C6	-5.29	1.36	1.41
22	BA	685	A	N9-C4	-5.17	1.34	1.37
22	BA	984	A	N3-C4	-5.14	1.31	1.34
22	BA	2452	C	N1-C6	-5.06	1.34	1.37

All (641) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	528	A	N1-C6-N6	13.66	126.80	118.60
25	BD	151	THR	C-N-CD	-12.30	93.53	120.60
22	BA	984	A	C2-N3-C4	-11.24	104.98	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	532	A	O5'-P-OP1	-10.12	96.59	105.70
22	BA	528	A	C6-C5-N7	-9.92	125.36	132.30
22	BA	2017	U	O5'-P-OP1	-9.80	96.88	105.70
22	BA	752	A	N1-C6-N6	9.65	124.39	118.60
31	BJ	27	ARG	NE-CZ-NH1	9.57	125.09	120.30
22	BA	1677	A	N1-C6-N6	9.52	124.31	118.60
22	BA	1255	U	O5'-P-OP2	-9.50	97.15	105.70
22	BA	1977	A	C2-N3-C4	-9.45	105.87	110.60
22	BA	979	A	O5'-P-OP2	-9.29	97.34	105.70
23	BB	75	G	C5-C6-O6	-9.28	123.03	128.60
22	BA	752	A	C4-C5-N7	9.25	115.33	110.70
22	BA	2605	U	O5'-P-OP2	-9.07	97.53	105.70
22	BA	528	A	C5-N7-C8	-9.01	99.39	103.90
22	BA	946	C	O5'-P-OP2	-9.01	97.59	105.70
22	BA	974	G	C4-C5-N7	9.00	114.40	110.80
22	BA	752	A	C5-N7-C8	-8.79	99.50	103.90
22	BA	704	G	O4'-C1'-N9	8.75	115.20	108.20
22	BA	1153	C	O5'-P-OP1	-8.73	97.84	105.70
22	BA	984	A	N3-C4-C5	8.65	132.85	126.80
22	BA	564	C	O5'-P-OP1	-8.62	97.94	105.70
22	BA	1761	C	N1-C2-O2	8.62	124.07	118.90
23	BB	75	G	N1-C6-O6	8.59	125.05	119.90
22	BA	1779	U	O5'-P-OP1	-8.45	98.09	105.70
22	BA	2872	A	C8-N9-C4	-8.39	102.44	105.80
22	BA	572	A	O5'-P-OP1	-8.27	98.26	105.70
22	BA	783	A	C5-N7-C8	-8.10	99.85	103.90
22	BA	1676	A	O5'-P-OP2	-8.06	98.45	105.70
22	BA	1762	A	N1-C6-N6	8.00	123.40	118.60
22	BA	2450	A	O5'-P-OP2	-7.99	98.51	105.70
22	BA	2498	C	C6-N1-C2	7.93	123.47	120.30
22	BA	984	A	N3-C4-N9	-7.92	121.07	127.40
22	BA	1760	C	N3-C2-O2	7.91	127.43	121.90
16	AP	51	ARG	NE-CZ-NH1	7.88	124.24	120.30
22	BA	2022	U	N3-C2-O2	-7.87	116.69	122.20
22	BA	784	G	N1-C6-O6	-7.79	115.23	119.90
22	BA	1007	C	O5'-P-OP1	-7.76	98.71	105.70
22	BA	974	G	C5-N7-C8	-7.76	100.42	104.30
22	BA	528	A	C4-C5-N7	7.76	114.58	110.70
22	BA	2005	A	N1-C6-N6	7.75	123.25	118.60
22	BA	2286	G	N3-C4-C5	7.75	132.47	128.60
22	BA	1779	U	C5-C4-O4	7.73	130.54	125.90
22	BA	752	A	C6-C5-N7	-7.73	126.89	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2030	A	C5-C6-N6	7.66	129.83	123.70
22	BA	2021	C	O5'-P-OP2	-7.63	98.84	105.70
22	BA	1260	A	O5'-P-OP2	-7.58	98.87	105.70
22	BA	528	A	N7-C8-N9	7.56	117.58	113.80
22	BA	784	G	O4'-C1'-N9	-7.54	102.17	108.20
22	BA	531	C	N3-C2-O2	-7.51	116.64	121.90
1	AA	279	A	N1-C6-N6	7.51	123.11	118.60
22	BA	1760	C	N1-C2-O2	-7.48	114.41	118.90
22	BA	780	G	N1-C2-N2	-7.47	109.48	116.20
22	BA	729	G	O4'-C1'-N9	7.46	114.17	108.20
22	BA	1157	G	O5'-P-OP2	-7.45	98.99	105.70
22	BA	942	G	C5-C6-O6	-7.42	124.15	128.60
22	BA	705	A	N1-C6-N6	7.40	123.04	118.60
22	BA	1677	A	C5-C6-N6	-7.36	117.82	123.70
22	BA	2871	U	N1-C2-O2	7.35	127.94	122.80
22	BA	1768	C	C6-N1-C2	-7.32	117.37	120.30
22	BA	2705	A	N1-C6-N6	7.31	122.98	118.60
22	BA	2024	G	N1-C6-O6	-7.30	115.52	119.90
22	BA	2574	G	O5'-P-OP2	-7.26	99.17	105.70
22	BA	984	A	C5-C6-N1	-7.21	114.09	117.70
22	BA	2689	U	N3-C4-O4	-7.20	114.36	119.40
22	BA	806	C	N3-C4-C5	7.19	124.78	121.90
22	BA	1774	C	N1-C2-O2	-7.19	114.58	118.90
22	BA	2002	G	N1-C6-O6	7.19	124.22	119.90
1	CA	575	G	N3-C4-C5	7.17	132.19	128.60
22	BA	967	U	C5-C4-O4	7.13	130.18	125.90
22	BA	2633	G	N3-C4-C5	7.12	132.16	128.60
22	BA	2884	U	C5-C4-O4	7.12	130.17	125.90
22	BA	780	G	N3-C2-N2	7.10	124.87	119.90
1	AA	1286	U	C2-N1-C1'	7.08	126.19	117.70
22	BA	180	G	N3-C4-C5	7.07	132.14	128.60
22	BA	1784	A	C2-N3-C4	-7.06	107.07	110.60
22	BA	2495	G	C5-C6-O6	-7.05	124.37	128.60
22	BA	456	C	O5'-P-OP2	-7.04	99.36	105.70
22	BA	1286	A	N1-C6-N6	7.04	122.82	118.60
22	BA	980	A	C5-C6-N6	-7.03	118.08	123.70
22	BA	2871	U	N3-C2-O2	-7.02	117.29	122.20
22	BA	248	G	N1-C6-O6	6.99	124.09	119.90
22	BA	2447	G	N1-C6-O6	-6.99	115.71	119.90
22	BA	2055	C	O5'-P-OP2	-6.97	99.43	105.70
22	BA	760	G	N1-C6-O6	6.96	124.08	119.90
22	BA	2716	C	N3-C4-C5	6.94	124.68	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	769	U	N3-C2-O2	-6.94	117.34	122.20
22	BA	1658	C	C6-N1-C2	6.94	123.07	120.30
22	BA	2510	C	N1-C2-O2	-6.92	114.75	118.90
22	BA	450	G	N1-C6-O6	-6.91	115.75	119.90
22	BA	1274	A	N1-C6-N6	6.91	122.75	118.60
22	BA	1677	A	N9-C4-C5	-6.88	103.05	105.80
22	BA	672	C	N3-C4-C5	6.87	124.65	121.90
22	BA	980	A	N1-C6-N6	6.85	122.71	118.60
22	BA	1269	A	C4-C5-C6	6.85	120.42	117.00
1	AA	819	A	O5'-P-OP1	-6.84	99.55	105.70
22	BA	1780	A	O5'-P-OP2	-6.83	99.55	105.70
22	BA	1678	A	O5'-P-OP2	6.83	118.90	110.70
22	BA	2450	A	N1-C6-N6	6.82	122.69	118.60
22	BA	2824	C	OP2-P-O3'	6.82	120.19	105.20
22	BA	1189	A	O5'-P-OP2	-6.79	99.58	105.70
22	BA	2873	A	C8-N9-C4	-6.79	103.08	105.80
22	BA	780	G	N3-C4-N9	6.79	130.07	126.00
22	BA	2813	A	N1-C6-N6	6.79	122.67	118.60
22	BA	581	C	O5'-P-OP2	-6.78	99.60	105.70
22	BA	528	A	C2-N3-C4	-6.77	107.22	110.60
22	BA	2814	A	N1-C6-N6	6.76	122.66	118.60
22	BA	528	A	C5-C6-N1	-6.75	114.33	117.70
22	BA	1679	A	C4-C5-C6	6.75	120.37	117.00
22	BA	450	G	N3-C4-C5	-6.71	125.25	128.60
22	BA	980	A	C6-C5-N7	-6.70	127.61	132.30
22	BA	836	G	C4-C5-N7	6.70	113.48	110.80
1	CA	575	G	C4-N9-C1'	-6.69	117.81	126.50
1	CA	412	A	O4'-C1'-N9	6.63	113.51	108.20
22	DA	783	A	N1-C6-N6	6.63	122.58	118.60
22	BA	745	G	N3-C4-C5	-6.61	125.29	128.60
22	BA	2257	U	C5-C4-O4	6.61	129.86	125.90
22	BA	2002	G	C5-C6-O6	-6.60	124.64	128.60
22	BA	1654	A	N1-C6-N6	6.60	122.56	118.60
22	BA	1675	C	N1-C2-O2	-6.58	114.95	118.90
22	BA	461	C	N1-C2-O2	-6.54	114.97	118.90
22	BA	2565	A	N1-C6-N6	6.53	122.52	118.60
22	BA	1197	G	C4-N9-C1'	-6.53	118.02	126.50
22	BA	1019	U	O5'-P-OP1	-6.51	99.84	105.70
22	BA	783	A	N7-C8-N9	6.51	117.05	113.80
22	BA	2610	C	N3-C4-N4	-6.50	113.45	118.00
22	BA	1681	G	C5-C6-O6	-6.49	124.70	128.60
22	BA	1926	U	N1-C2-O2	6.48	127.33	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	533	G	C2-N3-C4	-6.47	108.66	111.90
22	BA	2037	A	N1-C6-N6	-6.47	114.72	118.60
22	BA	1321	A	C8-N9-C4	-6.47	103.21	105.80
22	BA	2592	G	O5'-P-OP1	-6.46	99.88	105.70
22	BA	1299	G	C6-C5-N7	-6.46	126.52	130.40
22	BA	1681	G	N1-C6-O6	6.44	123.77	119.90
22	BA	570	G	C5-C6-O6	-6.44	124.73	128.60
22	BA	2686	G	N1-C6-O6	6.43	123.76	119.90
13	AM	107	ARG	NE-CZ-NH1	6.42	123.51	120.30
22	BA	1677	A	C4-C5-N7	6.42	113.91	110.70
22	BA	2286	G	N3-C4-N9	-6.42	122.15	126.00
22	BA	977	G	O5'-P-OP2	-6.41	99.93	105.70
22	BA	2576	G	O5'-P-OP1	-6.40	99.94	105.70
22	BA	533	G	O5'-P-OP1	-6.40	99.94	105.70
22	BA	531	C	N1-C2-O2	6.38	122.73	118.90
22	BA	1779	U	N3-C4-O4	-6.38	114.94	119.40
1	AA	857	C	O5'-P-OP2	-6.37	99.97	105.70
22	BA	1677	A	C6-C5-N7	-6.37	127.84	132.30
22	BA	2498	C	C2-N1-C1'	-6.37	111.79	118.80
22	BA	32	C	N3-C2-O2	6.36	126.35	121.90
1	CA	575	G	N3-C4-N9	-6.35	122.19	126.00
22	BA	2439	A	N1-C6-N6	6.35	122.41	118.60
22	BA	2438	U	C5-C6-N1	-6.34	119.53	122.70
1	AA	1514	G	C5-C6-O6	-6.33	124.80	128.60
22	BA	2794	C	N1-C2-O2	-6.33	115.10	118.90
22	BA	942	G	N3-C2-N2	-6.33	115.47	119.90
22	BA	1032	A	N9-C4-C5	6.32	108.33	105.80
22	BA	2257	U	N3-C4-O4	-6.32	114.98	119.40
22	BA	1615	C	C6-N1-C2	-6.31	117.78	120.30
22	BA	1790	C	N1-C2-O2	-6.31	115.11	118.90
22	BA	488	G	N1-C6-O6	-6.31	116.11	119.90
1	AA	378	G	O5'-P-OP2	-6.30	100.03	105.70
22	BA	2674	G	N1-C6-O6	6.29	123.67	119.90
22	BA	802	A	O5'-P-OP1	-6.29	100.04	105.70
22	BA	737	C	OP1-P-OP2	6.28	129.02	119.60
22	BA	836	G	C5-C6-O6	-6.28	124.83	128.60
22	BA	2243	U	N1-C2-O2	-6.26	118.42	122.80
22	BA	2025	C	N3-C4-N4	-6.25	113.62	118.00
22	BA	2071	A	N3-C4-C5	6.25	131.18	126.80
22	BA	1260	A	O5'-P-OP1	6.25	118.20	110.70
22	BA	977	G	N1-C6-O6	6.25	123.65	119.90
22	BA	521	U	N3-C2-O2	-6.25	117.83	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	997	G	OP1-P-O3'	6.24	118.92	105.20
22	BA	2005	A	C5-C6-N6	-6.23	118.72	123.70
22	BA	961	C	O5'-P-OP2	-6.22	100.10	105.70
22	BA	1229	C	O5'-P-OP2	-6.21	100.11	105.70
22	BA	768	G	O5'-P-OP2	-6.20	100.12	105.70
22	BA	686	U	N1-C2-O2	-6.20	118.46	122.80
22	BA	2453	A	C4-C5-C6	6.18	120.09	117.00
22	BA	581	C	N3-C2-O2	-6.18	117.58	121.90
22	BA	2030	A	C5-C6-N1	-6.17	114.61	117.70
22	BA	2461	A	N1-C6-N6	6.17	122.30	118.60
22	BA	994	C	OP1-P-O3'	6.17	118.77	105.20
22	BA	2425	A	P-O3'-C3'	6.16	127.10	119.70
22	BA	2633	G	N3-C4-N9	-6.16	122.30	126.00
22	BA	2840	C	O5'-P-OP2	-6.16	100.16	105.70
22	BA	2263	C	C6-N1-C2	6.16	122.76	120.30
22	BA	1989	G	C6-C5-N7	-6.16	126.71	130.40
22	BA	1153	C	O5'-P-OP2	6.15	118.08	110.70
22	BA	1254	A	C6-N1-C2	-6.14	114.91	118.60
22	BA	2332	C	N1-C2-O2	-6.14	115.21	118.90
22	BA	752	A	N9-C4-C5	-6.14	103.34	105.80
22	BA	1909	C	C2-N1-C1'	6.14	125.55	118.80
22	BA	943	A	N1-C6-N6	6.13	122.28	118.60
22	BA	528	A	C4-C5-C6	6.13	120.06	117.00
22	BA	945	A	O5'-P-OP2	-6.12	100.19	105.70
22	BA	810	U	C5-C4-O4	-6.12	122.23	125.90
22	BA	1654	A	C4-C5-N7	6.11	113.76	110.70
22	BA	1761	C	C2-N1-C1'	6.10	125.51	118.80
22	BA	1277	G	N1-C6-O6	6.10	123.56	119.90
22	BA	1989	G	N1-C6-O6	6.10	123.56	119.90
22	BA	2388	A	N1-C6-N6	-6.09	114.95	118.60
22	BA	489	G	N9-C4-C5	6.08	107.83	105.40
22	BA	502	A	O5'-P-OP2	6.08	118.00	110.70
22	BA	973	A	OP2-P-O3'	6.08	118.58	105.20
22	BA	984	A	O4'-C1'-N9	6.08	113.06	108.20
22	BA	1754	A	OP1-P-OP2	-6.07	110.49	119.60
22	BA	2438	U	C2-N1-C1'	-6.07	110.42	117.70
22	BA	2689	U	C5-C4-O4	6.06	129.54	125.90
22	BA	2444	G	OP2-P-O3'	6.06	118.53	105.20
22	BA	1027	A	N1-C6-N6	6.05	122.23	118.60
22	BA	2250	G	N3-C4-C5	6.04	131.62	128.60
22	BA	528	A	C5-C6-N6	-6.04	118.87	123.70
22	BA	2448	A	N1-C6-N6	6.04	122.22	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2679	A	N1-C6-N6	6.04	122.22	118.60
22	BA	2588	G	O5'-P-OP2	-6.03	100.27	105.70
22	BA	2633	G	C2-N3-C4	-6.03	108.89	111.90
22	BA	528	A	C8-N9-C4	-6.01	103.39	105.80
22	BA	1265	A	OP1-P-O3'	6.01	118.42	105.20
22	BA	2452	C	C6-N1-C2	6.01	122.70	120.30
22	BA	2560	A	C8-N9-C4	-6.01	103.40	105.80
22	BA	2598	A	O5'-P-OP1	-6.01	100.29	105.70
22	BA	579	G	O5'-P-OP1	-6.00	100.30	105.70
22	BA	1132	U	N1-C2-N3	6.00	118.50	114.90
22	BA	1936	A	C2-N3-C4	-6.00	107.60	110.60
22	BA	1991	U	N3-C2-O2	-5.98	118.01	122.20
22	BA	778	G	N3-C4-N9	5.98	129.59	126.00
22	BA	970	U	OP2-P-O3'	5.98	118.35	105.20
22	BA	2238	G	N3-C2-N2	5.98	124.08	119.90
22	BA	590	A	N1-C6-N6	5.97	122.19	118.60
22	BA	686	U	N3-C2-O2	5.97	126.38	122.20
22	BA	2487	G	OP2-P-O3'	5.97	118.34	105.20
22	BA	752	A	N7-C8-N9	5.97	116.78	113.80
22	BA	855	G	N1-C6-O6	-5.95	116.33	119.90
22	BA	2250	G	O5'-P-OP1	-5.95	100.34	105.70
22	BA	727	A	N1-C6-N6	5.95	122.17	118.60
22	BA	664	G	O5'-P-OP2	-5.95	100.35	105.70
22	BA	2078	C	N3-C2-O2	-5.95	117.74	121.90
1	AA	503	C	C6-N1-C2	-5.95	117.92	120.30
22	BA	1644	C	C6-N1-C2	5.95	122.68	120.30
22	BA	1776	G	N1-C6-O6	5.93	123.46	119.90
22	BA	2037	A	N9-C4-C5	5.93	108.17	105.80
1	AA	971	G	O4'-C1'-N9	5.92	112.94	108.20
22	BA	912	C	OP1-P-O3'	5.92	118.22	105.20
22	BA	782	A	O5'-P-OP1	-5.91	100.38	105.70
22	BA	2054	A	OP2-P-O3'	5.91	118.21	105.20
22	BA	998	C	C6-N1-C2	-5.91	117.94	120.30
22	BA	1982	U	N3-C2-O2	-5.90	118.07	122.20
22	BA	942	G	N1-C6-O6	5.90	123.44	119.90
22	BA	672	C	C6-N1-C2	5.89	122.66	120.30
22	BA	740	C	C2-N3-C4	-5.89	116.95	119.90
22	BA	977	G	C5-C6-O6	-5.89	125.06	128.60
22	BA	1672	A	OP2-P-O3'	5.89	118.16	105.20
22	BA	583	G	N3-C4-N9	-5.89	122.47	126.00
22	BA	752	A	C5-C6-N6	-5.88	118.99	123.70
22	BA	481	G	C5-C6-O6	-5.88	125.07	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	790	U	O5'-P-OP2	-5.88	100.41	105.70
22	BA	1977	A	C5-C6-N1	-5.88	114.76	117.70
1	AA	1514	G	N1-C6-O6	5.88	123.43	119.90
22	BA	1977	A	C8-N9-C4	5.87	108.15	105.80
22	BA	571	U	O4'-C1'-N1	5.87	112.89	108.20
22	BA	1197	G	C8-N9-C1'	5.87	134.63	127.00
22	DA	729	G	O4'-C1'-N9	5.87	112.89	108.20
22	BA	2076	U	C5-C4-O4	5.86	129.42	125.90
22	BA	2059	A	OP1-P-OP2	5.86	128.39	119.60
22	BA	836	G	N1-C6-O6	5.85	123.41	119.90
22	BA	2578	G	C4-N9-C1'	-5.85	118.89	126.50
22	BA	2046	G	N1-C6-O6	5.84	123.41	119.90
22	BA	1250	G	OP1-P-OP2	5.83	128.35	119.60
22	DA	2447	G	C4-N9-C1'	-5.83	118.92	126.50
22	BA	536	G	C8-N9-C4	5.83	108.73	106.40
22	BA	1681	G	C4-C5-N7	5.83	113.13	110.80
22	BA	580	U	OP2-P-O3'	5.81	117.99	105.20
22	BA	2452	C	C2-N3-C4	-5.81	117.00	119.90
22	BA	783	A	C2-N3-C4	-5.81	107.70	110.60
1	AA	279	A	C5-C6-N6	-5.80	119.06	123.70
22	BA	461	C	N3-C2-O2	5.79	125.96	121.90
22	BA	16	C	O5'-P-OP2	-5.79	100.49	105.70
22	BA	2022	U	N1-C2-O2	5.79	126.85	122.80
22	BA	982	C	N1-C2-O2	5.79	122.37	118.90
22	BA	1311	G	C4-C5-N7	5.79	113.11	110.80
1	CA	209	U	C2-N1-C1'	5.78	124.64	117.70
22	BA	128	C	N1-C2-O2	-5.78	115.43	118.90
22	BA	1333	G	C5-C6-O6	5.78	132.06	128.60
22	BA	1779	U	O4'-C1'-N1	5.78	112.82	108.20
22	BA	1762	A	C5-C6-N6	-5.77	119.08	123.70
23	BB	107	G	C6-C5-N7	-5.77	126.94	130.40
22	BA	837	C	N1-C2-O2	-5.76	115.44	118.90
22	BA	752	A	C2-N3-C4	-5.76	107.72	110.60
22	BA	586	A	C8-N9-C4	-5.75	103.50	105.80
22	BA	2257	U	N3-C2-O2	-5.75	118.17	122.20
22	BA	1671	U	O5'-P-OP2	5.75	117.59	110.70
22	BA	952	G	C4-C5-N7	5.74	113.10	110.80
22	DA	481	G	O4'-C1'-N9	5.74	112.79	108.20
22	BA	2392	A	N1-C6-N6	5.73	122.04	118.60
22	BA	2718	G	O5'-P-OP1	-5.73	100.55	105.70
22	BA	514	A	OP1-P-O3'	5.72	117.79	105.20
22	BA	2029	G	C5-C6-N1	-5.72	108.64	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2799	A	N1-C6-N6	5.72	122.03	118.60
22	BA	2456	C	OP1-P-OP2	-5.72	111.02	119.60
23	BB	75	G	C6-C5-N7	-5.72	126.97	130.40
22	BA	2606	C	N1-C2-O2	-5.71	115.47	118.90
22	BA	1651	G	C4-N9-C1'	5.71	133.92	126.50
1	AA	664	G	N3-C4-N9	-5.71	122.58	126.00
22	BA	124	G	N3-C4-N9	-5.71	122.58	126.00
22	BA	1763	G	O5'-P-OP2	-5.68	100.58	105.70
22	BA	2004	G	OP1-P-OP2	5.68	128.12	119.60
22	BA	2350	C	OP2-P-O3'	5.68	117.69	105.20
22	BA	24	G	OP2-P-O3'	5.68	117.69	105.20
22	BA	532	A	N1-C6-N6	5.67	122.00	118.60
22	BA	32	C	N1-C2-O2	-5.67	115.50	118.90
22	BA	1299	G	N1-C6-O6	5.67	123.30	119.90
22	BA	1443	U	OP1-P-OP2	5.67	128.10	119.60
22	BA	2722	G	C6-C5-N7	-5.67	127.00	130.40
22	BA	1675	C	N1-C2-N3	5.66	123.16	119.20
22	BA	1131	G	OP1-P-O3'	5.65	117.64	105.20
22	BA	2606	C	C2-N3-C4	-5.65	117.07	119.90
22	BA	1784	A	C8-N9-C4	5.65	108.06	105.80
22	BA	200	U	N3-C2-O2	5.64	126.15	122.20
22	BA	47	C	N1-C2-O2	-5.63	115.52	118.90
22	BA	2592	G	C8-N9-C4	-5.63	104.15	106.40
22	BA	2581	G	C4-C5-N7	5.63	113.05	110.80
22	BA	563	A	N9-C4-C5	5.63	108.05	105.80
22	BA	962	G	C4-C5-N7	-5.63	108.55	110.80
22	BA	1550	C	N1-C2-O2	-5.63	115.52	118.90
22	BA	739	A	N1-C6-N6	5.62	121.97	118.60
22	BA	2815	C	C2-N3-C4	-5.62	117.09	119.90
1	AA	1504	G	O4'-C1'-N9	5.62	112.69	108.20
22	BA	655	A	N1-C6-N6	-5.61	115.23	118.60
22	BA	1266	G	C4-N9-C1'	-5.61	119.20	126.50
22	BA	748	G	O4'-C1'-N9	5.61	112.69	108.20
22	BA	855	G	C5-C6-O6	5.60	131.96	128.60
22	BA	1164	C	N1-C2-O2	-5.60	115.54	118.90
22	BA	2047	C	C6-N1-C2	5.60	122.54	120.30
22	BA	1022	G	N1-C6-O6	-5.60	116.54	119.90
22	BA	2076	U	N3-C4-O4	-5.60	115.48	119.40
1	AA	1279	G	N7-C8-N9	5.59	115.90	113.10
22	BA	1645	G	N3-C4-N9	5.59	129.35	126.00
22	BA	1125	G	C5-C6-O6	-5.59	125.25	128.60
22	BA	1142	A	C2-N3-C4	-5.59	107.81	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1926	U	N3-C2-O2	-5.58	118.29	122.20
22	BA	2076	U	N1-C2-N3	5.58	118.25	114.90
1	CA	1286	U	C2-N1-C1'	5.58	124.39	117.70
22	DA	2425	A	P-O3'-C3'	5.58	126.39	119.70
22	BA	207	A	C8-N9-C4	-5.58	103.57	105.80
22	BA	2640	G	N1-C6-O6	5.58	123.25	119.90
22	BA	2577	A	O5'-P-OP2	-5.57	100.69	105.70
23	BB	98	G	C5-C6-O6	-5.57	125.26	128.60
22	BA	962	G	N9-C4-C5	5.57	107.63	105.40
22	BA	1651	G	N3-C4-C5	-5.57	125.81	128.60
22	BA	1771	C	N1-C2-N3	5.57	123.09	119.20
22	BA	2073	C	N1-C2-O2	-5.57	115.56	118.90
22	BA	1250	G	O5'-P-OP1	-5.56	100.70	105.70
22	BA	1430	G	OP1-P-OP2	-5.55	111.27	119.60
22	DA	2447	G	C8-N9-C1'	5.55	134.21	127.00
22	BA	1248	G	C5-C6-O6	-5.55	125.27	128.60
22	BA	979	A	OP1-P-OP2	5.54	127.92	119.60
22	BA	973	A	N1-C6-N6	-5.54	115.28	118.60
22	BA	1673	G	O4'-C1'-N9	5.54	112.63	108.20
22	BA	2813	A	C8-N9-C4	5.54	108.01	105.80
22	BA	2250	G	C2-N3-C4	-5.53	109.13	111.90
22	BA	2375	G	N3-C4-N9	-5.53	122.68	126.00
22	BA	1760	C	C6-N1-C2	5.53	122.51	120.30
22	BA	2447	G	C4-C5-N7	-5.53	108.59	110.80
22	BA	531	C	C6-N1-C2	-5.53	118.09	120.30
1	AA	1279	G	C8-N9-C4	-5.52	104.19	106.40
22	BA	1761	C	C6-N1-C1'	-5.52	114.17	120.80
22	BA	2450	A	C5-C6-N6	-5.52	119.28	123.70
22	BA	1475	G	O4'-C1'-N9	5.52	112.61	108.20
22	BA	1277	G	C5-C6-O6	-5.51	125.30	128.60
22	BA	2260	C	C6-N1-C2	5.51	122.50	120.30
22	BA	967	U	N3-C4-O4	-5.50	115.55	119.40
22	BA	1671	U	C5-C6-N1	5.50	125.45	122.70
22	BA	962	G	C8-N9-C1'	5.50	134.15	127.00
22	BA	2630	G	N1-C6-O6	5.50	123.20	119.90
1	CA	575	G	C8-N9-C1'	5.50	134.15	127.00
22	BA	2715	C	O5'-P-OP2	-5.50	100.75	105.70
22	BA	1993	U	N3-C4-O4	-5.50	115.55	119.40
22	BA	585	G	O5'-P-OP2	-5.49	100.76	105.70
22	BA	2708	G	N1-C6-O6	-5.49	116.61	119.90
22	BA	1197	G	N3-C2-N2	-5.49	116.06	119.90
22	BA	1771	C	C2-N3-C4	-5.49	117.16	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	104	A	N1-C6-N6	5.48	121.89	118.60
22	BA	820	A	OP2-P-O3'	5.47	117.24	105.20
22	BA	2011	U	N1-C2-O2	-5.47	118.97	122.80
22	BA	2018	G	N1-C6-O6	-5.47	116.62	119.90
22	BA	2705	A	N9-C4-C5	-5.47	103.61	105.80
22	BA	84	A	N1-C6-N6	-5.46	115.33	118.60
37	BP	103	ARG	NE-CZ-NH1	5.46	123.03	120.30
22	BA	1784	A	N1-C6-N6	5.45	121.87	118.60
22	BA	1784	A	N9-C4-C5	-5.45	103.62	105.80
22	BA	2452	C	C5-C6-N1	-5.45	118.28	121.00
22	BA	2037	A	C8-N9-C4	-5.45	103.62	105.80
22	BA	2872	A	N9-C4-C5	5.45	107.98	105.80
22	BA	572	A	OP2-P-O3'	5.44	117.18	105.20
22	BA	200	U	N1-C2-O2	-5.44	118.99	122.80
22	BA	1248	G	N1-C6-O6	5.44	123.17	119.90
22	BA	2046	G	C5-C6-O6	-5.44	125.33	128.60
22	BA	1286	A	O5'-P-OP2	-5.44	100.81	105.70
22	BA	1147	A	O5'-P-OP2	-5.43	100.81	105.70
22	BA	1645	G	C6-C5-N7	-5.43	127.14	130.40
22	BA	2002	G	C6-C5-N7	-5.43	127.14	130.40
22	BA	2071	A	C2-N3-C4	-5.43	107.89	110.60
22	BA	1638	C	C5-C4-N4	-5.42	116.40	120.20
22	BA	2610	C	C5-C4-N4	5.42	124.00	120.20
22	BA	2685	G	N3-C2-N2	-5.42	116.11	119.90
22	BA	2437	G	C2-N3-C4	-5.42	109.19	111.90
22	BA	571	U	C2-N1-C1'	-5.41	111.20	117.70
22	BA	1452	G	C8-N9-C4	-5.41	104.24	106.40
22	DA	143	C	N3-C4-C5	5.41	124.06	121.90
22	BA	1197	G	C6-C5-N7	5.40	133.64	130.40
1	AA	115	G	P-O3'-C3'	5.40	126.18	119.70
22	BA	254	G	N1-C6-O6	5.40	123.14	119.90
22	BA	974	G	N3-C4-C5	5.40	131.30	128.60
22	BA	1789	A	N1-C6-N6	5.40	121.84	118.60
22	BA	1955	U	N3-C2-O2	5.40	125.98	122.20
22	BA	1651	G	C8-N9-C4	-5.39	104.24	106.40
22	BA	25	U	N1-C2-O2	-5.39	119.03	122.80
23	BB	107	G	N3-C4-N9	5.38	129.23	126.00
22	BA	913	U	OP1-P-OP2	-5.38	111.53	119.60
22	BA	834	G	N1-C2-N3	5.38	127.12	123.90
1	AA	1286	U	C6-N1-C1'	-5.37	113.68	121.20
22	BA	783	A	OP1-P-O3'	5.37	117.02	105.20
22	DA	1314	C	C2-N1-C1'	5.37	124.71	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2686	G	C8-N9-C4	-5.37	104.25	106.40
22	DA	2591	C	C6-N1-C2	-5.37	118.15	120.30
22	DA	776	G	C4-N9-C1'	5.36	133.47	126.50
22	BA	2498	C	N3-C2-O2	5.36	125.65	121.90
22	BA	804	A	N1-C6-N6	5.36	121.82	118.60
22	BA	2634	A	N1-C6-N6	5.36	121.82	118.60
22	BA	760	G	C5-C6-O6	-5.36	125.39	128.60
22	BA	1994	C	N1-C2-O2	5.36	122.11	118.90
22	BA	668	A	C4-C5-N7	5.35	113.38	110.70
22	BA	975	A	C8-N9-C4	-5.35	103.66	105.80
22	BA	1779	U	N3-C2-O2	-5.34	118.47	122.20
22	BA	2461	A	N9-C4-C5	-5.34	103.67	105.80
22	BA	1230	A	O5'-P-OP2	-5.33	100.90	105.70
22	BA	443	A	C8-N9-C4	-5.33	103.67	105.80
22	BA	1248	G	C6-C5-N7	-5.33	127.20	130.40
22	BA	1645	G	N9-C4-C5	-5.33	103.27	105.40
22	BA	2570	G	N1-C6-O6	-5.33	116.70	119.90
22	BA	837	C	N3-C4-C5	5.33	124.03	121.90
22	BA	979	A	N1-C6-N6	-5.33	115.40	118.60
22	BA	826	U	OP2-P-O3'	5.32	116.91	105.20
22	BA	2258	C	C6-N1-C2	5.32	122.43	120.30
22	BA	2687	U	N1-C2-O2	-5.31	119.08	122.80
22	BA	2286	G	C4-N9-C1'	-5.31	119.59	126.50
1	AA	108	G	C8-N9-C4	-5.31	104.28	106.40
22	BA	450	G	C5-C6-O6	5.31	131.78	128.60
22	DA	776	G	C8-N9-C1'	-5.31	120.10	127.00
22	BA	2630	G	C5-C6-O6	-5.30	125.42	128.60
22	BA	1269	A	C6-C5-N7	-5.30	128.59	132.30
22	BA	2592	G	N3-C2-N2	-5.30	116.19	119.90
22	BA	574	A	O5'-P-OP2	5.30	117.06	110.70
22	BA	2075	U	N3-C2-O2	-5.30	118.49	122.20
22	BA	200	U	N3-C4-O4	5.30	123.11	119.40
22	BA	533	G	N3-C4-C5	5.29	131.25	128.60
22	BA	2817	U	N3-C2-O2	5.29	125.91	122.20
22	BA	1229	C	N1-C2-O2	-5.29	115.73	118.90
22	BA	2004	G	C8-N9-C4	5.29	108.52	106.40
22	BA	938	G	C8-N9-C1'	5.29	133.87	127.00
22	BA	2633	G	N3-C2-N2	-5.29	116.20	119.90
22	BA	1326	U	N3-C2-O2	5.28	125.90	122.20
22	BA	953	G	C8-N9-C4	5.28	108.51	106.40
22	BA	957	C	C6-N1-C2	5.28	122.41	120.30
22	BA	2323	G	C6-C5-N7	-5.28	127.23	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	276	U	N1-C2-O2	5.28	126.49	122.80
22	BA	1614	A	O5'-P-OP1	-5.28	100.95	105.70
22	BA	2080	A	N1-C6-N6	5.27	121.76	118.60
22	BA	529	A	C8-N9-C4	5.27	107.91	105.80
22	BA	2252	G	C6-C5-N7	-5.27	127.24	130.40
22	BA	2627	G	C5-C6-O6	-5.27	125.44	128.60
22	BA	1464	G	N3-C4-N9	-5.26	122.84	126.00
22	BA	765	C	O5'-P-OP2	-5.26	100.96	105.70
1	CA	1151	A	O4'-C1'-N9	5.26	112.41	108.20
22	BA	747	U	C5-C4-O4	5.26	129.06	125.90
1	AA	279	A	C4-C5-N7	5.25	113.33	110.70
22	BA	2451	A	OP1-P-OP2	-5.25	111.72	119.60
22	BA	1651	G	OP1-P-O3'	5.25	116.75	105.20
22	BA	1989	G	N9-C4-C5	-5.25	103.30	105.40
22	BA	1649	G	OP1-P-OP2	5.25	127.47	119.60
22	BA	1128	G	C5-C6-O6	-5.24	125.45	128.60
22	BA	1756	G	O4'-C1'-N9	-5.24	104.01	108.20
22	BA	30	G	O5'-P-OP1	-5.24	100.98	105.70
22	BA	2456	C	OP1-P-O3'	5.24	116.73	105.20
22	BA	1255	U	OP1-P-OP2	5.24	127.46	119.60
22	BA	243	U	C5-C4-O4	-5.24	122.76	125.90
22	BA	1193	G	OP1-P-OP2	-5.23	111.75	119.60
22	BA	1977	A	N3-C4-C5	5.23	130.46	126.80
22	BA	2036	C	C6-N1-C2	-5.23	118.21	120.30
22	BA	1827	U	OP1-P-OP2	5.23	127.44	119.60
22	BA	2581	G	N9-C4-C5	-5.23	103.31	105.40
22	BA	2587	A	OP2-P-O3'	5.23	116.70	105.20
22	BA	578	G	C6-C5-N7	-5.22	127.27	130.40
22	BA	674	G	C8-N9-C4	-5.22	104.31	106.40
22	BA	2055	C	C5-C6-N1	-5.22	118.39	121.00
6	CF	86	ARG	NE-CZ-NH1	5.22	122.91	120.30
22	BA	1185	G	N1-C6-O6	-5.22	116.77	119.90
22	BA	2391	G	O4'-C1'-N9	5.21	112.37	108.20
22	BA	2434	A	C8-N9-C4	-5.21	103.72	105.80
33	BL	44	GLY	N-CA-C	-5.21	100.07	113.10
22	BA	276	U	C2-N1-C1'	5.21	123.95	117.70
22	BA	2694	G	C5-C6-O6	-5.21	125.47	128.60
22	BA	553	G	OP2-P-O3'	5.21	116.65	105.20
22	BA	2513	A	OP2-P-O3'	5.21	116.65	105.20
1	CA	733	G	P-O3'-C3'	5.21	125.95	119.70
22	BA	1286	A	C5-C6-N6	-5.20	119.54	123.70
22	BA	456	C	OP1-P-OP2	5.20	127.40	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	686	U	C2-N1-C1'	-5.20	111.46	117.70
22	BA	745	G	C6-N1-C2	-5.20	121.98	125.10
39	BR	51	VAL	C-N-CD	5.20	139.32	128.40
22	BA	772	C	C5-C4-N4	-5.20	116.56	120.20
22	BA	1153	C	OP2-P-O3'	5.20	116.63	105.20
22	BA	2612	C	C2-N1-C1'	-5.20	113.09	118.80
23	BB	5	U	N1-C2-O2	-5.20	119.16	122.80
22	BA	1123	C	C2-N3-C4	-5.19	117.30	119.90
22	BA	1790	C	C2-N3-C4	-5.19	117.30	119.90
22	BA	825	A	OP2-P-O3'	5.19	116.62	105.20
22	BA	2630	G	C6-C5-N7	-5.19	127.28	130.40
22	BA	2684	U	OP2-P-O3'	5.19	116.62	105.20
1	AA	365	U	C2-N1-C1'	-5.19	111.47	117.70
22	BA	249	C	N1-C2-O2	-5.19	115.79	118.90
22	BA	1762	A	C6-C5-N7	-5.18	128.67	132.30
22	BA	2553	G	N3-C4-C5	-5.18	126.01	128.60
22	BA	783	A	P-O3'-C3'	-5.18	113.48	119.70
22	BA	1216	G	C8-N9-C4	5.18	108.47	106.40
22	BA	488	G	C5-C6-O6	5.18	131.71	128.60
22	BA	1151	A	OP1-P-O3'	5.18	116.59	105.20
23	BB	5	U	N3-C2-O2	5.18	125.82	122.20
22	DA	1666	G	C4-N9-C1'	-5.18	119.77	126.50
22	BA	2330	G	N1-C6-O6	5.17	123.00	119.90
22	BA	576	U	N1-C2-O2	-5.17	119.18	122.80
22	BA	726	G	C2-N3-C4	-5.17	109.31	111.90
22	BA	2071	A	O5'-P-OP2	-5.17	101.05	105.70
22	BA	2428	G	C5-C6-N1	5.16	114.08	111.50
1	AA	348	G	C5-C6-O6	-5.16	125.50	128.60
22	BA	1127	A	C8-N9-C4	5.16	107.86	105.80
22	BA	2251	G	OP1-P-O3'	5.16	116.55	105.20
22	BA	962	G	C4-N9-C1'	-5.15	119.80	126.50
22	BA	1645	G	N3-C2-N2	5.15	123.51	119.90
22	BA	1426	G	C6-C5-N7	-5.15	127.31	130.40
22	BA	2645	G	C8-N9-C1'	-5.15	120.31	127.00
22	BA	1509	A	N1-C6-N6	5.14	121.69	118.60
22	BA	2024	G	C5-C6-O6	5.14	131.69	128.60
22	BA	2510	C	N3-C4-N4	5.14	121.60	118.00
22	BA	2719	G	N1-C6-O6	5.14	122.98	119.90
22	BA	1126	A	C4-C5-C6	5.14	119.57	117.00
22	BA	532	A	C4-C5-N7	5.14	113.27	110.70
22	BA	938	G	C4-N9-C1'	-5.14	119.82	126.50
22	BA	2030	A	C4-C5-N7	-5.14	108.13	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2838	G	N1-C6-O6	5.14	122.98	119.90
22	BA	2036	C	C2-N1-C1'	5.13	124.45	118.80
22	BA	2510	C	N3-C2-O2	5.13	125.49	121.90
22	BA	64	A	C8-N9-C4	-5.13	103.75	105.80
1	AA	348	G	N1-C6-O6	5.13	122.98	119.90
22	BA	1164	C	O5'-P-OP2	-5.13	101.08	105.70
1	AA	365	U	C6-N1-C1'	5.13	128.38	121.20
1	AA	742	G	C4-N9-C1'	-5.12	119.84	126.50
22	BA	583	G	N3-C4-C5	5.12	131.16	128.60
29	BH	121	VAL	C-N-CA	5.12	134.50	121.70
1	AA	1513	A	C8-N9-C4	5.12	107.85	105.80
22	BA	1326	U	N1-C2-O2	-5.12	119.22	122.80
22	BA	1658	C	C5-C6-N1	-5.11	118.44	121.00
22	BA	2625	G	C8-N9-C4	5.11	108.44	106.40
22	BA	2326	C	C3'-C2'-C1'	5.11	105.59	101.50
22	BA	1909	C	C5-C6-N1	5.11	123.56	121.00
22	BA	806	C	C5-C4-N4	-5.11	116.62	120.20
22	BA	1654	A	N9-C4-C5	-5.11	103.76	105.80
22	BA	677	A	O5'-P-OP1	5.10	116.82	110.70
22	BA	971	G	N3-C4-C5	-5.10	126.05	128.60
22	BA	946	C	C5-C4-N4	-5.10	116.63	120.20
22	BA	1346	G	C8-N9-C1'	5.09	133.62	127.00
22	BA	1768	C	N3-C2-O2	-5.09	118.33	121.90
1	AA	1524	C	N1-C2-O2	-5.09	115.85	118.90
22	BA	1270	C	OP1-P-OP2	-5.09	111.97	119.60
22	BA	586	A	N9-C4-C5	5.09	107.83	105.80
22	BA	2645	G	N3-C4-N9	5.09	129.05	126.00
22	BA	461	C	C6-N1-C2	5.09	122.33	120.30
22	BA	1394	U	O4'-C1'-N1	-5.09	104.13	108.20
22	BA	1637	A	N1-C6-N6	5.08	121.65	118.60
22	BA	2257	U	N1-C2-O2	5.08	126.36	122.80
22	BA	2685	G	N3-C4-N9	-5.08	122.95	126.00
22	BA	2705	A	C5-C6-N6	-5.08	119.63	123.70
22	DA	2326	C	C6-N1-C2	-5.08	118.27	120.30
22	BA	2715	C	N1-C2-O2	5.08	121.95	118.90
22	BA	705	A	C6-C5-N7	-5.08	128.75	132.30
22	BA	2030	A	N1-C6-N6	-5.08	115.56	118.60
22	BA	727	A	C6-C5-N7	-5.07	128.75	132.30
22	BA	1966	A	O4'-C1'-N9	-5.07	104.14	108.20
22	BA	975	A	N7-C8-N9	5.07	116.33	113.80
1	AA	279	A	N9-C4-C5	-5.07	103.77	105.80
22	BA	2246	G	C8-N9-C4	5.07	108.43	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1989	G	C4-C5-N7	5.06	112.83	110.80
22	BA	2076	U	C5-C6-N1	-5.06	120.17	122.70
22	BA	1926	U	P-O3'-C3'	-5.06	113.63	119.70
22	BA	969	G	N1-C6-O6	5.06	122.93	119.90
22	BA	809	G	O5'-P-OP1	5.05	116.76	110.70
22	BA	2645	G	C4-N9-C1'	5.05	133.07	126.50
1	AA	664	G	C8-N9-C1'	5.05	133.57	127.00
22	BA	796	C	N1-C2-O2	5.05	121.93	118.90
22	BA	1269	A	N1-C6-N6	5.05	121.63	118.60
22	BA	914	G	N3-C4-C5	5.04	131.12	128.60
22	BA	2517	C	N3-C4-C5	5.04	123.92	121.90
22	BA	199	A	N1-C6-N6	-5.04	115.58	118.60
22	BA	2722	G	C4-C5-N7	5.04	112.82	110.80
22	BA	784	G	C5-C6-O6	5.04	131.62	128.60
22	BA	670	A	O5'-P-OP1	-5.04	101.17	105.70
22	BA	1618	A	N1-C6-N6	-5.03	115.58	118.60
22	BA	770	G	C6-C5-N7	-5.03	127.38	130.40
22	BA	1244	A	N1-C6-N6	5.03	121.62	118.60
22	BA	2486	C	N1-C2-O2	-5.03	115.88	118.90
22	BA	699	A	N1-C6-N6	-5.03	115.58	118.60
22	BA	1253	A	C8-N9-C4	5.03	107.81	105.80
22	BA	2069	G	C4-C5-N7	5.03	112.81	110.80
22	BA	2613	U	O5'-P-OP2	-5.03	101.17	105.70
22	BA	906	U	O4'-C1'-N1	5.03	112.22	108.20
22	BA	980	A	C4-C5-N7	5.03	113.21	110.70
22	BA	39	G	N1-C6-O6	-5.02	116.89	119.90
22	BA	737	C	C2-N3-C4	-5.02	117.39	119.90
10	CJ	48	ARG	NE-CZ-NH1	5.02	122.81	120.30
22	BA	687	C	C5-C6-N1	-5.02	118.49	121.00
22	BA	1191	G	N1-C6-O6	-5.02	116.89	119.90
22	BA	2076	U	N3-C2-O2	-5.02	118.69	122.20
22	BA	2623	G	N3-C4-N9	5.02	129.01	126.00
22	BA	2723	C	OP2-P-O3'	5.02	116.24	105.20
1	AA	890	G	O4'-C1'-N9	5.01	112.21	108.20
22	BA	242	G	C8-N9-C1'	5.01	133.52	127.00
22	BA	1340	U	O4'-C1'-N1	5.01	112.21	108.20
22	BA	2375	G	C8-N9-C1'	5.01	133.52	127.00
22	BA	1212	G	O4'-C1'-N9	5.01	112.21	108.20
22	BA	2243	U	O5'-P-OP1	-5.01	101.19	105.70
22	BA	747	U	N3-C4-O4	-5.01	115.89	119.40
22	BA	783	A	C4-C5-N7	5.01	113.20	110.70
1	AA	742	G	N3-C4-C5	5.01	131.10	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	AQ	75	LEU	CA-CB-CG	5.01	126.82	115.30
22	BA	2719	G	C5-C6-O6	-5.01	125.60	128.60
22	BA	847	U	N3-C2-O2	-5.00	118.70	122.20
22	BA	977	G	OP1-P-O3'	5.00	116.21	105.20
22	BA	2724	U	OP2-P-O3'	5.00	116.21	105.20
22	BA	2889	C	C2-N3-C4	-5.00	117.40	119.90
22	BA	1945	G	C4-N9-C1'	5.00	133.00	126.50
22	BA	2581	G	N1-C6-O6	5.00	122.90	119.90

There are no chirality outliers.

All (13) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
21	AU	39	GLU	Peptide
21	AU	8	GLU	Peptide
25	BD	151	THR	Peptide
33	BL	110	VAL	Peptide
47	BZ	15	GLY	Peptide
2	CB	84	ALA	Peptide
5	CE	102	GLY	Peptide
6	CF	54	LEU	Peptide
11	CK	126	LYS	Peptide
12	CL	23	ALA	Peptide
21	CU	35	ARG	Peptide
25	DD	151	THR	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32995	0	16607	1173	4
1	CA	33015	0	16617	1168	1
2	AB	1705	0	1732	198	0
2	CB	1705	0	1732	149	0
3	AC	1625	0	1696	88	0
3	CC	1625	0	1696	94	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	AD	1643	0	1707	143	0
4	CD	1643	0	1707	130	0
5	AE	1106	0	1148	82	0
5	CE	1106	0	1148	115	0
6	AF	818	0	808	60	0
6	CF	818	0	808	65	0
7	AG	1182	0	1238	78	0
7	CG	1182	0	1238	57	0
8	AH	979	0	1031	64	0
8	CH	979	0	1031	54	0
9	AI	1022	0	1070	91	0
9	CI	1022	0	1070	67	0
10	AJ	787	0	828	97	0
10	CJ	787	0	828	48	0
11	AK	877	0	887	87	0
11	CK	877	0	887	74	0
12	AL	955	0	1016	54	0
12	CL	955	0	1016	61	0
13	AM	884	0	941	70	0
13	CM	884	0	941	56	0
14	AN	774	0	824	74	0
14	CN	774	0	824	55	0
15	AO	710	0	728	45	0
15	CO	710	0	728	46	0
16	AP	649	0	666	64	0
16	CP	649	0	666	30	0
17	AQ	649	0	691	59	0
17	CQ	649	0	691	55	0
18	AR	456	0	478	22	0
18	CR	456	0	478	39	0
19	AS	638	0	665	40	0
19	CS	638	0	665	30	0
20	AT	665	0	714	53	0
20	CT	665	0	714	48	0
21	AU	426	0	449	57	0
21	CU	426	0	449	54	0
22	BA	62195	0	31280	1960	0
22	DA	62195	0	31280	2094	1
23	BB	2549	0	1291	47	0
23	DB	2529	0	1281	64	0
24	BC	2083	0	2154	131	0
24	DC	2083	0	2154	140	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	BD	1565	0	1616	108	0
25	DD	1565	0	1616	85	0
26	BE	1552	0	1619	71	0
26	DE	1552	0	1619	108	0
27	BF	1411	0	1444	84	0
27	DF	1411	0	1444	53	0
28	BG	1323	0	1371	62	0
28	DG	1323	0	1371	62	0
29	BH	1110	0	1147	167	0
29	DH	1110	0	1148	93	4
30	BI	1032	0	1085	89	0
30	DI	1032	0	1085	76	0
31	BJ	1129	0	1162	45	0
31	DJ	1129	0	1162	55	0
32	BK	939	0	1012	48	0
32	DK	939	0	1012	35	0
33	BL	1045	0	1117	54	0
33	DL	1045	0	1117	71	0
34	BM	1074	0	1157	49	0
34	DM	1074	0	1157	31	0
35	BN	961	0	1000	68	0
35	DN	961	0	1000	69	0
36	BO	892	0	923	41	0
36	DO	892	0	923	48	0
37	BP	917	0	962	43	0
37	DP	917	0	962	49	0
38	BQ	947	0	1019	62	0
38	DQ	947	0	1019	56	0
39	BR	816	0	839	84	0
39	DR	816	0	839	52	0
40	BS	857	0	922	58	0
40	DS	857	0	922	43	0
41	BT	739	0	807	34	0
41	DT	739	0	807	54	0
42	BU	780	0	831	35	0
42	DU	780	0	831	71	0
43	BV	753	0	780	35	0
43	DV	753	0	780	24	0
44	BW	580	0	594	21	0
44	DW	569	0	581	20	0
45	BX	625	0	652	26	0
45	DX	625	0	652	67	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
46	BY	509	0	543	36	0
46	DY	509	0	543	45	0
47	BZ	449	0	488	20	0
47	DZ	449	0	488	16	0
48	B0	444	0	458	35	0
48	D0	444	0	458	26	0
49	B1	410	0	440	17	0
49	D1	410	0	440	19	0
50	B2	377	0	418	14	0
50	D2	377	0	418	28	0
51	B3	504	0	572	25	0
51	D3	504	0	572	31	0
52	B4	302	0	340	18	0
52	D4	302	0	342	21	0
53	B5	1142	0	865	58	0
54	AA	72	0	0	0	0
54	BA	194	0	0	0	0
54	BB	4	0	0	0	0
54	BN	1	0	0	0	0
54	CA	55	0	0	0	0
54	CM	1	0	0	0	0
54	D2	1	0	0	0	0
54	DA	166	0	0	0	0
54	DB	3	0	0	0	0
54	DQ	1	0	0	0	0
55	BA	38	0	38	5	0
55	DA	38	0	37	11	0
56	B4	1	0	0	2	0
56	D4	1	0	0	0	0
57	AA	195	0	0	29	0
57	AL	1	0	0	0	0
57	AN	5	0	0	0	0
57	AT	1	0	0	0	0
57	AU	1	0	0	1	0
57	B2	1	0	0	1	0
57	B3	2	0	0	0	0
57	B4	1	0	0	0	0
57	BA	620	0	0	101	0
57	BB	13	0	0	0	0
57	BC	6	0	0	4	0
57	BD	3	0	0	3	0
57	BE	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	BF	1	0	0	1	0
57	BG	1	0	0	0	0
57	BL	8	0	0	0	0
57	BN	4	0	0	0	0
57	BS	1	0	0	0	0
57	BV	1	0	0	0	0
57	CA	189	0	0	19	0
57	CL	1	0	0	0	0
57	CN	3	0	0	0	0
57	CT	4	0	0	0	0
57	CU	1	0	0	0	0
57	D0	1	0	0	0	0
57	D2	3	0	0	0	0
57	D3	2	0	0	0	0
57	D4	1	0	0	0	0
57	DA	613	0	0	87	0
57	DB	13	0	0	1	0
57	DC	9	0	0	1	0
57	DD	4	0	0	2	0
57	DE	2	0	0	0	0
57	DJ	1	0	0	0	0
57	DL	3	0	0	1	0
57	DN	1	0	0	0	0
57	DT	2	0	0	0	0
57	DV	1	0	0	0	0
All	All	288258	0	192864	11506	5

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 24.

All (11506) 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)
29:BH:123:ARG:NH2	1:CA:367:U:OP2	1.64	1.27
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
15:AO:89:ARG:NH1	22:BA:716:A:OP2	1.75	1.19
22:BA:1153:C:OP2	57:BA:3357:HOH:O	1.59	1.19
22:BA:2574:G:OP1	57:BA:3713:HOH:O	1.61	1.18
22:BA:1342:A:OP2	57:BA:3717:HOH:O	1.63	1.16
22:BA:2005:A:OP1	57:BA:3383:HOH:O	1.63	1.15
1:AA:684:U:O2'	11:AK:40:ASN:O	1.63	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
25:BD:140:HIS:NE2	57:BD:302:HOH:O	1.81	1.13
1:CA:1385:G:N7	57:CA:1870:HOH:O	1.81	1.12
1:AA:516:U:O4	57:AA:1849:HOH:O	1.68	1.11
22:DA:2711:A:OP2	57:DA:3548:HOH:O	1.68	1.11
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
22:DA:192:C:OP1	57:DA:3738:HOH:O	1.69	1.08
22:BA:2579:C:OP1	57:BA:3541:HOH:O	1.71	1.08
1:AA:702:A:N6	22:BA:1846:G:O2'	1.87	1.08
22:DA:1395:A:OP2	57:DA:3403:HOH:O	1.72	1.07
22:BA:731:C:OP2	57:BA:3695:HOH:O	1.72	1.07
25:DD:151:THR:O	25:DD:153:GLY:N	1.88	1.06
22:BA:2498:C:OP2	57:BA:3687:HOH:O	1.72	1.04
22:BA:2453:A:N7	57:BA:3524:HOH:O	1.91	1.04
22:BA:842:U:O4	57:BA:3588:HOH:O	1.74	1.04
22:DA:756:A:N7	57:DA:3301:HOH:O	1.90	1.04
22:BA:2499:C:OP2	57:BA:3687:HOH:O	1.77	1.03
22:BA:978:G:N7	57:BA:3590:HOH:O	1.89	1.03
22:DA:2588:G:OP1	57:DA:3314:HOH:O	1.77	1.03
22:BA:2575:C:OP2	57:BA:3713:HOH:O	1.76	1.02
29:BH:97:ARG:HD2	1:CA:369:G:O2'	1.57	1.01
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	1.00
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	1.95	1.00
1:AA:965:U:OP2	57:AA:1832:HOH:O	1.79	1.00
22:DA:370:G:N7	57:DA:3560:HOH:O	1.92	0.99
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
22:DA:1371:G:N7	57:DA:3399:HOH:O	1.95	0.99
5:CE:157:ARG:O	5:CE:159:LYS:N	1.95	0.99
22:BA:2757:A:N1	28:BG:67:THR:HG21	1.78	0.99
22:BA:1179:G:C5	22:BA:1180:U:H1'	1.96	0.99
22:BA:2728:U:O2'	22:BA:2729:G:OP2	1.79	0.99
22:DA:973:A:OP2	39:DR:81:LYS:NZ	1.95	0.98
4:AD:125:VAL:O	4:AD:127:GLY:N	1.97	0.98
14:CN:41:ARG:NH1	14:CN:42:TRP:O	1.97	0.97
22:DA:1010:A:OP2	57:DA:3780:HOH:O	1.81	0.97
22:DA:1006:C:OP2	57:DA:3781:HOH:O	1.83	0.97
22:DA:1823:G:N7	57:DA:3654:HOH:O	1.96	0.97
2:AB:82:ASP:O	2:AB:85:LEU:N	1.97	0.96
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.96
1:AA:1077:G:N7	57:AA:1789:HOH:O	1.98	0.96
22:DA:58:G:OP1	41:DT:78:SER:OG	1.82	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:123:ARG:HH22	1:CA:367:U:P	1.88	0.96
2:CB:206:ALA:O	2:CB:208:ARG:N	1.98	0.96
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.47	0.96
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.01	0.95
22:BA:747:U:C5	22:BA:2613:U:C5	2.54	0.95
5:AE:14:LYS:NZ	5:AE:116:GLU:OE1	1.99	0.95
2:AB:21:ARG:O	2:AB:23:TRP:N	2.00	0.95
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.95
22:BA:1602:U:O4	57:BA:3717:HOH:O	1.83	0.94
29:BH:83:LYS:HD2	1:CA:55:A:O2'	1.67	0.94
27:DF:122:PHE:O	27:DF:124:GLY:N	2.01	0.94
22:DA:2004:G:OP2	57:DA:3803:HOH:O	1.85	0.94
22:BA:14:A:OP2	57:BA:3553:HOH:O	1.84	0.94
22:BA:2025:C:OP2	57:BA:3473:HOH:O	1.84	0.94
22:DA:602:A:O2'	22:DA:604:G:O2'	1.83	0.94
22:BA:2057:G:OP2	57:BA:3488:HOH:O	1.85	0.93
1:AA:533:A:OP1	57:AA:1849:HOH:O	1.86	0.93
22:BA:944:C:O3'	57:BA:3345:HOH:O	1.86	0.93
22:BA:1669:A:OP2	57:BA:3726:HOH:O	1.86	0.92
4:AD:22:LYS:O	4:AD:24:GLY:N	2.03	0.92
1:CA:1198:G:N7	57:CA:1849:HOH:O	2.01	0.92
22:DA:450:G:O6	57:DA:3240:HOH:O	1.86	0.92
22:DA:528:A:OP1	57:DA:3244:HOH:O	1.87	0.91
22:BA:58:G:OP1	41:BT:78:SER:HB2	1.70	0.91
1:CA:257:G:N7	57:CA:1718:HOH:O	2.03	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
5:CE:101:GLU:O	5:CE:103:THR:N	2.04	0.90
22:BA:1965:C:OP1	22:BA:1966:A:O2'	1.90	0.89
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.52	0.89
22:DA:527:C:OP1	57:DA:3245:HOH:O	1.90	0.89
1:AA:405:U:O4	4:AD:2:ALA:N	2.05	0.89
22:DA:2134:A:N6	22:DA:2157:G:O2'	2.04	0.89
1:AA:1407:C:O2'	22:BA:1912:A:N6	2.05	0.89
22:DA:1602:U:O4	57:DA:3713:HOH:O	1.88	0.89
6:CF:12:PRO:O	6:CF:15:SER:OG	1.91	0.89
21:AU:35:ARG:O	21:AU:37:PHE:N	2.06	0.89
5:AE:159:LYS:O	8:AH:64:LYS:NZ	2.05	0.89
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.73	0.89
22:BA:1780:A:OP1	57:BA:3694:HOH:O	1.91	0.89
1:CA:858:G:N7	57:CA:1817:HOH:O	2.05	0.89
6:CF:91:ARG:O	6:CF:92:THR:OG1	1.89	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:116:LYS:O	12:CL:117:TYR:CG	2.26	0.88
22:BA:2615:U:OP2	57:BA:3753:HOH:O	1.89	0.88
22:BA:2497:A:O3'	57:BA:3688:HOH:O	1.91	0.88
22:BA:2573:C:OP1	57:BA:3713:HOH:O	1.89	0.88
1:CA:1097:C:OP1	2:CB:139:ARG:NH2	2.07	0.88
1:AA:1500:A:OP2	57:AA:1872:HOH:O	1.91	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.07	0.88
1:CA:484:G:H4'	1:CA:485:U:O5'	1.74	0.88
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	2.07	0.87
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.87
22:DA:761:A:OP2	57:DA:3295:HOH:O	1.92	0.87
1:CA:687:A:O2'	1:CA:701:U:O4	1.92	0.87
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.08	0.87
22:BA:1070:A:O2'	22:BA:1097:U:OP1	1.91	0.87
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.86
22:BA:273:G:N2	22:BA:365:U:O2	2.08	0.86
1:CA:412:A:O2'	1:CA:413:G:H4'	1.75	0.86
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.08	0.86
22:DA:161:A:H3'	22:DA:162:U:H5"	1.57	0.86
14:AN:46:LEU:O	14:AN:48:LEU:N	2.08	0.86
22:DA:1378:A:O2'	22:DA:1380:G:N7	2.07	0.86
22:DA:2006:C:OP1	57:DA:3379:HOH:O	1.92	0.86
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.06	0.86
22:BA:2458:G:N3	22:BA:2490:G:N2	2.24	0.85
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.85
22:DA:249:C:O5'	22:DA:2394:C:O2'	1.94	0.85
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.05	0.85
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.94	0.85
21:CU:10:GLU:HG3	21:CU:11:PRO:HD3	1.56	0.85
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.77	0.85
22:DA:310:A:O2'	22:DA:311:A:OP2	1.94	0.85
22:DA:2271:G:O6	57:DA:3509:HOH:O	1.94	0.85
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.30	0.85
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.11	0.85
22:DA:1817:G:OP1	24:DC:62:TYR:OH	1.92	0.85
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.12	0.85
22:DA:1266:G:O2'	22:DA:2012:G:O6	1.95	0.85
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.58	0.84
22:BA:2258:C:O2'	22:BA:2427:C:OP2	1.95	0.84
2:CB:221:VAL:O	2:CB:223:GLU:N	2.10	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.96	0.84
50:D2:43:THR:O	50:D2:44:VAL:HB	1.77	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
31:BJ:49:ASP:OD1	31:BJ:121:LYS:HE3	1.77	0.84
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.92	0.84
22:BA:819:A:C4	22:BA:1189:A:C2	2.66	0.84
35:DN:87:PHE:O	35:DN:89:SER:N	2.11	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.07	0.84
5:CE:102:GLY:O	5:CE:104:GLY:N	2.11	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.83
17:AQ:68:SER:O	17:AQ:70:THR:N	2.11	0.83
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.79	0.83
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.12	0.83
22:DA:618:G:O6	57:DA:3291:HOH:O	1.96	0.83
5:CE:99:ALA:O	5:CE:122:ASN:ND2	2.12	0.83
22:DA:2010:G:N7	57:DA:3371:HOH:O	2.10	0.83
2:AB:136:MET:N	2:AB:136:MET:SD	2.52	0.83
22:BA:756:A:N7	57:BA:3300:HOH:O	2.12	0.83
22:DA:1827:U:O2'	22:DA:1970:A:N3	2.11	0.83
1:AA:536:C:OP1	57:AA:1885:HOH:O	1.97	0.83
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.61	0.82
29:BH:83:LYS:CD	1:CA:55:A:O2'	2.26	0.82
22:DA:732:C:OP2	57:DA:3298:HOH:O	1.95	0.82
22:BA:1823:G:N7	57:BA:3658:HOH:O	2.11	0.82
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.14	0.82
22:BA:2448:A:OP2	57:BA:3686:HOH:O	1.95	0.82
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.82
33:BL:87:GLY:O	33:BL:89:VAL:N	2.12	0.82
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.82
22:BA:2211:A:O2'	22:BA:2212:A:OP1	1.98	0.82
1:AA:976:G:OP2	1:AA:1358:U:O2'	1.98	0.82
22:BA:2243:U:OP1	57:BA:3743:HOH:O	1.98	0.82
22:BA:826:U:OP2	57:BA:3702:HOH:O	1.97	0.82
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.11	0.82
22:DA:866:A:O4'	22:DA:914:G:N2	2.13	0.82
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.96	0.81
22:BA:1693:U:O2'	24:BC:14:ARG:NH2	2.13	0.81
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.13	0.81
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.13	0.81
22:BA:2800:A:H3'	22:BA:2801:G:H5'	1.62	0.81
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:614:A:O2'	22:BA:615:U:OP2	1.97	0.81
7:CG:145:ALA:O	7:CG:146:GLU:HB2	1.78	0.81
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.80	0.81
22:DA:1325:U:OP1	22:DA:1647:U:O2'	1.99	0.81
18:CR:25:ASP:O	18:CR:27:ALA:N	2.13	0.81
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.28	0.81
22:DA:1847:A:HO2'	22:DA:1848:A:H8	1.29	0.81
28:DG:170:ARG:NH1	52:D4:29:ALA:O	2.14	0.81
22:BA:1494:A:O2'	22:BA:1495:A:O5'	1.98	0.81
22:DA:822:G:OP2	57:DA:3347:HOH:O	1.98	0.81
26:DE:58:LYS:NZ	26:DE:70:SER:O	2.12	0.81
13:AM:11:ASP:OD1	13:AM:12:HIS:N	2.14	0.80
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.13	0.80
1:CA:527:G:C2	1:CA:528:C:C6	2.68	0.80
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.13	0.80
22:BA:481:G:C4	22:BA:507:A:C2	2.70	0.80
26:BE:1:MET:N	26:BE:14:VAL:O	2.14	0.80
1:CA:798:U:O4	57:CA:1805:HOH:O	1.99	0.80
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.82	0.80
22:DA:1340:U:C5	22:DA:1603:A:C8	2.69	0.80
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.15	0.80
24:BC:71:LYS:NZ	24:BC:98:ASP:OD2	2.15	0.80
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.64	0.80
22:BA:195:A:C6	22:BA:198:C:C5	2.70	0.80
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.14	0.80
28:DG:158:LYS:O	28:DG:160:LYS:N	2.15	0.80
14:AN:91:GLY:O	14:AN:93:ILE:N	2.15	0.80
22:BA:2324:U:H3'	22:BA:2325:G:C5'	2.11	0.80
31:BJ:80:HIS:HB3	31:BJ:81:ILE:HG22	1.62	0.80
1:CA:581:G:OP1	15:CO:65:LYS:NZ	2.14	0.80
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.63	0.80
22:BA:1917:U:C4	22:BA:1918:A:C5	2.70	0.79
22:BA:2550:G:OP2	57:BA:3725:HOH:O	1.99	0.79
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.17	0.79
22:DA:422:A:OP2	57:DA:3561:HOH:O	1.98	0.79
22:BA:819:A:OP2	22:BA:1187:G:N2	2.15	0.79
29:BH:123:ARG:NH2	1:CA:367:U:P	2.49	0.79
1:CA:582:C:N3	1:CA:760:G:C6	2.50	0.79
1:CA:840:C:N3	1:CA:842:U:H4'	1.97	0.79
22:DA:2243:U:OP1	57:DA:3738:HOH:O	1.99	0.79
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.00	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2748:A:N1	57:BA:3815:HOH:O	2.15	0.79
22:DA:1001:A:OP2	57:DA:3732:HOH:O	2.01	0.79
6:AF:7:VAL:O	6:AF:7:VAL:HG22	1.81	0.79
22:BA:2579:C:OP1	57:BA:3543:HOH:O	2.01	0.79
24:DC:157:SER:O	24:DC:160:THR:OG1	1.99	0.79
1:CA:32:A:C2	1:CA:33:A:C5	2.71	0.79
22:DA:668:A:N6	22:DA:670:A:O2'	2.16	0.79
22:DA:2162:G:H4'	22:DA:2163:A:OP1	1.83	0.79
1:AA:792:A:H4'	1:AA:793:U:O5'	1.82	0.78
22:BA:1083:U:O2	22:BA:1086:A:N1	2.16	0.78
22:BA:2269:G:OP1	57:BA:3512:HOH:O	2.01	0.78
22:BA:2820:A:OP2	35:BN:2:ARG:NH1	2.16	0.78
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.16	0.78
22:DA:1619:G:N7	57:DA:3644:HOH:O	2.17	0.78
24:BC:133:ARG:NH2	4:CD:174:ASP:OD2	2.17	0.78
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.13	0.78
52:B4:11:CYS:SG	56:B4:101:ZN:ZN	1.70	0.78
22:DA:1342:A:OP2	57:DA:3713:HOH:O	1.99	0.78
22:DA:1823:G:C8	57:DA:3654:HOH:O	2.34	0.78
1:AA:1504:G:O3'	57:AA:1870:HOH:O	2.02	0.78
2:AB:115:LYS:O	2:AB:117:LEU:N	2.16	0.78
22:BA:2495:G:C2'	22:BA:2496:C:H5'	2.13	0.78
22:DA:613:A:OP2	22:DA:614:A:N7	2.17	0.78
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.15	0.78
22:DA:444:C:OP1	26:DE:40:ARG:NH1	2.17	0.78
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.66	0.78
22:DA:53:A:C8	22:DA:54:G:C8	2.71	0.78
22:BA:2550:G:P	57:BA:3725:HOH:O	2.42	0.77
22:DA:1607:C:N4	22:DA:1622:G:N7	2.32	0.77
9:AI:40:GLY:O	9:AI:41:ARG:HB2	1.82	0.77
22:BA:731:C:P	57:BA:3695:HOH:O	2.39	0.77
22:DA:1019:U:O2	22:DA:1142:A:N6	2.17	0.77
22:DA:2504:U:C5	55:DA:3001:VIF:H30	2.19	0.77
1:AA:1074:G:C4	1:AA:1102:A:C2	2.73	0.77
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.22	0.77
22:BA:733:G:OP2	57:BA:3295:HOH:O	2.01	0.77
22:DA:1265:A:OP1	57:DA:3747:HOH:O	2.00	0.77
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.64	0.77
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.77
22:BA:2714:G:OP2	57:BA:3549:HOH:O	2.01	0.77
15:CO:19:ALA:O	15:CO:20:ASN:HB2	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.83	0.77
22:BA:1061:U:O2'	22:BA:1062:G:O5'	2.01	0.77
22:BA:555:G:O2'	22:BA:556:A:OP2	2.02	0.77
22:DA:582:A:OP2	57:DA:3283:HOH:O	2.02	0.77
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.00	0.77
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	2.17	0.77
22:DA:27:G:O2'	22:DA:28:A:OP2	2.03	0.77
22:DA:2551:C:OP2	57:DA:3720:HOH:O	2.02	0.77
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.85	0.77
22:BA:747:U:C4	22:BA:2613:U:C5	2.73	0.77
24:BC:236:GLU:OE2	57:BC:303:HOH:O	2.02	0.77
1:CA:1095:U:OP2	57:CA:1852:HOH:O	2.03	0.77
1:AA:995:C:N3	1:AA:1046:A:O2'	2.17	0.77
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.18	0.77
32:BK:121:GLU:OE2	37:BP:65:SER:OG	2.00	0.77
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.83	0.77
22:DA:1335:C:N4	57:DA:3392:HOH:O	2.17	0.77
22:DA:1359:A:C8	22:DA:1373:A:C2	2.73	0.77
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.18	0.77
22:DA:2575:C:OP2	57:DA:3709:HOH:O	2.03	0.76
22:DA:46:G:C2	22:DA:47:C:C5	2.73	0.76
22:BA:850:U:HO2'	47:BZ:23:THR:HG1	1.25	0.76
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.20	0.76
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.76
22:BA:475:C:C4	22:BA:481:G:O6	2.38	0.76
22:BA:500:G:N2	22:BA:502:A:H3'	2.01	0.76
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.33	0.76
22:BA:2847:U:OP1	37:BP:96:LYS:NZ	2.17	0.76
22:DA:1344:U:O2'	22:DA:1345:C:OP2	2.03	0.76
1:AA:1406:U:C5	1:AA:1407:C:C5	2.74	0.76
29:BH:90:LEU:O	1:CA:358:U:H4'	1.86	0.76
22:DA:618:G:N7	57:DA:3289:HOH:O	2.18	0.76
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.02	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
2:AB:73:LYS:O	2:AB:75:ALA:N	2.19	0.76
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.18	0.76
1:AA:1129:C:O2	1:AA:1130:A:N6	2.18	0.76
24:BC:204:VAL:O	24:BC:205:LEU:HB2	1.86	0.76
22:DA:1377:G:OP2	57:DA:3394:HOH:O	2.04	0.76
22:DA:2057:G:OP2	57:DA:3486:HOH:O	2.03	0.76
12:AL:24:LEU:O	12:AL:26:ALA:N	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:495:G:O4'	40:BS:57:ASN:ND2	2.18	0.76
22:BA:686:U:H2'	22:BA:788:A:C2	2.21	0.76
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.19	0.76
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.33	0.76
17:CQ:21:ILE:N	17:CQ:48:ASP:OD1	2.17	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
22:BA:2199:A:C1'	29:BH:28:ASN:ND2	2.48	0.76
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.01	0.76
22:BA:64:A:H2'	22:BA:65:U:C6	2.20	0.75
22:BA:627:A:C6	22:BA:637:A:C8	2.75	0.75
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.67	0.75
1:CA:55:A:N7	1:CA:56:U:C4	2.54	0.75
1:CA:209:U:H4'	1:CA:210:C:OP2	1.85	0.75
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.00	0.75
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.20	0.75
30:BI:122:ILE:O	30:BI:126:THR:OG1	2.05	0.75
41:BT:1:MET:HB2	41:BT:2:ILE:HD12	1.65	0.75
1:CA:378:G:C2	1:CA:386:C:O2	2.39	0.75
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.19	0.75
2:AB:160:ALA:O	2:AB:161:LEU:HB2	1.86	0.75
22:BA:927:A:H2'	22:BA:928:A:C8	2.21	0.75
22:BA:1474:U:O4	22:BA:1475:G:N2	2.20	0.75
22:BA:2291:U:H2'	22:BA:2292:U:H6	1.48	0.75
39:BR:24:LYS:HA	39:BR:94:THR:CG2	2.16	0.75
22:DA:118:A:C8	22:DA:119:A:C8	2.73	0.75
22:DA:2209:G:C2	22:DA:2216:G:C2	2.73	0.75
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.02	0.75
2:AB:26:LYS:NZ	2:AB:194:ASP:OD2	2.13	0.75
38:BQ:41:LYS:HD3	38:BQ:45:TYR:CZ	2.21	0.75
43:BV:6:ALA:HB1	43:BV:40:ILE:CG2	2.17	0.75
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.19	0.75
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.27	0.75
22:BA:1779:U:H5	22:BA:1784:A:N7	1.84	0.75
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	1.68	0.75
13:CM:6:GLY:O	13:CM:8:ASN:N	2.20	0.75
22:BA:2097:A:C2	22:BA:2193:G:C6	2.74	0.75
28:BG:104:ASN:ND2	28:BG:114:ASP:OD1	2.18	0.75
22:DA:447:A:H5'	22:DA:449:A:C5	2.21	0.75
4:AD:151:LYS:HA	4:AD:178:MET:HE1	1.69	0.75
17:CQ:48:ASP:N	17:CQ:48:ASP:OD2	2.17	0.75
22:DA:1289:C:O2'	22:DA:1330:C:H4'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.67	0.75
22:BA:1779:U:C5	22:BA:1784:A:N7	2.55	0.74
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.69	0.74
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.04	0.74
1:AA:533:A:OP1	57:AA:1848:HOH:O	2.05	0.74
1:CA:978:A:OP2	1:CA:1362:A:N6	2.20	0.74
1:CA:1101:A:H61	2:CB:102:THR:HG21	1.51	0.74
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.20	0.74
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.20	0.74
3:AC:205:GLY:O	3:AC:206:GLU:HG2	1.87	0.74
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.70	0.74
22:BA:1203:U:O4	22:BA:1204:A:C6	2.40	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
23:DB:29:A:O2'	23:DB:58:A:N1	2.19	0.74
22:BA:278:A:C2	22:BA:362:A:C8	2.75	0.74
22:BA:2516:A:C2	22:BA:2569:G:C2	2.75	0.74
25:BD:125:TRP:CD2	25:BD:160:LYS:HD3	2.22	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.87	0.74
22:BA:2516:A:C2	22:BA:2569:G:N3	2.55	0.74
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.74
1:CA:1362:A:OP1	1:CA:1362:A:H4'	1.86	0.74
2:CB:210:VAL:O	2:CB:214:LEU:HB2	1.88	0.74
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.22	0.74
25:DD:33:ARG:NH2	25:DD:74:GLU:O	2.21	0.74
1:AA:1151:A:O2'	1:AA:1152:A:O5'	2.05	0.74
1:CA:919:A:C2	1:CA:920:U:C5	2.76	0.74
3:CC:175:LEU:HD12	3:CC:175:LEU:O	1.88	0.74
38:BQ:36:PHE:CE1	38:BQ:40:ILE:HD11	2.23	0.74
5:CE:69:ARG:O	5:CE:70:ASN:HB2	1.87	0.74
22:DA:1315:C:OP2	57:DA:3762:HOH:O	2.06	0.74
27:BF:41:GLY:O	27:BF:43:ALA:N	2.20	0.74
2:CB:169:GLU:O	2:CB:171:ILE:N	2.21	0.74
1:AA:108:G:N3	1:AA:108:G:H5'	2.03	0.74
22:BA:1171:G:N2	22:BA:1178:C:O2	2.20	0.74
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.21	0.73
22:BA:1253:A:N7	57:BA:3336:HOH:O	2.20	0.73
22:BA:1910:G:H2'	22:BA:1911:U:O4'	1.88	0.73
22:BA:1838:C:C5	22:BA:1899:A:C6	2.77	0.73
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.37	0.73
1:CA:66:A:C6	1:CA:67:C:C5	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2125:G:N1	22:DA:2171:A:OP1	2.20	0.73
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.24	0.73
13:AM:10:PRO:O	13:AM:11:ASP:HB3	1.87	0.73
22:BA:2127:G:H4'	22:BA:2128:G:OP1	1.87	0.73
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.23	0.73
29:BH:86:ASP:HB2	1:CA:359:G:O2'	1.88	0.73
34:BM:110:GLU:OE2	34:BM:114:ARG:NH2	2.21	0.73
42:BU:14:LEU:HD11	42:BU:71:ALA:HB2	1.70	0.73
10:CJ:63:ASP:OD1	14:CN:85:ARG:NH1	2.22	0.73
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.70	0.73
22:DA:1378:A:O2'	57:DA:3753:HOH:O	2.06	0.73
22:DA:1428:C:O2'	22:DA:1569:A:OP2	2.02	0.73
1:AA:131:A:H2'	1:AA:132:C:C6	2.23	0.73
5:AE:41:ASP:OD1	5:AE:43:ASN:N	2.22	0.73
1:CA:552:U:O2'	12:CL:83:ARG:O	2.05	0.73
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.22	0.73
4:CD:145:ILE:HG21	4:CD:150:LYS:HA	1.70	0.73
22:BA:1838:C:C5	22:BA:1899:A:C5	2.77	0.73
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.19	0.73
32:DK:70:ARG:HD3	32:DK:76:VAL:HB	1.69	0.73
22:BA:563:A:C2	22:BA:564:C:C2	2.77	0.73
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.69	0.73
22:DA:2269:G:OP1	57:DA:3508:HOH:O	2.06	0.73
22:BA:30:G:O3'	57:BA:3705:HOH:O	2.05	0.73
1:CA:495:A:C2	1:CA:496:A:C6	2.77	0.73
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.71	0.73
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.04	0.73
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.22	0.73
22:BA:1916:A:H2'	22:BA:1917:U:O4'	1.88	0.73
45:BX:2:SER:O	45:BX:4:VAL:N	2.22	0.73
1:CA:542:G:C2	1:CA:543:U:C5	2.76	0.73
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	1.70	0.73
1:AA:1505:G:P	57:AA:1870:HOH:O	2.46	0.73
2:AB:82:ASP:O	2:AB:84:ALA:N	2.22	0.73
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.71	0.73
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.71	0.73
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.24	0.73
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.69	0.73
22:BA:2311:A:N3	27:BF:85:ILE:HD11	2.04	0.73
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.22	0.73
41:DT:17:SER:O	41:DT:19:LYS:N	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.37	0.72
22:DA:488:G:N2	22:DA:493:G:O6	2.22	0.72
22:DA:1450:G:C6	22:DA:1451:C:N4	2.57	0.72
1:AA:515:G:N7	57:AA:1847:HOH:O	2.22	0.72
1:CA:268:U:H2'	1:CA:269:C:C6	2.24	0.72
2:CB:86:SER:O	2:CB:87:CYS:O	2.07	0.72
7:AG:146:GLU:HA	7:AG:149:LYS:HB2	1.70	0.72
22:BA:2199:A:H1'	29:BH:28:ASN:ND2	2.04	0.72
1:AA:1014:A:N7	1:AA:1015:G:C5	2.57	0.72
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.22	0.72
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.05	0.72
22:BA:1061:U:HO2'	22:BA:1062:G:P	2.13	0.72
42:BU:72:ILE:HD13	42:BU:83:VAL:HG23	1.70	0.72
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.19	0.72
22:BA:2839:G:O2'	35:BN:49:GLU:OE1	2.08	0.72
1:AA:144:G:C4	1:AA:179:A:C2	2.78	0.72
5:AE:149:SER:O	5:AE:153:VAL:HG12	1.89	0.72
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.23	0.72
35:BN:32:GLU:OE1	35:BN:86:ARG:NH2	2.23	0.72
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.89	0.72
1:AA:64:G:C8	1:AA:99:C:N4	2.58	0.72
22:BA:1274:A:N1	22:BA:1644:C:O2'	2.19	0.72
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.23	0.72
22:DA:1167:C:H2'	22:DA:1168:G:H5'	1.70	0.72
22:DA:2268:A:OP1	57:DA:3508:HOH:O	2.07	0.72
25:DD:148:GLN:OE1	25:DD:148:GLN:N	2.23	0.72
1:AA:951:G:OP2	13:AM:101:ARG:NH2	2.23	0.72
1:AA:1197:A:OP2	57:AA:1784:HOH:O	2.07	0.72
22:BA:572:A:H5"	22:BA:573:U:OP2	1.90	0.72
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.90	0.72
22:BA:1925:C:H5"	22:BA:1926:U:O4	1.89	0.72
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.25	0.72
1:CA:55:A:C6	1:CA:56:U:C2	2.77	0.72
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.72
41:DT:54:GLU:HB3	41:DT:88:LYS:HG3	1.72	0.72
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.23	0.71
22:BA:508:A:H4'	22:BA:509:C:OP2	1.89	0.71
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.25	0.71
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.90	0.71
22:BA:253:C:OP2	51:B3:5:LYS:HE3	1.89	0.71
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:109:PHE:HE2	28:BG:152:ARG:CZ	2.03	0.71
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.71	0.71
39:DR:58:VAL:HG13	39:DR:102:SER:HB2	1.72	0.71
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.05	0.71
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.72	0.71
12:CL:34:CYS:HA	12:CL:55:VAL:HA	1.71	0.71
16:CP:43:ALA:O	16:CP:44:SER:OG	2.04	0.71
42:DU:38:GLY:HA2	42:DU:41:LEU:HD21	1.71	0.71
1:AA:1048:G:N3	1:AA:1050:G:C8	2.59	0.71
1:AA:1074:G:C2	1:AA:1075:U:C2	2.79	0.71
1:AA:1377:A:N3	7:AG:2:PRO:HG3	2.06	0.71
22:BA:1838:C:C2	22:BA:1898:U:C5	2.79	0.71
24:DC:70:ASN:O	24:DC:72:ASP:N	2.23	0.71
1:AA:145:G:N2	1:AA:178:C:C2	2.59	0.71
9:AI:30:ILE:HD11	9:AI:38:TYR:CD2	2.24	0.71
14:CN:91:GLY:O	14:CN:93:ILE:N	2.24	0.71
22:DA:2843:G:N2	22:DA:2875:C:C2	2.58	0.71
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.25	0.71
23:BB:78:A:N6	23:BB:98:G:O2'	2.23	0.71
29:BH:89:LYS:HB3	1:CA:359:G:H5"	1.72	0.71
1:CA:978:A:HO2'	1:CA:1322:C:H5	1.38	0.71
22:DA:846:U:O2'	22:DA:847:U:O5'	2.08	0.71
1:CA:499:A:C6	1:CA:547:A:C8	2.78	0.71
1:CA:689:C:OP2	11:CK:53:ARG:NH2	2.24	0.71
4:CD:168:PRO:HB2	4:CD:171:LEU:CD1	2.21	0.71
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.23	0.71
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.21	0.71
29:BH:123:ARG:CZ	1:CA:367:U:OP2	2.39	0.71
1:CA:405:U:O4	4:CD:2:ALA:N	2.23	0.71
1:CA:679:C:O2	1:CA:712:A:C2	2.43	0.71
4:CD:173:VAL:O	4:CD:179:GLU:O	2.07	0.71
22:DA:2750:A:O2'	22:DA:2752:C:N4	2.24	0.71
19:AS:29:LYS:HB3	19:AS:30:PRO:CD	2.21	0.70
22:BA:70:G:H4'	22:BA:71:A:OP1	1.90	0.70
22:BA:2856:A:N6	22:BA:2857:G:C6	2.59	0.70
50:B2:43:THR:O	50:B2:44:VAL:HG12	1.90	0.70
1:CA:374:A:H5"	1:CA:452:A:N1	2.06	0.70
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.25	0.70
22:DA:1153:C:P	57:DA:3360:HOH:O	2.48	0.70
1:AA:1461:G:C5	1:AA:1462:C:C5	2.78	0.70
22:BA:455:C:N3	22:BA:472:A:H2'	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1417:C:H2'	22:BA:1418:G:O4'	1.90	0.70
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.26	0.70
1:AA:322:C:O2'	20:AT:18:ARG:HG3	1.90	0.70
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.08	0.70
22:BA:1085:A:C6	22:BA:1086:A:N6	2.59	0.70
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.25	0.70
22:DA:488:G:C2	22:DA:493:G:O6	2.45	0.70
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.06	0.70
48:D0:55:ILE:HG22	48:D0:56:ALA:N	2.06	0.70
22:BA:1435:G:O2'	22:BA:1436:G:H5'	1.91	0.70
38:BQ:41:LYS:HA	38:BQ:44:GLN:HG3	1.71	0.70
1:CA:86:G:H1'	1:CA:87:C:O4'	1.90	0.70
42:DU:7:ARG:O	42:DU:25:VAL:HB	1.92	0.70
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.23	0.70
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.44	0.70
1:CA:319:G:O6	57:CA:1734:HOH:O	2.06	0.70
1:CA:933:G:N7	7:CG:3:ARG:NH2	2.39	0.70
2:CB:54:LEU:HD12	2:CB:220:THR:HG21	1.74	0.70
22:DA:2143:C:H2'	22:DA:2144:G:O4'	1.92	0.70
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	1.91	0.70
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.90	0.70
24:BC:78:VAL:HG21	24:BC:110:LEU:HD21	1.74	0.70
8:CH:96:MET:HB2	8:CH:99:LEU:O	1.92	0.70
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.27	0.70
2:AB:104:TRP:CZ2	2:AB:154:MET:HG2	2.26	0.70
11:AK:76:GLU:O	22:BA:2141:G:H5"	1.92	0.70
22:BA:195:A:N7	57:BA:3763:HOH:O	2.23	0.70
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.07	0.70
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.25	0.70
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.25	0.70
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.92	0.70
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.45	0.70
22:BA:1925:C:H4'	22:BA:1926:U:C5	2.26	0.70
4:CD:44:ARG:NE	4:CD:44:ARG:HA	2.06	0.70
22:DA:1187:G:N7	57:DA:3578:HOH:O	2.24	0.70
22:DA:1738:G:O2'	22:DA:1739:A:O5'	2.09	0.70
1:AA:657:U:O2	15:AO:22:THR:HG23	1.92	0.70
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.21	0.70
22:BA:1002:G:N7	57:BA:3742:HOH:O	2.23	0.70
22:BA:1086:A:O2'	22:BA:1087:G:N7	2.24	0.70
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.44	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.75	0.70
4:CD:151:LYS:O	4:CD:152:GLN:NE2	2.24	0.70
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.74	0.70
10:CJ:65:TYR:HB3	14:CN:96:LEU:HD11	1.74	0.70
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.90	0.70
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.25	0.70
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.07	0.70
22:BA:1344:U:H4'	22:BA:1345:C:OP2	1.90	0.70
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.56	0.70
22:BA:2066:C:OP1	57:BA:3509:HOH:O	2.10	0.70
22:BA:2502:G:C5'	22:BA:2503:A:H5"	2.22	0.70
24:BC:222:GLY:HA2	24:BC:225:MET:HE3	1.71	0.70
1:CA:728:A:H2'	1:CA:729:A:C8	2.27	0.70
22:DA:1317:G:H2'	22:DA:1318:U:O4'	1.91	0.70
1:AA:1125:U:C5	1:AA:1127:G:C6	2.80	0.69
22:BA:2516:A:N6	22:BA:2517:C:N4	2.39	0.69
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.56	0.69
1:CA:568:G:O6	12:CL:2:ALA:HB2	1.92	0.69
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.25	0.69
22:DA:197:A:H62	22:DA:2430:A:H2'	1.56	0.69
22:DA:469:G:O6	50:D2:37:LYS:HE2	1.92	0.69
22:DA:2507:C:OP1	57:DA:3710:HOH:O	2.08	0.69
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.60	0.69
2:AB:85:LEU:HG	2:AB:86:SER:N	2.05	0.69
22:BA:2151:U:H2'	22:BA:2152:G:C8	2.26	0.69
40:BS:66:ILE:HA	40:BS:69:LEU:CD2	2.23	0.69
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.72	0.69
22:DA:2575:C:OP1	57:DA:3711:HOH:O	2.10	0.69
26:DE:21:ARG:O	26:DE:114:ARG:NH2	2.24	0.69
22:BA:686:U:OP2	57:BA:3723:HOH:O	2.10	0.69
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.23	0.69
53:B5:59:VAL:HG21	53:B5:167:ASP:C	2.12	0.69
1:AA:1368:A:OP1	10:AJ:64:GLN:NE2	2.26	0.69
22:BA:1115:G:N3	22:BA:1116:G:C8	2.61	0.69
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.25	0.69
1:AA:562:U:OP2	12:AL:14:ARG:NH1	2.25	0.69
1:AA:1014:A:N7	1:AA:1015:G:C6	2.61	0.69
1:CA:1408:A:C2	1:CA:1494:G:C4	2.81	0.69
10:CJ:5:ARG:HG3	10:CJ:6:ILE:HG13	1.74	0.69
1:AA:568:G:C2	1:AA:569:C:C5	2.81	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.22	0.69
13:AM:3:ARG:CG	13:AM:4:ILE:N	2.56	0.69
22:BA:1154:G:OP2	38:BQ:58:ARG:NH1	2.25	0.69
22:BA:1936:A:C8	22:BA:1945:G:O6	2.46	0.69
1:CA:154:U:O4	1:CA:155:A:N6	2.26	0.69
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.22	0.69
1:AA:96:U:O2'	1:AA:97:G:P	2.50	0.69
1:AA:452:A:N6	1:AA:480:U:O2	2.26	0.69
4:AD:168:PRO:HG2	4:AD:171:LEU:HD11	1.75	0.69
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.40	0.69
22:BA:465:G:H2'	22:BA:466:A:C8	2.28	0.69
22:BA:1073:A:C3'	22:BA:1074:G:H5"	2.23	0.69
22:BA:1186:G:OP2	57:BA:3601:HOH:O	2.10	0.69
22:BA:2305:U:O2'	27:BF:133:ARG:NE	2.25	0.69
22:BA:2564:A:C6	22:BA:2565:A:N1	2.60	0.69
24:BC:13:ARG:HA	24:BC:16:VAL:HG23	1.75	0.69
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.58	0.69
11:CK:17:SER:O	11:CK:80:LYS:N	2.26	0.69
22:DA:733:G:OP2	57:DA:3296:HOH:O	2.10	0.69
22:DA:777:G:C2	22:DA:778:G:C8	2.81	0.69
22:DA:1638:C:H4'	22:DA:2710:C:O2	1.93	0.69
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.28	0.69
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.28	0.69
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.25	0.69
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.74	0.69
4:CD:198:HIS:CE1	4:CD:199:LEU:HD23	2.28	0.69
29:DH:27:ARG:HE	45:DX:60:ASP:CG	1.96	0.69
1:AA:68:G:C5	1:AA:69:G:H1'	2.28	0.69
10:AJ:52:LEU:HB3	14:AN:81:ARG:NE	2.08	0.69
22:BA:370:G:N7	57:BA:3562:HOH:O	2.26	0.69
22:BA:2595:G:N2	22:BA:2598:A:OP2	2.25	0.69
34:BM:136:MET:HE2	43:BV:57:TYR:CD2	2.28	0.69
17:CQ:46:VAL:HG21	17:CQ:61:ILE:HD11	1.75	0.69
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.26	0.69
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.93	0.68
3:AC:77:ILE:HA	3:AC:84:VAL:HG23	1.75	0.68
22:BA:2061:G:O5'	57:BA:3491:HOH:O	2.10	0.68
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.74	0.68
39:BR:49:ILE:HB	39:BR:52:PRO:HA	1.74	0.68
52:B4:11:CYS:SG	52:B4:33:HIS:ND1	2.66	0.68
22:DA:1010:A:N7	57:DA:3778:HOH:O	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:123:ILE:HD13	4:AD:123:ILE:N	2.08	0.68
9:AI:99:ARG:O	9:AI:102:GLY:N	2.25	0.68
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	1.93	0.68
22:BA:2502:G:H5"	22:BA:2503:A:H5"	1.75	0.68
48:B0:55:ILE:O	48:B0:56:ALA:CB	2.40	0.68
1:CA:527:G:N1	1:CA:528:C:C5	2.61	0.68
22:DA:21:A:C2	22:DA:520:G:C2	2.80	0.68
22:DA:479:A:H4'	22:DA:480:A:OP1	1.93	0.68
33:DL:77:ILE:HG23	33:DL:81:ASP:OD2	1.93	0.68
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.08	0.68
22:BA:137:U:H2'	22:BA:140:C:C2	2.28	0.68
22:BA:818:G:N7	57:BA:3580:HOH:O	2.25	0.68
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.15	0.68
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.28	0.68
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.08	0.68
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.28	0.68
22:DA:2261:C:C2	22:DA:2280:G:N2	2.62	0.68
1:AA:328:C:O2	1:AA:328:C:H2'	1.92	0.68
2:AB:83:ALA:HA	2:AB:86:SER:OG	1.94	0.68
4:AD:78:GLU:OE2	4:AD:81:ARG:NH1	2.26	0.68
22:BA:819:A:N3	22:BA:1189:A:C2	2.61	0.68
22:BA:2515:C:O2	22:BA:2570:G:C2	2.47	0.68
23:DB:57:A:H1'	27:DF:27:GLN:HA	1.75	0.68
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.23	0.68
1:AA:11:G:C5	1:AA:12:U:C5	2.81	0.68
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.27	0.68
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.75	0.68
22:DA:834:G:H1'	22:DA:2358:A:N3	2.08	0.68
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	1.76	0.68
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	1.75	0.68
16:AP:39:PHE:CD2	16:AP:74:LEU:HD11	2.28	0.68
22:BA:619:G:O6	57:BA:3291:HOH:O	2.10	0.68
22:BA:1265:A:OP1	57:BA:3752:HOH:O	2.11	0.68
40:BS:83:LYS:O	40:BS:84:ARG:HD3	1.94	0.68
52:B4:27:CYS:SG	56:B4:101:ZN:ZN	1.81	0.68
53:B5:42:VAL:O	53:B5:179:ALA:N	2.26	0.68
1:CA:1244:G:C6	1:CA:1245:C:N4	2.62	0.68
10:AJ:48:ARG:NH1	14:AN:101:TRP:CE3	2.62	0.68
22:BA:1414:C:C4	22:BA:1415:U:C5	2.81	0.68
22:BA:2578:G:N7	25:BD:145:SER:HB2	2.09	0.68
32:BK:107:LEU:O	32:BK:109:SER:N	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:100:HIS:O	36:BO:104:GLN:HB3	1.94	0.68
1:CA:31:G:N7	1:CA:306:A:H1'	2.09	0.68
1:CA:505:G:C6	1:CA:535:A:C2	2.82	0.68
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.08	0.68
38:DQ:79:PHE:CZ	38:DQ:83:LEU:HD11	2.28	0.68
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	1.75	0.68
22:BA:2078:C:O2'	22:BA:2079:U:H5'	1.94	0.68
22:BA:2385:C:O2'	22:BA:2386:A:H5'	1.93	0.68
23:BB:30:C:H2'	23:BB:31:C:H5'	1.75	0.68
14:CN:61:ARG:O	14:CN:62:ASN:HB2	1.94	0.68
22:DA:764:A:N1	22:DA:1789:A:O2'	2.27	0.68
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.76	0.68
22:BA:588:U:H2'	22:BA:589:U:C6	2.29	0.68
22:DA:485:C:C2	22:DA:496:G:N2	2.62	0.68
25:DD:140:HIS:NE2	57:DD:302:HOH:O	2.13	0.68
37:BP:15:GLN:O	37:BP:16:ASP:HB3	1.94	0.68
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.93	0.68
22:BA:973:A:C8	22:BA:1188:U:N3	2.62	0.67
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.58	0.67
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.27	0.67
11:CK:101:ASN:C	11:CK:101:ASN:OD1	2.32	0.67
12:CL:21:VAL:O	12:CL:23:ALA:N	2.27	0.67
22:DA:1060:U:O4'	22:DA:1062:G:H5'	1.94	0.67
1:AA:71:A:H3'	1:AA:71:A:OP2	1.93	0.67
1:AA:983:A:N3	1:AA:983:A:H2'	2.08	0.67
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.09	0.67
7:AG:146:GLU:HA	7:AG:149:LYS:CB	2.24	0.67
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.10	0.67
21:AU:4:ILE:HA	21:AU:20:LYS:HE3	1.75	0.67
22:BA:2310:C:C4	27:BF:77:PHE:CZ	2.81	0.67
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.29	0.67
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.75	0.67
1:CA:683:G:N2	11:CK:39:GLY:O	2.27	0.67
1:CA:976:G:OP2	1:CA:1358:U:O2'	2.12	0.67
14:CN:21:PHE:O	14:CN:23:LYS:N	2.27	0.67
22:DA:686:U:OP2	57:DA:3718:HOH:O	2.11	0.67
22:DA:724:U:H2'	22:DA:725:G:O4'	1.94	0.67
22:DA:948:C:O2	22:DA:984:A:O2'	2.11	0.67
1:AA:91:U:H2'	1:AA:92:U:O4'	1.95	0.67
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.29	0.67
12:AL:85:GLY:O	12:AL:96:HIS:ND1	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:622:G:P	57:BA:3293:HOH:O	2.51	0.67
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.08	0.67
22:BA:2728:U:O2'	22:BA:2729:G:P	2.53	0.67
24:BC:70:ASN:O	24:BC:72:ASP:N	2.27	0.67
52:B4:33:HIS:O	52:B4:35:GLN:HG3	1.94	0.67
1:CA:72:A:C6	1:CA:73:C:N4	2.62	0.67
1:CA:518:C:H2'	1:CA:530:G:C8	2.29	0.67
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.43	0.67
20:CT:6:SER:OG	20:CT:7:ALA:N	2.23	0.67
22:BA:1582:C:O2'	22:BA:1585:C:N3	2.26	0.67
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.92	0.67
26:BE:7:ASP:O	26:BE:9:GLN:N	2.27	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.76	0.67
39:DR:81:LYS:HD3	39:DR:81:LYS:N	2.10	0.67
1:AA:1079:G:OP1	57:AA:1791:HOH:O	2.12	0.67
5:AE:95:PHE:CZ	5:AE:97:GLN:HG3	2.29	0.67
21:AU:4:ILE:N	21:AU:20:LYS:HE3	2.09	0.67
22:BA:2061:G:O6	55:BA:3001:VIF:H29	1.94	0.67
22:BA:2392:A:O2'	33:BL:60:ARG:O	2.12	0.67
25:BD:133:THR:O	25:BD:134:HIS:HB2	1.94	0.67
34:BM:28:PHE:HB2	34:BM:104:GLU:OE2	1.94	0.67
35:DN:117:ASP:O	35:DN:118:ARG:HB2	1.94	0.67
1:AA:1504:G:H3'	57:AA:1803:HOH:O	1.93	0.67
1:AA:1525:G:O6	57:AA:1869:HOH:O	2.08	0.67
2:AB:103:ASN:O	2:AB:106:THR:N	2.27	0.67
22:BA:18:U:O4	57:BA:3205:HOH:O	2.10	0.67
22:BA:197:A:N6	22:BA:2430:A:H2'	2.09	0.67
22:BA:747:U:C4	22:BA:2613:U:C4	2.82	0.67
1:CA:404:G:O6	4:CD:2:ALA:N	2.28	0.67
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.32	0.67
22:BA:276:U:H2'	22:BA:276:U:O2	1.95	0.67
22:BA:2554:U:C4	22:BA:2555:U:O4	2.47	0.67
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.77	0.67
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.28	0.67
1:CA:111:G:O6	1:CA:330:C:N4	2.27	0.67
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.30	0.67
1:AA:992:U:C2	1:AA:1043:G:N7	2.63	0.67
8:AH:2:SER:C	8:AH:4:GLN:H	1.98	0.67
22:BA:1142:A:N3	22:BA:1144:A:C8	2.63	0.67
39:BR:46:GLU:N	39:BR:46:GLU:OE1	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1055:A:C6	1:CA:1206:G:C5	2.83	0.67
1:CA:1298:U:O2	1:CA:1298:U:H2'	1.94	0.67
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.28	0.67
13:CM:40:ALA:O	13:CM:42:ASP:N	2.28	0.67
16:CP:42:ILE:O	16:CP:44:SER:N	2.23	0.67
22:DA:1380:G:OP2	57:DA:3753:HOH:O	2.12	0.67
5:AE:99:ALA:O	5:AE:101:GLU:N	2.28	0.67
22:BA:1422:G:C4	22:BA:1423:G:C8	2.83	0.67
28:BG:174:ALA:O	28:BG:175:LYS:HB3	1.95	0.67
22:DA:1809:A:C6	22:DA:1810:A:C6	2.83	0.67
22:DA:1826:G:C5	22:DA:1827:U:C5	2.82	0.67
24:DC:30:PHE:CE2	24:DC:32:PRO:HG2	2.29	0.67
24:DC:69:ARG:HD3	24:DC:104:ILE:HG21	1.74	0.67
10:AJ:47:GLU:OE2	14:AN:76:LYS:NZ	2.21	0.67
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.25	0.67
27:BF:67:ILE:HD12	27:BF:67:ILE:O	1.94	0.67
31:BJ:81:ILE:HG12	31:BJ:82:GLY:N	2.09	0.67
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.28	0.67
1:CA:1388:C:C2	1:CA:1389:C:C5	2.83	0.67
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.95	0.67
27:DF:32:GLU:OE1	27:DF:92:ARG:NH1	2.28	0.67
1:AA:173:U:C2	1:AA:197:A:N1	2.63	0.66
21:AU:35:ARG:NH2	57:AU:101:HOH:O	2.22	0.66
22:BA:714:U:O2'	22:BA:716:A:N7	2.28	0.66
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.66
36:BO:55:GLU:OE1	36:BO:81:ARG:NH1	2.27	0.66
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.15	0.66
21:CU:51:SER:O	21:CU:53:VAL:N	2.28	0.66
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.95	0.66
22:DA:2838:G:OP1	57:DA:3806:HOH:O	2.13	0.66
41:DT:14:PRO:HD2	46:DY:33:ALA:HB1	1.76	0.66
1:AA:598:U:H4'	8:AH:86:TYR:CD1	2.30	0.66
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.28	0.66
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.96	0.66
39:BR:49:ILE:HB	39:BR:51:VAL:O	1.95	0.66
2:CB:73:LYS:O	2:CB:75:ALA:N	2.28	0.66
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.76	0.66
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.48	0.66
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.10	0.66
44:DW:21:LEU:HA	44:DW:39:ARG:HB2	1.77	0.66
11:AK:29:ASN:OD1	11:AK:47:ALA:HB3	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:14:VAL:HG13	21:AU:16:LEU:CD2	2.25	0.66
22:BA:357:C:H2'	22:BA:358:U:C6	2.30	0.66
22:BA:826:U:P	57:BA:3702:HOH:O	2.53	0.66
22:BA:945:A:C8	57:BA:3263:HOH:O	2.48	0.66
1:CA:532:A:N6	3:CC:192:THR:OG1	2.27	0.66
7:CG:12:ILE:HD12	7:CG:24:ALA:HB1	1.75	0.66
22:DA:1139:G:N2	22:DA:1140:C:C2	2.63	0.66
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.10	0.66
1:AA:144:G:C5	1:AA:179:A:C2	2.82	0.66
1:AA:663:A:N1	1:AA:743:A:C2	2.63	0.66
22:BA:974:G:C8	22:BA:989:G:C2	2.84	0.66
22:BA:1180:U:H2'	22:BA:1181:U:H5'	1.77	0.66
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.31	0.66
22:BA:1936:A:C8	22:BA:1945:G:C6	2.83	0.66
22:BA:2516:A:N6	22:BA:2517:C:H42	1.93	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
34:BM:136:MET:CE	43:BV:57:TYR:CD2	2.78	0.66
2:CB:99:GLY:O	2:CB:101:LEU:N	2.28	0.66
22:DA:46:G:C2	22:DA:47:C:C6	2.84	0.66
1:AA:1033:G:H2'	1:AA:1034:G:H5'	1.77	0.66
1:AA:1228:C:OP2	13:AM:107:ARG:NH2	2.29	0.66
3:AC:139:GLN:O	3:AC:141:ALA:N	2.29	0.66
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.26	0.66
10:AJ:12:ALA:HB2	10:AJ:96:VAL:HA	1.78	0.66
22:BA:933:A:H5'	22:BA:934:U:OP2	1.95	0.66
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.31	0.66
22:BA:2291:U:H2'	22:BA:2292:U:C5	2.31	0.66
22:BA:2674:G:H4'	32:BK:30:ARG:HD2	1.77	0.66
24:BC:71:LYS:HE3	24:BC:96:TYR:CD2	2.30	0.66
39:BR:76:LYS:HD2	39:BR:85:LYS:HD2	1.76	0.66
41:BT:19:LYS:O	41:BT:21:SER:N	2.29	0.66
43:BV:80:HIS:CE1	43:BV:83:LYS:HG3	2.30	0.66
5:CE:149:SER:HB2	5:CE:152:MET:CG	2.26	0.66
13:CM:11:ASP:OD1	13:CM:12:HIS:N	2.27	0.66
22:DA:187:G:C2	22:DA:210:C:C2	2.83	0.66
22:DA:2163:A:OP1	22:DA:2171:A:C8	2.49	0.66
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.78	0.66
29:BH:93:SER:OG	1:CA:357:G:H4'	1.96	0.66
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.10	0.66
22:DA:617:G:O6	57:DA:3286:HOH:O	2.09	0.66
22:DA:2690:U:C4	22:DA:2873:A:N1	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.29	0.66
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.78	0.66
22:BA:1439:A:OP2	57:BA:3634:HOH:O	2.14	0.66
22:BA:2012:G:OP1	40:BS:98:LYS:HG2	1.95	0.66
22:BA:2819:G:OP1	57:BA:3807:HOH:O	2.13	0.66
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.77	0.66
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.95	0.66
4:CD:50:ASP:O	4:CD:53:VAL:HG22	1.95	0.66
12:AL:24:LEU:HG	12:AL:25:GLU:H	1.61	0.66
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.25	0.66
22:BA:608:A:C6	22:BA:609:A:C6	2.84	0.66
28:BG:10:VAL:O	28:BG:10:VAL:CG1	2.44	0.66
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.96	0.66
1:CA:72:A:N6	1:CA:73:C:N4	2.43	0.66
9:CI:54:LEU:O	9:CI:55:VAL:HG22	1.95	0.66
1:AA:702:A:H3'	1:AA:703:G:C5'	2.26	0.66
2:AB:49:MET:O	2:AB:53:ALA:HB2	1.94	0.66
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.44	0.66
22:BA:206:U:C2'	22:BA:207:A:H5'	2.26	0.66
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.66
22:DA:1973:G:C6	22:DA:1974:C:C4	2.84	0.66
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.78	0.66
1:AA:872:A:C4	1:AA:874:G:N7	2.64	0.66
22:BA:1143:A:N7	31:BJ:27:ARG:NH1	2.44	0.66
22:BA:1730:C:H4'	22:BA:1730:C:OP1	1.96	0.66
7:CG:75:VAL:HG21	7:CG:144:MET:HG2	1.77	0.66
22:DA:1871:A:O2'	22:DA:1872:A:N7	2.29	0.66
22:DA:2125:G:H5'	22:DA:2126:A:OP2	1.96	0.66
23:DB:84:G:N2	23:DB:93:C:C2	2.64	0.66
4:AD:59:GLN:O	4:AD:63:ARG:HG2	1.95	0.65
22:BA:1745:A:C2	22:BA:1746:A:C8	2.84	0.65
22:BA:2346:A:H4'	22:BA:2347:C:OP2	1.94	0.65
25:BD:12:THR:CG2	37:BP:9:GLU:OE2	2.44	0.65
25:BD:84:LEU:HD22	25:BD:88:GLU:HB3	1.79	0.65
14:CN:51:LEU:O	14:CN:53:ARG:N	2.29	0.65
22:DA:269:C:N3	22:DA:270:A:C8	2.63	0.65
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.31	0.65
22:DA:1429:G:N7	24:DC:28:LYS:NZ	2.44	0.65
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.78	0.65
38:DQ:47:TYR:CZ	38:DQ:51:ARG:CZ	2.79	0.65
1:AA:483:C:O2	16:AP:13:LYS:NZ	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:78:VAL:HG13	16:AP:78:VAL:O	1.96	0.65
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.68	0.65
22:BA:265:A:H4'	22:BA:266:G:OP1	1.96	0.65
22:BA:575:A:H2'	22:BA:576:U:H5'	1.78	0.65
1:CA:495:A:C2	1:CA:496:A:N6	2.64	0.65
2:CB:83:ALA:O	2:CB:86:SER:OG	2.15	0.65
18:CR:20:GLU:O	18:CR:22:ASP:N	2.29	0.65
22:DA:24:G:C5	22:DA:25:U:C5	2.85	0.65
22:DA:247:G:H4'	22:DA:386:G:C5	2.31	0.65
22:DA:996:A:C2	22:DA:997:G:C8	2.83	0.65
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.11	0.65
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.26	0.65
22:DA:2504:U:C4	55:DA:3001:VIF:H30	2.31	0.65
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.30	0.65
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.31	0.65
1:AA:1289:A:O3'	7:AG:35:LYS:NZ	2.29	0.65
2:AB:168:HIS:ND1	2:AB:168:HIS:O	2.28	0.65
9:AI:81:HIS:NE2	9:AI:104:VAL:O	2.29	0.65
13:AM:26:GLY:O	13:AM:28:THR:N	2.29	0.65
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.11	0.65
22:BA:1027:A:C6	22:BA:1126:A:N3	2.64	0.65
24:BC:226:ASN:ND2	57:BC:302:HOH:O	2.28	0.65
38:BQ:36:PHE:CE1	38:BQ:40:ILE:CD1	2.78	0.65
53:B5:50:ILE:CG2	53:B5:51:ASP:N	2.59	0.65
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.78	0.65
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.44	0.65
22:DA:2344:U:H4'	22:DA:2345:G:OP1	1.96	0.65
24:DC:62:TYR:CE1	24:DC:63:ARG:O	2.49	0.65
52:D4:30:GLU:HB3	52:D4:33:HIS:CD2	2.31	0.65
22:BA:996:A:C2	22:BA:997:G:C8	2.85	0.65
22:DA:514:A:N3	22:DA:581:C:O2'	2.23	0.65
22:DA:2225:A:H4'	22:DA:2226:C:O5'	1.96	0.65
2:AB:15:HIS:C	2:AB:15:HIS:CD2	2.69	0.65
4:AD:191:LEU:HD12	4:AD:192:SER:HB2	1.78	0.65
9:AI:56:ASP:O	9:AI:60:LYS:NZ	2.18	0.65
22:BA:1258:U:C4	22:BA:1259:G:N7	2.65	0.65
26:BE:171:ASP:C	26:BE:171:ASP:OD1	2.34	0.65
23:DB:34:A:N6	23:DB:44:G:O2'	2.30	0.65
1:AA:872:A:C5	1:AA:874:G:C8	2.85	0.65
2:AB:51:ASN:O	2:AB:52:GLU:HB2	1.96	0.65
3:AC:11:ARG:O	3:AC:14:ILE:O	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:25:ASN:O	3:AC:27:LYS:N	2.29	0.65
4:AD:106:GLY:O	4:AD:108:GLY:N	2.29	0.65
4:AD:151:LYS:HB2	4:AD:156:LYS:HE3	1.79	0.65
22:BA:576:U:H2'	22:BA:577:G:C8	2.31	0.65
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.79	0.65
24:BC:244:PRO:O	24:BC:251:GLN:NE2	2.29	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
22:DA:352:A:H2'	22:DA:353:C:O4'	1.96	0.65
22:DA:1693:U:O4	22:DA:1976:U:O2'	2.12	0.65
1:AA:800:G:O6	57:AA:1813:HOH:O	2.11	0.65
16:AP:42:ILE:O	16:AP:44:SER:N	2.30	0.65
20:AT:6:SER:OG	20:AT:7:ALA:N	2.30	0.65
22:BA:1816:C:C5	24:BC:62:TYR:CE1	2.85	0.65
22:BA:1925:C:H4'	22:BA:1926:U:C4	2.31	0.65
22:BA:2555:U:C5	22:BA:2556:C:C2	2.84	0.65
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.78	0.65
31:BJ:13:ARG:HB3	31:BJ:51:GLY:O	1.97	0.65
35:BN:77:ALA:O	35:BN:81:ASN:HB2	1.97	0.65
37:BP:103:ARG:HH11	37:BP:103:ARG:HG3	1.61	0.65
44:BW:52:GLY:HA3	44:BW:60:PHE:CE2	2.31	0.65
24:DC:61:ALA:O	24:DC:63:ARG:NH2	2.30	0.65
30:DI:69:PHE:N	30:DI:69:PHE:HD1	1.94	0.65
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.12	0.65
12:AL:21:VAL:HG23	12:AL:95:TYR:CE1	2.30	0.65
20:AT:29:ARG:O	20:AT:33:LYS:HG2	1.97	0.65
22:BA:1509:A:O2'	22:BA:1510:G:P	2.54	0.65
22:BA:2264:C:N4	44:BW:15:ASP:OD1	2.29	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
45:BX:12:PRO:HB3	45:BX:30:LEU:HD23	1.79	0.65
1:CA:152:A:N6	1:CA:170:U:C2	2.65	0.65
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.12	0.65
12:CL:116:LYS:O	12:CL:117:TYR:CD2	2.49	0.65
13:CM:33:ILE:HD13	13:CM:59:GLU:HB3	1.79	0.65
22:DA:2136:G:N1	22:DA:2156:G:H1'	2.12	0.65
1:AA:721:G:H4'	1:AA:722:G:O4'	1.97	0.65
1:AA:1054:C:OP2	57:AA:1784:HOH:O	2.14	0.65
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.31	0.65
22:BA:528:A:C8	22:BA:528:A:H3'	2.32	0.65
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.13	0.65
22:BA:2034:U:O4	57:BA:3579:HOH:O	2.12	0.65
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.30	0.65
1:CA:790:A:C6	1:CA:791:G:C6	2.85	0.65
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.30	0.65
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.29	0.65
22:DA:1477:A:N6	22:DA:1514:G:O2'	2.30	0.65
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.32	0.65
32:DK:76:VAL:HG12	37:DP:73:VAL:CG2	2.26	0.65
1:AA:652:U:O2'	1:AA:653:U:OP2	2.13	0.65
2:AB:33:GLY:O	2:AB:34:ALA:HB2	1.97	0.65
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.27	0.65
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.65
30:BI:47:ASP:HA	30:BI:51:LYS:CD	2.26	0.65
1:CA:718:A:C8	1:CA:719:C:C5	2.84	0.65
1:AA:920:U:O4'	1:AA:1080:A:C2	2.49	0.64
3:AC:206:GLU:O	3:AC:207:ILE:O	2.15	0.64
10:AJ:33:GLY:O	10:AJ:34:ALA:HB2	1.97	0.64
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.30	0.64
22:BA:2020:A:C2	22:BA:2035:G:N1	2.65	0.64
27:BF:36:LEU:HD22	27:BF:91:LEU:HD11	1.78	0.64
38:BQ:40:ILE:O	38:BQ:44:GLN:HG3	1.97	0.64
2:CB:141:LEU:O	2:CB:145:GLU:N	2.30	0.64
22:DA:204:A:H5'	22:DA:206:U:O4'	1.96	0.64
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.32	0.64
22:DA:2681:C:C2	22:DA:2724:U:O4	2.50	0.64
40:DS:41:LYS:O	40:DS:44:ALA:N	2.30	0.64
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.80	0.64
1:AA:174:A:C5	1:AA:175:C:C5	2.85	0.64
22:BA:118:A:C8	22:BA:119:A:C8	2.84	0.64
22:BA:1926:U:H2'	22:BA:1926:U:O2	1.96	0.64
26:BE:108:ILE:HD13	26:BE:181:ILE:HG12	1.78	0.64
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.50	0.64
22:DA:247:G:H4'	22:DA:386:G:C4	2.33	0.64
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.30	0.64
22:DA:2346:A:H3'	22:DA:2347:C:H5'	1.77	0.64
1:AA:232:G:H2'	1:AA:233:C:O4'	1.97	0.64
1:AA:624:C:H4'	16:AP:11:ALA:HB2	1.79	0.64
1:AA:731:G:OP1	1:AA:766:A:H1'	1.97	0.64
4:AD:17:THR:HG23	4:AD:18:ASP:N	2.12	0.64
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.30	0.64
22:BA:2176:A:C6	22:BA:2177:C:N4	2.65	0.64
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.17	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:4:U:H5"	1:CA:5:U:OP1	1.97	0.64
6:CF:9:MET:HG3	6:CF:86:ARG:HB2	1.78	0.64
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.30	0.64
22:DA:2063:C:O2	22:DA:2063:C:H2'	1.97	0.64
22:DA:2127:G:H4'	22:DA:2128:G:OP1	1.96	0.64
44:DW:52:GLY:HA3	44:DW:60:PHE:CZ	2.32	0.64
1:AA:663:A:C2	1:AA:743:A:C2	2.86	0.64
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.79	0.64
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.97	0.64
1:CA:866:C:C5	1:CA:867:G:H1'	2.32	0.64
9:CI:90:TYR:O	9:CI:91:ASP:CG	2.36	0.64
22:DA:1127:A:C2'	22:DA:1128:G:H5"	2.27	0.64
22:DA:2436:G:C2	22:DA:2437:G:C8	2.85	0.64
28:DG:159:GLY:O	28:DG:163:ARG:NH1	2.30	0.64
1:AA:1374:A:C2	1:AA:1375:A:C8	2.85	0.64
22:BA:991:C:C4	22:BA:1185:G:C6	2.86	0.64
22:BA:2458:G:C2	22:BA:2490:G:N2	2.66	0.64
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.46	0.64
22:DA:118:A:N3	22:DA:178:G:H1'	2.13	0.64
22:DA:370:G:C6	22:DA:424:G:N7	2.66	0.64
22:DA:1530:G:N2	22:DA:1542:U:O2	2.31	0.64
1:AA:544:G:C5	1:AA:545:C:C5	2.86	0.64
4:AD:75:TYR:OH	4:AD:97:ARG:NH1	2.30	0.64
15:AO:8:THR:O	15:AO:12:VAL:HG23	1.97	0.64
22:BA:447:A:OP2	57:BA:3210:HOH:O	2.14	0.64
22:BA:572:A:C2	22:BA:2033:A:C2	2.86	0.64
22:BA:983:A:C6	22:BA:984:A:C2	2.86	0.64
30:BI:58:VAL:HG12	30:BI:59:ILE:N	2.12	0.64
8:CH:77:ARG:NE	8:CH:79:SER:O	2.30	0.64
8:CH:94:LYS:HD3	8:CH:98:GLY:HA2	1.79	0.64
15:CO:62:GLN:O	15:CO:66:LEU:HD23	1.97	0.64
20:CT:78:ASN:O	20:CT:82:GLN:HG2	1.98	0.64
22:DA:151:C:H2'	22:DA:152:A:C8	2.32	0.64
22:DA:192:C:O2'	22:DA:802:A:N3	2.29	0.64
22:DA:1359:A:C8	22:DA:1373:A:N1	2.66	0.64
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.32	0.64
22:DA:2282:G:N3	22:DA:2425:A:N6	2.46	0.64
42:DU:9:ASP:OD2	42:DU:10:GLU:N	2.31	0.64
1:AA:91:U:C2	1:AA:92:U:H1'	2.33	0.64
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.32	0.64
22:BA:211:C:OP1	50:B2:25:LYS:NZ	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2282:G:H5”	22:BA:2283:C:O4’	1.98	0.64
22:BA:2520:C:C6	22:BA:2567:G:H1’	2.32	0.64
22:BA:2839:G:C5	22:BA:2840:C:C5	2.85	0.64
35:BN:2:ARG:HA	35:BN:5:LYS:CD	2.26	0.64
22:DA:1339:G:O4’	22:DA:1393:A:C2	2.51	0.64
22:DA:1774:C:O2	24:DC:11:PRO:HB2	1.97	0.64
31:DJ:142:ILE:OXT	31:DJ:142:ILE:HG23	1.96	0.64
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.46	0.64
1:AA:468:A:C2	1:AA:469:C:C4	2.85	0.64
1:AA:673:A:H2’	1:AA:674:G:C8	2.32	0.64
1:AA:1304:G:N1	1:AA:1305:G:N2	2.45	0.64
2:AB:95:ARG:HH12	2:AB:97:LEU:HA	1.63	0.64
22:BA:206:U:H2’	22:BA:207:A:H5’	1.79	0.64
22:BA:1176:U:H2’	22:BA:1177:G:C8	2.32	0.64
22:BA:2474:U:H5”	22:BA:2475:C:OP2	1.98	0.64
22:BA:2828:G:C2	22:BA:2829:A:C8	2.85	0.64
2:CB:23:TRP:CG	2:CB:23:TRP:O	2.51	0.64
2:CB:35:ARG:O	2:CB:37:LYS:N	2.31	0.64
9:CI:120:LYS:HG2	9:CI:123:ARG:HB3	1.79	0.64
17:CQ:8:LEU:HD22	17:CQ:73:TRP:CH2	2.32	0.64
22:DA:1141:U:H4’	22:DA:1142:A:O4’	1.97	0.64
22:DA:1181:U:H2’	22:DA:1182:G:C8	2.33	0.64
1:AA:532:A:N6	3:AC:192:THR:OG1	2.31	0.64
1:AA:566:G:O6	57:AA:1840:HOH:O	2.10	0.64
2:AB:213:TYR:O	2:AB:217:VAL:HG23	1.97	0.64
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.33	0.64
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	1.80	0.64
22:BA:947:A:O2’	22:BA:984:A:H2	1.79	0.64
22:BA:1100:C:H2’	22:BA:1101:U:C6	2.32	0.64
22:BA:1140:C:OP2	31:BJ:68:LYS:NZ	2.31	0.64
38:BQ:21:ALA:HA	38:BQ:24:TYR:CE1	2.33	0.64
1:CA:1029:U:O2	1:CA:1029:U:H2’	1.96	0.64
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.80	0.64
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.64
45:DX:33:LEU:O	45:DX:34:HIS:CG	2.51	0.64
1:AA:208:U:C5	1:AA:210:C:C4	2.86	0.64
1:AA:657:U:O2	15:AO:22:THR:CG2	2.46	0.64
1:AA:1031:C:O2’	1:AA:1032:G:OP2	2.16	0.64
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.66	0.64
22:BA:2516:A:C6	22:BA:2517:C:N4	2.65	0.64
29:BH:89:LYS:HB3	1:CA:359:G:C5’	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	1.98	0.64
43:BV:13:GLY:O	43:BV:17:SER:OG	2.15	0.64
1:CA:980:C:OP2	57:CA:1861:HOH:O	2.15	0.64
2:CB:135:LEU:O	2:CB:137:ARG:N	2.31	0.64
22:DA:526:A:N6	22:DA:2626:C:H4'	2.13	0.64
1:AA:262:A:C6	1:AA:263:A:C6	2.85	0.63
7:AG:27:VAL:HG12	7:AG:43:VAL:HG21	1.79	0.63
24:BC:136:PRO:O	24:BC:139:SER:OG	2.16	0.63
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	1.99	0.63
1:CA:289:G:C2	1:CA:290:C:C5	2.85	0.63
1:CA:463:U:H5'	1:CA:464:U:OP2	1.98	0.63
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.11	0.63
22:DA:1651:G:C6	22:DA:1652:A:C5	2.87	0.63
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.33	0.63
3:AC:130:PHE:CZ	3:AC:131:ARG:HD2	2.33	0.63
22:BA:2325:G:C6	22:BA:2326:C:N4	2.66	0.63
41:BT:2:ILE:HA	41:BT:3:ARG:C	2.18	0.63
53:B5:50:ILE:O	53:B5:52:PRO:HD3	1.98	0.63
1:CA:949:A:O2'	1:CA:971:G:O6	2.08	0.63
20:CT:80:THR:O	20:CT:83:ILE:HG13	1.99	0.63
22:DA:563:A:C4	22:DA:2018:G:C2	2.86	0.63
22:DA:717:C:N4	22:DA:718:A:C2	2.67	0.63
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.33	0.63
22:DA:1187:G:H5"	39:DR:83:TYR:CE2	2.33	0.63
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.31	0.63
22:BA:250:G:OP1	57:BA:3818:HOH:O	2.15	0.63
22:BA:321:U:H5"	26:BE:131:THR:HG23	1.80	0.63
22:BA:2571:U:H2'	22:BA:2572:A:OP1	1.99	0.63
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.80	0.63
1:CA:64:G:C8	1:CA:99:C:N4	2.65	0.63
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.32	0.63
19:CS:40:ILE:HB	19:CS:66:MET:O	1.98	0.63
20:CT:81:ALA:O	20:CT:85:LYS:HG2	1.98	0.63
22:DA:197:A:N6	22:DA:2430:A:H2'	2.12	0.63
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.34	0.63
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.33	0.63
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.64	0.63
1:AA:373:A:C2	1:AA:374:A:C8	2.85	0.63
22:BA:790:U:O2'	22:BA:791:C:P	2.57	0.63
22:BA:1838:C:C4	22:BA:1899:A:C4	2.86	0.63
22:BA:2015:A:C6	48:B0:3:VAL:HG23	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:91:SER:O	32:BK:92:GLU:C	2.36	0.63
39:BR:102:SER:O	39:BR:103:ALA:O	2.16	0.63
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.46	0.63
1:CA:624:C:H2'	1:CA:625:U:O4'	1.99	0.63
1:CA:909:A:H2'	1:CA:910:C:O4'	1.98	0.63
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.79	0.63
16:CP:20:VAL:CG2	16:CP:32:PHE:HB2	2.29	0.63
22:DA:12:U:O2	22:DA:12:U:H2'	1.98	0.63
22:DA:310:A:H5"	42:DU:15:THR:HG22	1.80	0.63
22:DA:2211:A:H1'	22:DA:2212:A:OP1	1.99	0.63
22:DA:2311:A:O2'	22:DA:2312:U:P	2.56	0.63
1:AA:206:C:H2'	1:AA:207:C:O4'	1.98	0.63
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.32	0.63
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.79	0.63
22:BA:58:G:OP1	41:BT:78:SER:CB	2.45	0.63
22:BA:1020:A:C2	22:BA:1141:U:C2	2.86	0.63
22:BA:2495:G:H2'	22:BA:2496:C:H5'	1.80	0.63
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.39	0.63
1:CA:216:U:H4'	1:CA:464:U:H4'	1.80	0.63
1:CA:811:C:O2'	1:CA:901:A:N1	2.30	0.63
1:CA:858:G:O6	1:CA:869:G:H3'	1.98	0.63
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.34	0.63
19:CS:4:SER:O	19:CS:5:LEU:HB2	1.97	0.63
22:DA:420:C:H2'	22:DA:421:C:H6	1.64	0.63
22:DA:753:A:C2	22:DA:754:U:C2	2.86	0.63
24:DC:93:LEU:HD13	24:DC:103:TYR:CE1	2.34	0.63
46:DY:9:LYS:HB3	46:DY:12:GLU:HG2	1.80	0.63
49:D1:10:LYS:O	49:D1:51:GLU:HG2	1.98	0.63
10:AJ:10:LEU:HB2	10:AJ:72:ARG:HB2	1.79	0.63
22:BA:936:A:H2'	22:BA:937:C:C6	2.34	0.63
22:BA:1838:C:N4	22:BA:1899:A:C4	2.67	0.63
22:BA:2808:G:N2	22:BA:2891:U:C6	2.67	0.63
30:BI:28:LEU:HD12	30:BI:28:LEU:O	1.96	0.63
1:CA:66:A:H4'	1:CA:173:U:C5	2.34	0.63
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.80	0.63
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.33	0.63
11:AK:102:ALA:O	11:AK:104:GLY:N	2.31	0.63
22:BA:12:U:H2'	22:BA:12:U:O2	1.99	0.63
22:BA:742:A:H2'	22:BA:743:A:C8	2.34	0.63
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.31	0.63
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.34	0.63
1:CA:373:A:C2	1:CA:374:A:C8	2.87	0.63
22:DA:528:A:C2	22:DA:2043:C:H4'	2.33	0.63
22:DA:1789:A:H5"	24:DC:219:THR:O	1.99	0.63
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.34	0.63
22:DA:2308:G:H5"	22:DA:2309:A:OP2	1.98	0.63
22:DA:2428:G:H5"	22:DA:2429:G:OP1	1.99	0.63
1:AA:983:A:N3	1:AA:983:A:C2'	2.61	0.63
22:BA:474:G:O6	57:BA:3208:HOH:O	2.14	0.63
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.79	0.63
25:BD:39:ASP:OD2	25:BD:40:LEU:N	2.31	0.63
1:CA:1048:G:OP1	57:CA:1846:HOH:O	2.16	0.63
11:CK:15:GLN:HA	11:CK:77:TYR:HA	1.81	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.66	0.63
1:AA:466:A:H5'	1:AA:467:U:OP2	1.98	0.63
2:AB:187:VAL:HG23	2:AB:187:VAL:O	1.99	0.63
12:AL:24:LEU:HG	12:AL:25:GLU:N	2.14	0.63
22:BA:1922:G:C2	22:BA:1923:U:C6	2.86	0.63
26:BE:91:ASP:OD1	26:BE:93:SER:OG	2.15	0.63
52:B4:3:VAL:HG13	52:B4:36:ARG:HB3	1.79	0.63
22:DA:152:A:C2	22:DA:175:G:C2	2.87	0.63
22:DA:306:U:O2	22:DA:312:G:N2	2.31	0.63
22:DA:945:A:C8	22:DA:2448:A:C2	2.86	0.63
37:DP:22:PRO:HA	37:DP:47:VAL:HG12	1.79	0.63
1:AA:205:A:OP1	1:AA:205:A:H4'	1.99	0.62
1:AA:484:G:H4'	1:AA:485:U:OP1	1.99	0.62
1:AA:1198:G:N7	57:AA:1786:HOH:O	2.31	0.62
22:BA:947:A:H2'	22:BA:948:C:C6	2.33	0.62
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.62	0.62
22:BA:1216:G:C5	22:BA:1217:U:C5	2.87	0.62
22:BA:1907:G:C5	22:BA:1908:C:C4	2.87	0.62
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.34	0.62
1:CA:374:A:H5"	1:CA:452:A:C2	2.34	0.62
1:CA:1182:G:H4'	1:CA:1183:U:H5"	1.79	0.62
1:CA:1215:G:C5	1:CA:1216:A:N7	2.67	0.62
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.99	0.62
22:DA:305:C:H1'	22:DA:313:G:N2	2.14	0.62
22:DA:594:U:H2'	22:DA:595:C:C6	2.34	0.62
22:DA:1320:C:N4	22:DA:1333:G:C6	2.67	0.62
22:DA:2499:C:N4	22:DA:2500:U:O4	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:213:G:C8	1:AA:214:C:C5	2.87	0.62
1:AA:375:U:C4	1:AA:376:G:N7	2.67	0.62
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.78	0.62
22:BA:1153:C:OP1	38:BQ:92:ARG:NH1	2.32	0.62
22:BA:1794:A:O4'	22:BA:1900:A:C2	2.52	0.62
25:BD:140:HIS:CD2	57:BD:302:HOH:O	2.37	0.62
51:B3:17:THR:OG1	51:B3:18:GLY:N	2.31	0.62
1:CA:257:G:C5	57:CA:1718:HOH:O	2.49	0.62
3:CC:6:HIS:CD2	14:CN:89:MET:HB3	2.34	0.62
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.80	0.62
20:CT:29:ARG:O	20:CT:33:LYS:HG2	1.98	0.62
22:DA:1649:G:C6	22:DA:2009:A:C6	2.86	0.62
22:DA:1805:A:C2	22:DA:1813:G:C2	2.87	0.62
22:DA:1805:A:N3	22:DA:1813:G:C2	2.67	0.62
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	2.32	0.62
22:BA:1087:G:N2	22:BA:1090:A:C8	2.67	0.62
1:CA:16:A:C2'	1:CA:17:U:H5'	2.29	0.62
1:CA:32:A:OP1	1:CA:398:U:H1'	1.99	0.62
1:CA:562:U:H4'	1:CA:563:A:O5'	2.00	0.62
1:CA:1263:C:H2'	1:CA:1264:U:C6	2.34	0.62
2:CB:23:TRP:O	2:CB:23:TRP:CD1	2.51	0.62
2:CB:186:ILE:HA	2:CB:200:ILE:HB	1.79	0.62
16:CP:20:VAL:HG21	16:CP:32:PHE:HB2	1.81	0.62
22:DA:1153:C:H5'	38:DQ:62:ILE:HD13	1.80	0.62
23:DB:81:G:C5	23:DB:82:U:C5	2.88	0.62
33:DL:81:ASP:O	33:DL:82:LEU:HB3	1.98	0.62
1:AA:451:A:H5"	16:AP:70:ARG:NH2	2.14	0.62
1:AA:727:G:N2	1:AA:731:G:C4	2.67	0.62
2:AB:50:PHE:HA	2:AB:213:TYR:OH	2.00	0.62
9:AI:57:MET:SD	9:AI:58:VAL:N	2.69	0.62
22:BA:1421:G:C2	22:BA:1422:G:C8	2.87	0.62
22:BA:1686:C:H2'	22:BA:1687:G:O4'	1.99	0.62
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.30	0.62
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.32	0.62
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	1.99	0.62
40:BS:6:LYS:HB3	40:BS:104:THR:HA	1.80	0.62
1:CA:55:A:C8	1:CA:56:U:C5	2.88	0.62
1:CA:866:C:C4	1:CA:867:G:H1'	2.35	0.62
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.35	0.62
4:CD:35:GLU:O	4:CD:37:ALA:N	2.31	0.62
22:DA:811:U:O2	22:DA:1251:C:C5	2.52	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2061:G:O6	55:DA:3001:VIF:H29	1.98	0.62
22:DA:2689:U:H4'	22:DA:2690:U:OP2	1.99	0.62
24:DC:24:LEU:HD21	24:DC:90:ASN:ND2	2.13	0.62
28:DG:70:ALA:O	28:DG:74:SER:OG	2.10	0.62
1:AA:259:G:C2	1:AA:260:G:H1'	2.34	0.62
2:AB:163:VAL:HG13	2:AB:185:ALA:HB2	1.81	0.62
11:AK:76:GLU:HA	22:BA:2141:G:P	2.40	0.62
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.80	0.62
22:BA:1450:G:C6	22:BA:1451:C:N4	2.68	0.62
22:BA:2199:A:O4'	29:BH:28:ASN:ND2	2.33	0.62
27:BF:4:LEU:HD11	27:BF:104:ILE:HD11	1.81	0.62
1:CA:435:A:H2'	1:CA:436:C:O5'	1.99	0.62
1:CA:555:U:H2'	1:CA:556:C:C6	2.34	0.62
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.33	0.62
22:DA:228:C:H4'	22:DA:229:C:H5"	1.82	0.62
22:DA:2899:A:H2'	22:DA:2900:A:C8	2.34	0.62
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.62	0.62
40:DS:28:LYS:O	40:DS:30:SER:N	2.33	0.62
1:AA:914:A:C4	1:AA:915:A:C8	2.88	0.62
1:AA:998:C:H2'	1:AA:999:C:C6	2.34	0.62
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.35	0.62
2:AB:15:HIS:CD2	2:AB:16:PHE:O	2.53	0.62
4:AD:122:ALA:O	4:AD:123:ILE:HG23	2.00	0.62
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.80	0.62
22:BA:2478:A:C5'	52:B4:32:LYS:HD3	2.28	0.62
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	1.81	0.62
4:CD:59:GLN:O	4:CD:63:ARG:HG3	1.99	0.62
22:DA:503:A:C4	22:DA:506:G:N7	2.68	0.62
22:DA:642:U:O2'	22:DA:644:A:N7	2.25	0.62
22:DA:674:G:H1'	26:DE:69:ARG:HD3	1.82	0.62
22:DA:1182:G:H2'	22:DA:1183:U:O4'	1.99	0.62
33:DL:85:VAL:O	33:DL:86:GLU:HB3	1.98	0.62
1:AA:373:A:N3	1:AA:374:A:C8	2.67	0.62
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.99	0.62
22:BA:1425:G:O2'	22:BA:1426:G:H5'	2.00	0.62
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.82	0.62
22:BA:2630:G:H2'	22:BA:2631:G:O4'	1.99	0.62
1:CA:407:U:C2	1:CA:408:A:C8	2.87	0.62
1:CA:552:U:C4	1:CA:553:A:N7	2.68	0.62
22:DA:301:G:H1'	22:DA:302:C:C6	2.35	0.62
22:DA:1027:A:C6	22:DA:1126:A:N3	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1064:C:N3	22:DA:1074:G:N2	2.48	0.62
1:AA:212:G:N2	1:AA:213:G:C4	2.68	0.62
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.99	0.62
22:BA:1018:U:O3'	22:BA:1120:G:N2	2.32	0.62
4:CD:188:ARG:NH1	4:CD:191:LEU:CD1	2.63	0.62
22:DA:983:A:N6	22:DA:984:A:C2	2.68	0.62
41:DT:64:LYS:HD2	41:DT:79:ASP:OD1	2.00	0.62
8:AH:125:ILE:O	8:AH:125:ILE:HG13	1.99	0.62
22:BA:1142:A:C2	22:BA:1144:A:N9	2.67	0.62
22:BA:1936:A:N7	22:BA:1945:G:C6	2.68	0.62
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.48	0.62
1:CA:55:A:N7	1:CA:56:U:C5	2.68	0.62
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.33	0.62
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.73	0.62
6:CF:41:ASP:OD2	6:CF:43:GLY:N	2.33	0.62
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.30	0.62
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.35	0.62
22:DA:2164:C:H2'	22:DA:2165:C:H6	1.59	0.62
3:AC:7:PRO:HD2	3:AC:184:TYR:CD2	2.35	0.62
22:BA:988:A:P	47:BZ:12:SER:HB2	2.40	0.62
22:BA:1808:A:O2'	45:BX:3:ARG:NH1	2.32	0.62
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.15	0.62
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.35	0.62
6:CF:45:ARG:O	6:CF:56:LYS:HA	2.00	0.62
22:DA:185:G:C6	22:DA:212:G:C2	2.88	0.62
22:DA:910:A:N3	22:DA:2264:C:O2'	2.32	0.62
22:DA:1045:C:H1'	22:DA:1047:G:C6	2.35	0.62
22:DA:1187:G:OP1	39:DR:85:LYS:HE3	2.00	0.62
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.09	0.62
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.00	0.62
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.47	0.62
38:DQ:27:ALA:HB1	38:DQ:31:VAL:HB	1.82	0.62
1:AA:19:A:N3	1:AA:917:G:C2	2.68	0.61
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.82	0.61
22:BA:1061:U:O4	30:BI:11:LEU:HA	2.00	0.61
22:BA:1100:C:H2'	22:BA:1101:U:C5	2.35	0.61
24:BC:25:HIS:CE1	24:BC:26:LYS:O	2.53	0.61
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HB	1.80	0.61
4:CD:26:ARG:O	4:CD:27:ALA:HB2	2.00	0.61
22:DA:67:U:C2	22:DA:68:G:C8	2.88	0.61
22:DA:377:G:C6	22:DA:378:C:C4	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2091:C:H3'	22:DA:2092:U:H5"	1.82	0.61
23:DB:22:U:O4	57:DB:302:HOH:O	2.12	0.61
13:AM:66:GLU:O	13:AM:69:LEU:N	2.33	0.61
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.32	0.61
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.16	0.61
31:BJ:27:ARG:HH11	31:BJ:27:ARG:CG	2.13	0.61
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.80	0.61
39:BR:21:ARG:NE	39:BR:93:PHE:CD1	2.67	0.61
12:CL:86:ARG:CZ	12:CL:88:LYS:HB3	2.30	0.61
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.36	0.61
1:AA:771:G:C2'	1:AA:772:U:H5'	2.30	0.61
6:AF:98:GLU:HG3	6:AF:99:ALA:H	1.65	0.61
22:BA:495:G:C1'	40:BS:57:ASN:ND2	2.63	0.61
22:BA:714:U:C2'	22:BA:716:A:N7	2.62	0.61
22:BA:1098:A:C5	22:BA:1099:G:C6	2.88	0.61
22:BA:2262:U:OP1	44:BW:41:ARG:NH2	2.33	0.61
22:BA:2516:A:C4	22:BA:2569:G:N2	2.68	0.61
25:BD:129:THR:HG22	25:BD:130:GLN:O	2.00	0.61
30:BI:6:GLN:O	30:BI:7:ALA:HB3	2.00	0.61
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.33	0.61
1:CA:632:U:O2	1:CA:632:U:H2'	1.99	0.61
1:CA:955:U:H2'	1:CA:956:U:O4'	2.01	0.61
1:CA:1080:A:OP1	5:CE:52:LYS:CE	2.48	0.61
6:CF:64:VAL:HG12	6:CF:65:GLU:N	2.15	0.61
22:DA:297:G:H5"	42:DU:85:PHE:HB2	1.82	0.61
22:DA:400:G:N7	45:DX:57:ARG:NH1	2.47	0.61
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.99	0.61
22:DA:1607:C:O2	22:DA:1621:U:C5	2.52	0.61
22:DA:2005:A:OP1	57:DA:3383:HOH:O	2.16	0.61
22:DA:2250:G:OP1	34:DM:84:LYS:NZ	2.33	0.61
22:DA:2812:G:N2	22:DA:2889:C:C2	2.69	0.61
22:DA:2889:C:H2'	22:DA:2890:G:C8	2.35	0.61
23:DB:25:U:C4	23:DB:26:C:C4	2.88	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.16	0.61
50:D2:15:SER:OG	50:D2:16:HIS:CE1	2.53	0.61
1:AA:393:A:C2	1:AA:394:G:C8	2.89	0.61
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.34	0.61
11:AK:127:ARG:N	21:AU:34:ARG:CZ	2.63	0.61
22:BA:555:G:HO2'	22:BA:556:A:P	2.23	0.61
22:BA:1496:A:N3	22:BA:1577:C:O2'	2.28	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:86:ASP:CB	1:CA:359:G:O2'	2.47	0.61
53:B5:43:GLU:HA	53:B5:178:LYS:HA	1.83	0.61
53:B5:64:SER:O	53:B5:65:LEU:HB2	2.00	0.61
1:CA:978:A:P	1:CA:1362:A:N6	2.73	0.61
1:CA:990:C:C4	1:CA:991:U:O4	2.54	0.61
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.82	0.61
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.16	0.61
22:DA:2283:C:C2	22:DA:2389:G:C2	2.88	0.61
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.36	0.61
35:DN:98:LEU:HD13	48:D0:54:VAL:HG21	1.82	0.61
1:AA:428:G:O4'	1:AA:430:A:C8	2.54	0.61
1:AA:701:U:H4'	1:AA:702:A:H5"	1.82	0.61
16:AP:52:LEU:O	16:AP:54:LEU:N	2.34	0.61
22:BA:228:C:H4'	22:BA:229:C:H5"	1.81	0.61
22:BA:1142:A:C2	22:BA:1144:A:C1'	2.83	0.61
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.35	0.61
27:BF:40:VAL:O	27:BF:42:GLU:N	2.33	0.61
1:CA:18:C:C2	1:CA:19:A:C8	2.88	0.61
1:CA:115:G:H4'	1:CA:116:A:O5'	2.01	0.61
1:CA:328:C:H4'	1:CA:329:A:H5"	1.83	0.61
22:DA:593:U:H2'	22:DA:594:U:C6	2.36	0.61
22:DA:1355:G:C2	22:DA:1356:G:C8	2.88	0.61
22:DA:1435:G:H2'	22:DA:1436:G:H5'	1.82	0.61
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.11	0.61
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.01	0.61
39:DR:42:ALA:HA	39:DR:46:GLU:HA	1.83	0.61
46:DY:28:LEU:CD1	46:DY:46:VAL:HG21	2.31	0.61
4:AD:174:ASP:O	4:AD:175:ALA:HB2	1.99	0.61
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.30	0.61
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.00	0.61
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.18	0.61
22:BA:2114:A:H2'	22:BA:2114:A:N3	2.14	0.61
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.35	0.61
1:CA:435:A:C2'	1:CA:436:C:O5'	2.48	0.61
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.35	0.61
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.16	0.61
22:DA:30:G:C6	22:DA:31:C:N3	2.69	0.61
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.36	0.61
49:D1:4:GLY:O	49:D1:6:ARG:N	2.25	0.61
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.49	0.61
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:4:ILE:O	13:AM:6:GLY:N	2.33	0.61
22:BA:11:C:H2'	22:BA:12:U:H5'	1.81	0.61
22:BA:998:C:H2'	22:BA:999:U:O5'	2.00	0.61
42:BU:99:ASN:O	42:BU:101:GLU:N	2.33	0.61
1:CA:378:G:N2	1:CA:386:C:O2	2.34	0.61
1:CA:790:A:N6	1:CA:791:G:C6	2.69	0.61
1:CA:1125:U:H4'	10:CJ:7:ARG:NH1	2.16	0.61
4:CD:4:TYR:O	4:CD:5:LEU:HB2	2.00	0.61
20:CT:25:ARG:O	20:CT:29:ARG:HG2	2.01	0.61
22:DA:485:C:N3	22:DA:496:G:C2	2.68	0.61
22:DA:536:G:N2	22:DA:558:U:C2	2.68	0.61
22:DA:783:A:O2'	22:DA:1779:U:O2	2.16	0.61
24:DC:2:ALA:HA	24:DC:199:GLU:OE2	2.00	0.61
1:AA:315:A:O2'	1:AA:330:C:H4'	2.00	0.61
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.16	0.61
1:AA:1089:G:H2'	1:AA:1090:U:O4'	2.01	0.61
2:AB:132:LYS:O	2:AB:134:ALA:N	2.33	0.61
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.16	0.61
5:AE:137:VAL:O	5:AE:138:ARG:HB2	2.00	0.61
6:AF:53:LYS:O	6:AF:54:LEU:HB3	1.99	0.61
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.80	0.61
22:BA:2673:G:C2	22:BA:2674:G:C8	2.89	0.61
22:DA:373:U:C2	22:DA:374:A:C8	2.88	0.61
22:DA:1027:A:N7	22:DA:1126:A:C2	2.67	0.61
22:DA:1599:U:C4	22:DA:1600:C:N4	2.68	0.61
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.68	0.61
1:AA:277:C:H2'	1:AA:278:G:H5'	1.82	0.61
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.36	0.61
4:AD:84:GLY:O	4:AD:89:ASN:ND2	2.34	0.61
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.34	0.61
10:AJ:90:LEU:N	10:AJ:91:ASP:OD1	2.34	0.61
22:BA:195:A:C5	22:BA:198:C:C5	2.89	0.61
22:BA:1278:C:OP1	35:BN:36:THR:OG1	2.18	0.61
27:BF:158:THR:O	57:BF:201:HOH:O	2.16	0.61
43:BV:64:VAL:O	43:BV:64:VAL:HG12	2.01	0.61
1:CA:706:A:C5	1:CA:707:U:C5	2.89	0.61
1:CA:1169:A:C6	1:CA:1170:A:C6	2.89	0.61
22:DA:482:A:N6	22:DA:506:G:O2'	2.33	0.61
22:DA:565:C:H4'	22:DA:1253:A:N6	2.16	0.61
22:DA:1599:U:O4	22:DA:1600:C:N4	2.34	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:620:C:H2'	1:AA:621:A:O4'	2.01	0.61
1:AA:1348:U:H4'	9:AI:122:ARG:HG3	1.82	0.61
2:AB:21:ARG:C	2:AB:23:TRP:H	2.01	0.61
20:AT:5:LYS:O	20:AT:7:ALA:N	2.34	0.61
22:BA:1897:G:C2	22:BA:1898:U:O2	2.54	0.61
1:CA:369:G:OP2	1:CA:388:G:N1	2.33	0.61
1:CA:388:G:O2'	1:CA:389:A:OP1	2.14	0.61
2:CB:16:PHE:CE1	2:CB:18:HIS:CE1	2.89	0.61
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.00	0.61
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.16	0.61
12:CL:58:THR:HG22	12:CL:59:ASN:N	2.15	0.61
22:DA:2209:G:N2	22:DA:2216:G:N3	2.48	0.61
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.83	0.61
26:DE:131:THR:HA	26:DE:160:ALA:HB1	1.83	0.61
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.36	0.60
13:AM:15:ALA:CB	13:AM:34:LEU:HD21	2.31	0.60
21:AU:4:ILE:CA	21:AU:20:LYS:HE3	2.31	0.60
22:BA:1924:C:O2	22:BA:1926:U:O4	2.19	0.60
22:BA:2559:C:O2'	22:BA:2560:A:H5'	2.00	0.60
25:BD:4:LEU:CD2	25:BD:100:LEU:HD23	2.31	0.60
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.60
30:BI:47:ASP:HA	30:BI:51:LYS:HD2	1.83	0.60
1:CA:409:U:OP1	4:CD:24:GLY:HA3	2.01	0.60
1:CA:805:C:C2	1:CA:806:C:C5	2.89	0.60
1:CA:995:C:N3	1:CA:1046:A:O2'	2.31	0.60
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.19	0.60
9:CI:52:LEU:HD13	9:CI:57:MET:HG2	1.82	0.60
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.31	0.60
22:DA:235:U:C4	22:DA:236:C:C5	2.89	0.60
22:DA:1806:C:C5	22:DA:1807:G:C8	2.89	0.60
22:DA:2038:G:H2'	22:DA:2039:U:O4'	1.99	0.60
25:DD:78:GLY:HA3	25:DD:80:TRP:CH2	2.35	0.60
1:AA:71:A:O2'	1:AA:72:A:P	2.60	0.60
1:AA:927:G:C2	1:AA:1391:U:O2	2.54	0.60
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.19	0.60
1:CA:577:G:C8	1:CA:816:A:C6	2.89	0.60
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.00	0.60
1:AA:604:G:C2	1:AA:635:A:C2	2.89	0.60
4:AD:29:ASP:O	4:AD:31:LYS:HD3	2.01	0.60
12:AL:50:ARG:HG3	12:AL:90:LEU:HD11	1.83	0.60
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.01	0.60
26:BE:125:SER:OG	26:BE:126:VAL:N	2.31	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
32:BK:8:LEU:HD12	32:BK:8:LEU:N	2.17	0.60
38:BQ:47:TYR:C	38:BQ:47:TYR:CD2	2.74	0.60
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.37	0.60
5:CE:137:VAL:O	5:CE:138:ARG:HB2	2.01	0.60
13:CM:26:GLY:O	13:CM:30:SER:HB2	2.00	0.60
17:CQ:8:LEU:HB2	17:CQ:61:ILE:CG2	2.30	0.60
22:DA:195:A:C6	22:DA:198:C:C5	2.89	0.60
22:DA:1317:G:C2	22:DA:1336:A:C2	2.88	0.60
22:DA:1663:G:C6	22:DA:1992:G:N7	2.68	0.60
22:DA:1779:U:H5	22:DA:1784:A:N7	1.99	0.60
24:DC:237:GLY:O	24:DC:239:ASN:N	2.34	0.60
35:DN:1:MET:O	35:DN:3:HIS:N	2.34	0.60
40:DS:7:HIS:HB2	40:DS:50:VAL:HG21	1.81	0.60
49:D1:38:LYS:HB2	49:D1:49:TYR:CD2	2.36	0.60
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.37	0.60
4:AD:191:LEU:O	4:AD:192:SER:CB	2.49	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
30:BI:18:ALA:O	30:BI:19:ASN:CB	2.49	0.60
33:BL:48:ARG:HG2	51:B3:60:ALA:HB1	1.83	0.60
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.16	0.60
1:CA:525:C:N4	1:CA:526:C:N4	2.49	0.60
1:CA:1534:A:H5"	1:CA:1535:C:OP1	2.01	0.60
2:CB:166:ALA:HB2	2:CB:187:VAL:HG12	1.82	0.60
22:DA:749:A:C5	22:DA:750:A:N7	2.70	0.60
22:DA:938:G:C2	22:DA:939:G:N7	2.69	0.60
22:DA:2138:G:N2	22:DA:2154:A:H1'	2.16	0.60
22:DA:2212:A:C2	22:DA:2214:C:C4	2.89	0.60
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.23	0.60
8:AH:2:SER:O	8:AH:4:GLN:N	2.34	0.60
9:AI:43:THR:O	9:AI:44:ALA:CB	2.49	0.60
22:BA:244:A:C2	22:BA:255:A:C4	2.89	0.60
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.48	0.60
22:BA:1073:A:N7	22:BA:1074:G:H8	1.99	0.60
22:BA:1494:A:HO2'	22:BA:1495:A:P	2.24	0.60
22:BA:1714:U:H5"	22:BA:1715:G:H5'	1.82	0.60
1:CA:568:G:N2	1:CA:883:C:C2	2.70	0.60
2:CB:66:LYS:NZ	2:CB:154:MET:O	2.33	0.60
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.02	0.60
22:DA:856:G:N2	22:DA:922:C:C2	2.70	0.60
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.37	0.60
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.83	0.60
22:DA:2199:A:C6	22:DA:2200:C:C2	2.89	0.60
22:DA:2815:C:HO2'	48:D0:41:HIS:HD1	1.47	0.60
22:DA:2819:G:OP1	57:DA:3808:HOH:O	2.16	0.60
1:AA:1359:C:O3'	57:AA:1777:HOH:O	2.16	0.60
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.01	0.60
22:BA:877:A:N6	22:BA:899:A:N6	2.49	0.60
24:BC:160:THR:O	24:BC:195:VAL:HG12	2.02	0.60
30:BI:34:ASN:OD1	30:BI:65:ARG:NH2	2.34	0.60
32:BK:34:GLY:O	32:BK:36:GLY:N	2.34	0.60
1:CA:411:A:C6	1:CA:429:U:C5	2.89	0.60
1:CA:1239:A:H2'	1:CA:1298:U:O4	2.01	0.60
22:DA:247:G:N7	22:DA:249:C:C2	2.69	0.60
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.32	0.60
22:DA:2033:A:OP2	57:DA:3476:HOH:O	2.16	0.60
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.01	0.60
22:DA:2474:U:H5"	22:DA:2475:C:OP2	2.02	0.60
1:AA:1048:G:N3	1:AA:1050:G:N7	2.50	0.60
6:AF:7:VAL:O	6:AF:7:VAL:CG2	2.50	0.60
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	2.29	0.60
22:BA:1348:C:C5	22:BA:1349:C:C5	2.90	0.60
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.36	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
40:BS:30:SER:OG	40:BS:31:GLN:N	2.34	0.60
1:CA:515:G:H2'	1:CA:516:U:O4'	2.02	0.60
1:CA:642:A:C5	8:CH:107:SER:HA	2.37	0.60
1:CA:778:G:O2'	11:CK:121:CYS:HB3	2.01	0.60
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.83	0.60
22:DA:60:G:O2'	22:DA:62:U:OP2	2.14	0.60
22:DA:1995:U:OP1	57:DA:3810:HOH:O	2.17	0.60
41:DT:34:VAL:HG21	41:DT:43:ILE:HD11	1.84	0.60
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.02	0.60
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.02	0.60
22:BA:17:G:C4	22:BA:524:G:N2	2.69	0.60
22:BA:983:A:N6	22:BA:984:A:N1	2.50	0.60
22:BA:2142:A:H2'	22:BA:2143:C:C6	2.36	0.60
22:BA:2309:A:C6	22:BA:2310:C:N4	2.69	0.60
51:B3:15:LYS:HD2	51:B3:23:LYS:HE2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:495:A:N1	1:CA:496:A:N6	2.49	0.60
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.02	0.60
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.84	0.60
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.83	0.60
42:DU:11:VAL:HG12	42:DU:72:ILE:HA	1.82	0.60
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.34	0.60
1:AA:251:G:C6	1:AA:266:G:C6	2.89	0.60
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.02	0.60
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.83	0.60
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.37	0.60
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.17	0.60
25:BD:172:VAL:HG21	25:BD:194:PRO:HD3	1.84	0.60
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.02	0.60
1:CA:736:C:H2'	1:CA:737:C:C6	2.37	0.60
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.01	0.60
10:CJ:6:ILE:HD12	10:CJ:76:ILE:HB	1.84	0.60
12:CL:30:LYS:HA	12:CL:30:LYS:HE3	1.83	0.60
22:DA:2004:G:P	57:DA:3803:HOH:O	2.55	0.60
22:DA:2502:G:H5'	22:DA:2503:A:H5"	1.83	0.60
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.37	0.60
24:DC:247:PRO:HG2	24:DC:248:TRP:CZ3	2.36	0.60
42:DU:44:LYS:O	42:DU:58:ILE:HA	2.01	0.60
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.01	0.60
4:AD:160:GLU:O	4:AD:162:ALA:N	2.35	0.60
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.32	0.60
14:AN:33:ASP:O	14:AN:35:ASN:N	2.34	0.60
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.02	0.60
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.02	0.60
22:BA:2458:G:C4	22:BA:2490:G:C2	2.90	0.60
53:B5:35:THR:O	53:B5:35:THR:OG1	2.17	0.60
1:CA:502:A:H2'	1:CA:503:C:O4'	2.00	0.60
2:CB:206:ALA:C	2:CB:208:ARG:N	2.55	0.60
3:CC:42:TYR:CE1	3:CC:90:VAL:HG21	2.37	0.60
6:CF:19:PRO:HA	6:CF:22:ILE:HB	1.84	0.60
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.67	0.60
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.83	0.60
22:DA:13:A:N1	22:DA:525:U:H2'	2.17	0.60
48:D0:55:ILE:O	48:D0:56:ALA:CB	2.50	0.60
1:AA:7:A:N6	5:AE:97:GLN:OE1	2.35	0.59
1:AA:9:G:OP2	5:AE:126:LYS:NZ	2.28	0.59
1:AA:1216:A:OP1	14:AN:3:LYS:HE2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:2:SER:C	8:AH:4:GLN:N	2.55	0.59
10:AJ:51:VAL:HB	14:AN:81:ARG:HB2	1.83	0.59
13:AM:3:ARG:HG3	13:AM:4:ILE:N	2.16	0.59
16:AP:42:ILE:O	16:AP:42:ILE:HG22	2.02	0.59
22:BA:780:G:H2'	22:BA:782:A:N7	2.17	0.59
22:BA:1250:G:C5'	38:BQ:6:ARG:HD3	2.32	0.59
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.02	0.59
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.84	0.59
41:BT:73:ARG:NH2	41:BT:73:ARG:HB3	2.17	0.59
1:CA:38:G:N2	1:CA:397:A:C4	2.70	0.59
1:CA:203:G:N2	1:CA:215:C:C2	2.70	0.59
1:CA:406:G:C2	1:CA:407:U:C6	2.90	0.59
1:CA:583:A:C2	1:CA:759:A:C5	2.90	0.59
1:CA:1124:G:C2	1:CA:1127:G:N2	2.70	0.59
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.02	0.59
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.17	0.59
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.01	0.59
22:DA:1856:U:O4	22:DA:1857:G:C6	2.55	0.59
22:DA:2262:U:N3	22:DA:2279:G:C2	2.70	0.59
22:DA:2845:U:H5"	37:DP:52:ASN:O	2.02	0.59
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
1:AA:64:G:C2	1:AA:67:C:N4	2.71	0.59
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.02	0.59
9:AI:84:THR:HG21	9:AI:103:PHE:HB2	1.84	0.59
22:BA:190:A:C4	22:BA:207:A:C2	2.90	0.59
22:BA:576:U:OP1	57:BA:3672:HOH:O	2.17	0.59
22:BA:813:U:H2'	22:BA:814:C:C6	2.37	0.59
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.32	0.59
22:BA:1142:A:C2	22:BA:1144:A:C8	2.91	0.59
29:BH:83:LYS:CE	1:CA:55:A:O2'	2.49	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
44:BW:68:LYS:HE2	44:BW:83:GLU:OE2	2.01	0.59
2:CB:123:ASP:O	2:CB:124:GLY:C	2.40	0.59
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.84	0.59
19:CS:66:MET:SD	19:CS:74:PHE:CZ	2.95	0.59
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.02	0.59
22:DA:1805:A:N3	22:DA:1813:G:N2	2.50	0.59
22:DA:2311:A:C2	27:DF:79:ILE:HG21	2.37	0.59
41:DT:44:LYS:HE3	41:DT:55:VAL:HB	1.84	0.59
2:AB:151:ILE:O	2:AB:152:LYS:C	2.40	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.18	0.59
12:AL:22:PRO:C	12:AL:24:LEU:N	2.56	0.59
22:BA:265:A:N1	22:BA:427:U:O2'	2.31	0.59
22:BA:528:A:C2	22:BA:2043:C:H5'	2.37	0.59
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.02	0.59
22:BA:1731:G:C6	22:BA:1733:G:C5	2.90	0.59
22:BA:1791:A:O2'	24:BC:206:GLY:HA2	2.02	0.59
22:BA:2032:G:N7	57:BA:3534:HOH:O	2.31	0.59
22:BA:2390:U:OP2	51:B3:35:LYS:NZ	2.35	0.59
1:CA:527:G:C2	1:CA:528:C:C5	2.90	0.59
1:CA:906:A:N6	57:CA:1823:HOH:O	2.35	0.59
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.01	0.59
3:CC:130:PHE:CE2	3:CC:131:ARG:HD3	2.37	0.59
14:CN:64:CYS:SG	14:CN:83:LYS:HG3	2.42	0.59
22:DA:753:A:H2'	22:DA:754:U:C6	2.37	0.59
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.10	0.59
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.03	0.59
22:DA:2415:G:C6	22:DA:2416:C:C4	2.90	0.59
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.02	0.59
38:DQ:47:TYR:OH	38:DQ:51:ARG:NH1	2.34	0.59
40:DS:33:LEU:HD21	40:DS:52:GLU:CG	2.32	0.59
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.70	0.59
2:AB:184:PHE:CE2	2:AB:198:PHE:CD2	2.90	0.59
2:AB:218:ALA:O	2:AB:222:ARG:HB2	2.02	0.59
22:BA:543:G:C2	22:BA:544:C:H1'	2.38	0.59
22:BA:761:A:N7	57:BA:3294:HOH:O	2.35	0.59
22:BA:1027:A:C6	22:BA:1126:A:C4	2.90	0.59
22:BA:1838:C:C6	22:BA:1899:A:C6	2.90	0.59
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.02	0.59
22:BA:2517:C:C5	22:BA:2542:A:C5	2.91	0.59
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.32	0.59
35:BN:36:THR:HG23	35:BN:37:THR:N	2.17	0.59
1:CA:295:C:C4	1:CA:296:U:C4	2.91	0.59
1:CA:1028:C:O2	1:CA:1028:C:H2'	2.01	0.59
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.38	0.59
22:DA:186:G:C2	22:DA:211:C:C2	2.90	0.59
22:DA:219:A:N6	22:DA:220:G:C6	2.70	0.59
39:DR:47:VAL:O	39:DR:47:VAL:CG1	2.49	0.59
1:AA:148:G:H2'	1:AA:149:A:O5'	2.03	0.59
1:AA:1048:G:C2	1:AA:1050:G:C5	2.91	0.59
1:AA:1417:G:C6	1:AA:1482:G:C6	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:43:GLY:HA3	11:AK:74:VAL:HG13	1.85	0.59
13:AM:73:ILE:O	13:AM:76:SER:OG	2.17	0.59
13:AM:95:LEU:HB3	13:AM:96:PRO:CD	2.32	0.59
22:BA:78:U:H2'	22:BA:79:C:C6	2.38	0.59
22:BA:2001:C:C2	22:BA:2002:G:C8	2.90	0.59
22:BA:2502:G:H5"	22:BA:2503:A:C5'	2.33	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
31:BJ:19:ASP:OD2	31:BJ:58:ASN:ND2	2.35	0.59
46:BY:37:LEU:HD11	46:BY:39:GLN:O	2.02	0.59
1:CA:269:C:H2'	1:CA:270:A:C8	2.38	0.59
1:CA:542:G:C2	1:CA:543:U:C6	2.91	0.59
1:CA:570:G:C4	1:CA:571:U:C5	2.91	0.59
17:CQ:52:GLU:HG2	17:CQ:53:CYS:SG	2.42	0.59
22:DA:132:G:N2	22:DA:148:U:C2	2.70	0.59
22:DA:1529:G:C6	22:DA:1543:G:N2	2.70	0.59
22:DA:2272:U:H5"	22:DA:2273:A:OP1	2.03	0.59
22:DA:2873:A:H4'	57:DA:3807:HOH:O	2.03	0.59
27:DF:10:ASP:OD2	27:DF:11:GLU:HG3	2.02	0.59
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.35	0.59
22:BA:319:G:C4	22:BA:333:G:N2	2.70	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.34	0.59
46:BY:61:ALA:O	46:BY:63:ALA:N	2.36	0.59
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.38	0.59
4:CD:31:LYS:HD3	4:CD:31:LYS:N	2.17	0.59
22:DA:142:A:H2'	22:DA:143:C:C6	2.37	0.59
22:DA:1109:C:C4	22:DA:1110:G:C6	2.90	0.59
22:DA:1173:U:O2'	22:DA:1176:U:O2	2.12	0.59
24:DC:67:PHE:HB3	24:DC:151:GLY:O	2.02	0.59
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	1.84	0.59
10:AJ:9:ARG:HB2	10:AJ:99:GLN:HB2	1.83	0.59
20:AT:83:ILE:O	20:AT:87:ALA:HB3	2.03	0.59
22:BA:415:A:N1	22:BA:2409:G:C6	2.71	0.59
22:BA:585:G:H5"	22:BA:586:A:P	2.42	0.59
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.38	0.59
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.33	0.59
48:B0:54:VAL:O	48:B0:55:ILE:C	2.41	0.59
1:CA:791:G:C6	1:CA:792:A:N7	2.71	0.59
1:CA:1219:A:N6	1:CA:1220:G:O6	2.36	0.59
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.02	0.59
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.03	0.59
22:DA:2146:C:H5"	22:DA:2147:A:OP1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.02	0.59
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.51	0.59
30:DI:39:CYS:HA	30:DI:42:PHE:HB3	1.83	0.59
33:DL:77:ILE:O	33:DL:110:VAL:O	2.20	0.59
1:AA:92:U:H2'	1:AA:93:U:C6	2.37	0.59
1:AA:673:A:H5"	6:AF:86:ARG:NH1	2.17	0.59
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.03	0.59
11:AK:23:ILE:HG13	11:AK:23:ILE:O	2.02	0.59
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.38	0.59
22:BA:2029:G:N1	22:BA:2033:A:OP2	2.32	0.59
22:BA:2721:A:C2	22:BA:2873:A:C5	2.91	0.59
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.03	0.59
1:CA:160:A:H2'	1:CA:161:A:O4'	2.02	0.59
1:CA:202:G:O2'	1:CA:468:A:C8	2.56	0.59
2:CB:99:GLY:O	2:CB:103:ASN:N	2.35	0.59
12:CL:74:LEU:HD21	12:CL:104:CYS:SG	2.43	0.59
14:CN:30:ILE:HG22	14:CN:35:ASN:OD1	2.03	0.59
16:CP:20:VAL:HG21	16:CP:32:PHE:CB	2.32	0.59
22:DA:279:A:C2	22:DA:362:A:H4'	2.38	0.59
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.38	0.59
22:DA:2199:A:C4	22:DA:2225:A:C2	2.90	0.59
22:DA:2415:G:C2	22:DA:2416:C:C2	2.91	0.59
25:DD:151:THR:O	25:DD:152:PRO:C	2.39	0.59
37:DP:65:SER:O	37:DP:67:GLY:N	2.36	0.59
2:AB:106:THR:O	2:AB:107:VAL:CB	2.51	0.59
2:AB:111:ILE:CG1	2:AB:151:ILE:HG12	2.32	0.59
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.38	0.59
22:BA:1219:U:H2'	22:BA:1220:G:H8	1.68	0.59
22:BA:2714:G:P	57:BA:3549:HOH:O	2.60	0.59
24:BC:237:GLY:O	57:BC:305:HOH:O	2.17	0.59
41:BT:56:GLU:HB2	41:BT:88:LYS:HA	1.85	0.59
1:CA:441:A:C2	1:CA:497:G:C6	2.91	0.59
1:CA:1511:G:C5	1:CA:1512:U:C5	2.91	0.59
3:CC:173:VAL:O	3:CC:175:LEU:N	2.36	0.59
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.08	0.59
22:DA:2345:G:C6	22:DA:2347:C:N4	2.71	0.59
22:DA:2585:U:HO2'	22:DA:2586:U:P	2.26	0.59
23:DB:58:A:H2'	23:DB:59:A:O4'	2.03	0.59
1:AA:554:A:H5'	12:AL:26:ALA:HB1	1.84	0.59
11:AK:23:ILE:HG22	11:AK:32:VAL:HG22	1.84	0.59
11:AK:126:LYS:C	21:AU:34:ARG:CZ	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.32	0.59
1:CA:1458:G:H5'	20:CT:27:MET:HB3	1.85	0.59
4:CD:46:PRO:O	4:CD:47:ARG:C	2.41	0.59
5:CE:74:VAL:HB	5:CE:76:LEU:HD11	1.85	0.59
5:CE:115:LEU:O	5:CE:120:VAL:HG23	2.02	0.59
12:CL:90:LEU:CB	12:CL:93:VAL:HG21	2.33	0.59
17:CQ:12:VAL:HG23	17:CQ:57:ASP:O	2.03	0.59
22:DA:590:A:C6	22:DA:591:U:C4	2.90	0.59
22:DA:608:A:H2'	22:DA:609:A:C8	2.37	0.59
22:DA:1823:G:O6	57:DA:3658:HOH:O	2.16	0.59
22:DA:2819:G:H2'	22:DA:2821:A:N7	2.18	0.59
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.18	0.59
24:DC:226:ASN:ND2	57:DC:304:HOH:O	2.24	0.59
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.38	0.58
1:AA:152:A:N6	1:AA:170:U:C2	2.71	0.58
1:AA:451:A:OP2	16:AP:70:ARG:NH2	2.36	0.58
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.33	0.58
2:AB:47:VAL:HB	2:AB:48:PRO:HD3	1.85	0.58
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.38	0.58
22:BA:1057:A:C2	22:BA:1086:A:C2	2.91	0.58
22:BA:2309:A:N6	22:BA:2310:C:N4	2.51	0.58
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.02	0.58
35:BN:117:ASP:O	35:BN:119:SER:N	2.36	0.58
1:CA:32:A:H2'	1:CA:32:A:N3	2.18	0.58
1:CA:216:U:H2'	1:CA:217:C:C6	2.38	0.58
1:CA:657:U:O2	15:CO:22:THR:CG2	2.51	0.58
7:CG:115:SER:HB3	7:CG:118:LEU:HG	1.85	0.58
22:DA:248:G:H5'	22:DA:250:G:N7	2.18	0.58
22:DA:720:U:H2'	22:DA:721:A:C8	2.38	0.58
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.18	0.58
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.38	0.58
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.33	0.58
1:AA:259:G:H2'	1:AA:260:G:O4'	2.03	0.58
2:AB:188:ASP:HB2	2:AB:204:ASP:OD1	2.03	0.58
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.65	0.58
4:AD:147:GLU:OE1	4:AD:148:LYS:NZ	2.35	0.58
5:AE:25:VAL:O	5:AE:26:LYS:C	2.41	0.58
22:BA:608:A:N1	22:BA:609:A:C2	2.71	0.58
37:BP:26:VAL:HG23	37:BP:85:SER:O	2.03	0.58
42:BU:18:ASP:O	42:BU:20:GLY:N	2.36	0.58
48:B0:55:ILE:O	48:B0:56:ALA:HB3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:10:LEU:HB2	52:B4:33:HIS:CE1	2.38	0.58
1:CA:228:A:H4'	16:CP:63:GLN:HG2	1.85	0.58
4:CD:124:MET:HG3	4:CD:146:ARG:HG2	1.84	0.58
15:CO:87:LEU:O	15:CO:88:ARG:HB3	2.04	0.58
20:CT:3:ASN:O	20:CT:5:LYS:N	2.35	0.58
22:DA:297:G:H5"	42:DU:85:PHE:CB	2.34	0.58
22:DA:771:G:C2	22:DA:772:C:C6	2.91	0.58
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.39	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
31:DJ:31:GLU:HG3	31:DJ:142:ILE:HD11	1.85	0.58
1:AA:96:U:O2'	1:AA:97:G:OP2	2.20	0.58
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.03	0.58
1:AA:1181:G:C2	1:AA:1182:G:N2	2.70	0.58
4:AD:152:GLN:O	4:AD:153:SER:C	2.41	0.58
8:AH:55:THR:C	8:AH:57:PRO:HD3	2.23	0.58
17:AQ:4:LYS:HG3	17:AQ:7:THR:CG2	2.33	0.58
22:BA:181:A:C2	22:BA:182:A:C4	2.92	0.58
22:BA:1000:A:C6	22:BA:1001:A:C6	2.91	0.58
22:BA:1006:C:C2	22:BA:1138:G:N2	2.70	0.58
22:BA:1259:G:O2'	22:BA:1260:A:H5'	2.03	0.58
22:BA:2021:C:OP1	48:B0:9:THR:HG21	2.03	0.58
27:BF:73:SER:OG	27:BF:80:ARG:HA	2.03	0.58
31:BJ:49:ASP:OD1	31:BJ:121:LYS:CE	2.49	0.58
38:BQ:101:PHE:O	38:BQ:102:ASP:HB2	2.03	0.58
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.85	0.58
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.04	0.58
2:CB:208:ARG:O	2:CB:212:LEU:N	2.35	0.58
22:DA:388:G:N7	22:DA:390:U:H2'	2.18	0.58
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.03	0.58
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.38	0.58
24:DC:15:HIS:O	24:DC:204:VAL:HG21	2.03	0.58
39:DR:61:ALA:HB2	39:DR:98:ILE:HD13	1.85	0.58
1:AA:32:A:OP1	1:AA:398:U:H1'	2.04	0.58
1:AA:188:C:O2	1:AA:188:C:C2'	2.52	0.58
1:AA:338:A:N1	1:AA:351:G:O6	2.36	0.58
1:AA:572:A:H5'	1:AA:573:A:OP2	2.02	0.58
1:AA:913:A:H4'	1:AA:914:A:OP1	2.04	0.58
1:AA:1125:U:C5	1:AA:1127:G:C5	2.92	0.58
2:AB:10:LEU:HG	2:AB:11:LYS:N	2.19	0.58
2:AB:15:HIS:O	2:AB:16:PHE:C	2.41	0.58
6:AF:17:GLN:NE2	6:AF:17:GLN:O	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:15:ASP:C	17:AQ:17:MET:SD	2.82	0.58
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.85	0.58
22:BA:991:C:C2'	22:BA:992:C:O5'	2.50	0.58
22:BA:998:C:C2'	22:BA:999:U:O5'	2.52	0.58
22:BA:1153:C:N4	22:BA:1154:G:N1	2.51	0.58
22:BA:1324:G:C2	22:BA:1328:A:N1	2.70	0.58
22:BA:2360:G:H1'	33:BL:60:ARG:HD3	1.84	0.58
22:BA:2571:U:C2'	22:BA:2572:A:OP1	2.50	0.58
24:BC:258:ARG:NH1	24:BC:264:ASP:OD2	2.36	0.58
27:BF:175:PHE:HD1	27:BF:177:PHE:CE1	2.21	0.58
9:CI:95:ARG:O	9:CI:99:ARG:N	2.32	0.58
18:CR:25:ASP:O	18:CR:28:THR:N	2.36	0.58
22:DA:533:G:H5'	38:DQ:24:TYR:CE2	2.39	0.58
22:DA:655:A:H4'	22:DA:656:G:OP1	2.03	0.58
22:DA:1366:A:C4	22:DA:1367:A:C8	2.91	0.58
22:DA:2234:G:C6	22:DA:2235:G:N7	2.72	0.58
40:DS:84:ARG:HB2	40:DS:96:ILE:HG12	1.85	0.58
16:AP:71:VAL:O	16:AP:75:ILE:HG13	2.03	0.58
22:BA:1356:G:N2	22:BA:1357:C:H1'	2.19	0.58
22:BA:2192:U:C2	22:BA:2193:G:C8	2.91	0.58
22:BA:2298:A:C4	22:BA:2321:U:C5	2.90	0.58
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.38	0.58
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.18	0.58
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.18	0.58
22:DA:35:G:H1'	22:DA:454:A:C4	2.39	0.58
22:DA:607:U:O4	22:DA:619:G:H2'	2.03	0.58
22:DA:1439:A:N7	22:DA:1552:A:H2	2.01	0.58
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.04	0.58
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	1.86	0.58
26:DE:108:ILE:HD13	26:DE:181:ILE:HG12	1.86	0.58
37:DP:92:VAL:HG21	37:DP:97:LEU:HD11	1.84	0.58
1:AA:1349:A:C2	1:AA:1374:A:C5	2.91	0.58
22:BA:528:A:C8	22:BA:528:A:C3'	2.86	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.39	0.58
3:CC:145:GLY:O	3:CC:146:ALA:O	2.20	0.58
15:CO:46:HIS:O	15:CO:48:LYS:N	2.36	0.58
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.03	0.58
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.18	0.58
46:DY:9:LYS:N	46:DY:12:GLU:HG3	2.19	0.58
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	2.03	0.58
22:BA:2517:C:C6	22:BA:2542:A:C5	2.92	0.58
24:BC:189:ARG:O	24:BC:190:ALA:HB2	2.03	0.58
27:BF:52:ASN:HB3	27:BF:147:ASP:OD1	2.04	0.58
29:BH:93:SER:HG	1:CA:357:G:H4'	1.68	0.58
20:CT:7:ALA:HB1	20:CT:10:ARG:HB2	1.86	0.58
22:DA:21:A:C2	22:DA:520:G:N3	2.71	0.58
22:DA:186:G:N2	22:DA:211:C:C2	2.71	0.58
22:DA:301:G:C2	22:DA:302:C:C2	2.91	0.58
22:DA:776:G:C8	22:DA:793:A:C4	2.91	0.58
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.36	0.58
22:DA:1809:A:N6	22:DA:1810:A:C6	2.72	0.58
1:AA:188:C:O2	1:AA:188:C:H2'	2.04	0.58
1:AA:223:A:H2'	1:AA:224:U:C6	2.39	0.58
1:AA:1210:C:O4'	1:AA:1214:C:C5	2.57	0.58
1:AA:1371:G:C6	1:AA:1372:U:C4	2.91	0.58
17:AQ:68:SER:O	17:AQ:69:LYS:C	2.42	0.58
22:BA:575:A:C2'	22:BA:576:U:H5'	2.34	0.58
22:BA:1180:U:H2'	22:BA:1181:U:C5'	2.33	0.58
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.04	0.58
22:BA:2462:C:H2'	22:BA:2463:C:C6	2.38	0.58
29:BH:97:ARG:CD	1:CA:369:G:O2'	2.44	0.58
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.33	0.58
1:CA:227:G:H2'	1:CA:228:A:O4'	2.03	0.58
1:CA:829:G:C6	1:CA:858:G:N2	2.72	0.58
22:DA:575:A:C2	22:DA:576:U:C6	2.92	0.58
31:DJ:34:ARG:O	31:DJ:39:LYS:HB2	2.02	0.58
35:DN:118:ARG:O	35:DN:119:SER:CB	2.52	0.58
22:BA:997:G:OP1	38:BQ:92:ARG:CG	2.51	0.58
22:BA:1260:A:N6	57:BA:3276:HOH:O	2.36	0.58
22:BA:1499:C:C4	22:BA:1500:G:N7	2.71	0.58
23:BB:94:A:O2'	23:BB:95:U:H5'	2.03	0.58
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.36	0.58
1:CA:511:C:C2	1:CA:512:U:C6	2.92	0.58
1:CA:841:C:H3'	1:CA:843:U:H5"	1.84	0.58
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.39	0.58
22:DA:24:G:C6	22:DA:25:U:C4	2.92	0.58
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.57	0.58
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.19	0.58
2:AB:99:GLY:O	2:AB:103:ASN:N	2.36	0.58
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:59:LEU:HD13	8:AH:60:GLU:N	2.18	0.58
16:AP:51:ARG:HG2	16:AP:51:ARG:HH11	1.69	0.58
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.04	0.58
22:BA:2780:G:H4'	22:BA:2781:A:OP2	2.03	0.58
26:BE:149:ILE:HG23	26:BE:188:MET:HG2	1.86	0.58
30:BI:92:LYS:HB3	30:BI:95:LYS:HG2	1.84	0.58
53:B5:48:LEU:HA	53:B5:208:THR:CB	2.34	0.58
1:CA:1036:A:H3'	1:CA:1037:C:C6	2.39	0.58
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.04	0.58
2:CB:163:VAL:HG23	2:CB:185:ALA:HB2	1.85	0.58
9:CI:25:ASN:O	9:CI:62:ASP:HA	2.03	0.58
22:DA:328:U:O3'	42:DU:66:GLN:HG3	2.04	0.58
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.51	0.58
22:DA:1809:A:C5	22:DA:1810:A:C5	2.92	0.58
22:DA:2468:A:C2	22:DA:2481:G:C2	2.92	0.58
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	1.85	0.58
31:DJ:84:ILE:O	31:DJ:84:ILE:HG13	2.04	0.58
38:DQ:47:TYR:CZ	38:DQ:51:ARG:NH1	2.72	0.58
45:DX:41:GLU:O	45:DX:44:LYS:HD2	2.04	0.58
1:AA:80:A:C2	1:AA:90:C:N3	2.72	0.57
1:AA:186:C:H2'	1:AA:187:G:O4'	2.04	0.57
1:AA:1375:A:C6	1:AA:1376:U:C4	2.92	0.57
2:AB:106:THR:O	2:AB:107:VAL:HB	2.03	0.57
7:AG:43:VAL:O	7:AG:47:LEU:HB2	2.04	0.57
7:AG:149:LYS:O	7:AG:151:PHE:O	2.21	0.57
22:BA:264:C:O2'	22:BA:265:A:H2'	2.03	0.57
22:BA:404:A:H1'	22:BA:405:U:OP2	2.04	0.57
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.39	0.57
22:BA:1355:G:O2'	22:BA:1356:G:H5'	2.03	0.57
22:BA:2180:U:H5"	22:BA:2181:U:OP2	2.03	0.57
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.03	0.57
1:CA:206:C:H2'	1:CA:207:C:C4'	2.34	0.57
2:CB:35:ARG:O	2:CB:38:VAL:N	2.35	0.57
5:CE:149:SER:O	5:CE:153:VAL:HG13	2.03	0.57
22:DA:503:A:N3	22:DA:506:G:C8	2.72	0.57
22:DA:574:A:P	57:DA:3263:HOH:O	2.62	0.57
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.19	0.57
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.19	0.57
22:DA:2297:A:N1	22:DA:2321:U:C5	2.71	0.57
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.39	0.57
1:AA:763:G:C2	1:AA:764:C:C2	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:20:THR:OG1	2:AB:21:ARG:N	2.35	0.57
2:AB:148:LEU:HA	2:AB:151:ILE:HG22	1.86	0.57
11:AK:71:ALA:O	11:AK:73:ALA:N	2.37	0.57
22:BA:761:A:C8	57:BA:3294:HOH:O	2.52	0.57
22:BA:1249:U:C2	33:BL:18:ARG:NH1	2.72	0.57
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.34	0.57
22:BA:2507:C:P	57:BA:3714:HOH:O	2.61	0.57
24:BC:13:ARG:HA	24:BC:16:VAL:CG2	2.34	0.57
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.68	0.57
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.37	0.57
53:B5:191:ARG:O	53:B5:195:ARG:CB	2.52	0.57
1:CA:475:C:H2'	1:CA:476:U:C6	2.39	0.57
1:CA:1133:G:C2	1:CA:1142:G:C2	2.92	0.57
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.04	0.57
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.84	0.57
22:DA:78:U:OP2	46:DY:2:LYS:CD	2.52	0.57
22:DA:563:A:C6	22:DA:2018:G:C4	2.92	0.57
22:DA:649:G:H2'	22:DA:650:C:C6	2.39	0.57
22:DA:813:U:H1'	22:DA:1226:A:N3	2.18	0.57
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.03	0.57
22:DA:2594:C:N4	22:DA:2595:G:O6	2.37	0.57
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.52	0.57
41:DT:73:ARG:NH1	41:DT:74:ILE:O	2.36	0.57
1:AA:990:C:N3	1:AA:991:U:C4	2.72	0.57
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.86	0.57
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.40	0.57
22:BA:2779:U:C5	22:BA:2781:A:C2	2.92	0.57
23:BB:41:G:H5"	27:BF:66:LEU:HD13	1.86	0.57
32:BK:34:GLY:O	32:BK:35:VAL:C	2.42	0.57
1:CA:147:G:H2'	1:CA:148:G:C8	2.40	0.57
1:CA:1330:U:H4'	13:CM:23:TYR:CE1	2.39	0.57
3:CC:63:SER:OG	3:CC:64:ILE:N	2.36	0.57
11:CK:91:PRO:O	11:CK:92:GLY:C	2.43	0.57
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.39	0.57
22:DA:1445:G:N2	22:DA:1547:C:C2	2.73	0.57
22:DA:1654:A:P	35:DN:1:MET:HA	2.43	0.57
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.57
42:DU:34:VAL:HG22	42:DU:65:ILE:O	2.04	0.57
1:AA:202:G:N2	1:AA:216:U:O2	2.37	0.57
1:AA:1168:U:O2	1:AA:1168:U:C2'	2.52	0.57
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:22:LYS:N	8:AH:65:TYR:OH	2.37	0.57
8:AH:88:ARG:O	8:AH:122:GLY:HA3	2.04	0.57
9:AI:90:TYR:O	9:AI:91:ASP:CG	2.43	0.57
14:AN:48:LEU:O	14:AN:50:THR:N	2.37	0.57
22:BA:1385:A:C4	22:BA:1386:C:C5	2.91	0.57
23:BB:47:C:OP2	36:BO:3:LYS:HE3	2.04	0.57
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.20	0.57
52:B4:11:CYS:SG	52:B4:33:HIS:CE1	2.97	0.57
53:B5:204:GLY:O	53:B5:205:ALA:CB	2.52	0.57
1:CA:366:A:O2'	1:CA:394:G:N2	2.38	0.57
1:CA:667:G:C2	1:CA:740:U:O2	2.57	0.57
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.04	0.57
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.69	0.57
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.19	0.57
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.52	0.57
19:CS:11:ILE:HG13	19:CS:12:ASP:N	2.19	0.57
19:CS:58:VAL:HG11	19:CS:75:ALA:HA	1.86	0.57
22:DA:537:G:N1	22:DA:555:G:C2	2.72	0.57
22:DA:1167:C:C2'	22:DA:1168:G:H5'	2.34	0.57
22:DA:1177:G:H2'	22:DA:1178:C:O4'	2.03	0.57
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.05	0.57
32:DK:105:ARG:NH1	37:DP:34:GLU:HG3	2.19	0.57
35:DN:103:ARG:HB2	35:DN:110:MET:HE3	1.85	0.57
45:DX:2:SER:O	45:DX:4:VAL:N	2.37	0.57
1:AA:438:U:C2	1:AA:494:G:C6	2.92	0.57
1:AA:1031:C:C2'	1:AA:1032:G:OP2	2.51	0.57
2:AB:200:ILE:O	2:AB:201:PRO:O	2.23	0.57
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.69	0.57
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.34	0.57
22:BA:277:G:O2'	22:BA:361:G:N1	2.37	0.57
22:BA:1091:G:O2'	22:BA:1092:C:OP2	2.22	0.57
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.37	0.57
22:BA:1845:G:OP1	24:BC:256:LYS:NZ	2.37	0.57
22:BA:1971:U:OP2	22:BA:1971:U:H4'	2.04	0.57
22:BA:2611:C:OP2	57:BA:3540:HOH:O	2.17	0.57
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.38	0.57
1:CA:1072:G:C5	1:CA:1073:U:C4	2.93	0.57
3:CC:83:ASP:O	3:CC:85:GLU:N	2.38	0.57
7:CG:136:LYS:O	7:CG:140:ASP:HB2	2.04	0.57
12:CL:65:SER:HB2	12:CL:82:ILE:HD11	1.85	0.57
22:DA:1773:A:N3	22:DA:1978:A:C2	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2296:U:H4'	22:DA:2297:A:OP1	2.02	0.57
23:DB:106:G:H2'	23:DB:107:G:O4'	2.04	0.57
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.57
46:DY:11:VAL:HA	46:DY:14:LEU:HB2	1.87	0.57
1:AA:11:G:C6	1:AA:12:U:C4	2.92	0.57
1:AA:108:G:O6	20:AT:10:ARG:HG2	2.04	0.57
1:AA:496:A:C2	1:AA:497:G:C5	2.92	0.57
1:AA:596:A:C6	1:AA:645:G:C2	2.92	0.57
22:BA:1917:U:O2	22:BA:1918:A:O4'	2.22	0.57
22:BA:2191:A:C6	22:BA:2192:U:C4	2.92	0.57
22:BA:2324:U:H3'	22:BA:2325:G:H5'	1.84	0.57
22:BA:2495:G:O2'	22:BA:2496:C:H5'	2.05	0.57
22:BA:2564:A:C6	22:BA:2565:A:C6	2.92	0.57
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.57
1:CA:406:G:C2	1:CA:407:U:C5	2.92	0.57
1:CA:412:A:HO2'	1:CA:413:G:H4'	1.68	0.57
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.39	0.57
18:CR:35:GLU:HB2	21:CU:19:PHE:CZ	2.40	0.57
22:DA:118:A:H1'	22:DA:178:G:O4'	2.05	0.57
22:DA:301:G:C6	22:DA:317:G:C6	2.93	0.57
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.04	0.57
22:DA:2004:G:C5	22:DA:2005:A:C8	2.92	0.57
22:DA:2056:G:C2	22:DA:2057:G:C8	2.92	0.57
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.20	0.57
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.39	0.57
25:DD:12:THR:HG21	37:DP:5:ILE:HG23	1.86	0.57
1:AA:79:G:N2	1:AA:91:U:O4	2.36	0.57
1:AA:872:A:C8	1:AA:874:G:C8	2.93	0.57
1:AA:1313:U:O4	19:AS:4:SER:HA	2.05	0.57
22:BA:116:C:N4	22:BA:117:G:C6	2.72	0.57
22:BA:539:G:C5	22:BA:540:C:C5	2.93	0.57
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.20	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.04	0.57
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.87	0.57
1:CA:518:C:H4'	1:CA:519:C:O5'	2.03	0.57
1:CA:822:U:C2	1:CA:823:C:C5	2.93	0.57
1:CA:890:G:O2'	1:CA:891:U:OP2	2.21	0.57
1:CA:957:U:O2	1:CA:959:A:C8	2.58	0.57
17:CQ:12:VAL:HG12	17:CQ:13:VAL:H	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.52	0.57
21:CU:37:PHE:HA	21:CU:40:LYS:HE3	1.85	0.57
22:DA:224:U:C4	22:DA:225:C:C5	2.93	0.57
22:DA:2585:U:O2'	22:DA:2586:U:O5'	2.21	0.57
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.05	0.57
28:DG:89:LEU:HB2	28:DG:129:THR:HG22	1.85	0.57
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.40	0.57
2:AB:32:PHE:CG	2:AB:32:PHE:O	2.57	0.57
11:AK:126:LYS:C	21:AU:34:ARG:NH2	2.58	0.57
12:AL:44:LYS:HB2	12:AL:45:PRO:HD3	1.86	0.57
15:AO:64:ARG:NH2	15:AO:68:ASP:OD2	2.38	0.57
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.35	0.57
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.04	0.57
22:BA:2189:U:H2'	22:BA:2190:G:O4'	2.04	0.57
22:BA:2794:C:H2'	22:BA:2795:C:H6	1.70	0.57
28:BG:74:SER:HA	28:BG:77:ILE:HG13	1.85	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
1:CA:577:G:C8	1:CA:816:A:N1	2.73	0.57
1:CA:1343:G:O2'	9:CI:123:ARG:HD2	2.04	0.57
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.04	0.57
12:CL:44:LYS:HB2	12:CL:45:PRO:HD3	1.87	0.57
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.86	0.57
22:DA:320:A:H2'	26:DE:131:THR:HG21	1.87	0.57
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.40	0.57
22:DA:1308:A:N6	22:DA:1309:G:C2	2.73	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
30:DI:5:VAL:HA	30:DI:8:TYR:CE1	2.40	0.57
36:DO:79:ALA:HA	36:DO:115:LEU:HD22	1.86	0.57
1:AA:921:U:H2'	1:AA:922:G:O4'	2.04	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.20	0.57
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.05	0.57
22:BA:892:A:H2'	22:BA:892:A:N3	2.20	0.57
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.05	0.57
22:BA:1467:U:C4	22:BA:1546:G:C2	2.93	0.57
24:BC:15:HIS:O	24:BC:204:VAL:HG21	2.04	0.57
26:BE:12:LEU:HD23	26:BE:13:THR:N	2.20	0.57
33:BL:68:SER:O	33:BL:69:ARG:CB	2.52	0.57
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.19	0.57
1:CA:484:G:C5	1:CA:486:U:H1'	2.39	0.57
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.86	0.57
21:CU:24:GLU:HA	21:CU:28:VAL:HG22	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:161:A:C3'	22:DA:162:U:H5"	2.34	0.57
22:DA:697:G:C2	22:DA:766:U:O2	2.58	0.57
22:DA:1428:C:C4	22:DA:1569:A:H5"	2.40	0.57
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.53	0.57
23:DB:81:G:C6	23:DB:82:U:C4	2.93	0.57
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.87	0.57
46:DY:41:HIS:O	46:DY:45:GLN:HG2	2.04	0.57
1:AA:8:A:N6	4:AD:202:GLU:O	2.38	0.57
1:AA:568:G:N3	1:AA:569:C:C5	2.73	0.57
1:AA:820:U:H4'	1:AA:821:G:OP2	2.05	0.57
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.04	0.57
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.77	0.57
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.40	0.57
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.69	0.57
27:BF:2:ALA:O	27:BF:3:LYS:C	2.43	0.57
28:BG:11:VAL:CG2	28:BG:11:VAL:O	2.53	0.57
30:BI:18:ALA:O	30:BI:19:ASN:HB3	2.05	0.57
1:CA:562:U:OP2	12:CL:14:ARG:NH2	2.38	0.57
1:CA:1072:G:C6	1:CA:1073:U:C4	2.93	0.57
7:CG:88:PRO:HD2	7:CG:151:PHE:O	2.05	0.57
15:CO:19:ALA:O	15:CO:20:ASN:CB	2.52	0.57
22:DA:897:C:H2'	22:DA:898:C:C6	2.40	0.57
22:DA:981:A:N1	22:DA:2027:G:O2'	2.32	0.57
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.23	0.57
22:DA:2093:G:C6	22:DA:2225:A:C8	2.93	0.57
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.38	0.57
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.40	0.57
31:DJ:64:VAL:HG11	31:DJ:89:PHE:CZ	2.40	0.57
1:AA:1418:A:N1	22:BA:1948:G:O2'	2.38	0.56
1:AA:1520:C:C2	1:AA:1521:C:C5	2.93	0.56
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.38	0.56
19:AS:36:ARG:NH2	19:AS:75:ALA:O	2.38	0.56
22:BA:197:A:C6	22:BA:198:C:C2	2.93	0.56
22:BA:1840:G:C2	22:BA:1841:U:C2	2.92	0.56
22:BA:2051:A:H4'	22:BA:2052:A:OP1	2.05	0.56
22:BA:2318:G:C6	22:BA:2319:G:N1	2.72	0.56
22:BA:2564:A:C5	22:BA:2565:A:C6	2.93	0.56
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.36	0.56
23:BB:91:C:OP2	34:BM:18:ARG:HG2	2.04	0.56
24:BC:7:LYS:HB3	24:BC:8:PRO:CD	2.35	0.56
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	1.86	0.56
1:CA:1198:G:OP1	57:CA:1835:HOH:O	2.17	0.56
5:CE:81:LEU:CD1	5:CE:120:VAL:HG11	2.35	0.56
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.20	0.56
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	1.86	0.56
22:DA:55:G:C2	22:DA:56:A:C8	2.93	0.56
22:DA:341:C:H2'	22:DA:342:A:C8	2.40	0.56
22:DA:674:G:H1'	26:DE:69:ARG:CD	2.35	0.56
22:DA:2469:A:O2'	34:DM:55:ARG:NH2	2.38	0.56
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.04	0.56
24:DC:68:LYS:HG2	24:DC:151:GLY:HA2	1.86	0.56
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.86	0.56
1:AA:109:A:C6	1:AA:326:G:C6	2.93	0.56
1:AA:194:C:OP1	57:AA:1880:HOH:O	2.18	0.56
1:AA:600:A:H2'	1:AA:601:G:C8	2.39	0.56
1:AA:665:A:H2'	1:AA:732:C:O2	2.05	0.56
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.52	0.56
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.52	0.56
1:AA:1319:A:C8	1:AA:1323:G:C5	2.92	0.56
4:AD:150:LYS:O	4:AD:151:LYS:C	2.43	0.56
13:AM:25:VAL:HG12	13:AM:29:ARG:HB3	1.87	0.56
15:AO:89:ARG:NH1	22:BA:714:U:C6	2.73	0.56
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.40	0.56
22:BA:1142:A:C4	22:BA:1144:A:C8	2.93	0.56
22:BA:1334:G:C6	22:BA:1335:C:C4	2.93	0.56
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.05	0.56
22:BA:2800:A:H3'	22:BA:2801:G:C5'	2.33	0.56
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.05	0.56
1:CA:552:U:C2	1:CA:553:A:C8	2.92	0.56
1:CA:1431:A:C6	1:CA:1432:G:C6	2.92	0.56
20:CT:67:ILE:HD11	20:CT:71:LYS:HD3	1.87	0.56
22:DA:584:C:N4	57:DA:3282:HOH:O	2.38	0.56
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.36	0.56
22:DA:956:G:O6	34:DM:14:LYS:NZ	2.38	0.56
22:DA:1428:C:C5	22:DA:1569:A:H5"	2.40	0.56
22:DA:1581:G:C5	22:DA:1582:C:C4	2.93	0.56
22:DA:2345:G:H5'	22:DA:2347:C:O4'	2.05	0.56
1:AA:196:A:N3	1:AA:222:C:H1'	2.20	0.56
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.05	0.56
1:AA:946:A:C2	1:AA:1236:A:C2	2.93	0.56
1:AA:1226:C:O2'	13:AM:110:LYS:NZ	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1517:G:H1'	22:BA:1919:A:O3'	2.04	0.56
2:AB:15:HIS:HB2	2:AB:209:ALA:HB2	1.87	0.56
4:AD:197:GLU:N	4:AD:197:GLU:OE2	2.38	0.56
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.87	0.56
7:AG:47:LEU:O	7:AG:51:ALA:HB2	2.05	0.56
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	1.88	0.56
10:AJ:36:VAL:HG23	10:AJ:76:ILE:HG23	1.86	0.56
22:BA:195:A:C5	22:BA:198:C:H5	2.23	0.56
22:BA:205:G:O2'	22:BA:206:U:P	2.63	0.56
22:BA:585:G:C5'	22:BA:586:A:OP1	2.53	0.56
22:BA:1014:A:C4	22:BA:1149:G:N2	2.73	0.56
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.85	0.56
22:BA:1156:A:C8	38:BQ:51:ARG:HG2	2.40	0.56
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.20	0.56
22:BA:1266:G:O2'	22:BA:2012:G:O6	2.15	0.56
22:BA:1426:G:H1'	22:BA:1572:A:N6	2.19	0.56
22:BA:2267:A:H5"	22:BA:2268:A:H5'	1.87	0.56
22:BA:2502:G:C5'	22:BA:2503:A:C5'	2.84	0.56
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.05	0.56
24:BC:121:ASP:O	24:BC:122:ALA:O	2.23	0.56
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.19	0.56
34:BM:4:PRO:HG3	34:BM:70:ASP:HA	1.87	0.56
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.65	0.56
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.04	0.56
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.05	0.56
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.57	0.56
2:CB:91:PHE:O	2:CB:150:GLY:HA3	2.05	0.56
15:CO:25:THR:HG23	15:CO:66:LEU:HD12	1.86	0.56
18:CR:58:ALA:O	18:CR:61:ARG:N	2.38	0.56
22:DA:377:G:C5	22:DA:378:C:C5	2.94	0.56
22:DA:420:C:H2'	22:DA:421:C:C6	2.40	0.56
22:DA:483:A:H1'	42:DU:45:HIS:HB2	1.87	0.56
22:DA:987:C:H2'	22:DA:988:A:O4'	2.05	0.56
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.04	0.56
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.20	0.56
22:DA:1826:G:C6	22:DA:1827:U:C4	2.94	0.56
22:DA:1831:G:N2	22:DA:1975:G:C4	2.74	0.56
22:DA:1973:G:C5	22:DA:1974:C:C4	2.94	0.56
22:DA:2131:U:H5'	22:DA:2132:U:H5"	1.88	0.56
22:DA:2514:U:H2'	22:DA:2515:C:C6	2.40	0.56
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.20	0.56
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.05	0.56
27:DF:126:GLY:HA2	27:DF:163:ASP:HA	1.87	0.56
33:DL:77:ILE:HD11	33:DL:101:ILE:HG21	1.86	0.56
36:DO:53:THR:O	36:DO:59:ALA:HB2	2.05	0.56
43:DV:14:LYS:HD3	43:DV:18:ARG:NH2	2.20	0.56
1:AA:100:G:N7	1:AA:101:A:N7	2.53	0.56
1:AA:107:G:H2'	1:AA:108:G:H5"	1.87	0.56
1:AA:1182:G:C4'	1:AA:1183:U:H5'	2.34	0.56
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.41	0.56
4:AD:198:HIS:CE1	4:AD:199:LEU:HD23	2.41	0.56
6:AF:81:ASN:O	6:AF:84:VAL:HG12	2.05	0.56
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.85	0.56
15:AO:4:SER:O	15:AO:8:THR:HG23	2.05	0.56
19:AS:44:MET:HA	19:AS:47:LEU:HD12	1.88	0.56
35:BN:78:LYS:C	35:BN:79:LEU:O	2.41	0.56
38:BQ:57:PHE:O	38:BQ:60:LEU:N	2.38	0.56
43:BV:1:MET:SD	43:BV:1:MET:C	2.83	0.56
1:CA:1309:G:C6	1:CA:1329:A:C2	2.94	0.56
8:CH:9:ASP:OD2	8:CH:13:ARG:NH1	2.38	0.56
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.35	0.56
13:CM:10:PRO:O	13:CM:11:ASP:CB	2.53	0.56
22:DA:781:A:H2'	22:DA:1777:U:O2'	2.06	0.56
22:DA:893:C:H2'	22:DA:894:U:O4'	2.04	0.56
22:DA:1206:G:C6	22:DA:1207:C:C4	2.93	0.56
22:DA:1654:A:O2'	25:DD:118:PHE:O	2.20	0.56
22:DA:2503:A:H8	55:DA:3001:VIF:C10	2.18	0.56
22:DA:2571:U:C4	22:DA:2574:G:C8	2.93	0.56
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.41	0.56
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.56
1:AA:935:A:C2	1:AA:936:C:C2	2.92	0.56
1:AA:982:U:H4'	1:AA:983:A:H5'	1.88	0.56
13:AM:66:GLU:O	13:AM:68:ASP:N	2.39	0.56
14:AN:68:GLY:O	14:AN:69:ARG:C	2.43	0.56
17:AQ:69:LYS:O	17:AQ:70:THR:HB	2.05	0.56
21:AU:12:PHE:N	21:AU:12:PHE:CD2	2.74	0.56
22:BA:322:A:C5	22:BA:340:A:C2	2.94	0.56
24:BC:3:VAL:HG12	24:BC:19:VAL:HG22	1.88	0.56
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	1.87	0.56
1:CA:159:G:N2	1:CA:162:A:OP2	2.39	0.56
1:CA:716:A:N3	11:CK:119:ASN:O	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1118:U:OP1	9:CI:11:ARG:NH1	2.39	0.56
1:CA:1361:G:C2	1:CA:1362:A:N7	2.73	0.56
2:CB:210:VAL:CG2	2:CB:211:THR:N	2.68	0.56
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.88	0.56
19:CS:63:THR:HG22	19:CS:64:ASP:N	2.20	0.56
22:DA:1855:U:C5	22:DA:1856:U:C5	2.93	0.56
28:DG:19:ILE:O	28:DG:21:GLY:N	2.39	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
30:DI:6:GLN:O	30:DI:7:ALA:HB2	2.06	0.56
39:DR:81:LYS:N	39:DR:81:LYS:CD	2.69	0.56
47:DZ:3:LYS:O	47:DZ:4:THR:O	2.23	0.56
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.88	0.56
1:AA:1374:A:N3	1:AA:1375:A:C8	2.74	0.56
12:AL:86:ARG:NE	12:AL:88:LYS:HB3	2.20	0.56
22:BA:404:A:C8	22:BA:406:G:C6	2.93	0.56
22:BA:1536:C:H4’	22:BA:1537:G:H5”	1.87	0.56
22:BA:1720:U:H2’	22:BA:1721:G:O4’	2.05	0.56
22:BA:2800:A:C2	22:BA:2895:G:H1’	2.41	0.56
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.05	0.56
37:BP:113:ARG:O	37:BP:114:LEU:HG	2.05	0.56
51:B3:45:ARG:N	51:B3:46:PRO:HD2	2.20	0.56
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.41	0.56
5:CE:82:GLN:OE1	5:CE:150:PRO:HD3	2.05	0.56
17:CQ:14:SER:C	17:CQ:17:MET:HE1	2.26	0.56
22:DA:2311:A:O2’	22:DA:2312:U:OP1	2.21	0.56
24:DC:10:SER:O	24:DC:13:ARG:HB3	2.05	0.56
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.35	0.56
1:AA:923:A:O4’	1:AA:1398:A:C2	2.58	0.56
1:AA:1141:C:O2’	1:AA:1142:G:P	2.63	0.56
1:AA:1375:A:C5	1:AA:1376:U:C5	2.93	0.56
1:AA:1377:A:O2’	7:AG:2:PRO:HB3	2.04	0.56
2:AB:126:PHE:CD2	2:AB:126:PHE:N	2.73	0.56
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	1.86	0.56
12:AL:51:LYS:HD3	12:AL:51:LYS:N	2.21	0.56
22:BA:1056:G:H4’	22:BA:1086:A:C8	2.41	0.56
22:BA:1219:U:H2’	22:BA:1220:G:C8	2.41	0.56
22:BA:1301:A:C4	22:BA:1303:G:C8	2.94	0.56
22:BA:2311:A:C2	27:BF:85:ILE:HD11	2.41	0.56
23:BB:42:C:C5	27:BF:66:LEU:HD22	2.40	0.56
30:BI:67:PHE:CD2	30:BI:67:PHE:N	2.74	0.56
39:BR:68:ARG:NH1	39:BR:90:ARG:HD3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:41:ARG:HH11	44:BW:41:ARG:HG3	1.70	0.56
1:CA:804:U:H5"	1:CA:805:C:OP2	2.05	0.56
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.37	0.56
2:CB:119:THR:O	2:CB:120:GLN:CB	2.54	0.56
2:CB:206:ALA:O	2:CB:207:ILE:C	2.42	0.56
3:CC:72:ARG:HB3	3:CC:75:ILE:HG22	1.88	0.56
15:CO:18:ASP:C	15:CO:18:ASP:OD1	2.44	0.56
20:CT:74:ARG:O	20:CT:78:ASN:OD1	2.24	0.56
22:DA:777:G:N7	22:DA:793:A:H2	2.02	0.56
22:DA:1820:U:OP1	24:DC:177:ARG:HG2	2.06	0.56
22:DA:1965:C:OP1	22:DA:1966:A:C2'	2.54	0.56
22:DA:2550:G:O6	22:DA:2551:C:N4	2.38	0.56
27:DF:5:HIS:HB2	27:DF:97:TRP:CG	2.41	0.56
31:DJ:64:VAL:CG1	31:DJ:89:PHE:CZ	2.89	0.56
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.26	0.56
3:AC:97:VAL:HB	3:AC:98:PRO:CD	2.36	0.56
21:AU:25:LYS:HD2	21:AU:26:ALA:N	2.21	0.56
22:BA:587:C:C6	22:BA:671:C:H1'	2.41	0.56
22:BA:1139:G:O2'	22:BA:1140:C:H5'	2.06	0.56
22:BA:1171:G:C5	22:BA:1172:C:C4	2.94	0.56
22:BA:1356:G:C2	22:BA:1357:C:C2	2.94	0.56
22:BA:1916:A:N3	22:BA:1917:U:H1'	2.21	0.56
22:BA:2204:G:O5'	24:BC:150:LYS:HE3	2.05	0.56
22:BA:2296:U:H4'	22:BA:2297:A:OP1	2.06	0.56
22:BA:2452:C:C4	22:BA:2453:A:C6	2.94	0.56
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	1.88	0.56
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	1.87	0.56
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.69	0.56
37:BP:31:TRP:CD2	37:BP:40:LEU:CD1	2.89	0.56
41:BT:2:ILE:HG12	41:BT:7:LEU:HD11	1.88	0.56
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.53	0.56
1:CA:211:G:O2'	1:CA:212:G:C4'	2.53	0.56
1:CA:371:A:H1'	1:CA:482:A:H1'	1.86	0.56
1:CA:511:C:C2	1:CA:512:U:C5	2.94	0.56
8:CH:78:VAL:N	8:CH:126:ILE:O	2.38	0.56
22:DA:197:A:H2'	22:DA:197:A:N3	2.21	0.56
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.19	0.56
22:DA:747:U:C5	22:DA:2613:U:C5	2.93	0.56
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.06	0.56
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.21	0.56
22:DA:2521:C:C2	22:DA:2545:G:N2	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.89	0.56
26:DE:5:LEU:O	26:DE:7:ASP:N	2.38	0.56
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.21	0.56
1:AA:108:G:C6	20:AT:10:ARG:HG2	2.41	0.56
1:AA:276:G:OP1	17:AQ:17:MET:HE2	2.06	0.56
1:AA:775:G:O2'	1:AA:776:G:H5'	2.06	0.56
1:AA:1032:G:H3'	1:AA:1033:G:O4'	2.06	0.56
1:AA:1311:A:C2	1:AA:1327:C:N3	2.74	0.56
2:AB:126:PHE:N	2:AB:126:PHE:HD2	2.04	0.56
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.88	0.56
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.06	0.56
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.36	0.56
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.06	0.56
22:BA:528:A:H2	22:BA:2043:C:H5'	1.69	0.56
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.79	0.56
22:BA:1494:A:C2	22:BA:1495:A:C4	2.94	0.56
22:BA:1651:G:OP1	35:BN:40:LYS:HE3	2.06	0.56
22:BA:1941:C:C4	22:BA:1942:C:C4	2.94	0.56
22:BA:2032:G:C8	57:BA:3534:HOH:O	2.58	0.56
25:BD:4:LEU:HD23	25:BD:101:PHE:CE1	2.41	0.56
28:BG:69:ARG:C	28:BG:69:ARG:HD3	2.27	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
30:BI:100:LYS:HB3	30:BI:139:VAL:HB	1.88	0.56
1:CA:242:G:N2	1:CA:285:C:C2	2.74	0.56
1:CA:302:G:O2'	1:CA:556:C:H5"	2.05	0.56
1:CA:337:G:H2'	1:CA:338:A:C8	2.41	0.56
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.87	0.56
12:CL:21:VAL:N	12:CL:22:PRO:HD3	2.21	0.56
22:DA:569:U:H5"	22:DA:821:A:C2	2.41	0.56
22:DA:607:U:H5	22:DA:619:G:C4	2.24	0.56
22:DA:1152:C:H3'	57:DA:3360:HOH:O	2.05	0.56
22:DA:1206:G:C5	22:DA:1207:C:C5	2.94	0.56
22:DA:1297:C:O2'	22:DA:1302:A:N1	2.36	0.56
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.41	0.56
38:DQ:94:ILE:HD13	39:DR:11:GLN:HB2	1.87	0.56
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.86	0.56
1:AA:137:U:H1'	1:AA:227:G:N2	2.21	0.56
1:AA:1168:U:O2	1:AA:1168:U:H2'	2.06	0.56
4:AD:123:ILE:N	4:AD:123:ILE:CD1	2.68	0.56
5:AE:50:TYR:CE2	5:AE:134:ILE:HD11	2.40	0.56
7:AG:73:VAL:HG12	7:AG:90:GLU:HG3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:146:GLU:O	7:AG:149:LYS:HB3	2.05	0.56
13:AM:107:ARG:HG2	13:AM:107:ARG:HH11	1.70	0.56
16:AP:51:ARG:HH11	16:AP:51:ARG:CG	2.19	0.56
21:AU:25:LYS:HD2	21:AU:26:ALA:H	1.70	0.56
22:BA:1452:G:C4	22:BA:2702:G:C6	2.94	0.56
28:BG:10:VAL:O	28:BG:10:VAL:HG13	2.06	0.56
30:BI:122:ILE:O	30:BI:122:ILE:HG22	2.06	0.56
37:BP:14:LYS:HE3	37:BP:77:HIS:HA	1.88	0.56
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.04	0.56
1:CA:1074:G:H4'	2:CB:103:ASN:CB	2.35	0.56
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.41	0.56
2:CB:134:ALA:O	2:CB:138:THR:N	2.38	0.56
6:CF:86:ARG:CG	6:CF:86:ARG:HH11	2.19	0.56
6:CF:97:THR:O	6:CF:98:GLU:CB	2.54	0.56
12:CL:25:GLU:O	12:CL:26:ALA:C	2.41	0.56
22:DA:242:G:H5"	51:D3:64:TYR:CZ	2.40	0.56
22:DA:491:G:C6	22:DA:492:A:C6	2.93	0.56
22:DA:547:A:H3'	22:DA:548:G:H5'	1.88	0.56
22:DA:635:C:O2'	22:DA:639:U:H5"	2.05	0.56
22:DA:1312:U:C2	22:DA:1603:A:C2	2.94	0.56
22:DA:2831:G:OP1	25:DD:56:LYS:NZ	2.35	0.56
28:DG:133:LEU:O	28:DG:133:LEU:HD12	2.05	0.56
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.05	0.56
50:D2:16:HIS:HB3	50:D2:21:ARG:NH1	2.21	0.56
1:AA:381:C:H2'	1:AA:382:A:O4'	2.06	0.55
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.05	0.55
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.41	0.55
2:AB:50:PHE:HA	2:AB:53:ALA:HB3	1.87	0.55
3:AC:140:ASN:HA	3:AC:143:ARG:CB	2.35	0.55
7:AG:147:ALA:O	11:AK:61:PHE:CD1	2.59	0.55
8:AH:10:MET:HE1	8:AH:33:LYS:HA	1.88	0.55
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.21	0.55
12:AL:59:ASN:C	12:AL:59:ASN:OD1	2.44	0.55
22:BA:545:U:H2'	22:BA:546:U:O3'	2.06	0.55
22:BA:894:U:H2'	22:BA:895:U:C6	2.41	0.55
22:BA:1808:A:N1	45:BX:28:ARG:HD2	2.22	0.55
22:BA:2673:G:N3	22:BA:2674:G:C8	2.74	0.55
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.36	0.55
28:BG:40:ALA:HB2	28:BG:58:TYR:CG	2.41	0.55
1:CA:411:A:C5	1:CA:429:U:C5	2.94	0.55
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.40	0.55
10:CJ:80:THR:O	10:CJ:84:VAL:HB	2.06	0.55
22:DA:511:U:O4	22:DA:512:G:N1	2.38	0.55
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.40	0.55
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.42	0.55
23:DB:14:U:O2	23:DB:14:U:C2'	2.54	0.55
28:DG:27:LYS:HG3	28:DG:27:LYS:O	2.06	0.55
50:D2:18:PHE:O	50:D2:19:ARG:C	2.44	0.55
1:AA:1145:A:O2'	1:AA:1146:A:P	2.65	0.55
2:AB:61:ALA:HA	2:AB:65:GLY:CA	2.37	0.55
2:AB:67:ILE:O	2:AB:68:LEU:HB2	2.07	0.55
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.79	0.55
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.36	0.55
22:BA:26:G:C6	22:BA:27:G:N1	2.75	0.55
22:BA:593:U:H2'	22:BA:594:U:C6	2.40	0.55
22:BA:614:A:HO2'	22:BA:615:U:P	2.25	0.55
22:BA:1008:A:N6	22:BA:1136:G:C6	2.74	0.55
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	2.94	0.55
22:BA:1467:U:C4	22:BA:1546:G:N2	2.74	0.55
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.06	0.55
22:BA:1587:G:C4	22:BA:1588:G:C8	2.95	0.55
22:BA:2566:A:N1	32:BK:28:SER:OG	2.36	0.55
26:BE:44:ARG:HG2	26:BE:45:ALA:N	2.21	0.55
33:BL:109:LYS:HG2	33:BL:126:ARG:CB	2.35	0.55
39:BR:68:ARG:CZ	39:BR:90:ARG:HD3	2.37	0.55
1:CA:68:G:C6	1:CA:69:G:H1'	2.41	0.55
1:CA:833:G:C5	1:CA:834:U:C5	2.94	0.55
1:CA:987:G:C6	1:CA:988:G:C5	2.94	0.55
2:CB:102:THR:O	2:CB:103:ASN:HB3	2.06	0.55
5:CE:25:VAL:O	5:CE:28:GLY:N	2.39	0.55
22:DA:1651:G:N2	22:DA:2007:U:O2	2.39	0.55
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.24	0.55
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.05	0.55
1:AA:15:G:H4'	5:AE:29:ARG:NH1	2.22	0.55
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.06	0.55
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.05	0.55
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.06	0.55
21:AU:14:VAL:HG13	21:AU:16:LEU:HD21	1.88	0.55
22:BA:1141:U:OP2	31:BJ:65:THR:HG21	2.06	0.55
22:BA:1508:A:H4'	22:BA:1508:A:OP1	2.06	0.55
22:BA:1905:C:H2'	22:BA:1930:G:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1911:U:H2'	22:BA:1918:A:C2	2.42	0.55
22:BA:2478:A:H5'	52:B4:32:LYS:CD	2.32	0.55
22:BA:2688:G:C8	22:BA:2719:G:C6	2.94	0.55
29:BH:91:PHE:HB3	1:CA:55:A:N3	2.21	0.55
35:BN:24:MET:SD	35:BN:44:LEU:HD22	2.46	0.55
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.21	0.55
47:BZ:35:THR:HG22	47:BZ:36:VAL:N	2.21	0.55
1:CA:158:G:H2'	1:CA:159:G:H5"	1.87	0.55
1:CA:200:G:C3'	1:CA:201:G:H5"	2.36	0.55
2:CB:27:MET:SD	2:CB:193:PRO:HD3	2.47	0.55
5:CE:75:ALA:O	5:CE:147:MET:HE2	2.06	0.55
20:CT:5:LYS:O	20:CT:7:ALA:N	2.39	0.55
22:DA:42:A:C2	22:DA:438:G:C2	2.94	0.55
22:DA:153:U:H2'	22:DA:154:U:C6	2.42	0.55
22:DA:188:G:C6	22:DA:189:G:C4	2.95	0.55
22:DA:279:A:N6	22:DA:361:G:O2'	2.38	0.55
22:DA:547:A:H3'	22:DA:548:G:C5'	2.34	0.55
22:DA:674:G:C1'	26:DE:69:ARG:HD3	2.37	0.55
22:DA:1415:U:H2'	22:DA:1416:G:H4'	1.89	0.55
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.42	0.55
22:DA:2611:C:OP2	57:DA:3538:HOH:O	2.17	0.55
40:DS:33:LEU:HD21	40:DS:52:GLU:HG3	1.88	0.55
1:AA:316:C:C2	1:AA:317:U:C5	2.94	0.55
1:AA:609:A:N7	57:AA:1852:HOH:O	2.33	0.55
1:AA:1072:G:C5	1:AA:1073:U:C4	2.94	0.55
1:AA:1491:G:H5"	12:AL:43:LYS:HG3	1.88	0.55
2:AB:71:GLY:HA2	2:AB:164:ILE:HG22	1.88	0.55
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.07	0.55
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.06	0.55
11:AK:76:GLU:N	11:AK:76:GLU:CD	2.59	0.55
11:AK:76:GLU:CA	22:BA:2141:G:OP1	2.54	0.55
11:AK:102:ALA:O	11:AK:103:ALA:C	2.44	0.55
12:AL:74:LEU:HD21	12:AL:104:CYS:HA	1.87	0.55
13:AM:90:ARG:NH1	13:AM:95:LEU:HB2	2.21	0.55
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.07	0.55
22:BA:1607:C:N4	22:BA:1622:G:C8	2.74	0.55
22:BA:2193:G:O2'	22:BA:2194:U:H5'	2.06	0.55
22:BA:2412:A:H5"	22:BA:2413:G:OP2	2.07	0.55
25:BD:101:PHE:HE2	25:BD:203:VAL:CG1	2.20	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
42:BU:72:ILE:HD13	42:BU:83:VAL:CG2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:179:ARG:O	3:CC:206:GLU:O	2.24	0.55
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.20	0.55
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.22	0.55
26:DE:149:ILE:HG23	26:DE:188:MET:HG2	1.89	0.55
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.20	0.55
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.06	0.55
3:AC:7:PRO:HG2	3:AC:184:TYR:CD1	2.42	0.55
5:AE:72:ILE:HD13	5:AE:145:GLU:CD	2.27	0.55
9:AI:22:LYS:NZ	9:AI:62:ASP:OD2	2.39	0.55
9:AI:90:TYR:O	9:AI:91:ASP:CB	2.55	0.55
18:AR:22:ASP:OD2	18:AR:24:LYS:N	2.38	0.55
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.36	0.55
22:BA:29:U:H2'	22:BA:30:G:C8	2.41	0.55
22:BA:591:U:HO2'	51:B3:2:PRO:N	2.05	0.55
22:BA:608:A:C2	22:BA:609:A:C4	2.95	0.55
22:BA:1056:G:HO2'	22:BA:1086:A:H8	1.52	0.55
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.37	0.55
22:BA:1317:G:C2	22:BA:1336:A:C2	2.95	0.55
22:BA:2582:G:OP2	22:BA:2583:G:OP2	2.24	0.55
22:BA:2648:G:N2	22:BA:2673:G:H1'	2.22	0.55
24:BC:260:ASN:O	24:BC:262:ARG:N	2.38	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
1:CA:542:G:N3	1:CA:543:U:C6	2.75	0.55
1:CA:585:G:C6	1:CA:586:C:C4	2.95	0.55
2:CB:134:ALA:O	2:CB:138:THR:HG23	2.07	0.55
2:CB:135:LEU:O	2:CB:138:THR:N	2.40	0.55
6:CF:88:MET:HE1	18:CR:64:TYR:CD2	2.42	0.55
22:DA:847:U:O2	22:DA:934:U:H1'	2.06	0.55
22:DA:1087:G:N1	22:DA:1089:A:C2	2.75	0.55
22:DA:1644:C:O2	22:DA:1644:C:H2'	2.06	0.55
22:DA:1670:C:C5	22:DA:1671:U:C4	2.94	0.55
34:DM:70:ASP:C	34:DM:70:ASP:OD1	2.44	0.55
42:DU:14:LEU:HD11	42:DU:71:ALA:HB2	1.89	0.55
47:DZ:52:SER:HA	47:DZ:55:VAL:HG22	1.89	0.55
1:AA:17:U:H2'	1:AA:18:C:C6	2.42	0.55
1:AA:736:C:H2'	1:AA:737:C:C6	2.42	0.55
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.55	0.55
5:AE:131:THR:OG1	5:AE:131:THR:O	2.25	0.55
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.07	0.55
14:AN:83:LYS:NZ	14:AN:86:GLU:OE1	2.35	0.55
22:BA:219:A:N3	22:BA:234:U:O2'	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1070:A:C2	30:BI:10:LYS:HG3	2.42	0.55
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.87	0.55
22:BA:1866:A:N1	22:BA:1876:A:C8	2.74	0.55
22:BA:2131:U:H5'	22:BA:2132:U:H5"	1.89	0.55
55:BA:3001:VIF:C13	55:BA:3001:VIF:N	2.70	0.55
28:BG:19:ILE:HG12	28:BG:24:ILE:HD13	1.88	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
35:BN:32:GLU:HG3	35:BN:120:GLU:HG2	1.89	0.55
48:B0:55:ILE:HG22	48:B0:56:ALA:H	1.72	0.55
1:CA:243:A:H4'	1:CA:244:U:H5"	1.89	0.55
1:CA:519:C:OP2	12:CL:47:SER:OG	2.24	0.55
1:CA:572:A:H5'	1:CA:573:A:OP2	2.07	0.55
1:CA:661:G:C2	1:CA:662:U:C6	2.95	0.55
1:CA:991:U:C4	1:CA:1212:U:H1'	2.40	0.55
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.36	0.55
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.41	0.55
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.72	0.55
2:CB:52:GLU:HG3	2:CB:56:GLU:HG2	1.89	0.55
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.39	0.55
5:CE:101:GLU:HA	5:CE:122:ASN:HB2	1.88	0.55
10:CJ:48:ARG:HH11	10:CJ:48:ARG:CG	2.20	0.55
22:DA:1469:A:C2	22:DA:1470:A:C5	2.94	0.55
22:DA:1649:G:N1	22:DA:2009:A:C6	2.75	0.55
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.42	0.55
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.07	0.55
1:AA:204:G:H2'	1:AA:205:A:O4'	2.06	0.55
1:AA:209:U:H4'	1:AA:210:C:OP2	2.06	0.55
1:AA:408:A:C2	1:AA:435:A:C2	2.95	0.55
1:AA:810:C:O2	1:AA:810:C:H2'	2.06	0.55
1:AA:992:U:H4'	1:AA:993:G:O5'	2.06	0.55
1:AA:1367:C:H5'	10:AJ:62:ARG:NH1	2.22	0.55
2:AB:20:THR:O	2:AB:21:ARG:NH1	2.39	0.55
4:AD:190:ASP:OD2	4:AD:190:ASP:N	2.36	0.55
5:AE:109:GLY:O	5:AE:110:ALA:HB3	2.07	0.55
22:BA:477:A:H2'	22:BA:478:A:C8	2.41	0.55
22:BA:969:G:C6	22:BA:970:U:C4	2.95	0.55
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.54	0.55
22:BA:1086:A:H5"	22:BA:1087:G:OP1	2.07	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
31:BJ:27:ARG:HH11	31:BJ:27:ARG:HG2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:36:VAL:O	34:BM:36:VAL:HG12	2.07	0.55
36:BO:15:ARG:HG2	36:BO:93:ASP:OD1	2.07	0.55
39:BR:21:ARG:CZ	39:BR:93:PHE:CE1	2.90	0.55
1:CA:1003:G:C2	1:CA:1038:C:C2	2.95	0.55
5:CE:137:VAL:O	5:CE:138:ARG:HB3	2.06	0.55
22:DA:450:G:N1	22:DA:454:A:OP2	2.31	0.55
22:DA:728:G:C2	22:DA:730:A:C4	2.95	0.55
22:DA:1083:U:O2	22:DA:1086:A:N1	2.40	0.55
22:DA:1943:U:H4'	22:DA:1944:U:OP1	2.07	0.55
22:DA:2043:C:OP1	22:DA:2777:G:O2'	2.21	0.55
22:DA:2195:U:C2	22:DA:2196:C:C6	2.95	0.55
22:DA:2249:U:N3	22:DA:2253:G:OP2	2.39	0.55
22:DA:2571:U:N3	22:DA:2574:G:C8	2.74	0.55
24:DC:33:LEU:HA	24:DC:64:ILE:HD12	1.89	0.55
46:DY:1:MET:O	46:DY:5:GLU:HG3	2.07	0.55
1:AA:145:G:N2	1:AA:178:C:N3	2.54	0.55
1:AA:203:G:N2	1:AA:215:C:C2	2.75	0.55
1:AA:772:U:H2'	1:AA:773:G:O5'	2.07	0.55
1:AA:929:G:C6	1:AA:930:C:C4	2.95	0.55
1:AA:956:U:C4	1:AA:957:U:C5	2.95	0.55
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.41	0.55
22:BA:381:G:OP1	45:BX:18:ARG:NH2	2.40	0.55
22:BA:388:G:C8	22:BA:390:U:C6	2.95	0.55
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.55
40:BS:38:TYR:CE1	48:B0:28:LEU:HD21	2.42	0.55
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.88	0.55
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.55	0.55
1:CA:77:A:H2'	1:CA:78:A:O4'	2.05	0.55
1:CA:261:U:OP2	20:CT:71:LYS:HD2	2.07	0.55
1:CA:295:C:C4	1:CA:296:U:C5	2.95	0.55
9:CI:57:MET:SD	9:CI:58:VAL:N	2.78	0.55
22:DA:689:A:H2'	22:DA:690:G:C8	2.42	0.55
22:DA:1344:U:O2'	22:DA:1345:C:P	2.65	0.55
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.06	0.55
22:DA:2346:A:H4'	22:DA:2347:C:OP2	2.07	0.55
51:D3:34:THR:HG23	51:D3:35:LYS:N	2.22	0.55
1:AA:74:A:C2	1:AA:97:G:C4	2.94	0.55
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.40	0.55
1:AA:992:U:O2	1:AA:1043:G:N7	2.39	0.55
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.37	0.55
20:AT:83:ILE:O	20:AT:87:ALA:CB	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:714:U:H2'	22:BA:716:A:N7	2.22	0.55
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.07	0.55
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.42	0.55
22:BA:1820:U:O4	24:BC:198:ALA:HB1	2.06	0.55
22:BA:1918:A:H1'	22:BA:1919:A:N7	2.22	0.55
22:BA:1919:A:H2'	22:BA:1919:A:N3	2.22	0.55
22:BA:2139:U:C2	22:BA:2140:G:C8	2.95	0.55
23:BB:29:A:C2	23:BB:56:G:C2	2.95	0.55
23:BB:77:U:C2'	23:BB:78:A:H5'	2.36	0.55
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.21	0.55
1:CA:16:A:H2'	1:CA:17:U:H5'	1.88	0.55
1:CA:545:C:H5'	4:CD:69:GLU:HG2	1.88	0.55
1:CA:702:A:N6	22:DA:1848:A:C6	2.75	0.55
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.42	0.55
12:CL:22:PRO:O	12:CL:24:LEU:N	2.39	0.55
22:DA:636:G:N1	33:DL:76:GLU:OE2	2.38	0.55
22:DA:2796:U:C4	22:DA:2798:U:C4	2.95	0.55
24:DC:92:ALA:HB3	24:DC:104:ILE:HD12	1.88	0.55
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD2	2.39	0.55
33:DL:61:LEU:O	51:D3:13:ARG:HD3	2.07	0.55
35:DN:75:ILE:O	35:DN:79:LEU:HD12	2.06	0.55
35:DN:83:LEU:CD2	35:DN:115:LEU:HD13	2.37	0.55
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.89	0.55
3:AC:26:THR:HG23	14:AN:76:LYS:HZ2	1.71	0.55
4:AD:30:THR:O	4:AD:31:LYS:C	2.46	0.55
9:AI:22:LYS:HZ2	9:AI:24:GLY:HA3	1.71	0.55
11:AK:34:ILE:HG13	11:AK:74:VAL:HG21	1.89	0.55
14:AN:31:ILE:HG23	14:AN:45:VAL:HB	1.87	0.55
22:BA:84:A:N1	22:BA:98:G:O2'	2.26	0.55
22:BA:204:A:O4'	22:BA:206:U:C6	2.60	0.55
22:BA:590:A:H2'	22:BA:591:U:C6	2.42	0.55
22:BA:991:C:H2'	22:BA:992:C:O5'	2.07	0.55
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.07	0.55
22:BA:1482:G:C2	22:BA:1483:G:C8	2.95	0.55
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.40	0.55
25:BD:12:THR:HG21	37:BP:9:GLU:CG	2.37	0.55
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.37	0.55
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.07	0.55
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.47	0.55
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.37	0.55
1:CA:477:C:H2'	1:CA:478:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:666:G:C6	1:CA:741:G:C6	2.95	0.55
1:CA:891:U:C5	1:CA:906:A:C2	2.95	0.55
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.07	0.55
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.72	0.55
4:CD:32:CYS:O	4:CD:33:LYS:HB2	2.07	0.55
22:DA:53:A:C2	22:DA:179:C:H4'	2.42	0.55
22:DA:92:U:H2'	22:DA:93:G:O4'	2.06	0.55
22:DA:219:A:C6	22:DA:220:G:C6	2.95	0.55
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.42	0.55
22:DA:1409:U:C5	57:DA:3622:HOH:O	2.54	0.55
22:DA:1783:A:C6	22:DA:2587:A:C2	2.95	0.55
23:DB:48:U:H4'	36:DO:100:HIS:NE2	2.21	0.55
23:DB:62:C:H2'	23:DB:63:C:C6	2.41	0.55
26:DE:143:LEU:HB3	26:DE:146:VAL:HG11	1.90	0.55
31:DJ:140:LEU:HD12	31:DJ:141:ASP:N	2.22	0.55
40:DS:95:ARG:CG	40:DS:95:ARG:O	2.54	0.55
41:DT:21:SER:O	41:DT:24:MET:N	2.40	0.55
1:AA:168:G:C6	1:AA:169:C:N3	2.75	0.54
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.71	0.54
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.89	0.54
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.88	0.54
22:BA:15:G:C6	22:BA:16:C:C4	2.95	0.54
22:BA:236:C:O2'	22:BA:237:C:H5'	2.07	0.54
22:BA:636:G:O2'	22:BA:638:G:O2'	2.20	0.54
22:BA:990:A:H5"	22:BA:991:C:OP1	2.07	0.54
22:BA:2297:A:N1	22:BA:2321:U:C5	2.75	0.54
29:BH:83:LYS:HD2	1:CA:55:A:HO2'	1.67	0.54
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.42	0.54
48:B0:15:MET:O	48:B0:18:SER:HB3	2.07	0.54
1:CA:18:C:N3	1:CA:19:A:C8	2.75	0.54
1:CA:756:C:O2'	1:CA:757:U:H5'	2.06	0.54
1:CA:1166:G:C6	1:CA:1168:U:H5"	2.43	0.54
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.07	0.54
22:DA:183:C:H1'	22:DA:433:C:H1'	1.89	0.54
22:DA:537:G:OP1	22:DA:995:C:N4	2.41	0.54
22:DA:2133:G:C2	22:DA:2158:A:N6	2.75	0.54
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.07	0.54
39:DR:68:ARG:HD3	39:DR:92:TRP:CE2	2.43	0.54
41:DT:47:VAL:O	41:DT:47:VAL:HG12	2.07	0.54
1:AA:1288:A:N3	1:AA:1352:C:O2'	2.35	0.54
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:53:SER:HB2	3:AC:112:ASP:OD2	2.08	0.54
3:AC:140:ASN:HA	3:AC:143:ARG:HB3	1.88	0.54
4:AD:130:VAL:HG11	4:AD:135:TYR:CD1	2.42	0.54
5:AE:18:VAL:HA	5:AE:34:THR:O	2.07	0.54
14:AN:63:ARG:HG2	14:AN:68:GLY:O	2.07	0.54
16:AP:77:GLU:C	16:AP:79:ASN:N	2.60	0.54
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.72	0.54
22:BA:1754:A:C6	22:BA:1755:A:C6	2.96	0.54
22:BA:1869:G:C2	22:BA:1873:G:C6	2.95	0.54
22:BA:1917:U:O4	22:BA:1918:A:C6	2.60	0.54
22:BA:2187:U:C4	22:BA:2188:U:C4	2.96	0.54
22:BA:2297:A:C2	22:BA:2298:A:C8	2.95	0.54
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.07	0.54
24:BC:162:VAL:HG12	24:BC:163:GLN:N	2.21	0.54
24:BC:252:THR:O	24:BC:253:LYS:C	2.45	0.54
43:BV:38:LEU:HD23	43:BV:40:ILE:HD11	1.88	0.54
46:BY:1:MET:HA	46:BY:4:LYS:HB2	1.88	0.54
1:CA:403:C:OP1	4:CD:134:SER:HB3	2.06	0.54
1:CA:824:G:H1'	8:CH:2:SER:N	2.21	0.54
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.22	0.54
8:CH:18:GLN:HG2	8:CH:63:LEU:HD13	1.88	0.54
9:CI:54:LEU:O	9:CI:55:VAL:HG13	2.06	0.54
22:DA:1319:C:O2'	22:DA:1320:C:H5'	2.07	0.54
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.06	0.54
22:DA:2810:A:C8	22:DA:2811:G:C8	2.95	0.54
40:DS:107:VAL:HG13	40:DS:107:VAL:O	2.06	0.54
42:DU:96:PHE:CZ	42:DU:103:ILE:HG12	2.43	0.54
1:AA:448:A:C4	1:AA:487:A:C2	2.95	0.54
2:AB:71:GLY:O	2:AB:93:ASN:HA	2.07	0.54
2:AB:94:HIS:CE1	2:AB:146:ASN:HB2	2.42	0.54
16:AP:23:ASP:O	16:AP:25:ARG:N	2.40	0.54
22:BA:192:C:H2'	22:BA:193:U:H5'	1.89	0.54
22:BA:586:A:C2	22:BA:1254:A:C2	2.96	0.54
22:BA:712:G:C2'	22:BA:713:G:H5'	2.38	0.54
22:BA:744:U:H2'	22:BA:745:G:O4'	2.07	0.54
22:BA:776:G:H4'	22:BA:777:G:O5'	2.07	0.54
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.59	0.54
22:BA:1877:A:N6	22:BA:1878:G:C6	2.75	0.54
22:BA:2496:C:C2'	22:BA:2497:A:O5'	2.55	0.54
22:BA:2687:U:O4	22:BA:2688:G:N1	2.40	0.54
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
40:BS:18:ARG:HG2	40:BS:76:VAL:HG23	1.88	0.54
1:CA:109:A:C6	1:CA:327:A:C6	2.95	0.54
1:CA:186:C:O4'	20:CT:76:LYS:HD2	2.08	0.54
1:CA:374:A:C5	1:CA:375:U:C5	2.95	0.54
1:CA:1439:G:C2	1:CA:1463:U:O2	2.60	0.54
15:CO:49:ASP:OD1	15:CO:52:SER:OG	2.25	0.54
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.07	0.54
15:CO:70:LEU:HD22	15:CO:78:TYR:HB2	1.89	0.54
22:DA:699:A:H2'	22:DA:700:G:H5'	1.89	0.54
22:DA:1716:U:C5	22:DA:1743:G:C2	2.95	0.54
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.42	0.54
22:DA:2133:G:N2	22:DA:2158:A:C6	2.75	0.54
31:DJ:7:LYS:O	31:DJ:11:VAL:CG2	2.55	0.54
1:AA:429:U:H4'	1:AA:430:A:OP1	2.04	0.54
1:AA:1461:G:C6	1:AA:1462:C:C4	2.95	0.54
1:AA:1503:A:C8	1:AA:1531:A:O2'	2.60	0.54
1:AA:1539:C:H5"	21:AU:18:ARG:CB	2.37	0.54
5:AE:133:PRO:O	5:AE:135:ASN:N	2.40	0.54
5:AE:149:SER:HB2	5:AE:152:MET:HB2	1.88	0.54
9:AI:57:MET:HA	9:AI:60:LYS:HB2	1.89	0.54
22:BA:570:G:H2'	22:BA:2030:A:C8	2.43	0.54
22:BA:1197:G:H5'	22:BA:1227:G:O2'	2.08	0.54
22:BA:1230:A:H2'	22:BA:1231:U:O4'	2.07	0.54
22:BA:1372:U:O2'	22:BA:1373:A:H5'	2.07	0.54
22:BA:1912:A:C2	22:BA:1919:A:C4	2.95	0.54
22:BA:2458:G:C4	22:BA:2490:G:N2	2.76	0.54
25:BD:1:MET:HG3	25:BD:205:PRO:HG2	1.89	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
40:BS:37:THR:CG2	40:BS:38:TYR:CE1	2.89	0.54
1:CA:209:U:O2	1:CA:209:U:H2'	2.06	0.54
1:CA:451:A:H61	1:CA:481:G:H5'	1.73	0.54
1:CA:1022:A:C6	1:CA:1023:U:C4	2.96	0.54
2:CB:131:LYS:O	2:CB:135:LEU:N	2.40	0.54
11:CK:25:ALA:N	11:CK:87:LYS:O	2.40	0.54
13:CM:27:LYS:O	13:CM:27:LYS:HD3	2.06	0.54
22:DA:324:A:N6	22:DA:338:G:O2'	2.40	0.54
22:DA:491:G:C6	22:DA:492:A:C5	2.96	0.54
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.88	0.54
22:DA:983:A:C6	22:DA:984:A:C2	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1240:U:O2'	22:DA:1241:A:O5'	2.26	0.54
22:DA:2359:C:N4	22:DA:2360:G:C6	2.75	0.54
23:DB:64:G:H2'	23:DB:65:U:C6	2.42	0.54
26:DE:179:SER:HA	26:DE:182:ALA:HB3	1.88	0.54
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.08	0.54
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.89	0.54
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.07	0.54
42:DU:12:ILE:HG13	42:DU:21:LYS:O	2.08	0.54
1:AA:96:U:O2'	1:AA:97:G:O5'	2.26	0.54
1:AA:209:U:C5'	1:AA:210:C:OP2	2.55	0.54
1:AA:687:A:C2	1:AA:700:G:N3	2.76	0.54
1:AA:963:G:H2'	1:AA:963:G:N3	2.22	0.54
2:AB:206:ALA:O	2:AB:208:ARG:N	2.40	0.54
3:AC:70:THR:O	3:AC:106:VAL:N	2.40	0.54
11:AK:53:ARG:O	11:AK:56:ARG:HG3	2.07	0.54
12:AL:25:GLU:O	12:AL:26:ALA:C	2.46	0.54
21:AU:35:ARG:O	21:AU:36:GLU:C	2.45	0.54
22:BA:1355:G:C4	22:BA:1356:G:C8	2.95	0.54
27:BF:133:ARG:O	27:BF:134:GLU:HB2	2.07	0.54
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.54
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.88	0.54
1:CA:115:G:C2	1:CA:289:G:N7	2.75	0.54
1:CA:577:G:C2	1:CA:578:C:C6	2.95	0.54
1:CA:620:C:H2'	1:CA:621:A:O4'	2.07	0.54
3:CC:121:THR:HB	3:CC:187:SER:OG	2.07	0.54
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.08	0.54
22:DA:126:A:N7	22:DA:127:A:N1	2.55	0.54
22:DA:187:G:C2	22:DA:210:C:O2	2.61	0.54
22:DA:1581:G:C6	22:DA:1582:C:C4	2.95	0.54
22:DA:2676:C:OP1	32:DK:31:ARG:NH2	2.41	0.54
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.23	0.54
27:DF:34:ILE:HA	27:DF:155:THR:O	2.07	0.54
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.55	0.54
39:DR:21:ARG:CZ	39:DR:93:PHE:CE1	2.90	0.54
1:AA:686:U:O4	1:AA:703:G:O2'	2.15	0.54
1:AA:981:U:O2'	14:AN:61:ARG:NE	2.41	0.54
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.61	0.54
1:AA:1481:U:O2'	1:AA:1482:G:H5'	2.08	0.54
2:AB:88:ASP:HB2	2:AB:221:VAL:HG12	1.88	0.54
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.06	0.54
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:153:VAL:HG11	8:AH:99:LEU:HD13	1.88	0.54
22:BA:1355:G:C6	22:BA:1356:G:N7	2.75	0.54
22:BA:1438:U:H3'	57:BA:3634:HOH:O	2.07	0.54
22:BA:1731:G:N1	22:BA:1733:G:C4	2.75	0.54
22:BA:2052:A:C2	22:BA:2053:G:C8	2.95	0.54
22:BA:2820:A:OP1	57:BA:3811:HOH:O	2.19	0.54
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.08	0.54
24:BC:31:ALA:HB3	24:BC:32:PRO:HD3	1.90	0.54
26:BE:84:THR:HG22	26:BE:85:PHE:CD2	2.43	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.38	0.54
4:CD:105:MET:SD	4:CD:143:VAL:CG1	2.95	0.54
8:CH:7:ILE:HB	8:CH:77:ARG:NH1	2.22	0.54
15:CO:10:LYS:O	15:CO:14:GLU:HG3	2.08	0.54
22:DA:108:G:O2'	22:DA:347:A:N3	2.37	0.54
22:DA:297:G:OP1	42:DU:92:LYS:HD3	2.07	0.54
22:DA:327:G:H2'	22:DA:328:U:O4'	2.08	0.54
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.55	0.54
22:DA:1544:A:N6	22:DA:1545:A:C6	2.75	0.54
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.25	0.54
22:DA:1833:C:C4	22:DA:1834:U:C4	2.96	0.54
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.07	0.54
22:DA:2449:U:H4'	22:DA:2450:A:OP1	2.08	0.54
24:DC:82:GLU:OE1	24:DC:103:TYR:OH	2.24	0.54
27:DF:43:ALA:O	27:DF:47:LYS:HD2	2.08	0.54
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.90	0.54
43:DV:21:ARG:HA	43:DV:25:LYS:O	2.06	0.54
50:D2:44:VAL:O	50:D2:45:SER:OG	2.20	0.54
1:AA:622:A:C8	1:AA:623:C:C6	2.96	0.54
1:AA:1204:A:OP1	57:AA:1780:HOH:O	2.18	0.54
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.43	0.54
2:AB:187:VAL:O	2:AB:187:VAL:CG2	2.56	0.54
4:AD:50:ASP:O	4:AD:54:GLN:HB2	2.07	0.54
5:AE:50:TYR:CZ	5:AE:134:ILE:HD11	2.42	0.54
10:AJ:32:THR:O	10:AJ:33:GLY:O	2.25	0.54
22:BA:492:A:H2'	22:BA:493:G:O4'	2.08	0.54
22:BA:842:U:C2	22:BA:843:G:C8	2.96	0.54
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.90	0.54
22:BA:1829:A:C8	22:BA:1830:C:C6	2.95	0.54
22:BA:2076:U:O2	22:BA:2076:U:O5'	2.26	0.54
22:BA:2305:U:N3	27:BF:151:GLY:HA3	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2392:A:C2	22:BA:2393:U:C2	2.96	0.54
22:BA:2675:A:C2'	22:BA:2676:C:H5'	2.38	0.54
33:BL:81:ASP:CG	33:BL:100:ILE:HD13	2.28	0.54
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.90	0.54
53:B5:43:GLU:O	53:B5:213:VAL:HA	2.08	0.54
3:CC:181:ASP:O	3:CC:203:PHE:HA	2.08	0.54
5:CE:38:VAL:HG11	5:CE:114:VAL:HA	1.88	0.54
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.86	0.54
21:CU:34:ARG:NE	21:CU:35:ARG:HB2	2.23	0.54
22:DA:14:A:C6	22:DA:526:A:C2	2.95	0.54
22:DA:224:U:OP2	22:DA:408:G:N2	2.40	0.54
22:DA:572:A:H5"	22:DA:573:U:OP2	2.07	0.54
28:DG:140:VAL:O	28:DG:144:VAL:HG23	2.06	0.54
36:DO:97:PHE:CB	36:DO:103:VAL:HG11	2.37	0.54
39:DR:101:ILE:O	39:DR:103:ALA:N	2.41	0.54
1:AA:147:G:N2	1:AA:176:C:C2	2.76	0.54
1:AA:277:C:C2'	1:AA:278:G:H5'	2.38	0.54
1:AA:453:G:H2'	1:AA:454:G:C8	2.43	0.54
1:AA:760:G:C5	1:AA:761:G:C8	2.96	0.54
1:AA:1032:G:H5'	1:AA:1033:G:OP2	2.07	0.54
1:AA:1367:C:C4	1:AA:1368:A:N7	2.76	0.54
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.90	0.54
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.08	0.54
16:AP:51:ARG:NH1	16:AP:51:ARG:HB3	2.23	0.54
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.28	0.54
22:BA:752:A:C2	22:BA:1781:U:C2	2.96	0.54
22:BA:990:A:H5"	22:BA:991:C:P	2.48	0.54
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.07	0.54
22:BA:1355:G:C2	22:BA:1356:G:C8	2.96	0.54
22:BA:1413:A:C6	22:BA:1414:C:N3	2.75	0.54
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.30	0.54
22:BA:2112:G:H2'	22:BA:2112:G:N3	2.23	0.54
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.43	0.54
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.54	0.54
28:BG:63:ALA:O	28:BG:67:THR:HG22	2.08	0.54
43:BV:35:GLU:HB2	43:BV:93:ARG:CZ	2.37	0.54
44:BW:41:ARG:HG3	44:BW:41:ARG:NH1	2.22	0.54
53:B5:42:VAL:HG12	53:B5:214:TYR:HA	1.90	0.54
1:CA:517:G:O6	57:CA:1761:HOH:O	2.18	0.54
2:CB:102:THR:HG22	2:CB:175:GLU:OE1	2.06	0.54
8:CH:32:LEU:HD12	8:CH:32:LEU:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:14:LYS:HD2	11:CK:14:LYS:C	2.29	0.54
12:CL:19:SER:OG	12:CL:21:VAL:HG23	2.07	0.54
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.08	0.54
22:DA:105:C:H2'	22:DA:106:C:C6	2.43	0.54
22:DA:846:U:HO2'	22:DA:847:U:P	2.31	0.54
22:DA:847:U:O2	22:DA:847:U:H2'	2.06	0.54
22:DA:936:A:C2	22:DA:937:C:C2	2.96	0.54
22:DA:1027:A:C6	22:DA:1126:A:C4	2.96	0.54
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	1.89	0.54
22:DA:2200:C:O2	22:DA:2226:C:N4	2.41	0.54
36:DO:50:ALA:O	36:DO:81:ARG:NH2	2.41	0.54
1:AA:521:G:OP2	12:AL:51:LYS:NZ	2.20	0.54
1:AA:842:U:H3'	1:AA:843:U:C5'	2.38	0.54
3:AC:153:VAL:HG23	3:AC:157:LEU:HD22	1.90	0.54
7:AG:146:GLU:HG3	7:AG:149:LYS:HE2	1.90	0.54
17:AQ:52:GLU:OE1	17:AQ:52:GLU:N	2.38	0.54
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.23	0.54
22:BA:1074:G:C2'	22:BA:1075:C:H5'	2.38	0.54
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.42	0.54
22:BA:2502:G:H5'	22:BA:2503:A:H5"	1.89	0.54
29:BH:95:GLY:CA	1:CA:368:U:OP1	2.56	0.54
1:CA:254:G:OP1	17:CQ:69:LYS:O	2.26	0.54
1:CA:518:C:H2'	1:CA:530:G:H8	1.72	0.54
1:CA:773:G:C2	1:CA:807:A:C2	2.96	0.54
1:CA:920:U:H2'	1:CA:921:U:C6	2.43	0.54
1:CA:1150:A:N6	1:CA:1151:A:H62	2.06	0.54
1:CA:1227:A:OP2	13:CM:110:LYS:HE3	2.08	0.54
1:CA:1317:C:OP1	14:CN:57:PRO:HD2	2.07	0.54
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.90	0.54
3:CC:177:THR:HG22	3:CC:179:ARG:HG3	1.90	0.54
11:CK:16:VAL:O	11:CK:17:SER:OG	2.16	0.54
21:CU:10:GLU:CG	21:CU:11:PRO:HD3	2.33	0.54
22:DA:218:A:N7	57:DA:3223:HOH:O	2.33	0.54
22:DA:247:G:C8	22:DA:249:C:C6	2.96	0.54
22:DA:776:G:N7	22:DA:793:A:C4	2.76	0.54
28:DG:98:VAL:CG2	28:DG:125:CYS:SG	2.96	0.54
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.89	0.54
34:DM:42:THR:O	34:DM:46:ILE:HG13	2.08	0.54
1:AA:73:C:O2'	1:AA:74:A:H5"	2.08	0.54
1:AA:415:A:OP2	57:AA:1720:HOH:O	2.19	0.54
1:AA:792:A:H1'	1:AA:794:A:N7	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:880:C:C2'	1:AA:881:G:H5'	2.37	0.54
1:AA:1395:C:O2'	1:AA:1401:G:O2'	2.25	0.54
4:AD:99:ASP:OD1	4:AD:99:ASP:N	2.41	0.54
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.56	0.54
9:AI:26:GLY:N	9:AI:59:GLU:HA	2.23	0.54
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.90	0.54
20:AT:58:VAL:HG12	20:AT:72:ALA:CB	2.38	0.54
22:BA:22:C:H2'	22:BA:23:G:O5'	2.08	0.54
22:BA:370:G:C8	57:BA:3562:HOH:O	2.60	0.54
22:BA:415:A:C2	22:BA:2409:G:C2	2.96	0.54
22:BA:585:G:H4'	22:BA:586:A:OP1	2.07	0.54
22:BA:674:G:H5"	26:BE:71:GLY:N	2.23	0.54
22:BA:721:A:H2'	22:BA:722:A:C8	2.42	0.54
22:BA:743:A:O3'	57:BA:3656:HOH:O	2.19	0.54
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.43	0.54
22:BA:1115:G:C4	22:BA:1116:G:C8	2.96	0.54
22:BA:1916:A:C2	22:BA:1917:U:H1'	2.42	0.54
22:BA:2286:G:OP2	49:B1:6:ARG:NH2	2.41	0.54
22:BA:2469:A:C6	22:BA:2482:A:C8	2.96	0.54
22:BA:2757:A:N1	28:BG:67:THR:CG2	2.62	0.54
57:BA:3805:HOH:O	35:BN:11:ASN:ND2	2.41	0.54
23:BB:78:A:C2	23:BB:99:A:C4	2.95	0.54
27:BF:80:ARG:HG2	27:BF:81:GLN:N	2.23	0.54
28:BG:124:GLU:CD	28:BG:125:CYS:H	2.10	0.54
31:BJ:114:LEU:HG	31:BJ:118:MET:CE	2.38	0.54
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	1.89	0.54
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.43	0.54
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.42	0.54
9:CI:31:ASN:ND2	9:CI:38:TYR:OH	2.41	0.54
22:DA:276:U:O2'	22:DA:278:A:N7	2.41	0.54
22:DA:607:U:O4	22:DA:620:G:H5'	2.08	0.54
22:DA:1069:A:N1	22:DA:1073:A:N7	2.56	0.54
22:DA:1087:G:C4	22:DA:1089:A:H1'	2.43	0.54
26:DE:52:VAL:HG11	26:DE:81:GLY:HA3	1.88	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
37:DP:22:PRO:HA	37:DP:47:VAL:CG1	2.37	0.54
1:AA:338:A:C5	1:AA:339:C:C5	2.96	0.53
2:AB:62:SER:C	2:AB:64:LYS:N	2.59	0.53
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.41	0.53
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.90	0.53
7:AG:70:ARG:HG3	7:AG:96:ARG:HG2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:146:GLU:CG	7:AG:149:LYS:HE2	2.38	0.53
13:AM:10:PRO:O	13:AM:11:ASP:CB	2.54	0.53
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.46	0.53
22:BA:332:A:C2	22:BA:335:C:C5	2.96	0.53
22:BA:1056:G:H5"	22:BA:1057:A:H5'	1.90	0.53
22:BA:1357:C:H2'	22:BA:1358:G:O4'	2.08	0.53
22:BA:2094:A:OP1	29:BH:22:LYS:HE3	2.08	0.53
28:BG:40:ALA:HA	28:BG:58:TYR:CD1	2.43	0.53
33:BL:61:LEU:HB3	33:BL:62:PRO:HD2	1.90	0.53
34:BM:20:LEU:HD12	43:BV:81:PRO:HG2	1.88	0.53
39:BR:49:ILE:C	39:BR:51:VAL:O	2.46	0.53
40:BS:34:ASP:OD2	48:B0:37:LYS:NZ	2.41	0.53
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.47	0.53
1:CA:104:G:C2	1:CA:105:G:C8	2.96	0.53
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.72	0.53
1:CA:1279:G:OP2	10:CJ:11:LYS:NZ	2.41	0.53
1:CA:1309:G:C6	1:CA:1329:A:N1	2.77	0.53
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	1.90	0.53
5:CE:122:ASN:O	5:CE:123:VAL:O	2.26	0.53
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.89	0.53
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.07	0.53
10:CJ:26:VAL:HG22	10:CJ:36:VAL:HG11	1.89	0.53
16:CP:44:SER:O	16:CP:46:LYS:HG3	2.07	0.53
22:DA:187:G:O2'	22:DA:1365:A:N3	2.34	0.53
22:DA:228:C:C5'	22:DA:229:C:C6	2.91	0.53
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.23	0.53
22:DA:2259:U:H1'	22:DA:2427:C:C2	2.43	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.90	0.53
1:AA:872:A:C4	1:AA:874:G:C8	2.97	0.53
1:AA:989:U:H2'	1:AA:990:C:H6	1.72	0.53
1:AA:1211:U:O2'	1:AA:1212:U:P	2.66	0.53
1:AA:1346:A:N7	7:AG:10:ARG:NH2	2.57	0.53
13:AM:15:ALA:HB3	13:AM:34:LEU:HD21	1.90	0.53
13:AM:29:ARG:NH2	13:AM:63:PHE:HB2	2.23	0.53
17:AQ:4:LYS:HD2	17:AQ:4:LYS:O	2.08	0.53
19:AS:5:LEU:O	19:AS:6:LYS:HD2	2.07	0.53
20:AT:70:ASN:OD1	20:AT:70:ASN:N	2.40	0.53
22:BA:1046:A:H3'	22:BA:1047:G:H5'	1.90	0.53
22:BA:1122:G:H2'	22:BA:1122:G:N3	2.22	0.53
22:BA:1167:C:H2'	22:BA:1168:G:H5"	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1225:G:C2	22:BA:1226:A:C2	2.96	0.53
22:BA:1712:U:OP2	22:BA:1713:A:O2'	2.17	0.53
22:BA:1789:A:H5"	24:BC:219:THR:O	2.08	0.53
23:BB:116:G:H4'	36:BO:54:VAL:O	2.08	0.53
28:BG:124:GLU:CD	28:BG:125:CYS:N	2.61	0.53
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.23	0.53
34:BM:78:LEU:O	34:BM:80:VAL:HG23	2.08	0.53
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.89	0.53
42:BU:97:LYS:O	42:BU:98:SER:OG	2.22	0.53
1:CA:1074:G:H4'	2:CB:103:ASN:HB3	1.90	0.53
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.22	0.53
5:CE:81:LEU:CD1	5:CE:81:LEU:N	2.70	0.53
9:CI:120:LYS:O	9:CI:121:ALA:HB3	2.09	0.53
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.09	0.53
22:DA:396:G:H1'	45:DX:29:PHE:HB3	1.89	0.53
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.43	0.53
22:DA:2189:U:H2'	22:DA:2190:G:H5"	1.90	0.53
22:DA:2467:C:N4	22:DA:2468:A:C6	2.76	0.53
22:DA:2491:U:H5"	22:DA:2570:G:H5"	1.89	0.53
1:AA:102:G:N2	1:AA:103:U:C2	2.77	0.53
1:AA:151:A:H2'	1:AA:152:A:O4'	2.08	0.53
1:AA:237:G:H2'	1:AA:238:A:O4'	2.09	0.53
1:AA:1407:C:O2'	22:BA:1912:A:C6	2.51	0.53
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.08	0.53
5:AE:13:GLU:HB3	5:AE:39:VAL:HG12	1.91	0.53
10:AJ:91:ASP:C	10:AJ:92:LEU:HG	2.29	0.53
22:BA:1917:U:H2'	22:BA:1917:U:O2	2.09	0.53
22:BA:2317:A:H2'	22:BA:2318:G:H5'	1.90	0.53
27:BF:63:GLN:NE2	27:BF:90:THR:O	2.41	0.53
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.91	0.53
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.47	0.53
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.07	0.53
42:BU:49:VAL:O	42:BU:51:ALA:N	2.41	0.53
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.22	0.53
1:CA:399:G:C6	1:CA:400:C:C4	2.97	0.53
1:CA:485:U:O2'	1:CA:486:U:OP1	2.22	0.53
1:CA:1007:U:H2'	1:CA:1008:U:H5"	1.89	0.53
1:CA:1055:A:N6	1:CA:1206:G:C5	2.76	0.53
2:CB:53:ALA:C	2:CB:54:LEU:HD22	2.29	0.53
7:CG:125:SER:C	7:CG:127:ALA:H	2.11	0.53
11:CK:21:ALA:HB3	11:CK:84:VAL:HG13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.43	0.53
22:DA:1045:C:O2	22:DA:1047:G:N1	2.41	0.53
22:DA:1525:A:C6	22:DA:1526:C:C4	2.97	0.53
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.43	0.53
22:DA:1993:U:H4'	25:DD:133:THR:HG21	1.91	0.53
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.37	0.53
22:DA:2550:G:C6	22:DA:2551:C:C4	2.97	0.53
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.38	0.53
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.37	0.53
27:DF:135:GLN:N	27:DF:135:GLN:OE1	2.41	0.53
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.09	0.53
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	1.89	0.53
35:DN:54:LEU:HD23	35:DN:66:ALA:HB2	1.90	0.53
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.07	0.53
46:DY:45:GLN:O	46:DY:47:ARG:N	2.41	0.53
1:AA:205:A:H2'	1:AA:205:A:N3	2.22	0.53
1:AA:533:A:P	57:AA:1848:HOH:O	2.66	0.53
1:AA:728:A:C6	1:AA:729:A:C6	2.96	0.53
1:AA:1374:A:C2	1:AA:1375:A:C4	2.96	0.53
1:AA:1378:C:H2'	1:AA:1379:G:O5'	2.08	0.53
2:AB:35:ARG:HA	2:AB:35:ARG:HE	1.74	0.53
3:AC:25:ASN:O	3:AC:26:THR:C	2.46	0.53
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.90	0.53
13:AM:80:LEU:HD21	13:AM:87:ARG:HE	1.74	0.53
22:BA:996:A:C2	22:BA:997:G:N9	2.77	0.53
22:BA:1268:A:C2	22:BA:2013:A:C4	2.96	0.53
22:BA:2211:A:O2'	22:BA:2212:A:P	2.67	0.53
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.22	0.53
23:BB:34:A:O2'	23:BB:35:C:H5"	2.08	0.53
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	2.08	0.53
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.08	0.53
34:BM:72:PRO:O	34:BM:73:ILE:HD13	2.07	0.53
39:BR:39:LEU:O	39:BR:40:MET:HB2	2.09	0.53
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.77	0.53
50:B2:43:THR:O	50:B2:44:VAL:CG1	2.56	0.53
1:CA:57:G:C6	1:CA:58:C:C4	2.96	0.53
1:CA:78:A:N6	1:CA:79:G:C6	2.76	0.53
1:CA:123:U:OP1	1:CA:311:C:O2'	2.22	0.53
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.07	0.53
21:CU:28:VAL:O	21:CU:32:VAL:HG23	2.09	0.53
22:DA:329:G:O4'	22:DA:477:A:H1'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:995:C:N3	31:DJ:3:THR:N	2.55	0.53
22:DA:1422:G:C6	22:DA:1423:G:C5	2.96	0.53
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.90	0.53
22:DA:2043:C:H1'	22:DA:2779:U:O4	2.08	0.53
22:DA:2581:G:H1'	22:DA:2582:G:N7	2.23	0.53
22:DA:2652:C:C4	22:DA:2653:U:C4	2.97	0.53
29:DH:27:ARG:HE	45:DX:60:ASP:CB	2.20	0.53
31:DJ:5:THR:HG22	31:DJ:6:ALA:O	2.09	0.53
31:DJ:78:THR:OG1	31:DJ:80:HIS:HB2	2.08	0.53
36:DO:15:ARG:O	36:DO:18:LEU:HB2	2.09	0.53
39:DR:19:THR:CG2	39:DR:95:ASP:HB3	2.39	0.53
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.24	0.53
5:AE:96:MET:HB3	5:AE:125:ALA:HB2	1.89	0.53
17:AQ:15:ASP:HA	17:AQ:21:ILE:CD1	2.37	0.53
22:BA:700:G:O2'	22:BA:1632:A:N3	2.29	0.53
22:BA:1584:U:O2	22:BA:1584:U:H2'	2.07	0.53
22:BA:2020:A:C2	22:BA:2035:G:C6	2.97	0.53
23:BB:78:A:H2'	23:BB:79:G:O4'	2.08	0.53
28:BG:60:ASP:O	28:BG:61:GLY:C	2.47	0.53
1:CA:818:G:O2'	1:CA:819:A:H5'	2.09	0.53
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.09	0.53
4:CD:29:ASP:C	4:CD:31:LYS:H	2.12	0.53
4:CD:145:ILE:HD12	4:CD:145:ILE:N	2.23	0.53
11:CK:25:ALA:HA	11:CK:30:THR:HG22	1.88	0.53
15:CO:70:LEU:HD13	15:CO:78:TYR:HA	1.89	0.53
22:DA:451:U:H2'	22:DA:453:A:N7	2.24	0.53
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.24	0.53
22:DA:1866:A:N7	22:DA:1867:G:C8	2.76	0.53
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.07	0.53
25:DD:7:LYS:HD3	25:DD:198:GLY:HA2	1.91	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
39:DR:47:VAL:O	39:DR:47:VAL:HG12	2.09	0.53
49:D1:50:LYS:O	49:D1:51:GLU:HB3	2.07	0.53
1:AA:190:A:C8	1:AA:191:G:C8	2.97	0.53
1:AA:275:G:C2	1:AA:276:G:C8	2.97	0.53
1:AA:1066:C:H2'	1:AA:1066:C:O2	2.08	0.53
2:AB:147:SER:O	2:AB:148:LEU:CB	2.56	0.53
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.24	0.53
7:AG:120:LEU:HD22	7:AG:124:LEU:HD23	1.90	0.53
11:AK:110:ILE:HB	21:AU:6:VAL:HG22	1.91	0.53
14:AN:25:ALA:O	14:AN:28:LYS:HG2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:137:U:H2'	22:BA:140:C:N1	2.23	0.53
22:BA:749:A:C6	22:BA:1618:A:C2	2.97	0.53
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.08	0.53
22:BA:1435:G:HO2'	22:BA:1436:G:H5'	1.74	0.53
22:BA:2665:A:C2	22:BA:2666:C:C6	2.96	0.53
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.91	0.53
38:BQ:76:TYR:C	38:BQ:76:TYR:CD2	2.81	0.53
46:BY:5:GLU:C	46:BY:7:ARG:N	2.61	0.53
1:CA:354:G:C2	1:CA:355:C:C5	2.96	0.53
1:CA:1124:G:N2	1:CA:1127:G:C2	2.76	0.53
1:CA:1125:U:C6	10:CJ:40:ILE:HD13	2.44	0.53
1:CA:1250:A:C6	1:CA:1251:A:C6	2.96	0.53
1:CA:1373:G:H5"	7:CG:36:LYS:HB2	1.90	0.53
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.41	0.53
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.09	0.53
21:CU:11:PRO:C	21:CU:12:PHE:CG	2.80	0.53
22:DA:18:U:O4	57:DA:3205:HOH:O	2.14	0.53
22:DA:35:G:N2	22:DA:450:G:H1'	2.23	0.53
22:DA:160:A:C6	22:DA:161:A:C6	2.96	0.53
22:DA:770:G:H1'	22:DA:1379:U:C4	2.44	0.53
22:DA:2133:G:N3	22:DA:2158:A:N1	2.57	0.53
22:DA:2244:U:C5	22:DA:2245:U:C4	2.97	0.53
24:DC:262:ARG:HG2	24:DC:263:THR:HG23	1.90	0.53
26:DE:181:ILE:HD13	33:DL:2:ARG:NH2	2.24	0.53
1:AA:74:A:N3	1:AA:97:G:C2	2.77	0.53
1:AA:561:U:O2'	1:AA:562:U:P	2.66	0.53
1:AA:946:A:H2'	1:AA:947:G:C8	2.44	0.53
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.09	0.53
1:AA:1533:C:H5'	1:AA:1534:A:OP1	2.09	0.53
3:AC:55:ILE:O	3:AC:55:ILE:HG13	2.08	0.53
4:AD:97:ARG:HB3	4:AD:99:ASP:OD1	2.09	0.53
12:AL:88:LYS:O	12:AL:88:LYS:HG3	2.08	0.53
15:AO:55:GLY:O	15:AO:58:ARG:HB3	2.09	0.53
16:AP:77:GLU:C	16:AP:79:ASN:H	2.11	0.53
16:AP:78:VAL:O	16:AP:80:LYS:N	2.41	0.53
22:BA:102:U:H4'	22:BA:103:A:OP1	2.08	0.53
22:BA:782:A:C2	24:BC:225:MET:SD	3.02	0.53
22:BA:1779:U:H2'	57:BA:3694:HOH:O	2.07	0.53
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.07	0.53
22:BA:2347:C:H2'	22:BA:2348:U:C6	2.44	0.53
22:BA:2591:C:H2'	22:BA:2592:G:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:7:ASP:OD2	26:BE:8:ALA:N	2.39	0.53
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.44	0.53
33:BL:85:VAL:HG11	33:BL:94:THR:HG22	1.91	0.53
41:BT:71:GLY:O	41:BT:73:ARG:N	2.42	0.53
50:B2:43:THR:O	50:B2:44:VAL:CB	2.57	0.53
1:CA:247:G:C6	1:CA:278:G:C2	2.97	0.53
1:CA:435:A:C2	1:CA:436:C:H1'	2.44	0.53
1:CA:657:U:O2	15:CO:22:THR:HG23	2.09	0.53
1:CA:743:A:C6	1:CA:744:C:C4	2.97	0.53
1:CA:1101:A:H61	2:CB:102:THR:CG2	2.20	0.53
1:CA:1417:G:C6	1:CA:1482:G:C6	2.97	0.53
1:CA:1441:A:C8	1:CA:1442:G:C8	2.97	0.53
2:CB:103:ASN:OD1	2:CB:103:ASN:O	2.27	0.53
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.90	0.53
4:CD:48:LEU:HD21	4:CD:52:GLY:C	2.29	0.53
5:CE:126:LYS:HE2	5:CE:126:LYS:HA	1.91	0.53
6:CF:88:MET:SD	6:CF:90:MET:SD	3.07	0.53
10:CJ:26:VAL:HG12	10:CJ:27:GLU:N	2.23	0.53
12:CL:16:VAL:O	12:CL:17:ALA:O	2.27	0.53
22:DA:56:A:C2	22:DA:57:C:C2	2.96	0.53
22:DA:1031:G:H5"	52:D4:8:LYS:HE3	1.89	0.53
22:DA:1073:A:O2'	22:DA:2474:U:H5'	2.08	0.53
22:DA:1258:U:H2'	22:DA:1259:G:H8	1.68	0.53
22:DA:1364:G:H5"	45:DX:3:ARG:NH1	2.23	0.53
22:DA:2070:A:C2	22:DA:2442:C:C2	2.97	0.53
22:DA:2648:G:C4	22:DA:2673:G:C2	2.97	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	1.91	0.53
33:DL:77:ILE:CD1	33:DL:108:ALA:HB1	2.38	0.53
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.77	0.53
1:AA:485:U:O2	1:AA:485:U:O4'	2.26	0.53
1:AA:581:G:C5	1:AA:758:C:C5	2.97	0.53
2:AB:56:GLU:HA	2:AB:59:LYS:HB3	1.90	0.53
2:AB:154:MET:CE	2:AB:158:PRO:HG3	2.39	0.53
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.38	0.53
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.08	0.53
9:AI:36:GLU:OE2	9:AI:36:GLU:N	2.42	0.53
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.76	0.53
11:AK:81:ASN:HB3	11:AK:106:ARG:HB3	1.90	0.53
22:BA:1066:U:O2	22:BA:1069:A:N7	2.42	0.53
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1714:U:H5”	22:BA:1715:G:C5’	2.38	0.53
22:BA:2783:U:H2’	22:BA:2784:U:C6	2.44	0.53
25:BD:16:THR:HG23	25:BD:20:VAL:O	2.09	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.24	0.53
34:BM:74:THR:O	34:BM:75:GLU:HG2	2.09	0.53
34:BM:135:VAL:O	34:BM:136:MET:O	2.27	0.53
35:BN:103:ARG:NE	35:BN:110:MET:HE2	2.24	0.53
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.44	0.53
42:BU:89:ASP:OD1	42:BU:90:GLY:N	2.42	0.53
1:CA:247:G:C6	1:CA:278:G:N1	2.76	0.53
1:CA:527:G:C6	1:CA:528:C:C5	2.97	0.53
1:CA:1486:G:H2’	1:CA:1487:G:O4’	2.09	0.53
4:CD:145:ILE:HG22	4:CD:146:ARG:O	2.08	0.53
5:CE:122:ASN:CG	5:CE:123:VAL:N	2.62	0.53
11:CK:51:GLY:O	11:CK:52:PHE:O	2.26	0.53
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	1.91	0.53
22:DA:242:G:H5”	51:D3:64:TYR:CE2	2.44	0.53
22:DA:811:U:C2	22:DA:1251:C:C5	2.96	0.53
22:DA:1544:A:C6	22:DA:1545:A:C6	2.97	0.53
22:DA:1831:G:C5	22:DA:1832:C:C4	2.97	0.53
22:DA:2001:C:H4’	22:DA:2689:U:H2’	1.91	0.53
22:DA:2196:C:O2’	22:DA:2197:U:H5’	2.09	0.53
22:DA:2503:A:C8	55:DA:3001:VIF:H1	2.44	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.53
33:DL:58:TYR:O	51:D3:13:ARG:HD3	2.08	0.53
35:DN:87:PHE:CZ	35:DN:94:TYR:HB3	2.44	0.53
37:DP:39:ARG:CG	37:DP:40:LEU:H	2.21	0.53
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.09	0.53
3:AC:7:PRO:O	3:AC:11:ARG:HG3	2.08	0.53
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.09	0.53
16:AP:4:ILE:HD12	16:AP:67:ILE:HD11	1.91	0.53
19:AS:29:LYS:CB	19:AS:30:PRO:CD	2.87	0.53
22:BA:991:C:C4	22:BA:1185:G:O6	2.62	0.53
22:BA:1090:A:H2’	22:BA:1091:G:H5’	1.90	0.53
22:BA:1358:G:H1’	22:BA:1374:G:N2	2.23	0.53
22:BA:2073:C:O2	22:BA:2437:G:C2	2.62	0.53
22:BA:2191:A:C2	22:BA:2192:U:C2	2.96	0.53
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.91	0.53
49:B1:11:LEU:N	49:B1:11:LEU:HD23	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:976:G:P	1:CA:1358:U:O2'	2.67	0.53
1:CA:1080:A:OP1	5:CE:52:LYS:HE3	2.09	0.53
1:CA:1364:U:O2	1:CA:1364:U:H2'	2.08	0.53
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.74	0.53
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.09	0.53
6:CF:18:VAL:HA	6:CF:21:MET:HE2	1.90	0.53
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.24	0.53
12:CL:7:LEU:HD22	12:CL:12:ARG:CD	2.38	0.53
22:DA:532:A:H2'	22:DA:532:A:N3	2.24	0.53
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.24	0.53
22:DA:2127:G:C2	22:DA:2162:G:C8	2.97	0.53
24:DC:57:GLY:O	24:DC:58:HIS:O	2.26	0.53
44:DW:21:LEU:HD22	44:DW:39:ARG:HB3	1.90	0.53
1:AA:142:G:H3'	1:AA:143:A:H8	1.74	0.53
1:AA:268:U:H2'	1:AA:269:C:C6	2.44	0.53
1:AA:321:A:N7	1:AA:328:C:O2'	2.34	0.53
1:AA:464:U:C2	1:AA:466:A:H5"	2.45	0.53
1:AA:890:G:O2'	1:AA:906:A:N6	2.42	0.53
1:AA:1374:A:C2	1:AA:1375:A:N9	2.77	0.53
3:AC:40:ARG:NH1	3:AC:55:ILE:O	2.41	0.53
3:AC:114:LYS:HD3	3:AC:185:ASN:OD1	2.08	0.53
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.09	0.53
10:AJ:59:LYS:HD2	10:AJ:59:LYS:C	2.29	0.53
11:AK:17:SER:HA	11:AK:79:ILE:HA	1.90	0.53
18:AR:29:LEU:O	18:AR:31:ASN:N	2.42	0.53
22:BA:45:G:C5'	22:BA:46:G:OP1	2.57	0.53
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.55	0.53
22:BA:499:U:C4	22:BA:500:G:C6	2.97	0.53
22:BA:580:U:O3'	38:BQ:31:VAL:HG13	2.08	0.53
22:BA:695:G:C2	22:BA:696:G:C8	2.97	0.53
22:BA:841:G:H2'	22:BA:842:U:H6	1.73	0.53
22:BA:1084:A:C5	22:BA:1085:A:C6	2.97	0.53
22:BA:1984:G:O2'	22:BA:1985:C:H5'	2.09	0.53
22:BA:2127:G:H2'	22:BA:2128:G:C8	2.44	0.53
27:BF:38:MET:HE3	27:BF:152:LEU:HD13	1.90	0.53
37:BP:2:SER:O	37:BP:6:LYS:HG2	2.09	0.53
41:BT:48:GLN:OE1	41:BT:54:GLU:HA	2.09	0.53
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.24	0.53
1:CA:485:U:OP2	1:CA:485:U:H4'	2.09	0.53
1:CA:608:A:H2'	1:CA:609:A:O4'	2.09	0.53
4:CD:35:GLU:O	4:CD:38:PRO:HD3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:36:ALA:HB2	14:CN:42:TRP:CH2	2.44	0.53
22:DA:1125:G:C6	22:DA:1126:A:N6	2.76	0.53
22:DA:1855:U:C5	22:DA:1856:U:C4	2.97	0.53
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	1.90	0.53
26:DE:193:VAL:O	26:DE:197:GLU:HB2	2.09	0.53
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.53
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.53
41:DT:54:GLU:CB	41:DT:88:LYS:HG3	2.39	0.53
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.56	0.53
1:AA:257:G:C2	1:AA:258:G:C5	2.96	0.52
1:AA:345:C:N3	32:BK:117:SER:OG	2.42	0.52
1:AA:495:A:C2	1:AA:496:A:N6	2.76	0.52
1:AA:1160:G:O2'	1:AA:1161:C:P	2.67	0.52
22:BA:156:A:H2'	22:BA:157:C:O4'	2.09	0.52
22:BA:1073:A:C2'	22:BA:1074:G:H5"	2.39	0.52
22:BA:1717:A:C5	22:BA:1718:G:C8	2.97	0.52
22:BA:1842:G:N3	22:BA:1901:A:C2	2.77	0.52
22:BA:1848:A:H2'	22:BA:1849:G:O4'	2.09	0.52
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.72	0.52
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.91	0.52
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.24	0.52
1:CA:134:G:H2'	1:CA:135:C:O4'	2.09	0.52
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.08	0.52
12:CL:25:GLU:CB	12:CL:27:CYS:SG	2.97	0.52
20:CT:6:SER:O	20:CT:8:LYS:N	2.42	0.52
22:DA:40:U:H2'	22:DA:41:C:C6	2.45	0.52
22:DA:500:G:N2	22:DA:502:A:C8	2.77	0.52
22:DA:734:A:C8	22:DA:735:A:C8	2.98	0.52
22:DA:811:U:O2	22:DA:1251:C:C6	2.61	0.52
22:DA:1782:U:O4'	22:DA:2609:U:C2	2.62	0.52
22:DA:2013:A:N1	22:DA:2014:A:C2	2.78	0.52
24:DC:68:LYS:HD3	24:DC:149:GLY:O	2.09	0.52
25:DD:13:ARG:HD2	25:DD:15:PHE:CE1	2.44	0.52
25:DD:78:GLY:C	25:DD:80:TRP:CZ3	2.82	0.52
26:DE:143:LEU:HB3	26:DE:146:VAL:CG1	2.39	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.09	0.52
30:DI:42:PHE:O	30:DI:46:THR:OG1	2.27	0.52
30:DI:97:LYS:N	30:DI:97:LYS:HD2	2.24	0.52
31:DJ:17:VAL:HG22	31:DJ:55:ILE:HB	1.91	0.52
36:DO:39:VAL:N	36:DO:49:VAL:O	2.41	0.52
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:13:ALA:O	41:DT:32:LEU:HB2	2.08	0.52
1:AA:568:G:C4	1:AA:569:C:H5	2.28	0.52
1:AA:702:A:H3'	1:AA:703:G:H5'	1.90	0.52
1:AA:1135:U:C2	1:AA:1137:C:N3	2.77	0.52
7:AG:40:GLU:HB2	7:AG:44:TYR:CE2	2.44	0.52
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.10	0.52
16:AP:50:THR:O	16:AP:50:THR:HG22	2.09	0.52
21:AU:25:LYS:O	21:AU:29:LEU:HB2	2.09	0.52
22:BA:583:G:H2'	22:BA:584:C:O5'	2.10	0.52
22:BA:1064:C:O2	22:BA:1064:C:H2'	2.08	0.52
22:BA:1083:U:O2	22:BA:1086:A:C2	2.61	0.52
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.09	0.52
22:BA:1912:A:N1	22:BA:1919:A:C4	2.76	0.52
24:BC:10:SER:O	24:BC:13:ARG:HB3	2.09	0.52
26:BE:85:PHE:O	26:BE:86:ALA:O	2.27	0.52
35:BN:67:PHE:CE2	35:BN:71:ARG:NH1	2.77	0.52
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.91	0.52
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.90	0.52
40:BS:59:GLU:HG3	40:BS:66:ILE:CD1	2.39	0.52
1:CA:238:A:C5	1:CA:239:U:C5	2.97	0.52
1:CA:847:G:H2'	1:CA:848:C:O4'	2.08	0.52
1:CA:1490:U:H2'	1:CA:1491:G:C8	2.44	0.52
7:CG:146:GLU:HA	7:CG:149:LYS:HB2	1.91	0.52
16:CP:61:VAL:HG21	16:CP:67:ILE:HD11	1.89	0.52
18:CR:49:ALA:O	18:CR:50:LYS:C	2.48	0.52
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.56	0.52
22:DA:119:A:H4'	22:DA:120:U:O5'	2.09	0.52
22:DA:277:G:H1'	22:DA:361:G:O6	2.10	0.52
22:DA:370:G:O2'	22:DA:423:A:H3'	2.10	0.52
22:DA:1605:C:O2	22:DA:1610:A:O2'	2.25	0.52
22:DA:2341:G:C5	22:DA:2342:C:C4	2.98	0.52
24:DC:171:TYR:CD2	24:DC:185:GLU:HA	2.44	0.52
34:DM:56:ALA:C	34:DM:58:LYS:H	2.11	0.52
39:DR:68:ARG:HD3	39:DR:92:TRP:CZ2	2.44	0.52
50:D2:11:LYS:O	50:D2:15:SER:N	2.42	0.52
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.08	0.52
1:AA:100:G:O6	1:AA:101:A:C6	2.62	0.52
1:AA:518:C:H5	1:AA:530:G:OP2	1.91	0.52
1:AA:1000:A:C2	1:AA:1041:G:C2	2.97	0.52
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.44	0.52
4:AD:62:ARG:NH1	4:AD:69:GLU:HG2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.42	0.52
6:AF:51:ILE:HD12	6:AF:86:ARG:CZ	2.39	0.52
9:AI:50:GLN:C	9:AI:52:LEU:H	2.13	0.52
22:BA:744:U:O4	22:BA:745:G:C6	2.62	0.52
22:BA:1414:C:C4	22:BA:1415:U:H5	2.26	0.52
22:BA:2094:A:C2	22:BA:2196:C:C2	2.98	0.52
25:BD:131:ASP:HB3	25:BD:133:THR:O	2.09	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
41:BT:69:ARG:HB2	41:BT:74:ILE:HG22	1.90	0.52
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.45	0.52
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.09	0.52
1:CA:1144:G:C2	1:CA:1145:A:C2	2.97	0.52
3:CC:50:ALA:HB1	3:CC:76:VAL:CG2	2.40	0.52
8:CH:51:VAL:O	8:CH:51:VAL:HG22	2.09	0.52
12:CL:25:GLU:HB2	12:CL:27:CYS:SG	2.49	0.52
18:CR:24:LYS:O	18:CR:26:ILE:N	2.39	0.52
22:DA:624:C:O2'	22:DA:657:U:H5"	2.09	0.52
22:DA:651:G:P	51:D3:19:LYS:HG3	2.49	0.52
22:DA:873:C:N3	22:DA:905:A:C2	2.78	0.52
22:DA:987:C:O2'	22:DA:1000:A:N3	2.41	0.52
22:DA:1984:G:C6	22:DA:1985:C:C4	2.97	0.52
22:DA:2110:G:C6	22:DA:2120:G:C8	2.98	0.52
24:DC:80:ARG:NE	24:DC:82:GLU:OE2	2.41	0.52
32:DK:58:LEU:HD11	32:DK:86:LEU:HB3	1.91	0.52
34:DM:54:THR:HA	34:DM:57:VAL:HG22	1.91	0.52
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.44	0.52
1:AA:502:A:OP1	12:AL:115:SER:HB3	2.10	0.52
1:AA:520:A:N1	1:AA:536:C:H1'	2.24	0.52
1:AA:602:A:C2	1:AA:603:U:C2	2.97	0.52
1:AA:1014:A:C8	1:AA:1015:G:C5	2.97	0.52
1:AA:1144:G:H5"	1:AA:1145:A:OP2	2.09	0.52
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.50	0.52
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.29	0.52
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.08	0.52
6:AF:70:VAL:HA	6:AF:73:GLU:HG2	1.90	0.52
14:AN:7:LYS:O	14:AN:10:GLU:N	2.42	0.52
15:AO:74:ASP:OD1	15:AO:77:ARG:HD3	2.09	0.52
16:AP:72:ALA:HA	16:AP:75:ILE:HD11	1.92	0.52
22:BA:811:U:C4	33:BL:21:ARG:NH2	2.77	0.52
22:BA:2462:C:N4	22:BA:2463:C:N4	2.57	0.52
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:13:ARG:CA	24:BC:16:VAL:HG23	2.38	0.52
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.09	0.52
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.40	0.52
40:BS:51:LEU:O	40:BS:54:ALA:HB3	2.09	0.52
46:BY:7:ARG:O	46:BY:7:ARG:HG3	2.09	0.52
48:B0:17:ARG:HB3	48:B0:20:ASP:OD1	2.08	0.52
53:B5:102:GLN:HA	53:B5:105:LEU:CB	2.40	0.52
1:CA:8:A:C2	5:CE:112:ARG:NH2	2.78	0.52
1:CA:206:C:H2'	1:CA:207:C:H4'	1.90	0.52
1:CA:920:U:C2	1:CA:921:U:C5	2.97	0.52
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.92	0.52
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.39	0.52
1:CA:1379:G:N2	1:CA:1381:U:O4	2.38	0.52
5:CE:98:PRO:O	5:CE:99:ALA:CB	2.58	0.52
6:CF:99:ALA:O	6:CF:100:SER:HB3	2.10	0.52
10:CJ:52:LEU:HD22	10:CJ:59:LYS:HA	1.91	0.52
22:DA:489:G:C2	22:DA:491:G:H1'	2.45	0.52
22:DA:973:A:O4'	22:DA:1188:U:C6	2.62	0.52
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.92	0.52
23:DB:71:C:C2	23:DB:106:G:C2	2.97	0.52
25:DD:78:GLY:CA	25:DD:80:TRP:CH2	2.92	0.52
25:DD:157:LYS:HD2	31:DJ:79:GLY:O	2.10	0.52
28:DG:91:GLY:O	28:DG:92:VAL:O	2.27	0.52
38:DQ:72:ASN:CB	38:DQ:110:VAL:HG11	2.40	0.52
45:DX:40:VAL:CG2	45:DX:43:GLU:HB2	2.39	0.52
1:AA:841:C:O2	1:AA:843:U:N3	2.43	0.52
1:AA:1053:G:O5'	1:AA:1054:C:H5'	2.09	0.52
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.42	0.52
21:AU:16:LEU:C	21:AU:18:ARG:HD2	2.30	0.52
22:BA:816:C:C2	22:BA:1192:G:N2	2.77	0.52
22:BA:1392:A:C6	22:BA:1393:A:N1	2.78	0.52
22:BA:2572:A:N7	25:BD:150:GLN:HB2	2.24	0.52
23:BB:75:G:H1'	43:BV:29:ILE:HG13	1.91	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
32:BK:47:ILE:HB	32:BK:48:PRO:HD3	1.92	0.52
35:BN:67:PHE:HE2	35:BN:71:ARG:NH1	2.08	0.52
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.09	0.52
39:BR:21:ARG:NH1	39:BR:93:PHE:CE1	2.78	0.52
44:BW:47:ALA:HB2	44:BW:59:LEU:HD22	1.91	0.52
48:B0:46:ASP:O	48:B0:53:LYS:HE3	2.10	0.52
1:CA:131:A:O2'	1:CA:262:A:N3	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.09	0.52
1:CA:909:A:C8	1:CA:910:C:C5	2.97	0.52
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.45	0.52
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	1.92	0.52
4:CD:168:PRO:HB2	4:CD:171:LEU:HD13	1.91	0.52
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.09	0.52
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.10	0.52
22:DA:957:C:C4	22:DA:2459:A:H1'	2.45	0.52
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.91	0.52
28:DG:80:THR:HG22	28:DG:81:GLU:N	2.24	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52
41:DT:51:PHE:O	41:DT:53:VAL:N	2.43	0.52
1:AA:121:U:OP2	1:AA:121:U:H4'	2.09	0.52
1:AA:338:A:N6	1:AA:339:C:C4	2.77	0.52
1:AA:1074:G:N1	1:AA:1075:U:C2	2.78	0.52
1:AA:1140:C:O2'	1:AA:1141:C:P	2.67	0.52
1:AA:1286:U:OP1	1:AA:1286:U:C6	2.63	0.52
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.23	0.52
5:AE:122:ASN:N	5:AE:122:ASN:ND2	2.57	0.52
20:AT:58:VAL:CG1	20:AT:72:ALA:HA	2.40	0.52
22:BA:975:A:C2	22:BA:990:A:C8	2.97	0.52
22:BA:1588:G:C2	22:BA:1589:U:C6	2.98	0.52
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.74	0.52
22:BA:2462:C:C4	22:BA:2463:C:N4	2.77	0.52
23:BB:24:G:N2	23:BB:28:C:C2	2.77	0.52
25:BD:104:VAL:O	25:BD:105:LYS:HB2	2.10	0.52
28:BG:24:ILE:HD12	28:BG:72:LEU:HD21	1.91	0.52
28:BG:67:THR:O	28:BG:71:LEU:HG	2.10	0.52
31:BJ:30:THR:CG2	31:BJ:31:GLU:N	2.72	0.52
34:BM:70:ASP:OD2	34:BM:70:ASP:C	2.48	0.52
38:BQ:74:ILE:HG23	38:BQ:74:ILE:O	2.10	0.52
1:CA:18:C:C4	1:CA:19:A:N7	2.77	0.52
1:CA:123:U:H2'	1:CA:124:C:H6	1.74	0.52
1:CA:801:U:H2'	1:CA:802:A:H8	1.73	0.52
1:CA:1521:C:C2	1:CA:1522:U:C6	2.98	0.52
2:CB:80:VAL:HG13	2:CB:214:LEU:HD11	1.91	0.52
5:CE:76:LEU:HD23	5:CE:120:VAL:HG13	1.91	0.52
16:CP:38:PHE:CZ	16:CP:51:ARG:HB3	2.45	0.52
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.25	0.52
22:DA:1638:C:H5"	22:DA:2710:C:O2'	2.10	0.52
22:DA:1856:U:C4	22:DA:1857:G:C6	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.09	0.52
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.10	0.52
28:DG:84:THR:OG1	28:DG:134:LYS:HG2	2.08	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.92	0.52
33:DL:50:PHE:CZ	33:DL:52:GLY:O	2.63	0.52
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.56	0.52
47:DZ:41:THR:HG23	47:DZ:44:ILE:HG12	1.92	0.52
1:AA:207:C:O2	1:AA:213:G:N2	2.43	0.52
1:AA:924:C:O2'	1:AA:925:G:H5'	2.08	0.52
1:AA:994:A:N1	1:AA:1047:G:H4'	2.25	0.52
1:AA:1107:C:C4	1:AA:1108:G:N7	2.78	0.52
1:AA:1224:U:O2'	1:AA:1322:C:OP1	2.27	0.52
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.75	0.52
3:AC:165:THR:O	3:AC:166:GLU:HB2	2.09	0.52
4:AD:150:LYS:O	4:AD:152:GLN:N	2.43	0.52
7:AG:63:GLU:OE1	7:AG:63:GLU:O	2.27	0.52
9:AI:99:ARG:O	9:AI:101:ALA:N	2.42	0.52
19:AS:51:VAL:HG22	19:AS:71:LEU:CD1	2.39	0.52
22:BA:515:A:H1'	22:BA:581:C:H1'	1.90	0.52
22:BA:812:C:C5	22:BA:1250:G:C6	2.97	0.52
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.45	0.52
22:BA:1269:A:H2'	22:BA:1270:C:C6	2.44	0.52
22:BA:1316:U:C2	22:BA:1337:G:N2	2.78	0.52
22:BA:2226:C:O2	22:BA:2226:C:H2'	2.09	0.52
24:BC:107:PRO:HB3	24:BC:142:HIS:HE1	1.73	0.52
24:BC:130:LEU:HD23	24:BC:130:LEU:N	2.25	0.52
25:BD:103:ASP:O	25:BD:105:LYS:N	2.39	0.52
30:BI:57:VAL:CG2	30:BI:58:VAL:N	2.71	0.52
35:BN:1:MET:O	35:BN:2:ARG:CB	2.57	0.52
1:CA:295:C:N4	1:CA:296:U:O4	2.43	0.52
1:CA:545:C:H5'	4:CD:69:GLU:CG	2.39	0.52
1:CA:1022:A:C5	1:CA:1023:U:C4	2.98	0.52
1:CA:1215:G:C6	1:CA:1216:A:C5	2.98	0.52
1:CA:1300:G:C6	1:CA:1335:U:C6	2.97	0.52
1:CA:1311:A:C2	1:CA:1327:C:N3	2.78	0.52
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.45	0.52
5:CE:52:LYS:O	5:CE:53:ALA:HB2	2.09	0.52
17:CQ:47:HIS:HB2	17:CQ:67:LEU:CD1	2.40	0.52
22:DA:686:U:H2'	22:DA:788:A:C2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:704:G:H1'	22:DA:726:G:H22	1.75	0.52
22:DA:830:G:C2	22:DA:2448:A:N7	2.78	0.52
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.09	0.52
24:DC:101:ARG:O	24:DC:102:ARG:HG3	2.10	0.52
49:D1:15:ALA:O	49:D1:17:THR:N	2.43	0.52
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.10	0.52
1:AA:669:G:H2'	1:AA:670:G:H8	1.74	0.52
1:AA:796:C:OP1	11:AK:126:LYS:HB2	2.10	0.52
1:AA:815:A:H4'	1:AA:817:C:C4	2.45	0.52
1:AA:973:G:H1'	10:AJ:56:HIS:HD2	1.74	0.52
1:AA:1060:U:O2	1:AA:1061:G:C8	2.63	0.52
2:AB:82:ASP:C	2:AB:84:ALA:N	2.63	0.52
2:AB:117:LEU:HB3	2:AB:141:LEU:HD11	1.92	0.52
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.73	0.52
18:AR:25:ASP:O	18:AR:27:ALA:N	2.42	0.52
20:AT:25:ARG:O	20:AT:29:ARG:HG3	2.10	0.52
21:AU:12:PHE:N	21:AU:12:PHE:HD2	2.07	0.52
21:AU:16:LEU:O	21:AU:18:ARG:HD2	2.10	0.52
22:BA:84:A:H4'	22:BA:85:G:O5'	2.10	0.52
22:BA:110:G:H2'	22:BA:110:G:N3	2.25	0.52
22:BA:503:A:C2	22:BA:505:A:C4	2.98	0.52
22:BA:585:G:C4'	22:BA:586:A:OP1	2.57	0.52
22:BA:616:A:OP2	57:BA:3290:HOH:O	2.19	0.52
22:BA:1187:G:H5'	39:BR:83:TYR:CZ	2.44	0.52
22:BA:2075:U:H2'	22:BA:2077:A:OP2	2.09	0.52
22:BA:2513:A:H2'	22:BA:2513:A:N3	2.25	0.52
25:BD:1:MET:HA	25:BD:88:GLU:OE2	2.10	0.52
34:BM:34:LYS:O	34:BM:129:THR:N	2.43	0.52
35:BN:49:GLU:OE2	35:BN:95:THR:CG2	2.58	0.52
39:BR:41:ILE:O	39:BR:46:GLU:HB2	2.09	0.52
1:CA:73:C:HO2'	1:CA:74:A:C5'	2.23	0.52
1:CA:273:U:H1'	17:CQ:18:GLU:OE2	2.10	0.52
1:CA:407:U:H2'	1:CA:408:A:C8	2.45	0.52
1:CA:855:U:H2'	1:CA:856:C:C6	2.44	0.52
7:CG:42:ILE:HD13	7:CG:116:MET:HB3	1.91	0.52
13:CM:33:ILE:HG23	13:CM:59:GLU:HB3	1.91	0.52
22:DA:39:G:C6	22:DA:40:U:C4	2.98	0.52
22:DA:107:G:O3'	22:DA:293:U:O2'	2.12	0.52
22:DA:661:A:H1'	33:DL:12:SER:O	2.09	0.52
22:DA:696:G:C2	22:DA:767:U:O2	2.63	0.52
22:DA:748:G:O6	22:DA:751:A:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:833:A:H2'	22:DA:834:G:C8	2.44	0.52
22:DA:993:G:H1'	39:DR:91:GLN:OE1	2.10	0.52
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.75	0.52
22:DA:1355:G:C6	22:DA:1356:G:N7	2.78	0.52
22:DA:1738:G:HO2'	22:DA:1739:A:P	2.32	0.52
22:DA:2499:C:C4	22:DA:2500:U:O4	2.63	0.52
22:DA:2549:G:C2	22:DA:2560:A:C2	2.98	0.52
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.45	0.52
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.10	0.52
24:DC:107:PRO:HD2	24:DC:110:LEU:HD22	1.92	0.52
27:DF:5:HIS:O	27:DF:9:LYS:HG3	2.10	0.52
42:DU:74:ASN:HA	42:DU:96:PHE:CZ	2.45	0.52
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.45	0.52
1:AA:1306:A:C5	1:AA:1307:U:C5	2.97	0.52
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.92	0.52
9:AI:46:MET:SD	9:AI:46:MET:N	2.83	0.52
22:BA:238:C:H2'	22:BA:239:C:O5'	2.09	0.52
22:BA:613:A:H2'	22:BA:614:A:H5"	1.91	0.52
22:BA:674:G:O2'	26:BE:69:ARG:HD3	2.10	0.52
22:BA:893:C:H2'	22:BA:894:U:O4'	2.10	0.52
22:BA:1002:G:C2	22:BA:1003:G:H1'	2.44	0.52
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.91	0.52
22:BA:1121:C:H2'	22:BA:1122:G:O4'	2.10	0.52
22:BA:1271:G:O2'	22:BA:1618:A:OP1	2.20	0.52
22:BA:1374:G:C2'	22:BA:1375:U:H5'	2.40	0.52
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.57	0.52
22:BA:1829:A:O2'	24:BC:15:HIS:CD2	2.63	0.52
22:BA:2116:G:C6	22:BA:2171:A:N6	2.77	0.52
22:BA:2331:G:C6	22:BA:2332:C:C4	2.97	0.52
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.40	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
29:BH:123:ARG:NH2	1:CA:367:U:O5'	2.43	0.52
30:BI:116:ASP:O	30:BI:117:MET:CB	2.57	0.52
32:BK:116:ILE:O	32:BK:118:LEU:O	2.27	0.52
1:CA:369:G:OP2	1:CA:388:G:N2	2.39	0.52
1:CA:604:G:H2'	1:CA:605:U:O4'	2.09	0.52
1:CA:632:U:O2	1:CA:632:U:C2'	2.58	0.52
1:CA:926:G:C6	1:CA:1505:G:C5	2.98	0.52
1:CA:976:G:N2	1:CA:1363:A:C4	2.78	0.52
5:CE:25:VAL:N	5:CE:28:GLY:O	2.37	0.52
5:CE:101:GLU:HA	5:CE:122:ASN:CB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:89:LYS:HA	8:CH:92:LEU:HD12	1.92	0.52
11:CK:27:PHE:CE1	11:CK:89:PRO:HG2	2.45	0.52
17:CQ:61:ILE:HA	17:CQ:75:LEU:HA	1.92	0.52
20:CT:39:ILE:HD11	20:CT:83:ILE:HG22	1.90	0.52
22:DA:289:G:C2	22:DA:352:A:C2	2.98	0.52
22:DA:1020:A:C2	22:DA:1141:U:C2	2.98	0.52
25:DD:123:LYS:HD3	25:DD:165:MET:SD	2.49	0.52
27:DF:106:ILE:HG12	27:DF:107:ALA:N	2.25	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
37:DP:48:ILE:HD13	37:DP:62:ARG:HB2	1.92	0.52
41:DT:72:GLN:O	41:DT:73:ARG:O	2.28	0.52
1:AA:347:G:H2'	1:AA:348:G:O5'	2.10	0.52
1:AA:715:A:OP1	1:AA:805:C:H1'	2.10	0.52
4:AD:151:LYS:CA	4:AD:178:MET:HE1	2.38	0.52
5:AE:60:ILE:HG13	5:AE:61:GLN:N	2.24	0.52
6:AF:84:VAL:HG22	6:AF:84:VAL:O	2.10	0.52
14:AN:64:CYS:HB2	14:AN:80:SER:HB2	1.91	0.52
14:AN:64:CYS:O	14:AN:66:GLN:N	2.43	0.52
15:AO:88:ARG:O	15:AO:89:ARG:OXT	2.28	0.52
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.10	0.52
22:BA:574:A:H4'	22:BA:575:A:O5'	2.10	0.52
22:BA:699:A:N7	22:BA:734:A:C5	2.78	0.52
22:BA:877:A:C6	22:BA:899:A:C6	2.98	0.52
22:BA:1073:A:N7	22:BA:1074:G:C8	2.78	0.52
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.44	0.52
22:BA:2619:C:H5'	25:BD:155:VAL:O	2.10	0.52
25:BD:139:SER:HA	25:BD:142:VAL:HG13	1.91	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.43	0.52
39:BR:25:LEU:N	39:BR:94:THR:HG21	2.25	0.52
39:BR:79:ARG:O	39:BR:80:ARG:CB	2.58	0.52
45:BX:17:ASN:OD1	45:BX:27:ARG:HD2	2.10	0.52
1:CA:72:A:C5	1:CA:73:C:C5	2.98	0.52
1:CA:142:G:C2	1:CA:143:A:H1'	2.44	0.52
1:CA:1082:A:C6	1:CA:1083:U:N3	2.78	0.52
2:CB:59:LYS:HA	2:CB:62:SER:HB2	1.92	0.52
2:CB:82:ASP:OD1	2:CB:82:ASP:N	2.43	0.52
5:CE:105:ILE:N	5:CE:122:ASN:O	2.44	0.52
5:CE:131:THR:O	5:CE:132:ASN:C	2.48	0.52
5:CE:155:ALA:HB1	8:CH:66:PHE:CE2	2.44	0.52
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:19:LEU:CB	13:CM:30:SER:OG	2.58	0.52
14:CN:23:LYS:HG3	14:CN:24:ARG:N	2.24	0.52
15:CO:56:LEU:O	15:CO:59:MET:N	2.43	0.52
15:CO:73:LYS:HE2	15:CO:73:LYS:HA	1.91	0.52
19:CS:29:LYS:CB	19:CS:30:PRO:HD2	2.40	0.52
20:CT:80:THR:O	20:CT:83:ILE:N	2.42	0.52
22:DA:36:G:C2'	22:DA:450:G:HO2'	2.23	0.52
22:DA:271:G:H4'	22:DA:272:A:OP1	2.09	0.52
22:DA:729:G:H2'	22:DA:1775:U:H1'	1.92	0.52
22:DA:1340:U:H4'	22:DA:1341:G:OP2	2.09	0.52
22:DA:1566:A:N1	24:DC:213:TRP:CE3	2.78	0.52
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.10	0.52
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.45	0.52
22:DA:2133:G:C2	22:DA:2158:A:C6	2.98	0.52
22:DA:2297:A:C8	22:DA:2320:U:C4	2.98	0.52
22:DA:2311:A:HO2'	22:DA:2312:U:P	2.30	0.52
22:DA:2554:U:H2'	22:DA:2555:U:C6	2.45	0.52
26:DE:83:VAL:CG1	26:DE:86:ALA:HA	2.40	0.52
35:DN:46:ARG:O	35:DN:50:PRO:HG2	2.10	0.52
36:DO:97:PHE:HB2	36:DO:103:VAL:HG11	1.92	0.52
39:DR:29:THR:O	39:DR:29:THR:HG22	2.09	0.52
40:DS:41:LYS:O	40:DS:42:LYS:C	2.48	0.52
46:DY:1:MET:HA	46:DY:4:LYS:HD3	1.92	0.52
50:D2:18:PHE:O	50:D2:21:ARG:N	2.43	0.52
51:D3:27:ALA:O	51:D3:28:ASN:HB2	2.10	0.52
1:AA:27:G:C5	1:AA:557:G:C2	2.97	0.51
1:AA:209:U:C4'	1:AA:210:C:OP2	2.58	0.51
1:AA:568:G:C4	1:AA:569:C:C5	2.97	0.51
1:AA:620:C:H1'	4:AD:132:ILE:HD11	1.91	0.51
1:AA:701:U:H4'	1:AA:702:A:C5'	2.40	0.51
1:AA:1349:A:C6	1:AA:1374:A:C8	2.98	0.51
1:AA:1353:G:C2	1:AA:1354:U:C6	2.99	0.51
11:AK:74:VAL:C	11:AK:76:GLU:H	2.11	0.51
22:BA:418:C:H2'	22:BA:419:U:O4'	2.10	0.51
22:BA:584:C:OP2	38:BQ:6:ARG:HG3	2.10	0.51
22:BA:784:G:H5"	24:BC:226:ASN:OD1	2.10	0.51
22:BA:1080:A:H2'	22:BA:1080:A:N3	2.25	0.51
22:BA:2498:C:P	57:BA:3688:HOH:O	2.64	0.51
22:BA:2821:A:OP2	25:BD:115:GLY:HA3	2.10	0.51
28:BG:149:ARG:CG	28:BG:149:ARG:HH11	2.22	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.91	0.51
40:BS:41:LYS:HE3	48:B0:22:LEU:HD21	1.92	0.51
1:CA:19:A:C2	1:CA:20:U:C2	2.98	0.51
1:CA:102:G:O2'	1:CA:151:A:N3	2.34	0.51
1:CA:505:G:H2'	1:CA:506:G:C8	2.45	0.51
1:CA:844:G:H2'	1:CA:844:G:N3	2.25	0.51
1:CA:1084:G:C5	1:CA:1085:U:C4	2.98	0.51
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.25	0.51
1:CA:1202:U:C2'	1:CA:1203:C:H5'	2.40	0.51
2:CB:206:ALA:O	2:CB:209:ALA:N	2.43	0.51
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.10	0.51
5:CE:149:SER:HB2	5:CE:152:MET:HG3	1.92	0.51
22:DA:2:G:C6	22:DA:3:U:C4	2.97	0.51
22:DA:158:U:H2'	22:DA:159:G:H5'	1.92	0.51
22:DA:270:A:C2	22:DA:369:U:H4'	2.45	0.51
22:DA:621:A:OP2	33:DL:99:ASN:ND2	2.41	0.51
22:DA:1551:A:N6	57:DA:3632:HOH:O	2.42	0.51
22:DA:1647:U:H3'	22:DA:1647:U:OP2	2.10	0.51
22:DA:2712:C:OP1	22:DA:2714:G:H4'	2.10	0.51
27:DF:73:SER:HB2	27:DF:81:GLN:HB3	1.92	0.51
30:DI:8:TYR:CD1	30:DI:8:TYR:O	2.63	0.51
31:DJ:5:THR:C	31:DJ:6:ALA:O	2.48	0.51
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.39	0.51
45:DX:28:ARG:NH1	45:DX:30:LEU:HD21	2.25	0.51
45:DX:54:LYS:O	45:DX:57:ARG:N	2.43	0.51
1:AA:100:G:C5	1:AA:101:A:C5	2.99	0.51
1:AA:131:A:H2'	1:AA:132:C:H6	1.75	0.51
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.09	0.51
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.75	0.51
5:AE:82:GLN:H	5:AE:147:MET:CE	2.23	0.51
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.93	0.51
13:AM:114:LYS:CB	13:AM:115:PRO:CD	2.89	0.51
17:AQ:16:LYS:HE3	17:AQ:16:LYS:O	2.10	0.51
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.73	0.51
22:BA:361:G:HO2'	22:BA:362:A:P	2.32	0.51
22:BA:623:C:H2'	22:BA:624:C:C6	2.45	0.51
22:BA:1301:A:C4	22:BA:1303:G:N7	2.79	0.51
22:BA:1392:A:C6	22:BA:1393:A:C6	2.97	0.51
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.10	0.51
22:BA:2056:G:N2	22:BA:2057:G:C4	2.79	0.51
22:BA:2180:U:C5'	22:BA:2181:U:OP2	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2681:C:OP2	25:BD:114:LYS:HE2	2.09	0.51
25:BD:146:ILE:HG22	25:BD:159:LYS:HE3	1.91	0.51
32:BK:10:VAL:HG21	32:BK:16:ALA:HB3	1.92	0.51
45:BX:8:THR:OG1	45:BX:10:LYS:HG3	2.10	0.51
1:CA:844:G:C8	1:CA:844:G:OP2	2.64	0.51
1:CA:1028:C:OP2	1:CA:1028:C:C6	2.63	0.51
2:CB:183:VAL:N	2:CB:197:ASP:OD1	2.43	0.51
11:CK:52:PHE:CZ	11:CK:62:ALA:HA	2.45	0.51
14:CN:64:CYS:SG	14:CN:80:SER:HB2	2.51	0.51
22:DA:30:G:C5	22:DA:31:C:C4	2.99	0.51
22:DA:200:U:C4	22:DA:248:G:C2	2.98	0.51
22:DA:214:G:H1'	22:DA:217:A:H5'	1.92	0.51
22:DA:228:C:H5"	22:DA:229:C:C6	2.46	0.51
22:DA:792:A:N3	22:DA:2072:C:O2'	2.32	0.51
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.41	0.51
22:DA:2199:A:C5	22:DA:2225:A:C6	2.98	0.51
22:DA:2518:A:P	57:DA:3533:HOH:O	2.67	0.51
28:DG:113:VAL:HG11	28:DG:151:TYR:CE2	2.46	0.51
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.92	0.51
34:DM:59:ARG:O	34:DM:59:ARG:HD3	2.10	0.51
41:DT:38:ALA:O	41:DT:39:THR:HB	2.11	0.51
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.11	0.51
50:D2:44:VAL:O	50:D2:45:SER:CB	2.58	0.51
1:AA:102:G:C2	1:AA:103:U:C5	2.99	0.51
1:AA:111:G:H5"	1:AA:112:G:OP2	2.10	0.51
1:AA:502:A:C2	1:AA:544:G:C2	2.98	0.51
1:AA:972:C:H4'	10:AJ:59:LYS:HE3	1.92	0.51
1:AA:999:C:H2'	1:AA:1000:A:C8	2.45	0.51
1:AA:1538:C:C2'	1:AA:1539:C:H5'	2.41	0.51
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.42	0.51
15:AO:32:LEU:O	15:AO:33:THR:C	2.49	0.51
21:AU:14:VAL:HG13	21:AU:16:LEU:HG	1.92	0.51
22:BA:340:A:H2'	22:BA:341:C:H5'	1.92	0.51
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.58	0.51
22:BA:1423:G:C2	22:BA:1424:G:C4	2.98	0.51
22:BA:1504:A:C2	22:BA:1505:A:C4	2.98	0.51
22:BA:1791:A:OP2	57:BA:3787:HOH:O	2.19	0.51
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.40	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
1:CA:73:C:C2	1:CA:74:A:C8	2.98	0.51
1:CA:476:U:O2'	1:CA:477:C:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:528:C:H2'	1:CA:528:C:O2	2.11	0.51
1:CA:878:A:C6	1:CA:879:C:C4	2.99	0.51
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.91	0.51
2:CB:81:LYS:HG2	2:CB:85:LEU:HD23	1.93	0.51
4:CD:161:LEU:HD23	4:CD:162:ALA:N	2.24	0.51
16:CP:10:GLY:O	16:CP:11:ALA:HB2	2.11	0.51
22:DA:570:G:C4	22:DA:2030:A:N7	2.79	0.51
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.45	0.51
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.45	0.51
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.43	0.51
22:DA:2013:A:N6	22:DA:2014:A:N1	2.58	0.51
22:DA:2061:G:H5"	22:DA:2503:A:C2	2.46	0.51
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.46	0.51
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.41	0.51
22:DA:2148:G:C2	22:DA:2149:U:C4	2.99	0.51
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.43	0.51
33:DL:55:MET:SD	33:DL:59:ARG:NH2	2.84	0.51
36:DO:35:ILE:HG23	36:DO:35:ILE:O	2.11	0.51
1:AA:375:U:OP1	16:AP:70:ARG:NH1	2.44	0.51
1:AA:429:U:H1'	1:AA:430:A:H5"	1.91	0.51
1:AA:616:G:N2	1:AA:617:G:C4	2.79	0.51
1:AA:859:G:H2'	1:AA:860:A:C8	2.45	0.51
1:AA:1081:A:H5'	5:AE:23:LYS:HG3	1.92	0.51
1:AA:1197:A:OP1	1:AA:1198:G:OP2	2.28	0.51
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.45	0.51
3:AC:70:THR:OG1	3:AC:71:ALA:N	2.43	0.51
6:AF:10:VAL:HG12	6:AF:11:HIS:N	2.25	0.51
12:AL:22:PRO:O	12:AL:24:LEU:N	2.41	0.51
22:BA:841:G:H2'	22:BA:842:U:C6	2.45	0.51
22:BA:1358:G:C8	22:BA:1371:G:O6	2.63	0.51
22:BA:1936:A:N3	22:BA:1940:U:O2	2.43	0.51
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.46	0.51
22:BA:2298:A:C4	22:BA:2321:U:H5	2.29	0.51
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.45	0.51
22:BA:2451:A:C2	55:BA:3001:VIF:C23	2.94	0.51
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.09	0.51
26:BE:147:LEU:CD2	26:BE:180:LEU:HD23	2.39	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
30:BI:43:ASN:OD1	30:BI:46:THR:HB	2.10	0.51
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.75	0.51
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:5:PHE:HA	39:BR:39:LEU:HD12	1.92	0.51
50:B2:1:MET:O	50:B2:2:LYS:C	2.48	0.51
1:CA:673:A:H2'	1:CA:674:G:C8	2.45	0.51
1:CA:987:G:N2	1:CA:1218:C:O2	2.44	0.51
1:CA:1434:A:N6	1:CA:1435:G:C6	2.79	0.51
1:CA:1450:U:O2'	1:CA:1451:U:H2'	2.11	0.51
2:CB:50:PHE:HB2	2:CB:213:TYR:OH	2.10	0.51
2:CB:102:THR:CG2	2:CB:175:GLU:HG2	2.40	0.51
3:CC:77:ILE:HA	3:CC:84:VAL:CG2	2.39	0.51
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.11	0.51
22:DA:579:G:N2	22:DA:1262:A:C4	2.78	0.51
22:DA:756:A:H2'	22:DA:757:G:O4'	2.10	0.51
22:DA:1316:U:C2	22:DA:1337:G:N2	2.78	0.51
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.92	0.51
23:DB:115:A:H2'	23:DB:116:G:C8	2.45	0.51
24:DC:35:GLU:O	24:DC:36:LYS:O	2.29	0.51
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	1.92	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
1:AA:596:A:N6	1:AA:645:G:C6	2.79	0.51
1:AA:1150:A:O2'	10:AJ:43:PRO:HD3	2.10	0.51
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.25	0.51
2:AB:91:PHE:O	2:AB:150:GLY:HA3	2.10	0.51
5:AE:77:ASN:O	5:AE:78:ASN:CB	2.59	0.51
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.11	0.51
22:BA:45:G:H5'	22:BA:46:G:OP1	2.10	0.51
22:BA:229:C:H2'	22:BA:230:G:O5'	2.11	0.51
22:BA:1107:G:C6	22:BA:1108:U:C4	2.98	0.51
22:BA:1275:A:C8	35:BN:16:HIS:ND1	2.79	0.51
22:BA:2077:A:O2'	22:BA:2078:C:H5'	2.10	0.51
22:BA:2486:C:C2'	22:BA:2487:G:O5'	2.58	0.51
25:BD:40:LEU:O	25:BD:41:ALA:C	2.49	0.51
46:BY:45:GLN:O	46:BY:46:VAL:HG23	2.10	0.51
1:CA:31:G:O4'	1:CA:306:A:C2	2.63	0.51
1:CA:756:C:C2'	1:CA:757:U:H5'	2.41	0.51
1:CA:1130:A:N9	1:CA:1146:A:C2	2.78	0.51
2:CB:119:THR:O	2:CB:120:GLN:HB3	2.10	0.51
2:CB:126:PHE:CD2	2:CB:126:PHE:N	2.78	0.51
2:CB:225:ARG:O	2:CB:226:SER:HB2	2.11	0.51
12:CL:90:LEU:CB	12:CL:93:VAL:CG2	2.89	0.51
22:DA:571:U:C4	22:DA:2030:A:C6	2.99	0.51
22:DA:675:A:C6	22:DA:676:A:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:706:A:C2	22:DA:707:G:H1'	2.45	0.51
22:DA:931:U:H4'	22:DA:932:U:OP2	2.10	0.51
22:DA:1082:U:OP1	30:DI:124:ALA:HB2	2.10	0.51
22:DA:1376:C:H3'	57:DA:3398:HOH:O	2.10	0.51
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.64	0.51
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.11	0.51
22:DA:1869:G:N2	22:DA:1871:A:O2'	2.43	0.51
22:DA:1965:C:OP1	22:DA:1966:A:O2'	2.28	0.51
22:DA:2058:A:N6	22:DA:2059:A:N6	2.58	0.51
26:DE:181:ILE:HG23	33:DL:2:ARG:CZ	2.41	0.51
27:DF:134:GLU:HG3	27:DF:136:ILE:HD12	1.91	0.51
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.26	0.51
30:DI:76:ALA:HB3	30:DI:132:THR:HG21	1.91	0.51
31:DJ:15:TRP:O	31:DJ:137:PRO:HA	2.10	0.51
37:DP:113:ARG:O	37:DP:114:LEU:HD23	2.11	0.51
1:AA:339:C:H2'	1:AA:340:U:H6	1.75	0.51
1:AA:682:G:N2	1:AA:709:U:C2	2.78	0.51
1:AA:832:G:C4	1:AA:833:G:C8	2.98	0.51
1:AA:1489:G:C6	1:AA:1490:U:C4	2.98	0.51
2:AB:23:TRP:HB3	2:AB:39:HIS:CE1	2.45	0.51
2:AB:72:THR:O	2:AB:73:LYS:CB	2.58	0.51
4:AD:174:ASP:OD2	4:AD:177:LYS:N	2.37	0.51
15:AO:43:PHE:CE1	15:AO:56:LEU:HD22	2.46	0.51
22:BA:164:C:C2'	22:BA:165:A:H5'	2.41	0.51
22:BA:2056:G:H2'	22:BA:2056:G:N3	2.25	0.51
22:BA:2371:G:C2	22:BA:2372:U:C6	2.99	0.51
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.10	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
36:BO:100:HIS:CG	36:BO:101:GLY:N	2.77	0.51
40:BS:28:LYS:O	40:BS:29:VAL:C	2.49	0.51
1:CA:17:U:C2	1:CA:18:C:C6	2.99	0.51
1:CA:304:U:H2'	1:CA:305:G:C8	2.46	0.51
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.73	0.51
1:CA:1491:G:H2'	1:CA:1492:A:C8	2.45	0.51
2:CB:57:LEU:HD13	2:CB:58:ASN:N	2.26	0.51
10:CJ:27:GLU:O	10:CJ:27:GLU:HG2	2.09	0.51
11:CK:26:SER:OG	11:CK:29:ASN:O	2.17	0.51
12:CL:43:LYS:O	12:CL:44:LYS:C	2.49	0.51
17:CQ:69:LYS:O	17:CQ:70:THR:CB	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:67:ILE:O	20:CT:68:HIS:O	2.29	0.51
22:DA:155:A:H2'	22:DA:156:A:C8	2.45	0.51
22:DA:1677:A:H5"	57:DA:3436:HOH:O	2.11	0.51
22:DA:1914:C:C5	22:DA:1915:U:C2	2.99	0.51
22:DA:1936:A:H2	22:DA:1943:U:H3	1.56	0.51
22:DA:2354:C:O2'	44:DW:35:SER:HA	2.10	0.51
35:DN:72:ASP:HB3	35:DN:75:ILE:HB	1.92	0.51
41:DT:14:PRO:HA	41:DT:32:LEU:HB3	1.93	0.51
41:DT:17:SER:O	41:DT:18:GLU:C	2.49	0.51
41:DT:72:GLN:O	41:DT:73:ARG:C	2.48	0.51
1:AA:220:G:C5	1:AA:221:C:C5	2.99	0.51
1:AA:1539:C:H5"	21:AU:18:ARG:HG3	1.93	0.51
2:AB:21:ARG:NH1	2:AB:21:ARG:HA	2.25	0.51
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.11	0.51
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.10	0.51
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE2	2.45	0.51
11:AK:36:ASP:OD1	11:AK:40:ASN:HB2	2.10	0.51
11:AK:125:LYS:HG2	11:AK:126:LYS:N	2.26	0.51
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.93	0.51
22:BA:1846:G:C2	22:BA:1895:C:C2	2.98	0.51
22:BA:2211:A:HO2'	22:BA:2212:A:P	2.29	0.51
22:BA:2380:C:C2	22:BA:2381:A:C8	2.98	0.51
22:BA:2547:A:H5"	32:BK:29:HIS:NE2	2.25	0.51
22:BA:2708:G:H1'	35:BN:71:ARG:CZ	2.41	0.51
22:BA:2737:G:C6	22:BA:2738:A:C6	2.99	0.51
26:BE:171:ASP:OD1	26:BE:172:ALA:N	2.43	0.51
33:BL:142:ILE:CG2	33:BL:143:GLU:N	2.73	0.51
36:BO:78:VAL:O	36:BO:79:ALA:C	2.49	0.51
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.45	0.51
53:B5:64:SER:O	53:B5:65:LEU:CB	2.58	0.51
1:CA:769:G:O2'	1:CA:770:C:H5'	2.11	0.51
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.93	0.51
8:CH:5:ASP:OD1	8:CH:81:PRO:HD3	2.11	0.51
22:DA:478:A:C6	22:DA:480:A:C6	2.99	0.51
22:DA:868:U:C4	22:DA:869:G:N7	2.79	0.51
22:DA:1097:U:O2	30:DI:9:VAL:HG11	2.11	0.51
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.40	0.51
22:DA:2142:A:C6	22:DA:2143:C:C4	2.98	0.51
22:DA:2478:A:C8	22:DA:2529:G:C5	2.99	0.51
22:DA:2794:C:H2'	22:DA:2795:C:O4'	2.11	0.51
31:DJ:9:GLU:O	31:DJ:10:THR:CG2	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:33:ARG:HG2	36:DO:34:HIS:CD2	2.45	0.51
52:D4:11:CYS:SG	52:D4:12:ARG:N	2.83	0.51
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.11	0.51
3:AC:118:ASP:HA	3:AC:121:THR:HB	1.93	0.51
4:AD:23:SER:O	4:AD:24:GLY:C	2.49	0.51
6:AF:67:PRO:O	6:AF:69:GLU:N	2.44	0.51
7:AG:144:MET:HA	7:AG:144:MET:CE	2.41	0.51
9:AI:103:PHE:N	9:AI:103:PHE:CD1	2.77	0.51
11:AK:21:ALA:HA	11:AK:34:ILE:HD13	1.93	0.51
17:AQ:42:THR:O	17:AQ:42:THR:HG22	2.09	0.51
22:BA:479:A:N3	22:BA:481:G:H5"	2.26	0.51
22:BA:841:G:C2	22:BA:938:G:C2	2.99	0.51
22:BA:998:C:OP2	38:BQ:58:ARG:NH2	2.41	0.51
22:BA:1759:A:C2	22:BA:1760:C:C2	2.99	0.51
22:BA:1801:A:C8	22:BA:2203:U:H2'	2.46	0.51
22:BA:2275:C:O2	34:BM:84:LYS:HD2	2.10	0.51
22:BA:2510:C:C2'	22:BA:2511:U:H5'	2.41	0.51
25:BD:103:ASP:O	25:BD:104:VAL:HG22	2.11	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.74	0.51
32:BK:91:SER:O	32:BK:91:SER:OG	2.28	0.51
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.74	0.51
39:BR:25:LEU:N	39:BR:94:THR:CG2	2.74	0.51
39:BR:66:HIS:CE1	39:BR:94:THR:HB	2.46	0.51
1:CA:56:U:H2'	1:CA:57:G:C8	2.46	0.51
1:CA:258:G:C2	1:CA:269:C:O2	2.64	0.51
1:CA:439:U:H5"	4:CD:121:LYS:HD2	1.93	0.51
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.46	0.51
1:CA:1540:U:O3'	21:CU:18:ARG:NE	2.43	0.51
20:CT:57:ILE:O	20:CT:61:GLN:HG2	2.11	0.51
20:CT:73:ALA:O	20:CT:74:ARG:C	2.49	0.51
22:DA:404:A:C1'	22:DA:405:U:OP2	2.59	0.51
22:DA:587:C:OP2	33:DL:21:ARG:NH1	2.44	0.51
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.25	0.51
22:DA:769:U:N3	22:DA:770:G:N7	2.59	0.51
22:DA:1483:G:C6	22:DA:1484:U:C4	2.98	0.51
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.93	0.51
22:DA:2282:G:C2	22:DA:2425:A:C6	2.98	0.51
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.51
34:DM:11:LYS:HE3	34:DM:87:GLY:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:51:ARG:O	37:DP:57:SER:HA	2.11	0.51
1:AA:79:G:N2	1:AA:91:U:C4	2.78	0.51
1:AA:901:A:N7	1:AA:902:G:H1'	2.26	0.51
1:AA:1306:A:C4	1:AA:1307:U:C6	2.99	0.51
6:AF:16:GLU:OE2	4:CD:188:ARG:NH1	2.44	0.51
16:AP:48:GLU:HG3	16:AP:49:GLY:N	2.26	0.51
20:AT:3:ASN:O	20:AT:5:LYS:N	2.43	0.51
21:AU:19:PHE:O	21:AU:22:SER:HB3	2.11	0.51
22:BA:545:U:H3'	22:BA:546:U:H4'	1.93	0.51
22:BA:582:A:N1	22:BA:1259:G:C6	2.79	0.51
22:BA:1333:G:C2	22:BA:1334:G:C8	2.98	0.51
22:BA:2697:G:C5	22:BA:2698:U:C5	2.99	0.51
25:BD:2:ILE:HD13	25:BD:90:PHE:CZ	2.46	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.93	0.51
40:BS:66:ILE:HA	40:BS:69:LEU:HD23	1.93	0.51
46:BY:9:LYS:O	46:BY:11:VAL:N	2.43	0.51
1:CA:1104:G:H2'	1:CA:1105:A:O4'	2.10	0.51
4:CD:64:ILE:HG22	4:CD:65:TYR:CD1	2.46	0.51
4:CD:150:LYS:O	4:CD:151:LYS:HG2	2.11	0.51
13:CM:54:ASP:HA	13:CM:57:ARG:HB3	1.93	0.51
14:CN:16:LEU:HB3	14:CN:55:SER:HA	1.93	0.51
18:CR:34:THR:CG2	18:CR:38:LYS:HB2	2.41	0.51
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.75	0.51
22:DA:1439:A:N7	22:DA:1552:A:C2	2.79	0.51
22:DA:1651:G:C2	22:DA:2007:U:O2	2.63	0.51
22:DA:1997:C:P	25:DD:129:THR:HG1	2.34	0.51
37:DP:32:VAL:O	37:DP:38:LYS:HA	2.11	0.51
40:DS:37:THR:OG1	40:DS:48:LYS:NZ	2.32	0.51
1:AA:34:C:O2'	1:AA:35:G:H5'	2.11	0.51
1:AA:71:A:O2'	1:AA:72:A:OP2	2.24	0.51
1:AA:258:G:C6	1:AA:259:G:C5	2.99	0.51
1:AA:451:A:C8	1:AA:452:A:C2	2.99	0.51
1:AA:577:G:C1'	1:AA:816:A:H2'	2.41	0.51
1:AA:914:A:C5	1:AA:915:A:N7	2.79	0.51
1:AA:960:U:H2'	1:AA:1225:A:H62	1.76	0.51
2:AB:87:CYS:HB2	2:AB:89:GLN:NE2	2.25	0.51
4:AD:90:LEU:O	4:AD:90:LEU:HD12	2.10	0.51
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.11	0.51
15:AO:39:LEU:HD23	15:AO:56:LEU:HD13	1.92	0.51
22:BA:223:A:C6	22:BA:422:A:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:388:G:N7	22:BA:390:U:H2'	2.26	0.51
22:BA:686:U:H2'	22:BA:788:A:N1	2.26	0.51
22:BA:817:C:P	57:BA:3583:HOH:O	2.68	0.51
22:BA:1079:C:C5	22:BA:1088:A:C2	2.99	0.51
22:BA:1185:G:H5"	22:BA:1186:G:P	2.50	0.51
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.41	0.51
22:BA:2198:A:C4	29:BH:29:PHE:HB2	2.46	0.51
22:BA:2708:G:O2'	35:BN:71:ARG:HD3	2.11	0.51
27:BF:108:VAL:HG13	27:BF:114:PHE:CE2	2.46	0.51
34:BM:41:LEU:O	34:BM:93:VAL:HA	2.11	0.51
42:BU:97:LYS:O	42:BU:98:SER:CB	2.59	0.51
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.41	0.51
1:CA:724:G:C2	1:CA:725:G:C8	2.98	0.51
1:CA:1084:G:OP1	1:CA:1086:U:C6	2.64	0.51
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.46	0.51
5:CE:23:LYS:O	5:CE:24:THR:CB	2.59	0.51
5:CE:150:PRO:O	5:CE:153:VAL:HG22	2.11	0.51
6:CF:70:VAL:HG23	6:CF:71:ILE:N	2.26	0.51
10:CJ:59:LYS:O	10:CJ:62:ARG:HD2	2.11	0.51
20:CT:70:ASN:O	20:CT:74:ARG:N	2.43	0.51
22:DA:582:A:OP1	38:DQ:14:HIS:ND1	2.43	0.51
22:DA:686:U:H6	22:DA:788:A:N1	2.09	0.51
22:DA:752:A:N1	22:DA:1781:U:H1'	2.26	0.51
22:DA:818:G:O2'	22:DA:819:A:O4'	2.28	0.51
22:DA:1027:A:C5	22:DA:1126:A:C2	2.99	0.51
22:DA:1073:A:H2'	22:DA:1074:G:H5'	1.93	0.51
22:DA:1323:C:N4	22:DA:1324:G:O6	2.44	0.51
22:DA:1737:G:C6	22:DA:1738:G:N1	2.79	0.51
22:DA:2056:G:OP1	57:DA:3667:HOH:O	2.19	0.51
24:DC:129:THR:C	24:DC:130:LEU:HD23	2.32	0.51
24:DC:260:ASN:OD1	24:DC:263:THR:N	2.42	0.51
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.78	0.51
27:DF:117:LEU:O	27:DF:177:PHE:HA	2.11	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.59	0.51
32:DK:2:ILE:HB	32:DK:33:ALA:O	2.11	0.51
39:DR:3:ALA:HB2	39:DR:101:ILE:HG23	1.93	0.51
1:AA:668:G:O2'	1:AA:669:G:H5'	2.11	0.50
1:AA:1222:G:C6	1:AA:1223:C:C4	2.99	0.50
2:AB:203:ASN:OD1	2:AB:204:ASP:N	2.44	0.50
7:AG:95:ARG:O	7:AG:98:ALA:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:16:ALA:O	9:AI:67:VAL:HA	2.11	0.50
10:AJ:48:ARG:HD3	14:AN:101:TRP:CH2	2.46	0.50
12:AL:110:ARG:NH2	12:AL:117:TYR:CE2	2.79	0.50
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.91	0.50
22:BA:194:G:N7	57:BA:3763:HOH:O	2.35	0.50
22:BA:211:C:O2'	22:BA:212:G:H5'	2.11	0.50
22:BA:528:A:H3'	22:BA:528:A:H8	1.73	0.50
22:BA:1394:U:P	57:BA:3407:HOH:O	2.69	0.50
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.11	0.50
22:BA:1687:G:C2	22:BA:1688:U:C4	2.98	0.50
22:BA:1832:C:N4	22:BA:1833:C:C4	2.79	0.50
22:BA:2004:G:OP1	57:BA:3804:HOH:O	2.19	0.50
22:BA:2574:G:O2'	22:BA:2575:C:H5'	2.11	0.50
22:BA:2748:A:C2	22:BA:2757:A:C4	2.99	0.50
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.92	0.50
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.42	0.50
53:B5:65:LEU:C	53:B5:67:HIS:H	2.14	0.50
1:CA:425:G:H2'	1:CA:426:U:O4'	2.11	0.50
1:CA:833:G:C4	1:CA:834:U:C6	3.00	0.50
1:CA:898:G:O2'	1:CA:900:A:N7	2.37	0.50
1:CA:1160:G:O2'	1:CA:1161:C:P	2.70	0.50
3:CC:97:VAL:HB	3:CC:98:PRO:HD2	1.93	0.50
4:CD:150:LYS:O	4:CD:151:LYS:C	2.47	0.50
8:CH:11:LEU:HD22	8:CH:75:ILE:HD11	1.93	0.50
11:CK:31:ILE:O	11:CK:31:ILE:HG12	2.11	0.50
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.41	0.50
22:DA:483:A:C8	22:DA:484:C:C5	2.99	0.50
22:DA:1636:U:H2'	22:DA:1637:A:C8	2.45	0.50
22:DA:1682:G:N2	22:DA:1757:A:O4'	2.44	0.50
22:DA:1739:A:H2'	22:DA:1740:G:O5'	2.11	0.50
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.45	0.50
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.11	0.50
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.11	0.50
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.93	0.50
23:DB:14:U:O2	23:DB:14:U:O2'	2.27	0.50
26:DE:170:ARG:HG3	26:DE:174:GLY:O	2.10	0.50
28:DG:89:LEU:HD12	28:DG:162:VAL:HG22	1.93	0.50
38:DQ:32:TYR:C	38:DQ:32:TYR:CD2	2.84	0.50
38:DQ:65:ILE:HD11	38:DQ:95:LEU:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:49:ILE:O	39:DR:49:ILE:HG13	2.11	0.50
1:AA:93:U:H2'	1:AA:94:G:H5"	1.93	0.50
1:AA:652:U:O2'	1:AA:653:U:P	2.68	0.50
1:AA:824:G:C2	1:AA:877:G:C2	3.00	0.50
1:AA:900:A:N1	1:AA:901:A:C2	2.78	0.50
2:AB:216:ALA:O	2:AB:220:THR:HG22	2.12	0.50
4:AD:98:LEU:HD23	4:AD:118:VAL:CG1	2.41	0.50
4:AD:145:ILE:N	4:AD:145:ILE:HD12	2.25	0.50
6:AF:8:PHE:HA	6:AF:87:SER:HA	1.93	0.50
17:AQ:69:LYS:O	17:AQ:70:THR:OG1	2.28	0.50
21:AU:4:ILE:N	21:AU:20:LYS:CE	2.75	0.50
22:BA:611:C:C2'	22:BA:612:G:H5'	2.41	0.50
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.46	0.50
22:BA:1421:G:C2	22:BA:1422:G:N7	2.79	0.50
22:BA:2016:U:H2'	22:BA:2017:U:C6	2.46	0.50
22:BA:2186:G:H2'	22:BA:2187:U:C6	2.46	0.50
22:BA:2496:C:H2'	22:BA:2497:A:O5'	2.11	0.50
30:BI:43:ASN:HB3	30:BI:47:ASP:OD1	2.11	0.50
30:BI:78:VAL:HG23	30:BI:79:LEU:HG	1.92	0.50
32:BK:2:ILE:HG23	32:BK:6:THR:HG21	1.93	0.50
40:BS:59:GLU:HG3	40:BS:66:ILE:HG13	1.92	0.50
47:BZ:37:GLU:O	47:BZ:38:ARG:HD3	2.12	0.50
49:B1:26:ASN:OD1	49:B1:28:ARG:HB2	2.10	0.50
1:CA:68:G:C5	1:CA:69:G:H1'	2.46	0.50
1:CA:174:A:C4	1:CA:175:C:C6	2.99	0.50
1:CA:252:U:H5'	1:CA:253:A:OP2	2.10	0.50
1:CA:940:C:N4	1:CA:941:G:O6	2.45	0.50
1:CA:1505:G:H4'	1:CA:1506:U:H5"	1.93	0.50
1:CA:1521:C:C4	1:CA:1522:U:C5	3.00	0.50
9:CI:12:ARG:HD2	9:CI:107:ASP:HB3	1.92	0.50
13:CM:81:MET:O	13:CM:83:LEU:N	2.45	0.50
19:CS:36:ARG:HB3	19:CS:72:GLY:CA	2.41	0.50
22:DA:699:A:C2'	22:DA:700:G:H5'	2.40	0.50
22:DA:1062:G:C2	22:DA:1063:G:N1	2.80	0.50
22:DA:1063:G:O2'	30:DI:89:GLY:HA3	2.12	0.50
22:DA:1799:G:N2	22:DA:1818:U:O2'	2.42	0.50
22:DA:2341:G:C2	22:DA:2342:C:C2	2.99	0.50
22:DA:2351:G:H1'	22:DA:2367:G:N2	2.26	0.50
22:DA:2822:G:H2'	22:DA:2823:A:H5"	1.93	0.50
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.36	0.50
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:71:THR:C	30:DI:72:LYS:HD3	2.31	0.50
33:DL:79:LEU:HB3	33:DL:114:GLY:O	2.11	0.50
43:DV:9:ARG:HG3	43:DV:41:GLU:HB3	1.93	0.50
49:D1:47:VAL:HG12	49:D1:48:ILE:N	2.26	0.50
1:AA:74:A:C2	1:AA:97:G:C2	2.99	0.50
1:AA:89:U:O2'	1:AA:90:C:C5'	2.59	0.50
1:AA:771:G:O2'	1:AA:772:U:H5'	2.10	0.50
1:AA:1157:A:N7	1:AA:1180:A:N6	2.60	0.50
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.47	0.50
2:AB:103:ASN:CG	2:AB:106:THR:HB	2.31	0.50
5:AE:15:LEU:HB3	5:AE:37:THR:HG22	1.93	0.50
6:AF:74:LEU:HD23	6:AF:78:PHE:CE1	2.46	0.50
7:AG:17:LYS:O	7:AG:18:PHE:CD1	2.64	0.50
9:AI:118:LEU:HA	9:AI:125:PRO:HD3	1.94	0.50
10:AJ:81:GLU:HA	10:AJ:84:VAL:HG12	1.93	0.50
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.11	0.50
16:AP:56:ARG:O	16:AP:59:HIS:HB3	2.12	0.50
19:AS:15:LEU:HD13	19:AS:33:THR:HG21	1.94	0.50
22:BA:182:A:H2'	22:BA:183:C:C6	2.46	0.50
22:BA:657:U:H2'	22:BA:658:U:C6	2.47	0.50
22:BA:864:G:C6	22:BA:865:C:N4	2.79	0.50
22:BA:1061:U:C4	30:BI:10:LYS:O	2.64	0.50
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.11	0.50
22:BA:2025:C:H2'	22:BA:2026:U:C6	2.46	0.50
24:BC:162:VAL:CG1	24:BC:163:GLN:N	2.75	0.50
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.93	0.50
42:BU:42:VAL:O	42:BU:60:GLU:HA	2.11	0.50
43:BV:15:GLY:O	43:BV:19:ARG:HG3	2.11	0.50
1:CA:211:G:O2'	1:CA:212:G:H4'	2.12	0.50
1:CA:321:A:C8	1:CA:328:C:C2	2.99	0.50
1:CA:577:G:N3	1:CA:578:C:C6	2.80	0.50
1:CA:701:U:H4'	1:CA:703:G:C8	2.46	0.50
1:CA:711:G:O2'	1:CA:712:A:H5'	2.11	0.50
1:CA:957:U:O2	1:CA:959:A:H8	1.94	0.50
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.93	0.50
2:CB:18:HIS:CD2	2:CB:203:ASN:ND2	2.80	0.50
3:CC:47:LEU:HB3	3:CC:50:ALA:HB3	1.93	0.50
4:CD:116:GLN:NE2	4:CD:120:HIS:CE1	2.80	0.50
4:CD:145:ILE:CG2	4:CD:150:LYS:HA	2.41	0.50
11:CK:82:LEU:HD23	11:CK:82:LEU:O	2.11	0.50
22:DA:335:C:H6	22:DA:335:C:O5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:447:A:H5'	22:DA:449:A:C4	2.46	0.50
22:DA:453:A:H4'	22:DA:472:A:N6	2.26	0.50
22:DA:690:G:H1'	22:DA:779:U:O3'	2.12	0.50
22:DA:1417:C:N4	22:DA:1418:G:C6	2.79	0.50
22:DA:1866:A:C8	22:DA:1867:G:C8	2.99	0.50
22:DA:2080:A:OP1	45:DX:20:HIS:HB2	2.11	0.50
22:DA:2244:U:C5	22:DA:2245:U:C5	2.98	0.50
22:DA:2382:G:OP1	22:DA:2382:G:H3'	2.11	0.50
22:DA:2767:C:C2'	22:DA:2768:U:H5'	2.41	0.50
22:DA:2823:A:C5	22:DA:2824:C:C5	3.00	0.50
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.46	0.50
24:DC:147:LYS:HG3	24:DC:150:LYS:HD2	1.93	0.50
27:DF:58:ALA:HB2	27:DF:65:PRO:HD3	1.93	0.50
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.50
31:DJ:56:VAL:HB	31:DJ:124:VAL:HG12	1.94	0.50
43:DV:63:ILE:HD12	43:DV:72:VAL:HG21	1.93	0.50
1:AA:620:C:H1'	4:AD:132:ILE:CD1	2.41	0.50
1:AA:880:C:O2'	1:AA:881:G:H5'	2.11	0.50
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.40	0.50
1:AA:1353:G:C2	1:AA:1354:U:C5	3.00	0.50
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.42	0.50
22:BA:430:A:H5"	22:BA:431:U:OP2	2.12	0.50
22:BA:1107:G:C5	22:BA:1108:U:C5	2.99	0.50
22:BA:1258:U:N3	22:BA:1259:G:N7	2.59	0.50
22:BA:2313:C:H5"	27:BF:88:LYS:HD3	1.94	0.50
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.46	0.50
25:BD:136:ASN:ND2	25:BD:140:HIS:CD2	2.80	0.50
25:BD:166:GLY:O	25:BD:167:ASN:HB3	2.11	0.50
28:BG:12:PRO:HD2	28:BG:15:VAL:HG21	1.93	0.50
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.92	0.50
39:BR:59:ILE:HG23	39:BR:101:ILE:CD1	2.41	0.50
42:BU:88:GLU:O	42:BU:89:ASP:HB3	2.12	0.50
43:BV:23:ALA:O	43:BV:25:LYS:N	2.44	0.50
1:CA:18:C:N3	1:CA:19:A:N7	2.59	0.50
1:CA:1089:G:C4	1:CA:1090:U:C6	2.99	0.50
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.46	0.50
4:CD:34:ILE:O	4:CD:35:GLU:CB	2.59	0.50
7:CG:75:VAL:HG11	7:CG:144:MET:HG3	1.94	0.50
9:CI:57:MET:O	9:CI:59:GLU:N	2.45	0.50
11:CK:112:ASP:HB3	21:CU:20:LYS:HE3	1.93	0.50
15:CO:46:HIS:C	15:CO:48:LYS:H	2.14	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:34:THR:HG22	18:CR:38:LYS:HB2	1.93	0.50
21:CU:4:ILE:O	21:CU:4:ILE:HG22	2.11	0.50
22:DA:310:A:C5	22:DA:330:A:C6	2.99	0.50
22:DA:396:G:C1'	45:DX:29:PHE:HB3	2.42	0.50
22:DA:591:U:C2	22:DA:592:A:C8	2.99	0.50
22:DA:636:G:C6	33:DL:111:ILE:HD11	2.46	0.50
22:DA:851:C:O2'	47:DZ:43:ALA:O	2.28	0.50
22:DA:1127:A:H2'	22:DA:1128:G:H5"	1.94	0.50
22:DA:2466:C:OP1	52:D4:4:ARG:HB2	2.12	0.50
24:DC:31:ALA:HB3	24:DC:32:PRO:CD	2.41	0.50
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.26	0.50
28:DG:115:HIS:HE1	28:DG:144:VAL:HG13	1.77	0.50
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.11	0.50
47:DZ:6:LYS:HB2	47:DZ:58:GLU:HG3	1.93	0.50
1:AA:116:A:C4	1:AA:117:G:C8	3.00	0.50
1:AA:1446:A:N6	1:AA:1447:A:H62	2.09	0.50
2:AB:176:ALA:O	2:AB:179:LEU:N	2.45	0.50
4:AD:30:THR:O	4:AD:31:LYS:HE2	2.11	0.50
4:AD:101:VAL:O	4:AD:101:VAL:HG12	2.12	0.50
5:AE:81:LEU:HD12	5:AE:147:MET:SD	2.52	0.50
6:AF:99:ALA:O	6:AF:100:SER:CB	2.59	0.50
7:AG:56:LYS:O	7:AG:57:SER:HB3	2.11	0.50
22:BA:368:A:N6	22:BA:369:U:O4	2.45	0.50
22:BA:468:G:O6	22:BA:469:G:C2	2.64	0.50
22:BA:495:G:H1'	40:BS:57:ASN:ND2	2.26	0.50
22:BA:1424:G:H2'	22:BA:1425:G:O4'	2.12	0.50
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.42	0.50
22:BA:1846:G:N2	22:BA:1895:C:C2	2.79	0.50
22:BA:2839:G:C4	22:BA:2840:C:C6	3.00	0.50
25:BD:136:ASN:HD21	25:BD:140:HIS:CD2	2.30	0.50
25:BD:186:LEU:HD21	37:BP:4:ILE:HG21	1.94	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
48:B0:4:GLN:NE2	48:B0:7:LYS:HA	2.27	0.50
1:CA:84:U:O2'	1:CA:85:U:H5'	2.12	0.50
1:CA:237:G:C6	1:CA:238:A:C5	3.00	0.50
1:CA:649:A:H2'	1:CA:650:G:O4'	2.11	0.50
1:CA:679:C:C2	1:CA:712:A:C2	2.98	0.50
1:CA:1203:C:H4'	14:CN:67:THR:HB	1.93	0.50
4:CD:88:GLU:HG2	4:CD:188:ARG:HD3	1.93	0.50
22:DA:222:A:H3'	22:DA:421:C:H5'	1.93	0.50
22:DA:310:A:HO2'	22:DA:311:A:P	2.28	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:786:C:H5”	22:DA:1780:A:N7	2.26	0.50
22:DA:1073:A:H4’	22:DA:2474:U:H4’	1.94	0.50
22:DA:1179:G:C6	22:DA:1180:U:H1’	2.47	0.50
22:DA:1248:G:N3	38:DQ:3:ARG:HG3	2.26	0.50
22:DA:1856:U:O4	22:DA:1857:G:N1	2.44	0.50
22:DA:2853:C:H2’	22:DA:2854:G:C8	2.46	0.50
23:DB:5:U:C2	23:DB:116:G:N2	2.79	0.50
24:DC:238:ARG:O	24:DC:239:ASN:O	2.30	0.50
25:DD:12:THR:CG2	37:DP:5:ILE:HG23	2.41	0.50
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.44	0.50
33:DL:102:GLY:N	57:DL:202:HOH:O	2.43	0.50
33:DL:111:ILE:N	33:DL:111:ILE:HD12	2.26	0.50
37:DP:18:PRO:HG3	37:DP:84:ILE:O	2.12	0.50
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.27	0.50
44:DW:38:VAL:HG21	44:DW:80:ILE:CD1	2.42	0.50
45:DX:12:PRO:HB3	45:DX:28:ARG:NH2	2.27	0.50
1:AA:203:G:O2’	1:AA:465:A:N1	2.42	0.50
1:AA:490:C:C2	1:AA:491:G:C8	2.99	0.50
1:AA:553:A:O2’	1:AA:554:A:H5’	2.11	0.50
1:AA:582:C:C2	1:AA:583:A:C8	3.00	0.50
1:AA:618:C:O2	1:AA:618:C:H2’	2.10	0.50
1:AA:642:A:C4	8:AH:106:THR:O	2.64	0.50
1:AA:737:C:C2	1:AA:738:C:C5	2.99	0.50
1:AA:973:G:H1’	10:AJ:56:HIS:CD2	2.45	0.50
1:AA:1374:A:O3’	7:AG:28:ASN:ND2	2.45	0.50
2:AB:47:VAL:C	2:AB:49:MET:H	2.15	0.50
4:AD:118:VAL:HA	4:AD:123:ILE:CD1	2.41	0.50
8:AH:89:LYS:HA	8:AH:92:LEU:HG	1.92	0.50
10:AJ:52:LEU:HD21	10:AJ:59:LYS:HA	1.94	0.50
11:AK:76:GLU:HA	22:BA:2141:G:OP1	2.12	0.50
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.93	0.50
22:BA:362:A:C8	22:BA:362:A:OP2	2.64	0.50
22:BA:511:U:C5	22:BA:512:G:C5	3.00	0.50
22:BA:665:U:O2’	22:BA:666:A:H5’	2.12	0.50
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.45	0.50
22:BA:983:A:C6	22:BA:984:A:N1	2.79	0.50
22:BA:1189:A:C8	22:BA:1190:G:C8	2.99	0.50
22:BA:1783:A:N1	22:BA:2587:A:H2’	2.27	0.50
27:BF:132:VAL:CG2	27:BF:152:LEU:HB3	2.42	0.50
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	1.93	0.50
30:BI:75:PRO:HB2	30:BI:78:VAL:HG13	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.27	0.50
38:BQ:41:LYS:O	38:BQ:42:ALA:C	2.50	0.50
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.24	0.50
1:CA:123:U:H2'	1:CA:124:C:C6	2.47	0.50
1:CA:124:C:N3	1:CA:125:U:C4	2.80	0.50
1:CA:505:G:H2'	1:CA:506:G:H8	1.76	0.50
1:CA:1226:C:H2'	13:CM:102:THR:HB	1.94	0.50
1:CA:1267:C:N3	1:CA:1327:C:H4'	2.27	0.50
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.27	0.50
2:CB:142:GLU:HA	2:CB:145:GLU:HB2	1.94	0.50
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.11	0.50
6:CF:67:PRO:O	6:CF:69:GLU:N	2.45	0.50
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.12	0.50
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.12	0.50
22:DA:1906:G:OP1	22:DA:1930:G:C8	2.65	0.50
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.46	0.50
22:DA:2147:A:N7	22:DA:2148:G:C5	2.79	0.50
22:DA:2209:G:N2	22:DA:2216:G:C4	2.79	0.50
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.47	0.50
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.59	0.50
22:DA:2506:U:O2	22:DA:2506:U:H2'	2.10	0.50
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	1.92	0.50
28:DG:138:LYS:O	28:DG:141:ILE:HG13	2.12	0.50
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.12	0.50
35:DN:29:VAL:HG13	35:DN:83:LEU:HD11	1.94	0.50
35:DN:66:ALA:O	35:DN:70:THR:HG23	2.12	0.50
40:DS:73:LYS:CB	40:DS:106:VAL:HB	2.41	0.50
43:DV:20:LEU:HD22	43:DV:27:PRO:HD3	1.93	0.50
44:DW:34:GLY:O	44:DW:35:SER:C	2.50	0.50
1:AA:357:G:C2	1:AA:358:U:C6	3.00	0.50
1:AA:468:A:H5'	1:AA:469:C:OP2	2.12	0.50
1:AA:920:U:C1'	1:AA:1080:A:C2	2.95	0.50
1:AA:946:A:O2'	1:AA:1333:A:N3	2.34	0.50
2:AB:41:ILE:HD13	2:AB:41:ILE:C	2.32	0.50
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.47	0.50
6:AF:3:HIS:HB2	6:AF:92:THR:HG23	1.93	0.50
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.27	0.50
8:AH:64:LYS:HB2	8:AH:71:VAL:HG21	1.92	0.50
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.77	0.50
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.27	0.50
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:819:A:N3	22:BA:1189:A:H2	2.10	0.50
22:BA:1179:G:C3'	22:BA:1180:U:H4'	2.37	0.50
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.12	0.50
22:BA:1428:C:C5	22:BA:1569:A:H5"	2.46	0.50
22:BA:1947:C:C2	22:BA:1960:A:C2	2.99	0.50
22:BA:2118:U:O4	22:BA:2148:G:O2'	2.29	0.50
22:BA:2320:U:O2	22:BA:2333:A:N6	2.43	0.50
22:BA:2467:C:N4	22:BA:2468:A:C6	2.80	0.50
22:BA:2883:A:OP2	48:B0:50:ARG:NH1	2.45	0.50
24:BC:210:ALA:O	24:BC:214:ARG:HG3	2.11	0.50
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.75	0.50
27:BF:127:ASN:OD1	27:BF:157:THR:HA	2.12	0.50
29:BH:93:SER:O	1:CA:368:U:C6	2.64	0.50
46:BY:32:ALA:HB2	46:BY:37:LEU:HD23	1.92	0.50
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.59	0.50
1:CA:33:A:H2'	1:CA:34:C:C6	2.47	0.50
1:CA:183:C:O2'	1:CA:184:G:O5'	2.30	0.50
1:CA:421:U:O5'	1:CA:422:C:C5	2.65	0.50
1:CA:687:A:N3	1:CA:688:G:H1'	2.26	0.50
1:CA:756:C:H2'	1:CA:757:U:C5'	2.42	0.50
1:CA:938:A:N6	1:CA:939:G:C6	2.80	0.50
5:CE:72:ILE:HD13	5:CE:145:GLU:CD	2.32	0.50
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.11	0.50
20:CT:64:LYS:HA	20:CT:64:LYS:HE3	1.94	0.50
22:DA:844:A:C2	22:DA:845:A:N7	2.80	0.50
22:DA:1240:U:HO2'	22:DA:1241:A:P	2.34	0.50
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.11	0.50
26:DE:1:MET:CG	26:DE:14:VAL:HG23	2.42	0.50
26:DE:5:LEU:O	26:DE:6:LYS:C	2.49	0.50
26:DE:28:VAL:O	26:DE:32:VAL:HG23	2.12	0.50
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.42	0.50
42:DU:74:ASN:ND2	42:DU:96:PHE:CG	2.79	0.50
1:AA:15:G:C5	1:AA:1396:A:C2	2.99	0.50
1:AA:131:A:O2'	1:AA:262:A:N3	2.37	0.50
1:AA:792:A:N3	1:AA:794:A:C5	2.80	0.50
1:AA:951:G:C2	1:AA:952:U:C2	3.00	0.50
1:AA:957:U:H1'	1:AA:960:U:N3	2.27	0.50
1:AA:1023:U:H2'	1:AA:1024:G:O4'	2.12	0.50
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.26	0.50
1:AA:1140:C:O2'	1:AA:1141:C:OP2	2.28	0.50
1:AA:1346:A:C5	7:AG:10:ARG:CZ	2.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:56:ARG:O	16:AP:59:HIS:N	2.45	0.50
18:AR:49:ALA:O	18:AR:51:TYR:N	2.45	0.50
22:BA:27:G:N2	22:BA:512:G:H1'	2.26	0.50
22:BA:118:A:N3	22:BA:178:G:H1'	2.26	0.50
22:BA:790:U:O2'	22:BA:791:C:O5'	2.29	0.50
22:BA:1176:U:C4	22:BA:1177:G:O6	2.65	0.50
22:BA:1364:G:OP2	45:BX:2:SER:N	2.45	0.50
22:BA:1792:G:OP1	24:BC:204:VAL:O	2.30	0.50
22:BA:1924:C:O2	22:BA:1924:C:C2'	2.59	0.50
22:BA:2001:C:N3	22:BA:2002:G:N7	2.60	0.50
22:BA:2557:G:C6	22:BA:2558:C:N4	2.80	0.50
24:BC:205:LEU:HG	24:BC:210:ALA:HB1	1.93	0.50
24:BC:252:THR:HG22	24:BC:253:LYS:H	1.76	0.50
28:BG:6:LYS:HG2	28:BG:62:TRP:CZ3	2.47	0.50
49:B1:11:LEU:O	49:B1:20:PHE:HB2	2.12	0.50
1:CA:213:G:C8	1:CA:214:C:C5	2.99	0.50
1:CA:485:U:HO2'	1:CA:486:U:P	2.34	0.50
3:CC:153:VAL:O	3:CC:165:THR:O	2.30	0.50
4:CD:78:GLU:OE2	4:CD:81:ARG:NH1	2.44	0.50
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.11	0.50
12:CL:7:LEU:HD22	12:CL:12:ARG:HD2	1.93	0.50
22:DA:307:G:N2	22:DA:310:A:C8	2.80	0.50
22:DA:362:A:C4	22:DA:363:G:C8	3.00	0.50
22:DA:396:G:OP1	45:DX:13:VAL:HG11	2.11	0.50
22:DA:457:A:N1	22:DA:470:A:H5"	2.26	0.50
22:DA:555:G:O2'	22:DA:556:A:OP2	2.29	0.50
22:DA:699:A:N6	22:DA:733:G:O2'	2.44	0.50
22:DA:1109:C:H5"	22:DA:1110:G:OP2	2.12	0.50
22:DA:1247:A:O3'	38:DQ:2:ALA:HB3	2.11	0.50
22:DA:2012:G:OP1	40:DS:98:LYS:HG2	2.11	0.50
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.12	0.50
22:DA:2261:C:H5"	44:DW:19:LYS:HZ3	1.76	0.50
22:DA:2323:G:C6	22:DA:2324:U:C4	3.00	0.50
22:DA:2391:G:OP2	51:D3:35:LYS:NZ	2.35	0.50
24:DC:260:ASN:O	24:DC:261:LYS:HB2	2.12	0.50
26:DE:148:ILE:HG12	26:DE:168:ASP:O	2.12	0.50
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.52	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.12	0.50
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.26	0.50
1:AA:219:U:C2	1:AA:220:G:C8	2.99	0.50
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:41:LYS:NZ	8:AH:48:ASP:OD2	2.43	0.50
9:AI:13:LYS:HG2	9:AI:13:LYS:O	2.12	0.50
10:AJ:7:ARG:HB2	10:AJ:75:ASP:OD1	2.12	0.50
10:AJ:26:VAL:HG12	10:AJ:30:LYS:HD3	1.94	0.50
11:AK:37:ARG:C	11:AK:39:GLY:H	2.15	0.50
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.26	0.50
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.11	0.50
22:BA:563:A:C2	22:BA:564:C:N1	2.80	0.50
22:BA:861:A:C2	22:BA:917:A:C4	2.99	0.50
22:BA:1131:G:O2'	22:BA:2025:C:O2'	2.27	0.50
22:BA:1169:A:N1	22:BA:1180:U:O4	2.44	0.50
22:BA:1487:U:O2	22:BA:1503:A:C2	2.64	0.50
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.12	0.50
22:BA:2409:G:H2'	22:BA:2410:G:O4'	2.11	0.50
24:BC:17:VAL:H	24:BC:204:VAL:HG22	1.76	0.50
28:BG:20:ASN:O	28:BG:20:ASN:ND2	2.40	0.50
42:BU:6:ARG:O	42:BU:9:ASP:HB2	2.12	0.50
44:BW:38:VAL:HG12	44:BW:39:ARG:N	2.26	0.50
53:B5:24:ASP:CB	53:B5:185:LYS:O	2.60	0.50
53:B5:49:GLY:N	53:B5:208:THR:CB	2.75	0.50
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.60	0.50
1:CA:214:C:H2'	1:CA:215:C:C6	2.47	0.50
1:CA:934:C:H5"	57:CA:1825:HOH:O	2.11	0.50
1:CA:1105:A:C2	1:CA:1106:G:C8	3.00	0.50
2:CB:36:ASN:O	2:CB:37:LYS:HB2	2.12	0.50
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.93	0.50
5:CE:89:HIS:CE1	5:CE:90:THR:OG1	2.65	0.50
5:CE:105:ILE:H	5:CE:122:ASN:CA	2.25	0.50
6:CF:99:ALA:O	6:CF:100:SER:CB	2.59	0.50
18:CR:25:ASP:C	18:CR:27:ALA:N	2.63	0.50
18:CR:50:LYS:HA	18:CR:53:ARG:NH1	2.27	0.50
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.47	0.50
22:DA:654:A:H3'	22:DA:654:A:N3	2.27	0.50
22:DA:715:A:N6	22:DA:716:A:C6	2.79	0.50
22:DA:810:U:C4	33:DL:30:THR:HA	2.46	0.50
22:DA:1491:G:C6	22:DA:1500:G:C2	3.00	0.50
22:DA:1593:A:H2'	22:DA:1594:U:O4'	2.12	0.50
22:DA:2165:C:O2	22:DA:2165:C:H2'	2.11	0.50
22:DA:2637:U:H5"	25:DD:83:ARG:NH2	2.26	0.50
39:DR:82:HIS:CG	39:DR:82:HIS:O	2.65	0.50
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:35:GLY:C	46:DY:36:GLN:HG3	2.33	0.50
1:AA:68:G:C6	1:AA:69:G:H1'	2.47	0.49
1:AA:277:C:H2'	1:AA:278:G:C5'	2.42	0.49
1:AA:316:C:C5	1:AA:351:G:C2	3.00	0.49
1:AA:1136:C:O2	1:AA:1136:C:O4'	2.29	0.49
1:AA:1461:G:C4	1:AA:1462:C:C6	3.00	0.49
3:AC:87:LEU:O	3:AC:88:ARG:C	2.50	0.49
11:AK:21:ALA:CB	11:AK:34:ILE:HD13	2.42	0.49
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.12	0.49
16:AP:79:ASN:O	16:AP:80:LYS:HB2	2.12	0.49
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.26	0.49
22:BA:1857:G:H1'	22:BA:1884:G:N2	2.27	0.49
22:BA:2214:C:C5	22:BA:2215:C:C5	3.00	0.49
22:BA:2309:A:C6	22:BA:2310:C:C4	2.99	0.49
22:BA:2500:U:H5"	22:BA:2501:C:OP2	2.12	0.49
22:BA:2549:G:N2	22:BA:2560:A:C4	2.80	0.49
22:BA:2598:A:C8	22:BA:2599:G:H1'	2.47	0.49
33:BL:111:ILE:H	33:BL:111:ILE:HD12	1.77	0.49
38:BQ:41:LYS:HD3	38:BQ:45:TYR:CE1	2.47	0.49
39:BR:11:GLN:O	39:BR:12:HIS:CG	2.65	0.49
1:CA:363:A:O2'	1:CA:364:A:H5'	2.12	0.49
1:CA:728:A:H2'	1:CA:729:A:H8	1.75	0.49
1:CA:1211:U:O2'	1:CA:1212:U:P	2.70	0.49
1:CA:1255:G:C6	1:CA:1279:G:C8	3.00	0.49
1:CA:1372:U:OP2	9:CI:13:LYS:NZ	2.41	0.49
4:CD:151:LYS:O	4:CD:151:LYS:HG3	2.12	0.49
5:CE:156:LYS:HD2	8:CH:71:VAL:HG13	1.93	0.49
9:CI:45:ARG:HG3	9:CI:46:MET:SD	2.51	0.49
19:CS:80:TYR:O	19:CS:81:ARG:HB3	2.11	0.49
21:CU:29:LEU:O	21:CU:29:LEU:HD23	2.12	0.49
22:DA:222:A:H3'	22:DA:421:C:C5'	2.41	0.49
22:DA:223:A:N1	22:DA:407:G:O2'	2.36	0.49
22:DA:406:G:H2'	22:DA:407:G:O4'	2.11	0.49
22:DA:734:A:C5	22:DA:735:A:C8	3.00	0.49
22:DA:1045:C:C3'	22:DA:1046:A:H5'	2.41	0.49
22:DA:1323:C:C4	22:DA:1324:G:N7	2.80	0.49
22:DA:1581:G:C5	22:DA:1582:C:C5	3.00	0.49
22:DA:1651:G:N2	22:DA:2007:U:C2	2.80	0.49
22:DA:1738:G:O2'	22:DA:1739:A:P	2.69	0.49
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.94	0.49
24:DC:51:THR:O	24:DC:54:ILE:HG13	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:113:VAL:HG23	26:DE:118:LEU:HD23	1.93	0.49
32:DK:10:VAL:CG1	32:DK:12:ASP:OD1	2.59	0.49
35:DN:74:GLU:O	35:DN:77:ALA:HB3	2.12	0.49
41:DT:51:PHE:O	41:DT:53:VAL:HG22	2.12	0.49
1:AA:126:G:C2'	1:AA:127:G:O5'	2.60	0.49
1:AA:427:U:C4	1:AA:428:G:C6	2.99	0.49
1:AA:1001:C:H3'	1:AA:1001:C:H6	1.77	0.49
2:AB:95:ARG:HG2	2:AB:95:ARG:HH11	1.77	0.49
3:AC:16:LYS:HE3	3:AC:181:ASP:OD1	2.12	0.49
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.60	0.49
14:AN:21:PHE:O	14:AN:22:ALA:HB3	2.12	0.49
19:AS:5:LEU:O	19:AS:6:LYS:CD	2.60	0.49
22:BA:187:G:C2	22:BA:210:C:C2	3.00	0.49
22:BA:859:G:O2'	22:BA:860:U:P	2.70	0.49
22:BA:981:A:OP1	57:BA:3596:HOH:O	2.19	0.49
22:BA:1178:C:C2'	22:BA:1179:G:N7	2.75	0.49
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.44	0.49
22:BA:1908:C:H2'	22:BA:1909:C:C6	2.47	0.49
22:BA:2001:C:C4	22:BA:2002:G:N7	2.80	0.49
22:BA:2127:G:C4'	22:BA:2128:G:OP1	2.59	0.49
22:BA:2531:A:H4'	28:BG:157:TYR:CD1	2.47	0.49
22:BA:2808:G:C2	22:BA:2891:U:C6	3.00	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.75	0.49
1:CA:577:G:C2	1:CA:578:C:C5	3.00	0.49
1:CA:951:G:N3	1:CA:1231:G:C2	2.79	0.49
1:CA:1408:A:C2	1:CA:1494:G:C5	3.00	0.49
2:CB:35:ARG:O	2:CB:38:VAL:HG12	2.12	0.49
2:CB:167:ASP:OD2	2:CB:191:SER:HA	2.11	0.49
6:CF:14:GLN:C	6:CF:16:GLU:H	2.14	0.49
10:CJ:48:ARG:HH11	10:CJ:48:ARG:HG3	1.76	0.49
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.27	0.49
11:CK:90:GLY:O	11:CK:91:PRO:O	2.29	0.49
22:DA:769:U:C4	22:DA:770:G:N7	2.81	0.49
22:DA:1016:G:C2	22:DA:1147:A:C2	3.00	0.49
22:DA:1438:U:O2	22:DA:1555:G:N2	2.45	0.49
22:DA:1566:A:C2	24:DC:213:TRP:CE3	3.00	0.49
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.46	0.49
22:DA:2199:A:C4	22:DA:2225:A:N1	2.81	0.49
23:DB:48:U:H2'	23:DB:49:C:C6	2.47	0.49
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:53:HIS:NE2	24:DC:219:THR:HG23	2.27	0.49
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.49
41:DT:2:ILE:HG23	41:DT:3:ARG:C	2.32	0.49
42:DU:33:LYS:HE2	42:DU:66:GLN:CD	2.32	0.49
44:DW:71:VAL:HG13	44:DW:76:ASN:O	2.12	0.49
45:DX:3:ARG:HG2	45:DX:33:LEU:HD22	1.94	0.49
47:DZ:10:THR:HG22	47:DZ:54:MET:C	2.33	0.49
1:AA:10:A:O2'	1:AA:11:G:H5'	2.12	0.49
1:AA:21:G:N2	1:AA:22:G:C6	2.81	0.49
1:AA:1430:A:C2	1:AA:1471:U:C2	3.00	0.49
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.12	0.49
8:AH:49:PHE:O	8:AH:50:LYS:HG3	2.12	0.49
9:AI:28:ILE:HG12	9:AI:63:LEU:HD21	1.94	0.49
9:AI:52:LEU:HD13	9:AI:57:MET:HG2	1.95	0.49
22:BA:749:A:C5	22:BA:1618:A:C2	3.00	0.49
22:BA:967:U:H2'	22:BA:968:C:C6	2.47	0.49
22:BA:1056:G:C2	22:BA:1102:C:C5	3.01	0.49
22:BA:1392:A:C5	22:BA:1393:A:C6	2.99	0.49
22:BA:2190:G:C6	22:BA:2191:A:C5	3.00	0.49
22:BA:2262:U:OP2	44:BW:19:LYS:HE2	2.12	0.49
22:BA:2307:G:O4'	22:BA:2308:G:C2	2.66	0.49
22:BA:2318:G:C6	22:BA:2319:G:C6	3.01	0.49
22:BA:2642:G:C2	22:BA:2773:C:C2	3.00	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
37:BP:75:GLN:O	37:BP:77:HIS:N	2.46	0.49
44:BW:12:ASN:O	44:BW:14:ARG:NH1	2.45	0.49
47:BZ:2:ALA:HB1	47:BZ:3:LYS:HE3	1.95	0.49
1:CA:17:U:C2	1:CA:18:C:C5	3.00	0.49
1:CA:407:U:H2'	1:CA:408:A:H8	1.76	0.49
1:CA:582:C:C4	1:CA:760:G:C6	3.00	0.49
1:CA:748:G:H2'	1:CA:749:A:C8	2.47	0.49
2:CB:19:GLN:HB3	2:CB:189:THR:OG1	2.12	0.49
2:CB:103:ASN:O	2:CB:103:ASN:CG	2.50	0.49
3:CC:19:ASN:HA	3:CC:56:VAL:HG13	1.94	0.49
3:CC:57:ILE:HG13	3:CC:66:VAL:HG22	1.94	0.49
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.11	0.49
4:CD:124:MET:HE2	4:CD:146:ARG:HD2	1.94	0.49
5:CE:101:GLU:C	5:CE:103:THR:N	2.66	0.49
6:CF:85:ILE:O	6:CF:86:ARG:O	2.29	0.49
7:CG:145:ALA:O	7:CG:146:GLU:CB	2.56	0.49
10:CJ:35:GLN:O	10:CJ:36:VAL:HB	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:38:TYR:N	12:CL:52:VAL:O	2.42	0.49
14:CN:72:GLY:O	14:CN:80:SER:HA	2.12	0.49
22:DA:82:U:H5'	22:DA:296:U:H5"	1.94	0.49
22:DA:289:G:H2'	22:DA:290:U:O4'	2.12	0.49
22:DA:308:G:C6	22:DA:309:A:C6	3.01	0.49
22:DA:445:C:O2'	22:DA:449:A:N3	2.45	0.49
22:DA:549:G:N3	22:DA:549:G:O4'	2.44	0.49
22:DA:771:G:C6	22:DA:772:C:C5	3.01	0.49
22:DA:982:C:H5"	22:DA:983:A:P	2.52	0.49
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.65	0.49
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.47	0.49
22:DA:1370:C:H2'	22:DA:1371:G:O4'	2.12	0.49
22:DA:1456:G:C5	22:DA:1457:U:C5	3.00	0.49
22:DA:1479:G:H2'	22:DA:1480:C:O4'	2.12	0.49
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.11	0.49
22:DA:2757:A:N1	28:DG:67:THR:CG2	2.74	0.49
24:DC:159:GLY:N	24:DC:195:VAL:HG22	2.28	0.49
26:DE:22:ASP:OD2	26:DE:22:ASP:N	2.45	0.49
26:DE:97:ASN:HB2	26:DE:100:MET:HB2	1.92	0.49
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.42	0.49
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.49
32:DK:38:ILE:HD13	32:DK:61:VAL:HB	1.93	0.49
41:DT:35:ALA:HB3	41:DT:38:ALA:HB2	1.94	0.49
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.28	0.49
1:AA:15:G:N7	1:AA:1396:A:C2	2.80	0.49
1:AA:135:C:O2	16:AP:1:MET:N	2.41	0.49
1:AA:208:U:C5	1:AA:210:C:N3	2.81	0.49
1:AA:575:G:C6	1:AA:821:G:C8	3.00	0.49
1:AA:723:U:H5'	1:AA:724:G:OP1	2.12	0.49
1:AA:903:G:H2'	1:AA:904:U:H6	1.77	0.49
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.12	0.49
4:AD:91:LEU:HD21	4:AD:195:ILE:HD11	1.93	0.49
11:AK:70:CYS:O	11:AK:74:VAL:HG22	2.13	0.49
11:AK:89:PRO:HD3	21:AU:29:LEU:HD11	1.94	0.49
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.60	0.49
16:AP:73:ALA:O	16:AP:77:GLU:HB2	2.12	0.49
17:AQ:14:SER:OG	17:AQ:17:MET:HE2	2.12	0.49
22:BA:581:C:H2'	22:BA:582:A:C8	2.47	0.49
22:BA:927:A:H2'	22:BA:928:A:H8	1.76	0.49
22:BA:954:G:C5	22:BA:955:U:C5	3.00	0.49
22:BA:1932:A:H5"	22:BA:1933:G:OP2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2075:U:C2'	22:BA:2077:A:OP2	2.61	0.49
24:BC:44:ASN:HB3	24:BC:50:THR:HG21	1.94	0.49
27:BF:173:PHE:O	27:BF:174:ASP:HB3	2.11	0.49
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.43	0.49
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.95	0.49
47:BZ:35:THR:CG2	47:BZ:36:VAL:N	2.75	0.49
1:CA:106:C:O2	1:CA:379:C:H4'	2.12	0.49
1:CA:263:A:OP1	20:CT:74:ARG:HD3	2.12	0.49
1:CA:552:U:N3	1:CA:553:A:N7	2.60	0.49
1:CA:951:G:C2	1:CA:1231:G:C2	3.01	0.49
1:CA:1005:A:N7	1:CA:1006:G:C4	2.80	0.49
5:CE:80:THR:HA	5:CE:120:VAL:HG12	1.94	0.49
8:CH:75:ILE:HA	8:CH:128:TYR:O	2.13	0.49
10:CJ:84:VAL:O	10:CJ:88:MET:HG2	2.11	0.49
11:CK:16:VAL:HG12	11:CK:79:ILE:HG12	1.94	0.49
12:CL:77:HIS:O	12:CL:78:SER:CB	2.60	0.49
14:CN:31:ILE:HG22	14:CN:32:SER:N	2.27	0.49
15:CO:33:THR:HA	15:CO:63:ARG:NH1	2.26	0.49
15:CO:37:ASN:O	15:CO:40:GLN:HB2	2.13	0.49
17:CQ:46:VAL:CG2	17:CQ:61:ILE:HD11	2.42	0.49
21:CU:43:THR:O	21:CU:44:GLU:C	2.51	0.49
22:DA:347:A:C2	22:DA:348:A:C4	3.01	0.49
22:DA:404:A:C4'	22:DA:405:U:OP2	2.61	0.49
22:DA:604:G:N1	22:DA:605:G:C5	2.80	0.49
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.12	0.49
22:DA:1663:G:C6	22:DA:1992:G:C8	3.00	0.49
22:DA:2037:A:N6	22:DA:2038:G:O6	2.46	0.49
22:DA:2066:C:H5"	57:DA:3505:HOH:O	2.13	0.49
22:DA:2094:A:OP1	29:DH:22:LYS:HG3	2.12	0.49
22:DA:2131:U:H5'	22:DA:2132:U:C5'	2.42	0.49
22:DA:2376:A:H2'	22:DA:2377:A:O4'	2.12	0.49
22:DA:2612:C:H5"	22:DA:2613:U:OP1	2.13	0.49
1:AA:590:U:H2'	1:AA:591:U:C6	2.47	0.49
1:AA:1080:A:OP1	5:AE:52:LYS:CE	2.60	0.49
2:AB:47:VAL:O	2:AB:49:MET:N	2.45	0.49
2:AB:74:ARG:O	2:AB:75:ALA:HB2	2.12	0.49
2:AB:119:THR:O	2:AB:120:GLN:CB	2.60	0.49
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.41	0.49
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.28	0.49
6:AF:6:ILE:HA	6:AF:88:MET:O	2.12	0.49
9:AI:40:GLY:O	9:AI:41:ARG:CB	2.54	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.94	0.49
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.31	0.49
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.26	0.49
15:AO:43:PHE:CD1	15:AO:56:LEU:HD22	2.48	0.49
22:BA:699:A:C8	22:BA:734:A:C2	3.00	0.49
22:BA:1203:U:C4	22:BA:1204:A:C5	3.00	0.49
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.47	0.49
22:BA:1415:U:H3'	22:BA:1415:U:O2	2.12	0.49
22:BA:1794:A:H1'	22:BA:1900:A:N3	2.27	0.49
22:BA:1853:A:C2	22:BA:1854:A:C2	3.00	0.49
22:BA:2308:G:O6	22:BA:2311:A:C8	2.66	0.49
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.48	0.49
22:BA:2880:C:N3	22:BA:2881:U:C5	2.80	0.49
23:BB:33:G:O2'	23:BB:34:A:H5'	2.13	0.49
24:BC:171:TYR:CD2	24:BC:185:GLU:HA	2.47	0.49
24:BC:212:ARG:HD2	24:BC:216:VAL:O	2.13	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
41:BT:2:ILE:CG1	41:BT:7:LEU:HD11	2.42	0.49
45:BX:37:ARG:HG3	45:BX:48:THR:HB	1.94	0.49
1:CA:523:A:N1	12:CL:89:ASP:HB2	2.27	0.49
1:CA:583:A:C8	1:CA:584:G:C8	3.00	0.49
1:CA:1460:C:N4	1:CA:1461:G:C6	2.80	0.49
2:CB:210:VAL:HG22	2:CB:211:THR:N	2.28	0.49
8:CH:11:LEU:HD11	8:CH:127:CYS:HB3	1.94	0.49
10:CJ:92:LEU:O	10:CJ:93:ALA:HB2	2.12	0.49
15:CO:45:GLU:O	15:CO:46:HIS:HB2	2.12	0.49
22:DA:585:G:H2'	22:DA:586:A:N7	2.27	0.49
22:DA:813:U:H2'	22:DA:814:C:C6	2.46	0.49
22:DA:945:A:C5	22:DA:2448:A:C2	3.00	0.49
22:DA:1530:G:N2	22:DA:1542:U:C2	2.80	0.49
22:DA:1688:U:C4	22:DA:1698:A:C2	3.00	0.49
22:DA:2372:U:H2'	22:DA:2373:G:C8	2.48	0.49
22:DA:2627:G:N2	22:DA:2777:G:OP2	2.45	0.49
23:DB:38:C:H2'	23:DB:39:A:O4'	2.12	0.49
24:DC:146:MET:SD	24:DC:154:LEU:HD21	2.53	0.49
25:DD:3:GLY:HA3	25:DD:204:LYS:HG2	1.93	0.49
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.12	0.49
1:AA:125:U:H2'	1:AA:126:G:O4'	2.12	0.49
1:AA:167:A:H2'	1:AA:168:G:O4'	2.11	0.49
1:AA:316:C:N3	1:AA:317:U:C5	2.81	0.49
1:AA:685:G:N1	1:AA:686:U:O4	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.13	0.49
2:AB:133:GLU:O	2:AB:137:ARG:N	2.46	0.49
3:AC:39:VAL:O	3:AC:43:LEU:HB2	2.13	0.49
3:AC:54:ARG:HB3	3:AC:69:HIS:HB2	1.94	0.49
6:AF:46:GLN:HA	6:AF:56:LYS:HG2	1.93	0.49
9:AI:120:LYS:O	9:AI:121:ALA:HB3	2.12	0.49
12:AL:3:THR:HB	12:AL:6:GLN:HG3	1.94	0.49
13:AM:56:LEU:O	13:AM:59:GLU:N	2.46	0.49
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.47	0.49
22:BA:645:C:O2'	22:BA:646:U:H5"	2.13	0.49
22:BA:1419:A:C5	22:BA:1421:G:C5	3.00	0.49
22:BA:1860:G:C2	22:BA:1883:U:H1'	2.47	0.49
22:BA:2489:U:O2	22:BA:2491:U:C4	2.66	0.49
22:BA:2618:G:C6	22:BA:2619:C:C4	3.01	0.49
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.48	0.49
33:BL:90:VAL:HG23	33:BL:120:VAL:HG21	1.93	0.49
36:BO:59:ALA:O	36:BO:60:GLU:C	2.50	0.49
49:B1:34:LEU:H	49:B1:52:ALA:CB	2.25	0.49
1:CA:182:A:C5	1:CA:184:G:N7	2.80	0.49
1:CA:635:A:C6	1:CA:636:U:C4	3.00	0.49
1:CA:793:U:HO2'	1:CA:1516:G:C1'	2.26	0.49
1:CA:1342:C:H1'	9:CI:126:GLN:HG3	1.94	0.49
2:CB:43:LEU:HG	2:CB:44:GLU:CG	2.43	0.49
2:CB:72:THR:HG23	2:CB:94:HIS:O	2.11	0.49
3:CC:16:LYS:HG3	3:CC:17:PRO:HD2	1.95	0.49
4:CD:98:LEU:O	4:CD:99:ASP:C	2.51	0.49
6:CF:88:MET:CE	18:CR:64:TYR:CD2	2.95	0.49
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.95	0.49
10:CJ:18:ILE:HG23	10:CJ:19:ASP:N	2.28	0.49
14:CN:33:ASP:O	14:CN:35:ASN:N	2.42	0.49
14:CN:80:SER:O	14:CN:83:LYS:N	2.45	0.49
22:DA:121:G:H8	22:DA:121:G:O5'	1.95	0.49
22:DA:749:A:C4	22:DA:750:A:C8	3.01	0.49
22:DA:798:G:H2'	22:DA:799:G:C8	2.47	0.49
22:DA:1408:G:N2	22:DA:1595:C:H1'	2.27	0.49
22:DA:1638:C:O2'	22:DA:2698:U:O2	2.30	0.49
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.48	0.49
22:DA:2144:G:C2	22:DA:2146:C:O2	2.65	0.49
22:DA:2314:A:O4'	27:DF:155:THR:HG21	2.13	0.49
22:DA:2415:G:C5	22:DA:2416:C:C4	3.01	0.49
22:DA:2511:U:C5	22:DA:2512:C:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2834:G:H2'	22:DA:2879:A:N6	2.27	0.49
23:DB:25:U:H2'	23:DB:26:C:O4'	2.12	0.49
38:DQ:47:TYR:CE1	38:DQ:51:ARG:NH2	2.80	0.49
1:AA:328:C:O2	1:AA:328:C:C2'	2.60	0.49
1:AA:338:A:C6	1:AA:339:C:C4	3.01	0.49
1:AA:1181:G:O2'	1:AA:1182:G:C8	2.66	0.49
1:AA:1293:C:H5'	1:AA:1294:G:OP2	2.12	0.49
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.94	0.49
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.47	0.49
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.93	0.49
7:AG:139:GLU:OE1	7:AG:139:GLU:HA	2.12	0.49
12:AL:72:HIS:ND1	12:AL:72:HIS:O	2.46	0.49
22:BA:100:U:H4'	22:BA:101:A:O5'	2.11	0.49
22:BA:449:A:C6	22:BA:450:G:C5	3.01	0.49
22:BA:948:C:H1'	22:BA:984:A:O2'	2.12	0.49
22:BA:1063:G:N2	30:BI:90:SER:HG	2.11	0.49
22:BA:1355:G:N3	22:BA:1356:G:C8	2.81	0.49
22:BA:2094:A:H5'	29:BH:25:TYR:CG	2.47	0.49
22:BA:2275:C:O2	34:BM:84:LYS:CD	2.60	0.49
22:BA:2415:G:C2	22:BA:2416:C:C2	3.00	0.49
22:BA:2456:C:C2'	22:BA:2457:U:H5'	2.43	0.49
22:BA:2555:U:H5"	22:BA:2556:C:OP2	2.12	0.49
25:BD:12:THR:HG21	37:BP:9:GLU:HG3	1.95	0.49
42:BU:12:ILE:HG13	42:BU:21:LYS:O	2.13	0.49
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.12	0.49
47:BZ:21:LYS:O	47:BZ:23:THR:N	2.46	0.49
1:CA:32:A:N1	1:CA:33:A:C6	2.80	0.49
1:CA:207:C:O2	1:CA:207:C:H2'	2.11	0.49
1:CA:509:A:N3	1:CA:543:U:O2'	2.41	0.49
1:CA:706:A:C1'	11:CK:31:ILE:HD11	2.42	0.49
1:CA:757:U:OP1	1:CA:822:U:O2'	2.24	0.49
1:CA:978:A:O2'	1:CA:1322:C:H5	1.94	0.49
1:CA:1144:G:H5"	1:CA:1145:A:OP2	2.12	0.49
4:CD:26:ARG:O	4:CD:27:ALA:CB	2.61	0.49
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.12	0.49
22:DA:200:U:C4	22:DA:248:G:N2	2.81	0.49
22:DA:833:A:P	33:DL:39:LYS:HE2	2.53	0.49
22:DA:953:G:O2'	22:DA:954:G:H5'	2.13	0.49
22:DA:1534:U:O2'	22:DA:1537:G:O6	2.29	0.49
22:DA:2020:A:C2	22:DA:2022:U:O4'	2.65	0.49
22:DA:2134:A:H62	22:DA:2157:G:H1'	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2351:G:O2'	22:DA:2366:A:N6	2.39	0.49
28:DG:11:VAL:O	28:DG:48:ASN:CG	2.51	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49
30:DI:33:VAL:HG22	30:DI:67:PHE:CE2	2.48	0.49
32:DK:63:VAL:O	32:DK:64:ARG:HG2	2.12	0.49
32:DK:63:VAL:O	32:DK:64:ARG:CG	2.61	0.49
1:AA:102:G:C2	1:AA:103:U:C6	3.00	0.49
1:AA:126:G:H2'	1:AA:127:G:O5'	2.13	0.49
1:AA:292:G:N7	1:AA:293:G:H1'	2.28	0.49
1:AA:382:A:H2'	1:AA:383:A:C8	2.48	0.49
1:AA:683:G:N2	11:AK:39:GLY:O	2.46	0.49
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.94	0.49
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.47	0.49
1:AA:1432:G:P	37:BP:106:LYS:HG2	2.52	0.49
2:AB:207:ILE:HD13	2:AB:207:ILE:N	2.28	0.49
3:AC:60:PRO:HB3	10:AJ:94:ALA:HB1	1.94	0.49
5:AE:90:THR:HG22	5:AE:91:GLY:H	1.74	0.49
5:AE:153:VAL:O	5:AE:156:LYS:HB2	2.12	0.49
6:AF:17:GLN:OE1	6:AF:21:MET:HG3	2.13	0.49
7:AG:50:LEU:O	7:AG:51:ALA:C	2.50	0.49
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.60	0.49
10:AJ:36:VAL:HA	10:AJ:75:ASP:O	2.11	0.49
11:AK:112:ASP:OD2	11:AK:114:THR:HG23	2.13	0.49
20:AT:58:VAL:HG12	20:AT:72:ALA:HB1	1.95	0.49
22:BA:947:A:O2'	22:BA:984:A:C2	2.58	0.49
22:BA:1063:G:H4'	30:BI:77:ALA:HB1	1.93	0.49
22:BA:1649:G:C6	22:BA:2009:A:C6	3.01	0.49
22:BA:2331:G:O4'	44:BW:42:GLY:HA3	2.13	0.49
22:BA:2665:A:C2	22:BA:2666:C:C2	3.01	0.49
26:BE:119:ILE:CG2	26:BE:187:VAL:HG22	2.42	0.49
34:BM:51:ARG:O	34:BM:55:ARG:HG2	2.13	0.49
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.43	0.49
40:BS:55:ILE:O	40:BS:56:ALA:C	2.51	0.49
41:BT:10:VAL:HG12	41:BT:11:LEU:HD23	1.95	0.49
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.13	0.49
49:B1:23:THR:OG1	49:B1:24:THR:N	2.44	0.49
1:CA:92:U:C4	1:CA:93:U:O4	2.66	0.49
1:CA:862:C:H2'	1:CA:863:U:H6	1.78	0.49
1:CA:890:G:HO2'	1:CA:891:U:P	2.36	0.49
3:CC:49:LYS:O	3:CC:72:ARG:NH1	2.45	0.49
8:CH:87:LYS:HG3	8:CH:91:GLU:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:18:ASP:HA	14:CN:22:ALA:HB3	1.95	0.49
22:DA:70:G:H5"	22:DA:112:U:O2	2.13	0.49
22:DA:319:G:OP2	26:DE:132:LYS:HE2	2.12	0.49
22:DA:469:G:O6	50:D2:37:LYS:CE	2.60	0.49
22:DA:1060:U:H5	30:DI:132:THR:HG23	1.78	0.49
22:DA:2211:A:C1'	22:DA:2212:A:OP1	2.61	0.49
22:DA:2341:G:C6	22:DA:2342:C:C4	3.01	0.49
22:DA:2811:G:OP1	25:DD:62:LYS:N	2.45	0.49
42:DU:18:ASP:HB3	42:DU:21:LYS:HG3	1.94	0.49
1:AA:201:G:C2	1:AA:217:C:O2	2.66	0.49
1:AA:231:U:O2'	1:AA:232:G:H5'	2.12	0.49
1:AA:452:A:C8	1:AA:452:A:H3'	2.47	0.49
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.95	0.49
1:AA:843:U:H3	2:CB:115:LYS:HD3	1.78	0.49
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.13	0.49
1:AA:1026:G:C6	1:AA:1027:C:N3	2.81	0.49
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.77	0.49
1:AA:1211:U:HO2'	1:AA:1212:U:P	2.36	0.49
1:AA:1302:C:C4	13:AM:17:ILE:CD1	2.96	0.49
1:AA:1503:A:C8	1:AA:1531:A:H1'	2.47	0.49
8:AH:49:PHE:CB	8:AH:61:LEU:HD23	2.43	0.49
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.95	0.49
14:AN:43:ASN:HA	14:AN:45:VAL:HG22	1.95	0.49
14:AN:63:ARG:CG	14:AN:68:GLY:O	2.61	0.49
22:BA:58:G:N2	22:BA:70:G:C4	2.81	0.49
22:BA:627:A:C5	22:BA:637:A:N7	2.81	0.49
22:BA:1088:A:H3'	22:BA:1088:A:N3	2.28	0.49
22:BA:1132:U:H3'	22:BA:1133:A:H5"	1.94	0.49
22:BA:1922:G:C6	22:BA:1923:U:C5	3.00	0.49
22:BA:2287:A:C8	22:BA:2289:G:C8	3.00	0.49
22:BA:2572:A:OP1	22:BA:2574:G:H4'	2.13	0.49
22:BA:2580:U:C5	22:BA:2581:G:C6	3.00	0.49
22:BA:2600:A:C6	22:BA:2601:C:N4	2.80	0.49
22:BA:2620:C:C2	22:BA:2621:G:C8	3.01	0.49
25:BD:124:ARG:HA	25:BD:165:MET:SD	2.53	0.49
30:BI:99:GLY:O	30:BI:139:VAL:HG23	2.13	0.49
35:BN:2:ARG:CA	35:BN:5:LYS:HD2	2.39	0.49
46:BY:36:GLN:O	46:BY:37:LEU:HB3	2.13	0.49
1:CA:106:C:C2'	1:CA:107:G:H5'	2.42	0.49
1:CA:247:G:C5	1:CA:278:G:N2	2.81	0.49
1:CA:743:A:C6	1:CA:744:C:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:151:LYS:O	4:CD:151:LYS:CG	2.61	0.49
4:CD:203:LEU:HD12	4:CD:203:LEU:O	2.11	0.49
22:DA:242:G:N7	51:D3:5:LYS:HG2	2.28	0.49
22:DA:574:A:H4'	22:DA:575:A:C5'	2.43	0.49
22:DA:2702:G:C6	22:DA:2703:C:C4	3.01	0.49
22:DA:2780:G:O6	31:DJ:102:GLU:OE2	2.31	0.49
24:DC:130:LEU:HD12	24:DC:134:ASN:HB2	1.95	0.49
25:DD:101:PHE:O	25:DD:104:VAL:HG22	2.12	0.49
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.49
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.28	0.49
35:DN:116:VAL:O	35:DN:116:VAL:HG13	2.12	0.49
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.28	0.49
1:AA:626:G:O2'	1:AA:627:G:H5'	2.13	0.49
1:AA:914:A:C6	1:AA:915:A:N7	2.81	0.49
1:AA:1072:G:C6	1:AA:1073:U:C4	3.01	0.49
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.48	0.49
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.47	0.49
4:AD:22:LYS:O	4:AD:23:SER:C	2.51	0.49
4:AD:124:MET:SD	4:AD:127:GLY:O	2.71	0.49
8:AH:30:SER:O	8:AH:31:LYS:C	2.51	0.49
11:AK:22:HIS:CD2	11:AK:35:THR:HG22	2.48	0.49
13:AM:6:GLY:C	13:AM:8:ASN:N	2.63	0.49
16:AP:39:PHE:CG	16:AP:74:LEU:HD11	2.48	0.49
18:AR:27:ALA:O	18:AR:30:LYS:HE3	2.12	0.49
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.28	0.49
21:AU:29:LEU:HD23	21:AU:29:LEU:O	2.13	0.49
22:BA:108:G:C6	22:BA:109:C:C4	3.01	0.49
22:BA:207:A:C2'	22:BA:208:C:O5'	2.61	0.49
22:BA:714:U:O2	22:BA:717:C:H5	1.96	0.49
22:BA:977:G:C5	57:BA:3590:HOH:O	2.64	0.49
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.27	0.49
22:BA:1342:A:C2	22:BA:1345:C:C6	3.01	0.49
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.47	0.49
22:BA:2190:G:C2	22:BA:2191:A:C4	3.01	0.49
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.48	0.49
24:BC:157:SER:O	24:BC:158:ALA:C	2.50	0.49
25:BD:57:ALA:O	25:BD:59:ARG:N	2.46	0.49
28:BG:94:TYR:HA	28:BG:106:SER:O	2.13	0.49
33:BL:110:VAL:O	33:BL:131:ALA:CB	2.61	0.49
35:BN:118:ARG:O	35:BN:120:GLU:N	2.42	0.49
46:BY:39:GLN:HB2	46:BY:41:HIS:CE1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:8:LYS:HA	49:B1:24:THR:HG22	1.95	0.49
1:CA:15:G:C4	1:CA:16:A:C8	3.01	0.49
1:CA:41:G:H2'	1:CA:42:G:C8	2.48	0.49
1:CA:243:A:C2	1:CA:246:A:C8	3.01	0.49
1:CA:247:G:C5	1:CA:278:G:C2	3.00	0.49
1:CA:254:G:C4	1:CA:255:G:C8	3.00	0.49
1:CA:433:G:C5	1:CA:434:U:C5	3.01	0.49
1:CA:562:U:H1'	12:CL:12:ARG:HG3	1.95	0.49
1:CA:834:U:H2'	1:CA:835:U:C6	2.48	0.49
2:CB:90:PHE:CD2	2:CB:150:GLY:O	2.66	0.49
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.77	0.49
9:CI:18:ARG:O	9:CI:65:ILE:HA	2.12	0.49
18:CR:71:THR:OG1	18:CR:72:ASP:N	2.45	0.49
22:DA:1053:C:C2	22:DA:1107:G:C2	3.01	0.49
22:DA:1095:A:H2'	22:DA:1096:A:N9	2.27	0.49
22:DA:1379:U:OP1	22:DA:1379:U:C6	2.65	0.49
22:DA:1677:A:N6	22:DA:1678:A:C6	2.81	0.49
22:DA:1739:A:C2'	22:DA:1740:G:O5'	2.61	0.49
22:DA:1805:A:H5"	24:DC:248:TRP:CE2	2.48	0.49
22:DA:2054:A:C2	22:DA:2616:C:C2	3.01	0.49
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.13	0.49
22:DA:2282:G:C4	22:DA:2425:A:N6	2.81	0.49
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.77	0.49
22:DA:2784:U:O4	22:DA:2785:C:N4	2.46	0.49
24:DC:160:THR:O	24:DC:195:VAL:HG13	2.12	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
30:DI:33:VAL:HG22	30:DI:67:PHE:CD2	2.47	0.49
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.27	0.49
42:DU:96:PHE:CE1	42:DU:103:ILE:CG1	2.96	0.49
48:D0:53:LYS:HE3	48:D0:56:ALA:HA	1.95	0.49
51:D3:33:LEU:HA	51:D3:36:LYS:HD2	1.93	0.49
1:AA:77:A:N1	1:AA:91:U:O4	2.46	0.48
1:AA:202:G:O2'	1:AA:468:A:C8	2.55	0.48
1:AA:254:G:O2'	1:AA:255:G:H5'	2.13	0.48
1:AA:363:A:O2'	1:AA:364:A:H5'	2.12	0.48
1:AA:559:A:C8	1:AA:561:U:C6	3.00	0.48
1:AA:712:A:C2	1:AA:713:G:C4	3.01	0.48
1:AA:1107:C:C4	1:AA:1108:G:C8	3.01	0.48
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.48	0.48
7:AG:76:LYS:HB3	7:AG:89:VAL:HG11	1.94	0.48
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:207:A:H2'	22:BA:208:C:O5'	2.13	0.48
22:BA:973:A:OP2	39:BR:81:LYS:NZ	2.39	0.48
22:BA:1026:G:P	22:BA:1026:G:O4'	2.71	0.48
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.13	0.48
22:BA:1695:G:C8	24:BC:8:PRO:HG2	2.47	0.48
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.29	0.48
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.47	0.48
24:BC:180:GLU:HG3	24:BC:269:ARG:O	2.12	0.48
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.48
32:BK:121:GLU:O	32:BK:122:VAL:C	2.50	0.48
39:BR:4:VAL:HA	39:BR:12:HIS:O	2.12	0.48
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.86	0.48
42:BU:98:SER:O	42:BU:99:ASN:CB	2.61	0.48
44:BW:82:ILE:HG22	44:BW:82:ILE:O	2.12	0.48
53:B5:53:ARG:HD3	53:B5:204:GLY:HA3	1.94	0.48
53:B5:122:GLY:CA	53:B5:146:VAL:CB	2.90	0.48
1:CA:165:G:C2	1:CA:166:U:C2	3.01	0.48
1:CA:200:G:H2'	1:CA:201:G:H5"	1.94	0.48
1:CA:421:U:C4'	1:CA:421:U:OP1	2.61	0.48
1:CA:755:G:C2	1:CA:756:C:C5	3.01	0.48
1:CA:1068:G:H2'	1:CA:1069:C:H5'	1.94	0.48
6:CF:3:HIS:CD2	6:CF:94:HIS:HA	2.48	0.48
7:CG:42:ILE:HG22	7:CG:42:ILE:O	2.13	0.48
11:CK:127:ARG:N	21:CU:34:ARG:NH2	2.60	0.48
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.47	0.48
22:DA:276:U:O2	22:DA:276:U:H2'	2.12	0.48
22:DA:279:A:H61	22:DA:361:G:H1'	1.78	0.48
22:DA:362:A:N3	22:DA:362:A:H2'	2.28	0.48
22:DA:415:A:C2	22:DA:2409:G:C2	3.01	0.48
22:DA:599:A:N3	22:DA:659:G:C2	2.81	0.48
22:DA:682:G:N3	22:DA:682:G:H2'	2.27	0.48
22:DA:704:G:H1'	22:DA:726:G:N2	2.28	0.48
22:DA:782:A:O2'	24:DC:224:ALA:O	2.28	0.48
22:DA:1180:U:H5'	22:DA:1181:U:OP2	2.14	0.48
22:DA:1265:A:C8	22:DA:1267:U:N3	2.81	0.48
22:DA:1343:G:N2	22:DA:1405:U:C2	2.81	0.48
22:DA:1601:G:C5	22:DA:1602:U:C4	3.00	0.48
22:DA:1753:G:N1	22:DA:1756:G:C2	2.81	0.48
22:DA:1760:C:H3'	22:DA:1761:C:H6	1.77	0.48
22:DA:2061:G:C6	55:DA:3001:VIF:H29	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.66	0.48
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.95	0.48
22:DA:2573:C:OP1	22:DA:2574:G:H5"	2.13	0.48
22:DA:2693:G:N2	22:DA:2717:C:C2	2.81	0.48
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.13	0.48
24:DC:9:THR:O	24:DC:10:SER:CB	2.60	0.48
25:DD:52:THR:O	25:DD:77:ARG:HG2	2.13	0.48
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.95	0.48
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.47	0.48
33:DL:28:GLY:O	33:DL:29:LYS:HB3	2.12	0.48
34:DM:76:LYS:HE3	34:DM:80:VAL:HG12	1.95	0.48
36:DO:92:PHE:HB2	36:DO:117:PHE:CE1	2.47	0.48
1:AA:406:G:C6	1:AA:495:A:C8	3.01	0.48
1:AA:596:A:N6	1:AA:645:G:N1	2.61	0.48
1:AA:623:C:C4	1:AA:624:C:C5	3.01	0.48
1:AA:661:G:N2	1:AA:662:U:C2	2.82	0.48
1:AA:958:A:C6	1:AA:959:A:N1	2.82	0.48
1:AA:1182:G:C3'	1:AA:1183:U:H5'	2.43	0.48
1:AA:1242:G:C6	1:AA:1243:C:N3	2.81	0.48
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.61	0.48
2:AB:208:ARG:O	2:AB:210:VAL:N	2.46	0.48
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.96	0.48
6:AF:45:ARG:HB3	6:AF:59:TYR:CD1	2.48	0.48
6:AF:47:LEU:HD12	6:AF:55:HIS:HA	1.95	0.48
6:AF:75:GLU:HA	6:AF:78:PHE:HB2	1.95	0.48
7:AG:147:ALA:HA	11:AK:61:PHE:CE1	2.48	0.48
11:AK:13:ARG:O	11:AK:14:LYS:O	2.31	0.48
11:AK:128:ARG:HG2	11:AK:128:ARG:HH11	1.78	0.48
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.42	0.48
21:AU:18:ARG:HD2	21:AU:18:ARG:N	2.28	0.48
22:BA:184:C:H2'	22:BA:185:G:H8	1.78	0.48
22:BA:630:G:H5"	22:BA:631:A:OP2	2.13	0.48
22:BA:699:A:N7	22:BA:734:A:C4	2.82	0.48
22:BA:719:C:H2'	22:BA:720:U:O4'	2.13	0.48
22:BA:783:A:C8	22:BA:784:G:H4'	2.48	0.48
22:BA:1058:U:N3	22:BA:1059:G:N7	2.61	0.48
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.62	0.48
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.43	0.48
22:BA:2428:G:H5"	22:BA:2429:G:OP1	2.12	0.48
22:BA:2462:C:H2'	22:BA:2463:C:H6	1.78	0.48
22:BA:2599:G:C8	24:BC:236:GLU:HB2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2721:A:H2'	22:BA:2722:G:O4'	2.13	0.48
32:BK:41:ILE:HD11	32:BK:86:LEU:HD22	1.95	0.48
37:BP:52:ASN:O	37:BP:53:ARG:HD3	2.13	0.48
38:BQ:74:ILE:O	38:BQ:74:ILE:CG2	2.60	0.48
46:BY:3:ALA:HA	46:BY:6:LEU:HB2	1.95	0.48
1:CA:263:A:P	20:CT:74:ARG:NH1	2.86	0.48
1:CA:620:C:C1'	4:CD:132:ILE:HD13	2.44	0.48
1:CA:636:U:H2'	1:CA:637:C:C6	2.47	0.48
1:CA:939:G:C2	1:CA:940:C:C2	3.01	0.48
1:CA:952:U:H2'	1:CA:953:G:C8	2.48	0.48
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.12	0.48
1:CA:1141:C:C2	1:CA:1142:G:C8	3.01	0.48
1:CA:1507:A:C5	1:CA:1530:G:C6	3.01	0.48
2:CB:15:HIS:O	2:CB:17:GLY:N	2.46	0.48
3:CC:102:ASN:N	3:CC:102:ASN:OD1	2.46	0.48
9:CI:127:PHE:C	9:CI:127:PHE:CD2	2.87	0.48
10:CJ:46:LYS:HB3	10:CJ:66:GLU:OE1	2.13	0.48
12:CL:16:VAL:O	12:CL:17:ALA:C	2.51	0.48
13:CM:106:ALA:O	13:CM:110:LYS:HB3	2.13	0.48
18:CR:46:GLY:O	18:CR:47:THR:O	2.32	0.48
22:DA:158:U:C2'	22:DA:159:G:H5'	2.43	0.48
22:DA:382:A:N1	22:DA:383:C:C2	2.81	0.48
22:DA:479:A:N3	22:DA:481:G:H5"	2.27	0.48
22:DA:537:G:C6	22:DA:555:G:C2	3.00	0.48
22:DA:705:A:C2	22:DA:727:A:O4'	2.67	0.48
22:DA:1060:U:C5	30:DI:132:THR:HG23	2.48	0.48
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.48	0.48
26:DE:5:LEU:HD23	26:DE:122:GLU:HG2	1.94	0.48
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.12	0.48
32:DK:76:VAL:CG1	37:DP:73:VAL:HG22	2.43	0.48
32:DK:99:ILE:HD13	32:DK:118:LEU:HD12	1.94	0.48
36:DO:72:ALA:HA	36:DO:109:ALA:CB	2.43	0.48
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.95	0.48
50:D2:35:ARG:O	50:D2:38:GLY:N	2.45	0.48
1:AA:116:A:H2'	1:AA:117:G:H8	1.78	0.48
1:AA:437:U:C2'	1:AA:438:U:H5'	2.43	0.48
1:AA:577:G:C8	1:AA:816:A:C6	3.01	0.48
1:AA:601:G:H2'	1:AA:602:A:C8	2.48	0.48
1:AA:1270:G:C2	1:AA:1271:A:C8	3.00	0.48
1:AA:1483:A:H2'	1:AA:1484:C:O4'	2.13	0.48
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:11:ARG:O	3:AC:12:LEU:C	2.51	0.48
6:AF:36:ILE:HG23	6:AF:36:ILE:O	2.13	0.48
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.13	0.48
17:AQ:59:VAL:HG23	17:AQ:77:ARG:O	2.13	0.48
22:BA:513:A:C2	22:BA:514:A:C4	3.00	0.48
22:BA:1027:A:N1	22:BA:1126:A:C4	2.82	0.48
22:BA:1085:A:C5	22:BA:1086:A:N6	2.82	0.48
22:BA:1224:U:C4	22:BA:1225:G:C6	3.00	0.48
22:BA:1372:U:C2'	22:BA:1373:A:H5'	2.43	0.48
22:BA:1383:A:N3	22:BA:1405:U:O2'	2.37	0.48
22:BA:2292:U:H2'	22:BA:2293:G:H8	1.77	0.48
22:BA:2429:G:OP2	57:BA:3343:HOH:O	2.20	0.48
22:BA:2779:U:C6	22:BA:2781:A:C2	3.01	0.48
22:BA:2820:A:P	35:BN:2:ARG:HH12	2.36	0.48
34:BM:43:ALA:O	34:BM:47:GLU:HB2	2.13	0.48
40:BS:38:TYR:CD1	48:B0:28:LEU:HD21	2.48	0.48
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.27	0.48
1:CA:66:A:O4'	1:CA:173:U:C4	2.66	0.48
1:CA:445:G:C2	1:CA:490:C:C2	3.00	0.48
1:CA:890:G:O2'	1:CA:906:A:N6	2.47	0.48
1:CA:919:A:N1	1:CA:920:U:C5	2.82	0.48
1:CA:1089:G:N2	1:CA:1090:U:H1'	2.28	0.48
1:CA:1512:U:O2	1:CA:1513:A:C8	2.67	0.48
2:CB:165:ASP:O	2:CB:169:GLU:HG2	2.13	0.48
3:CC:64:ILE:CG1	3:CC:66:VAL:HG23	2.43	0.48
7:CG:57:SER:HB3	7:CG:60:GLU:HG3	1.94	0.48
11:CK:122:ARG:NH1	21:CU:36:GLU:HG2	2.27	0.48
21:CU:14:VAL:HG12	21:CU:16:LEU:CD2	2.44	0.48
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.48	0.48
22:DA:319:G:OP2	26:DE:132:LYS:CE	2.61	0.48
22:DA:582:A:N7	57:DA:3285:HOH:O	2.35	0.48
22:DA:583:G:C5	22:DA:584:C:C5	3.01	0.48
22:DA:1138:G:O2'	31:DJ:104:ALA:O	2.30	0.48
22:DA:1317:G:N2	22:DA:1336:A:N3	2.61	0.48
22:DA:1525:A:C5	22:DA:1526:C:C4	3.01	0.48
22:DA:1813:G:H2'	22:DA:1814:G:O4'	2.12	0.48
22:DA:2267:A:H5"	22:DA:2268:A:H5'	1.95	0.48
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.28	0.48
23:DB:35:C:C2'	23:DB:36:C:O5'	2.61	0.48
27:DF:122:PHE:O	27:DF:123:ASP:C	2.50	0.48
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:114:GLU:OE2	35:DN:118:ARG:CD	2.61	0.48
38:DQ:58:ARG:NH2	38:DQ:92:ARG:NH1	2.61	0.48
40:DS:66:ILE:HD13	40:DS:66:ILE:N	2.28	0.48
42:DU:6:ARG:O	42:DU:7:ARG:O	2.30	0.48
42:DU:47:LYS:HE2	42:DU:47:LYS:HB2	1.52	0.48
45:DX:31:PRO:HB2	45:DX:33:LEU:HD13	1.94	0.48
1:AA:44:A:C2	1:AA:399:G:C2	3.01	0.48
1:AA:376:G:H2'	1:AA:377:G:H8	1.78	0.48
1:AA:558:G:C5	1:AA:559:A:C2	3.01	0.48
1:AA:592:G:C6	1:AA:648:A:C6	3.01	0.48
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.40	0.48
4:AD:197:GLU:O	4:AD:200:ILE:N	2.46	0.48
7:AG:132:GLY:O	7:AG:135:VAL:HG22	2.14	0.48
10:AJ:52:LEU:HB3	14:AN:81:ARG:HE	1.76	0.48
13:AM:107:ARG:HG2	13:AM:107:ARG:NH1	2.28	0.48
22:BA:735:A:C8	22:BA:736:C:C5	3.01	0.48
22:BA:847:U:O2	22:BA:934:U:H1'	2.13	0.48
22:BA:1940:U:C2	22:BA:1965:C:OP2	2.66	0.48
22:BA:2543:G:H2'	22:BA:2544:G:C8	2.48	0.48
22:BA:2598:A:OP1	24:BC:235:GLY:HA2	2.13	0.48
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.43	0.48
26:BE:109:LEU:O	26:BE:111:GLU:N	2.47	0.48
27:BF:119:ALA:HB2	27:BF:177:PHE:CD2	2.48	0.48
32:BK:19:VAL:HG11	32:BK:41:ILE:HD13	1.95	0.48
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.12	0.48
1:CA:49:U:O4	1:CA:365:U:H5	1.96	0.48
1:CA:244:U:H4'	1:CA:245:U:C5'	2.44	0.48
1:CA:375:U:N3	1:CA:376:G:N7	2.61	0.48
1:CA:510:A:H5"	1:CA:511:C:P	2.53	0.48
1:CA:609:A:N7	57:CA:1795:HOH:O	2.35	0.48
1:CA:747:A:N6	1:CA:748:G:C6	2.81	0.48
8:CH:67:GLN:C	8:CH:69:LYS:N	2.65	0.48
15:CO:8:THR:O	15:CO:12:VAL:HG23	2.13	0.48
15:CO:42:HIS:O	15:CO:45:GLU:O	2.31	0.48
22:DA:784:G:N1	24:DC:228:VAL:HG21	2.28	0.48
22:DA:1058:U:H2'	22:DA:1059:G:C8	2.48	0.48
22:DA:1090:A:N6	22:DA:1091:G:O6	2.46	0.48
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.43	0.48
22:DA:1586:A:N6	22:DA:1587:G:C2	2.81	0.48
22:DA:1846:G:H5"	22:DA:1847:A:OP2	2.12	0.48
22:DA:2037:A:C6	22:DA:2038:G:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2405:G:N2	22:DA:2411:A:C8	2.81	0.48
22:DA:2873:A:O4'	35:DN:6:SER:HB2	2.13	0.48
24:DC:141:VAL:O	24:DC:162:VAL:N	2.43	0.48
35:DN:51:LEU:N	35:DN:51:LEU:HD23	2.27	0.48
44:DW:33:ALA:N	44:DW:64:ASP:OD2	2.46	0.48
47:DZ:7:ILE:HD11	47:DZ:48:ILE:HD11	1.96	0.48
1:AA:34:C:H2'	1:AA:35:G:C8	2.48	0.48
1:AA:110:C:N4	1:AA:111:G:C6	2.81	0.48
1:AA:193:C:O4'	20:AT:55:GLN:OE1	2.31	0.48
1:AA:402:G:C5	1:AA:403:C:C5	3.01	0.48
1:AA:495:A:O4'	1:AA:496:A:C8	2.67	0.48
1:AA:499:A:H4'	1:AA:500:G:OP1	2.14	0.48
1:AA:575:G:C6	1:AA:821:G:N7	2.81	0.48
1:AA:772:U:C2'	1:AA:773:G:O5'	2.61	0.48
1:AA:785:G:N2	1:AA:798:U:C2	2.81	0.48
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.12	0.48
1:AA:1042:A:H2'	1:AA:1043:G:C1'	2.43	0.48
1:AA:1058:G:C6	1:AA:1059:C:C4	3.01	0.48
1:AA:1133:G:N1	1:AA:1142:G:C6	2.81	0.48
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.46	0.48
3:AC:107:ARG:O	3:AC:108:LYS:C	2.52	0.48
4:AD:3:ARG:NE	4:AD:115:ARG:HD3	2.29	0.48
10:AJ:44:THR:CG2	10:AJ:70:HIS:HA	2.43	0.48
10:AJ:81:GLU:O	10:AJ:84:VAL:HG12	2.14	0.48
11:AK:125:LYS:CG	11:AK:126:LYS:N	2.76	0.48
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.62	0.48
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.94	0.48
14:AN:66:GLN:HG3	14:AN:79:LEU:HD21	1.94	0.48
20:AT:23:SER:OG	20:AT:24:ARG:N	2.46	0.48
22:BA:22:C:C2'	22:BA:23:G:O5'	2.61	0.48
22:BA:164:C:H2'	22:BA:165:A:H5'	1.94	0.48
22:BA:247:G:H4'	22:BA:386:G:C5	2.49	0.48
22:BA:842:U:N3	22:BA:843:G:N7	2.62	0.48
22:BA:1074:G:H2'	22:BA:1075:C:H5'	1.96	0.48
22:BA:1176:U:N3	22:BA:1177:G:C6	2.81	0.48
22:BA:1319:C:O2'	22:BA:1320:C:H5'	2.14	0.48
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.14	0.48
22:BA:1876:A:C2	22:BA:1877:A:C4	3.02	0.48
22:BA:1917:U:C2	22:BA:1918:A:C8	3.01	0.48
22:BA:2020:A:H5'	48:B0:9:THR:HG22	1.95	0.48
22:BA:2027:G:N2	22:BA:2037:A:C4	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2093:G:O5'	29:BH:24:GLY:HA3	2.14	0.48
22:BA:2371:G:N2	22:BA:2372:U:C2	2.81	0.48
23:BB:30:C:C2'	23:BB:31:C:H5'	2.40	0.48
30:BI:6:GLN:O	30:BI:7:ALA:CB	2.62	0.48
33:BL:28:GLY:C	33:BL:29:LYS:O	2.52	0.48
53:B5:59:VAL:HG12	53:B5:63:VAL:CG2	2.43	0.48
1:CA:501:C:H1'	1:CA:549:C:H1'	1.96	0.48
2:CB:139:ARG:C	2:CB:139:ARG:CD	2.82	0.48
3:CC:148:GLY:O	3:CC:203:PHE:N	2.38	0.48
3:CC:152:GLU:OE2	3:CC:154:SER:HB3	2.14	0.48
6:CF:88:MET:HE1	18:CR:64:TYR:HD2	1.78	0.48
8:CH:86:TYR:CE2	8:CH:124:GLU:HB2	2.48	0.48
11:CK:93:ARG:NH2	21:CU:20:LYS:HD2	2.29	0.48
15:CO:35:GLN:NE2	15:CO:39:LEU:HD22	2.28	0.48
16:CP:50:THR:O	16:CP:50:THR:HG22	2.14	0.48
17:CQ:45:HIS:ND1	17:CQ:70:THR:HG21	2.27	0.48
22:DA:27:G:N2	22:DA:512:G:H1'	2.29	0.48
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.46	0.48
22:DA:532:A:N7	22:DA:2021:C:H2'	2.28	0.48
22:DA:546:U:O2	22:DA:546:U:H3'	2.13	0.48
22:DA:664:G:H4'	22:DA:941:A:OP1	2.13	0.48
22:DA:737:C:C2	22:DA:738:G:C8	3.02	0.48
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.37	0.48
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.13	0.48
22:DA:1567:G:OP1	24:DC:85:PRO:HB3	2.13	0.48
22:DA:1647:U:H3'	22:DA:1647:U:P	2.54	0.48
22:DA:1864:U:H2'	22:DA:1865:U:H5'	1.94	0.48
22:DA:1983:G:O2'	22:DA:2606:C:H5'	2.13	0.48
22:DA:2305:U:C4	27:DF:152:LEU:HA	2.48	0.48
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.13	0.48
25:DD:179:ARG:NH1	37:DP:8:LEU:HD21	2.29	0.48
26:DE:145:ASP:HB3	26:DE:184:ASP:HB2	1.96	0.48
32:DK:113:MET:SD	32:DK:116:ILE:HD11	2.54	0.48
36:DO:2:ASP:O	36:DO:6:ALA:HB2	2.14	0.48
36:DO:80:GLU:HA	36:DO:83:LEU:HD12	1.96	0.48
41:DT:39:THR:HG23	41:DT:42:GLU:H	1.78	0.48
46:DY:18:LEU:O	46:DY:22:LEU:HB2	2.13	0.48
46:DY:23:ARG:NE	46:DY:23:ARG:HA	2.27	0.48
1:AA:108:G:N3	1:AA:108:G:C5'	2.74	0.48
1:AA:602:A:C6	1:AA:603:U:N3	2.82	0.48
1:AA:654:G:H2'	1:AA:655:A:H5'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1036:A:H3'	1:AA:1037:C:C5	2.49	0.48
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.48	0.48
1:AA:1288:A:C6	1:AA:1289:A:C5	3.01	0.48
1:AA:1446:A:O2'	1:AA:1447:A:H5'	2.14	0.48
3:AC:46:GLU:C	3:AC:48:ALA:H	2.16	0.48
4:AD:192:SER:O	4:AD:193:ALA:HB3	2.14	0.48
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.43	0.48
7:AG:97:ASN:O	7:AG:101:MET:HG3	2.14	0.48
9:AI:25:ASN:HB2	9:AI:27:LYS:HG2	1.94	0.48
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.29	0.48
21:AU:6:VAL:O	21:AU:6:VAL:HG23	2.12	0.48
22:BA:194:G:C8	57:BA:3763:HOH:O	2.65	0.48
22:BA:301:G:H4'	22:BA:301:G:OP1	2.14	0.48
22:BA:602:A:N3	22:BA:655:A:C2	2.82	0.48
22:BA:612:G:H4'	22:BA:613:A:C2	2.48	0.48
22:BA:1115:G:C4	22:BA:1116:G:N7	2.82	0.48
22:BA:1344:U:HO2'	22:BA:1345:C:P	2.37	0.48
22:BA:1789:A:OP1	24:BC:221:ARG:HG3	2.13	0.48
22:BA:1917:U:C4	22:BA:1918:A:C4	3.02	0.48
22:BA:2317:A:C2'	22:BA:2318:G:H5'	2.44	0.48
22:BA:2665:A:C2	22:BA:2666:C:N1	2.82	0.48
22:BA:2687:U:H2'	22:BA:2688:G:O4'	2.13	0.48
27:BF:36:LEU:HB3	27:BF:57:LEU:HD21	1.94	0.48
27:BF:46:ASP:OD2	27:BF:49:LEU:HD13	2.13	0.48
28:BG:96:ALA:CB	28:BG:105:LEU:HD23	2.44	0.48
30:BI:5:VAL:O	30:BI:6:GLN:HB2	2.12	0.48
30:BI:92:LYS:HB3	30:BI:95:LYS:CG	2.43	0.48
30:BI:102:SER:OG	30:BI:103:ARG:N	2.47	0.48
37:BP:53:ARG:O	37:BP:54:GLY:C	2.51	0.48
1:CA:55:A:N6	1:CA:56:U:N3	2.61	0.48
1:CA:207:C:O2	1:CA:207:C:C2'	2.61	0.48
1:CA:960:U:C5	1:CA:1225:A:C8	3.01	0.48
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.13	0.48
1:CA:1088:G:C4	1:CA:1089:G:C8	3.02	0.48
1:CA:1303:C:N4	1:CA:1304:G:C6	2.82	0.48
3:CC:22:TRP:CD1	3:CC:57:ILE:HG22	2.49	0.48
4:CD:147:GLU:O	4:CD:148:LYS:C	2.51	0.48
8:CH:88:ARG:O	8:CH:122:GLY:HA3	2.13	0.48
11:CK:110:ILE:O	21:CU:6:VAL:HG22	2.12	0.48
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	1.95	0.48
22:DA:532:A:N1	22:DA:2020:A:H1'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:703:U:C5	22:DA:704:G:C6	3.01	0.48
22:DA:769:U:C2	22:DA:770:G:C8	3.01	0.48
22:DA:783:A:H8	22:DA:784:G:H4'	1.78	0.48
22:DA:1027:A:N6	22:DA:1126:A:N3	2.61	0.48
22:DA:1062:G:H2'	22:DA:1063:G:C4	2.49	0.48
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.95	0.48
22:DA:1820:U:OP1	24:DC:177:ARG:CG	2.60	0.48
22:DA:2131:U:C4'	22:DA:2133:G:H1'	2.44	0.48
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.49	0.48
24:DC:84:ASP:OD1	24:DC:86:ASN:ND2	2.44	0.48
25:DD:150:GLN:C	25:DD:151:THR:O	2.50	0.48
26:DE:5:LEU:HD13	26:DE:10:SER:O	2.14	0.48
28:DG:4:VAL:HG12	28:DG:69:ARG:HG2	1.94	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
33:DL:110:VAL:HG21	33:DL:127:VAL:HG22	1.95	0.48
41:DT:39:THR:HA	41:DT:81:LYS:HZ3	1.79	0.48
43:DV:30:ILE:HD11	43:DV:63:ILE:CD1	2.44	0.48
47:DZ:47:MET:O	47:DZ:51:VAL:HG22	2.14	0.48
49:D1:26:ASN:HB3	49:D1:29:THR:OG1	2.13	0.48
1:AA:90:C:C2	1:AA:91:U:C5	3.02	0.48
1:AA:469:C:C4	1:AA:470:C:C4	3.02	0.48
1:AA:852:G:C5	1:AA:853:C:C5	3.02	0.48
1:AA:1048:G:N2	1:AA:1050:G:C4	2.81	0.48
1:AA:1077:G:N1	1:AA:1081:A:C6	2.82	0.48
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.26	0.48
1:AA:1216:A:H2'	1:AA:1217:C:H6	1.78	0.48
4:AD:197:GLU:O	4:AD:199:LEU:N	2.46	0.48
5:AE:97:GLN:HB2	5:AE:124:LEU:HD12	1.95	0.48
11:AK:76:GLU:O	22:BA:2141:G:OP1	2.30	0.48
13:AM:15:ALA:HB1	13:AM:34:LEU:HD21	1.94	0.48
18:AR:36:SER:HA	18:AR:72:ASP:HB3	1.94	0.48
21:AU:17:ARG:NH1	21:AU:20:LYS:HG2	2.29	0.48
22:BA:83:A:C2	22:BA:101:A:C2	3.01	0.48
22:BA:238:C:C2'	22:BA:239:C:O5'	2.61	0.48
22:BA:380:G:H2'	22:BA:381:G:O4'	2.14	0.48
22:BA:848:C:H2'	22:BA:849:A:C8	2.48	0.48
22:BA:1662:U:O2	22:BA:1662:U:H2'	2.12	0.48
22:BA:1695:G:H1'	24:BC:8:PRO:O	2.13	0.48
22:BA:1799:G:O6	24:BC:178:SER:HB3	2.14	0.48
22:BA:2063:C:O2	22:BA:2450:A:N1	2.46	0.48
22:BA:2146:C:H5"	22:BA:2147:A:OP1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2345:G:C5	22:BA:2381:A:C2	3.02	0.48
22:BA:2675:A:H2'	22:BA:2676:C:H5'	1.93	0.48
25:BD:29:VAL:HG11	25:BD:98:VAL:HG23	1.96	0.48
27:BF:80:ARG:O	27:BF:83:TYR:HB2	2.14	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
30:BI:77:ALA:HA	30:BI:80:LEU:HD12	1.95	0.48
38:BQ:9:ILE:O	38:BQ:9:ILE:HG13	2.12	0.48
39:BR:52:PRO:O	39:BR:53:PHE:O	2.31	0.48
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.29	0.48
1:CA:202:G:H2'	1:CA:203:G:O4'	2.13	0.48
1:CA:463:U:O2	1:CA:463:U:H2'	2.12	0.48
2:CB:62:SER:HA	2:CB:224:GLY:HA2	1.96	0.48
3:CC:83:ASP:O	3:CC:84:VAL:C	2.51	0.48
5:CE:77:ASN:HB2	5:CE:82:GLN:HG2	1.95	0.48
9:CI:41:ARG:O	9:CI:45:ARG:NH1	2.47	0.48
17:CQ:11:ARG:NH2	17:CQ:12:VAL:O	2.47	0.48
22:DA:204:A:O4'	22:DA:206:U:C6	2.67	0.48
22:DA:300:A:O5'	42:DU:82:ARG:NH1	2.46	0.48
22:DA:327:G:N2	42:DU:68:SER:HB2	2.29	0.48
22:DA:374:A:C2	22:DA:401:A:C4	3.01	0.48
22:DA:681:G:C4	22:DA:682:G:C8	3.02	0.48
22:DA:1087:G:H2'	22:DA:1088:A:H5'	1.96	0.48
22:DA:1544:A:N6	22:DA:1545:A:N1	2.61	0.48
22:DA:1821:A:H2'	22:DA:1822:C:O4'	2.14	0.48
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.29	0.48
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.48
31:DJ:9:GLU:O	31:DJ:10:THR:HG22	2.13	0.48
32:DK:121:GLU:O	32:DK:122:VAL:O	2.32	0.48
35:DN:117:ASP:O	35:DN:118:ARG:CB	2.60	0.48
51:D3:52:LYS:O	51:D3:53:GLY:C	2.51	0.48
52:D4:12:ARG:NH1	52:D4:12:ARG:HB2	2.28	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.49	0.48
1:AA:702:A:H61	22:BA:1846:G:C2'	2.27	0.48
1:AA:989:U:H2'	1:AA:990:C:C6	2.49	0.48
1:AA:1379:G:C5	1:AA:1380:U:C5	3.02	0.48
2:AB:35:ARG:HA	2:AB:35:ARG:NE	2.28	0.48
2:AB:46:THR:HG23	2:AB:201:PRO:HB2	1.96	0.48
7:AG:92:ARG:O	7:AG:96:ARG:HB2	2.14	0.48
9:AI:115:LYS:O	9:AI:116:VAL:C	2.52	0.48
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.92	0.48
22:BA:627:A:C5	22:BA:637:A:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:748:G:OP2	40:BS:88:ARG:HB3	2.14	0.48
22:BA:811:U:C2	22:BA:1251:C:C5	3.02	0.48
22:BA:1564:C:H2'	22:BA:1565:C:C6	2.49	0.48
22:BA:1646:C:H5"	22:BA:1647:U:C5'	2.44	0.48
22:BA:2210:U:C2	22:BA:2212:A:N7	2.82	0.48
22:BA:2674:G:H2'	22:BA:2675:A:C8	2.48	0.48
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.43	0.48
23:BB:30:C:C5	23:BB:31:C:C6	3.02	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
30:BI:7:ALA:HB2	30:BI:61:VAL:HB	1.96	0.48
30:BI:25:GLY:O	30:BI:28:LEU:HD23	2.13	0.48
36:BO:2:ASP:OD1	36:BO:2:ASP:C	2.52	0.48
36:BO:93:ASP:OD2	36:BO:95:SER:N	2.40	0.48
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.79	0.48
44:BW:10:THR:O	44:BW:11:ARG:CB	2.60	0.48
49:B1:32:GLU:HG2	49:B1:32:GLU:O	2.14	0.48
1:CA:644:U:C2	1:CA:645:G:C8	3.01	0.48
1:CA:756:C:N3	1:CA:757:U:C6	2.81	0.48
1:CA:767:A:H2'	1:CA:768:A:O4'	2.14	0.48
1:CA:799:G:C6	1:CA:800:G:C4	3.02	0.48
2:CB:126:PHE:N	2:CB:126:PHE:HD2	2.11	0.48
3:CC:184:TYR:CE1	3:CC:201:TRP:CE2	3.01	0.48
5:CE:93:ARG:NH1	5:CE:93:ARG:HB3	2.27	0.48
5:CE:153:VAL:O	5:CE:157:ARG:N	2.43	0.48
9:CI:116:VAL:HG21	10:CJ:62:ARG:HB2	1.95	0.48
17:CQ:17:MET:HE2	17:CQ:20:SER:O	2.14	0.48
22:DA:14:A:N1	22:DA:526:A:C2	2.81	0.48
22:DA:24:G:N2	22:DA:517:C:C2	2.82	0.48
22:DA:448:U:H4'	22:DA:449:A:OP2	2.13	0.48
22:DA:629:G:O6	22:DA:630:G:C6	2.66	0.48
22:DA:830:G:C4	22:DA:2448:A:C5	3.02	0.48
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.96	0.48
22:DA:1470:A:H2'	22:DA:1471:G:O5'	2.13	0.48
22:DA:1708:C:H2'	22:DA:1709:U:C6	2.49	0.48
24:DC:141:VAL:HG13	24:DC:191:THR:O	2.14	0.48
24:DC:162:VAL:HG12	24:DC:163:GLN:N	2.27	0.48
25:DD:112:THR:O	25:DD:195:GLY:HA2	2.14	0.48
27:DF:6:ASP:HA	27:DF:9:LYS:HD2	1.96	0.48
28:DG:17:VAL:HG12	28:DG:19:ILE:HD11	1.95	0.48
35:DN:69:ARG:O	35:DN:71:ARG:N	2.38	0.48
40:DS:58:ALA:O	40:DS:62:ASP:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.48	0.48
48:D0:44:THR:C	48:D0:46:ASP:H	2.17	0.48
1:AA:1074:G:O3'	2:AB:102:THR:CG2	2.62	0.48
1:AA:1322:C:O2	1:AA:1322:C:O4'	2.27	0.48
2:AB:149:GLY:O	2:AB:151:ILE:N	2.46	0.48
2:AB:196:VAL:HG11	2:AB:199:VAL:HA	1.96	0.48
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.47	0.48
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	2.13	0.48
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.29	0.48
22:BA:142:A:C5	22:BA:143:C:C4	3.02	0.48
22:BA:784:G:O2'	22:BA:785:G:H5"	2.13	0.48
22:BA:1098:A:C6	22:BA:1099:G:C6	3.01	0.48
22:BA:1415:U:O2	22:BA:1415:U:C2'	2.62	0.48
22:BA:1693:U:O4	22:BA:1977:A:C5	2.67	0.48
22:BA:2329:U:H2'	22:BA:2330:G:C8	2.49	0.48
22:BA:2619:C:OP1	25:BD:157:LYS:HE2	2.14	0.48
23:BB:22:U:H2'	23:BB:23:G:C8	2.49	0.48
25:BD:181:ASP:OD1	25:BD:183:GLU:OE1	2.32	0.48
26:BE:105:LEU:O	26:BE:106:LYS:C	2.51	0.48
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.34	0.48
31:BJ:96:ARG:NH2	31:BJ:99:ARG:HD3	2.29	0.48
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.95	0.48
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.14	0.48
1:CA:509:A:C2	1:CA:510:A:C2	3.02	0.48
1:CA:562:U:OP2	12:CL:14:ARG:CZ	2.62	0.48
1:CA:666:G:O2'	1:CA:667:G:H5'	2.14	0.48
1:CA:740:U:O2'	1:CA:741:G:H5'	2.13	0.48
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.95	0.48
1:CA:1346:A:N6	1:CA:1374:A:C8	2.81	0.48
3:CC:5:VAL:HG21	3:CC:10:ILE:HD13	1.94	0.48
7:CG:23:LEU:HD23	7:CG:26:PHE:HB3	1.96	0.48
7:CG:126:ASP:O	7:CG:130:ASN:HA	2.13	0.48
11:CK:23:ILE:HG13	11:CK:23:ILE:O	2.14	0.48
12:CL:22:PRO:C	12:CL:24:LEU:H	2.16	0.48
18:CR:58:ALA:HA	18:CR:61:ARG:HD3	1.96	0.48
21:CU:14:VAL:HG12	21:CU:16:LEU:HD23	1.94	0.48
22:DA:536:G:H2'	22:DA:537:G:O4'	2.14	0.48
22:DA:627:A:O2'	33:DL:76:GLU:OE1	2.32	0.48
22:DA:947:A:HO2'	22:DA:984:A:H2	1.59	0.48
22:DA:1070:A:H2'	22:DA:1097:U:OP1	2.14	0.48
22:DA:1198:U:O2	38:DQ:4:VAL:HG11	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.01	0.48
22:DA:2080:A:O5'	45:DX:19:SER:HB2	2.14	0.48
24:DC:3:VAL:HG11	24:DC:202:LEU:HD23	1.95	0.48
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.49	0.48
28:DG:38:ASN:HB3	28:DG:41:VAL:HG23	1.96	0.48
28:DG:39:ASP:HB3	28:DG:58:TYR:OH	2.14	0.48
30:DI:7:ALA:O	30:DI:59:ILE:HB	2.14	0.48
32:DK:105:ARG:HG2	32:DK:122:VAL:HG12	1.96	0.48
1:AA:374:A:C6	1:AA:375:U:C4	3.01	0.48
1:AA:927:G:N1	1:AA:1391:U:C2	2.82	0.48
1:AA:1091:U:O2	1:AA:1095:U:C2	2.66	0.48
2:AB:47:VAL:C	2:AB:49:MET:N	2.68	0.48
2:AB:56:GLU:HA	2:AB:59:LYS:CB	2.44	0.48
5:AE:20:ARG:O	5:AE:21:VAL:HG12	2.14	0.48
8:AH:66:PHE:CD2	8:AH:67:GLN:HG2	2.48	0.48
9:AI:47:VAL:O	9:AI:50:GLN:HB2	2.14	0.48
9:AI:57:MET:SD	9:AI:57:MET:N	2.85	0.48
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.13	0.48
17:AQ:52:GLU:N	17:AQ:52:GLU:CD	2.66	0.48
20:AT:67:ILE:HG23	20:AT:67:ILE:O	2.14	0.48
22:BA:10:A:C5	22:BA:11:C:C5	3.02	0.48
22:BA:340:A:C2'	22:BA:341:C:H5'	2.44	0.48
22:BA:1170:C:H2'	22:BA:1171:G:C8	2.49	0.48
22:BA:1877:A:H2'	22:BA:1878:G:O4'	2.14	0.48
22:BA:1894:C:O2'	22:BA:1895:C:H5'	2.14	0.48
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.48	0.48
22:BA:2747:G:C2	22:BA:2756:U:C5	3.02	0.48
22:BA:2825:G:C3'	22:BA:2826:A:H5'	2.44	0.48
24:BC:88:SER:HB2	24:BC:200:HIS:CD2	2.49	0.48
32:BK:57:VAL:C	32:BK:58:LEU:HD13	2.34	0.48
32:BK:114:LYS:O	32:BK:118:LEU:HG	2.14	0.48
1:CA:17:U:N3	1:CA:18:C:C5	2.82	0.48
1:CA:238:A:O2'	1:CA:239:U:H5'	2.14	0.48
1:CA:505:G:H5'	1:CA:534:U:C2	2.48	0.48
1:CA:652:U:C4	1:CA:752:G:N3	2.81	0.48
1:CA:1512:U:C2	1:CA:1513:A:C8	3.02	0.48
3:CC:79:LYS:O	3:CC:81:GLY:N	2.47	0.48
3:CC:87:LEU:O	3:CC:91:VAL:HG23	2.13	0.48
3:CC:130:PHE:CE1	3:CC:157:LEU:HB3	2.48	0.48
17:CQ:52:GLU:HG2	17:CQ:53:CYS:H	1.79	0.48
19:CS:63:THR:CG2	19:CS:64:ASP:N	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:225:C:H2'	22:DA:226:A:O4'	2.13	0.48
22:DA:937:C:C4	22:DA:938:G:N7	2.82	0.48
22:DA:1062:G:N1	22:DA:1077:A:C2	2.82	0.48
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.13	0.48
22:DA:1361:G:C2	22:DA:1362:C:C6	3.02	0.48
22:DA:1775:U:H2'	22:DA:1776:G:O5'	2.13	0.48
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.44	0.48
22:DA:2491:U:C5'	22:DA:2570:G:H5"	2.43	0.48
22:DA:2615:U:H1'	48:D0:4:GLN:HB3	1.96	0.48
23:DB:84:G:C2	23:DB:93:C:C2	3.02	0.48
25:DD:39:ASP:OD1	25:DD:40:LEU:N	2.47	0.48
25:DD:142:VAL:HB	25:DD:143:PRO:HD2	1.96	0.48
26:DE:146:VAL:HG22	26:DE:167:VAL:HG22	1.94	0.48
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.96	0.48
35:DN:85:PRO:HA	35:DN:88:ALA:HB2	1.95	0.48
1:AA:146:G:C2	1:AA:177:G:N7	2.82	0.47
1:AA:188:C:N3	1:AA:189:A:C2	2.82	0.47
1:AA:465:A:H2'	1:AA:466:A:C8	2.49	0.47
1:AA:683:G:N2	11:AK:40:ASN:HA	2.29	0.47
1:AA:737:C:N3	1:AA:738:C:C5	2.82	0.47
1:AA:960:U:O2'	1:AA:1223:C:H5"	2.14	0.47
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.49	0.47
1:AA:1213:A:C5	1:AA:1215:G:C4	3.02	0.47
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.95	0.47
2:AB:138:THR:HA	2:AB:141:LEU:HB2	1.96	0.47
4:AD:147:GLU:HA	4:AD:150:LYS:HD2	1.96	0.47
4:AD:177:LYS:N	4:AD:177:LYS:HD3	2.29	0.47
8:AH:11:LEU:N	8:AH:11:LEU:HD23	2.28	0.47
17:AQ:14:SER:OG	17:AQ:17:MET:CE	2.62	0.47
22:BA:2:G:H2'	22:BA:3:U:C6	2.49	0.47
22:BA:11:C:C2'	22:BA:12:U:H5'	2.44	0.47
22:BA:528:A:C2	22:BA:2043:C:H4'	2.49	0.47
22:BA:705:A:N6	22:BA:726:G:H1'	2.29	0.47
22:BA:991:C:C5	22:BA:1185:G:C6	3.02	0.47
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.13	0.47
24:BC:77:VAL:HA	24:BC:114:ASP:O	2.14	0.47
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.16	0.47
30:BI:34:ASN:HB2	30:BI:37:GLU:HG3	1.96	0.47
32:BK:21:CYS:HB2	32:BK:39:ILE:HD12	1.95	0.47
1:CA:664:G:N2	1:CA:666:G:C8	2.82	0.47
1:CA:829:G:C5	1:CA:858:G:N2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:881:G:C6	1:CA:882:C:C4	3.02	0.47
1:CA:1101:A:N6	2:CB:102:THR:HG21	2.23	0.47
1:CA:1255:G:N1	1:CA:1279:G:C8	2.82	0.47
1:CA:1388:C:N3	1:CA:1389:C:C5	2.82	0.47
1:CA:1431:A:C6	1:CA:1432:G:O6	2.66	0.47
3:CC:10:ILE:HD12	14:CN:98:LYS:HG3	1.96	0.47
3:CC:69:HIS:HA	3:CC:104:ALA:HB3	1.95	0.47
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.28	0.47
10:CJ:35:GLN:O	10:CJ:36:VAL:CB	2.61	0.47
22:DA:121:G:H4'	22:DA:149:A:H5'	1.95	0.47
22:DA:883:G:N2	22:DA:894:U:O2	2.47	0.47
22:DA:1229:C:C2	22:DA:1230:A:C8	3.02	0.47
22:DA:1285:A:N6	22:DA:1329:U:C6	2.82	0.47
22:DA:1826:G:C4	22:DA:1827:U:C6	3.02	0.47
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.44	0.47
22:DA:1893:C:C5	22:DA:1894:C:C5	3.02	0.47
22:DA:2142:A:C2	22:DA:2150:C:N3	2.82	0.47
33:DL:68:SER:O	33:DL:69:ARG:CB	2.61	0.47
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.49	0.47
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.29	0.47
41:DT:20:ALA:HA	41:DT:31:VAL:HG21	1.96	0.47
46:DY:60:LYS:O	46:DY:61:ALA:C	2.52	0.47
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.14	0.47
1:AA:19:A:C2	1:AA:917:G:C4	3.02	0.47
1:AA:1367:C:C5'	10:AJ:62:ARG:NH1	2.76	0.47
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.77	0.47
2:AB:120:GLN:N	2:AB:123:ASP:HB2	2.29	0.47
4:AD:113:GLU:CD	4:AD:154:ARG:HD2	2.34	0.47
5:AE:141:ILE:HG22	5:AE:142:ASP:N	2.29	0.47
9:AI:114:LYS:HG2	9:AI:120:LYS:HA	1.95	0.47
22:BA:478:A:C6	22:BA:480:A:C6	3.02	0.47
22:BA:581:C:H2'	22:BA:582:A:H8	1.79	0.47
22:BA:596:U:O2'	22:BA:597:G:H5'	2.14	0.47
22:BA:1029:A:OP1	34:BM:127:LYS:NZ	2.47	0.47
22:BA:1228:G:C6	22:BA:1229:C:C4	3.02	0.47
22:BA:1911:U:O2	22:BA:1920:C:O2	2.31	0.47
22:BA:2790:U:H5'	22:BA:2893:A:N7	2.29	0.47
23:BB:109:A:C5	23:BB:110:C:C4	3.02	0.47
24:BC:107:PRO:HD2	24:BC:110:LEU:HB2	1.96	0.47
25:BD:13:ARG:HD2	25:BD:15:PHE:CE2	2.49	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:35:ARG:HG2	31:BJ:40:HIS:CD2	2.49	0.47
33:BL:132:ARG:NH1	33:BL:142:ILE:HG21	2.29	0.47
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.44	0.47
40:BS:83:LYS:HD2	40:BS:97:LEU:CD1	2.44	0.47
42:BU:14:LEU:HD12	42:BU:70:VAL:C	2.34	0.47
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.96	0.47
53:B5:41:THR:HG21	53:B5:216:THR:CB	2.45	0.47
1:CA:8:A:N6	4:CD:206:LYS:HB3	2.29	0.47
1:CA:57:G:C6	1:CA:58:C:N4	2.82	0.47
1:CA:211:G:N3	1:CA:211:G:H2'	2.29	0.47
1:CA:661:G:N3	1:CA:662:U:C6	2.82	0.47
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.14	0.47
1:CA:1080:A:OP1	5:CE:52:LYS:HE2	2.13	0.47
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.12	0.47
3:CC:81:GLY:O	3:CC:82:GLU:C	2.52	0.47
4:CD:78:GLU:HG3	4:CD:93:LEU:HD11	1.96	0.47
4:CD:151:LYS:C	4:CD:152:GLN:HE21	2.17	0.47
9:CI:19:VAL:HG21	9:CI:82:GLY:C	2.34	0.47
12:CL:111:LYS:O	12:CL:114:ARG:HG3	2.14	0.47
13:CM:43:VAL:HG23	13:CM:43:VAL:O	2.14	0.47
14:CN:22:ALA:N	14:CN:25:ALA:HB2	2.29	0.47
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.96	0.47
22:DA:67:U:H2'	22:DA:68:G:O4'	2.14	0.47
22:DA:742:A:H2'	22:DA:743:A:C8	2.49	0.47
22:DA:1014:A:C2	22:DA:1149:G:C2	3.02	0.47
22:DA:1515:A:H5'	22:DA:1516:G:OP2	2.15	0.47
22:DA:1662:U:O2	22:DA:2687:U:H4'	2.13	0.47
22:DA:1754:A:C6	22:DA:1755:A:C6	3.02	0.47
22:DA:2111:U:H5	22:DA:2145:C:H2'	1.78	0.47
22:DA:2114:A:H2'	22:DA:2114:A:N3	2.29	0.47
22:DA:2491:U:H5'	22:DA:2570:G:H5'	1.96	0.47
22:DA:2886:A:C2	48:D0:29:SER:HB3	2.49	0.47
24:DC:29:PRO:HG3	24:DC:63:ARG:CZ	2.43	0.47
24:DC:39:LYS:HE3	24:DC:56:GLY:O	2.14	0.47
25:DD:172:VAL:CG2	25:DD:194:PRO:HD3	2.44	0.47
29:DH:83:LYS:CG	29:DH:149:GLU:CG	2.86	0.47
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.14	0.47
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.35	0.47
36:DO:99:TYR:CD1	36:DO:99:TYR:O	2.67	0.47
37:DP:52:ASN:O	37:DP:53:ARG:HD3	2.14	0.47
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:56:LEU:O	46:DY:57:LEU:HB3	2.14	0.47
51:D3:7:VAL:HB	51:D3:61:CYS:HB3	1.95	0.47
1:AA:254:G:O2'	17:AQ:18:GLU:O	2.32	0.47
1:AA:352:C:OP2	57:AA:1891:HOH:O	2.19	0.47
1:AA:1202:U:C2	14:AN:82:ILE:HG21	2.50	0.47
8:AH:49:PHE:HB3	8:AH:61:LEU:HD23	1.97	0.47
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.29	0.47
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.61	0.47
18:AR:34:THR:CG2	18:AR:38:LYS:HB2	2.45	0.47
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.96	0.47
20:AT:54:MET:HE3	20:AT:58:VAL:CG2	2.44	0.47
20:AT:69:LYS:HB2	20:AT:70:ASN:OD1	2.14	0.47
22:BA:149:A:C5	22:BA:150:U:C5	3.02	0.47
22:BA:242:G:C8	51:B3:5:LYS:HG2	2.49	0.47
22:BA:973:A:H5"	39:BR:81:LYS:HG3	1.96	0.47
22:BA:1014:A:C6	22:BA:1015:U:C4	3.02	0.47
22:BA:1026:G:H2'	22:BA:1027:A:H8	1.79	0.47
22:BA:1135:C:N4	22:BA:1139:G:C6	2.82	0.47
22:BA:1169:A:C6	22:BA:1180:U:O4	2.68	0.47
22:BA:1242:U:O2	33:BL:4:ASN:ND2	2.47	0.47
22:BA:1924:C:O2	22:BA:1924:C:H2'	2.13	0.47
22:BA:2281:A:C2	22:BA:2282:G:C5	3.03	0.47
22:BA:2729:G:C5	22:BA:2730:C:C5	3.02	0.47
24:BC:31:ALA:HA	24:BC:34:LEU:HD12	1.96	0.47
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.78	0.47
28:BG:63:ALA:O	28:BG:67:THR:CG2	2.62	0.47
28:BG:118:PRO:O	28:BG:119:ALA:C	2.52	0.47
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.29	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
30:BI:80:LEU:HA	30:BI:84:ALA:HB3	1.95	0.47
37:BP:14:LYS:NZ	37:BP:81:VAL:O	2.48	0.47
39:BR:24:LYS:CA	39:BR:94:THR:HG23	2.33	0.47
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.77	0.47
1:CA:781:A:H2'	1:CA:782:A:H5'	1.96	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.29	0.47
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.14	0.47
1:CA:1377:A:C5	7:CG:7:ILE:CD1	2.96	0.47
1:CA:1537:U:H5"	1:CA:1538:C:OP2	2.14	0.47
3:CC:138:VAL:O	3:CC:141:ALA:HB3	2.14	0.47
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.15	0.47
6:CF:38:ARG:HG2	6:CF:63:ASN:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:110:ARG:NE	12:CL:117:TYR:CD2	2.82	0.47
15:CO:60:VAL:O	15:CO:63:ARG:HB3	2.15	0.47
17:CQ:14:SER:OG	17:CQ:17:MET:CE	2.63	0.47
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.48	0.47
22:DA:79:C:O2	22:DA:108:G:C2	2.68	0.47
22:DA:510:C:C4	22:DA:511:U:C4	3.02	0.47
22:DA:961:C:C4	22:DA:2031:A:C4	3.01	0.47
22:DA:1475:G:HO2'	22:DA:1476:U:P	2.38	0.47
22:DA:1833:C:C4	22:DA:1834:U:C5	3.02	0.47
22:DA:2160:C:H2'	22:DA:2161:C:O4'	2.14	0.47
22:DA:2253:G:C5	22:DA:2254:C:C5	3.02	0.47
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.62	0.47
26:DE:197:GLU:O	26:DE:201:ALA:HB2	2.15	0.47
28:DG:10:VAL:O	28:DG:10:VAL:HG13	2.14	0.47
46:DY:9:LYS:H	46:DY:12:GLU:HG3	1.78	0.47
1:AA:8:A:H5'	5:AE:125:ALA:O	2.14	0.47
1:AA:148:G:C2'	1:AA:149:A:O5'	2.62	0.47
1:AA:903:G:H2'	1:AA:904:U:C6	2.50	0.47
1:AA:1418:A:C2	1:AA:1483:A:C2	3.03	0.47
2:AB:82:ASP:N	2:AB:85:LEU:HB3	2.29	0.47
2:AB:113:ARG:O	2:AB:117:LEU:HB2	2.15	0.47
2:AB:184:PHE:CE2	2:AB:198:PHE:HD2	2.31	0.47
4:AD:171:LEU:HD12	4:AD:171:LEU:O	2.14	0.47
12:AL:43:LYS:HG2	12:AL:44:LYS:HD3	1.96	0.47
16:AP:68:SER:HB2	16:AP:71:VAL:HB	1.96	0.47
20:AT:23:SER:OG	20:AT:24:ARG:HD2	2.14	0.47
22:BA:26:G:C6	22:BA:27:G:C6	3.03	0.47
22:BA:205:G:O2'	22:BA:206:U:OP2	2.32	0.47
22:BA:566:U:OP1	33:BL:29:LYS:HE3	2.15	0.47
22:BA:1446:C:H2'	22:BA:1447:C:C6	2.49	0.47
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.14	0.47
22:BA:1851:U:C4	22:BA:1852:U:C4	3.03	0.47
22:BA:1907:G:C8	22:BA:1908:C:C5	3.02	0.47
22:BA:2267:A:H2	57:BA:3511:HOH:O	1.96	0.47
22:BA:2321:U:C5'	22:BA:2322:A:OP2	2.57	0.47
22:BA:2642:G:N2	22:BA:2773:C:C2	2.81	0.47
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.14	0.47
24:BC:7:LYS:HB3	24:BC:8:PRO:HD2	1.95	0.47
28:BG:121:ILE:HD12	28:BG:141:ILE:CG2	2.44	0.47
29:BH:86:ASP:H	1:CA:359:G:H4'	1.80	0.47
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.95	0.47
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.91	0.47
1:CA:161:A:H2'	1:CA:162:A:C8	2.49	0.47
1:CA:439:U:H4'	4:CD:121:LYS:HD2	1.96	0.47
1:CA:756:C:C2	1:CA:757:U:C6	3.02	0.47
1:CA:821:G:H2'	1:CA:822:U:H6	1.79	0.47
1:CA:881:G:C5	1:CA:882:C:C5	3.03	0.47
1:CA:1098:C:C2	1:CA:1099:G:C8	3.02	0.47
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.15	0.47
1:CA:1296:C:H5"	1:CA:1297:G:OP2	2.14	0.47
6:CF:24:ARG:O	6:CF:27:ALA:HB3	2.15	0.47
13:CM:45:ILE:HG22	13:CM:45:ILE:O	2.14	0.47
14:CN:36:ALA:HB2	14:CN:41:ARG:HG3	1.95	0.47
22:DA:221:A:C8	22:DA:266:G:O6	2.68	0.47
22:DA:612:G:O2'	22:DA:613:A:C8	2.67	0.47
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.95	0.47
22:DA:1437:C:C4	22:DA:1438:U:C4	3.03	0.47
22:DA:1609:A:H5"	57:DA:3645:HOH:O	2.13	0.47
22:DA:1649:G:O6	22:DA:2009:A:N6	2.47	0.47
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.14	0.47
22:DA:2799:A:C6	22:DA:2801:G:C5	3.03	0.47
23:DB:66:A:N6	23:DB:107:G:H2'	2.30	0.47
28:DG:93:GLY:HA2	28:DG:95:ARG:NH2	2.29	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
29:DH:32:PRO:HB3	45:DX:39:TRP:CB	2.43	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
38:DQ:61:TRP:HB3	38:DQ:92:ARG:O	2.15	0.47
45:DX:33:LEU:O	45:DX:34:HIS:ND1	2.47	0.47
46:DY:28:LEU:HD23	46:DY:37:LEU:HD11	1.96	0.47
1:AA:109:A:H2'	1:AA:326:G:N2	2.29	0.47
1:AA:276:G:O3'	17:AQ:45:HIS:CE1	2.67	0.47
1:AA:557:G:C6	1:AA:558:G:N1	2.82	0.47
1:AA:994:A:N3	1:AA:994:A:H2'	2.29	0.47
1:AA:1403:C:H1'	1:AA:1500:A:N1	2.29	0.47
3:AC:113:ALA:HB2	3:AC:183:ASP:O	2.14	0.47
4:AD:63:ARG:HA	4:AD:63:ARG:HE	1.79	0.47
4:AD:116:GLN:NE2	4:AD:120:HIS:CE1	2.82	0.47
6:AF:81:ASN:O	6:AF:84:VAL:CG1	2.62	0.47
12:AL:23:ALA:O	12:AL:24:LEU:C	2.52	0.47
17:AQ:12:VAL:O	17:AQ:13:VAL:HB	2.13	0.47
20:AT:3:ASN:O	20:AT:4:ILE:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:80:THR:O	20:AT:83:ILE:HG13	2.14	0.47
22:BA:303:G:C5	22:BA:304:U:C5	3.02	0.47
22:BA:465:G:C6	22:BA:466:A:N6	2.82	0.47
22:BA:1042:G:C5	22:BA:1043:C:C5	3.03	0.47
22:BA:1060:U:H4'	22:BA:1061:U:H3'	1.94	0.47
22:BA:1078:U:H5"	22:BA:1079:C:OP1	2.15	0.47
22:BA:1098:A:N7	22:BA:1099:G:O6	2.47	0.47
22:BA:1259:G:N2	22:BA:1260:A:C4	2.83	0.47
22:BA:1926:U:O2	22:BA:1927:A:OP2	2.32	0.47
22:BA:2674:G:C2	22:BA:2675:A:C4	3.03	0.47
22:BA:2820:A:O2'	22:BA:2821:A:OP1	2.32	0.47
23:BB:110:C:C4	23:BB:111:U:C5	3.02	0.47
25:BD:98:VAL:O	25:BD:98:VAL:HG22	2.15	0.47
26:BE:109:LEU:O	26:BE:112:LEU:N	2.47	0.47
28:BG:9:VAL:HG21	28:BG:73:ASN:HA	1.97	0.47
35:BN:36:THR:HG22	35:BN:41:ALA:HB2	1.95	0.47
36:BO:54:VAL:O	36:BO:54:VAL:HG22	2.15	0.47
37:BP:92:VAL:HG21	37:BP:97:LEU:HD11	1.96	0.47
41:BT:43:ILE:O	41:BT:47:VAL:HG23	2.15	0.47
48:B0:40:ARG:O	48:B0:41:HIS:HB2	2.13	0.47
1:CA:66:A:C4'	1:CA:173:U:C4	2.98	0.47
1:CA:81:A:H2'	1:CA:82:G:C8	2.49	0.47
1:CA:332:G:OP2	20:CT:5:LYS:HB3	2.14	0.47
1:CA:582:C:C2	1:CA:760:G:N1	2.83	0.47
1:CA:706:A:C5	1:CA:707:U:C4	3.02	0.47
1:CA:935:A:N1	7:CG:3:ARG:NH1	2.62	0.47
2:CB:104:TRP:CZ2	2:CB:156:GLY:N	2.83	0.47
3:CC:103:ILE:N	3:CC:103:ILE:HD12	2.29	0.47
5:CE:81:LEU:O	5:CE:98:PRO:HB3	2.15	0.47
17:CQ:28:PHE:CE2	17:CQ:39:LYS:HG3	2.49	0.47
22:DA:135:U:H2'	22:DA:136:G:C8	2.49	0.47
22:DA:216:A:C8	22:DA:432:A:C6	3.02	0.47
22:DA:301:G:C5	22:DA:317:G:C6	3.02	0.47
22:DA:309:A:H4'	42:DU:16:GLY:HA2	1.97	0.47
22:DA:389:G:C8	22:DA:2413:G:H4'	2.48	0.47
22:DA:548:G:H4'	22:DA:549:G:C2	2.50	0.47
22:DA:597:G:C2	22:DA:661:A:C2	3.03	0.47
22:DA:1254:A:C6	26:DE:77:ILE:HD12	2.49	0.47
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.14	0.47
22:DA:1469:A:N1	22:DA:1470:A:C6	2.82	0.47
22:DA:2061:G:H2'	22:DA:2501:C:O2'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2084:C:C4	22:DA:2085:U:C4	3.02	0.47
22:DA:2109:U:H1'	22:DA:2181:U:O2	2.15	0.47
22:DA:2280:G:O2'	22:DA:2388:A:N1	2.42	0.47
34:DM:72:PRO:HB3	34:DM:92:TRP:CZ3	2.49	0.47
38:DQ:50:ARG:NH2	39:DR:74:ILE:HG13	2.29	0.47
40:DS:84:ARG:HB2	40:DS:96:ILE:CG1	2.44	0.47
42:DU:7:ARG:HG3	42:DU:8:ASP:H	1.79	0.47
45:DX:71:LEU:HA	45:DX:74:ARG:HG2	1.96	0.47
49:D1:8:LYS:HG3	49:D1:24:THR:HG22	1.95	0.47
1:AA:10:A:OP2	5:AE:131:THR:OG1	2.24	0.47
1:AA:49:U:O4	1:AA:365:U:C5	2.68	0.47
1:AA:159:G:N1	1:AA:163:C:N4	2.62	0.47
1:AA:409:U:OP1	4:AD:22:LYS:O	2.33	0.47
1:AA:616:G:C2	1:AA:617:G:C8	3.03	0.47
1:AA:790:A:C6	1:AA:791:G:C6	3.03	0.47
1:AA:1167:A:N7	1:AA:1169:A:C5	2.82	0.47
1:AA:1270:G:N3	1:AA:1271:A:C8	2.82	0.47
1:AA:1419:G:C6	1:AA:1420:U:C4	3.03	0.47
6:AF:41:ASP:O	6:AF:43:GLY:N	2.47	0.47
7:AG:134:ALA:O	7:AG:137:LYS:HB3	2.14	0.47
13:AM:86:TYR:HA	13:AM:89:LEU:HD12	1.97	0.47
14:AN:46:LEU:C	14:AN:48:LEU:N	2.68	0.47
15:AO:24:SER:O	15:AO:25:THR:C	2.53	0.47
22:BA:747:U:C2	22:BA:2613:U:O4	2.67	0.47
22:BA:1007:C:C4	22:BA:1008:A:C5	3.03	0.47
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.30	0.47
22:BA:1084:A:C5	22:BA:1085:A:N6	2.82	0.47
22:BA:1379:U:H2'	22:BA:1379:U:O2	2.15	0.47
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.50	0.47
22:BA:1767:G:C2	22:BA:1768:C:C6	3.02	0.47
22:BA:2043:C:OP1	22:BA:2777:G:O2'	2.23	0.47
22:BA:2056:G:C4	22:BA:2577:A:C2	3.02	0.47
22:BA:2516:A:C2	22:BA:2569:G:C4	3.03	0.47
22:BA:2553:G:H5"	22:BA:2554:U:OP2	2.15	0.47
22:BA:2761:A:H1'	28:BG:143:GLN:NE2	2.29	0.47
22:BA:2865:U:C4	22:BA:2866:U:C4	3.02	0.47
26:BE:104:ALA:O	26:BE:105:LEU:C	2.52	0.47
26:BE:109:LEU:O	26:BE:110:SER:C	2.52	0.47
26:BE:115:GLN:OE1	26:BE:115:GLN:HA	2.12	0.47
28:BG:9:VAL:CG1	28:BG:50:LEU:HB2	2.45	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:83:ALA:HB1	30:BI:109:ILE:HD13	1.96	0.47
31:BJ:23:LYS:O	31:BJ:63:ALA:HB3	2.15	0.47
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.14	0.47
52:B4:1:MET:HB3	52:B4:34:LYS:HB3	1.97	0.47
1:CA:33:A:H2'	1:CA:34:C:H6	1.78	0.47
1:CA:50:A:H1'	1:CA:52:C:O4'	2.15	0.47
1:CA:198:G:O2'	1:CA:199:A:H5'	2.15	0.47
1:CA:340:U:C2	1:CA:350:G:N2	2.82	0.47
1:CA:1033:G:H3'	1:CA:1034:G:H5"	1.97	0.47
1:CA:1061:G:C2	1:CA:1197:A:C2	3.03	0.47
1:CA:1137:C:H1'	1:CA:1138:G:N2	2.29	0.47
1:CA:1320:C:N3	19:CS:36:ARG:NH1	2.63	0.47
1:CA:1337:G:C5'	1:CA:1338:G:OP1	2.62	0.47
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.15	0.47
1:CA:1492:A:H3'	1:CA:1493:A:C8	2.50	0.47
2:CB:33:GLY:HA2	2:CB:40:ILE:H	1.79	0.47
5:CE:122:ASN:CG	5:CE:123:VAL:H	2.18	0.47
6:CF:16:GLU:C	6:CF:18:VAL:H	2.17	0.47
12:CL:40:THR:HG22	12:CL:41:THR:N	2.30	0.47
21:CU:19:PHE:HA	21:CU:22:SER:HB3	1.96	0.47
22:DA:195:A:C5	22:DA:198:C:C5	3.03	0.47
22:DA:404:A:H1'	22:DA:405:U:OP2	2.15	0.47
22:DA:1468:U:H2'	22:DA:1522:A:N6	2.30	0.47
22:DA:1652:A:OP1	35:DN:8:ARG:NH2	2.43	0.47
22:DA:2013:A:N1	22:DA:2014:A:N3	2.63	0.47
22:DA:2033:A:P	57:DA:3476:HOH:O	2.73	0.47
22:DA:2131:U:H4'	22:DA:2133:G:C1'	2.45	0.47
22:DA:2131:U:O4'	22:DA:2133:G:H1'	2.15	0.47
22:DA:2214:C:C2	22:DA:2215:C:C6	3.03	0.47
39:DR:29:THR:O	39:DR:29:THR:CG2	2.63	0.47
39:DR:66:HIS:CD2	39:DR:94:THR:CG2	2.97	0.47
45:DX:71:LEU:HB2	45:DX:76:GLU:HB2	1.95	0.47
1:AA:19:A:C2	1:AA:917:G:C2	3.03	0.47
1:AA:125:U:C2'	1:AA:126:G:H5'	2.45	0.47
1:AA:127:G:N2	1:AA:235:C:C2	2.83	0.47
1:AA:251:G:H4'	1:AA:252:U:O5'	2.15	0.47
1:AA:270:A:H2'	1:AA:271:C:O4'	2.15	0.47
1:AA:318:G:C2	1:AA:336:A:C2	3.03	0.47
1:AA:390:U:H2'	1:AA:391:G:H8	1.79	0.47
1:AA:858:G:C2'	1:AA:859:G:H5'	2.44	0.47
1:AA:1151:A:O2'	1:AA:1152:A:P	2.73	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1157:A:C5	1:AA:1180:A:C6	3.03	0.47
1:AA:1314:C:H41	19:AS:4:SER:HA	1.80	0.47
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.49	0.47
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.29	0.47
2:AB:128:LYS:O	2:AB:129:LEU:C	2.52	0.47
2:AB:128:LYS:O	2:AB:129:LEU:O	2.33	0.47
3:AC:8:ASN:C	3:AC:8:ASN:OD1	2.53	0.47
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.45	0.47
3:AC:181:ASP:OD2	3:AC:204:LYS:HB2	2.13	0.47
4:AD:35:GLU:O	4:AD:38:PRO:HD3	2.15	0.47
6:AF:46:GLN:HB2	6:AF:56:LYS:HE2	1.96	0.47
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.28	0.47
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.96	0.47
21:AU:25:LYS:CD	21:AU:26:ALA:N	2.77	0.47
22:BA:768:G:H2'	22:BA:769:U:O5'	2.15	0.47
22:BA:858:G:C4	22:BA:2268:A:C2	3.02	0.47
22:BA:975:A:N1	22:BA:990:A:C8	2.82	0.47
22:BA:988:A:P	47:BZ:12:SER:CB	3.03	0.47
22:BA:1101:U:O5'	22:BA:1101:U:H6	1.97	0.47
22:BA:1356:G:C6	22:BA:1357:C:C4	3.02	0.47
22:BA:1673:G:C2'	22:BA:1674:G:H5'	2.44	0.47
22:BA:1846:G:N1	22:BA:1847:A:C2	2.82	0.47
22:BA:1919:A:C2	22:BA:1920:C:O4'	2.68	0.47
22:BA:2305:U:O2'	27:BF:133:ARG:CD	2.63	0.47
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.15	0.47
22:BA:2579:C:O2'	25:BD:136:ASN:HA	2.15	0.47
22:BA:2675:A:C6	22:BA:2676:C:C4	3.02	0.47
22:BA:2681:C:OP2	25:BD:114:LYS:CE	2.63	0.47
22:BA:2824:C:C4	22:BA:2825:G:C5	3.03	0.47
22:BA:2880:C:C2	22:BA:2881:U:C5	3.03	0.47
25:BD:158:GLY:O	25:BD:159:LYS:C	2.53	0.47
26:BE:12:LEU:CD1	26:BE:190:ALA:HB1	2.44	0.47
26:BE:18:THR:HA	26:BE:106:LYS:HG2	1.96	0.47
27:BF:2:ALA:O	27:BF:4:LEU:N	2.48	0.47
27:BF:43:ALA:HB1	27:BF:46:ASP:O	2.14	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
32:BK:77:ILE:N	32:BK:77:ILE:CD1	2.78	0.47
35:BN:79:LEU:HA	35:BN:83:LEU:HB2	1.95	0.47
41:BT:87:LEU:O	41:BT:89:GLU:N	2.47	0.47
45:BX:43:GLU:O	45:BX:44:LYS:C	2.52	0.47
51:B3:4:ILE:HG22	51:B3:5:LYS:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:135:C:O2	16:CP:1:MET:HB2	2.14	0.47
1:CA:158:G:C4	1:CA:159:G:C8	3.02	0.47
1:CA:280:C:H4'	1:CA:281:G:OP2	2.15	0.47
1:CA:289:G:N1	1:CA:290:C:C4	2.82	0.47
1:CA:512:U:H2'	1:CA:513:C:C6	2.50	0.47
1:CA:619:U:H3	4:CD:131:ASN:HB3	1.79	0.47
1:CA:859:G:C8	1:CA:869:G:N2	2.83	0.47
1:CA:905:U:C5	1:CA:906:A:N7	2.82	0.47
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.50	0.47
1:CA:1184:G:C4	1:CA:1185:G:C8	3.01	0.47
1:CA:1417:G:N2	1:CA:1484:C:C4	2.83	0.47
1:CA:1431:A:N6	1:CA:1432:G:O6	2.48	0.47
2:CB:72:THR:HG22	2:CB:73:LYS:N	2.29	0.47
2:CB:152:LYS:HG3	2:CB:153:ASP:N	2.30	0.47
3:CC:12:LEU:HD13	3:CC:18:TRP:CE2	2.49	0.47
3:CC:50:ALA:HB1	3:CC:76:VAL:HG22	1.97	0.47
3:CC:111:LEU:CD2	3:CC:111:LEU:N	2.77	0.47
3:CC:150:LYS:HB3	3:CC:169:ARG:HG2	1.96	0.47
4:CD:48:LEU:CD2	4:CD:53:VAL:N	2.77	0.47
4:CD:134:SER:O	4:CD:135:TYR:C	2.53	0.47
4:CD:148:LYS:O	4:CD:150:LYS:N	2.48	0.47
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.34	0.47
8:CH:30:SER:O	8:CH:34:VAL:HG23	2.14	0.47
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.29	0.47
9:CI:92:GLU:HG3	9:CI:95:ARG:NH1	2.30	0.47
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.15	0.47
17:CQ:15:ASP:N	17:CQ:17:MET:HE1	2.30	0.47
17:CQ:52:GLU:HG2	17:CQ:53:CYS:N	2.30	0.47
20:CT:62:ALA:HA	20:CT:68:HIS:N	2.30	0.47
20:CT:79:LEU:O	20:CT:82:GLN:HB2	2.15	0.47
21:CU:40:LYS:H	21:CU:41:PRO:CD	2.27	0.47
22:DA:53:A:N7	22:DA:54:G:C8	2.82	0.47
22:DA:190:A:H2'	22:DA:191:A:O4'	2.15	0.47
22:DA:207:A:C2	22:DA:208:C:H1'	2.50	0.47
22:DA:228:C:N4	22:DA:417:C:O2	2.44	0.47
22:DA:352:A:H2'	22:DA:353:C:C6	2.50	0.47
22:DA:848:C:H2'	22:DA:849:A:H8	1.79	0.47
22:DA:974:G:H1'	22:DA:975:A:C8	2.50	0.47
22:DA:1304:A:C6	22:DA:1305:C:C4	3.02	0.47
22:DA:1529:G:O6	22:DA:1543:G:C2	2.68	0.47
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2195:U:N3	22:DA:2196:C:C5	2.82	0.47
22:DA:2282:G:C2	22:DA:2425:A:N6	2.83	0.47
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.15	0.47
22:DA:2843:G:C2	22:DA:2875:C:N3	2.82	0.47
23:DB:94:A:H2'	23:DB:95:U:O4'	2.15	0.47
24:DC:160:THR:N	24:DC:195:VAL:HG13	2.30	0.47
33:DL:92:LEU:HD21	33:DL:124:GLY:HA3	1.96	0.47
33:DL:105:ILE:CG2	33:DL:107:PHE:O	2.63	0.47
33:DL:110:VAL:HG12	33:DL:131:ALA:HB1	1.97	0.47
38:DQ:47:TYR:CE2	38:DQ:51:ARG:CZ	2.98	0.47
40:DS:39:THR:HG22	40:DS:39:THR:O	2.15	0.47
41:DT:11:LEU:HG	41:DT:46:ALA:HB1	1.97	0.47
42:DU:34:VAL:O	42:DU:64:ALA:HA	2.14	0.47
42:DU:83:VAL:HG12	42:DU:84:GLY:N	2.30	0.47
43:DV:87:GLN:O	43:DV:88:HIS:HB2	2.14	0.47
45:DX:13:VAL:HG23	45:DX:13:VAL:O	2.14	0.47
1:AA:16:A:O2'	1:AA:17:U:H5'	2.15	0.47
1:AA:36:C:OP1	12:AL:120:LYS:HE3	2.15	0.47
1:AA:370:C:C2	1:AA:371:A:C8	3.03	0.47
1:AA:496:A:C2	1:AA:497:G:C6	3.03	0.47
1:AA:922:G:H1'	5:AE:24:THR:HG22	1.97	0.47
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.47
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.49	0.47
1:AA:1421:G:C2	1:AA:1422:G:C8	3.03	0.47
1:AA:1521:C:C2	1:AA:1522:U:C5	3.03	0.47
2:AB:19:GLN:HG2	2:AB:190:ASN:OD1	2.14	0.47
2:AB:24:ASN:C	2:AB:24:ASN:OD1	2.53	0.47
2:AB:128:LYS:HG3	2:AB:129:LEU:N	2.30	0.47
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	1.96	0.47
12:AL:3:THR:HG22	12:AL:5:ASN:N	2.30	0.47
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	2.14	0.47
16:AP:6:LEU:HD13	16:AP:71:VAL:HG23	1.96	0.47
20:AT:35:VAL:HG22	20:AT:50:ALA:CB	2.44	0.47
22:BA:38:A:C2	22:BA:442:G:C2	3.03	0.47
22:BA:288:U:C2	22:BA:289:G:C8	3.02	0.47
22:BA:1132:U:H4'	31:BJ:75:TYR:CE1	2.50	0.47
22:BA:2229:U:O2	45:BX:34:HIS:HE1	1.98	0.47
25:BD:84:LEU:HD22	25:BD:88:GLU:CB	2.45	0.47
30:BI:39:CYS:O	30:BI:43:ASN:HB2	2.15	0.47
32:BK:6:THR:HG22	32:BK:7:MET:N	2.30	0.47
37:BP:27:GLU:O	37:BP:27:GLU:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.44	0.47
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.50	0.47
40:BS:14:ALA:O	40:BS:15:GLN:C	2.53	0.47
42:BU:18:ASP:O	42:BU:19:LYS:C	2.52	0.47
53:B5:167:ASP:CB	53:B5:176:VAL:O	2.63	0.47
1:CA:36:C:OP1	12:CL:120:LYS:HE3	2.15	0.47
1:CA:339:C:O2	1:CA:351:G:N2	2.47	0.47
1:CA:407:U:O2	1:CA:408:A:C8	2.68	0.47
1:CA:439:U:H1'	4:CD:119:SER:O	2.14	0.47
1:CA:675:A:OP1	18:CR:74:HIS:CE1	2.67	0.47
1:CA:822:U:H2'	1:CA:823:C:H6	1.79	0.47
1:CA:1280:A:C8	10:CJ:42:LEU:HD23	2.49	0.47
5:CE:155:ALA:HB3	5:CE:156:LYS:HE3	1.97	0.47
11:CK:16:VAL:O	11:CK:17:SER:CB	2.62	0.47
11:CK:46:THR:O	11:CK:50:SER:OG	2.33	0.47
22:DA:46:G:N1	22:DA:47:C:C4	2.83	0.47
22:DA:46:G:N1	22:DA:47:C:C5	2.83	0.47
22:DA:630:G:C3'	22:DA:631:A:H5"	2.45	0.47
22:DA:806:C:O2'	22:DA:2445:G:H4'	2.15	0.47
22:DA:836:G:H2'	22:DA:837:C:C6	2.50	0.47
22:DA:1462:C:N3	22:DA:1463:C:C5	2.83	0.47
22:DA:1605:C:H2'	22:DA:1606:C:H5'	1.96	0.47
22:DA:1791:A:C8	22:DA:1792:G:C8	3.03	0.47
22:DA:2540:C:H2'	22:DA:2541:A:C8	2.50	0.47
22:DA:2596:U:C5	22:DA:2597:G:C5	3.03	0.47
22:DA:2798:U:H4'	22:DA:2799:A:H5'	1.96	0.47
23:DB:71:C:C2	23:DB:106:G:N2	2.83	0.47
41:DT:2:ILE:HA	41:DT:3:ARG:CB	2.45	0.47
46:DY:31:GLN:HG2	46:DY:37:LEU:HB2	1.97	0.47
1:AA:554:A:C5'	12:AL:26:ALA:HB1	2.44	0.47
1:AA:559:A:C8	1:AA:561:U:C5	3.03	0.47
1:AA:760:G:N7	1:AA:761:G:C8	2.83	0.47
1:AA:922:G:N1	1:AA:923:A:C2	2.83	0.47
1:AA:1118:U:C5'	9:AI:106:ARG:HG3	2.44	0.47
1:AA:1272:G:H2'	1:AA:1273:C:O4'	2.15	0.47
3:AC:203:PHE:CE1	3:AC:205:GLY:O	2.67	0.47
5:AE:108:GLY:O	5:AE:109:GLY:C	2.52	0.47
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.80	0.47
8:AH:93:PRO:HG3	8:AH:125:ILE:CD1	2.45	0.47
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	1.96	0.47
13:AM:45:ILE:CG2	13:AM:45:ILE:O	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:71:LYS:O	15:AO:75:VAL:HG13	2.14	0.47
22:BA:181:A:H2'	22:BA:182:A:C8	2.50	0.47
22:BA:410:G:N2	22:BA:2407:A:C4	2.82	0.47
22:BA:538:A:O2'	31:BJ:8:PRO:HD2	2.15	0.47
22:BA:683:U:C2	22:BA:684:G:C8	3.03	0.47
22:BA:729:G:H4'	22:BA:763:G:C5'	2.45	0.47
22:BA:876:C:H2'	22:BA:877:A:O4'	2.15	0.47
22:BA:1002:G:N2	22:BA:1003:G:H1'	2.30	0.47
22:BA:1141:U:OP2	31:BJ:65:THR:CG2	2.63	0.47
22:BA:2293:G:C4	22:BA:2294:G:C8	3.03	0.47
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.50	0.47
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.45	0.47
30:BI:33:VAL:HG21	30:BI:59:ILE:HG23	1.95	0.47
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.95	0.47
38:BQ:82:GLY:O	38:BQ:84:LYS:N	2.48	0.47
39:BR:37:GLU:HG2	39:BR:53:PHE:CD2	2.50	0.47
44:BW:49:ALA:O	44:BW:50:ASN:HB2	2.14	0.47
51:B3:25:LYS:HG2	51:B3:26:HIS:N	2.28	0.47
1:CA:1521:C:C4	1:CA:1522:U:C4	3.03	0.47
2:CB:45:LYS:HG3	2:CB:45:LYS:O	2.15	0.47
7:CG:35:LYS:HB2	7:CG:38:THR:HG22	1.97	0.47
9:CI:87:LEU:C	9:CI:89:GLU:H	2.18	0.47
14:CN:24:ARG:HG2	14:CN:27:LEU:HD12	1.97	0.47
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.15	0.47
22:DA:17:G:H4'	38:DQ:25:TYR:HE1	1.80	0.47
22:DA:137:U:H2'	22:DA:140:C:C2	2.49	0.47
22:DA:167:A:C2	22:DA:168:G:H1'	2.50	0.47
22:DA:508:A:C3'	22:DA:509:C:H5'	2.45	0.47
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.49	0.47
22:DA:607:U:H5	22:DA:619:G:C5	2.32	0.47
22:DA:669:G:N3	22:DA:669:G:C2'	2.78	0.47
22:DA:672:C:N4	22:DA:673:C:N4	2.63	0.47
22:DA:749:A:C6	22:DA:750:A:N7	2.83	0.47
22:DA:818:G:C2'	22:DA:819:A:H5"	2.44	0.47
22:DA:1050:A:C2	22:DA:2751:G:C4	3.03	0.47
22:DA:1178:C:H2'	22:DA:1179:G:N7	2.30	0.47
22:DA:1255:U:C2'	22:DA:1256:G:OP1	2.63	0.47
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.30	0.47
22:DA:1934:C:H4'	22:DA:1974:C:O3'	2.15	0.47
22:DA:2000:C:O2'	22:DA:2688:G:H5"	2.14	0.47
22:DA:2053:G:H5'	25:DD:149:ASN:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2392:A:C8	22:DA:2429:G:C2	3.03	0.47
22:DA:2408:U:H2'	22:DA:2409:G:C8	2.50	0.47
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.48	0.47
26:DE:61:ARG:HD2	26:DE:63:LYS:O	2.15	0.47
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.55	0.47
26:DE:195:GLN:O	26:DE:199:MET:HB2	2.15	0.47
32:DK:4:GLU:C	32:DK:5:GLN:HG2	2.35	0.47
32:DK:35:VAL:HG22	32:DK:69:VAL:HG12	1.96	0.47
1:AA:173:U:C6	1:AA:197:A:C2	3.03	0.47
1:AA:353:A:C2'	1:AA:354:G:OP2	2.63	0.47
1:AA:391:G:C6	1:AA:392:C:C4	3.03	0.47
1:AA:451:A:C5'	16:AP:70:ARG:NH2	2.78	0.47
1:AA:645:G:C6	1:AA:646:G:N7	2.83	0.47
1:AA:791:G:N2	1:AA:1497:G:O3'	2.45	0.47
1:AA:988:G:N2	1:AA:1217:C:O2	2.48	0.47
2:AB:58:ASN:HA	2:AB:61:ALA:HB3	1.97	0.47
2:AB:95:ARG:HG2	2:AB:95:ARG:NH1	2.29	0.47
7:AG:89:VAL:CG2	7:AG:90:GLU:N	2.77	0.47
7:AG:107:ALA:O	7:AG:110:LYS:N	2.48	0.47
11:AK:55:SER:O	11:AK:56:ARG:C	2.53	0.47
11:AK:83:GLU:HG3	11:AK:109:ASN:HB2	1.97	0.47
14:AN:11:VAL:O	14:AN:14:VAL:HG12	2.15	0.47
20:AT:5:LYS:O	20:AT:6:SER:C	2.52	0.47
22:BA:142:A:C6	22:BA:143:C:N3	2.83	0.47
22:BA:150:U:H2'	22:BA:151:C:C6	2.50	0.47
22:BA:668:A:C2'	22:BA:669:G:OP1	2.63	0.47
22:BA:996:A:N6	22:BA:1160:G:C6	2.83	0.47
22:BA:1190:G:P	33:BL:32:GLY:HA2	2.55	0.47
22:BA:1469:A:C2	22:BA:1470:A:C4	3.03	0.47
22:BA:1853:A:N6	22:BA:1889:A:C4	2.83	0.47
22:BA:1917:U:N3	22:BA:1918:A:C4	2.83	0.47
22:BA:1918:A:H4'	22:BA:1919:A:OP1	2.15	0.47
22:BA:2008:C:C2'	22:BA:2009:A:O5'	2.63	0.47
22:BA:2531:A:C6	22:BA:2532:G:C5	3.02	0.47
24:BC:222:GLY:O	24:BC:224:ALA:N	2.48	0.47
25:BD:139:SER:HA	25:BD:142:VAL:CG1	2.45	0.47
30:BI:58:VAL:CG1	30:BI:59:ILE:N	2.78	0.47
39:BR:11:GLN:O	39:BR:12:HIS:CD2	2.67	0.47
1:CA:53:A:C2	1:CA:359:G:C2	3.03	0.47
1:CA:468:A:O4'	1:CA:468:A:N3	2.48	0.47
1:CA:542:G:C4	1:CA:543:U:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:575:G:C6	1:CA:821:G:C5	3.03	0.47
1:CA:866:C:C5	1:CA:867:G:C1'	2.98	0.47
1:CA:938:A:O3'	7:CG:95:ARG:NH2	2.48	0.47
1:CA:994:A:N3	1:CA:994:A:H2'	2.30	0.47
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.81	0.47
1:CA:1138:G:C2	1:CA:1140:C:C5	3.03	0.47
1:CA:1163:A:C2	1:CA:1174:G:C2	3.04	0.47
1:CA:1182:G:H4'	1:CA:1183:U:C5'	2.43	0.47
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.82	0.47
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.14	0.47
8:CH:59:LEU:CD1	8:CH:60:GLU:N	2.78	0.47
12:CL:79:VAL:O	12:CL:103:ASP:HB2	2.15	0.47
13:CM:5:ALA:HB2	13:CM:57:ARG:CG	2.45	0.47
13:CM:11:ASP:HA	13:CM:45:ILE:HD13	1.97	0.47
13:CM:19:LEU:HB3	13:CM:30:SER:OG	2.15	0.47
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.62	0.47
22:DA:208:C:H2'	22:DA:209:C:C6	2.50	0.47
22:DA:300:A:HO2'	22:DA:318:C:HO2'	1.55	0.47
22:DA:392:U:H2'	22:DA:393:C:C6	2.50	0.47
22:DA:642:U:H5'	22:DA:2349:G:O3'	2.15	0.47
22:DA:1029:A:N7	22:DA:1030:C:C2	2.83	0.47
22:DA:1060:U:O4'	22:DA:1062:G:C5'	2.61	0.47
22:DA:1154:G:P	38:DQ:58:ARG:HH11	2.38	0.47
22:DA:1364:G:C8	45:DX:2:SER:CA	2.98	0.47
22:DA:1603:A:OP2	22:DA:1604:C:OP2	2.33	0.47
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.15	0.47
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.29	0.47
22:DA:2389:G:H5"	22:DA:2390:U:H5'	1.97	0.47
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.49	0.47
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.50	0.47
25:DD:121:THR:HG21	25:DD:143:PRO:HB3	1.96	0.47
42:DU:28:VAL:HB	42:DU:34:VAL:HG12	1.97	0.47
1:AA:409:U:H2'	1:AA:410:G:C8	2.50	0.46
1:AA:671:G:H2'	1:AA:672:U:O4'	2.14	0.46
1:AA:781:A:C5	1:AA:802:A:C2	3.03	0.46
1:AA:842:U:O2	1:AA:842:U:H2'	2.15	0.46
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.76	0.46
1:AA:1329:A:H2'	1:AA:1330:U:H5'	1.97	0.46
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.49	0.46
3:AC:22:TRP:CG	3:AC:59:ARG:HG2	2.49	0.46
3:AC:190:HIS:ND1	3:AC:195:VAL:HG22	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.80	0.46
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.48	0.46
10:AJ:92:LEU:O	10:AJ:93:ALA:HB3	2.14	0.46
22:BA:281:C:H2'	22:BA:282:A:C8	2.50	0.46
22:BA:360:U:H3'	22:BA:361:G:C8	2.49	0.46
22:BA:364:C:H2'	22:BA:365:U:C6	2.50	0.46
22:BA:420:C:O2'	22:BA:421:C:H5'	2.16	0.46
22:BA:944:C:H2'	57:BA:3351:HOH:O	2.14	0.46
22:BA:1021:A:O2'	22:BA:1123:C:OP1	2.24	0.46
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.45	0.46
22:BA:1695:G:H8	24:BC:8:PRO:HB2	1.80	0.46
22:BA:1754:A:H2'	22:BA:1755:A:C8	2.50	0.46
22:BA:1915:U:O2'	22:BA:1916:A:H5'	2.15	0.46
22:BA:1935:G:C6	22:BA:1962:C:C5	3.03	0.46
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.46	0.46
22:BA:2688:G:N7	22:BA:2719:G:C6	2.83	0.46
22:BA:2856:A:C6	22:BA:2857:G:C6	3.03	0.46
27:BF:158:THR:CG2	27:BF:160:ALA:H	2.27	0.46
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	1.97	0.46
30:BI:115:ALA:O	30:BI:116:ASP:HB2	2.15	0.46
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.55	0.46
35:BN:3:HIS:O	35:BN:4:ARG:HB2	2.14	0.46
39:BR:37:GLU:HB3	39:BR:53:PHE:CE1	2.50	0.46
40:BS:55:ILE:HG23	40:BS:66:ILE:HG12	1.96	0.46
43:BV:10:LYS:HG2	43:BV:11:GLU:HG2	1.98	0.46
44:BW:34:GLY:N	44:BW:61:ALA:O	2.37	0.46
1:CA:158:G:C5	1:CA:159:G:N7	2.83	0.46
1:CA:828:U:H2'	1:CA:829:G:O5'	2.15	0.46
1:CA:923:A:H2'	1:CA:924:C:O4'	2.15	0.46
1:CA:1385:G:C6	1:CA:1386:G:C5	3.03	0.46
1:CA:1443:C:H2'	1:CA:1444:U:O4'	2.15	0.46
3:CC:19:ASN:OD1	3:CC:54:ARG:NE	2.48	0.46
4:CD:107:PHE:N	4:CD:107:PHE:CD1	2.81	0.46
14:CN:15:ALA:O	14:CN:17:ALA:N	2.48	0.46
19:CS:55:ARG:NE	19:CS:79:THR:CG2	2.78	0.46
22:DA:53:A:C8	22:DA:54:G:N7	2.82	0.46
22:DA:249:C:P	22:DA:2394:C:HO2'	2.37	0.46
22:DA:323:C:H6	22:DA:1205:A:N1	2.13	0.46
22:DA:512:G:OP1	22:DA:1234:U:O2'	2.31	0.46
22:DA:822:G:C6	22:DA:836:G:C2	3.02	0.46
22:DA:866:A:O4'	22:DA:914:G:C2	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1366:A:C2	22:DA:1367:A:H1'	2.50	0.46
22:DA:1599:U:C4	22:DA:1600:C:C4	3.03	0.46
22:DA:1665:A:C6	22:DA:1666:G:C5	3.03	0.46
22:DA:1831:G:C2	22:DA:1975:G:C4	3.03	0.46
22:DA:2058:A:C6	22:DA:2059:A:N6	2.83	0.46
22:DA:2267:A:H5"	22:DA:2268:A:C5'	2.46	0.46
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.51	0.46
22:DA:2772:C:H5'	25:DD:173:GLN:NE2	2.30	0.46
25:DD:62:LYS:HB2	25:DD:63:PRO:HD3	1.97	0.46
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.97	0.46
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.97	0.46
1:AA:204:G:H1'	1:AA:465:A:C2	2.50	0.46
1:AA:347:G:C2'	1:AA:348:G:O5'	2.63	0.46
1:AA:1253:G:N1	1:AA:1285:A:N6	2.62	0.46
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.16	0.46
2:AB:70:VAL:O	2:AB:70:VAL:HG12	2.15	0.46
2:AB:111:ILE:HD11	2:AB:151:ILE:HG12	1.96	0.46
2:AB:132:LYS:CG	2:AB:133:GLU:N	2.78	0.46
4:AD:19:LEU:HD13	4:AD:63:ARG:HB2	1.98	0.46
7:AG:87:VAL:HG12	7:AG:87:VAL:O	2.14	0.46
8:AH:113:ASP:O	8:AH:117:ARG:HB2	2.14	0.46
9:AI:51:PRO:HB3	9:AI:84:THR:HG23	1.97	0.46
15:AO:46:HIS:C	15:AO:48:LYS:H	2.18	0.46
16:AP:7:ALA:O	16:AP:9:HIS:N	2.48	0.46
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.50	0.46
19:AS:11:ILE:HG13	19:AS:38:SER:HB3	1.96	0.46
21:AU:14:VAL:HG13	21:AU:16:LEU:CG	2.45	0.46
22:BA:141:G:H3'	22:BA:142:A:C8	2.51	0.46
22:BA:255:A:H2'	22:BA:256:A:O4'	2.15	0.46
22:BA:422:A:N1	22:BA:423:A:C2	2.83	0.46
22:BA:597:G:C2	22:BA:661:A:C2	3.03	0.46
22:BA:608:A:N6	22:BA:609:A:C6	2.83	0.46
22:BA:744:U:C4	22:BA:745:G:C5	3.03	0.46
22:BA:909:A:H2'	22:BA:912:C:C5	2.50	0.46
22:BA:1195:G:O2'	22:BA:1196:C:H5'	2.15	0.46
22:BA:1248:G:OP1	26:BE:44:ARG:NH1	2.48	0.46
22:BA:1428:C:N4	22:BA:1570:A:OP2	2.37	0.46
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.16	0.46
22:BA:1794:A:C1'	22:BA:1900:A:C2	2.98	0.46
22:BA:1917:U:C4	22:BA:1918:A:C6	3.02	0.46
22:BA:2421:G:H5"	22:BA:2422:C:OP2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:115:GLN:HB3	26:BE:117:ARG:HD3	1.98	0.46
26:BE:145:ASP:HB3	26:BE:184:ASP:OD2	2.15	0.46
33:BL:29:LYS:O	33:BL:31:GLY:N	2.48	0.46
35:BN:51:LEU:O	35:BN:54:LEU:HB3	2.15	0.46
36:BO:56:LYS:O	36:BO:57:ALA:C	2.54	0.46
1:CA:37:U:O2'	1:CA:500:G:H4'	2.15	0.46
1:CA:158:G:C5	1:CA:164:G:C6	3.04	0.46
1:CA:613:C:C2	1:CA:628:G:N2	2.83	0.46
1:CA:624:C:H4'	16:CP:10:GLY:O	2.14	0.46
1:CA:644:U:H2'	1:CA:645:G:O4'	2.15	0.46
1:CA:1244:G:C6	1:CA:1245:C:C4	3.04	0.46
2:CB:71:GLY:HA3	2:CB:164:ILE:CG2	2.45	0.46
2:CB:187:VAL:HB	2:CB:191:SER:CB	2.45	0.46
3:CC:130:PHE:CD2	3:CC:157:LEU:HD23	2.49	0.46
6:CF:86:ARG:HD3	18:CR:64:TYR:CE1	2.50	0.46
7:CG:13:LEU:CD1	7:CG:14:PRO:HD2	2.46	0.46
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.45	0.46
13:CM:74:SER:O	13:CM:78:LYS:HG3	2.16	0.46
22:DA:204:A:C8	22:DA:206:U:C2	3.03	0.46
22:DA:630:G:N2	22:DA:633:A:OP2	2.38	0.46
22:DA:783:A:C8	22:DA:784:G:H4'	2.50	0.46
22:DA:789:A:N1	57:DA:3312:HOH:O	2.36	0.46
22:DA:933:A:H5'	22:DA:934:U:OP2	2.14	0.46
22:DA:1197:G:H2'	22:DA:1198:U:H6	1.78	0.46
22:DA:1364:G:N3	22:DA:1368:G:C2	2.83	0.46
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.50	0.46
22:DA:1607:C:O2	22:DA:1621:U:C6	2.68	0.46
22:DA:1766:G:C6	22:DA:1987:A:C6	3.03	0.46
22:DA:1801:A:C4	22:DA:2203:U:C5	3.03	0.46
22:DA:2087:G:C2	22:DA:2233:U:O2	2.68	0.46
22:DA:2499:C:C4	22:DA:2500:U:C4	3.04	0.46
22:DA:2505:G:OP2	55:DA:3001:VIF:H6	2.15	0.46
22:DA:2528:U:O2'	22:DA:2529:G:H3'	2.14	0.46
22:DA:2784:U:C4	22:DA:2785:C:N4	2.83	0.46
24:DC:254:GLY:O	24:DC:255:LYS:CB	2.62	0.46
27:DF:15:LYS:O	27:DF:19:GLU:HG3	2.15	0.46
31:DJ:39:LYS:NZ	31:DJ:44:TYR:CZ	2.84	0.46
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.50	0.46
32:DK:107:LEU:O	32:DK:109:SER:N	2.48	0.46
37:DP:16:ASP:OD2	37:DP:16:ASP:N	2.48	0.46
40:DS:14:ALA:HB1	40:DS:18:ARG:CZ	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:5:ILE:HG22	42:DU:6:ARG:N	2.30	0.46
42:DU:7:ARG:CG	42:DU:8:ASP:N	2.78	0.46
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	1.97	0.46
46:DY:51:ALA:O	46:DY:55:THR:OG1	2.32	0.46
1:AA:223:A:C6	1:AA:224:U:C4	3.03	0.46
1:AA:397:A:N6	1:AA:548:G:C5	2.84	0.46
1:AA:412:A:H4'	1:AA:413:G:OP1	2.14	0.46
1:AA:518:C:H5"	1:AA:519:C:C6	2.50	0.46
1:AA:585:G:OP1	17:AQ:39:LYS:HE3	2.15	0.46
1:AA:587:G:H4'	8:AH:4:GLN:HA	1.96	0.46
1:AA:737:C:C2	1:AA:738:C:C6	3.03	0.46
1:AA:824:G:H1'	8:AH:2:SER:HA	1.97	0.46
1:AA:1349:A:C2	1:AA:1374:A:C4	3.03	0.46
4:AD:167:LYS:HA	4:AD:168:PRO:HD3	1.75	0.46
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.35	0.46
11:AK:127:ARG:N	21:AU:34:ARG:NH2	2.63	0.46
14:AN:46:LEU:O	14:AN:47:LYS:C	2.52	0.46
14:AN:82:ILE:O	14:AN:86:GLU:HG3	2.16	0.46
20:AT:34:LYS:O	20:AT:37:ALA:HB3	2.15	0.46
22:BA:38:A:H2'	22:BA:39:G:O4'	2.15	0.46
22:BA:488:G:C2	22:BA:493:G:O6	2.68	0.46
22:BA:1063:G:C8	22:BA:1064:C:C6	3.03	0.46
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.50	0.46
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.80	0.46
22:BA:2055:C:H5'	22:BA:2056:G:H5"	1.95	0.46
22:BA:2182:U:H2'	22:BA:2183:A:C8	2.49	0.46
22:BA:2619:C:O2'	22:BA:2620:C:H5'	2.14	0.46
22:BA:2697:G:C6	22:BA:2711:A:N1	2.84	0.46
24:BC:209:GLY:O	24:BC:212:ARG:HB2	2.16	0.46
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.68	0.46
27:BF:36:LEU:HD21	27:BF:99:PHE:CE1	2.50	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
29:BH:80:ILE:HG21	29:BH:94:ILE:CG1	2.45	0.46
29:BH:132:PHE:CD2	29:BH:142:VAL:CG2	2.99	0.46
31:BJ:23:LYS:CE	31:BJ:142:ILE:OXT	2.63	0.46
34:BM:7:THR:OG1	34:BM:9:PHE:O	2.25	0.46
35:BN:66:ALA:O	35:BN:69:ARG:O	2.33	0.46
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.97	0.46
48:B0:10:ARG:HB2	48:B0:13:ARG:HH21	1.80	0.46
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.56	0.46
51:B3:31:HIS:CD2	51:B3:31:HIS:C	2.88	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:48:LEU:HD12	53:B5:57:GLN:HG2	1.97	0.46
1:CA:328:C:O2	1:CA:328:C:C2'	2.64	0.46
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.45	0.46
4:CD:48:LEU:CD2	4:CD:52:GLY:C	2.84	0.46
14:CN:44:ALA:HA	14:CN:47:LYS:HG3	1.98	0.46
20:CT:33:LYS:O	20:CT:36:TYR:CD2	2.69	0.46
22:DA:235:U:C2	22:DA:236:C:C6	3.03	0.46
22:DA:600:G:C5	22:DA:601:C:C4	3.04	0.46
22:DA:699:A:H2'	22:DA:700:G:O4'	2.14	0.46
22:DA:1061:U:O2	22:DA:1061:U:H2'	2.15	0.46
22:DA:1331:G:O2'	22:DA:1332:G:H5'	2.16	0.46
22:DA:1835:G:N7	57:DA:3468:HOH:O	2.35	0.46
22:DA:2531:A:C4	22:DA:2532:G:C8	3.03	0.46
26:DE:148:ILE:HG21	26:DE:157:LEU:HD21	1.98	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
30:DI:89:GLY:HA2	30:DI:136:MET:HE3	1.96	0.46
42:DU:34:VAL:HG13	42:DU:67:VAL:HG23	1.98	0.46
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.45	0.46
1:AA:147:G:H2'	1:AA:148:G:C8	2.50	0.46
1:AA:450:G:C8	1:AA:481:G:O6	2.69	0.46
1:AA:640:A:O3'	8:AH:108:LYS:NZ	2.48	0.46
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.38	0.46
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.79	0.46
4:AD:29:ASP:C	4:AD:30:THR:O	2.47	0.46
12:AL:23:ALA:O	12:AL:24:LEU:O	2.33	0.46
16:AP:72:ALA:HA	16:AP:75:ILE:CD1	2.45	0.46
17:AQ:17:MET:HB2	17:AQ:20:SER:HB3	1.97	0.46
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.31	0.46
21:AU:25:LYS:O	21:AU:29:LEU:CB	2.63	0.46
22:BA:39:G:H2'	22:BA:40:U:C6	2.50	0.46
22:BA:991:C:H5'	22:BA:1185:G:H2'	1.96	0.46
22:BA:1171:G:C6	22:BA:1172:C:N3	2.84	0.46
22:BA:1869:G:C3'	22:BA:1870:C:H5'	2.39	0.46
22:BA:2498:C:C2'	22:BA:2499:C:H5'	2.46	0.46
22:BA:2500:U:O2	22:BA:2504:U:C4	2.68	0.46
22:BA:2821:A:OP2	25:BD:115:GLY:CA	2.64	0.46
23:BB:109:A:C6	23:BB:110:C:C4	3.03	0.46
24:BC:17:VAL:N	24:BC:204:VAL:HG22	2.31	0.46
43:BV:14:LYS:HD3	43:BV:18:ARG:NH1	2.30	0.46
46:BY:5:GLU:HG3	46:BY:56:LEU:CD1	2.45	0.46
48:B0:41:HIS:HA	48:B0:49:TYR:OH	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:128:G:C2	1:CA:234:C:C2	3.03	0.46
1:CA:670:G:N2	1:CA:737:C:O2	2.49	0.46
4:CD:54:GLN:HG2	4:CD:203:LEU:HB2	1.97	0.46
7:CG:55:GLY:O	7:CG:56:LYS:O	2.33	0.46
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.97	0.46
11:CK:29:ASN:OD1	11:CK:47:ALA:HB3	2.15	0.46
22:DA:454:A:H4'	22:DA:455:C:OP2	2.15	0.46
22:DA:750:A:H5"	22:DA:751:A:OP2	2.15	0.46
22:DA:845:A:H5'	22:DA:846:U:OP2	2.15	0.46
22:DA:874:G:C2	22:DA:904:G:C2	3.03	0.46
22:DA:972:A:N1	22:DA:973:A:N6	2.63	0.46
22:DA:1364:G:N7	45:DX:2:SER:N	2.64	0.46
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.50	0.46
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.15	0.46
22:DA:2063:C:H4'	55:DA:3001:VIF:H37	1.96	0.46
22:DA:2250:G:O5'	22:DA:2250:G:H8	1.98	0.46
22:DA:2297:A:N1	22:DA:2321:U:H5	2.11	0.46
22:DA:2516:A:O2'	22:DA:2517:C:H5'	2.16	0.46
22:DA:2862:G:N2	22:DA:2863:C:C2	2.83	0.46
23:DB:89:U:O2	23:DB:89:U:O4'	2.34	0.46
24:DC:159:GLY:H	24:DC:195:VAL:HG22	1.81	0.46
24:DC:176:LEU:O	24:DC:179:GLY:N	2.45	0.46
28:DG:45:HIS:HA	28:DG:50:LEU:HD23	1.97	0.46
30:DI:10:LYS:HB3	30:DI:56:PRO:HB2	1.96	0.46
46:DY:17:GLU:OE1	46:DY:53:VAL:HB	2.15	0.46
1:AA:605:U:O2'	1:AA:606:G:H5'	2.16	0.46
1:AA:937:A:N1	7:AG:2:PRO:HG2	2.30	0.46
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.30	0.46
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.48	0.46
2:AB:33:GLY:O	2:AB:34:ALA:CB	2.60	0.46
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.62	0.46
2:AB:94:HIS:O	2:AB:95:ARG:C	2.53	0.46
4:AD:91:LEU:HD21	4:AD:195:ILE:CD1	2.46	0.46
4:AD:98:LEU:O	4:AD:99:ASP:C	2.53	0.46
14:AN:72:GLY:O	14:AN:80:SER:HA	2.15	0.46
14:AN:93:ILE:HG21	14:AN:96:LEU:HD22	1.98	0.46
22:BA:700:G:C6	22:BA:733:G:C2	3.03	0.46
22:BA:747:U:C6	22:BA:2613:U:C5	3.03	0.46
22:BA:796:C:H2'	22:BA:797:G:C8	2.51	0.46
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.50	0.46
22:BA:1575:C:H2'	22:BA:1576:U:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.80	0.46
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.97	0.46
24:BC:143:ASN:OD1	24:BC:143:ASN:O	2.34	0.46
24:BC:222:GLY:HA2	24:BC:225:MET:CE	2.43	0.46
27:BF:132:VAL:HG22	27:BF:152:LEU:HB3	1.98	0.46
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.16	0.46
29:BH:83:LYS:HG3	1:CA:55:A:N3	2.31	0.46
33:BL:30:THR:O	33:BL:32:GLY:N	2.48	0.46
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.97	0.46
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.51	0.46
40:BS:37:THR:CG2	40:BS:38:TYR:CD1	2.96	0.46
42:BU:49:VAL:O	42:BU:49:VAL:HG13	2.15	0.46
1:CA:8:A:O4'	5:CE:107:ALA:C	2.54	0.46
1:CA:136:C:H2'	1:CA:137:U:C6	2.50	0.46
1:CA:354:G:C2	1:CA:355:C:C6	3.03	0.46
1:CA:373:A:O2'	1:CA:374:A:H5'	2.15	0.46
1:CA:496:A:C2	1:CA:497:G:C5	3.03	0.46
1:CA:841:C:H2'	1:CA:843:U:O4'	2.15	0.46
1:CA:1521:C:N3	1:CA:1522:U:C5	2.83	0.46
2:CB:64:LYS:HD3	2:CB:64:LYS:C	2.36	0.46
8:CH:43:GLU:OE1	8:CH:112:THR:HG21	2.15	0.46
18:CR:33:ILE:O	18:CR:33:ILE:HG12	2.14	0.46
20:CT:37:ALA:O	20:CT:40:GLU:HB3	2.15	0.46
22:DA:181:A:H1'	22:DA:435:C:O4'	2.15	0.46
22:DA:185:G:N1	22:DA:212:G:C2	2.84	0.46
22:DA:205:G:O2'	22:DA:206:U:P	2.73	0.46
22:DA:627:A:C6	22:DA:637:A:C8	3.03	0.46
22:DA:909:A:C6	22:DA:912:C:C2	3.03	0.46
22:DA:1662:U:O2'	22:DA:2687:U:H5"	2.16	0.46
22:DA:1767:G:C2	22:DA:1986:C:C2	3.04	0.46
22:DA:1802:A:C6	22:DA:1803:A:C6	3.04	0.46
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.16	0.46
22:DA:2204:G:C2	22:DA:2205:A:C8	3.03	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
34:DM:2:LEU:O	34:DM:3:GLN:CB	2.63	0.46
39:DR:102:SER:O	39:DR:103:ALA:O	2.34	0.46
43:DV:51:GLN:HA	43:DV:56:PHE:CB	2.46	0.46
1:AA:207:C:H2'	1:AA:208:U:C2	2.49	0.46
1:AA:357:G:C2	1:AA:358:U:C5	3.04	0.46
1:AA:1099:G:C5	1:AA:1100:C:C5	3.03	0.46
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:22:TYR:N	2:AB:22:TYR:CD1	2.84	0.46
2:AB:69:PHE:N	2:AB:90:PHE:O	2.40	0.46
5:AE:151:GLU:C	5:AE:153:VAL:H	2.19	0.46
6:AF:49:TYR:CE2	6:AF:51:ILE:HG22	2.50	0.46
8:AH:49:PHE:CD1	8:AH:49:PHE:C	2.89	0.46
9:AI:11:ARG:HB2	9:AI:15:SER:O	2.15	0.46
9:AI:86:ALA:C	9:AI:88:MET:N	2.69	0.46
22:BA:280:U:H2'	22:BA:281:C:O4'	2.15	0.46
22:BA:340:A:H2'	22:BA:341:C:C5'	2.46	0.46
22:BA:910:A:C6	22:BA:911:A:C6	3.04	0.46
22:BA:988:A:C2'	22:BA:989:G:O5'	2.63	0.46
22:BA:1300:G:H4'	22:BA:1301:A:H5'	1.97	0.46
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.31	0.46
22:BA:1806:C:H2'	22:BA:1807:G:O5'	2.15	0.46
22:BA:2499:C:C4	22:BA:2500:U:C4	3.04	0.46
22:BA:2515:C:N3	22:BA:2570:G:C6	2.84	0.46
22:BA:2516:A:C6	22:BA:2517:C:C4	3.03	0.46
55:BA:3001:VIF:H6	55:BA:3001:VIF:H7	1.58	0.46
25:BD:163:GLY:O	25:BD:164:GLN:C	2.53	0.46
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.16	0.46
27:BF:105:THR:CG2	27:BF:106:ILE:HG23	2.45	0.46
28:BG:11:VAL:O	28:BG:11:VAL:HG23	2.16	0.46
36:BO:64:TYR:HB3	36:BO:67:ASN:ND2	2.30	0.46
40:BS:95:ARG:NE	40:BS:97:LEU:HD22	2.29	0.46
1:CA:223:A:C6	1:CA:224:U:C4	3.03	0.46
1:CA:445:G:N1	1:CA:446:G:C5	2.84	0.46
1:CA:484:G:N7	1:CA:486:U:H1'	2.31	0.46
1:CA:511:C:O2	1:CA:512:U:C6	2.69	0.46
3:CC:9:GLY:HA2	3:CC:12:LEU:HG	1.97	0.46
4:CD:9:LEU:O	4:CD:10:LYS:C	2.54	0.46
9:CI:10:GLY:HA2	9:CI:81:HIS:ND1	2.31	0.46
9:CI:26:GLY:H	9:CI:59:GLU:HA	1.80	0.46
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.16	0.46
10:CJ:65:TYR:HB3	14:CN:96:LEU:CD1	2.44	0.46
22:DA:7:G:H2'	22:DA:8:C:O4'	2.15	0.46
22:DA:364:C:H2'	22:DA:365:U:O4'	2.15	0.46
22:DA:487:C:C2	22:DA:494:G:N2	2.83	0.46
22:DA:621:A:H2'	22:DA:622:G:O4'	2.16	0.46
22:DA:657:U:C2	22:DA:658:U:C5	3.03	0.46
22:DA:673:C:OP1	26:DE:76:PRO:HG3	2.15	0.46
22:DA:1019:U:O2'	22:DA:1021:A:N7	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1027:A:C5	22:DA:1126:A:N3	2.84	0.46
22:DA:1097:U:H3'	22:DA:1098:A:O4'	2.16	0.46
22:DA:1293:C:H2'	22:DA:1294:U:O5'	2.15	0.46
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.96	0.46
22:DA:1428:C:C5	22:DA:1569:A:C5'	2.98	0.46
22:DA:1529:G:C6	22:DA:1543:G:C2	3.03	0.46
22:DA:1682:G:C2	22:DA:1757:A:C1'	2.98	0.46
22:DA:1831:G:C6	22:DA:1832:C:C4	3.03	0.46
22:DA:2113:U:C2	22:DA:2114:A:C8	3.03	0.46
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.15	0.46
24:DC:135:ILE:O	24:DC:167:ARG:NH2	2.49	0.46
27:DF:13:VAL:O	27:DF:17:MET:HG2	2.16	0.46
27:DF:58:ALA:O	27:DF:61:SER:O	2.34	0.46
33:DL:82:LEU:HD23	33:DL:82:LEU:C	2.35	0.46
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.98	0.46
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.98	0.46
39:DR:19:THR:HA	39:DR:96:VAL:O	2.16	0.46
42:DU:26:LYS:HG2	42:DU:37:GLU:HB3	1.98	0.46
48:D0:10:ARG:HG2	48:D0:11:SER:N	2.30	0.46
1:AA:235:C:H2'	1:AA:236:A:H8	1.80	0.46
1:AA:625:U:H4'	16:AP:16:PHE:CZ	2.50	0.46
1:AA:878:A:H2'	1:AA:879:C:O4'	2.16	0.46
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.51	0.46
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.30	0.46
1:AA:1204:A:P	57:AA:1780:HOH:O	2.74	0.46
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.51	0.46
2:AB:106:THR:O	2:AB:107:VAL:CG2	2.64	0.46
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.51	0.46
4:AD:122:ALA:O	4:AD:123:ILE:CG2	2.62	0.46
4:AD:168:PRO:CG	4:AD:171:LEU:HD11	2.43	0.46
5:AE:115:LEU:HG	5:AE:123:VAL:HG21	1.98	0.46
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.15	0.46
13:AM:91:HIS:HA	13:AM:109:ARG:NH2	2.30	0.46
22:BA:199:A:C8	22:BA:2433:A:N6	2.83	0.46
22:BA:226:A:C6	22:BA:227:A:C6	3.04	0.46
22:BA:475:C:N3	22:BA:481:G:C6	2.84	0.46
22:BA:481:G:C2	22:BA:507:A:C4	3.04	0.46
22:BA:1106:G:C2	22:BA:1107:G:N9	2.83	0.46
22:BA:1588:G:C2	22:BA:1589:U:C5	3.03	0.46
22:BA:1605:C:H2'	22:BA:1606:C:H5'	1.97	0.46
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1786:A:C4	22:BA:1938:A:C6	3.03	0.46
22:BA:2109:U:H2'	22:BA:2110:G:C8	2.51	0.46
25:BD:177:VAL:O	25:BD:177:VAL:HG22	2.14	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
31:BJ:77:HIS:HA	31:BJ:83:GLY:O	2.16	0.46
32:BK:14:SER:O	32:BK:52:VAL:HG22	2.16	0.46
34:BM:36:VAL:O	34:BM:36:VAL:CG1	2.63	0.46
35:BN:52:ILE:HG21	35:BN:94:TYR:CD2	2.51	0.46
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.15	0.46
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.89	0.46
1:CA:414:A:C2	1:CA:415:A:H1'	2.51	0.46
1:CA:582:C:C2	1:CA:760:G:C6	3.04	0.46
1:CA:862:C:H2'	1:CA:863:U:C6	2.50	0.46
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.29	0.46
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.50	0.46
3:CC:53:SER:O	3:CC:54:ARG:HB2	2.15	0.46
12:CL:75:GLN:O	12:CL:76:GLU:C	2.53	0.46
15:CO:88:ARG:HG3	15:CO:88:ARG:O	2.15	0.46
17:CQ:21:ILE:HB	17:CQ:48:ASP:OD1	2.16	0.46
22:DA:206:U:H2'	22:DA:207:A:H8	1.80	0.46
22:DA:749:A:C5	22:DA:750:A:C8	3.04	0.46
22:DA:961:C:C2	22:DA:2031:A:C6	3.04	0.46
22:DA:1288:G:C4	22:DA:1327:A:C2	3.04	0.46
22:DA:1502:A:C2	22:DA:1503:A:C4	3.03	0.46
22:DA:1649:G:C6	22:DA:2009:A:N6	2.84	0.46
22:DA:1753:G:C2	22:DA:1756:G:C2	3.04	0.46
22:DA:2125:G:C5'	22:DA:2126:A:OP2	2.62	0.46
22:DA:2377:A:O2'	22:DA:2378:A:H5'	2.15	0.46
22:DA:2603:G:C6	22:DA:2604:U:C4	3.03	0.46
22:DA:2718:G:C6	22:DA:2719:G:C4	3.04	0.46
22:DA:2854:G:C2	22:DA:2864:G:C2	3.04	0.46
23:DB:49:C:OP1	36:DO:101:GLY:HA3	2.16	0.46
23:DB:114:C:C2	23:DB:115:A:C8	3.04	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
37:DP:28:VAL:HG12	37:DP:30:VAL:HG23	1.97	0.46
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.16	0.46
42:DU:7:ARG:HD2	42:DU:8:ASP:OD2	2.16	0.46
48:D0:13:ARG:HD2	48:D0:17:ARG:NH2	2.30	0.46
50:D2:10:LEU:HD11	50:D2:14:ARG:CZ	2.46	0.46
1:AA:175:C:O2'	1:AA:176:C:H5'	2.15	0.46
1:AA:451:A:C2	1:AA:480:U:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:958:A:N3	1:AA:985:C:O2'	2.39	0.46
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.51	0.46
1:AA:1363:A:C4	1:AA:1365:G:C6	3.04	0.46
2:AB:161:LEU:HD12	2:AB:181:ILE:HG21	1.97	0.46
5:AE:101:GLU:HB3	5:AE:122:ASN:HB3	1.97	0.46
9:AI:43:THR:O	9:AI:44:ALA:HB3	2.16	0.46
10:AJ:8:ILE:HG13	10:AJ:74:VAL:HB	1.97	0.46
11:AK:87:LYS:HA	11:AK:114:THR:HG22	1.97	0.46
18:AR:62:ALA:HB3	18:AR:68:LEU:HD12	1.97	0.46
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.16	0.46
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.79	0.46
22:BA:229:C:C2'	22:BA:230:G:O5'	2.64	0.46
22:BA:584:C:N4	57:BA:3282:HOH:O	2.44	0.46
22:BA:734:A:C4	22:BA:735:A:C8	3.04	0.46
22:BA:1059:G:H5"	22:BA:1060:U:H3'	1.98	0.46
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.51	0.46
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.16	0.46
22:BA:2299:U:O2'	22:BA:2300:C:H5'	2.16	0.46
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.50	0.46
22:BA:2743:U:OP1	52:B4:34:LYS:NZ	2.33	0.46
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	1.98	0.46
38:BQ:21:ALA:HB1	38:BQ:24:TYR:CD1	2.51	0.46
38:BQ:66:ASN:CG	38:BQ:76:TYR:HB2	2.36	0.46
41:BT:87:LEU:O	41:BT:88:LYS:C	2.54	0.46
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.51	0.46
53:B5:65:LEU:HD11	53:B5:191:ARG:CA	2.45	0.46
1:CA:110:C:H2'	1:CA:111:G:O4'	2.16	0.46
1:CA:263:A:OP2	20:CT:74:ARG:NH1	2.49	0.46
1:CA:289:G:C2	1:CA:290:C:C6	3.03	0.46
1:CA:563:A:N7	1:CA:567:G:H1'	2.31	0.46
1:CA:706:A:C6	1:CA:707:U:C4	3.04	0.46
1:CA:791:G:C5	1:CA:792:A:N7	2.84	0.46
1:CA:899:C:O2'	22:DA:1832:C:OP1	2.22	0.46
1:CA:991:U:C4	1:CA:1212:U:C1'	2.99	0.46
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.16	0.46
4:CD:62:ARG:HG3	4:CD:72:PHE:CD2	2.51	0.46
6:CF:18:VAL:O	6:CF:21:MET:HB2	2.16	0.46
6:CF:93:LYS:C	6:CF:94:HIS:CG	2.90	0.46
7:CG:42:ILE:O	7:CG:42:ILE:CG2	2.64	0.46
14:CN:53:ARG:C	14:CN:55:SER:H	2.19	0.46
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.97	0.46
22:DA:445:C:H2'	22:DA:446:G:C8	2.51	0.46
22:DA:1095:A:C6	22:DA:1096:A:C2	3.04	0.46
22:DA:1285:A:C6	22:DA:1329:U:C5	3.04	0.46
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.50	0.46
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.51	0.46
24:DC:210:ALA:HA	24:DC:213:TRP:NE1	2.29	0.46
25:DD:114:LYS:HE2	25:DD:196:ALA:HA	1.96	0.46
26:DE:170:ARG:HG3	26:DE:174:GLY:C	2.35	0.46
38:DQ:47:TYR:C	38:DQ:47:TYR:CD2	2.89	0.46
38:DQ:76:TYR:CE2	38:DQ:80:ILE:HG13	2.51	0.46
39:DR:80:ARG:HB3	39:DR:81:LYS:HD3	1.98	0.46
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.79	0.46
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.84	0.46
1:AA:69:G:H2'	1:AA:69:G:N3	2.31	0.46
1:AA:392:C:C2	1:AA:393:A:C8	3.04	0.46
1:AA:581:G:C6	1:AA:758:C:C5	3.04	0.46
1:AA:645:G:C2	1:AA:646:G:C8	3.04	0.46
1:AA:949:A:N1	1:AA:950:U:C2	2.84	0.46
1:AA:1016:A:N7	1:AA:1017:U:O2	2.49	0.46
1:AA:1060:U:OP1	14:AN:85:ARG:NH2	2.47	0.46
1:AA:1379:G:C6	1:AA:1380:U:C4	3.03	0.46
1:AA:1406:U:C5	1:AA:1407:C:C4	3.03	0.46
1:AA:1525:G:OP1	11:AK:122:ARG:NH2	2.44	0.46
2:AB:33:GLY:HA3	2:AB:39:HIS:CB	2.46	0.46
3:AC:10:ILE:O	3:AC:10:ILE:HG13	2.16	0.46
3:AC:47:LEU:HB3	3:AC:50:ALA:HB3	1.97	0.46
3:AC:116:VAL:O	3:AC:119:SER:HB3	2.16	0.46
7:AG:40:GLU:HA	7:AG:43:VAL:HG23	1.97	0.46
8:AH:75:ILE:HD13	8:AH:129:VAL:HG22	1.97	0.46
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.98	0.46
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.14	0.46
10:AJ:36:VAL:O	10:AJ:36:VAL:HG12	2.16	0.46
11:AK:74:VAL:C	11:AK:76:GLU:N	2.68	0.46
11:AK:81:ASN:HB3	11:AK:106:ARG:CG	2.45	0.46
13:AM:77:ILE:HG22	13:AM:81:MET:CE	2.46	0.46
17:AQ:49:GLU:O	17:AQ:52:GLU:OE2	2.33	0.46
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.33	0.46
22:BA:773:U:O2	22:BA:778:G:O2'	2.33	0.46
22:BA:1005:C:N3	22:BA:1143:A:C2	2.84	0.46
22:BA:1696:G:C6	22:BA:1697:G:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.46	0.46
22:BA:2839:G:C6	22:BA:2840:C:C4	3.03	0.46
24:BC:97:LYS:N	24:BC:97:LYS:HD2	2.31	0.46
25:BD:5:VAL:HG21	25:BD:80:TRP:CD2	2.51	0.46
25:BD:68:PHE:CE1	25:BD:75:ALA:HA	2.51	0.46
30:BI:102:SER:HB3	30:BI:105:GLN:NE2	2.31	0.46
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.16	0.46
36:BO:7:ARG:HD2	36:BO:97:PHE:CE2	2.51	0.46
45:BX:11:ARG:HB2	45:BX:12:PRO:HD2	1.98	0.46
53:B5:24:ASP:HB2	53:B5:185:LYS:O	2.15	0.46
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.50	0.46
53:B5:84:ILE:O	53:B5:84:ILE:HG22	2.16	0.46
1:CA:35:G:C2	1:CA:550:G:C2	3.04	0.46
4:CD:62:ARG:CG	4:CD:72:PHE:CD2	2.99	0.46
5:CE:38:VAL:CG1	5:CE:117:VAL:HG21	2.46	0.46
15:CO:45:GLU:HG2	15:CO:46:HIS:N	2.31	0.46
22:DA:33:C:O2	22:DA:447:A:N6	2.49	0.46
22:DA:532:A:H2'	38:DQ:28:ARG:NH1	2.31	0.46
22:DA:589:U:H2'	22:DA:590:A:C8	2.51	0.46
22:DA:777:G:N3	22:DA:778:G:C8	2.84	0.46
22:DA:1269:A:C6	22:DA:1270:C:N4	2.83	0.46
22:DA:1351:C:O3'	22:DA:1571:A:O2'	2.30	0.46
22:DA:2004:G:C4	22:DA:2005:A:C8	3.04	0.46
22:DA:2563:U:C2	22:DA:2566:A:N7	2.84	0.46
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.16	0.46
22:DA:2834:G:H2'	22:DA:2879:A:H61	1.80	0.46
24:DC:53:HIS:O	24:DC:217:ARG:N	2.35	0.46
26:DE:29:HIS:HA	26:DE:32:VAL:HG23	1.98	0.46
33:DL:94:THR:O	33:DL:98:ALA:N	2.48	0.46
42:DU:82:ARG:O	42:DU:97:LYS:HG2	2.16	0.46
45:DX:69:ALA:O	45:DX:72:ARG:HB3	2.16	0.46
1:AA:29:U:C2'	1:AA:30:U:H5'	2.46	0.46
1:AA:41:G:H2'	1:AA:42:G:H8	1.81	0.46
1:AA:89:U:O2'	1:AA:90:C:H5'	2.16	0.46
1:AA:181:A:N6	1:AA:195:A:C8	2.84	0.46
1:AA:213:G:N7	1:AA:214:C:C4	2.84	0.46
1:AA:522:C:N4	1:AA:523:A:C6	2.84	0.46
1:AA:532:A:N7	3:AC:193:TYR:HB3	2.31	0.46
1:AA:557:G:C6	1:AA:558:G:C6	3.04	0.46
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.16	0.46
1:AA:1152:A:OP1	10:AJ:15:HIS:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1160:G:O6	1:AA:1181:G:C6	2.69	0.46
1:AA:1302:C:C5	13:AM:17:ILE:HD13	2.51	0.46
1:AA:1387:G:H2'	1:AA:1388:C:H6	1.81	0.46
8:AH:99:LEU:HD23	8:AH:99:LEU:N	2.31	0.46
15:AO:63:ARG:HG3	15:AO:67:LEU:HD12	1.97	0.46
22:BA:253:C:OP2	51:B3:5:LYS:CE	2.61	0.46
22:BA:1139:G:N2	22:BA:1140:C:C2	2.84	0.46
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.32	0.46
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.16	0.46
22:BA:1422:G:C5	22:BA:1423:G:N7	2.84	0.46
22:BA:1722:A:C2	22:BA:1739:A:H1'	2.51	0.46
22:BA:2181:U:H2'	22:BA:2182:U:O4'	2.16	0.46
22:BA:2232:C:C4	22:BA:2233:U:C4	3.04	0.46
25:BD:104:VAL:HG23	25:BD:177:VAL:HG11	1.97	0.46
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.46
30:BI:65:ARG:HG3	30:BI:66:SER:N	2.30	0.46
32:BK:19:VAL:HG21	32:BK:84:CYS:SG	2.55	0.46
41:BT:17:SER:O	41:BT:18:GLU:C	2.54	0.46
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.45	0.46
49:B1:48:ILE:N	49:B1:48:ILE:HD12	2.32	0.46
50:B2:3:ARG:O	50:B2:6:GLN:NE2	2.43	0.46
1:CA:137:U:H1'	1:CA:227:G:N2	2.30	0.46
1:CA:158:G:C6	1:CA:164:G:C6	3.04	0.46
1:CA:457:G:N2	1:CA:476:U:C2	2.84	0.46
1:CA:485:U:O2	1:CA:485:U:O4'	2.32	0.46
1:CA:545:C:O2'	1:CA:549:C:H5"	2.16	0.46
1:CA:570:G:N3	1:CA:571:U:C5	2.84	0.46
1:CA:623:C:C4	1:CA:624:C:C5	3.03	0.46
1:CA:853:C:C4	1:CA:854:U:C5	3.04	0.46
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.16	0.46
1:CA:1151:A:C2	1:CA:1152:A:C5	3.04	0.46
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.62	0.46
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.16	0.46
1:CA:1491:G:C6	1:CA:1492:A:C6	3.03	0.46
2:CB:15:HIS:ND1	2:CB:15:HIS:O	2.49	0.46
2:CB:141:LEU:O	2:CB:144:LEU:N	2.48	0.46
4:CD:29:ASP:C	4:CD:31:LYS:N	2.70	0.46
7:CG:116:MET:O	7:CG:120:LEU:HB2	2.16	0.46
8:CH:49:PHE:C	8:CH:49:PHE:CD1	2.87	0.46
8:CH:95:VAL:HG21	8:CH:128:TYR:HB3	1.98	0.46
11:CK:58:SER:O	11:CK:91:PRO:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:79:ARG:O	13:CM:83:LEU:HD23	2.16	0.46
22:DA:86:G:C2	22:DA:87:U:C5	3.04	0.46
22:DA:184:C:H2'	22:DA:185:G:C8	2.50	0.46
22:DA:279:A:N6	22:DA:361:G:C2'	2.79	0.46
22:DA:310:A:C6	22:DA:330:A:C6	3.03	0.46
22:DA:734:A:N7	22:DA:735:A:N7	2.63	0.46
22:DA:1345:C:H5'	22:DA:1396:U:C5	2.51	0.46
22:DA:1437:C:N4	22:DA:1438:U:O4	2.49	0.46
22:DA:1829:A:O2'	24:DC:15:HIS:CD2	2.69	0.46
22:DA:2516:A:C6	22:DA:2517:C:N4	2.84	0.46
22:DA:2585:U:O2'	22:DA:2586:U:C5'	2.64	0.46
22:DA:2824:C:N4	22:DA:2825:G:C5	2.84	0.46
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.31	0.46
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	1.98	0.46
26:DE:171:ASP:CG	26:DE:172:ALA:N	2.69	0.46
30:DI:61:VAL:HG22	30:DI:67:PHE:HB3	1.98	0.46
31:DJ:74:TYR:CD1	31:DJ:92:MET:HG3	2.50	0.46
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.15	0.46
33:DL:23:ILE:HD12	39:DR:84:ARG:NE	2.31	0.46
36:DO:98:GLN:O	36:DO:100:HIS:N	2.47	0.46
43:DV:7:GLU:HB2	43:DV:41:GLU:OE2	2.16	0.46
48:D0:13:ARG:HG2	48:D0:17:ARG:NE	2.31	0.46
49:D1:15:ALA:C	49:D1:17:THR:H	2.19	0.46
1:AA:83:C:OP1	1:AA:83:C:H4'	2.16	0.45
1:AA:174:A:C6	1:AA:175:C:C4	3.04	0.45
1:AA:451:A:C5'	16:AP:70:ARG:HH22	2.29	0.45
1:AA:495:A:C2	1:AA:496:A:C6	3.05	0.45
1:AA:866:C:H2'	1:AA:867:G:O4'	2.16	0.45
1:AA:1061:G:H5"	1:AA:1062:U:OP2	2.16	0.45
1:AA:1180:A:H5"	1:AA:1181:G:OP2	2.16	0.45
1:AA:1319:A:C5	1:AA:1323:G:C4	3.05	0.45
10:AJ:10:LEU:HG	10:AJ:98:VAL:HG12	1.98	0.45
11:AK:125:LYS:O	21:AU:34:ARG:NE	2.44	0.45
13:AM:48:LEU:HD23	13:AM:52:GLN:HB2	1.98	0.45
14:AN:16:LEU:N	14:AN:16:LEU:HD23	2.31	0.45
17:AQ:21:ILE:HB	17:AQ:48:ASP:OD2	2.16	0.45
20:AT:54:MET:O	20:AT:57:ILE:HG22	2.17	0.45
22:BA:184:C:H2'	22:BA:185:G:C8	2.50	0.45
22:BA:288:U:N3	22:BA:289:G:N7	2.65	0.45
22:BA:847:U:C2'	22:BA:848:C:H5'	2.47	0.45
22:BA:852:U:H2'	22:BA:853:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:979:A:H2'	22:BA:982:C:H42	1.81	0.45
22:BA:1536:C:H4'	22:BA:1537:G:C5'	2.45	0.45
22:BA:1767:G:O2'	22:BA:1768:C:H5'	2.16	0.45
22:BA:1964:G:C2	22:BA:1967:C:C5	3.03	0.45
22:BA:2211:A:C2'	22:BA:2212:A:OP1	2.64	0.45
23:BB:14:U:O2	23:BB:107:G:H4'	2.16	0.45
23:BB:59:A:H2'	23:BB:60:C:O4'	2.16	0.45
24:BC:204:VAL:O	24:BC:205:LEU:CB	2.57	0.45
25:BD:4:LEU:HD21	25:BD:100:LEU:HD23	1.96	0.45
25:BD:101:PHE:HE2	25:BD:203:VAL:HG12	1.81	0.45
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.16	0.45
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.45
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.49	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
33:BL:19:LEU:HD22	33:BL:31:GLY:O	2.16	0.45
37:BP:23:GLY:O	37:BP:90:GLY:HA3	2.16	0.45
1:CA:137:U:O2	1:CA:227:G:C2	2.69	0.45
1:CA:485:U:O2	1:CA:485:U:C5'	2.65	0.45
1:CA:577:G:C8	1:CA:816:A:C2	3.03	0.45
1:CA:666:G:C2	1:CA:667:G:C8	3.03	0.45
1:CA:790:A:C5	1:CA:791:G:C5	3.04	0.45
1:CA:1095:U:P	57:CA:1852:HOH:O	2.73	0.45
1:CA:1150:A:H1'	1:CA:1280:A:N6	2.31	0.45
2:CB:135:LEU:C	2:CB:137:ARG:H	2.19	0.45
3:CC:153:VAL:CG2	3:CC:157:LEU:HD21	2.46	0.45
3:CC:186:THR:HG22	3:CC:187:SER:N	2.31	0.45
10:CJ:28:THR:HG22	10:CJ:28:THR:O	2.16	0.45
12:CL:88:LYS:HG3	12:CL:88:LYS:O	2.16	0.45
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.14	0.45
14:CN:10:GLU:O	14:CN:11:VAL:C	2.54	0.45
17:CQ:70:THR:HG22	17:CQ:71:LYS:H	1.82	0.45
22:DA:188:G:O6	22:DA:189:G:C2	2.69	0.45
22:DA:219:A:N6	22:DA:220:G:N1	2.63	0.45
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.45	0.45
22:DA:627:A:OP1	33:DL:78:ARG:NH1	2.44	0.45
22:DA:751:A:C6	22:DA:789:A:C6	3.04	0.45
22:DA:871:U:C2	22:DA:907:G:C6	3.04	0.45
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.31	0.45
22:DA:1679:A:N6	57:DA:3439:HOH:O	2.49	0.45
22:DA:1944:U:C2	22:DA:1955:U:O4'	2.70	0.45
22:DA:1953:A:N1	22:DA:2550:G:H5'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2100:G:C6	22:DA:2190:G:C5	3.05	0.45
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.49	0.45
22:DA:2466:C:OP1	52:D4:4:ARG:CB	2.64	0.45
22:DA:2468:A:N3	22:DA:2481:G:C2	2.84	0.45
22:DA:2506:U:O2	22:DA:2506:U:C2'	2.64	0.45
22:DA:2615:U:O2	22:DA:2615:U:H2'	2.16	0.45
22:DA:2765:A:H3'	22:DA:2765:A:N3	2.32	0.45
24:DC:66:ASP:OD2	24:DC:102:ARG:HD3	2.15	0.45
28:DG:94:TYR:CD2	28:DG:107:LEU:HA	2.50	0.45
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.30	0.45
33:DL:77:ILE:HD13	33:DL:108:ALA:HB1	1.98	0.45
41:DT:69:ARG:HA	41:DT:74:ILE:HG22	1.98	0.45
45:DX:39:TRP:HB2	45:DX:46:PHE:CE2	2.51	0.45
50:D2:31:LEU:HD21	50:D2:43:THR:CG2	2.46	0.45
1:AA:194:C:O2'	1:AA:195:A:H5'	2.16	0.45
1:AA:900:A:C6	1:AA:901:A:N1	2.85	0.45
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.46	0.45
4:AD:190:ASP:O	4:AD:191:LEU:HG	2.16	0.45
5:AE:24:THR:HA	5:AE:29:ARG:HA	1.98	0.45
5:AE:84:PRO:HB3	5:AE:97:GLN:HG2	1.98	0.45
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.46	0.45
9:AI:39:PHE:HA	9:AI:42:GLU:OE1	2.16	0.45
11:AK:19:GLY:O	11:AK:82:LEU:HA	2.17	0.45
14:AN:36:ALA:HB2	14:AN:41:ARG:HE	1.81	0.45
14:AN:75:ARG:O	14:AN:76:LYS:C	2.55	0.45
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	1.97	0.45
20:AT:71:LYS:HD2	20:AT:74:ARG:HH21	1.82	0.45
22:BA:272:A:H2'	22:BA:273:G:O4'	2.16	0.45
22:BA:309:A:O3'	42:BU:16:GLY:HA2	2.17	0.45
22:BA:545:U:H1'	22:BA:548:G:OP2	2.16	0.45
22:BA:842:U:N3	22:BA:843:G:C8	2.84	0.45
22:BA:848:C:H2'	22:BA:849:A:H8	1.81	0.45
22:BA:1069:A:N1	22:BA:1073:A:N6	2.64	0.45
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.51	0.45
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.69	0.45
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.64	0.45
22:BA:1406:U:H2'	22:BA:1407:G:H8	1.80	0.45
22:BA:1482:G:H1'	22:BA:1509:A:H61	1.82	0.45
22:BA:1489:C:C2	22:BA:1501:G:C2	3.04	0.45
22:BA:1676:A:H2'	22:BA:1677:A:O4'	2.16	0.45
22:BA:1688:U:C4	22:BA:1698:A:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1912:A:N1	22:BA:1919:A:N9	2.64	0.45
22:BA:2061:G:H5"	22:BA:2503:A:C2	2.51	0.45
22:BA:2170:A:C8	22:BA:2170:A:OP2	2.68	0.45
22:BA:2446:G:C2	22:BA:2501:C:C5	3.04	0.45
22:BA:2480:C:H2'	22:BA:2481:G:H5'	1.97	0.45
22:BA:2551:C:H2'	22:BA:2552:U:C6	2.51	0.45
22:BA:2715:C:C4	22:BA:2716:C:C5	3.05	0.45
23:BB:24:G:N2	23:BB:28:C:O2	2.49	0.45
24:BC:197:ASN:C	24:BC:197:ASN:OD1	2.54	0.45
25:BD:186:LEU:HD13	37:BP:8:LEU:HD11	1.98	0.45
26:BE:25:GLU:O	26:BE:28:VAL:N	2.49	0.45
26:BE:48:THR:C	26:BE:50:ALA:H	2.19	0.45
27:BF:106:ILE:C	27:BF:109:PRO:HD2	2.37	0.45
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.45
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.97	0.45
53:B5:75:VAL:HA	53:B5:120:VAL:O	2.16	0.45
1:CA:413:G:O2'	1:CA:428:G:N2	2.49	0.45
1:CA:542:G:N3	1:CA:543:U:C5	2.83	0.45
1:CA:682:G:N2	1:CA:709:U:C2	2.84	0.45
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.16	0.45
2:CB:140:GLU:O	2:CB:141:LEU:C	2.54	0.45
5:CE:149:SER:HB2	5:CE:152:MET:HG2	1.97	0.45
8:CH:24:ALA:O	8:CH:25:VAL:HG23	2.17	0.45
13:CM:34:LEU:N	13:CM:34:LEU:HD23	2.31	0.45
16:CP:12:LYS:O	16:CP:13:LYS:HB2	2.16	0.45
17:CQ:8:LEU:HD23	17:CQ:25:ILE:HD12	1.98	0.45
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.90	0.45
22:DA:729:G:C6	24:DC:207:LYS:HB2	2.51	0.45
22:DA:966:G:H4'	22:DA:2272:U:O2	2.15	0.45
22:DA:969:G:H2'	22:DA:970:U:C6	2.51	0.45
22:DA:1225:G:C6	22:DA:1226:A:N6	2.84	0.45
22:DA:1333:G:C2	22:DA:1334:G:C8	3.04	0.45
22:DA:1731:G:C5	22:DA:1733:G:C8	3.04	0.45
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.15	0.45
22:DA:1855:U:C4	22:DA:1856:U:C4	3.05	0.45
22:DA:2209:G:N2	22:DA:2216:G:C2	2.85	0.45
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.16	0.45
26:DE:149:ILE:CG1	26:DE:188:MET:HE3	2.47	0.45
27:DF:9:LYS:O	27:DF:13:VAL:CG2	2.64	0.45
28:DG:61:GLY:O	28:DG:64:GLN:HB2	2.16	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.45
30:DI:45:LYS:HA	30:DI:48:SER:HB3	1.99	0.45
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	1.99	0.45
31:DJ:88:THR:O	31:DJ:92:MET:N	2.45	0.45
1:AA:389:A:H2'	1:AA:389:A:N3	2.31	0.45
1:AA:828:U:H2'	1:AA:829:G:O5'	2.16	0.45
1:AA:911:U:OP2	12:AL:94:ARG:NH1	2.49	0.45
1:AA:1066:C:O2	1:AA:1066:C:C2'	2.64	0.45
1:AA:1216:A:H2'	1:AA:1217:C:C6	2.51	0.45
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.52	0.45
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.32	0.45
7:AG:116:MET:O	7:AG:120:LEU:HB2	2.17	0.45
7:AG:146:GLU:HA	7:AG:149:LYS:HB3	1.99	0.45
8:AH:83:LEU:C	8:AH:83:LEU:CD2	2.85	0.45
8:AH:105:SER:HB2	8:AH:126:ILE:HD11	1.99	0.45
12:AL:88:LYS:O	12:AL:89:ASP:HB2	2.16	0.45
13:AM:3:ARG:HA	13:AM:9:ILE:HG12	1.98	0.45
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.99	0.45
22:BA:49:A:H5"	22:BA:51:G:O4'	2.17	0.45
22:BA:684:G:C6	22:BA:774:G:C4	3.03	0.45
22:BA:974:G:C4	22:BA:1186:G:C2	3.04	0.45
22:BA:1344:U:O2'	22:BA:1345:C:P	2.75	0.45
22:BA:1680:U:O2'	22:BA:1681:G:H5'	2.16	0.45
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.31	0.45
22:BA:1826:G:C5	22:BA:1827:U:C5	3.04	0.45
22:BA:2013:A:H2'	22:BA:2013:A:N3	2.32	0.45
22:BA:2192:U:N3	22:BA:2193:G:N7	2.64	0.45
22:BA:2250:G:H8	22:BA:2250:G:O5'	2.00	0.45
22:BA:2298:A:C5	22:BA:2321:U:C5	3.03	0.45
22:BA:2507:C:OP2	57:BA:3714:HOH:O	2.21	0.45
23:BB:97:C:C5	23:BB:98:G:C8	3.04	0.45
33:BL:28:GLY:O	39:BR:82:HIS:CE1	2.70	0.45
35:BN:65:LEU:HD12	35:BN:65:LEU:O	2.16	0.45
44:BW:69:PHE:CE1	44:BW:80:ILE:HD11	2.51	0.45
53:B5:88:GLU:HG3	53:B5:95:VAL:HG23	1.99	0.45
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.65	0.45
1:CA:28:A:C5	1:CA:29:U:C5	3.04	0.45
1:CA:64:G:C2	1:CA:67:C:N4	2.84	0.45
1:CA:106:C:H2'	1:CA:107:G:H5'	1.98	0.45
1:CA:211:G:H21	1:CA:212:G:H1'	1.81	0.45
1:CA:407:U:C2	1:CA:408:A:N7	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:573:A:C2	1:CA:574:A:C2	3.04	0.45
1:CA:652:U:C5	1:CA:752:G:N3	2.84	0.45
1:CA:718:A:H1'	11:CK:118:HIS:HA	1.98	0.45
1:CA:913:A:H4'	1:CA:914:A:OP1	2.17	0.45
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.52	0.45
1:CA:1387:G:C4	1:CA:1388:C:C5	3.04	0.45
1:CA:1397:C:O2	1:CA:1397:C:O4'	2.32	0.45
2:CB:47:VAL:O	2:CB:50:PHE:CD2	2.70	0.45
9:CI:99:ARG:HA	9:CI:104:VAL:CG2	2.46	0.45
15:CO:18:ASP:CG	15:CO:19:ALA:O	2.54	0.45
22:DA:60:G:C4	22:DA:74:A:C2	3.04	0.45
22:DA:78:U:H2'	22:DA:79:C:O4'	2.16	0.45
22:DA:189:G:P	45:DX:26:LYS:HE2	2.56	0.45
22:DA:242:G:C5'	51:D3:64:TYR:CZ	2.99	0.45
22:DA:352:A:C5	22:DA:353:C:C4	3.04	0.45
22:DA:370:G:C6	22:DA:424:G:C5	3.03	0.45
22:DA:715:A:C6	22:DA:716:A:C5	3.04	0.45
22:DA:1045:C:H4'	22:DA:1046:A:H5'	1.98	0.45
22:DA:1452:G:C6	22:DA:2702:G:N2	2.84	0.45
22:DA:2127:G:N3	22:DA:2162:G:N7	2.64	0.45
22:DA:2418:A:H2'	22:DA:2419:U:O4'	2.16	0.45
22:DA:2576:G:O2'	22:DA:2579:C:OP2	2.20	0.45
28:DG:118:PRO:O	28:DG:119:ALA:C	2.54	0.45
37:DP:33:VAL:O	37:DP:33:VAL:HG12	2.15	0.45
39:DR:76:LYS:HB2	39:DR:85:LYS:HB2	1.97	0.45
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.15	0.45
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.52	0.45
1:AA:29:U:O2'	1:AA:30:U:H5'	2.16	0.45
1:AA:64:G:C8	1:AA:99:C:C4	3.05	0.45
1:AA:594:U:C4	1:AA:595:A:C6	3.05	0.45
1:AA:828:U:C5	1:AA:859:G:C4	3.05	0.45
1:AA:851:G:C2'	1:AA:852:G:H5'	2.47	0.45
1:AA:1350:A:C8	1:AA:1351:U:C5	3.05	0.45
1:AA:1481:U:C2'	1:AA:1482:G:H5'	2.46	0.45
2:AB:141:LEU:O	2:AB:145:GLU:N	2.46	0.45
4:AD:86:THR:HG22	4:AD:201:VAL:HG22	1.99	0.45
5:AE:34:THR:HB	5:AE:50:TYR:CE2	2.51	0.45
9:AI:39:PHE:HA	9:AI:42:GLU:CD	2.37	0.45
10:AJ:27:GLU:C	10:AJ:29:ALA:H	2.20	0.45
15:AO:70:LEU:O	15:AO:73:LYS:N	2.49	0.45
22:BA:533:G:OP1	38:BQ:24:TYR:O	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:583:G:O2'	22:BA:584:C:H5'	2.17	0.45
22:BA:611:C:H2'	22:BA:612:G:H5'	1.98	0.45
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.52	0.45
22:BA:1478:G:H1	22:BA:1513:U:H3	1.63	0.45
22:BA:1488:C:O2	22:BA:1502:A:C2	2.69	0.45
22:BA:2074:U:H1'	22:BA:2598:A:N3	2.32	0.45
22:BA:2296:U:C4'	22:BA:2297:A:OP1	2.65	0.45
22:BA:2310:C:C2	27:BF:77:PHE:CE1	3.04	0.45
22:BA:2519:U:OP1	22:BA:2519:U:H3'	2.16	0.45
22:BA:2525:G:C2	22:BA:2539:C:C2	3.04	0.45
22:BA:2838:G:C6	22:BA:2839:G:C5	3.04	0.45
32:BK:103:VAL:HB	32:BK:107:LEU:CD1	2.46	0.45
35:BN:75:ILE:O	35:BN:79:LEU:HD12	2.16	0.45
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.98	0.45
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.99	0.45
43:BV:43:ASP:OD1	43:BV:46:LYS:CG	2.65	0.45
44:BW:29:GLU:O	44:BW:66:LYS:HA	2.16	0.45
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.69	0.45
47:BZ:3:LYS:HE3	47:BZ:3:LYS:H	1.82	0.45
1:CA:268:U:H2'	1:CA:269:C:H6	1.74	0.45
1:CA:819:A:H4'	1:CA:820:U:OP2	2.17	0.45
1:CA:919:A:C6	1:CA:920:U:C5	3.04	0.45
1:CA:1232:U:H5"	9:CI:126:GLN:O	2.16	0.45
1:CA:1533:C:H4'	1:CA:1533:C:OP1	2.16	0.45
2:CB:193:PRO:O	2:CB:195:GLY:N	2.47	0.45
5:CE:50:TYR:O	5:CE:51:GLY:O	2.35	0.45
5:CE:115:LEU:HD12	5:CE:120:VAL:HG21	1.99	0.45
5:CE:150:PRO:C	5:CE:152:MET:H	2.20	0.45
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.49	0.45
11:CK:110:ILE:HG22	21:CU:17:ARG:NH1	2.29	0.45
12:CL:84:GLY:HA2	12:CL:95:TYR:HA	1.99	0.45
18:CR:28:THR:O	18:CR:31:ASN:HB2	2.15	0.45
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.80	0.45
22:DA:38:A:C2	22:DA:442:G:C6	3.04	0.45
22:DA:479:A:H1'	22:DA:481:G:H5'	1.99	0.45
22:DA:527:C:H2'	22:DA:2779:U:O2	2.16	0.45
22:DA:622:G:H2'	22:DA:623:C:C6	2.50	0.45
22:DA:675:A:C6	22:DA:676:A:N1	2.85	0.45
22:DA:914:G:H5'	22:DA:915:C:OP2	2.16	0.45
22:DA:1351:C:C2	22:DA:1381:G:C2	3.04	0.45
22:DA:1596:A:C6	22:DA:1597:A:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1663:G:O6	22:DA:1992:G:C8	2.69	0.45
22:DA:1809:A:N6	22:DA:1810:A:N1	2.65	0.45
22:DA:2144:G:N3	22:DA:2146:C:O2	2.50	0.45
22:DA:2835:A:C2	22:DA:2879:A:N7	2.85	0.45
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.16	0.45
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.15	0.45
26:DE:125:SER:OG	26:DE:126:VAL:N	2.48	0.45
27:DF:108:VAL:HG11	27:DF:176:PRO:HG2	1.99	0.45
27:DF:136:ILE:O	27:DF:136:ILE:HG22	2.16	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
33:DL:70:LYS:O	33:DL:74:THR:HG23	2.17	0.45
33:DL:132:ARG:O	33:DL:136:GLU:HG3	2.17	0.45
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.70	0.45
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	1.98	0.45
41:DT:26:LYS:HG2	41:DT:26:LYS:O	2.16	0.45
45:DX:13:VAL:HG22	45:DX:29:PHE:HB2	1.98	0.45
45:DX:25:THR:O	45:DX:25:THR:HG22	2.15	0.45
1:AA:266:G:H4'	1:AA:267:C:OP1	2.16	0.45
1:AA:275:G:H4'	17:AQ:17:MET:HB3	1.97	0.45
1:AA:570:G:C6	1:AA:873:A:C2	3.05	0.45
1:AA:675:A:OP1	18:AR:74:HIS:NE2	2.47	0.45
1:AA:723:U:H5'	1:AA:724:G:P	2.57	0.45
1:AA:737:C:H2'	1:AA:738:C:H6	1.80	0.45
1:AA:841:C:O2	1:AA:843:U:C2	2.69	0.45
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.70	0.45
3:AC:152:GLU:HA	3:AC:166:GLU:O	2.16	0.45
4:AD:105:MET:HG2	4:AD:171:LEU:HD22	1.97	0.45
5:AE:101:GLU:CB	5:AE:122:ASN:HB3	2.47	0.45
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.63	0.45
19:AS:27:ASP:OD2	19:AS:28:LYS:O	2.34	0.45
22:BA:141:G:H5"	22:BA:142:A:C5	2.51	0.45
22:BA:417:C:H2'	22:BA:418:C:C6	2.52	0.45
22:BA:747:U:N3	22:BA:2613:U:C4	2.85	0.45
22:BA:838:C:O2'	22:BA:839:U:H5'	2.17	0.45
22:BA:988:A:O5'	47:BZ:12:SER:HB2	2.17	0.45
22:BA:1299:G:H8	22:BA:1299:G:O5'	2.00	0.45
22:BA:1376:C:N4	22:BA:1377:G:N1	2.65	0.45
22:BA:1406:U:C2	22:BA:1407:G:C8	3.05	0.45
22:BA:2128:G:H5'	53:B5:36:ALA:HA	1.98	0.45
22:BA:2199:A:C1'	29:BH:28:ASN:HD21	2.27	0.45
22:BA:2259:U:C6	22:BA:2427:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2419:U:OP1	51:B3:41:LYS:HE2	2.17	0.45
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.51	0.45
23:BB:105:G:C2	23:BB:106:G:C8	3.04	0.45
25:BD:91:THR:O	25:BD:94:GLN:HB2	2.16	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
29:BH:83:LYS:HE2	1:CA:55:A:H2'	1.98	0.45
33:BL:22:GLY:O	33:BL:25:SER:OG	2.35	0.45
33:BL:120:VAL:HG22	33:BL:121:THR:N	2.31	0.45
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.46	0.45
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.32	0.45
38:BQ:36:PHE:CE1	38:BQ:40:ILE:HD12	2.51	0.45
1:CA:21:G:H2'	1:CA:22:G:C8	2.51	0.45
1:CA:145:G:C2	1:CA:146:G:C8	3.05	0.45
1:CA:451:A:C8	1:CA:452:A:C6	3.04	0.45
1:CA:1198:G:H5"	57:CA:1835:HOH:O	2.17	0.45
1:CA:1512:U:O2'	1:CA:1513:A:H5'	2.16	0.45
2:CB:50:PHE:CD1	2:CB:50:PHE:C	2.89	0.45
2:CB:72:THR:HG22	2:CB:95:ARG:NH1	2.31	0.45
3:CC:151:VAL:HG12	3:CC:200:VAL:HB	1.98	0.45
5:CE:58:ALA:O	5:CE:62:LYS:HB2	2.16	0.45
12:CL:25:GLU:HB3	12:CL:27:CYS:SG	2.57	0.45
13:CM:114:LYS:CB	13:CM:115:PRO:HD3	2.47	0.45
17:CQ:14:SER:OG	17:CQ:17:MET:HE1	2.16	0.45
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.55	0.45
22:DA:140:C:O2	22:DA:140:C:O4'	2.34	0.45
22:DA:231:A:N6	22:DA:232:G:C2	2.84	0.45
22:DA:511:U:C2'	22:DA:512:G:H5'	2.46	0.45
22:DA:538:A:C2	22:DA:556:A:C4	3.04	0.45
22:DA:681:G:C2	22:DA:682:G:C8	3.04	0.45
22:DA:864:G:C6	22:DA:865:C:N4	2.85	0.45
22:DA:1252:G:N3	38:DQ:33:ARG:HG2	2.32	0.45
22:DA:1343:G:C6	22:DA:1344:U:O4	2.69	0.45
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.82	0.45
22:DA:1806:C:C5	22:DA:1807:G:N7	2.84	0.45
23:DB:78:A:C6	23:DB:99:A:C8	3.05	0.45
24:DC:87:ARG:HB3	24:DC:87:ARG:CZ	2.47	0.45
30:DI:57:VAL:CG2	30:DI:71:THR:HB	2.46	0.45
31:DJ:7:LYS:O	31:DJ:11:VAL:HG23	2.15	0.45
32:DK:7:MET:C	32:DK:8:LEU:HD12	2.37	0.45
32:DK:13:ASN:OD1	32:DK:97:THR:N	2.45	0.45
38:DQ:65:ILE:HD11	38:DQ:92:ARG:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:27:LYS:O	40:DS:71:VAL:HG23	2.17	0.45
44:DW:21:LEU:HD11	44:DW:41:ARG:HG2	1.97	0.45
45:DX:7:VAL:HG12	45:DX:8:THR:N	2.31	0.45
1:AA:67:C:O2'	1:AA:171:A:N3	2.39	0.45
1:AA:89:U:O2'	1:AA:90:C:H5"	2.16	0.45
1:AA:102:G:N1	1:AA:103:U:C4	2.84	0.45
1:AA:115:G:H4'	1:AA:116:A:O5'	2.16	0.45
1:AA:174:A:C4	1:AA:175:C:C6	3.05	0.45
1:AA:306:A:H2'	1:AA:307:C:O4'	2.17	0.45
1:AA:417:G:C5	1:AA:418:C:C5	3.04	0.45
1:AA:711:G:H2'	1:AA:712:A:H8	1.82	0.45
1:AA:807:A:C5	1:AA:808:C:C5	3.05	0.45
1:AA:864:A:H3'	1:AA:865:A:C8	2.52	0.45
1:AA:1160:G:OP1	2:AB:132:LYS:NZ	2.42	0.45
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.51	0.45
1:AA:1242:G:N1	1:AA:1243:C:C2	2.85	0.45
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.52	0.45
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.16	0.45
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.52	0.45
2:AB:111:ILE:HG13	2:AB:151:ILE:HG12	1.98	0.45
2:AB:154:MET:O	2:AB:156:GLY:N	2.49	0.45
4:AD:78:GLU:CD	4:AD:81:ARG:NH1	2.70	0.45
4:AD:98:LEU:HD23	4:AD:118:VAL:HG11	1.99	0.45
7:AG:135:VAL:O	7:AG:139:GLU:HG2	2.16	0.45
9:AI:21:ILE:HG22	9:AI:22:LYS:N	2.32	0.45
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.79	0.45
10:AJ:56:HIS:O	10:AJ:57:VAL:O	2.35	0.45
11:AK:76:GLU:O	22:BA:2141:G:C5'	2.64	0.45
13:AM:95:LEU:CB	13:AM:96:PRO:CD	2.94	0.45
22:BA:102:U:O4	46:BY:2:LYS:HB2	2.17	0.45
22:BA:142:A:C2'	22:BA:143:C:O5'	2.65	0.45
22:BA:410:G:C2	22:BA:2407:A:C5	3.05	0.45
22:BA:613:A:C8	22:BA:616:A:N1	2.85	0.45
22:BA:713:G:C6	22:BA:714:U:C4	3.05	0.45
22:BA:846:U:C2'	22:BA:847:U:OP2	2.64	0.45
22:BA:946:C:OP2	57:BA:3347:HOH:O	2.21	0.45
22:BA:1131:G:C4	31:BJ:77:HIS:ND1	2.84	0.45
22:BA:1148:U:O2'	22:BA:1149:G:H5'	2.17	0.45
22:BA:1348:C:C5	22:BA:1349:C:C6	3.05	0.45
22:BA:1428:C:O2'	22:BA:1569:A:OP2	2.21	0.45
22:BA:1549:A:C6	22:BA:1550:C:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2259:U:C5	22:BA:2427:C:N4	2.85	0.45
22:BA:2784:U:C2	22:BA:2785:C:C5	3.04	0.45
24:BC:83:TYR:CE2	57:BC:306:HOH:O	2.69	0.45
30:BI:113:LYS:HE2	30:BI:116:ASP:OD1	2.17	0.45
33:BL:100:ILE:O	33:BL:100:ILE:HG13	2.17	0.45
34:BM:77:PRO:HD2	34:BM:80:VAL:HG21	1.99	0.45
1:CA:195:A:C6	1:CA:196:A:N1	2.84	0.45
1:CA:200:G:C2'	1:CA:201:G:H5"	2.47	0.45
1:CA:282:A:C8	1:CA:283:U:C5	3.04	0.45
1:CA:392:C:H2'	1:CA:393:A:C8	2.50	0.45
1:CA:431:A:H2'	1:CA:432:A:O4'	2.16	0.45
1:CA:597:G:H2'	1:CA:598:U:H5'	1.98	0.45
1:CA:691:G:H4'	1:CA:798:U:OP1	2.17	0.45
1:CA:891:U:C4	1:CA:906:A:C2	3.05	0.45
1:CA:938:A:C2	1:CA:1345:U:O4	2.69	0.45
1:CA:1031:C:H4'	1:CA:1032:G:C2	2.52	0.45
1:CA:1053:G:O5'	1:CA:1054:C:H5'	2.17	0.45
1:CA:1160:G:O6	1:CA:1181:G:C6	2.70	0.45
1:CA:1261:A:C6	1:CA:1275:A:C4	3.05	0.45
2:CB:17:GLY:O	2:CB:39:HIS:O	2.34	0.45
5:CE:68:ARG:O	5:CE:71:MET:HE3	2.16	0.45
5:CE:155:ALA:C	5:CE:156:LYS:HG3	2.37	0.45
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.16	0.45
22:DA:37:C:H2'	22:DA:38:A:C8	2.51	0.45
22:DA:173:A:H2'	22:DA:174:U:C6	2.51	0.45
22:DA:308:G:H2'	22:DA:309:A:O4'	2.17	0.45
22:DA:494:G:H4'	40:DS:6:LYS:HG3	1.99	0.45
22:DA:600:G:H2'	22:DA:601:C:C6	2.52	0.45
22:DA:1276:A:N1	22:DA:1295:C:C2	2.85	0.45
22:DA:1332:G:C6	22:DA:1609:A:C5	3.05	0.45
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.31	0.45
22:DA:2091:C:C3'	22:DA:2092:U:H5"	2.45	0.45
22:DA:2291:U:H2'	22:DA:2292:U:H6	1.80	0.45
22:DA:2298:A:C2	22:DA:2321:U:C5	3.05	0.45
22:DA:2728:U:O2'	22:DA:2729:G:C5'	2.65	0.45
22:DA:2814:A:C6	22:DA:2815:C:C4	3.05	0.45
24:DC:144:VAL:HB	24:DC:154:LEU:HB2	1.98	0.45
26:DE:56:GLY:O	26:DE:57:LYS:C	2.54	0.45
27:DF:28:VAL:HG22	27:DF:29:PRO:HD2	1.98	0.45
28:DG:111:HIS:ND1	28:DG:111:HIS:O	2.49	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
34:DM:66:ARG:HB2	34:DM:101:VAL:O	2.15	0.45
40:DS:17:VAL:HG12	40:DS:76:VAL:HG21	1.97	0.45
42:DU:72:ILE:HD11	42:DU:83:VAL:HG23	1.98	0.45
1:AA:15:G:C4	1:AA:16:A:C8	3.05	0.45
1:AA:34:C:H2'	1:AA:35:G:H8	1.81	0.45
1:AA:438:U:N3	1:AA:494:G:C6	2.85	0.45
1:AA:587:G:C2	1:AA:755:G:C5	3.05	0.45
1:AA:624:C:C2	1:AA:625:U:C6	3.05	0.45
1:AA:747:A:H5'	1:AA:748:G:OP2	2.16	0.45
1:AA:995:C:C2	1:AA:1046:A:O2'	2.66	0.45
3:AC:205:GLY:O	3:AC:206:GLU:CG	2.63	0.45
6:AF:1:MET:HG2	6:AF:65:GLU:HG2	1.99	0.45
6:AF:79:ARG:NE	6:AF:79:ARG:HA	2.32	0.45
7:AG:57:SER:OG	7:AG:58:GLU:N	2.49	0.45
9:AI:24:GLY:H	9:AI:61:LEU:HA	1.82	0.45
12:AL:29:GLN:HB2	12:AL:82:ILE:O	2.16	0.45
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.98	0.45
16:AP:23:ASP:OD1	16:AP:23:ASP:C	2.55	0.45
22:BA:164:C:H2'	22:BA:165:A:O4'	2.16	0.45
22:BA:877:A:N6	22:BA:899:A:C6	2.85	0.45
22:BA:962:G:N2	22:BA:2250:G:H1	2.14	0.45
22:BA:973:A:C8	22:BA:1188:U:C2	3.05	0.45
22:BA:1085:A:C5	22:BA:1086:A:C6	3.05	0.45
22:BA:1588:G:N1	22:BA:1589:U:C4	2.84	0.45
22:BA:1838:C:C4	22:BA:1899:A:C2	3.05	0.45
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.51	0.45
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.98	0.45
22:BA:2001:C:N3	22:BA:2002:G:C8	2.85	0.45
22:BA:2128:G:OP2	53:B5:37:LYS:HE3	2.16	0.45
22:BA:2171:A:O2'	22:BA:2172:U:H5'	2.17	0.45
26:BE:44:ARG:O	26:BE:45:ALA:HB2	2.16	0.45
27:BF:129:SER:OG	27:BF:155:THR:OG1	2.31	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
29:BH:95:GLY:HA3	1:CA:368:U:OP1	2.15	0.45
41:BT:2:ILE:CA	41:BT:3:ARG:HB2	2.47	0.45
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.17	0.45
49:B1:51:GLU:O	49:B1:52:ALA:HB2	2.16	0.45
52:B4:27:CYS:SG	52:B4:33:HIS:ND1	2.90	0.45
1:CA:72:A:C5	1:CA:73:C:N4	2.84	0.45
1:CA:435:A:C2	1:CA:436:C:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:607:A:C2	1:CA:608:A:C4	3.05	0.45
1:CA:968:A:C8	1:CA:1062:U:H4'	2.51	0.45
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.17	0.45
4:CD:177:LYS:O	4:CD:178:MET:HB2	2.16	0.45
11:CK:87:LYS:HA	11:CK:114:THR:HG22	1.99	0.45
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.37	0.45
22:DA:106:C:O2	22:DA:106:C:H2'	2.15	0.45
22:DA:132:G:N2	22:DA:148:U:O2	2.50	0.45
22:DA:185:G:C6	22:DA:212:G:N1	2.85	0.45
22:DA:500:G:C2	22:DA:502:A:C8	3.04	0.45
22:DA:818:G:H2'	22:DA:819:A:H5"	1.98	0.45
22:DA:993:G:C6	22:DA:1162:G:C6	3.04	0.45
22:DA:1532:A:C2	22:DA:1540:G:C6	3.05	0.45
22:DA:1814:G:C6	22:DA:1815:A:N6	2.84	0.45
22:DA:1973:G:C6	22:DA:1974:C:N4	2.84	0.45
24:DC:204:VAL:O	24:DC:206:GLY:N	2.49	0.45
26:DE:182:ALA:HB2	33:DL:3:LEU:HD22	1.99	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
30:DI:80:LEU:HD11	30:DI:133:ALA:CB	2.46	0.45
37:DP:106:LYS:HA	37:DP:109:ARG:CD	2.46	0.45
39:DR:5:PHE:O	39:DR:11:GLN:HA	2.16	0.45
51:D3:26:HIS:NE2	51:D3:48:ALA:HB2	2.32	0.45
52:D4:25:VAL:HB	52:D4:35:GLN:HG3	1.98	0.45
1:AA:201:G:H2'	1:AA:202:G:O4'	2.17	0.45
1:AA:283:U:C5	1:AA:284:C:C5	3.05	0.45
1:AA:947:G:C2	1:AA:948:C:C2	3.05	0.45
3:AC:42:TYR:OH	3:AC:90:VAL:HG21	2.16	0.45
7:AG:17:LYS:O	7:AG:17:LYS:HG2	2.16	0.45
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.17	0.45
9:AI:113:ARG:NH2	14:AN:101:TRP:CZ2	2.85	0.45
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.98	0.45
12:AL:21:VAL:HG22	12:AL:21:VAL:O	2.16	0.45
14:AN:12:LYS:O	14:AN:16:LEU:HG	2.17	0.45
14:AN:83:LYS:CD	14:AN:86:GLU:OE1	2.65	0.45
16:AP:39:PHE:CD1	16:AP:39:PHE:C	2.90	0.45
16:AP:70:ARG:O	16:AP:74:LEU:HG	2.17	0.45
18:AR:32:TYR:CG	18:AR:55:LEU:HD11	2.52	0.45
21:AU:20:LYS:HA	21:AU:20:LYS:NZ	2.32	0.45
22:BA:250:G:P	51:B3:13:ARG:NH1	2.89	0.45
22:BA:493:G:H2'	22:BA:494:G:O4'	2.17	0.45
22:BA:563:A:O2'	22:BA:564:C:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:693:A:O2'	22:BA:694:U:H5'	2.16	0.45
22:BA:713:G:C5	22:BA:714:U:C5	3.05	0.45
22:BA:950:G:H2'	22:BA:951:C:C6	2.51	0.45
22:BA:1754:A:N1	22:BA:2716:C:O2'	2.41	0.45
22:BA:2310:C:C4	27:BF:77:PHE:CE1	3.04	0.45
22:BA:2380:C:H5'	36:BO:17:LYS:NZ	2.31	0.45
22:BA:2550:G:C2	22:BA:2559:C:O2	2.69	0.45
22:BA:2680:U:H3	22:BA:2681:C:N4	2.15	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.49	0.45
1:CA:121:U:H3'	1:CA:122:G:H5'	1.98	0.45
1:CA:414:A:C2	1:CA:415:A:C4	3.04	0.45
1:CA:519:C:H2'	1:CA:520:A:O4'	2.17	0.45
1:CA:743:A:C5	1:CA:744:C:C5	3.05	0.45
1:CA:754:C:H3'	1:CA:754:C:O2	2.16	0.45
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.51	0.45
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.52	0.45
2:CB:60:ILE:HD12	2:CB:61:ALA:N	2.31	0.45
5:CE:95:PHE:O	5:CE:125:ALA:O	2.35	0.45
5:CE:102:GLY:C	5:CE:104:GLY:N	2.70	0.45
6:CF:54:LEU:C	6:CF:55:HIS:O	2.54	0.45
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.32	0.45
9:CI:57:MET:O	9:CI:60:LYS:HB2	2.16	0.45
13:CM:19:LEU:HB2	13:CM:30:SER:OG	2.16	0.45
15:CO:73:LYS:HA	15:CO:73:LYS:CE	2.47	0.45
22:DA:7:G:H4'	31:DJ:15:TRP:CZ2	2.52	0.45
22:DA:269:C:O2	22:DA:269:C:H2'	2.17	0.45
22:DA:320:A:H4'	22:DA:322:A:N7	2.30	0.45
22:DA:592:A:C2	22:DA:593:U:C2	3.05	0.45
22:DA:875:G:N2	22:DA:903:C:C2	2.85	0.45
22:DA:949:G:C6	22:DA:950:G:N7	2.85	0.45
22:DA:959:A:H2'	22:DA:960:A:C8	2.51	0.45
22:DA:1309:G:OP1	50:D2:9:VAL:N	2.47	0.45
22:DA:1565:C:C5	22:DA:1567:G:C6	3.05	0.45
22:DA:1568:G:N7	24:DC:28:LYS:HE3	2.32	0.45
22:DA:1604:C:O2'	22:DA:1610:A:N1	2.43	0.45
22:DA:1907:G:C6	22:DA:1924:C:N3	2.85	0.45
22:DA:2069:G:N2	22:DA:2443:C:C2	2.85	0.45
22:DA:2156:G:C6	22:DA:2157:G:C2	3.05	0.45
22:DA:2302:U:O2'	27:DF:123:ASP:O	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2627:G:C6	22:DA:2628:C:C4	3.05	0.45
22:DA:2824:C:C4	22:DA:2825:G:C5	3.05	0.45
23:DB:32:U:C2	23:DB:51:G:N2	2.84	0.45
26:DE:1:MET:HG2	26:DE:14:VAL:HG23	1.99	0.45
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
30:DI:101:ILE:O	30:DI:102:SER:CB	2.64	0.45
35:DN:83:LEU:HD22	35:DN:115:LEU:HD13	1.98	0.45
35:DN:118:ARG:O	35:DN:119:SER:HB2	2.17	0.45
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.15	0.45
50:D2:31:LEU:HD21	50:D2:43:THR:HG22	1.99	0.45
51:D3:15:LYS:HD3	51:D3:23:LYS:HE2	1.99	0.45
1:AA:243:A:C2	1:AA:246:A:C8	3.05	0.45
1:AA:451:A:C2	1:AA:480:U:N3	2.85	0.45
1:AA:725:G:C2	1:AA:726:C:C5	3.04	0.45
1:AA:1237:C:C4	1:AA:1336:C:N3	2.85	0.45
1:AA:1308:U:OP2	13:AM:98:ARG:CG	2.65	0.45
2:AB:175:GLU:O	2:AB:178:ASN:HB3	2.17	0.45
3:AC:11:ARG:NH1	3:AC:182:ILE:HG13	2.32	0.45
3:AC:23:PHE:CE1	10:AJ:13:PHE:CE2	3.05	0.45
7:AG:103:TRP:CD2	7:AG:137:LYS:HG2	2.52	0.45
8:AH:39:VAL:HG13	8:AH:112:THR:HG22	1.99	0.45
8:AH:83:LEU:HD22	8:AH:85:ILE:HD13	1.99	0.45
15:AO:4:SER:O	15:AO:7:ALA:N	2.50	0.45
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.16	0.45
21:AU:37:PHE:O	21:AU:38:TYR:CB	2.64	0.45
22:BA:90:U:H2'	22:BA:91:A:C8	2.52	0.45
22:BA:189:G:OP1	45:BX:26:LYS:HD2	2.17	0.45
22:BA:570:G:H8	22:BA:570:G:O5'	2.00	0.45
22:BA:572:A:P	57:BA:3570:HOH:O	2.74	0.45
22:BA:706:A:H2'	22:BA:707:G:O4'	2.16	0.45
22:BA:1073:A:H2'	22:BA:1074:G:H5"	1.98	0.45
22:BA:1366:A:C5	22:BA:1367:A:C8	3.05	0.45
22:BA:1791:A:O3'	24:BC:204:VAL:O	2.35	0.45
22:BA:1937:A:C2	22:BA:1939:U:C4	3.05	0.45
22:BA:2310:C:C5	27:BF:77:PHE:CZ	3.04	0.45
22:BA:2498:C:O2'	22:BA:2499:C:H5'	2.16	0.45
22:BA:2754:U:H2'	22:BA:2756:U:OP1	2.16	0.45
23:BB:2:G:C6	23:BB:119:A:C2	3.04	0.45
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:209:GLY:O	24:BC:212:ARG:N	2.50	0.45
25:BD:57:ALA:C	25:BD:59:ARG:H	2.21	0.45
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.17	0.45
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.99	0.45
26:BE:124:PHE:O	26:BE:125:SER:CB	2.65	0.45
27:BF:133:ARG:O	27:BF:134:GLU:CB	2.65	0.45
30:BI:67:PHE:N	30:BI:67:PHE:HD2	2.14	0.45
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.50	0.45
32:BK:1:MET:HE3	32:BK:32:TYR:CZ	2.51	0.45
36:BO:76:LYS:O	36:BO:77:ALA:C	2.56	0.45
38:BQ:24:TYR:HB3	38:BQ:28:ARG:HB3	1.99	0.45
39:BR:68:ARG:HD3	39:BR:92:TRP:CE2	2.52	0.45
46:BY:16:THR:HA	46:BY:19:LEU:HD12	1.98	0.45
47:BZ:45:ARG:HD3	47:BZ:45:ARG:HA	1.76	0.45
51:B3:32:ILE:O	51:B3:32:ILE:HG22	2.15	0.45
51:B3:45:ARG:N	51:B3:46:PRO:CD	2.79	0.45
53:B5:50:ILE:HG23	53:B5:51:ASP:H	1.82	0.45
1:CA:64:G:N2	1:CA:67:C:C4	2.85	0.45
1:CA:117:G:H2'	1:CA:118:U:O4'	2.17	0.45
1:CA:158:G:C6	1:CA:164:G:C5	3.05	0.45
1:CA:376:G:H5"	16:CP:5:ARG:HB2	1.98	0.45
1:CA:501:C:H2'	1:CA:502:A:C8	2.52	0.45
1:CA:563:A:H2'	1:CA:567:G:C8	2.52	0.45
1:CA:1103:C:C4	1:CA:1104:G:N7	2.85	0.45
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.52	0.45
1:CA:1204:A:P	57:CA:1845:HOH:O	2.74	0.45
4:CD:129:VAL:O	4:CD:129:VAL:CG1	2.64	0.45
5:CE:66:LYS:O	5:CE:69:ARG:O	2.35	0.45
5:CE:156:LYS:HA	5:CE:159:LYS:NZ	2.31	0.45
6:CF:1:MET:HG2	6:CF:65:GLU:HG2	1.98	0.45
6:CF:38:ARG:HG2	6:CF:63:ASN:CB	2.46	0.45
6:CF:51:ILE:O	6:CF:51:ILE:HG12	2.17	0.45
22:DA:319:G:H2'	22:DA:320:A:O4'	2.17	0.45
22:DA:482:A:O2'	22:DA:497:A:N1	2.39	0.45
22:DA:538:A:H5"	31:DJ:7:LYS:HE3	1.97	0.45
22:DA:1114:C:H2'	22:DA:1115:G:C8	2.52	0.45
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.47	0.45
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.17	0.45
22:DA:1740:G:H2'	22:DA:1741:C:C6	2.52	0.45
22:DA:1773:A:C2	22:DA:1978:A:C2	3.05	0.45
22:DA:1809:A:C6	22:DA:1810:A:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.16	0.45
22:DA:1833:C:N4	22:DA:1834:U:O4	2.50	0.45
22:DA:1858:A:C2	22:DA:1859:U:C2	3.05	0.45
22:DA:2199:A:C5	22:DA:2225:A:N1	2.84	0.45
22:DA:2699:C:O2	22:DA:2709:G:C2	2.70	0.45
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.52	0.45
22:DA:2784:U:C4	22:DA:2785:C:C4	3.05	0.45
22:DA:2804:U:H2'	22:DA:2805:C:C6	2.52	0.45
27:DF:70:ALA:O	27:DF:72:LYS:N	2.50	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
31:DJ:36:LEU:HG	31:DJ:54:ILE:HD12	1.99	0.45
33:DL:110:VAL:CG2	33:DL:127:VAL:HG22	2.47	0.45
35:DN:18:GLN:O	35:DN:18:GLN:HG2	2.17	0.45
35:DN:45:ARG:O	35:DN:49:GLU:HG3	2.16	0.45
36:DO:26:LEU:HD23	36:DO:117:PHE:CE2	2.51	0.45
38:DQ:88:VAL:CG1	38:DQ:90:ILE:HG13	2.47	0.45
40:DS:66:ILE:O	40:DS:68:ASP:N	2.49	0.45
52:D4:3:VAL:O	52:D4:3:VAL:CG2	2.65	0.45
1:AA:409:U:OP1	4:AD:24:GLY:HA3	2.17	0.45
1:AA:591:U:H2'	1:AA:592:G:C8	2.52	0.45
1:AA:1043:G:H3'	1:AA:1044:A:H5"	1.99	0.45
1:AA:1277:C:O2'	1:AA:1279:G:H8	2.00	0.45
1:AA:1378:C:C2'	1:AA:1379:G:O5'	2.64	0.45
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.56	0.45
4:AD:62:ARG:NH2	4:AD:68:LEU:HD13	2.32	0.45
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.47	0.45
11:AK:35:THR:HG23	11:AK:36:ASP:O	2.16	0.45
13:AM:12:HIS:HA	13:AM:44:LYS:NZ	2.32	0.45
22:BA:412:A:H2'	22:BA:413:C:H5'	1.99	0.45
22:BA:475:C:C4	22:BA:481:G:C6	3.05	0.45
22:BA:1080:A:C2	22:BA:1081:U:C5	3.05	0.45
22:BA:1153:C:N4	22:BA:1154:G:C6	2.85	0.45
22:BA:1482:G:C6	22:BA:1508:A:C6	3.04	0.45
22:BA:2365:G:H4'	44:BW:60:PHE:CE1	2.52	0.45
22:BA:2520:C:C6	22:BA:2567:G:C1'	3.00	0.45
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.47	0.45
22:BA:2583:G:C5	22:BA:2584:U:C5	3.04	0.45
22:BA:2622:U:O2'	22:BA:2825:G:N7	2.50	0.45
24:BC:30:PHE:O	24:BC:31:ALA:C	2.54	0.45
24:BC:266:PHE:N	24:BC:266:PHE:CD1	2.84	0.45
26:BE:180:LEU:HD23	26:BE:180:LEU:HA	1.83	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:10:VAL:O	28:BG:12:PRO:HD3	2.17	0.45
38:BQ:40:ILE:HG22	38:BQ:44:GLN:OE1	2.16	0.45
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.97	0.45
43:BV:4:ILE:HD11	43:BV:50:MET:HE1	1.99	0.45
1:CA:165:G:N2	1:CA:166:U:O2	2.50	0.45
1:CA:209:U:C4'	1:CA:210:C:OP2	2.62	0.45
1:CA:295:C:N3	1:CA:296:U:C5	2.85	0.45
1:CA:575:G:C6	1:CA:821:G:N7	2.85	0.45
1:CA:1004:A:C2	1:CA:1026:G:N3	2.85	0.45
1:CA:1126:U:O4	10:CJ:73:LEU:HD12	2.16	0.45
1:CA:1169:A:N6	1:CA:1170:A:N6	2.65	0.45
1:CA:1215:G:C4	1:CA:1216:A:C8	3.05	0.45
2:CB:111:ILE:O	2:CB:114:LEU:HB3	2.17	0.45
3:CC:67:THR:OG1	3:CC:102:ASN:ND2	2.50	0.45
3:CC:147:LYS:HG3	3:CC:204:LYS:O	2.17	0.45
7:CG:69:VAL:HG21	7:CG:104:ILE:HD11	1.98	0.45
9:CI:55:VAL:O	9:CI:55:VAL:HG23	2.16	0.45
10:CJ:46:LYS:HG2	10:CJ:68:ARG:HG2	1.99	0.45
14:CN:88:ALA:N	14:CN:93:ILE:HD12	2.32	0.45
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.47	0.45
17:CQ:47:HIS:HB3	17:CQ:74:THR:OG1	2.16	0.45
22:DA:27:G:HO2'	22:DA:28:A:P	2.34	0.45
22:DA:134:G:C2	22:DA:146:A:C2	3.05	0.45
22:DA:168:G:C2	22:DA:169:G:C8	3.06	0.45
22:DA:235:U:N3	22:DA:236:C:C5	2.85	0.45
22:DA:310:A:O2'	22:DA:311:A:P	2.72	0.45
22:DA:372:G:P	45:DX:62:LYS:HZ2	2.40	0.45
22:DA:498:G:C6	22:DA:499:U:C4	3.05	0.45
22:DA:1430:G:H2'	22:DA:1431:A:O4'	2.17	0.45
22:DA:1604:C:C5'	57:DA:3404:HOH:O	2.64	0.45
22:DA:1654:A:OP2	35:DN:1:MET:HA	2.17	0.45
22:DA:2114:A:C5	22:DA:2167:U:H4'	2.52	0.45
22:DA:2264:C:O2	22:DA:2277:G:C2	2.69	0.45
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.82	0.45
24:DC:125:LYS:HB2	24:DC:126:PRO:HD2	1.99	0.45
26:DE:187:VAL:O	26:DE:187:VAL:CG1	2.65	0.45
28:DG:98:VAL:HG21	28:DG:124:GLU:HA	1.99	0.45
28:DG:158:LYS:O	28:DG:159:GLY:C	2.56	0.45
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.98	0.45
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.32	0.45
37:DP:75:GLN:O	37:DP:78:SER:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:33:LEU:HD21	40:DS:52:GLU:HG2	1.99	0.45
41:DT:51:PHE:C	41:DT:52:GLU:HG2	2.37	0.45
1:AA:102:G:N3	1:AA:103:U:C6	2.85	0.44
1:AA:118:U:O4	1:AA:288:A:H2'	2.17	0.44
1:AA:162:A:H1'	1:AA:348:G:O2'	2.17	0.44
1:AA:195:A:C5	1:AA:196:A:C6	3.05	0.44
1:AA:463:U:H5'	1:AA:464:U:OP2	2.16	0.44
1:AA:948:C:OP2	13:AM:107:ARG:HB2	2.17	0.44
1:AA:957:U:H1'	1:AA:960:U:C4	2.52	0.44
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.18	0.44
1:AA:1503:A:H8	1:AA:1531:A:HO2'	1.56	0.44
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.37	0.44
4:AD:4:TYR:CE2	4:AD:6:GLY:O	2.70	0.44
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.17	0.44
7:AG:99:LEU:O	7:AG:102:ARG:N	2.50	0.44
9:AI:50:GLN:O	9:AI:52:LEU:N	2.51	0.44
22:BA:49:A:C8	22:BA:51:G:N2	2.84	0.44
22:BA:479:A:H4'	22:BA:480:A:OP1	2.16	0.44
22:BA:547:A:H8	22:BA:548:G:N3	2.15	0.44
22:BA:1288:G:C4	22:BA:1327:A:C2	3.05	0.44
22:BA:1324:G:C4	22:BA:1328:A:N6	2.85	0.44
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.52	0.44
22:BA:1846:G:H2'	22:BA:1847:A:C8	2.53	0.44
22:BA:1925:C:H5"	22:BA:1926:U:C4	2.53	0.44
22:BA:2261:C:O2'	22:BA:2262:U:H5'	2.17	0.44
22:BA:2443:C:H2'	22:BA:2444:G:H8	1.82	0.44
22:BA:2880:C:H1'	35:BN:92:GLY:O	2.16	0.44
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	2.00	0.44
28:BG:2:SER:C	28:BG:4:VAL:N	2.70	0.44
41:BT:12:ARG:HD2	41:BT:12:ARG:N	2.32	0.44
43:BV:23:ALA:O	43:BV:24:ASN:C	2.54	0.44
45:BX:18:ARG:NE	45:BX:24:ALA:HB2	2.32	0.44
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.51	0.44
53:B5:25:GLU:HG2	53:B5:25:GLU:O	2.17	0.44
1:CA:399:G:C6	1:CA:400:C:N4	2.85	0.44
1:CA:403:C:H5'	4:CD:132:ILE:HG23	2.00	0.44
1:CA:839:C:C2'	1:CA:840:C:H5'	2.47	0.44
1:CA:921:U:H2'	1:CA:922:G:O4'	2.16	0.44
1:CA:939:G:C6	1:CA:940:C:C4	3.05	0.44
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.17	0.44
1:CA:1195:C:H2'	1:CA:1197:A:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1426:G:C4	1:CA:1475:G:C2	3.05	0.44
4:CD:173:VAL:O	4:CD:174:ASP:CB	2.65	0.44
8:CH:30:SER:O	8:CH:33:LYS:HB2	2.17	0.44
11:CK:19:GLY:O	11:CK:82:LEU:HA	2.17	0.44
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.46	0.44
13:CM:39:ILE:HG13	13:CM:56:LEU:HD21	1.99	0.44
18:CR:48:ARG:N	18:CR:48:ARG:HD2	2.31	0.44
19:CS:51:VAL:O	19:CS:58:VAL:HG12	2.17	0.44
22:DA:265:A:H4'	22:DA:266:G:OP1	2.17	0.44
22:DA:468:G:H2'	22:DA:469:G:O4'	2.16	0.44
22:DA:483:A:C8	42:DU:45:HIS:CD2	3.05	0.44
22:DA:522:A:H2'	22:DA:523:C:O4'	2.17	0.44
22:DA:609:A:H2'	22:DA:610:C:O4'	2.17	0.44
22:DA:973:A:P	39:DR:81:LYS:NZ	2.88	0.44
22:DA:1248:G:O2'	38:DQ:3:ARG:HA	2.17	0.44
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.31	0.44
22:DA:1607:C:N4	22:DA:1622:G:C5	2.85	0.44
22:DA:1644:C:O2	22:DA:1644:C:C2'	2.65	0.44
22:DA:1805:A:C4	22:DA:1813:G:N2	2.85	0.44
22:DA:2029:G:C2	22:DA:2033:A:N7	2.85	0.44
22:DA:2111:U:O2	22:DA:2118:U:H1'	2.17	0.44
22:DA:2453:A:O5'	22:DA:2453:A:H8	2.00	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
31:DJ:6:ALA:O	31:DJ:7:LYS:HG3	2.17	0.44
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.17	0.44
40:DS:79:GLY:HA2	40:DS:102:HIS:NE2	2.32	0.44
41:DT:38:ALA:O	41:DT:39:THR:CB	2.65	0.44
44:DW:19:LYS:O	44:DW:21:LEU:HD23	2.17	0.44
45:DX:52:SER:OG	45:DX:55:GLY:N	2.44	0.44
1:AA:119:A:C4	1:AA:240:G:N7	2.85	0.44
1:AA:119:A:C5	1:AA:240:G:N7	2.85	0.44
1:AA:346:G:P	32:BK:105:ARG:NH1	2.90	0.44
1:AA:410:G:H5"	1:AA:411:A:P	2.57	0.44
1:AA:452:A:C8	1:AA:452:A:C3'	3.01	0.44
1:AA:509:A:C2'	1:AA:543:U:O2'	2.65	0.44
1:AA:650:G:C2'	1:AA:651:C:H5'	2.47	0.44
1:AA:652:U:C2	1:AA:752:G:N2	2.86	0.44
1:AA:987:G:N2	1:AA:988:G:C4	2.85	0.44
1:AA:1061:G:C5	1:AA:1197:A:C2	3.06	0.44
1:AA:1118:U:H5"	9:AI:106:ARG:HG3	1.98	0.44
1:AA:1438:G:C6	1:AA:1439:G:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:3:ARG:CZ	4:AD:115:ARG:CD	2.93	0.44
4:AD:35:GLU:CD	4:AD:35:GLU:C	2.76	0.44
4:AD:153:SER:O	4:AD:154:ARG:C	2.56	0.44
4:AD:168:PRO:HB2	4:AD:171:LEU:CD1	2.47	0.44
5:AE:100:SER:O	5:AE:101:GLU:C	2.55	0.44
5:AE:104:GLY:O	5:AE:105:ILE:CG2	2.63	0.44
7:AG:80:VAL:O	7:AG:81:GLY:C	2.56	0.44
15:AO:37:ASN:O	15:AO:38:HIS:C	2.54	0.44
16:AP:15:PRO:O	16:AP:16:PHE:HB2	2.17	0.44
22:BA:142:A:H2'	22:BA:143:C:O5'	2.17	0.44
22:BA:946:C:P	57:BA:3347:HOH:O	2.75	0.44
22:BA:1405:U:C2	22:BA:1406:U:C5	3.05	0.44
22:BA:1439:A:C2	22:BA:1553:A:C4	3.04	0.44
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.18	0.44
22:BA:1840:G:N1	22:BA:1841:U:C2	2.86	0.44
22:BA:1925:C:C4'	22:BA:1926:U:C4	2.99	0.44
22:BA:1949:G:N2	22:BA:1958:C:C2	2.86	0.44
22:BA:2683:C:O2'	22:BA:2684:U:H5'	2.17	0.44
22:BA:2706:A:N1	22:BA:2707:U:C2	2.85	0.44
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.99	0.44
22:BA:2886:A:C5	22:BA:2887:A:C8	3.06	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
41:BT:1:MET:O	41:BT:2:ILE:HG13	2.17	0.44
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.17	0.44
42:BU:89:ASP:CG	42:BU:90:GLY:N	2.70	0.44
43:BV:28:ALA:HA	43:BV:88:HIS:CD2	2.52	0.44
53:B5:50:ILE:CG2	53:B5:51:ASP:H	2.31	0.44
1:CA:32:A:C2	1:CA:33:A:C4	3.05	0.44
1:CA:49:U:C5	1:CA:364:A:C6	3.05	0.44
1:CA:361:G:O6	1:CA:362:G:N1	2.50	0.44
1:CA:402:G:H4'	1:CA:620:C:O2	2.18	0.44
1:CA:714:G:H21	1:CA:777:A:H1'	1.82	0.44
1:CA:840:C:C4	1:CA:842:U:C5'	3.01	0.44
1:CA:949:A:C2'	1:CA:971:G:O6	2.65	0.44
1:CA:1071:C:O2	1:CA:1072:G:C8	2.69	0.44
1:CA:1346:A:C8	1:CA:1348:U:C2	3.05	0.44
7:CG:18:PHE:CZ	7:CG:58:GLU:HG2	2.52	0.44
7:CG:68:ASN:HB3	7:CG:130:ASN:HB3	1.99	0.44
7:CG:78:ARG:HD3	7:CG:80:VAL:CG2	2.48	0.44
9:CI:107:ASP:OD2	9:CI:109:ARG:HG3	2.18	0.44
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1343:G:C5	22:DA:1344:U:O4	2.70	0.44
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.17	0.44
22:DA:1462:C:C2	22:DA:1463:C:C5	3.05	0.44
22:DA:1668:A:C2	22:DA:1670:C:N3	2.85	0.44
22:DA:1773:A:C2'	22:DA:1774:C:H5'	2.48	0.44
22:DA:1889:A:N3	22:DA:2086:U:O2'	2.44	0.44
22:DA:2014:A:H2	22:DA:2613:U:C2	2.36	0.44
22:DA:2093:G:C2	22:DA:2094:A:C5	3.05	0.44
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.37	0.44
23:DB:52:A:C5	36:DO:33:ARG:NH2	2.85	0.44
23:DB:76:G:H2'	23:DB:77:U:O4'	2.17	0.44
24:DC:108:LYS:HA	24:DC:196:GLY:HA2	1.99	0.44
25:DD:112:THR:O	25:DD:112:THR:HG22	2.17	0.44
30:DI:75:PRO:HG2	30:DI:78:VAL:HG22	2.00	0.44
32:DK:62:VAL:HA	32:DK:84:CYS:HB3	1.98	0.44
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.17	0.44
44:DW:70:GLU:O	44:DW:79:PHE:N	2.45	0.44
47:DZ:10:THR:HG22	47:DZ:54:MET:HA	1.99	0.44
1:AA:658:C:O4'	15:AO:22:THR:OG1	2.30	0.44
1:AA:666:G:C5	1:AA:741:G:C6	3.05	0.44
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.65	0.44
2:AB:120:GLN:HG2	2:AB:125:THR:O	2.17	0.44
3:AC:27:LYS:H	3:AC:27:LYS:HD2	1.82	0.44
4:AD:132:ILE:HD12	4:AD:135:TYR:N	2.32	0.44
4:AD:157:ALA:HA	4:AD:160:GLU:HB3	1.99	0.44
6:AF:64:VAL:CG1	6:AF:65:GLU:N	2.80	0.44
6:AF:97:THR:O	6:AF:98:GLU:HG2	2.16	0.44
15:AO:3:LEU:HD13	15:AO:35:GLN:HG2	2.00	0.44
16:AP:78:VAL:O	16:AP:78:VAL:CG1	2.65	0.44
22:BA:201:C:C2'	22:BA:202:U:H5'	2.47	0.44
22:BA:231:A:C6	22:BA:232:G:C2	3.06	0.44
22:BA:536:G:C6	22:BA:537:G:C4	3.06	0.44
22:BA:595:C:H2'	22:BA:596:U:C6	2.52	0.44
22:BA:975:A:C6	22:BA:990:A:N7	2.85	0.44
22:BA:988:A:H2'	22:BA:989:G:O5'	2.18	0.44
22:BA:1056:G:O2'	22:BA:1086:A:H8	2.00	0.44
22:BA:1116:G:H2'	22:BA:1116:G:N3	2.31	0.44
22:BA:1805:A:O2'	24:BC:50:THR:HA	2.17	0.44
22:BA:1910:G:H2'	22:BA:1911:U:C6	2.53	0.44
22:BA:1935:G:N2	22:BA:1964:G:C8	2.85	0.44
22:BA:2490:G:H4'	22:BA:2491:U:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2627:G:C5	22:BA:2628:C:C4	3.05	0.44
23:BB:39:A:C2	23:BB:44:G:C4	3.05	0.44
26:BE:119:ILE:HB	26:BE:187:VAL:CG2	2.47	0.44
28:BG:86:LYS:HG2	28:BG:132:VAL:HG13	1.99	0.44
30:BI:58:VAL:HG12	30:BI:59:ILE:H	1.81	0.44
30:BI:89:GLY:O	30:BI:90:SER:C	2.54	0.44
36:BO:79:ALA:HA	36:BO:115:LEU:HD13	1.99	0.44
37:BP:48:ILE:HG22	37:BP:100:LEU:HD12	2.00	0.44
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	2.00	0.44
44:BW:10:THR:O	44:BW:11:ARG:HB2	2.18	0.44
1:CA:53:A:N3	1:CA:359:G:C2	2.86	0.44
1:CA:458:U:H2'	1:CA:459:A:C8	2.52	0.44
1:CA:708:C:H2'	1:CA:709:U:C6	2.53	0.44
1:CA:1078:U:O2	5:CE:90:THR:HG21	2.17	0.44
1:CA:1328:C:H5"	13:CM:28:THR:CG2	2.47	0.44
1:CA:1409:C:H4'	22:DA:1915:U:O4	2.18	0.44
1:CA:1434:A:N6	1:CA:1435:G:N1	2.65	0.44
3:CC:203:PHE:CE1	3:CC:205:GLY:O	2.71	0.44
5:CE:107:ALA:HA	5:CE:125:ALA:HB3	1.98	0.44
5:CE:133:PRO:O	5:CE:137:VAL:CG1	2.65	0.44
5:CE:153:VAL:HG23	5:CE:157:ARG:CB	2.47	0.44
7:CG:37:SER:OG	9:CI:43:THR:HG23	2.16	0.44
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.99	0.44
13:CM:83:LEU:N	13:CM:83:LEU:CD2	2.79	0.44
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.32	0.44
22:DA:176:A:C5	22:DA:177:G:C6	3.05	0.44
22:DA:775:G:O6	22:DA:787:C:H2'	2.17	0.44
22:DA:1269:A:H2'	22:DA:1270:C:C6	2.52	0.44
22:DA:1366:A:C2	22:DA:1367:A:N9	2.85	0.44
22:DA:1671:U:O2	22:DA:1673:G:C8	2.70	0.44
22:DA:2038:G:N7	22:DA:2039:U:C5	2.86	0.44
22:DA:2235:G:C5	22:DA:2236:U:C5	3.06	0.44
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.17	0.44
22:DA:2591:C:P	24:DC:238:ARG:HG3	2.56	0.44
22:DA:2597:G:O2'	22:DA:2598:A:H5'	2.18	0.44
22:DA:2718:G:O2'	37:DP:96:LYS:HG3	2.18	0.44
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.16	0.44
23:DB:60:C:N3	23:DB:61:G:N7	2.65	0.44
24:DC:72:ASP:O	24:DC:74:ILE:N	2.45	0.44
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.50	0.44
26:DE:52:VAL:CG2	26:DE:81:GLY:HA2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:36:LEU:HD13	27:DF:36:LEU:N	2.32	0.44
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	2.00	0.44
37:DP:21:ARG:HB3	37:DP:22:PRO:HD2	1.99	0.44
39:DR:81:LYS:O	39:DR:82:HIS:C	2.54	0.44
45:DX:49:LEU:O	45:DX:51:VAL:HG13	2.17	0.44
1:AA:11:G:C4	1:AA:12:U:C5	3.04	0.44
1:AA:119:A:C5	1:AA:240:G:C8	3.05	0.44
1:AA:339:C:O2'	1:AA:340:U:H5'	2.18	0.44
1:AA:682:G:C2	1:AA:709:U:C2	3.06	0.44
1:AA:977:A:H1'	1:AA:982:U:O4	2.17	0.44
1:AA:1242:G:C2	1:AA:1243:C:C2	3.06	0.44
1:AA:1368:A:OP2	9:AI:114:LYS:O	2.35	0.44
2:AB:73:LYS:HE3	2:AB:205:ASP:HB2	1.99	0.44
4:AD:9:LEU:CD2	4:AD:22:LYS:HB2	2.47	0.44
4:AD:136:GLN:OE1	4:AD:136:GLN:HA	2.17	0.44
8:AH:14:ILE:O	8:AH:15:ARG:C	2.54	0.44
8:AH:126:ILE:HG22	8:AH:127:CYS:N	2.32	0.44
14:AN:18:ASP:O	14:AN:19:LYS:C	2.55	0.44
20:AT:35:VAL:HG11	20:AT:79:LEU:HD13	1.99	0.44
22:BA:736:C:N3	22:BA:737:C:C5	2.85	0.44
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.66	0.44
22:BA:1180:U:O2'	22:BA:1181:U:H5'	2.17	0.44
22:BA:1587:G:C5	22:BA:1588:G:N7	2.86	0.44
22:BA:1674:G:N2	22:BA:1677:A:N1	2.59	0.44
22:BA:1972:G:H2'	22:BA:1973:G:H8	1.81	0.44
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.16	0.44
22:BA:2191:A:N1	22:BA:2192:U:N3	2.65	0.44
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.53	0.44
22:BA:2856:A:C6	22:BA:2857:G:C5	3.05	0.44
24:BC:71:LYS:HB2	24:BC:96:TYR:CE2	2.52	0.44
25:BD:9:VAL:HB	25:BD:26:VAL:O	2.17	0.44
25:BD:12:THR:HG21	37:BP:9:GLU:OE2	2.17	0.44
27:BF:36:LEU:HD22	27:BF:91:LEU:CD1	2.44	0.44
27:BF:94:GLU:HG3	27:BF:98:GLU:OE1	2.18	0.44
27:BF:108:VAL:CG1	27:BF:114:PHE:CE2	3.01	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
34:BM:4:PRO:CG	34:BM:70:ASP:HA	2.46	0.44
41:BT:19:LYS:C	41:BT:21:SER:N	2.70	0.44
41:BT:30:ILE:HD11	41:BT:32:LEU:HD11	2.00	0.44
46:BY:30:MET:O	46:BY:34:SER:OG	2.21	0.44
1:CA:1098:C:C4	1:CA:1099:G:N7	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1124:G:N2	1:CA:1127:G:N2	2.66	0.44
2:CB:131:LYS:HE2	2:CB:131:LYS:HA	1.98	0.44
3:CC:172:ARG:O	3:CC:174:PRO:HD3	2.17	0.44
5:CE:103:THR:O	5:CE:122:ASN:HA	2.18	0.44
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.18	0.44
6:CF:21:MET:O	6:CF:25:TYR:CG	2.70	0.44
9:CI:91:ASP:OD2	9:CI:91:ASP:C	2.55	0.44
11:CK:27:PHE:CZ	11:CK:89:PRO:CG	3.00	0.44
11:CK:60:PRO:N	11:CK:91:PRO:HB3	2.32	0.44
11:CK:122:ARG:CZ	21:CU:36:GLU:HG2	2.48	0.44
15:CO:87:LEU:HD23	15:CO:87:LEU:C	2.37	0.44
19:CS:67:VAL:O	19:CS:67:VAL:HG12	2.16	0.44
22:DA:109:C:C2	22:DA:110:G:C8	3.06	0.44
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.17	0.44
22:DA:543:G:C2	22:DA:551:G:C5	3.06	0.44
22:DA:563:A:C2	22:DA:2018:G:N3	2.85	0.44
22:DA:934:U:H2'	22:DA:935:C:C6	2.52	0.44
22:DA:982:C:H5"	22:DA:983:A:OP2	2.17	0.44
22:DA:1082:U:OP1	30:DI:124:ALA:CB	2.65	0.44
22:DA:1095:A:C5	22:DA:1096:A:C2	3.05	0.44
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.86	0.44
22:DA:1364:G:C8	45:DX:2:SER:N	2.86	0.44
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.18	0.44
22:DA:1797:G:O3'	24:DC:256:LYS:HA	2.18	0.44
22:DA:2015:A:C5	48:D0:3:VAL:HG21	2.52	0.44
22:DA:2059:A:H4'	26:DE:64:GLY:O	2.18	0.44
22:DA:2440:C:N3	22:DA:2441:U:H1'	2.32	0.44
22:DA:2544:G:H2'	22:DA:2545:G:C8	2.52	0.44
22:DA:2554:U:H2'	22:DA:2555:U:H6	1.82	0.44
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.33	0.44
22:DA:2776:A:C6	22:DA:2778:A:C6	3.05	0.44
22:DA:2807:U:O2	22:DA:2892:G:C2	2.70	0.44
23:DB:13:G:H1	23:DB:69:G:HO2'	1.64	0.44
23:DB:70:C:H2'	23:DB:71:C:C6	2.52	0.44
26:DE:25:GLU:CD	33:DL:6:LEU:HA	2.38	0.44
26:DE:117:ARG:NH1	33:DL:2:ARG:HD3	2.33	0.44
27:DF:38:MET:HB2	27:DF:57:LEU:HD11	1.99	0.44
27:DF:60:ILE:HG23	27:DF:138:PHE:CE1	2.53	0.44
30:DI:103:ARG:HB3	30:DI:142:ASP:OD2	2.18	0.44
35:DN:2:ARG:O	35:DN:3:HIS:C	2.56	0.44
36:DO:18:LEU:O	36:DO:22:GLY:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:67:ASN:O	36:DO:69:ASP:N	2.50	0.44
44:DW:46:HIS:NE2	44:DW:77:ARG:HD3	2.32	0.44
47:DZ:5:ILE:HD11	47:DZ:57:VAL:HG21	1.99	0.44
50:D2:34:ARG:CB	50:D2:42:LEU:HD13	2.48	0.44
1:AA:8:A:H1'	5:AE:108:GLY:HA2	1.99	0.44
1:AA:110:C:O2'	16:AP:25:ARG:O	2.34	0.44
1:AA:537:G:H2'	1:AA:538:G:C8	2.52	0.44
1:AA:542:G:C2	1:AA:543:U:C6	3.06	0.44
1:AA:828:U:C5	1:AA:859:G:C5	3.06	0.44
1:AA:881:G:H2'	1:AA:882:C:O4'	2.17	0.44
1:AA:978:A:C5	1:AA:1319:A:C2	3.06	0.44
2:AB:117:LEU:HG	2:AB:141:LEU:CD1	2.47	0.44
3:AC:112:ASP:O	3:AC:116:VAL:HG23	2.17	0.44
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.48	0.44
8:AH:34:VAL:O	8:AH:36:ILE:N	2.51	0.44
8:AH:93:PRO:HG3	8:AH:125:ILE:HD12	1.97	0.44
11:AK:52:PHE:HB3	11:AK:56:ARG:HB3	1.99	0.44
14:AN:3:LYS:O	14:AN:4:GLN:C	2.56	0.44
14:AN:13:ARG:O	14:AN:17:ALA:HB2	2.17	0.44
14:AN:90:ARG:HB2	14:AN:92:GLU:HG3	1.99	0.44
22:BA:102:U:C4	46:BY:2:LYS:HB2	2.52	0.44
22:BA:610:C:H2'	22:BA:611:C:H6	1.82	0.44
22:BA:1369:G:C2'	22:BA:1370:C:O5'	2.66	0.44
22:BA:1731:G:C2	22:BA:1733:G:C4	3.05	0.44
22:BA:1791:A:O2'	24:BC:206:GLY:CA	2.65	0.44
22:BA:1799:G:OP2	24:BC:270:ARG:NH2	2.46	0.44
22:BA:2204:G:C5	22:BA:2221:G:C2	3.06	0.44
22:BA:2312:U:OP1	27:BF:71:ARG:N	2.51	0.44
22:BA:2512:C:H1'	25:BD:145:SER:O	2.17	0.44
22:BA:2513:A:C6	22:BA:2514:U:C4	3.05	0.44
22:BA:2808:G:C2	22:BA:2891:U:C5	3.06	0.44
26:BE:148:ILE:N	26:BE:148:ILE:HD13	2.33	0.44
27:BF:58:ALA:O	27:BF:61:SER:O	2.36	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
1:CA:53:A:C2	1:CA:359:G:C6	3.05	0.44
1:CA:391:G:H2'	1:CA:392:C:O4'	2.17	0.44
1:CA:436:C:C2	1:CA:437:U:C5	3.05	0.44
1:CA:748:G:H2'	1:CA:749:A:H8	1.83	0.44
1:CA:1000:A:C2	1:CA:1041:G:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1244:G:C2	1:CA:1294:G:C2	3.05	0.44
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.52	0.44
2:CB:213:TYR:O	2:CB:217:VAL:HG23	2.18	0.44
4:CD:57:GLU:O	4:CD:58:LYS:C	2.55	0.44
4:CD:150:LYS:HG2	4:CD:151:LYS:N	2.32	0.44
5:CE:101:GLU:O	5:CE:101:GLU:OE2	2.36	0.44
8:CH:67:GLN:C	8:CH:69:LYS:H	2.19	0.44
10:CJ:10:LEU:N	10:CJ:10:LEU:HD12	2.32	0.44
11:CK:25:ALA:O	11:CK:88:GLY:HA3	2.17	0.44
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.85	0.44
18:CR:32:TYR:CD2	18:CR:55:LEU:HD21	2.52	0.44
19:CS:11:ILE:HG21	19:CS:41:PHE:CE2	2.52	0.44
20:CT:58:VAL:HG13	20:CT:72:ALA:HA	2.00	0.44
22:DA:822:G:C6	22:DA:836:G:N1	2.85	0.44
22:DA:1596:A:N6	22:DA:1597:A:C6	2.86	0.44
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.82	0.44
22:DA:1806:C:N4	22:DA:1807:G:C5	2.86	0.44
22:DA:2117:A:N1	22:DA:2171:A:N1	2.65	0.44
22:DA:2264:C:C2	22:DA:2277:G:N2	2.86	0.44
22:DA:2303:G:O4'	27:DF:123:ASP:HA	2.18	0.44
22:DA:2799:A:N6	22:DA:2801:G:C6	2.86	0.44
22:DA:2854:G:N2	22:DA:2864:G:C4	2.86	0.44
24:DC:197:ASN:OD1	24:DC:200:HIS:HB2	2.17	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.47	0.44
45:DX:21:ALA:O	45:DX:22:LEU:HB2	2.17	0.44
49:D1:9:ILE:HB	49:D1:52:ALA:HA	1.99	0.44
49:D1:23:THR:OG1	49:D1:24:THR:N	2.50	0.44
52:D4:36:ARG:O	52:D4:37:GLN:C	2.56	0.44
1:AA:64:G:N2	1:AA:67:C:C4	2.86	0.44
1:AA:118:U:H2'	1:AA:119:A:H5"	1.99	0.44
1:AA:215:C:H2'	1:AA:216:U:O4'	2.17	0.44
1:AA:402:G:H4'	1:AA:620:C:O2	2.18	0.44
1:AA:819:A:N7	1:AA:1529:G:C2	2.85	0.44
1:AA:832:G:C6	1:AA:833:G:N7	2.86	0.44
1:AA:908:A:C2	1:AA:909:A:C4	3.05	0.44
1:AA:1351:U:H2'	1:AA:1352:C:H6	1.83	0.44
2:AB:20:THR:HA	2:AB:38:VAL:HA	1.98	0.44
2:AB:28:LYS:HB3	2:AB:29:PRO:HD3	1.99	0.44
3:AC:25:ASN:O	3:AC:27:LYS:HG2	2.17	0.44
4:AD:46:PRO:O	4:AD:48:LEU:HD22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:147:GLU:HA	4:AD:150:LYS:CD	2.48	0.44
7:AG:83:SER:HB2	7:AG:85:TYR:CD2	2.52	0.44
9:AI:25:ASN:C	9:AI:59:GLU:HA	2.37	0.44
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.99	0.44
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.17	0.44
11:AK:23:ILE:HD13	11:AK:96:THR:HG21	1.99	0.44
11:AK:97:ILE:HG13	11:AK:98:ARG:N	2.32	0.44
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.17	0.44
17:AQ:5:ILE:N	17:AQ:5:ILE:HD12	2.33	0.44
17:AQ:67:LEU:N	17:AQ:67:LEU:HD12	2.33	0.44
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.56	0.44
22:BA:18:U:O2'	22:BA:19:A:H5'	2.16	0.44
22:BA:190:A:C5	22:BA:207:A:C2	3.06	0.44
22:BA:573:U:O2'	22:BA:574:A:H3'	2.18	0.44
22:BA:583:G:C2'	22:BA:584:C:O5'	2.65	0.44
22:BA:1079:C:H2'	22:BA:1080:A:O4'	2.17	0.44
22:BA:1190:G:N2	22:BA:1191:G:C4	2.86	0.44
22:BA:1356:G:C2	22:BA:1357:C:N1	2.85	0.44
22:BA:1784:A:OP1	57:BA:3698:HOH:O	2.21	0.44
22:BA:2093:G:C6	22:BA:2225:A:C8	3.05	0.44
22:BA:2190:G:H3'	22:BA:2191:A:H8	1.83	0.44
22:BA:2218:G:O2'	22:BA:2219:U:H5'	2.16	0.44
22:BA:2569:G:C2	22:BA:2570:G:C8	3.06	0.44
22:BA:2684:U:H6	22:BA:2684:U:O5'	2.00	0.44
22:BA:2688:G:N7	22:BA:2719:G:C5	2.86	0.44
22:BA:2844:G:H2'	22:BA:2845:U:O4'	2.18	0.44
23:BB:8:C:O2'	36:BO:40:ILE:HD13	2.18	0.44
24:BC:157:SER:O	24:BC:160:THR:HG23	2.16	0.44
25:BD:39:ASP:OD2	25:BD:41:ALA:N	2.43	0.44
25:BD:137:SER:O	25:BD:138:LEU:CB	2.64	0.44
27:BF:41:GLY:C	27:BF:43:ALA:N	2.71	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
31:BJ:21:THR:HA	31:BJ:61:LYS:HB3	1.99	0.44
31:BJ:37:ARG:O	31:BJ:37:ARG:HG2	2.17	0.44
33:BL:93:ASN:O	33:BL:94:THR:CB	2.65	0.44
35:BN:33:ILE:CG2	35:BN:118:ARG:HD2	2.47	0.44
38:BQ:68:ALA:CB	38:BQ:99:ALA:HB1	2.48	0.44
42:BU:99:ASN:O	42:BU:100:SER:C	2.56	0.44
43:BV:43:ASP:OD1	43:BV:46:LYS:HG2	2.17	0.44
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.45	0.44
1:CA:28:A:H2'	1:CA:29:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:29:U:N3	1:CA:30:U:C5	2.86	0.44
1:CA:179:A:H2'	1:CA:180:U:C6	2.53	0.44
1:CA:476:U:C2'	1:CA:477:C:H5'	2.48	0.44
1:CA:720:C:O2'	18:CR:56:ALA:HB2	2.18	0.44
1:CA:738:C:H2'	1:CA:739:C:H6	1.81	0.44
1:CA:745:G:H5"	1:CA:851:G:O2'	2.17	0.44
1:CA:777:A:C2	1:CA:778:G:H1'	2.52	0.44
1:CA:874:G:C6	1:CA:875:U:C4	3.05	0.44
1:CA:1070:U:C2	1:CA:1071:C:C5	3.06	0.44
1:CA:1074:G:N2	1:CA:1075:U:H1'	2.33	0.44
1:CA:1329:A:H5"	13:CM:25:VAL:HA	2.00	0.44
2:CB:91:PHE:O	2:CB:91:PHE:CD2	2.71	0.44
4:CD:177:LYS:HB2	4:CD:177:LYS:HE2	1.82	0.44
7:CG:27:VAL:HG12	7:CG:43:VAL:HG21	1.99	0.44
8:CH:86:TYR:C	8:CH:87:LYS:HD2	2.38	0.44
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.48	0.44
15:CO:74:ASP:CG	15:CO:77:ARG:HG3	2.38	0.44
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.18	0.44
22:DA:8:C:O2'	22:DA:9:G:H5'	2.17	0.44
22:DA:13:A:H4'	22:DA:14:A:OP1	2.16	0.44
22:DA:301:G:C2	22:DA:302:C:N3	2.86	0.44
22:DA:319:G:P	26:DE:132:LYS:HE3	2.58	0.44
22:DA:466:A:N1	22:DA:795:C:O2'	2.48	0.44
22:DA:609:A:N7	22:DA:610:C:C2	2.85	0.44
22:DA:977:G:N7	57:DA:3586:HOH:O	2.36	0.44
22:DA:980:A:C4	22:DA:1136:G:O4'	2.71	0.44
22:DA:1052:C:C2'	22:DA:1053:C:H5'	2.48	0.44
22:DA:1152:C:C3'	57:DA:3360:HOH:O	2.63	0.44
22:DA:1277:G:N1	22:DA:1294:U:C2	2.85	0.44
22:DA:1290:C:N3	22:DA:1291:C:C5	2.85	0.44
22:DA:1422:G:H2'	22:DA:1423:G:O4'	2.17	0.44
22:DA:1651:G:H5"	35:DN:10:LEU:HD23	1.99	0.44
22:DA:1862:G:C2	22:DA:1881:C:C2	3.05	0.44
22:DA:2014:A:H5'	40:DS:94:ASP:OD1	2.18	0.44
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.52	0.44
22:DA:2345:G:H4'	22:DA:2346:A:H5"	1.99	0.44
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.17	0.44
22:DA:2820:A:C8	25:DD:196:ALA:CB	3.01	0.44
24:DC:75:PRO:HB2	24:DC:97:LYS:CG	2.48	0.44
26:DE:129:PRO:HG3	26:DE:156:ASN:OD1	2.18	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:68:PHE:O	34:DM:69:PRO:O	2.36	0.44
35:DN:2:ARG:HG3	35:DN:3:HIS:N	2.33	0.44
35:DN:54:LEU:CD2	35:DN:66:ALA:HB2	2.48	0.44
42:DU:36:VAL:O	42:DU:37:GLU:C	2.56	0.44
42:DU:44:LYS:O	42:DU:59:VAL:N	2.51	0.44
45:DX:31:PRO:O	45:DX:33:LEU:N	2.51	0.44
49:D1:25:LYS:HE2	49:D1:30:LYS:O	2.17	0.44
1:AA:330:C:O2'	1:AA:331:G:H5'	2.18	0.44
1:AA:457:G:C6	1:AA:458:U:N3	2.85	0.44
1:AA:457:G:N2	1:AA:476:U:C2	2.85	0.44
1:AA:602:A:C2	1:AA:603:U:O2	2.71	0.44
1:AA:834:U:C4	1:AA:835:U:C4	3.05	0.44
1:AA:843:U:OP1	1:AA:846:G:N2	2.48	0.44
1:AA:858:G:O2'	1:AA:859:G:C5'	2.66	0.44
1:AA:1124:G:OP1	10:AJ:37:ARG:C	2.56	0.44
1:AA:1157:A:C6	1:AA:1180:A:C5	3.06	0.44
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.82	0.44
1:AA:1333:A:C2	1:AA:1334:G:H1'	2.53	0.44
2:AB:51:ASN:O	2:AB:52:GLU:CB	2.66	0.44
3:AC:85:GLU:OE1	3:AC:88:ARG:CZ	2.66	0.44
3:AC:155:GLY:N	3:AC:164:ARG:O	2.51	0.44
13:AM:85:CYS:SG	13:AM:87:ARG:HG3	2.57	0.44
15:AO:2:SER:O	15:AO:3:LEU:CB	2.65	0.44
15:AO:62:GLN:O	15:AO:65:LYS:N	2.51	0.44
16:AP:42:ILE:O	16:AP:42:ILE:CG2	2.66	0.44
19:AS:51:VAL:HB	19:AS:58:VAL:HG22	1.99	0.44
22:BA:513:A:C2'	22:BA:514:A:H5'	2.48	0.44
22:BA:563:A:N7	22:BA:2018:G:C6	2.85	0.44
22:BA:597:G:C5	22:BA:598:U:C4	3.05	0.44
22:BA:609:A:H2'	22:BA:610:C:O4'	2.17	0.44
22:BA:1047:G:N2	22:BA:1110:G:C4	2.86	0.44
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.48	0.44
22:BA:1718:G:C2	22:BA:1719:G:C8	3.05	0.44
22:BA:2518:A:H2'	22:BA:2518:A:N3	2.31	0.44
24:BC:187:ASP:N	24:BC:187:ASP:OD1	2.50	0.44
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.18	0.44
1:CA:149:A:C2	1:CA:150:U:C2	3.06	0.44
1:CA:179:A:C5	1:CA:180:U:C4	3.06	0.44
1:CA:246:A:N3	1:CA:279:A:N6	2.66	0.44
1:CA:441:A:C2	1:CA:497:G:C5	3.06	0.44
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1397:C:H3'	1:CA:1398:A:H5"	2.00	0.44
1:CA:1516:G:C2	1:CA:1518:A:OP2	2.71	0.44
3:CC:162:ILE:HD12	3:CC:162:ILE:O	2.18	0.44
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.99	0.44
6:CF:38:ARG:NH1	6:CF:63:ASN:HB2	2.33	0.44
6:CF:54:LEU:O	6:CF:55:HIS:O	2.36	0.44
13:CM:22:ILE:HB	13:CM:25:VAL:CG1	2.48	0.44
15:CO:33:THR:HA	15:CO:63:ARG:HH11	1.82	0.44
18:CR:35:GLU:HB2	21:CU:19:PHE:HZ	1.80	0.44
22:DA:54:G:C6	22:DA:55:G:N7	2.86	0.44
22:DA:78:U:OP2	46:DY:2:LYS:HD3	2.16	0.44
22:DA:543:G:C2	22:DA:551:G:C4	3.06	0.44
22:DA:630:G:H3'	22:DA:631:A:C5'	2.48	0.44
22:DA:633:A:H5"	33:DL:70:LYS:HD3	1.99	0.44
22:DA:1045:C:C4'	22:DA:1046:A:H5'	2.48	0.44
22:DA:1045:C:H41	22:DA:1111:A:H2'	1.81	0.44
22:DA:1096:A:C6	22:DA:1097:U:C5	3.06	0.44
22:DA:1470:A:C2'	22:DA:1471:G:O5'	2.66	0.44
22:DA:1480:C:C4	22:DA:1481:U:C4	3.06	0.44
22:DA:1588:G:H3'	22:DA:1589:U:C6	2.53	0.44
22:DA:1702:G:C6	22:DA:1703:G:C5	3.05	0.44
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.30	0.44
22:DA:2213:U:H4'	22:DA:2214:C:OP2	2.17	0.44
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.51	0.44
22:DA:2325:G:C6	22:DA:2326:C:N4	2.86	0.44
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.18	0.44
22:DA:2430:A:P	57:DA:3344:HOH:O	2.76	0.44
22:DA:2749:A:OP1	28:DG:2:SER:HB3	2.18	0.44
22:DA:2835:A:H4'	22:DA:2836:U:OP1	2.18	0.44
22:DA:2897:U:H2'	22:DA:2898:U:C6	2.52	0.44
25:DD:168:GLU:O	25:DD:170:VAL:HG22	2.18	0.44
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.81	0.44
27:DF:143:TYR:O	27:DF:146:VAL:HG22	2.18	0.44
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.44
31:DJ:29:ALA:HA	31:DJ:105:VAL:HG22	1.98	0.44
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.56	0.44
35:DN:24:MET:HE3	35:DN:44:LEU:HD22	2.00	0.44
37:DP:43:PHE:CD2	37:DP:72:ARG:HD3	2.53	0.44
39:DR:61:ALA:HB2	39:DR:98:ILE:HA	2.00	0.44
42:DU:53:ASN:OD1	42:DU:53:ASN:N	2.50	0.44
43:DV:30:ILE:HD11	43:DV:63:ILE:HD12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:104:G:O2'	1:AA:105:G:H5'	2.18	0.44
1:AA:511:C:C2	1:AA:512:U:C5	3.06	0.44
1:AA:945:G:C2	1:AA:946:A:C8	3.05	0.44
1:AA:956:U:C5	1:AA:957:U:C5	3.05	0.44
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.53	0.44
2:AB:67:ILE:HG21	2:AB:69:PHE:CE2	2.53	0.44
2:AB:90:PHE:CD2	2:AB:90:PHE:N	2.85	0.44
5:AE:41:ASP:OD1	5:AE:41:ASP:C	2.56	0.44
7:AG:133:THR:O	7:AG:136:LYS:HB3	2.18	0.44
8:AH:32:LEU:CD1	8:AH:32:LEU:C	2.86	0.44
9:AI:83:ILE:O	9:AI:87:LEU:HD13	2.17	0.44
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.51	0.44
11:AK:16:VAL:HG12	11:AK:77:TYR:HB3	1.99	0.44
11:AK:21:ALA:HB2	11:AK:82:LEU:HD12	2.00	0.44
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.99	0.44
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.38	0.44
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.17	0.44
22:BA:109:C:H2'	22:BA:110:G:O4'	2.18	0.44
22:BA:372:G:OP2	45:BX:61:LYS:HD3	2.18	0.44
22:BA:962:G:O2'	22:BA:963:U:H5'	2.17	0.44
22:BA:974:G:O4'	22:BA:1186:G:N2	2.51	0.44
22:BA:991:C:N4	22:BA:1185:G:O6	2.51	0.44
22:BA:1040:A:C2	22:BA:1116:G:N1	2.86	0.44
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.53	0.44
22:BA:1661:G:H2'	22:BA:1662:U:H6	1.82	0.44
22:BA:2267:A:C2	57:BA:3511:HOH:O	2.56	0.44
25:BD:37:VAL:HG12	25:BD:38:LYS:N	2.33	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
30:BI:80:LEU:HD13	30:BI:136:MET:SD	2.57	0.44
32:BK:60:ALA:HB1	32:BK:84:CYS:HB2	2.00	0.44
32:BK:113:MET:O	32:BK:116:ILE:HG13	2.16	0.44
42:BU:7:ARG:O	42:BU:8:ASP:O	2.36	0.44
1:CA:309:A:H1'	1:CA:608:A:C2	2.53	0.44
1:CA:375:U:C2	1:CA:376:G:C8	3.06	0.44
1:CA:429:U:H4'	1:CA:430:A:OP1	2.14	0.44
1:CA:663:A:H2'	1:CA:664:G:O4'	2.17	0.44
1:CA:1130:A:C1'	1:CA:1146:A:C2	3.01	0.44
1:CA:1220:G:H4'	19:CS:34:TRP:O	2.17	0.44
3:CC:121:THR:CB	3:CC:187:SER:OG	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:150:PRO:C	5:CE:152:MET:N	2.71	0.44
8:CH:40:LEU:O	8:CH:45:PHE:HB2	2.18	0.44
8:CH:55:THR:C	8:CH:57:PRO:HD3	2.38	0.44
9:CI:8:GLY:N	9:CI:86:ALA:HB2	2.33	0.44
14:CN:30:ILE:O	14:CN:33:ASP:HB3	2.16	0.44
17:CQ:12:VAL:HG12	17:CQ:13:VAL:N	2.32	0.44
18:CR:45:THR:O	18:CR:45:THR:OG1	2.31	0.44
19:CS:53:ASN:HB3	19:CS:75:ALA:HB1	1.99	0.44
22:DA:118:A:C8	22:DA:119:A:N7	2.85	0.44
22:DA:244:A:H5"	33:DL:67:THR:HG21	1.99	0.44
22:DA:481:G:C4	22:DA:507:A:C2	3.06	0.44
22:DA:693:A:H2'	22:DA:694:U:O4'	2.17	0.44
22:DA:696:G:N1	22:DA:767:U:C2	2.86	0.44
22:DA:747:U:O2	22:DA:2014:A:H1'	2.18	0.44
22:DA:758:C:O2'	22:DA:1981:A:N3	2.38	0.44
22:DA:798:G:C2	22:DA:799:G:C5	3.06	0.44
22:DA:1056:G:C6	22:DA:1102:C:OP2	2.71	0.44
22:DA:1128:G:C4	22:DA:1129:A:C2	3.06	0.44
22:DA:1257:C:N4	22:DA:1258:U:O4	2.51	0.44
22:DA:1286:A:N6	22:DA:1329:U:O2'	2.40	0.44
22:DA:1437:C:N3	22:DA:1438:U:C4	2.86	0.44
22:DA:1691:C:C4	22:DA:1692:U:C4	3.06	0.44
22:DA:2024:G:C2	22:DA:2040:G:N3	2.86	0.44
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.99	0.44
26:DE:40:ARG:NH2	26:DE:92:HIS:CD2	2.86	0.44
27:DF:42:GLU:HB2	27:DF:49:LEU:HD23	1.99	0.44
28:DG:89:LEU:HD13	28:DG:89:LEU:N	2.32	0.44
34:DM:58:LYS:O	34:DM:60:GLN:N	2.46	0.44
36:DO:70:ALA:O	36:DO:74:VAL:HB	2.17	0.44
36:DO:80:GLU:O	36:DO:84:GLU:HG3	2.17	0.44
41:DT:37:ASP:OD2	41:DT:38:ALA:N	2.51	0.44
41:DT:91:GLN:O	41:DT:91:GLN:NE2	2.48	0.44
42:DU:72:ILE:HG12	42:DU:83:VAL:HG23	2.00	0.44
1:AA:69:G:O6	1:AA:98:A:N6	2.51	0.44
1:AA:221:C:C2	1:AA:222:C:C5	3.06	0.44
1:AA:239:U:H5"	1:AA:240:G:OP2	2.17	0.44
1:AA:307:C:H5"	1:AA:308:C:OP2	2.18	0.44
1:AA:375:U:C2	1:AA:376:G:C8	3.06	0.44
1:AA:417:G:C6	1:AA:418:C:C4	3.06	0.44
1:AA:560:A:H5'	1:AA:566:G:N2	2.33	0.44
1:AA:569:C:O2	1:AA:569:C:H2'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:773:G:H2'	1:AA:774:G:O4'	2.18	0.44
1:AA:830:G:H2'	1:AA:831:A:H8	1.83	0.44
1:AA:1050:G:C2	1:AA:1209:C:O2	2.71	0.44
1:AA:1093:A:H2'	1:AA:1095:U:OP1	2.18	0.44
1:AA:1302:C:N3	13:AM:17:ILE:HD11	2.33	0.44
2:AB:193:PRO:O	2:AB:195:GLY:N	2.44	0.44
3:AC:14:ILE:O	3:AC:16:LYS:N	2.51	0.44
7:AG:73:VAL:HG12	7:AG:90:GLU:CG	2.48	0.44
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.33	0.44
11:AK:108:THR:HG22	11:AK:109:ASN:ND2	2.32	0.44
13:AM:85:CYS:O	13:AM:89:LEU:HD12	2.17	0.44
14:AN:46:LEU:C	14:AN:46:LEU:HD12	2.38	0.44
15:AO:25:THR:HG22	15:AO:26:GLU:N	2.33	0.44
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.18	0.44
20:AT:57:ILE:HD12	20:AT:60:ARG:HD2	1.98	0.44
22:BA:478:A:C6	22:BA:480:A:N6	2.86	0.44
22:BA:819:A:H1'	22:BA:1189:A:N1	2.33	0.44
22:BA:973:A:H5'	22:BA:1188:U:C1'	2.48	0.44
22:BA:973:A:H5'	22:BA:1188:U:H1'	2.00	0.44
22:BA:1420:A:O2'	22:BA:1421:G:H5'	2.18	0.44
22:BA:1465:G:C6	22:BA:1466:U:N3	2.86	0.44
22:BA:1590:A:C2	22:BA:1591:A:C5	3.05	0.44
22:BA:1627:G:C2	22:BA:1628:G:C8	3.06	0.44
22:BA:1649:G:C6	22:BA:2009:A:N1	2.86	0.44
22:BA:1876:A:N1	22:BA:1877:A:C4	2.86	0.44
22:BA:1915:U:H2'	22:BA:1916:A:O4'	2.18	0.44
22:BA:2403:C:C4	22:BA:2415:G:N1	2.86	0.44
22:BA:2756:U:H5"	52:B4:19:ARG:HG2	2.00	0.44
24:BC:78:VAL:HG21	24:BC:110:LEU:CD2	2.47	0.44
25:BD:4:LEU:HD12	25:BD:32:ASN:CG	2.38	0.44
25:BD:100:LEU:O	25:BD:100:LEU:HD12	2.18	0.44
27:BF:17:MET:O	27:BF:21:ASN:HA	2.18	0.44
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.33	0.44
28:BG:52:PHE:CD2	28:BG:52:PHE:N	2.86	0.44
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.98	0.44
33:BL:29:LYS:CG	33:BL:30:THR:HG23	2.47	0.44
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.32	0.44
48:B0:13:ARG:O	48:B0:17:ARG:HG3	2.18	0.44
48:B0:48:TYR:CZ	48:B0:53:LYS:HD2	2.53	0.44
50:B2:11:LYS:HE2	57:B2:101:HOH:O	2.17	0.44
1:CA:75:G:C2	1:CA:96:U:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:77:A:C2	1:CA:93:U:N3	2.86	0.44
1:CA:517:G:C8	1:CA:531:U:C5	3.06	0.44
1:CA:673:A:O3'	6:CF:86:ARG:NH2	2.51	0.44
1:CA:728:A:OP1	15:CO:54:ARG:NH2	2.51	0.44
1:CA:1386:G:C2	1:CA:1387:G:C8	3.05	0.44
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.21	0.44
6:CF:40:GLU:HB2	6:CF:42:TRP:HE1	1.83	0.44
6:CF:71:ILE:HG22	6:CF:72:ASP:N	2.33	0.44
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.38	0.44
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.51	0.44
19:CS:30:PRO:HA	19:CS:48:THR:O	2.18	0.44
22:DA:279:A:N6	22:DA:361:G:H1'	2.33	0.44
22:DA:301:G:N3	22:DA:302:C:C2	2.86	0.44
22:DA:450:G:H2'	22:DA:451:U:H5"	2.00	0.44
22:DA:478:A:C2	22:DA:480:A:C4	3.06	0.44
22:DA:534:U:H5'	38:DQ:42:ALA:HB1	1.99	0.44
22:DA:545:U:O2	22:DA:545:U:O5'	2.35	0.44
22:DA:568:U:H2'	22:DA:570:G:OP2	2.18	0.44
22:DA:630:G:H5"	22:DA:631:A:OP2	2.17	0.44
22:DA:945:A:N7	22:DA:2448:A:C2	2.86	0.44
22:DA:1034:G:C6	22:DA:1035:U:N3	2.86	0.44
22:DA:1262:A:N3	22:DA:1262:A:H2'	2.33	0.44
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.18	0.44
22:DA:1490:A:H2'	22:DA:1490:A:N3	2.32	0.44
22:DA:1651:G:C2	22:DA:2007:U:C2	3.06	0.44
22:DA:1668:A:C4	22:DA:1674:G:N7	2.86	0.44
22:DA:1721:G:H2'	22:DA:1738:G:H22	1.83	0.44
22:DA:2043:C:C2	22:DA:2044:C:C5	3.06	0.44
22:DA:2247:A:H3'	57:DA:3504:HOH:O	2.17	0.44
22:DA:2491:U:H5'	22:DA:2570:G:C5'	2.48	0.44
24:DC:35:GLU:O	24:DC:35:GLU:HG3	2.18	0.44
24:DC:74:ILE:HG22	24:DC:75:PRO:O	2.18	0.44
30:DI:57:VAL:HG21	30:DI:69:PHE:HB2	2.00	0.44
37:DP:4:ILE:O	37:DP:8:LEU:HB2	2.17	0.44
41:DT:65:GLY:O	41:DT:66:LYS:C	2.56	0.44
42:DU:7:ARG:CG	42:DU:8:ASP:H	2.29	0.44
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.18	0.44
46:DY:9:LYS:HG2	46:DY:10:SER:N	2.33	0.44
1:AA:223:A:C6	1:AA:224:U:O4	2.71	0.43
1:AA:439:U:H2'	1:AA:440:C:O5'	2.17	0.43
1:AA:464:U:N3	1:AA:466:A:H5"	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:582:C:C4	1:AA:583:A:N7	2.86	0.43
1:AA:818:G:O2'	1:AA:819:A:H5'	2.18	0.43
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.47	0.43
1:AA:1202:U:H1'	14:AN:69:ARG:HD2	1.99	0.43
1:AA:1249:C:H5"	9:AI:38:TYR:OH	2.17	0.43
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.27	0.43
3:AC:143:ARG:CG	3:AC:144:LEU:HD13	2.48	0.43
7:AG:103:TRP:CH2	7:AG:141:VAL:HG21	2.53	0.43
10:AJ:49:PHE:CD2	14:AN:77:PHE:CE1	3.05	0.43
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.47	0.43
13:AM:107:ARG:HH11	13:AM:107:ARG:CG	2.29	0.43
15:AO:69:TYR:O	15:AO:72:ARG:HB3	2.18	0.43
17:AQ:46:VAL:HG11	17:AQ:61:ILE:HG13	2.00	0.43
18:AR:72:ASP:OD2	21:AU:4:ILE:HG13	2.18	0.43
22:BA:278:A:N1	22:BA:362:A:C8	2.86	0.43
22:BA:587:C:H3'	22:BA:588:U:H5'	2.00	0.43
22:BA:669:G:N3	22:BA:669:G:C2'	2.80	0.43
22:BA:695:G:C6	22:BA:696:G:N7	2.86	0.43
22:BA:813:U:C2	22:BA:1195:G:N2	2.86	0.43
22:BA:864:G:O2'	22:BA:865:C:H5'	2.18	0.43
22:BA:878:A:H5'	22:BA:879:G:OP2	2.18	0.43
22:BA:1047:G:C2	22:BA:1110:G:C4	3.06	0.43
22:BA:1072:C:OP2	22:BA:1075:C:N4	2.51	0.43
22:BA:1250:G:H5'	38:BQ:6:ARG:HD3	2.00	0.43
22:BA:1483:G:C2	22:BA:1484:U:C2	3.06	0.43
22:BA:1492:G:C6	22:BA:1499:C:N3	2.86	0.43
22:BA:1538:G:OP2	22:BA:1538:G:H8	2.00	0.43
22:BA:2392:A:C8	22:BA:2429:G:C6	3.06	0.43
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.18	0.43
22:BA:2619:C:H2'	22:BA:2620:C:H6	1.82	0.43
22:BA:2892:G:H5"	22:BA:2894:G:N2	2.33	0.43
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.57	0.43
24:BC:174:LEU:O	24:BC:181:MET:HA	2.17	0.43
25:BD:101:PHE:CE2	25:BD:203:VAL:CG1	3.00	0.43
28:BG:38:ASN:O	28:BG:39:ASP:CB	2.66	0.43
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.99	0.43
31:BJ:70:THR:C	31:BJ:71:ASP:OD2	2.56	0.43
37:BP:46:VAL:O	37:BP:61:VAL:HA	2.18	0.43
39:BR:53:PHE:N	39:BR:53:PHE:CD1	2.83	0.43
45:BX:64:ILE:CD1	45:BX:68:LEU:HG	2.48	0.43
1:CA:15:G:C2	1:CA:16:A:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:222:C:C2	1:CA:223:A:C8	3.06	0.43
1:CA:373:A:N3	1:CA:374:A:C8	2.86	0.43
1:CA:688:G:O2'	1:CA:704:A:N1	2.46	0.43
1:CA:772:U:O2'	1:CA:773:G:H5'	2.17	0.43
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.54	0.43
1:CA:1489:G:C2'	1:CA:1490:U:H5'	2.48	0.43
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.17	0.43
2:CB:135:LEU:C	2:CB:137:ARG:N	2.71	0.43
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.57	0.43
4:CD:124:MET:CE	4:CD:146:ARG:HD2	2.47	0.43
4:CD:188:ARG:O	4:CD:191:LEU:HD12	2.18	0.43
5:CE:35:ALA:O	5:CE:50:TYR:O	2.37	0.43
8:CH:88:ARG:O	8:CH:89:LYS:HB3	2.18	0.43
17:CQ:28:PHE:CE1	17:CQ:37:PHE:O	2.71	0.43
17:CQ:55:ILE:HG12	17:CQ:56:GLY:N	2.33	0.43
22:DA:562:U:H2'	22:DA:572:A:O4'	2.18	0.43
22:DA:563:A:C6	22:DA:564:C:N3	2.85	0.43
22:DA:630:G:C5'	22:DA:631:A:OP2	2.66	0.43
22:DA:699:A:H2'	22:DA:700:G:C5'	2.47	0.43
22:DA:1064:C:O4'	30:DI:90:SER:HB2	2.18	0.43
22:DA:1361:G:C5	22:DA:1362:C:C5	3.06	0.43
22:DA:1361:G:C6	22:DA:1362:C:C5	3.06	0.43
22:DA:1581:G:C4	22:DA:1582:C:C5	3.06	0.43
22:DA:1655:A:C6	22:DA:1656:C:C2	3.05	0.43
22:DA:2222:C:H2'	22:DA:2223:G:O5'	2.18	0.43
22:DA:2298:A:C4	22:DA:2321:U:C5	3.06	0.43
22:DA:2323:G:C5	22:DA:2324:U:C5	3.06	0.43
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.18	0.43
25:DD:172:VAL:HG23	25:DD:194:PRO:HD3	1.99	0.43
26:DE:131:THR:O	26:DE:135:ALA:N	2.50	0.43
26:DE:140:ASP:C	26:DE:142:ALA:H	2.21	0.43
26:DE:147:LEU:HB3	26:DE:186:VAL:HG22	2.00	0.43
37:DP:53:ARG:CB	37:DP:56:HIS:HB2	2.48	0.43
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.48	0.43
38:DQ:71:GLN:OE1	38:DQ:71:GLN:HA	2.17	0.43
44:DW:40:GLN:OE1	44:DW:44:LYS:N	2.51	0.43
1:AA:33:A:H2'	1:AA:34:C:C6	2.53	0.43
1:AA:116:A:H2'	1:AA:117:G:C8	2.53	0.43
1:AA:246:A:N3	1:AA:247:G:H1'	2.32	0.43
1:AA:591:U:H2'	1:AA:592:G:H8	1.83	0.43
1:AA:922:G:C6	1:AA:923:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1367:C:P	9:AI:114:LYS:HZ1	2.40	0.43
2:AB:62:SER:O	2:AB:64:LYS:N	2.51	0.43
4:AD:78:GLU:O	4:AD:79:ALA:C	2.56	0.43
5:AE:46:VAL:HG11	5:AE:118:ALA:HB2	1.99	0.43
5:AE:111:MET:HE1	5:AE:125:ALA:HB1	2.00	0.43
7:AG:65:ALA:HA	7:AG:128:ALA:HA	2.00	0.43
8:AH:49:PHE:C	8:AH:49:PHE:HD1	2.21	0.43
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.48	0.43
22:BA:547:A:C8	22:BA:548:G:N3	2.86	0.43
22:BA:815:C:C2	22:BA:1193:G:C2	3.05	0.43
22:BA:816:C:C2	22:BA:1192:G:C2	3.06	0.43
22:BA:1845:G:C6	22:BA:1896:G:C6	3.05	0.43
22:BA:1926:U:O2	22:BA:1926:U:C2'	2.66	0.43
22:BA:2343:U:O2	22:BA:2343:U:H2'	2.17	0.43
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.18	0.43
22:BA:2379:G:H4'	36:BO:21:LEU:HD11	2.00	0.43
22:BA:2519:U:C5	22:BA:2541:A:C6	3.06	0.43
22:BA:2718:G:O3'	37:BP:96:LYS:HG3	2.18	0.43
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.47	0.43
24:BC:144:VAL:HG12	24:BC:145:GLU:O	2.17	0.43
24:BC:195:VAL:CG2	24:BC:196:GLY:N	2.81	0.43
24:BC:222:GLY:C	24:BC:224:ALA:H	2.22	0.43
25:BD:71:ALA:HA	25:BD:92:VAL:HG11	2.00	0.43
28:BG:173:GLU:HA	28:BG:173:GLU:OE1	2.17	0.43
40:BS:83:LYS:HD2	40:BS:97:LEU:HD11	2.00	0.43
1:CA:190:A:H2'	1:CA:191:G:O4'	2.17	0.43
1:CA:211:G:O2'	1:CA:212:G:O4'	2.36	0.43
1:CA:451:A:H4'	1:CA:452:A:O5'	2.17	0.43
1:CA:575:G:N2	1:CA:881:G:H1'	2.33	0.43
1:CA:802:A:C2	1:CA:803:G:H1'	2.53	0.43
1:CA:823:C:O2'	1:CA:824:G:H5'	2.18	0.43
1:CA:841:C:N3	1:CA:843:U:C5	2.86	0.43
1:CA:844:G:OP1	1:CA:844:G:H3'	2.18	0.43
1:CA:926:G:C6	1:CA:1505:G:C6	3.05	0.43
1:CA:996:A:H2'	1:CA:997:U:C6	2.53	0.43
1:CA:1048:G:H4'	14:CN:3:LYS:CE	2.49	0.43
1:CA:1055:A:C6	1:CA:1206:G:C4	3.06	0.43
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.52	0.43
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.18	0.43
3:CC:34:ASP:O	3:CC:38:LYS:HB2	2.17	0.43
4:CD:73:ARG:O	4:CD:76:TYR:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:12:ARG:HG3	9:CI:12:ARG:O	2.16	0.43
11:CK:92:GLY:O	11:CK:94:GLU:N	2.51	0.43
11:CK:109:ASN:HB3	21:CU:6:VAL:O	2.18	0.43
12:CL:63:VAL:HG21	12:CL:95:TYR:CD2	2.54	0.43
18:CR:23:TYR:HA	18:CR:58:ALA:HB1	2.00	0.43
19:CS:58:VAL:CG1	19:CS:75:ALA:HB2	2.48	0.43
21:CU:43:THR:O	21:CU:46:LYS:HB3	2.17	0.43
21:CU:53:VAL:HG13	21:CU:54:LYS:H	1.83	0.43
22:DA:199:A:N6	22:DA:2434:A:C5	2.87	0.43
22:DA:232:G:N1	22:DA:420:C:OP1	2.46	0.43
22:DA:293:U:C5'	22:DA:294:A:OP2	2.66	0.43
22:DA:303:G:H2'	22:DA:304:U:C6	2.53	0.43
22:DA:334:C:OP1	22:DA:335:C:N4	2.51	0.43
22:DA:971:G:H2'	22:DA:972:A:O4'	2.18	0.43
22:DA:1070:A:C2	22:DA:1097:U:O2'	2.70	0.43
22:DA:1801:A:C4	24:DC:262:ARG:NH2	2.85	0.43
22:DA:1936:A:OP1	22:DA:1937:A:H5'	2.18	0.43
22:DA:2100:G:C5	22:DA:2190:G:C6	3.06	0.43
22:DA:2298:A:C4	22:DA:2321:U:H5	2.36	0.43
22:DA:2497:A:N3	22:DA:2498:C:N4	2.66	0.43
22:DA:2551:C:H2'	22:DA:2552:U:C6	2.52	0.43
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.48	0.43
22:DA:2718:G:O3'	37:DP:96:LYS:HG3	2.18	0.43
22:DA:2873:A:H1'	35:DN:4:ARG:O	2.18	0.43
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.71	0.43
26:DE:8:ALA:O	26:DE:9:GLN:HB2	2.17	0.43
26:DE:25:GLU:HG2	33:DL:6:LEU:HD23	2.00	0.43
30:DI:80:LEU:HD23	30:DI:84:ALA:CB	2.48	0.43
30:DI:127:ARG:HA	30:DI:130:GLU:HB2	1.98	0.43
31:DJ:7:LYS:O	31:DJ:11:VAL:HG22	2.18	0.43
33:DL:23:ILE:HG12	39:DR:82:HIS:CD2	2.53	0.43
33:DL:56:PRO:O	33:DL:60:ARG:HB3	2.18	0.43
35:DN:31:HIS:O	35:DN:33:ILE:HG22	2.18	0.43
35:DN:103:ARG:CB	35:DN:110:MET:HE3	2.48	0.43
36:DO:110:ALA:HB3	36:DO:117:PHE:HE2	1.84	0.43
1:AA:107:G:C2'	1:AA:108:G:H5"	2.48	0.43
1:AA:259:G:N2	1:AA:260:G:H1'	2.33	0.43
1:AA:655:A:C2	1:AA:656:G:C4	3.06	0.43
1:AA:663:A:C6	1:AA:743:A:N1	2.86	0.43
1:AA:698:G:C6	1:AA:699:C:C4	3.06	0.43
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1077:G:N2	1:AA:1081:A:C4	2.87	0.43
1:AA:1098:C:H2'	1:AA:1099:G:O4'	2.18	0.43
1:AA:1140:C:O2	1:AA:1141:C:C5	2.70	0.43
1:AA:1342:C:O2'	9:AI:126:GLN:CG	2.66	0.43
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.99	0.43
2:AB:57:LEU:O	2:AB:60:ILE:HG13	2.18	0.43
2:AB:184:PHE:N	2:AB:184:PHE:CD2	2.86	0.43
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	2.00	0.43
9:AI:50:GLN:NE2	9:AI:103:PHE:CZ	2.86	0.43
10:AJ:65:TYR:HB2	14:AN:96:LEU:HD11	2.00	0.43
14:AN:43:ASN:C	14:AN:45:VAL:N	2.71	0.43
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.18	0.43
17:AQ:61:ILE:CG2	17:AQ:73:TRP:CE3	3.02	0.43
18:AR:25:ASP:O	18:AR:26:ILE:C	2.54	0.43
22:BA:13:A:N6	22:BA:525:U:C5	2.86	0.43
22:BA:416:U:H2'	22:BA:417:C:O4'	2.18	0.43
22:BA:554:U:C2'	22:BA:555:G:H5'	2.48	0.43
22:BA:768:G:C2'	22:BA:769:U:O5'	2.66	0.43
22:BA:790:U:O2'	22:BA:791:C:OP2	2.31	0.43
22:BA:812:C:O2	22:BA:812:C:H2'	2.19	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	2.00	0.43
22:BA:1225:G:C2	22:BA:1226:A:N1	2.86	0.43
22:BA:1358:G:N2	22:BA:1374:G:C6	2.87	0.43
22:BA:1374:G:C5	22:BA:1375:U:C5	3.06	0.43
22:BA:1505:A:H2'	22:BA:1506:U:O4'	2.18	0.43
22:BA:1665:A:H2'	22:BA:1666:G:O4'	2.18	0.43
22:BA:1915:U:C2	22:BA:1916:A:C8	3.06	0.43
22:BA:2048:G:H2'	22:BA:2049:G:O5'	2.18	0.43
22:BA:2409:G:C6	22:BA:2410:G:C5	3.06	0.43
25:BD:8:LYS:HE2	25:BD:193:VAL:HG22	2.00	0.43
27:BF:38:MET:CE	27:BF:152:LEU:HD13	2.48	0.43
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.83	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
30:BI:112:THR:O	30:BI:113:LYS:C	2.56	0.43
40:BS:54:ALA:O	40:BS:55:ILE:C	2.57	0.43
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.38	0.43
46:BY:46:VAL:O	46:BY:47:ARG:C	2.55	0.43
47:BZ:3:LYS:HE3	47:BZ:3:LYS:N	2.33	0.43
1:CA:57:G:C5	1:CA:58:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:81:A:C2	1:CA:89:U:C2	3.06	0.43
1:CA:111:G:C6	1:CA:330:C:N4	2.84	0.43
1:CA:198:G:H2'	1:CA:199:A:C5'	2.48	0.43
1:CA:198:G:N2	1:CA:199:A:H1'	2.33	0.43
1:CA:541:G:H2'	1:CA:542:G:O4'	2.17	0.43
1:CA:575:G:O2'	1:CA:821:G:OP2	2.13	0.43
1:CA:867:G:H2'	1:CA:868:C:C6	2.54	0.43
1:CA:976:G:C2	1:CA:1363:A:C2	3.06	0.43
1:CA:1078:U:C2	5:CE:90:THR:HG21	2.53	0.43
1:CA:1078:U:C5	1:CA:1079:G:C5	3.05	0.43
1:CA:1169:A:C2	1:CA:1170:A:C4	3.06	0.43
1:CA:1349:A:C2	1:CA:1374:A:C4	3.06	0.43
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.18	0.43
4:CD:26:ARG:CG	4:CD:27:ALA:N	2.67	0.43
4:CD:97:ARG:O	4:CD:101:VAL:HG23	2.19	0.43
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.80	0.43
7:CG:137:LYS:O	7:CG:141:VAL:HG23	2.18	0.43
8:CH:66:PHE:CD1	8:CH:66:PHE:C	2.89	0.43
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	1.99	0.43
9:CI:44:ALA:HB1	9:CI:47:VAL:HG21	2.00	0.43
14:CN:53:ARG:C	14:CN:55:SER:N	2.72	0.43
15:CO:27:VAL:O	15:CO:31:LEU:HD12	2.18	0.43
17:CQ:36:LYS:HG3	17:CQ:37:PHE:N	2.33	0.43
18:CR:25:ASP:C	18:CR:27:ALA:H	2.21	0.43
19:CS:80:TYR:CG	19:CS:81:ARG:N	2.87	0.43
22:DA:150:U:H2'	22:DA:151:C:C6	2.54	0.43
22:DA:223:A:C5	22:DA:422:A:C8	3.05	0.43
22:DA:495:G:H4'	40:DS:4:ILE:O	2.18	0.43
22:DA:510:C:C2'	22:DA:511:U:H5'	2.48	0.43
22:DA:947:A:O2'	22:DA:984:A:H2	2.01	0.43
22:DA:952:G:C6	22:DA:966:G:N1	2.87	0.43
22:DA:1208:C:C4	22:DA:1209:U:C5	3.06	0.43
22:DA:1224:U:C4	22:DA:1225:G:C6	3.07	0.43
22:DA:1303:G:H1'	22:DA:1641:A:N1	2.33	0.43
22:DA:1309:G:H2'	22:DA:1310:G:O4'	2.19	0.43
22:DA:1361:G:C5	22:DA:1371:G:N2	2.86	0.43
22:DA:1362:C:C2'	22:DA:1363:C:H5'	2.48	0.43
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.19	0.43
22:DA:2024:G:C4	22:DA:2040:G:N2	2.87	0.43
22:DA:2118:U:H5'	22:DA:2119:A:OP1	2.18	0.43
22:DA:2514:U:H2'	22:DA:2515:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2581:G:C1'	22:DA:2582:G:N7	2.81	0.43
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.18	0.43
34:DM:56:ALA:C	34:DM:58:LYS:N	2.70	0.43
35:DN:38:LEU:HD11	35:DN:42:LYS:HE3	2.00	0.43
35:DN:103:ARG:NE	35:DN:110:MET:CE	2.81	0.43
36:DO:31:THR:HG22	36:DO:33:ARG:O	2.18	0.43
1:AA:64:G:N7	1:AA:99:C:C4	2.86	0.43
1:AA:452:A:N7	1:AA:453:G:C4	2.86	0.43
1:AA:971:G:C8	1:AA:1365:G:H4'	2.53	0.43
6:AF:46:GLN:HB2	6:AF:56:LYS:CE	2.48	0.43
9:AI:117:GLY:C	9:AI:118:LEU:HD12	2.38	0.43
17:AQ:59:VAL:CG2	17:AQ:60:GLU:N	2.81	0.43
22:BA:13:A:N3	22:BA:15:G:C6	2.86	0.43
22:BA:201:C:H2'	22:BA:202:U:H5'	2.00	0.43
22:BA:632:A:H2'	22:BA:633:A:C8	2.53	0.43
22:BA:1063:G:N3	30:BI:136:MET:HA	2.33	0.43
22:BA:1106:G:C2	22:BA:1107:G:C4	3.06	0.43
22:BA:1132:U:C3'	22:BA:1133:A:H5"	2.48	0.43
22:BA:1237:A:H4'	22:BA:1238:G:OP1	2.19	0.43
22:BA:1429:G:H2'	22:BA:1430:G:C8	2.52	0.43
22:BA:1829:A:C8	22:BA:1830:C:C5	3.07	0.43
22:BA:1863:G:N2	22:BA:1880:U:H1'	2.34	0.43
22:BA:1972:G:H2'	22:BA:1973:G:C8	2.52	0.43
22:BA:2056:G:C5	22:BA:2577:A:C4	3.07	0.43
22:BA:2093:G:H4'	29:BH:25:TYR:N	2.33	0.43
23:BB:81:G:C2'	23:BB:82:U:H5'	2.48	0.43
24:BC:76:ALA:HA	24:BC:95:LEU:O	2.19	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
35:BN:51:LEU:O	35:BN:52:ILE:C	2.57	0.43
35:BN:103:ARG:CZ	35:BN:110:MET:HE2	2.48	0.43
36:BO:27:VAL:O	36:BO:27:VAL:CG2	2.65	0.43
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.48	0.43
47:BZ:21:LYS:O	47:BZ:24:LEU:N	2.51	0.43
48:B0:12:LYS:HA	48:B0:12:LYS:HD2	1.82	0.43
1:CA:55:A:N6	1:CA:56:U:C2	2.86	0.43
1:CA:130:A:C2	1:CA:264:C:C2	3.06	0.43
1:CA:327:A:N1	1:CA:329:A:C2	2.86	0.43
1:CA:731:G:H5'	1:CA:766:A:H4'	2.00	0.43
1:CA:745:G:H1'	1:CA:836:G:O2'	2.18	0.43
1:CA:756:C:H2'	1:CA:757:U:H5'	2.01	0.43
1:CA:884:U:H4'	1:CA:885:G:H5"	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:978:A:P	1:CA:1362:A:H61	2.41	0.43
1:CA:1137:C:O2	1:CA:1137:C:O4'	2.36	0.43
1:CA:1222:G:H5"	19:CS:78:ARG:NH1	2.34	0.43
1:CA:1359:C:O2'	1:CA:1361:G:N7	2.50	0.43
2:CB:139:ARG:HD2	2:CB:140:GLU:N	2.32	0.43
4:CD:24:GLY:O	4:CD:161:LEU:HD11	2.18	0.43
4:CD:98:LEU:O	4:CD:101:VAL:N	2.51	0.43
4:CD:206:LYS:O	4:CD:206:LYS:CD	2.66	0.43
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	2.01	0.43
9:CI:19:VAL:HG21	9:CI:83:ILE:N	2.33	0.43
13:CM:3:ARG:HA	13:CM:9:ILE:HG12	2.00	0.43
19:CS:6:LYS:HB2	19:CS:7:LYS:HG2	2.00	0.43
22:DA:89:A:C2	22:DA:90:U:C2	3.06	0.43
22:DA:533:G:H2'	22:DA:534:U:C6	2.53	0.43
22:DA:784:G:C6	22:DA:792:A:C4	3.07	0.43
22:DA:1338:G:O2'	22:DA:1392:A:N6	2.51	0.43
22:DA:1645:G:H5"	22:DA:1646:C:O4'	2.17	0.43
22:DA:1679:A:H2'	22:DA:1680:U:C6	2.53	0.43
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.18	0.43
22:DA:2283:C:H2'	22:DA:2284:A:O4'	2.19	0.43
22:DA:2307:G:N2	22:DA:2312:U:C2	2.86	0.43
22:DA:2787:C:O4'	25:DD:63:PRO:HA	2.19	0.43
24:DC:207:LYS:HE2	24:DC:213:TRP:CH2	2.54	0.43
25:DD:140:HIS:CD2	57:DD:302:HOH:O	2.66	0.43
26:DE:1:MET:HG3	26:DE:14:VAL:CG2	2.49	0.43
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.43
33:DL:122:VAL:HB	33:DL:142:ILE:HG12	2.00	0.43
35:DN:59:SER:O	35:DN:63:ARG:HB2	2.19	0.43
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.99	0.43
39:DR:41:ILE:HD13	39:DR:103:ALA:HA	1.99	0.43
42:DU:5:ILE:HD13	42:DU:67:VAL:HG13	2.01	0.43
42:DU:40:ASN:HB3	42:DU:63:ALA:HB3	2.00	0.43
42:DU:44:LYS:CG	42:DU:45:HIS:N	2.81	0.43
42:DU:53:ASN:C	42:DU:55:PRO:HD3	2.39	0.43
1:AA:212:G:C2	1:AA:213:G:C5	3.07	0.43
1:AA:373:A:C8	1:AA:482:A:C8	3.06	0.43
1:AA:515:G:N2	1:AA:537:G:C4	2.86	0.43
1:AA:616:G:C2	1:AA:617:G:C5	3.06	0.43
1:AA:1078:U:O4'	5:AE:89:HIS:HE1	2.02	0.43
1:AA:1280:A:C3'	1:AA:1281:C:H5'	2.47	0.43
2:AB:33:GLY:HA3	2:AB:39:HIS:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:167:TRP:O	3:AC:168:TYR:CD1	2.71	0.43
9:AI:17:ALA:HB2	9:AI:67:VAL:CG2	2.48	0.43
10:AJ:27:GLU:HA	10:AJ:30:LYS:HE2	2.01	0.43
14:AN:23:LYS:O	14:AN:25:ALA:N	2.52	0.43
14:AN:47:LYS:HD3	19:AS:13:LEU:HD21	2.00	0.43
16:AP:3:THR:HG22	16:AP:4:ILE:N	2.34	0.43
17:AQ:21:ILE:HD13	17:AQ:48:ASP:OD1	2.18	0.43
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	2.00	0.43
21:AU:47:ARG:HG3	21:AU:47:ARG:O	2.18	0.43
22:BA:807:U:H2'	22:BA:808:G:O4'	2.18	0.43
22:BA:945:A:P	57:BA:3345:HOH:O	2.68	0.43
22:BA:1022:G:C5	22:BA:1140:C:C4	3.05	0.43
22:BA:1171:G:C2	22:BA:1172:C:C2	3.07	0.43
22:BA:1366:A:C6	22:BA:1367:A:C4	3.06	0.43
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.36	0.43
22:BA:2006:C:O2'	22:BA:2823:A:C2'	2.67	0.43
22:BA:2352:A:H2'	22:BA:2353:G:H5'	2.00	0.43
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.83	0.43
22:BA:2526:G:C2	22:BA:2538:C:O2	2.72	0.43
22:BA:2901:C:C4	22:BA:2902:C:C5	3.06	0.43
22:BA:2901:C:N4	22:BA:2902:C:C4	2.87	0.43
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.63	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
32:BK:34:GLY:N	32:BK:37:ASP:OD2	2.50	0.43
33:BL:56:PRO:HB2	33:BL:58:TYR:CD2	2.53	0.43
42:BU:74:ASN:O	42:BU:77:THR:N	2.48	0.43
43:BV:84:PRO:O	43:BV:85:LYS:HG2	2.18	0.43
45:BX:37:ARG:NH2	45:BX:46:PHE:CD1	2.86	0.43
1:CA:93:U:C2'	1:CA:94:G:H5"	2.49	0.43
1:CA:407:U:N3	1:CA:408:A:N7	2.66	0.43
1:CA:552:U:C4'	12:CL:83:ARG:HD2	2.49	0.43
1:CA:590:U:H2'	1:CA:591:U:C6	2.54	0.43
1:CA:939:G:N1	1:CA:940:C:N3	2.67	0.43
1:CA:1261:A:C2	1:CA:1262:C:C5	3.06	0.43
1:CA:1397:C:C3'	1:CA:1398:A:H5"	2.48	0.43
5:CE:157:ARG:C	5:CE:159:LYS:N	2.66	0.43
6:CF:88:MET:HE3	18:CR:64:TYR:CE2	2.54	0.43
6:CF:90:MET:O	6:CF:91:ARG:O	2.37	0.43
11:CK:52:PHE:CE2	11:CK:62:ALA:HB1	2.53	0.43
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.17	0.43
13:CM:73:ILE:HA	13:CM:76:SER:OG	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:70:LEU:CD1	15:CO:78:TYR:HA	2.48	0.43
22:DA:622:G:OP2	57:DA:3294:HOH:O	2.21	0.43
22:DA:1142:A:C2	22:DA:1144:A:C1'	3.01	0.43
22:DA:1310:G:N2	22:DA:1605:C:C2	2.87	0.43
22:DA:1606:C:O2'	22:DA:1607:C:P	2.76	0.43
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.54	0.43
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.31	0.43
23:DB:46:A:C5	23:DB:47:C:C5	3.07	0.43
28:DG:129:THR:O	28:DG:130:GLU:HG2	2.19	0.43
31:DJ:142:ILE:OXT	31:DJ:142:ILE:CG2	2.66	0.43
42:DU:82:ARG:O	42:DU:97:LYS:CG	2.66	0.43
1:AA:299:G:H2'	1:AA:300:A:C8	2.53	0.43
1:AA:340:U:C2	1:AA:341:C:C5	3.06	0.43
1:AA:437:U:C4	1:AA:438:U:C5	3.06	0.43
1:AA:821:G:C6	1:AA:822:U:C4	3.06	0.43
1:AA:1079:G:C2	1:AA:1080:A:C6	3.06	0.43
1:AA:1149:C:N4	1:AA:1150:A:N6	2.65	0.43
1:AA:1269:A:H2	1:AA:1312:G:N3	2.16	0.43
1:AA:1370:G:O5'	9:AI:111:VAL:HG21	2.18	0.43
1:AA:1452:C:H4'	1:AA:1453:G:H5"	2.00	0.43
1:AA:1505:G:C5'	1:AA:1506:U:O5'	2.67	0.43
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.91	0.43
2:AB:68:LEU:HD22	2:AB:70:VAL:HG23	2.00	0.43
2:AB:140:GLU:O	2:AB:144:LEU:CD2	2.66	0.43
4:AD:174:ASP:OD1	4:AD:177:LYS:HE2	2.18	0.43
8:AH:95:VAL:O	8:AH:96:MET:C	2.57	0.43
10:AJ:81:GLU:C	10:AJ:84:VAL:HG12	2.39	0.43
13:AM:15:ALA:O	13:AM:19:LEU:HD23	2.19	0.43
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.18	0.43
16:AP:43:ALA:O	16:AP:44:SER:OG	2.32	0.43
18:AR:22:ASP:OD2	18:AR:24:LYS:HB2	2.19	0.43
19:AS:42:PRO:HD3	19:AS:67:VAL:HG13	2.00	0.43
20:AT:35:VAL:HG12	20:AT:39:ILE:CD1	2.49	0.43
22:BA:243:U:C2'	22:BA:244:A:H5'	2.49	0.43
22:BA:338:G:N2	22:BA:339:U:H1'	2.33	0.43
22:BA:956:G:OP1	34:BM:86:LYS:HG3	2.18	0.43
22:BA:1661:G:C4	22:BA:1662:U:C6	3.07	0.43
22:BA:1837:C:C2	22:BA:1899:A:N6	2.87	0.43
22:BA:1868:C:H2'	22:BA:1869:G:O4'	2.18	0.43
22:BA:1920:C:C6	22:BA:1920:C:H3'	2.54	0.43
22:BA:2456:C:H2'	22:BA:2457:U:H5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
30:BI:72:LYS:N	30:BI:72:LYS:HD3	2.33	0.43
35:BN:92:GLY:HA2	35:BN:94:TYR:CZ	2.53	0.43
40:BS:40:ASN:O	40:BS:41:LYS:HG2	2.19	0.43
40:BS:69:LEU:HA	40:BS:108:SER:O	2.18	0.43
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.66	0.43
53:B5:46:ALA:HA	53:B5:211:ARG:HA	2.01	0.43
53:B5:212:SER:HA	53:B5:221:PRO:CB	2.48	0.43
1:CA:454:G:N2	1:CA:479:U:O2	2.50	0.43
1:CA:821:G:H2'	1:CA:822:U:C6	2.54	0.43
1:CA:1151:A:C2	1:CA:1152:A:C4	3.07	0.43
1:CA:1211:U:H2'	1:CA:1212:U:OP2	2.18	0.43
1:CA:1495:U:H2'	1:CA:1496:C:O4'	2.18	0.43
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.49	0.43
11:CK:15:GLN:HG3	11:CK:15:GLN:O	2.18	0.43
14:CN:17:ALA:HA	14:CN:21:PHE:HB2	2.01	0.43
18:CR:24:LYS:C	18:CR:26:ILE:H	2.20	0.43
21:CU:25:LYS:HD3	21:CU:26:ALA:H	1.84	0.43
22:DA:49:A:N6	22:DA:177:G:C4	2.86	0.43
22:DA:223:A:H2'	22:DA:408:G:N3	2.33	0.43
22:DA:266:G:N2	22:DA:427:U:H1'	2.34	0.43
22:DA:374:A:N6	22:DA:400:G:O2'	2.48	0.43
22:DA:528:A:N1	22:DA:2043:C:O5'	2.51	0.43
22:DA:982:C:H4'	22:DA:983:A:OP1	2.19	0.43
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.54	0.43
22:DA:1262:A:C6	22:DA:1263:U:N3	2.86	0.43
22:DA:1264:A:N7	22:DA:1265:A:C5	2.86	0.43
22:DA:1356:G:C2	22:DA:1357:C:C2	3.07	0.43
22:DA:1492:G:C2	22:DA:1499:C:O2	2.72	0.43
22:DA:1497:U:C2	22:DA:1578:U:OP1	2.71	0.43
22:DA:1973:G:C5	22:DA:1974:C:C5	3.06	0.43
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.31	0.43
22:DA:2078:C:N4	22:DA:2079:U:O4	2.51	0.43
22:DA:2127:G:O2'	22:DA:2173:A:C2	2.71	0.43
23:DB:78:A:C5	23:DB:99:A:C8	3.06	0.43
24:DC:265:LYS:O	24:DC:265:LYS:HD3	2.19	0.43
25:DD:55:LYS:NZ	25:DD:77:ARG:O	2.51	0.43
25:DD:151:THR:HG22	25:DD:152:PRO:HD3	1.99	0.43
33:DL:81:ASP:O	33:DL:82:LEU:CB	2.66	0.43
46:DY:1:MET:N	46:DY:4:LYS:HD3	2.33	0.43
51:D3:34:THR:CG2	51:D3:35:LYS:N	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:38:G:N1	1:AA:397:A:C2	2.87	0.43
1:AA:107:G:C3'	1:AA:108:G:H5"	2.48	0.43
1:AA:357:G:N3	1:AA:358:U:C6	2.87	0.43
1:AA:397:A:C6	1:AA:548:G:N7	2.87	0.43
1:AA:403:C:OP1	4:AD:134:SER:OG	2.27	0.43
1:AA:453:G:H2'	1:AA:454:G:O4'	2.18	0.43
1:AA:858:G:O6	1:AA:869:G:C8	2.71	0.43
1:AA:920:U:H1'	1:AA:1080:A:C2	2.54	0.43
1:AA:1050:G:N3	1:AA:1050:G:H2'	2.34	0.43
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.53	0.43
1:AA:1080:A:OP1	5:AE:52:LYS:HE3	2.18	0.43
1:AA:1167:A:N7	1:AA:1169:A:C6	2.87	0.43
1:AA:1277:C:O2'	1:AA:1279:G:H1'	2.18	0.43
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.52	0.43
1:AA:1299:A:C6	1:AA:1301:U:O2	2.72	0.43
2:AB:146:ASN:O	2:AB:147:SER:OG	2.31	0.43
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	2.00	0.43
4:AD:10:LYS:HA	4:AD:13:ARG:HG3	2.01	0.43
5:AE:65:GLU:HG2	5:AE:69:ARG:NH2	2.33	0.43
7:AG:31:MET:SD	7:AG:36:LYS:HD3	2.58	0.43
9:AI:9:THR:O	9:AI:17:ALA:O	2.36	0.43
11:AK:35:THR:OG1	11:AK:40:ASN:N	2.51	0.43
13:AM:20:THR:HA	13:AM:25:VAL:HG23	2.01	0.43
13:AM:65:VAL:HG23	13:AM:66:GLU:HB2	2.00	0.43
13:AM:66:GLU:O	13:AM:67:GLY:C	2.57	0.43
22:BA:116:C:C4	22:BA:117:G:C5	3.07	0.43
22:BA:244:A:OP2	51:B3:8:ARG:NH2	2.47	0.43
22:BA:653:U:H2'	22:BA:654:A:OP1	2.18	0.43
22:BA:685:A:H1'	22:BA:688:U:O4	2.19	0.43
22:BA:975:A:C4	22:BA:990:A:C5	3.07	0.43
22:BA:994:C:H3'	38:BQ:54:LYS:HE3	1.99	0.43
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.19	0.43
22:BA:1142:A:C2	22:BA:1144:A:O4'	2.72	0.43
22:BA:1171:G:N2	22:BA:1179:G:C6	2.86	0.43
22:BA:1430:G:C6	22:BA:1431:A:C5	3.06	0.43
22:BA:1687:G:N1	22:BA:1688:U:C4	2.87	0.43
22:BA:1773:A:N7	22:BA:1829:A:H1'	2.33	0.43
22:BA:2575:C:O2'	22:BA:2578:G:N7	2.40	0.43
22:BA:2627:G:N3	22:BA:2781:A:H2	2.15	0.43
22:BA:2684:U:C2'	22:BA:2685:G:O5'	2.67	0.43
23:BB:61:G:H2'	23:BB:62:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:8:PRO:CB	24:BC:14:ARG:HB2	2.48	0.43
25:BD:105:LYS:O	25:BD:177:VAL:HG12	2.18	0.43
26:BE:16:GLU:O	26:BE:20:GLY:N	2.52	0.43
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	2.01	0.43
28:BG:5:ALA:HB2	28:BG:66:GLY:CA	2.48	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
33:BL:87:GLY:O	33:BL:89:VAL:HG12	2.18	0.43
35:BN:2:ARG:NH2	35:BN:5:LYS:O	2.52	0.43
35:BN:52:ILE:O	35:BN:53:THR:C	2.56	0.43
35:BN:116:VAL:O	35:BN:116:VAL:HG13	2.18	0.43
38:BQ:41:LYS:HA	38:BQ:44:GLN:CG	2.45	0.43
38:BQ:68:ALA:HB2	38:BQ:99:ALA:HB1	2.01	0.43
38:BQ:91:ASP:O	38:BQ:95:LEU:HD12	2.18	0.43
39:BR:15:SER:O	39:BR:18:GLN:HB2	2.18	0.43
42:BU:98:SER:OG	42:BU:98:SER:O	2.37	0.43
46:BY:35:GLY:O	46:BY:36:GLN:O	2.37	0.43
53:B5:55:SER:OG	53:B5:203:GLU:CB	2.67	0.43
1:CA:102:G:H2'	1:CA:103:U:H6	1.84	0.43
1:CA:356:A:C2'	1:CA:357:G:H5'	2.47	0.43
1:CA:875:U:C4	1:CA:876:C:C5	3.06	0.43
1:CA:878:A:N6	1:CA:879:C:N4	2.67	0.43
1:CA:1072:G:OP1	5:CE:62:LYS:NZ	2.52	0.43
1:CA:1381:U:C5	1:CA:1382:C:H5	2.37	0.43
1:CA:1484:C:H2'	1:CA:1485:U:O4'	2.18	0.43
1:CA:1534:A:H4'	1:CA:1535:C:H2'	2.01	0.43
2:CB:50:PHE:HD1	2:CB:54:LEU:HD23	1.84	0.43
2:CB:208:ARG:O	2:CB:211:THR:N	2.52	0.43
5:CE:105:ILE:H	5:CE:122:ASN:HA	1.84	0.43
7:CG:114:LYS:HB2	7:CG:118:LEU:HD12	2.00	0.43
10:CJ:18:ILE:CG2	10:CJ:19:ASP:N	2.82	0.43
11:CK:122:ARG:NH1	21:CU:36:GLU:CG	2.81	0.43
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.47	0.43
20:CT:24:ARG:O	20:CT:27:MET:HG3	2.17	0.43
22:DA:136:G:H1	22:DA:143:C:H42	1.67	0.43
22:DA:269:C:N4	22:DA:270:A:N7	2.67	0.43
22:DA:503:A:C2	22:DA:506:G:C4	3.07	0.43
22:DA:717:C:N4	22:DA:718:A:N3	2.67	0.43
22:DA:738:G:C6	22:DA:739:A:C6	3.07	0.43
22:DA:1047:G:N2	22:DA:1110:G:O2'	2.52	0.43
22:DA:1290:C:C2	22:DA:1291:C:C6	3.06	0.43
22:DA:1350:C:N3	22:DA:1382:G:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1364:G:C8	45:DX:2:SER:HA	2.54	0.43
22:DA:1801:A:C5	22:DA:2203:U:C5	3.06	0.43
22:DA:1802:A:C2	22:DA:1803:A:C2	3.06	0.43
22:DA:2286:G:H5"	22:DA:2287:A:OP1	2.18	0.43
22:DA:2345:G:C4	22:DA:2347:C:C5	3.06	0.43
22:DA:2550:G:C5	22:DA:2551:C:C5	3.06	0.43
23:DB:27:C:OP1	36:DO:34:HIS:NE2	2.51	0.43
33:DL:90:VAL:N	33:DL:121:THR:O	2.51	0.43
36:DO:38:GLN:HA	36:DO:50:ALA:HA	2.01	0.43
36:DO:71:ALA:O	36:DO:75:GLY:N	2.51	0.43
42:DU:61:LYS:HD2	42:DU:61:LYS:HA	1.87	0.43
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.19	0.43
49:D1:26:ASN:O	49:D1:27:LYS:C	2.57	0.43
1:AA:628:G:H2'	1:AA:629:A:O4'	2.19	0.43
1:AA:692:U:O4	11:AK:54:GLY:HA2	2.19	0.43
1:AA:1130:A:H8	1:AA:1130:A:O5'	2.01	0.43
1:AA:1372:U:C5	1:AA:1373:G:N7	2.87	0.43
3:AC:58:GLU:HG3	3:AC:65:ARG:HB3	2.01	0.43
3:AC:65:ARG:O	3:AC:100:GLN:O	2.36	0.43
6:AF:90:MET:O	6:AF:91:ARG:O	2.36	0.43
6:AF:92:THR:HG22	6:AF:93:LYS:H	1.78	0.43
7:AG:12:ILE:HD11	7:AG:25:LYS:HG3	2.01	0.43
7:AG:27:VAL:O	7:AG:31:MET:N	2.51	0.43
7:AG:91:VAL:HG23	7:AG:95:ARG:HD3	2.01	0.43
7:AG:138:ARG:O	7:AG:142:HIS:HB2	2.19	0.43
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.34	0.43
12:AL:122:PRO:O	12:AL:124:ALA:N	2.52	0.43
13:AM:22:ILE:HB	13:AM:25:VAL:HG22	2.01	0.43
17:AQ:4:LYS:HG3	17:AQ:7:THR:HG23	2.01	0.43
18:AR:27:ALA:O	18:AR:30:LYS:HG3	2.19	0.43
19:AS:52:HIS:CD2	19:AS:54:GLY:H	2.37	0.43
22:BA:78:U:H2'	22:BA:79:C:H6	1.81	0.43
22:BA:569:U:O2'	22:BA:983:A:N1	2.43	0.43
22:BA:1054:A:C6	22:BA:1055:G:C5	3.07	0.43
22:BA:1087:G:N2	22:BA:1090:A:N7	2.67	0.43
22:BA:1182:G:C6	22:BA:1183:U:C2	3.07	0.43
22:BA:1394:U:H2'	22:BA:1395:A:O4'	2.18	0.43
22:BA:1419:A:C4	22:BA:1421:G:C8	3.06	0.43
22:BA:1929:G:H5"	22:BA:1929:G:N3	2.33	0.43
22:BA:1967:C:H2'	22:BA:1968:G:H5'	2.01	0.43
24:BC:160:THR:H	24:BC:195:VAL:HG13	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:269:ARG:HH11	24:BC:269:ARG:HG2	1.84	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
30:BI:101:ILE:HG22	30:BI:105:GLN:HB2	2.00	0.43
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	2.16	0.43
38:BQ:115:ALA:C	38:BQ:117:LEU:H	2.22	0.43
48:B0:20:ASP:O	48:B0:21:ALA:C	2.57	0.43
1:CA:9:G:OP2	5:CE:126:LYS:CE	2.67	0.43
1:CA:158:G:C2'	1:CA:159:G:H5"	2.48	0.43
1:CA:229:U:H2'	1:CA:230:G:O4'	2.19	0.43
1:CA:753:A:H4'	1:CA:754:C:O5'	2.18	0.43
1:CA:764:C:C4	1:CA:765:G:C5	3.06	0.43
1:CA:867:G:H2'	1:CA:868:C:H6	1.83	0.43
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.18	0.43
1:CA:1144:G:N1	1:CA:1145:A:C2	2.87	0.43
1:CA:1191:A:H5"	3:CC:4:LYS:HE3	2.01	0.43
1:CA:1399:C:H4'	1:CA:1400:C:O5'	2.19	0.43
2:CB:69:PHE:O	2:CB:91:PHE:HA	2.19	0.43
2:CB:125:THR:O	2:CB:126:PHE:HB3	2.19	0.43
3:CC:121:THR:CB	3:CC:187:SER:HG	2.32	0.43
4:CD:40:GLN:OE1	4:CD:41:HIS:NE2	2.51	0.43
6:CF:17:GLN:O	6:CF:21:MET:HG3	2.19	0.43
7:CG:100:ALA:O	7:CG:104:ILE:HG13	2.18	0.43
8:CH:29:SER:HB2	8:CH:59:LEU:HB2	2.00	0.43
9:CI:99:ARG:HA	9:CI:104:VAL:HG21	2.01	0.43
22:DA:60:G:C5	22:DA:62:U:C4	3.07	0.43
22:DA:396:G:O3'	45:DX:30:LEU:O	2.35	0.43
22:DA:684:G:C2	22:DA:794:A:C2	3.07	0.43
22:DA:740:C:N4	22:DA:758:C:O2	2.52	0.43
22:DA:792:A:C3'	22:DA:793:A:H5'	2.47	0.43
22:DA:815:C:H2'	22:DA:816:C:C6	2.53	0.43
22:DA:1034:G:C6	22:DA:1035:U:C4	3.06	0.43
22:DA:1153:C:OP1	38:DQ:92:ARG:NH1	2.52	0.43
22:DA:1338:G:H4'	41:DT:18:GLU:OE1	2.18	0.43
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.59	0.43
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.99	0.43
22:DA:1659:G:C6	22:DA:1660:G:C5	3.07	0.43
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.67	0.43
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.49	0.43
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.19	0.43
22:DA:2015:A:C6	48:D0:3:VAL:HG23	2.54	0.43
22:DA:2147:A:H2'	22:DA:2148:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2262:U:C2	22:DA:2279:G:N2	2.86	0.43
22:DA:2298:A:N3	22:DA:2321:U:C5	2.87	0.43
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.53	0.43
22:DA:2591:C:C2	22:DA:2592:G:C8	3.07	0.43
22:DA:2638:G:O2'	22:DA:2775:G:N2	2.38	0.43
22:DA:2772:C:H2'	22:DA:2773:C:H6	1.84	0.43
24:DC:36:LYS:O	24:DC:36:LYS:CG	2.66	0.43
24:DC:225:MET:O	24:DC:233:GLY:HA2	2.19	0.43
25:DD:13:ARG:HD2	25:DD:15:PHE:CZ	2.54	0.43
28:DG:158:LYS:C	28:DG:160:LYS:N	2.72	0.43
30:DI:8:TYR:HD2	30:DI:58:VAL:HG13	1.84	0.43
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.38	0.43
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	2.00	0.43
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.53	0.43
1:AA:47:C:O4'	1:AA:365:U:C5	2.72	0.43
1:AA:114:U:H2'	1:AA:115:G:C8	2.53	0.43
1:AA:126:G:O2'	1:AA:635:A:H4'	2.18	0.43
1:AA:173:U:C2	1:AA:197:A:C6	3.07	0.43
1:AA:829:G:C6	1:AA:858:G:C2	3.07	0.43
1:AA:858:G:O2'	1:AA:859:G:H5'	2.18	0.43
2:AB:82:ASP:O	2:AB:83:ALA:C	2.55	0.43
3:AC:113:ALA:O	3:AC:116:VAL:HB	2.19	0.43
9:AI:35:LEU:HD11	9:AI:48:VAL:HG21	1.99	0.43
10:AJ:25:ILE:HG22	10:AJ:26:VAL:N	2.33	0.43
10:AJ:65:TYR:HB3	14:AN:96:LEU:CD1	2.49	0.43
11:AK:61:PHE:O	11:AK:64:GLN:HB3	2.19	0.43
12:AL:95:TYR:CD2	12:AL:95:TYR:N	2.86	0.43
13:AM:77:ILE:HD13	13:AM:91:HIS:CD2	2.54	0.43
15:AO:26:GLU:HG3	15:AO:81:LEU:HD22	2.01	0.43
15:AO:69:TYR:CZ	15:AO:73:LYS:HG3	2.54	0.43
17:AQ:45:HIS:ND1	17:AQ:70:THR:CG2	2.82	0.43
22:BA:28:A:C5	22:BA:29:U:C5	3.07	0.43
22:BA:517:C:OP1	48:B0:13:ARG:NH2	2.52	0.43
22:BA:1011:G:C5	22:BA:1013:C:C4	3.07	0.43
22:BA:1331:G:C5	22:BA:1333:G:N7	2.87	0.43
22:BA:1670:C:C5	22:BA:1671:U:C4	3.07	0.43
22:BA:1767:G:C2	22:BA:1768:C:C5	3.07	0.43
22:BA:1866:A:C2	22:BA:1876:A:C4	3.06	0.43
22:BA:2510:C:H2'	22:BA:2511:U:H5'	2.01	0.43
22:BA:2690:U:C4	22:BA:2873:A:N1	2.87	0.43
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:62:C:H2'	23:BB:63:C:H6	1.82	0.43
24:BC:133:ARG:HG3	24:BC:134:ASN:OD1	2.18	0.43
24:BC:189:ARG:O	24:BC:190:ALA:CB	2.65	0.43
33:BL:28:GLY:O	39:BR:82:HIS:HE1	2.01	0.43
38:BQ:41:LYS:HB2	38:BQ:41:LYS:HE3	1.86	0.43
41:BT:67:VAL:CG1	41:BT:68:LYS:N	2.82	0.43
44:BW:56:ASP:O	44:BW:57:HIS:HB2	2.19	0.43
46:BY:6:LEU:O	46:BY:60:LYS:NZ	2.49	0.43
47:BZ:3:LYS:H	47:BZ:3:LYS:CE	2.31	0.43
48:B0:34:SER:OG	48:B0:36:GLU:CG	2.67	0.43
1:CA:87:C:H2'	1:CA:88:U:C6	2.54	0.43
1:CA:489:C:O2'	1:CA:490:C:H5'	2.19	0.43
1:CA:869:G:H4'	1:CA:872:A:C8	2.54	0.43
1:CA:940:C:H2'	1:CA:941:G:C8	2.54	0.43
1:CA:976:G:N2	1:CA:1363:A:N3	2.67	0.43
1:CA:1074:G:H4'	2:CB:103:ASN:HB2	1.99	0.43
1:CA:1308:U:O3'	13:CM:91:HIS:HE1	2.01	0.43
3:CC:102:ASN:C	3:CC:103:ILE:HG13	2.39	0.43
4:CD:17:THR:HG22	4:CD:18:ASP:N	2.34	0.43
4:CD:173:VAL:HG13	4:CD:174:ASP:H	1.82	0.43
4:CD:174:ASP:O	4:CD:175:ALA:HB3	2.18	0.43
6:CF:22:ILE:O	6:CF:22:ILE:HG22	2.18	0.43
9:CI:67:VAL:HG13	9:CI:67:VAL:O	2.18	0.43
14:CN:53:ARG:O	14:CN:59:ARG:HD2	2.19	0.43
17:CQ:29:VAL:HG22	17:CQ:29:VAL:O	2.19	0.43
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD13	2.01	0.43
22:DA:53:A:N7	22:DA:54:G:N7	2.67	0.43
22:DA:200:U:O4	22:DA:248:G:C2	2.72	0.43
22:DA:321:U:C1'	26:DE:159:LEU:HD23	2.49	0.43
22:DA:399:U:C4	22:DA:400:G:C6	3.07	0.43
22:DA:593:U:C2	22:DA:594:U:C5	3.06	0.43
22:DA:673:C:OP1	26:DE:76:PRO:CG	2.67	0.43
22:DA:985:C:C2	22:DA:986:C:C5	3.07	0.43
22:DA:1659:G:C6	22:DA:1660:G:N7	2.87	0.43
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.54	0.43
22:DA:2104:C:C2	22:DA:2186:G:N2	2.87	0.43
22:DA:2799:A:O2'	22:DA:2800:A:H5"	2.19	0.43
23:DB:15:A:H1'	23:DB:109:A:N7	2.33	0.43
24:DC:124:ILE:HD13	24:DC:136:PRO:HD3	2.00	0.43
26:DE:83:VAL:HG11	26:DE:86:ALA:HA	2.00	0.43
27:DF:40:VAL:O	27:DF:42:GLU:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.43
30:DI:8:TYR:HB3	30:DI:59:ILE:O	2.18	0.43
31:DJ:4:PHE:HB3	38:DQ:64:ARG:NH1	2.34	0.43
31:DJ:114:LEU:O	31:DJ:118:MET:HG2	2.19	0.43
39:DR:41:ILE:O	39:DR:47:VAL:N	2.52	0.43
41:DT:23:ALA:O	41:DT:27:SER:HB3	2.19	0.43
43:DV:20:LEU:O	43:DV:25:LYS:HB2	2.18	0.43
46:DY:28:LEU:CD2	46:DY:37:LEU:HD11	2.49	0.43
1:AA:208:U:H5	1:AA:210:C:C4	2.37	0.43
1:AA:252:U:O4	1:AA:253:A:N6	2.52	0.43
1:AA:768:A:N3	1:AA:1512:U:O2'	2.49	0.43
1:AA:1082:A:H2'	1:AA:1083:U:O4'	2.18	0.43
1:AA:1202:U:H4'	14:AN:69:ARG:HG3	1.99	0.43
1:AA:1449:C:H2'	1:AA:1450:U:O4'	2.19	0.43
3:AC:40:ARG:CZ	3:AC:57:ILE:HD12	2.49	0.43
4:AD:4:TYR:O	4:AD:5:LEU:HB2	2.18	0.43
4:AD:58:LYS:HG2	4:AD:203:LEU:CD2	2.49	0.43
5:AE:45:ARG:CG	5:AE:73:ASN:HB3	2.49	0.43
6:AF:3:HIS:O	6:AF:4:TYR:CD1	2.72	0.43
7:AG:74:GLU:O	7:AG:89:VAL:HG13	2.19	0.43
9:AI:26:GLY:CA	9:AI:59:GLU:HA	2.49	0.43
9:AI:114:LYS:NZ	9:AI:118:LEU:O	2.52	0.43
14:AN:23:LYS:O	14:AN:24:ARG:C	2.57	0.43
14:AN:47:LYS:HD3	19:AS:13:LEU:CD2	2.48	0.43
15:AO:87:LEU:N	15:AO:87:LEU:CD2	2.82	0.43
16:AP:64:GLY:O	16:AP:65:ALA:O	2.37	0.43
18:AR:20:GLU:HA	18:AR:55:LEU:CD2	2.48	0.43
20:AT:69:LYS:HB2	20:AT:69:LYS:NZ	2.33	0.43
22:BA:372:G:C4	45:BX:61:LYS:HE3	2.54	0.43
22:BA:463:G:N1	22:BA:467:G:C6	2.87	0.43
22:BA:582:A:C6	22:BA:1259:G:C6	3.07	0.43
22:BA:616:A:H2'	22:BA:617:G:O4'	2.19	0.43
22:BA:920:A:C6	22:BA:921:C:C4	3.07	0.43
22:BA:947:A:H2'	22:BA:948:C:H6	1.82	0.43
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.49	0.43
22:BA:1148:U:C2'	22:BA:1149:G:H5'	2.49	0.43
22:BA:1203:U:C4	22:BA:1204:A:C6	3.06	0.43
22:BA:1301:A:C2	22:BA:1303:G:C6	3.07	0.43
22:BA:1355:G:C2'	22:BA:1356:G:H5'	2.48	0.43
22:BA:1575:C:C2'	22:BA:1576:U:O5'	2.66	0.43
22:BA:2093:G:O2'	29:BH:25:TYR:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2093:G:O2'	29:BH:25:TYR:CB	2.67	0.43
22:BA:2387:U:H5"	22:BA:2388:A:OP2	2.18	0.43
22:BA:2455:G:C6	22:BA:2456:C:N4	2.87	0.43
22:BA:2577:A:C2'	22:BA:2578:G:OP1	2.67	0.43
26:BE:7:ASP:C	26:BE:9:GLN:H	2.23	0.43
27:BF:63:GLN:OE1	27:BF:95:ARG:HD3	2.18	0.43
27:BF:112:ARG:O	27:BF:113:ASP:HB2	2.18	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
31:BJ:31:GLU:OE2	31:BJ:35:ARG:NH1	2.51	0.43
31:BJ:37:ARG:HG3	31:BJ:118:MET:SD	2.58	0.43
33:BL:37:GLY:O	33:BL:41:ARG:HG2	2.19	0.43
34:BM:89:VAL:HG12	34:BM:90:GLU:N	2.34	0.43
36:BO:53:THR:HG23	36:BO:74:VAL:HG21	2.01	0.43
37:BP:14:LYS:H	37:BP:77:HIS:CE1	2.37	0.43
38:BQ:21:ALA:HB1	38:BQ:24:TYR:HD1	1.83	0.43
43:BV:82:TYR:CD2	43:BV:82:TYR:N	2.87	0.43
47:BZ:10:THR:HG22	47:BZ:11:ARG:HG3	2.01	0.43
1:CA:78:A:C6	1:CA:79:G:C6	3.06	0.43
1:CA:282:A:H3'	1:CA:283:U:H6	1.84	0.43
1:CA:409:U:H2'	1:CA:410:G:O4'	2.18	0.43
1:CA:585:G:OP1	17:CQ:39:LYS:HE3	2.18	0.43
1:CA:718:A:N7	1:CA:719:C:C5	2.87	0.43
1:CA:733:G:H4'	1:CA:734:G:OP1	2.19	0.43
1:CA:793:U:O2	1:CA:1516:G:H4'	2.19	0.43
1:CA:1140:C:O2'	1:CA:1141:C:P	2.76	0.43
1:CA:1420:U:H2'	1:CA:1421:G:O4'	2.19	0.43
5:CE:133:PRO:O	5:CE:137:VAL:HG13	2.18	0.43
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	2.00	0.43
8:CH:126:ILE:N	8:CH:126:ILE:HD12	2.34	0.43
10:CJ:36:VAL:HG12	10:CJ:38:GLY:H	1.84	0.43
10:CJ:48:ARG:CG	10:CJ:48:ARG:NH1	2.80	0.43
12:CL:42:PRO:HA	12:CL:89:ASP:O	2.19	0.43
12:CL:90:LEU:HB3	12:CL:93:VAL:CG2	2.49	0.43
16:CP:21:VAL:HG21	16:CP:60:TRP:CD1	2.54	0.43
16:CP:52:LEU:HD21	16:CP:57:ILE:CD1	2.48	0.43
22:DA:120:U:O4	22:DA:177:G:C8	2.72	0.43
22:DA:182:A:H2'	22:DA:183:C:C6	2.54	0.43
22:DA:188:G:C2	22:DA:209:C:N3	2.87	0.43
22:DA:327:G:H21	42:DU:68:SER:HB2	1.84	0.43
22:DA:571:U:C4	22:DA:2030:A:N1	2.87	0.43
22:DA:740:C:C5	22:DA:1981:A:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1113:U:H2'	22:DA:1114:C:C6	2.54	0.43
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.47	0.43
22:DA:1452:G:C6	22:DA:2702:G:C2	3.07	0.43
22:DA:1566:A:C2	24:DC:213:TRP:CD2	3.07	0.43
22:DA:1705:A:C5	22:DA:1706:C:C4	3.07	0.43
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.45	0.43
22:DA:2597:G:C2	22:DA:2598:A:C2	3.07	0.43
22:DA:2662:A:H2'	22:DA:2663:G:O4'	2.19	0.43
22:DA:2663:G:H2'	22:DA:2664:G:O4'	2.18	0.43
22:DA:2796:U:O4	22:DA:2798:U:C4	2.72	0.43
26:DE:150:THR:C	26:DE:192:ALA:HB2	2.39	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
35:DN:12:ARG:O	35:DN:17:ARG:NH2	2.47	0.43
35:DN:28:LEU:O	35:DN:32:GLU:HA	2.19	0.43
37:DP:43:PHE:CE2	37:DP:72:ARG:HD3	2.54	0.43
37:DP:106:LYS:HA	37:DP:109:ARG:HD3	2.00	0.43
38:DQ:106:PHE:HA	38:DQ:109:LEU:HD12	2.01	0.43
39:DR:67:GLY:C	39:DR:93:PHE:CE2	2.92	0.43
42:DU:95:PHE:O	42:DU:95:PHE:CG	2.72	0.43
43:DV:38:LEU:HB3	43:DV:40:ILE:HD11	2.01	0.43
48:D0:17:ARG:HA	48:D0:20:ASP:OD1	2.19	0.43
1:AA:104:G:C2	1:AA:105:G:C8	3.07	0.42
1:AA:451:A:H2	1:AA:480:U:C4	2.37	0.42
1:AA:452:A:N7	1:AA:453:G:N9	2.66	0.42
1:AA:751:U:C5	1:AA:752:G:C5	3.07	0.42
1:AA:844:G:N3	1:AA:845:A:N7	2.67	0.42
1:AA:972:C:H4'	10:AJ:59:LYS:CE	2.49	0.42
1:AA:1068:G:H2'	1:AA:1069:C:H5'	2.01	0.42
1:AA:1371:G:P	9:AI:13:LYS:HD3	2.59	0.42
1:AA:1377:A:C4	7:AG:7:ILE:HD11	2.53	0.42
1:AA:1410:A:C2	1:AA:1411:C:C2	3.07	0.42
1:AA:1503:A:H8	1:AA:1531:A:O2'	1.99	0.42
6:AF:12:PRO:O	6:AF:15:SER:N	2.51	0.42
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.19	0.42
11:AK:55:SER:O	11:AK:58:SER:N	2.52	0.42
21:AU:34:ARG:O	21:AU:36:GLU:N	2.52	0.42
22:BA:46:G:N2	22:BA:47:C:C2	2.86	0.42
22:BA:152:A:H2'	22:BA:153:U:C6	2.54	0.42
22:BA:262:A:C2	22:BA:430:A:N3	2.87	0.42
22:BA:661:A:H2'	22:BA:662:G:O4'	2.19	0.42
22:BA:819:A:OP2	22:BA:1187:G:N1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:839:U:H1'	22:BA:1191:G:H1'	2.00	0.42
22:BA:1054:A:C5	22:BA:1055:G:N7	2.86	0.42
22:BA:1301:A:C5	22:BA:1303:G:C8	3.06	0.42
22:BA:1838:C:C4	22:BA:1899:A:N3	2.87	0.42
22:BA:1946:U:C2	22:BA:1947:C:C6	3.07	0.42
22:BA:2217:G:O2'	22:BA:2218:G:H5'	2.19	0.42
22:BA:2345:G:H4'	22:BA:2346:A:O5'	2.19	0.42
22:BA:2637:U:OP1	25:BD:83:ARG:NH2	2.50	0.42
24:BC:260:ASN:O	24:BC:261:LYS:HB2	2.19	0.42
25:BD:142:VAL:CB	25:BD:143:PRO:CD	2.96	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.81	0.42
46:BY:23:ARG:O	46:BY:27:ASN:HB2	2.19	0.42
53:B5:40:GLU:HA	53:B5:181:PHE:HA	2.01	0.42
1:CA:17:U:O2	1:CA:18:C:C6	2.72	0.42
1:CA:81:A:H61	1:CA:87:C:N4	2.17	0.42
1:CA:89:U:H2'	1:CA:90:C:C6	2.54	0.42
1:CA:410:G:H5"	1:CA:411:A:OP1	2.19	0.42
1:CA:504:C:H1'	1:CA:510:A:C4	2.53	0.42
1:CA:1182:G:H5'	1:CA:1184:G:H5"	2.00	0.42
1:CA:1184:G:C2	1:CA:1185:G:C8	3.06	0.42
1:CA:1491:G:C5	1:CA:1492:A:C5	3.07	0.42
3:CC:100:GLN:O	3:CC:101:ILE:HB	2.18	0.42
5:CE:156:LYS:HG2	8:CH:71:VAL:HG22	2.00	0.42
6:CF:13:ASP:O	6:CF:15:SER:N	2.48	0.42
7:CG:31:MET:O	7:CG:31:MET:HG2	2.19	0.42
7:CG:146:GLU:OE1	7:CG:149:LYS:HE2	2.19	0.42
20:CT:83:ILE:O	20:CT:87:ALA:HB3	2.19	0.42
21:CU:6:VAL:HG11	21:CU:17:ARG:HG3	2.01	0.42
21:CU:53:VAL:HG22	21:CU:54:LYS:H	1.83	0.42
22:DA:1:G:C2	22:DA:2:G:C4	3.07	0.42
22:DA:56:A:C2	22:DA:57:C:O2	2.72	0.42
22:DA:186:G:C2	22:DA:211:C:O2	2.72	0.42
22:DA:579:G:C2	22:DA:1262:A:C5	3.07	0.42
22:DA:798:G:H2'	22:DA:799:G:H8	1.83	0.42
22:DA:858:G:C4	22:DA:2268:A:C2	3.07	0.42
22:DA:1009:A:C6	22:DA:1010:A:N1	2.87	0.42
22:DA:1081:U:O3'	30:DI:124:ALA:HB1	2.19	0.42
22:DA:1351:C:O2'	22:DA:1571:A:N3	2.43	0.42
22:DA:1494:A:H2'	22:DA:1495:A:O4'	2.19	0.42
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.54	0.42
22:DA:1819:A:H4'	22:DA:1820:U:H5"	2.01	0.42
22:DA:1858:A:C2	22:DA:1859:U:H1'	2.54	0.42
22:DA:1936:A:C8	22:DA:1945:G:C6	3.07	0.42
22:DA:1984:G:C5	22:DA:1985:C:C5	3.07	0.42
22:DA:1997:C:P	25:DD:129:THR:OG1	2.77	0.42
22:DA:2378:A:N7	22:DA:2379:G:H1'	2.34	0.42
22:DA:2478:A:C8	22:DA:2529:G:N7	2.87	0.42
22:DA:2552:U:O2	22:DA:2554:U:H5'	2.18	0.42
24:DC:159:GLY:HA3	24:DC:198:ALA:HA	2.00	0.42
27:DF:17:MET:O	27:DF:21:ASN:HA	2.19	0.42
28:DG:129:THR:C	28:DG:130:GLU:HG2	2.40	0.42
30:DI:76:ALA:HA	30:DI:79:LEU:HB2	2.01	0.42
30:DI:103:ARG:O	30:DI:107:GLN:HB2	2.19	0.42
32:DK:105:ARG:CZ	37:DP:34:GLU:HG3	2.49	0.42
33:DL:77:ILE:CG2	33:DL:81:ASP:OD2	2.66	0.42
34:DM:34:LYS:HD3	43:DV:82:TYR:HA	2.01	0.42
34:DM:73:ILE:HG13	34:DM:91:TYR:CE2	2.54	0.42
35:DN:103:ARG:CD	35:DN:110:MET:HE3	2.48	0.42
51:D3:8:ARG:O	51:D3:12:LYS:HG3	2.19	0.42
52:D4:16:ILE:HG22	52:D4:17:VAL:N	2.34	0.42
1:AA:75:G:N3	1:AA:75:G:H2'	2.34	0.42
1:AA:212:G:C2	1:AA:213:G:C4	3.07	0.42
1:AA:220:G:C2'	1:AA:221:C:H5'	2.49	0.42
1:AA:411:A:C5	1:AA:429:U:C5	3.07	0.42
1:AA:481:G:O2'	1:AA:483:C:N4	2.52	0.42
1:AA:516:U:C4	1:AA:517:G:C6	3.08	0.42
1:AA:540:G:C6	1:AA:541:G:C5	3.07	0.42
1:AA:575:G:C5	1:AA:821:G:C8	3.07	0.42
1:AA:810:C:O2	1:AA:810:C:C2'	2.64	0.42
1:AA:851:G:H2'	1:AA:852:G:H5'	2.01	0.42
1:AA:991:U:C4	1:AA:1212:U:H1'	2.54	0.42
1:AA:1060:U:H5"	10:AJ:53:ILE:HG23	2.02	0.42
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.49	0.42
1:AA:1503:A:C5	1:AA:1531:A:N3	2.87	0.42
5:AE:45:ARG:HA	5:AE:73:ASN:HB3	2.00	0.42
7:AG:71:PRO:HD2	7:AG:96:ARG:HG2	2.01	0.42
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.33	0.42
13:AM:45:ILE:HG13	13:AM:48:LEU:HD13	2.01	0.42
15:AO:32:LEU:HA	15:AO:32:LEU:HD23	1.82	0.42
15:AO:87:LEU:O	15:AO:88:ARG:HB3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:80:THR:O	20:AT:81:ALA:C	2.58	0.42
22:BA:518:G:H4'	40:BS:18:ARG:CZ	2.48	0.42
22:BA:559:G:H2'	22:BA:560:C:O4'	2.19	0.42
22:BA:716:A:C6	22:BA:717:C:C5	3.08	0.42
22:BA:846:U:O2'	22:BA:847:U:OP2	2.37	0.42
22:BA:1046:A:H3'	22:BA:1047:G:C5'	2.48	0.42
22:BA:1902:C:N4	22:BA:1903:G:C4	2.87	0.42
22:BA:2281:A:N1	22:BA:2282:G:C6	2.86	0.42
22:BA:2297:A:N1	22:BA:2321:U:H5	2.17	0.42
22:BA:2308:G:C5	27:BF:77:PHE:CZ	3.07	0.42
22:BA:2345:G:C4	22:BA:2381:A:C2	3.07	0.42
22:BA:2352:A:C2'	22:BA:2353:G:H5'	2.49	0.42
22:BA:2728:U:O2	22:BA:2729:G:C8	2.72	0.42
24:BC:71:LYS:CB	24:BC:96:TYR:CE2	3.02	0.42
26:BE:41:GLN:NE2	26:BE:43:THR:HG21	2.34	0.42
30:BI:96:ASP:OD1	30:BI:97:LYS:N	2.52	0.42
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.52	0.42
34:BM:18:ARG:HH21	34:BM:18:ARG:CG	2.31	0.42
35:BN:28:LEU:O	35:BN:32:GLU:N	2.52	0.42
37:BP:75:GLN:O	37:BP:76:THR:C	2.58	0.42
49:B1:17:THR:HG22	49:B1:42:VAL:HG11	2.00	0.42
53:B5:59:VAL:HG12	53:B5:63:VAL:HG21	2.01	0.42
1:CA:327:A:C2	1:CA:329:A:N3	2.87	0.42
1:CA:620:C:C6	4:CD:132:ILE:HD13	2.54	0.42
1:CA:671:G:N2	1:CA:736:C:C2	2.87	0.42
1:CA:707:U:H2'	1:CA:708:C:C6	2.54	0.42
1:CA:822:U:N3	1:CA:823:C:C5	2.87	0.42
1:CA:996:A:H2'	1:CA:997:U:C5	2.53	0.42
2:CB:54:LEU:HA	2:CB:57:LEU:CB	2.42	0.42
2:CB:102:THR:O	2:CB:103:ASN:CB	2.67	0.42
2:CB:192:ASP:O	2:CB:193:PRO:O	2.36	0.42
4:CD:29:ASP:O	4:CD:31:LYS:N	2.46	0.42
5:CE:42:GLY:O	5:CE:119:GLY:HA3	2.19	0.42
5:CE:94:VAL:CG1	5:CE:111:MET:HE3	2.49	0.42
6:CF:92:THR:O	6:CF:93:LYS:C	2.57	0.42
7:CG:125:SER:C	7:CG:127:ALA:N	2.72	0.42
8:CH:11:LEU:HD11	8:CH:127:CYS:CB	2.50	0.42
8:CH:126:ILE:HG22	8:CH:127:CYS:SG	2.59	0.42
11:CK:85:MET:HA	11:CK:111:THR:O	2.19	0.42
14:CN:69:ARG:HA	14:CN:70:PRO:HD3	1.90	0.42
17:CQ:16:LYS:O	17:CQ:17:MET:SD	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:125:A:H3'	50:D2:19:ARG:HG3	2.01	0.42
22:DA:404:A:O4'	22:DA:405:U:OP2	2.37	0.42
22:DA:413:C:N4	57:DA:3564:HOH:O	2.52	0.42
22:DA:567:U:H2'	22:DA:568:U:O5'	2.19	0.42
22:DA:580:U:O2'	22:DA:581:C:H5'	2.19	0.42
22:DA:669:G:H2'	22:DA:670:A:N7	2.34	0.42
22:DA:756:A:C5	22:DA:757:G:C8	3.08	0.42
22:DA:1469:A:C2	22:DA:1470:A:C6	3.07	0.42
22:DA:1604:C:H5"	57:DA:3404:HOH:O	2.19	0.42
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.33	0.42
23:DB:2:G:N3	23:DB:2:G:H2'	2.33	0.42
24:DC:160:THR:H	24:DC:195:VAL:HG13	1.84	0.42
24:DC:202:LEU:HD12	24:DC:202:LEU:HA	1.80	0.42
25:DD:45:TYR:HB2	25:DD:83:ARG:NH1	2.34	0.42
31:DJ:64:VAL:HG11	31:DJ:89:PHE:CE2	2.55	0.42
35:DN:90:ARG:NH1	35:DN:116:VAL:HG11	2.34	0.42
40:DS:59:GLU:OE1	40:DS:66:ILE:HD11	2.18	0.42
42:DU:22:ARG:CZ	42:DU:73:PHE:CE2	3.02	0.42
42:DU:44:LYS:HG2	42:DU:45:HIS:N	2.34	0.42
42:DU:72:ILE:HD13	42:DU:96:PHE:CE2	2.54	0.42
42:DU:82:ARG:HB2	42:DU:97:LYS:HG3	2.01	0.42
45:DX:32:ASN:ND2	45:DX:53:ALA:HB2	2.34	0.42
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.48	0.42
51:D3:58:VAL:HG12	51:D3:62:LEU:HD12	2.01	0.42
52:D4:33:HIS:CD2	52:D4:33:HIS:N	2.87	0.42
1:AA:71:A:H3'	1:AA:71:A:P	2.59	0.42
1:AA:93:U:C2'	1:AA:94:G:H5"	2.49	0.42
1:AA:230:G:C6	1:AA:231:U:C4	3.06	0.42
1:AA:235:C:H2'	1:AA:236:A:C8	2.54	0.42
1:AA:270:A:C6	1:AA:271:C:N3	2.87	0.42
1:AA:448:A:C5	1:AA:487:A:C2	3.08	0.42
1:AA:522:C:H2'	1:AA:523:A:O4'	2.20	0.42
1:AA:532:A:O4'	1:AA:532:A:OP2	2.38	0.42
1:AA:559:A:H2'	1:AA:559:A:N3	2.33	0.42
1:AA:832:G:C2	1:AA:833:G:C8	3.07	0.42
1:AA:923:A:C6	1:AA:924:C:C4	3.07	0.42
1:AA:1061:G:C6	1:AA:1197:A:C2	3.08	0.42
1:AA:1062:U:C2'	1:AA:1063:C:C6	2.98	0.42
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.84	0.42
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.19	0.42
3:AC:20:SER:OG	3:AC:40:ARG:NH2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:173:VAL:HG22	4:AD:174:ASP:N	2.34	0.42
5:AE:35:ALA:CB	5:AE:60:ILE:HA	2.49	0.42
7:AG:45:SER:HA	7:AG:48:GLU:HB2	2.01	0.42
7:AG:130:ASN:OD1	7:AG:130:ASN:O	2.36	0.42
12:AL:110:ARG:NH1	12:AL:113:ALA:HB3	2.35	0.42
13:AM:40:ALA:O	13:AM:43:VAL:HG22	2.19	0.42
17:AQ:81:LYS:CA	17:AQ:81:LYS:HE2	2.48	0.42
22:BA:460:A:H2'	22:BA:461:C:O4'	2.19	0.42
22:BA:585:G:C5'	22:BA:586:A:P	3.05	0.42
22:BA:608:A:C2	22:BA:609:A:N3	2.87	0.42
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.18	0.42
22:BA:1826:G:H2'	22:BA:1827:U:H6	1.85	0.42
22:BA:2094:A:H4'	29:BH:25:TYR:CZ	2.55	0.42
22:BA:2243:U:O2	22:BA:2434:A:C2	2.72	0.42
22:BA:2376:A:H2'	22:BA:2377:A:O4'	2.19	0.42
22:BA:2543:G:H5'	22:BA:2766:A:O3'	2.20	0.42
22:BA:2684:U:H2'	22:BA:2685:G:O5'	2.20	0.42
22:BA:2749:A:OP1	28:BG:2:SER:N	2.52	0.42
22:BA:2761:A:N1	22:BA:2762:C:C2	2.87	0.42
22:BA:2812:G:C2	22:BA:2813:A:H1'	2.55	0.42
24:BC:199:GLU:O	24:BC:200:HIS:C	2.56	0.42
25:BD:35:THR:O	25:BD:36:GLN:HB2	2.19	0.42
27:BF:105:THR:HG23	27:BF:106:ILE:HG23	2.00	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.17	0.42
33:BL:110:VAL:O	33:BL:131:ALA:HB2	2.18	0.42
34:BM:72:PRO:HB3	34:BM:92:TRP:CZ3	2.54	0.42
36:BO:35:ILE:HG23	36:BO:35:ILE:O	2.20	0.42
39:BR:25:LEU:H	39:BR:94:THR:HG23	1.84	0.42
53:B5:19:LYS:HG2	53:B5:23:ILE:HD11	2.01	0.42
1:CA:34:C:H2'	1:CA:35:G:C8	2.54	0.42
1:CA:73:C:O2'	1:CA:74:A:P	2.77	0.42
1:CA:264:C:H2'	1:CA:265:G:O4'	2.18	0.42
1:CA:437:U:C4	1:CA:438:U:C5	3.06	0.42
1:CA:442:G:C6	1:CA:443:C:C4	3.07	0.42
1:CA:486:U:C6	1:CA:486:U:OP2	2.73	0.42
1:CA:769:G:C2'	1:CA:770:C:H5'	2.49	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.35	0.42
1:CA:983:A:C2'	1:CA:983:A:N3	2.81	0.42
1:CA:990:C:N3	1:CA:991:U:O4	2.52	0.42
1:CA:1108:G:H5"	3:CC:176:HIS:CD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:100:SER:O	5:CE:101:GLU:C	2.57	0.42
6:CF:18:VAL:HG12	6:CF:19:PRO:CD	2.50	0.42
8:CH:27:MET:HG2	8:CH:59:LEU:HB3	2.01	0.42
9:CI:115:LYS:HB2	9:CI:118:LEU:HD22	2.01	0.42
11:CK:71:ALA:O	11:CK:75:LYS:HG3	2.18	0.42
11:CK:97:ILE:HD13	11:CK:110:ILE:HD11	2.00	0.42
11:CK:110:ILE:HG22	21:CU:17:ARG:CZ	2.50	0.42
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	2.00	0.42
22:DA:95:A:H4'	46:DY:38:GLN:O	2.19	0.42
22:DA:446:G:H4'	22:DA:447:A:OP1	2.19	0.42
22:DA:958:U:OP2	34:DM:14:LYS:HD2	2.20	0.42
22:DA:1115:G:C2	22:DA:1116:G:C5	3.08	0.42
22:DA:1265:A:C8	22:DA:1267:U:C2	3.06	0.42
22:DA:1464:G:C4	22:DA:1465:G:C8	3.07	0.42
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.18	0.42
22:DA:2047:C:O2'	22:DA:2048:G:H5'	2.19	0.42
22:DA:2147:A:C8	22:DA:2148:G:C8	3.07	0.42
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.49	0.42
22:DA:2266:A:C2	22:DA:2272:U:C5	3.07	0.42
22:DA:2322:A:C5	22:DA:2323:G:C8	3.07	0.42
24:DC:145:GLU:HB2	24:DC:188:CYS:HB3	2.01	0.42
25:DD:99:GLU:HG2	25:DD:182:ALA:HB2	2.01	0.42
28:DG:87:LEU:CD2	28:DG:148:LEU:HB2	2.48	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
30:DI:77:ALA:HA	30:DI:80:LEU:HD12	2.01	0.42
31:DJ:81:ILE:HG12	31:DJ:82:GLY:N	2.34	0.42
35:DN:49:GLU:N	35:DN:50:PRO:HD2	2.35	0.42
37:DP:8:LEU:O	37:DP:8:LEU:HD23	2.19	0.42
39:DR:3:ALA:HB2	39:DR:101:ILE:CG2	2.49	0.42
39:DR:47:VAL:CG1	39:DR:54:VAL:HG21	2.50	0.42
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.16	0.42
51:D3:45:ARG:N	51:D3:46:PRO:HD2	2.33	0.42
1:AA:4:U:O2	1:AA:4:U:C2'	2.68	0.42
1:AA:749:A:H2'	1:AA:750:C:H6	1.84	0.42
1:AA:1031:C:H4'	1:AA:1032:G:H5"	2.01	0.42
1:AA:1134:G:C2	1:AA:1141:C:N4	2.87	0.42
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.55	0.42
1:AA:1288:A:C2	1:AA:1289:A:C4	3.06	0.42
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.84	0.42
2:AB:78:GLU:C	2:AB:80:VAL:H	2.22	0.42
2:AB:164:ILE:HG23	2:AB:165:ASP:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:100:ASN:C	4:AD:102:VAL:H	2.22	0.42
5:AE:77:ASN:HB2	5:AE:82:GLN:CG	2.48	0.42
5:AE:79:GLY:O	5:AE:121:HIS:N	2.48	0.42
5:AE:82:GLN:OE1	5:AE:148:ASN:O	2.37	0.42
9:AI:85:ARG:O	9:AI:88:MET:HB2	2.20	0.42
10:AJ:7:ARG:O	10:AJ:100:ILE:O	2.37	0.42
16:AP:30:GLY:O	16:AP:31:ARG:C	2.58	0.42
21:AU:14:VAL:CG1	21:AU:16:LEU:HD21	2.50	0.42
22:BA:57:C:H2'	22:BA:58:G:O4'	2.20	0.42
22:BA:120:U:OP2	57:BA:3214:HOH:O	2.21	0.42
22:BA:361:G:O2'	22:BA:362:A:O5'	2.33	0.42
22:BA:476:G:O4'	22:BA:505:A:C2	2.73	0.42
22:BA:629:G:N3	22:BA:639:U:O2'	2.48	0.42
22:BA:760:G:H2'	22:BA:761:A:O4'	2.20	0.42
22:BA:975:A:H2'	22:BA:976:G:H5'	2.01	0.42
22:BA:1187:G:H5'	39:BR:83:TYR:CE2	2.54	0.42
22:BA:1934:C:H4'	22:BA:1974:C:O3'	2.20	0.42
22:BA:2021:C:OP1	48:B0:9:THR:CG2	2.66	0.42
22:BA:2242:G:H2'	22:BA:2243:U:O4'	2.18	0.42
22:BA:2636:C:H4'	25:BD:81:GLU:CD	2.40	0.42
22:BA:2732:G:H3'	22:BA:2733:A:C5'	2.49	0.42
22:BA:2733:A:C2	22:BA:2734:A:C4	3.07	0.42
22:BA:2759:G:C5	22:BA:2760:C:C5	3.08	0.42
24:BC:33:LEU:O	24:BC:64:ILE:HG13	2.19	0.42
24:BC:168:ASP:CG	24:BC:169:GLY:N	2.73	0.42
24:BC:182:ARG:NH2	24:BC:183:LYS:O	2.53	0.42
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	2.01	0.42
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.34	0.42
26:BE:128:ALA:HB1	26:BE:129:PRO:HD2	2.02	0.42
30:BI:54:PRO:O	30:BI:75:PRO:HD2	2.18	0.42
34:BM:16:ARG:HA	34:BM:16:ARG:HD3	1.87	0.42
34:BM:136:MET:CE	43:BV:57:TYR:HD2	2.29	0.42
35:BN:32:GLU:HB3	35:BN:115:LEU:HD12	2.00	0.42
35:BN:103:ARG:CD	35:BN:110:MET:CE	2.91	0.42
36:BO:24:THR:HG22	36:BO:42:PRO:CD	2.45	0.42
40:BS:84:ARG:HB2	40:BS:96:ILE:CD1	2.49	0.42
41:BT:67:VAL:CG2	41:BT:76:ARG:HG3	2.49	0.42
46:BY:23:ARG:O	46:BY:24:GLU:C	2.58	0.42
53:B5:52:PRO:HB2	53:B5:205:ALA:HB3	2.01	0.42
1:CA:108:G:C5'	1:CA:108:G:N3	2.83	0.42
1:CA:151:A:H2'	1:CA:152:A:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:252:U:O4	1:CA:253:A:N6	2.52	0.42
1:CA:282:A:H3'	1:CA:283:U:C6	2.55	0.42
1:CA:408:A:H2'	1:CA:409:U:O4'	2.18	0.42
1:CA:583:A:N7	1:CA:584:G:N7	2.67	0.42
1:CA:676:A:C2	1:CA:677:U:C4	3.08	0.42
1:CA:1072:G:C6	1:CA:1104:G:C2	3.07	0.42
1:CA:1139:G:N2	1:CA:1143:G:C6	2.87	0.42
2:CB:43:LEU:HG	2:CB:44:GLU:HG3	2.01	0.42
3:CC:26:THR:OG1	14:CN:76:LYS:HE3	2.20	0.42
6:CF:9:MET:HE2	6:CF:59:TYR:CD1	2.54	0.42
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.34	0.42
14:CN:87:ALA:HA	14:CN:92:GLU:HG3	2.00	0.42
22:DA:301:G:N2	22:DA:302:C:O2	2.53	0.42
22:DA:305:C:C2	22:DA:313:G:N1	2.87	0.42
22:DA:848:C:H2'	22:DA:849:A:C8	2.54	0.42
22:DA:1050:A:O2'	22:DA:2752:C:H1'	2.18	0.42
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.55	0.42
22:DA:1362:C:H2'	22:DA:1363:C:C5'	2.50	0.42
22:DA:1669:A:C1'	32:DK:5:GLN:HG3	2.50	0.42
22:DA:2045:C:C2'	22:DA:2046:G:O5'	2.68	0.42
22:DA:2204:G:N3	22:DA:2205:A:C8	2.88	0.42
22:DA:2294:G:OP2	36:DO:94:ARG:NH1	2.52	0.42
22:DA:2341:G:C6	22:DA:2342:C:N4	2.88	0.42
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.73	0.42
24:DC:246:THR:C	24:DC:248:TRP:H	2.22	0.42
26:DE:83:VAL:HG12	26:DE:86:ALA:HA	2.02	0.42
26:DE:177:PRO:O	26:DE:181:ILE:HG13	2.20	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	2.02	0.42
45:DX:54:LYS:O	45:DX:57:ARG:HB2	2.19	0.42
46:DY:46:VAL:O	46:DY:50:VAL:HG23	2.19	0.42
51:D3:47:LYS:HA	51:D3:47:LYS:HD3	1.79	0.42
1:AA:4:U:O2	1:AA:4:U:H2'	2.18	0.42
1:AA:58:C:O2'	1:AA:59:A:H5'	2.19	0.42
1:AA:132:C:H2'	1:AA:133:U:O4'	2.20	0.42
1:AA:144:G:C5	1:AA:179:A:N1	2.87	0.42
1:AA:201:G:H2'	1:AA:202:G:C8	2.55	0.42
1:AA:624:C:C4	1:AA:625:U:C4	3.07	0.42
1:AA:630:A:C2	1:AA:631:C:C2	3.07	0.42
1:AA:683:G:H21	11:AK:40:ASN:HA	1.85	0.42
1:AA:736:C:H2'	1:AA:737:C:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1160:G:O6	1:AA:1181:G:O6	2.37	0.42
1:AA:1216:A:H5"	14:AN:5:SER:HB3	2.01	0.42
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.84	0.42
1:AA:1319:A:C8	1:AA:1323:G:C6	3.07	0.42
1:AA:1350:A:N7	1:AA:1351:U:C5	2.87	0.42
1:AA:1367:C:P	9:AI:114:LYS:NZ	2.93	0.42
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.48	0.42
1:AA:1505:G:H5'	1:AA:1506:U:O5'	2.18	0.42
2:AB:122:GLN:H	2:AB:122:GLN:CD	2.23	0.42
3:AC:11:ARG:NH1	3:AC:182:ILE:HB	2.33	0.42
4:AD:6:GLY:O	4:AD:8:LYS:N	2.51	0.42
4:AD:160:GLU:C	4:AD:162:ALA:H	2.22	0.42
5:AE:81:LEU:N	5:AE:81:LEU:HD22	2.34	0.42
6:AF:16:GLU:OE2	4:CD:192:SER:HB3	2.19	0.42
6:AF:92:THR:CG2	6:AF:93:LYS:H	2.32	0.42
10:AJ:49:PHE:CD2	14:AN:77:PHE:HE1	2.37	0.42
12:AL:73:ASN:O	12:AL:74:LEU:HD22	2.19	0.42
17:AQ:4:LYS:HG3	17:AQ:7:THR:HG22	2.01	0.42
20:AT:67:ILE:HG12	20:AT:71:LYS:HG2	2.00	0.42
22:BA:303:G:C4	22:BA:304:U:C6	3.08	0.42
22:BA:451:U:H5'	57:BA:3238:HOH:O	2.18	0.42
22:BA:496:G:C2	22:BA:497:A:H1'	2.55	0.42
22:BA:687:C:H2'	22:BA:688:U:O4'	2.19	0.42
22:BA:729:G:N3	22:BA:729:G:H2'	2.34	0.42
22:BA:929:U:H1'	47:BZ:26:GLY:O	2.20	0.42
22:BA:1000:A:N6	22:BA:1001:A:C6	2.88	0.42
22:BA:1045:C:O5'	22:BA:1046:A:H5'	2.20	0.42
22:BA:1343:G:C4	22:BA:1344:U:C5	3.08	0.42
22:BA:1359:A:C5	22:BA:1373:A:C2	3.08	0.42
22:BA:1444:G:C2	22:BA:1548:A:C2	3.08	0.42
22:BA:1671:U:O2	22:BA:1673:G:C8	2.73	0.42
22:BA:1688:U:H2'	22:BA:1698:A:N6	2.34	0.42
22:BA:1920:C:H6	22:BA:1920:C:O5'	2.02	0.42
22:BA:2291:U:H5"	22:BA:2380:C:O2'	2.19	0.42
22:BA:2318:G:H2'	22:BA:2319:G:O4'	2.20	0.42
22:BA:2511:U:C4	22:BA:2512:C:C4	3.08	0.42
22:BA:2579:C:H2'	22:BA:2580:U:O4'	2.19	0.42
22:BA:2720:U:C2'	22:BA:2721:A:O5'	2.68	0.42
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.35	0.42
23:BB:109:A:C5	23:BB:110:C:C5	3.07	0.42
27:BF:28:VAL:O	27:BF:28:VAL:CG1	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:73:SER:HB2	27:BF:81:GLN:H	1.84	0.42
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.42
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	2.02	0.42
32:BK:108:ARG:O	32:BK:109:SER:C	2.56	0.42
1:CA:298:A:H2'	1:CA:299:G:O4'	2.20	0.42
1:CA:328:C:O2	1:CA:328:C:H2'	2.20	0.42
1:CA:463:U:H3'	1:CA:464:U:C6	2.54	0.42
1:CA:775:G:C6	1:CA:776:G:C5	3.07	0.42
1:CA:890:G:N2	1:CA:906:A:H2'	2.35	0.42
1:CA:929:G:C5	1:CA:930:C:C5	3.07	0.42
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.55	0.42
1:CA:1305:G:C6	1:CA:1331:G:C2	3.07	0.42
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.54	0.42
1:CA:1446:A:N6	1:CA:1447:A:N6	2.68	0.42
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.54	0.42
6:CF:19:PRO:HA	6:CF:22:ILE:HD12	2.01	0.42
8:CH:94:LYS:HD3	8:CH:98:GLY:CA	2.49	0.42
10:CJ:35:GLN:C	10:CJ:36:VAL:HG23	2.40	0.42
12:CL:21:VAL:N	12:CL:22:PRO:CD	2.82	0.42
13:CM:16:VAL:HG13	13:CM:41:GLU:HA	2.02	0.42
15:CO:85:LEU:HD12	15:CO:85:LEU:HA	1.92	0.42
16:CP:52:LEU:HD21	16:CP:57:ILE:HD12	2.01	0.42
17:CQ:31:HIS:CD2	17:CQ:34:TYR:CD1	3.07	0.42
17:CQ:47:HIS:HA	17:CQ:71:LYS:HE2	2.01	0.42
18:CR:59:ILE:O	18:CR:63:ARG:HD2	2.19	0.42
19:CS:58:VAL:HG11	19:CS:75:ALA:CA	2.50	0.42
22:DA:126:A:C5	22:DA:127:A:C2	3.07	0.42
22:DA:371:A:N6	22:DA:402:A:OP2	2.45	0.42
22:DA:377:G:C6	22:DA:378:C:C5	3.07	0.42
22:DA:693:A:C5	22:DA:694:U:C5	3.07	0.42
22:DA:816:C:C2	22:DA:1192:G:C2	3.08	0.42
22:DA:832:U:H2'	22:DA:833:A:C8	2.55	0.42
22:DA:971:G:OP2	22:DA:974:G:N2	2.52	0.42
22:DA:1120:G:C6	22:DA:1121:C:C4	3.07	0.42
22:DA:1669:A:N3	22:DA:1669:A:H3'	2.35	0.42
22:DA:1750:G:O2'	22:DA:2860:A:N1	2.45	0.42
22:DA:2127:G:H2'	22:DA:2128:G:C8	2.54	0.42
22:DA:2136:G:C2	22:DA:2156:G:H1'	2.54	0.42
22:DA:2297:A:C2	22:DA:2298:A:C8	3.07	0.42
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.82	0.42
22:DA:2581:G:H8	22:DA:2582:G:O6	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2655:G:O2'	22:DA:2656:U:P	2.78	0.42
22:DA:2741:A:H2'	22:DA:2742:G:H5'	2.02	0.42
22:DA:2776:A:C5	22:DA:2778:A:C6	3.07	0.42
22:DA:2819:G:H5"	57:DA:3808:HOH:O	2.19	0.42
22:DA:2864:G:H2'	22:DA:2865:U:O4'	2.19	0.42
23:DB:29:A:H2'	23:DB:30:C:C6	2.55	0.42
26:DE:77:ILE:O	26:DE:77:ILE:CG1	2.67	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
34:DM:58:LYS:C	34:DM:60:GLN:H	2.23	0.42
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.53	0.42
35:DN:46:ARG:O	35:DN:50:PRO:CG	2.68	0.42
38:DQ:9:ILE:HD12	38:DQ:9:ILE:O	2.20	0.42
43:DV:63:ILE:HD11	43:DV:91:PHE:CD1	2.54	0.42
45:DX:36:HIS:O	45:DX:48:THR:HA	2.20	0.42
46:DY:11:VAL:O	46:DY:15:ASN:CG	2.58	0.42
1:AA:142:G:C6	1:AA:143:A:C5	3.07	0.42
1:AA:524:G:C6	1:AA:525:C:N4	2.87	0.42
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.19	0.42
1:AA:1149:C:H6	1:AA:1149:C:O5'	2.03	0.42
1:AA:1322:C:P	19:AS:78:ARG:NH2	2.93	0.42
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.53	0.42
1:AA:1446:A:N6	1:AA:1447:A:N6	2.68	0.42
1:AA:1539:C:H5"	21:AU:18:ARG:CG	2.50	0.42
4:AD:23:SER:O	4:AD:24:GLY:O	2.36	0.42
4:AD:174:ASP:OD1	4:AD:177:LYS:NZ	2.50	0.42
6:AF:52:ASN:C	6:AF:53:LYS:O	2.56	0.42
11:AK:22:HIS:HD2	11:AK:35:THR:HG22	1.84	0.42
13:AM:64:VAL:O	13:AM:64:VAL:HG12	2.19	0.42
16:AP:76:LYS:HG3	16:AP:76:LYS:O	2.19	0.42
18:AR:23:TYR:CE1	18:AR:24:LYS:HG3	2.54	0.42
22:BA:65:U:H2'	22:BA:66:C:H6	1.84	0.42
22:BA:440:C:O2'	22:BA:441:U:H5'	2.18	0.42
22:BA:567:U:C2'	22:BA:568:U:O5'	2.67	0.42
22:BA:598:U:H2'	22:BA:599:A:C8	2.54	0.42
22:BA:693:A:C2'	22:BA:694:U:H5'	2.49	0.42
22:BA:742:A:C2	22:BA:756:A:C2	3.08	0.42
22:BA:819:A:OP2	22:BA:1187:G:C2	2.72	0.42
22:BA:969:G:C5	22:BA:970:U:C5	3.08	0.42
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.83	0.42
22:BA:1351:C:C4	22:BA:1352:U:C4	3.08	0.42
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1789:A:H2'	22:BA:1790:C:O4'	2.20	0.42
22:BA:1922:G:C5	22:BA:1923:U:C5	3.06	0.42
22:BA:1947:C:N3	22:BA:1960:A:C2	2.87	0.42
22:BA:2127:G:O2'	22:BA:2128:G:O4'	2.28	0.42
22:BA:2590:A:H2'	22:BA:2591:C:C6	2.55	0.42
22:BA:2591:C:P	24:BC:238:ARG:HG3	2.60	0.42
22:BA:2657:A:C2	22:BA:2665:A:C4	3.07	0.42
22:BA:2888:C:O2	22:BA:2888:C:C2'	2.67	0.42
25:BD:67:HIS:CD2	25:BD:67:HIS:O	2.73	0.42
25:BD:122:VAL:HB	25:BD:141:ARG:NH1	2.35	0.42
26:BE:10:SER:O	26:BE:10:SER:OG	2.34	0.42
31:BJ:24:THR:HG21	31:BJ:27:ARG:HD2	2.00	0.42
34:BM:96:ILE:HG21	34:BM:126:ILE:CD1	2.49	0.42
35:BN:103:ARG:CD	35:BN:110:MET:HE2	2.49	0.42
49:B1:10:LYS:O	49:B1:51:GLU:HG3	2.20	0.42
53:B5:131:ILE:HA	53:B5:135:ARG:CB	2.50	0.42
1:CA:66:A:H5'	1:CA:173:U:O4	2.20	0.42
1:CA:68:G:O4'	1:CA:171:A:H1'	2.19	0.42
1:CA:104:G:H4'	1:CA:174:A:O4'	2.19	0.42
1:CA:208:U:C5	1:CA:210:C:H6	2.38	0.42
1:CA:375:U:OP1	16:CP:70:ARG:HD3	2.20	0.42
1:CA:728:A:C6	1:CA:729:A:C6	3.08	0.42
1:CA:1048:G:P	57:CA:1846:HOH:O	2.75	0.42
1:CA:1105:A:C2	1:CA:1106:G:N7	2.87	0.42
1:CA:1343:G:C6	1:CA:1344:C:N4	2.87	0.42
1:CA:1348:U:OP1	9:CI:112:GLU:N	2.45	0.42
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.68	0.42
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.55	0.42
2:CB:222:ARG:NE	2:CB:223:GLU:HB2	2.35	0.42
4:CD:98:LEU:HB2	4:CD:135:TYR:HB3	2.02	0.42
4:CD:115:ARG:HG3	4:CD:133:ALA:CB	2.49	0.42
4:CD:206:LYS:O	4:CD:206:LYS:CG	2.64	0.42
5:CE:25:VAL:O	5:CE:26:LYS:C	2.58	0.42
5:CE:96:MET:HE1	5:CE:140:THR:HG22	2.02	0.42
6:CF:25:TYR:N	6:CF:25:TYR:CD2	2.88	0.42
7:CG:33:ASP:CB	7:CG:35:LYS:HE3	2.50	0.42
9:CI:95:ARG:HA	9:CI:98:LEU:HB3	2.00	0.42
13:CM:46:SER:O	13:CM:47:GLU:HB3	2.19	0.42
18:CR:24:LYS:C	18:CR:26:ILE:N	2.73	0.42
22:DA:16:C:O3'	48:D0:11:SER:OG	2.38	0.42
22:DA:187:G:N2	22:DA:210:C:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:201:C:C4	22:DA:202:U:C5	3.08	0.42
22:DA:353:C:H3'	22:DA:354:A:C8	2.55	0.42
22:DA:485:C:C2	22:DA:496:G:C2	3.08	0.42
22:DA:792:A:H3'	22:DA:793:A:H5'	1.99	0.42
22:DA:845:A:H3'	22:DA:845:A:N3	2.33	0.42
22:DA:1230:A:C2	22:DA:1231:U:C2	3.07	0.42
22:DA:1584:U:O2	22:DA:1584:U:C3'	2.68	0.42
22:DA:2208:C:C2	22:DA:2217:G:N2	2.88	0.42
22:DA:2448:A:HO2'	22:DA:2449:U:H5	1.67	0.42
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.53	0.42
22:DA:2504:U:C5	55:DA:3001:VIF:C14	2.99	0.42
22:DA:2671:G:C2	22:DA:2672:U:C2	3.08	0.42
22:DA:2685:G:C4	22:DA:2686:G:C8	3.07	0.42
23:DB:84:G:N2	23:DB:93:C:O2	2.52	0.42
25:DD:179:ARG:HB2	25:DD:188:LEU:HD12	2.02	0.42
28:DG:8:PRO:HG3	28:DG:51:THR:HG22	2.02	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
29:DH:32:PRO:CB	45:DX:39:TRP:HB3	2.46	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
30:DI:62:TYR:C	30:DI:64:ASP:H	2.23	0.42
31:DJ:135:GLN:N	31:DJ:135:GLN:CD	2.73	0.42
33:DL:122:VAL:HG11	33:DL:127:VAL:HG21	2.00	0.42
37:DP:53:ARG:HB2	37:DP:56:HIS:HB2	2.02	0.42
40:DS:43:ALA:O	40:DS:44:ALA:C	2.57	0.42
43:DV:48:MET:O	43:DV:51:GLN:NE2	2.50	0.42
45:DX:13:VAL:O	45:DX:13:VAL:CG2	2.67	0.42
1:AA:38:G:N2	1:AA:397:A:C4	2.88	0.42
1:AA:141:G:H2'	1:AA:142:G:O4'	2.19	0.42
1:AA:399:G:H2'	1:AA:400:C:C6	2.54	0.42
1:AA:463:U:O2	1:AA:463:U:H2'	2.18	0.42
1:AA:545:C:O2	1:AA:545:C:H2'	2.20	0.42
1:AA:575:G:O2'	1:AA:821:G:H5'	2.19	0.42
1:AA:719:C:O2'	18:AR:38:LYS:HB3	2.19	0.42
1:AA:923:A:N6	1:AA:924:C:N4	2.68	0.42
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.53	0.42
1:AA:1241:G:C2	1:AA:1242:G:C5	3.08	0.42
1:AA:1253:G:H2'	1:AA:1254:A:C8	2.55	0.42
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.19	0.42
1:AA:1503:A:C4	1:AA:1531:A:N3	2.87	0.42
2:AB:62:SER:C	2:AB:64:LYS:H	2.23	0.42
3:AC:130:PHE:CE1	3:AC:131:ARG:HD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:199:LEU:O	4:AD:202:GLU:HB2	2.19	0.42
7:AG:111:ARG:HB3	7:AG:119:ARG:HG2	2.02	0.42
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.40	0.42
21:AU:41:PRO:HA	21:AU:45:ARG:NH1	2.34	0.42
22:BA:583:G:OP1	38:BQ:7:GLY:HA2	2.20	0.42
22:BA:1060:U:OP1	30:BI:132:THR:HG21	2.20	0.42
22:BA:1090:A:H2'	22:BA:1091:G:C5'	2.49	0.42
22:BA:1374:G:H2'	22:BA:1375:U:O4'	2.20	0.42
22:BA:1505:A:C2	22:BA:1506:U:O2	2.73	0.42
22:BA:1585:C:H2'	22:BA:1586:A:H5'	2.02	0.42
22:BA:2211:A:H1'	22:BA:2212:A:OP1	2.19	0.42
23:BB:94:A:H2'	23:BB:95:U:H6	1.85	0.42
24:BC:30:PHE:CE2	24:BC:32:PRO:HB2	2.55	0.42
25:BD:103:ASP:O	25:BD:104:VAL:CG2	2.68	0.42
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.42
29:BH:116:ARG:HB3	29:BH:131:SER:O	2.20	0.42
29:BH:118:PRO:O	29:BH:119:ASN:CB	2.68	0.42
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.35	0.42
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	2.02	0.42
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.54	0.42
40:BS:45:VAL:HG12	40:BS:46:LEU:N	2.34	0.42
41:BT:2:ILE:CA	41:BT:3:ARG:C	2.87	0.42
41:BT:51:PHE:O	41:BT:53:VAL:HG13	2.20	0.42
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.20	0.42
46:BY:37:LEU:C	46:BY:37:LEU:HD12	2.40	0.42
52:B4:11:CYS:SG	52:B4:14:CYS:SG	3.17	0.42
53:B5:48:LEU:HD11	53:B5:174:ALA:HB3	2.01	0.42
1:CA:295:C:C2	1:CA:296:U:C6	3.07	0.42
1:CA:304:U:O2'	1:CA:305:G:H5'	2.19	0.42
1:CA:346:G:H3'	1:CA:346:G:N3	2.34	0.42
1:CA:456:A:C6	1:CA:457:G:C5	3.07	0.42
1:CA:532:A:N6	3:CC:193:TYR:HD2	2.17	0.42
1:CA:615:G:C2	1:CA:616:G:C8	3.07	0.42
1:CA:684:U:O2'	11:CK:40:ASN:O	2.32	0.42
1:CA:728:A:C6	1:CA:729:A:N6	2.87	0.42
1:CA:952:U:O4	13:CM:103:LYS:HD3	2.19	0.42
1:CA:1112:C:C4	3:CC:178:LEU:HD23	2.54	0.42
1:CA:1130:A:C8	1:CA:1146:A:N1	2.88	0.42
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.55	0.42
1:CA:1426:G:C5	1:CA:1475:G:C2	3.07	0.42
6:CF:82:ASP:N	6:CF:82:ASP:OD2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:56:ARG:O	11:CK:59:THR:HG23	2.19	0.42
12:CL:42:PRO:HD3	12:CL:48:ALA:O	2.19	0.42
20:CT:83:ILE:O	20:CT:87:ALA:CB	2.67	0.42
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.88	0.42
22:DA:56:A:C2	22:DA:115:C:C2	3.07	0.42
22:DA:250:G:H2'	22:DA:251:A:C8	2.55	0.42
22:DA:306:U:C5	22:DA:307:G:C5	3.08	0.42
22:DA:310:A:C6	22:DA:330:A:C5	3.08	0.42
22:DA:629:G:H4'	22:DA:650:C:O2	2.19	0.42
22:DA:687:C:C2	22:DA:788:A:O4'	2.73	0.42
22:DA:706:A:C4	22:DA:707:G:C8	3.07	0.42
22:DA:734:A:C4	22:DA:735:A:C8	3.08	0.42
22:DA:1096:A:H2'	22:DA:1097:U:H5"	2.01	0.42
22:DA:1239:G:C6	22:DA:1240:U:C4	3.07	0.42
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.37	0.42
22:DA:1370:C:O4'	22:DA:1810:A:H2	2.02	0.42
22:DA:1526:C:N4	22:DA:1527:G:C6	2.87	0.42
22:DA:1566:A:H5'	24:DC:214:ARG:CZ	2.50	0.42
22:DA:1651:G:O6	22:DA:1652:A:C6	2.72	0.42
22:DA:2037:A:C6	22:DA:2038:G:C5	3.08	0.42
22:DA:2091:C:O2	45:DX:34:HIS:CE1	2.73	0.42
22:DA:2287:A:C8	22:DA:2289:G:C8	3.08	0.42
22:DA:2436:G:N3	22:DA:2437:G:C8	2.88	0.42
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	3.03	0.42
24:DC:65:VAL:HB	24:DC:67:PHE:CE1	2.54	0.42
26:DE:108:ILE:HD12	26:DE:108:ILE:O	2.19	0.42
27:DF:12:VAL:O	27:DF:16:LEU:HG	2.18	0.42
31:DJ:126:ALA:O	31:DJ:127:GLY:O	2.37	0.42
35:DN:103:ARG:NE	35:DN:110:MET:HE3	2.35	0.42
42:DU:51:ALA:O	42:DU:52:LEU:HB2	2.20	0.42
45:DX:5:CYS:O	45:DX:7:VAL:N	2.53	0.42
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.54	0.42
52:D4:30:GLU:CB	52:D4:33:HIS:CD2	3.02	0.42
1:AA:202:G:C2	1:AA:216:U:O2	2.73	0.42
1:AA:389:A:C6	1:AA:390:U:H1'	2.54	0.42
1:AA:666:G:C6	1:AA:741:G:C6	3.08	0.42
1:AA:920:U:H2'	1:AA:921:U:C6	2.54	0.42
1:AA:1308:U:OP2	13:AM:98:ARG:HG2	2.19	0.42
2:AB:17:GLY:HA2	2:AB:41:ILE:HG23	2.02	0.42
2:AB:97:LEU:O	2:AB:100:MET:HB3	2.20	0.42
2:AB:164:ILE:HG23	2:AB:165:ASP:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:207:ILE:N	2:AB:207:ILE:CD1	2.83	0.42
5:AE:81:LEU:HD21	5:AE:123:VAL:CG1	2.50	0.42
5:AE:133:PRO:C	5:AE:135:ASN:N	2.73	0.42
7:AG:95:ARG:O	7:AG:97:ASN:N	2.52	0.42
8:AH:64:LYS:HB2	8:AH:71:VAL:CG2	2.49	0.42
8:AH:109:GLY:O	8:AH:111:MET:HG3	2.19	0.42
11:AK:53:ARG:O	11:AK:56:ARG:CG	2.67	0.42
12:AL:72:HIS:ND1	12:AL:74:LEU:HB2	2.35	0.42
13:AM:4:ILE:HD11	13:AM:10:PRO:CG	2.49	0.42
14:AN:81:ARG:HA	14:AN:84:VAL:HB	2.01	0.42
15:AO:79:THR:O	15:AO:83:GLU:OE1	2.37	0.42
19:AS:19:VAL:O	19:AS:23:VAL:HG23	2.18	0.42
22:BA:104:A:C5	22:BA:105:C:C5	3.07	0.42
22:BA:634:C:H2'	22:BA:635:C:C6	2.54	0.42
22:BA:961:C:C4	22:BA:2031:A:C4	3.07	0.42
22:BA:1422:G:C6	22:BA:1423:G:N7	2.88	0.42
22:BA:1477:A:N6	22:BA:1514:G:O2'	2.52	0.42
22:BA:1794:A:C4	22:BA:1795:C:C5	3.07	0.42
22:BA:1795:C:C2	22:BA:1796:U:C6	3.08	0.42
22:BA:1897:G:N2	22:BA:1898:U:O2	2.53	0.42
22:BA:1916:A:P	22:BA:1917:U:OP2	2.78	0.42
22:BA:1926:U:H2'	22:BA:1927:A:OP2	2.20	0.42
22:BA:2127:G:N1	22:BA:2161:C:O2	2.53	0.42
22:BA:2198:A:C2	29:BH:29:PHE:HB2	2.55	0.42
22:BA:2517:C:C6	22:BA:2542:A:N7	2.87	0.42
22:BA:2577:A:H2'	22:BA:2578:G:OP1	2.20	0.42
22:BA:2633:G:H2'	22:BA:2634:A:O4'	2.20	0.42
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.20	0.42
25:BD:140:HIS:CE1	57:BD:302:HOH:O	2.52	0.42
28:BG:55:ARG:O	28:BG:56:ASP:C	2.58	0.42
30:BI:55:ILE:HG12	30:BI:74:PRO:CA	2.50	0.42
30:BI:80:LEU:HD11	30:BI:133:ALA:HA	2.01	0.42
30:BI:110:ALA:HB1	30:BI:129:ILE:HG13	2.02	0.42
31:BJ:109:LEU:HB3	31:BJ:110:PRO:CD	2.50	0.42
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.50	0.42
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	2.02	0.42
35:BN:52:ILE:HG21	35:BN:94:TYR:CG	2.55	0.42
36:BO:11:ALA:HB2	36:BO:96:GLY:CA	2.50	0.42
37:BP:15:GLN:O	37:BP:16:ASP:CB	2.65	0.42
38:BQ:41:LYS:HG2	38:BQ:45:TYR:CE1	2.55	0.42
39:BR:27:ILE:HG22	39:BR:28:ALA:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:59:ILE:HA	45:BX:67:VAL:HG21	2.01	0.42
1:CA:81:A:H2'	1:CA:82:G:H8	1.84	0.42
1:CA:146:G:N2	1:CA:147:G:H1'	2.35	0.42
1:CA:418:C:H1'	1:CA:540:G:O2'	2.19	0.42
1:CA:577:G:C1'	1:CA:816:A:H2'	2.49	0.42
1:CA:974:A:OP1	14:CN:69:ARG:NH1	2.51	0.42
1:CA:1014:A:N7	1:CA:1015:G:C6	2.88	0.42
1:CA:1130:A:C4	1:CA:1146:A:C2	3.07	0.42
1:CA:1306:A:H1'	1:CA:1332:A:C5	2.55	0.42
2:CB:24:ASN:O	2:CB:26:LYS:N	2.52	0.42
2:CB:187:VAL:HB	2:CB:191:SER:HB2	2.02	0.42
2:CB:222:ARG:HG2	2:CB:223:GLU:N	2.35	0.42
4:CD:206:LYS:O	4:CD:206:LYS:HD3	2.20	0.42
5:CE:105:ILE:CG1	5:CE:112:ARG:HG3	2.50	0.42
8:CH:83:LEU:O	8:CH:83:LEU:HD13	2.20	0.42
10:CJ:12:ALA:CB	10:CJ:18:ILE:HB	2.50	0.42
11:CK:18:ASP:HA	11:CK:81:ASN:O	2.19	0.42
13:CM:57:ARG:O	13:CM:60:VAL:HG13	2.20	0.42
13:CM:63:PHE:O	13:CM:65:VAL:HG13	2.20	0.42
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	2.01	0.42
16:CP:38:PHE:CE2	16:CP:51:ARG:HD3	2.54	0.42
21:CU:47:ARG:HE	21:CU:47:ARG:HA	1.85	0.42
22:DA:60:G:H1'	22:DA:61:C:OP1	2.19	0.42
22:DA:126:A:OP2	50:D2:19:ARG:HG3	2.20	0.42
22:DA:309:A:H5'	42:DU:17:LYS:HG2	2.00	0.42
22:DA:511:U:H2'	22:DA:512:G:H5'	2.01	0.42
22:DA:581:C:OP1	38:DQ:33:ARG:HB2	2.20	0.42
22:DA:681:G:C2	22:DA:682:G:N9	2.88	0.42
22:DA:1087:G:C6	22:DA:1089:A:C2	3.07	0.42
22:DA:1384:A:O2'	22:DA:1404:C:O2	2.35	0.42
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.55	0.42
22:DA:2452:C:C2	55:DA:3001:VIF:O05	2.73	0.42
22:DA:2657:A:H1'	22:DA:2665:A:N6	2.35	0.42
23:DB:51:G:N7	36:DO:64:TYR:HE2	2.18	0.42
24:DC:126:PRO:HA	24:DC:192:LEU:O	2.20	0.42
26:DE:181:ILE:HG23	33:DL:2:ARG:NH1	2.35	0.42
28:DG:64:GLN:O	28:DG:67:THR:OG1	2.37	0.42
29:DH:27:ARG:NE	45:DX:60:ASP:CG	2.71	0.42
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.42
30:DI:133:ALA:C	30:DI:138:LEU:HD12	2.40	0.42
31:DJ:49:ASP:OD1	31:DJ:121:LYS:HD3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	2.02	0.42
35:DN:17:ARG:O	35:DN:21:PHE:HB2	2.19	0.42
40:DS:62:ASP:O	40:DS:63:GLY:C	2.57	0.42
52:D4:30:GLU:CG	52:D4:33:HIS:CD2	3.03	0.42
1:AA:457:G:C6	1:AA:458:U:C4	3.08	0.42
1:AA:725:G:C2	1:AA:726:C:C6	3.08	0.42
1:AA:1234:C:H2'	1:AA:1235:U:H6	1.85	0.42
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.19	0.42
1:AA:1329:A:OP1	13:AM:26:GLY:O	2.38	0.42
2:AB:128:LYS:CG	2:AB:129:LEU:N	2.83	0.42
2:AB:210:VAL:O	2:AB:214:LEU:CB	2.68	0.42
3:AC:145:GLY:O	3:AC:146:ALA:HB3	2.20	0.42
5:AE:106:ILE:HD11	5:AE:124:LEU:HB3	2.02	0.42
6:AF:68:GLN:O	6:AF:69:GLU:HB2	2.20	0.42
10:AJ:48:ARG:NH1	14:AN:101:TRP:CZ3	2.87	0.42
12:AL:106:GLY:HA3	12:AL:118:GLY:O	2.19	0.42
12:AL:114:ARG:O	12:AL:116:LYS:O	2.37	0.42
13:AM:16:VAL:HG22	13:AM:41:GLU:O	2.19	0.42
19:AS:62:VAL:HG12	19:AS:63:THR:N	2.34	0.42
22:BA:102:U:N1	46:BY:2:LYS:HE3	2.35	0.42
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.55	0.42
22:BA:1204:A:O4'	22:BA:1206:G:C8	2.73	0.42
22:BA:1644:C:O2	22:BA:1644:C:C2'	2.64	0.42
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.55	0.42
22:BA:1999:C:H5"	22:BA:2723:C:O2'	2.19	0.42
22:BA:2097:A:C2	22:BA:2193:G:C5	3.08	0.42
22:BA:2118:U:O4	22:BA:2149:U:H5'	2.19	0.42
22:BA:2520:C:C5	22:BA:2567:G:C4	3.07	0.42
24:BC:23:GLU:OE1	24:BC:81:LEU:HD12	2.19	0.42
29:BH:1:MET:HE3	29:BH:23:ALA:HA	2.02	0.42
30:BI:29:GLY:O	30:BI:35:ILE:HD11	2.20	0.42
32:BK:41:ILE:HD11	32:BK:86:LEU:CD2	2.49	0.42
32:BK:105:ARG:C	32:BK:107:LEU:N	2.72	0.42
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.20	0.42
1:CA:15:G:O4'	5:CE:29:ARG:NH2	2.52	0.42
1:CA:63:C:O2'	1:CA:380:G:H4'	2.19	0.42
1:CA:295:C:N4	1:CA:296:U:C4	2.88	0.42
1:CA:538:G:H2'	1:CA:539:A:O4'	2.20	0.42
1:CA:919:A:C2	1:CA:920:U:C6	3.08	0.42
1:CA:1377:A:N3	7:CG:2:PRO:HG3	2.35	0.42
2:CB:91:PHE:CD2	2:CB:150:GLY:HA3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:165:ASP:O	2:CB:168:HIS:HB3	2.19	0.42
3:CC:101:ILE:HG23	3:CC:101:ILE:O	2.20	0.42
4:CD:33:LYS:O	4:CD:34:ILE:C	2.59	0.42
6:CF:78:PHE:CD2	6:CF:78:PHE:N	2.87	0.42
9:CI:57:MET:HA	9:CI:60:LYS:HB3	2.02	0.42
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.20	0.42
12:CL:76:GLU:O	12:CL:77:HIS:O	2.37	0.42
13:CM:93:ARG:CZ	13:CM:93:ARG:HB3	2.50	0.42
16:CP:40:ASN:HB3	16:CP:43:ALA:HB2	2.02	0.42
22:DA:160:A:H2'	22:DA:161:A:C8	2.55	0.42
22:DA:189:G:C5	22:DA:205:G:C2	3.08	0.42
22:DA:244:A:H2'	22:DA:245:G:O4'	2.20	0.42
22:DA:319:G:C4	22:DA:333:G:N2	2.88	0.42
22:DA:370:G:C8	57:DA:3559:HOH:O	2.69	0.42
22:DA:468:G:C2'	22:DA:469:G:H5'	2.50	0.42
22:DA:503:A:C2	22:DA:506:G:C5	3.08	0.42
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.19	0.42
22:DA:787:C:C5	22:DA:791:C:C4	3.08	0.42
22:DA:1121:C:N3	22:DA:1122:G:C8	2.87	0.42
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.50	0.42
22:DA:1438:U:C2	22:DA:1555:G:N2	2.87	0.42
22:DA:1713:A:C5	22:DA:1716:U:H1'	2.55	0.42
22:DA:1791:A:H5'	24:DC:207:LYS:O	2.20	0.42
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.55	0.42
22:DA:1998:A:O3'	22:DA:2724:U:H4'	2.19	0.42
22:DA:2055:C:H5'	22:DA:2056:G:OP1	2.20	0.42
22:DA:2142:A:N6	22:DA:2143:C:N4	2.68	0.42
22:DA:2291:U:H5"	22:DA:2380:C:O2	2.20	0.42
22:DA:2503:A:C8	55:DA:3001:VIF:C10	2.99	0.42
22:DA:2634:A:C2	22:DA:2635:A:C4	3.08	0.42
22:DA:2826:A:C5	22:DA:2827:C:C5	3.07	0.42
24:DC:36:LYS:O	24:DC:36:LYS:HG3	2.19	0.42
25:DD:4:LEU:HG	25:DD:32:ASN:OD1	2.20	0.42
25:DD:51:THR:OG1	25:DD:76:GLY:HA3	2.20	0.42
26:DE:23:PHE:CE1	26:DE:28:VAL:HG21	2.55	0.42
27:DF:64:LYS:O	27:DF:64:LYS:HG2	2.19	0.42
31:DJ:89:PHE:CE2	31:DJ:100:VAL:HG11	2.55	0.42
36:DO:36:TYR:HD2	36:DO:52:SER:HB2	1.85	0.42
40:DS:18:ARG:HA	40:DS:21:ALA:HB3	2.01	0.42
1:AA:179:A:C6	1:AA:180:U:N3	2.88	0.42
1:AA:877:G:H21	8:AH:2:SER:N	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:945:G:C6	1:AA:1337:G:C5	3.08	0.42
1:AA:974:A:H4'	1:AA:975:A:O5'	2.20	0.42
1:AA:1034:G:H2'	1:AA:1035:A:O4'	2.20	0.42
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.42
1:AA:1304:G:C2	1:AA:1305:G:N2	2.87	0.42
1:AA:1356:G:C2	1:AA:1367:C:O2	2.73	0.42
2:AB:99:GLY:O	2:AB:103:ASN:CB	2.68	0.42
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.34	0.42
4:AD:139:PRO:O	4:AD:140:ASN:HB2	2.20	0.42
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.20	0.42
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	2.19	0.42
20:AT:79:LEU:O	20:AT:82:GLN:HB2	2.20	0.42
22:BA:393:C:C2	22:BA:394:C:C5	3.08	0.42
22:BA:406:G:C6	22:BA:407:G:N7	2.88	0.42
22:BA:567:U:H2'	22:BA:568:U:O5'	2.19	0.42
22:BA:644:A:H2'	22:BA:645:C:O4'	2.20	0.42
22:BA:723:C:H2'	22:BA:724:U:C6	2.55	0.42
22:BA:976:G:C2	22:BA:977:G:N7	2.88	0.42
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.19	0.42
22:BA:1300:G:N9	22:BA:1626:A:C2	2.87	0.42
22:BA:1422:G:N3	22:BA:1423:G:C8	2.88	0.42
22:BA:1512:C:C2'	22:BA:1513:U:H5'	2.50	0.42
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.72	0.42
22:BA:1607:C:N3	22:BA:1622:G:OP2	2.53	0.42
22:BA:1673:G:H2'	22:BA:1674:G:H5'	2.02	0.42
22:BA:1985:C:H2'	22:BA:1986:C:O5'	2.19	0.42
22:BA:2370:G:C6	22:BA:2371:G:C5	3.08	0.42
26:BE:148:ILE:HG21	26:BE:157:LEU:HD21	2.02	0.42
28:BG:159:GLY:O	28:BG:160:LYS:C	2.57	0.42
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.42
30:BI:21:SER:N	30:BI:22:PRO:CD	2.82	0.42
31:BJ:32:LEU:O	31:BJ:36:LEU:HG	2.20	0.42
34:BM:2:LEU:HD22	34:BM:2:LEU:N	2.35	0.42
34:BM:14:LYS:HE3	34:BM:14:LYS:HB2	1.94	0.42
34:BM:105:MET:CG	34:BM:106:ASP:N	2.83	0.42
34:BM:114:ARG:HA	34:BM:130:PHE:CE1	2.55	0.42
37:BP:73:VAL:HG22	37:BP:73:VAL:O	2.18	0.42
39:BR:21:ARG:O	39:BR:22:LEU:HD23	2.20	0.42
40:BS:65:ASP:OD1	40:BS:67:ASP:HB2	2.19	0.42
42:BU:12:ILE:CG2	42:BU:80:ALA:HB2	2.50	0.42
50:B2:32:ALA:O	50:B2:33:ARG:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:12:U:H4'	1:CA:526:C:H4'	2.02	0.42
1:CA:73:C:O2'	1:CA:74:A:O5'	2.31	0.42
1:CA:210:C:H5"	1:CA:211:G:OP1	2.19	0.42
1:CA:254:G:O2'	17:CQ:18:GLU:O	2.36	0.42
1:CA:436:C:N3	1:CA:437:U:C4	2.88	0.42
1:CA:582:C:C4	1:CA:760:G:O6	2.72	0.42
1:CA:615:G:C2	1:CA:626:G:C5	3.08	0.42
1:CA:878:A:C5	1:CA:879:C:C5	3.08	0.42
1:CA:971:G:OP1	1:CA:972:C:H5"	2.19	0.42
2:CB:96:TRP:CZ3	2:CB:175:GLU:OE2	2.72	0.42
2:CB:100:MET:CA	2:CB:107:VAL:HG21	2.50	0.42
2:CB:208:ARG:O	2:CB:210:VAL:N	2.53	0.42
3:CC:84:VAL:HA	3:CC:87:LEU:HD12	2.01	0.42
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.34	0.42
4:CD:59:GLN:OE1	4:CD:59:GLN:CA	2.67	0.42
4:CD:129:VAL:HG23	4:CD:146:ARG:HD3	2.01	0.42
6:CF:16:GLU:O	6:CF:18:VAL:N	2.52	0.42
6:CF:59:TYR:C	6:CF:60:VAL:HG23	2.40	0.42
8:CH:102:ALA:O	8:CH:112:THR:HA	2.19	0.42
9:CI:51:PRO:HD3	9:CI:80:ARG:HG2	2.02	0.42
11:CK:43:GLY:HA3	11:CK:74:VAL:HG12	2.02	0.42
13:CM:81:MET:O	13:CM:82:ASP:C	2.57	0.42
14:CN:45:VAL:HG23	14:CN:46:LEU:H	1.85	0.42
15:CO:46:HIS:C	15:CO:48:LYS:N	2.72	0.42
20:CT:80:THR:O	20:CT:81:ALA:C	2.56	0.42
21:CU:9:ASN:N	21:CU:12:PHE:HE2	2.18	0.42
22:DA:60:G:HO2'	22:DA:62:U:P	2.38	0.42
22:DA:328:U:H4'	42:DU:66:GLN:NE2	2.35	0.42
22:DA:363:G:H2'	22:DA:364:C:C6	2.55	0.42
22:DA:503:A:H4'	22:DA:504:A:O5'	2.20	0.42
22:DA:609:A:C6	22:DA:610:C:O2	2.73	0.42
22:DA:957:C:C4	22:DA:2459:A:C1'	3.03	0.42
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.68	0.42
22:DA:1379:U:O2	22:DA:1379:U:H2'	2.20	0.42
22:DA:1581:G:C5	22:DA:1582:C:N4	2.88	0.42
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.54	0.42
22:DA:1665:A:H2'	22:DA:1666:G:O4'	2.20	0.42
22:DA:1745:A:C4	22:DA:1746:A:C8	3.08	0.42
22:DA:2212:A:C2	22:DA:2214:C:N4	2.88	0.42
22:DA:2428:G:C2	33:DL:54:GLN:OE1	2.73	0.42
22:DA:2536:G:C6	22:DA:2537:U:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.55	0.42
22:DA:2683:C:OP1	37:DP:56:HIS:CB	2.68	0.42
22:DA:2815:C:O2'	48:D0:41:HIS:ND1	2.41	0.42
24:DC:72:ASP:O	24:DC:74:ILE:HD12	2.19	0.42
24:DC:244:PRO:O	24:DC:245:VAL:HG13	2.20	0.42
26:DE:181:ILE:HB	33:DL:3:LEU:HD13	2.01	0.42
27:DF:85:ILE:HG23	27:DF:85:ILE:O	2.18	0.42
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.42
35:DN:58:ASP:O	35:DN:59:SER:HB3	2.18	0.42
35:DN:71:ARG:HH21	35:DN:71:ARG:CG	2.32	0.42
37:DP:28:VAL:HG21	37:DP:74:PHE:CE2	2.55	0.42
41:DT:21:SER:O	41:DT:23:ALA:N	2.52	0.42
41:DT:64:LYS:HB3	41:DT:76:ARG:NH2	2.35	0.42
49:D1:10:LYS:O	49:D1:51:GLU:CG	2.66	0.42
1:AA:161:A:C2'	1:AA:162:A:O5'	2.68	0.41
1:AA:212:G:N2	1:AA:213:G:N3	2.67	0.41
1:AA:262:A:N1	1:AA:263:A:C2	2.88	0.41
1:AA:451:A:H4'	1:AA:452:A:O4'	2.19	0.41
1:AA:462:G:H3'	1:AA:463:U:H6	1.85	0.41
1:AA:1048:G:C2	1:AA:1050:G:N7	2.87	0.41
1:AA:1537:U:C4	1:AA:1538:C:C4	3.07	0.41
2:AB:16:PHE:O	2:AB:41:ILE:HD12	2.20	0.41
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.85	0.41
2:AB:40:ILE:N	2:AB:40:ILE:HD13	2.35	0.41
2:AB:154:MET:HE3	2:AB:158:PRO:HG3	2.01	0.41
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.50	0.41
6:AF:8:PHE:CD1	6:AF:8:PHE:C	2.94	0.41
12:AL:21:VAL:N	12:AL:22:PRO:CD	2.83	0.41
12:AL:21:VAL:C	12:AL:23:ALA:H	2.23	0.41
12:AL:108:LYS:O	12:AL:109:ASP:HB2	2.19	0.41
14:AN:63:ARG:O	14:AN:65:ARG:N	2.53	0.41
18:AR:49:ALA:O	18:AR:50:LYS:C	2.58	0.41
20:AT:9:LYS:O	20:AT:13:GLN:HB2	2.19	0.41
22:BA:123:G:H2'	22:BA:124:G:O4'	2.19	0.41
22:BA:480:A:OP2	42:BU:44:LYS:NZ	2.43	0.41
22:BA:569:U:OP1	22:BA:945:A:O2'	2.19	0.41
22:BA:928:A:C2	47:BZ:47:MET:HE1	2.54	0.41
22:BA:1097:U:H1'	30:BI:9:VAL:HG12	2.02	0.41
22:BA:1769:U:C2'	22:BA:1770:G:O5'	2.67	0.41
22:BA:1961:C:C5	22:BA:1962:C:C4	3.08	0.41
22:BA:2070:A:C2	22:BA:2442:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2074:U:H2'	22:BA:2075:U:C6	2.55	0.41
22:BA:2152:G:C5	22:BA:2153:C:C5	3.08	0.41
22:BA:2267:A:H5"	22:BA:2268:A:C5'	2.50	0.41
22:BA:2340:A:H2'	22:BA:2341:G:H8	1.84	0.41
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.50	0.41
22:BA:2573:C:H6	22:BA:2573:C:O5'	2.03	0.41
25:BD:84:LEU:HD23	25:BD:84:LEU:HA	1.80	0.41
26:BE:48:THR:C	26:BE:50:ALA:N	2.72	0.41
26:BE:191:ASP:O	26:BE:195:GLN:HG3	2.20	0.41
28:BG:155:GLU:HG2	28:BG:156:PRO:HD2	2.01	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
35:BN:36:THR:O	35:BN:111:ALA:N	2.51	0.41
38:BQ:90:ILE:HG22	38:BQ:95:LEU:HG	2.00	0.41
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.50	0.41
39:BR:74:ILE:O	39:BR:86:GLN:HA	2.20	0.41
47:BZ:21:LYS:C	47:BZ:23:THR:N	2.73	0.41
53:B5:42:VAL:O	53:B5:179:ALA:HB3	2.19	0.41
1:CA:128:G:N1	1:CA:129:A:C6	2.88	0.41
1:CA:270:A:H2'	1:CA:271:C:C6	2.54	0.41
1:CA:276:G:H2'	1:CA:277:C:O4'	2.19	0.41
1:CA:406:G:N3	1:CA:407:U:C6	2.88	0.41
1:CA:502:A:C2	1:CA:503:C:C2	3.07	0.41
1:CA:706:A:O2'	11:CK:31:ILE:HD11	2.20	0.41
1:CA:716:A:C2'	1:CA:717:U:O5'	2.68	0.41
1:CA:825:A:O2'	1:CA:826:C:H5'	2.19	0.41
1:CA:978:A:H4'	1:CA:1322:C:C5	2.55	0.41
1:CA:1105:A:N3	1:CA:1106:G:C8	2.88	0.41
1:CA:1179:A:C2'	1:CA:1180:A:H5'	2.50	0.41
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.54	0.41
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.55	0.41
3:CC:134:MET:SD	3:CC:153:VAL:HG13	2.60	0.41
4:CD:34:ILE:O	4:CD:34:ILE:HG23	2.19	0.41
4:CD:106:GLY:O	4:CD:159:LEU:N	2.53	0.41
5:CE:89:HIS:CE1	5:CE:138:ARG:HD3	2.55	0.41
7:CG:122:ASN:O	7:CG:125:SER:HB2	2.19	0.41
9:CI:47:VAL:O	9:CI:80:ARG:HG2	2.19	0.41
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	2.02	0.41
13:CM:39:ILE:HG13	13:CM:56:LEU:HD11	2.01	0.41
22:DA:192:C:H5'	22:DA:678:C:H1'	2.02	0.41
22:DA:201:C:C5	22:DA:202:U:C5	3.08	0.41
22:DA:335:C:H2'	22:DA:336:C:H6	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:360:U:C4	22:DA:361:G:C6	3.08	0.41
22:DA:529:A:H4'	22:DA:530:G:OP1	2.19	0.41
22:DA:604:G:C6	22:DA:605:G:C6	3.08	0.41
22:DA:668:A:H3'	22:DA:669:G:H5"	2.02	0.41
22:DA:776:G:C8	22:DA:793:A:C5	3.08	0.41
22:DA:788:A:OP1	22:DA:791:C:N4	2.47	0.41
22:DA:846:U:O2'	22:DA:847:U:P	2.77	0.41
22:DA:1002:G:C5	22:DA:1003:G:C8	3.08	0.41
22:DA:1324:G:H1'	22:DA:1616:A:N6	2.35	0.41
22:DA:1623:G:C2	22:DA:1624:U:C6	3.08	0.41
22:DA:1940:U:C2	22:DA:1965:C:OP2	2.73	0.41
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.54	0.41
22:DA:2314:A:C2	22:DA:2315:G:C5	3.08	0.41
22:DA:2321:U:H3'	22:DA:2322:A:H5'	2.01	0.41
22:DA:2549:G:N3	22:DA:2560:A:C2	2.87	0.41
22:DA:2767:C:H2'	22:DA:2768:U:H5'	2.01	0.41
22:DA:2819:G:N3	22:DA:2828:G:C2	2.88	0.41
23:DB:60:C:C2	23:DB:61:G:C8	3.08	0.41
23:DB:97:C:C4	23:DB:98:G:C8	3.08	0.41
24:DC:75:PRO:HB2	24:DC:97:LYS:HG3	2.02	0.41
24:DC:147:LYS:HB2	24:DC:150:LYS:CB	2.47	0.41
27:DF:8:TYR:OH	27:DF:30:ARG:HB3	2.19	0.41
30:DI:4:LYS:HD2	30:DI:5:VAL:H	1.85	0.41
31:DJ:138:GLN:HG3	31:DJ:138:GLN:O	2.20	0.41
33:DL:68:SER:O	33:DL:69:ARG:HG3	2.19	0.41
33:DL:121:THR:O	33:DL:121:THR:HG22	2.19	0.41
34:DM:2:LEU:HD12	34:DM:2:LEU:N	2.35	0.41
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.20	0.41
41:DT:2:ILE:HA	41:DT:3:ARG:HB2	2.02	0.41
46:DY:9:LYS:O	46:DY:12:GLU:HB2	2.19	0.41
51:D3:31:HIS:O	51:D3:36:LYS:NZ	2.52	0.41
1:AA:35:G:H2'	1:AA:36:C:H6	1.84	0.41
1:AA:57:G:H2'	1:AA:58:C:C6	2.54	0.41
1:AA:209:U:H5"	1:AA:210:C:OP2	2.20	0.41
1:AA:258:G:C4	1:AA:259:G:C8	3.08	0.41
1:AA:603:U:H2'	1:AA:604:G:C8	2.55	0.41
1:AA:693:G:O2'	1:AA:694:A:H5'	2.20	0.41
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.41
1:AA:923:A:C5	1:AA:924:C:C5	3.07	0.41
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.55	0.41
1:AA:1223:C:P	19:AS:78:ARG:NH1	2.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.43	0.41
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.20	0.41
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.18	0.41
1:AA:1538:C:H2'	1:AA:1539:C:H5'	2.02	0.41
2:AB:167:ASP:OD1	2:AB:167:ASP:C	2.59	0.41
6:AF:76:THR:O	6:AF:79:ARG:N	2.49	0.41
7:AG:47:LEU:HD12	7:AG:47:LEU:HA	1.92	0.41
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	2.02	0.41
13:AM:114:LYS:O	13:AM:115:PRO:OXT	2.38	0.41
18:AR:34:THR:HG22	18:AR:38:LYS:HB2	2.01	0.41
19:AS:4:SER:O	19:AS:6:LYS:N	2.54	0.41
19:AS:31:LEU:HD12	19:AS:31:LEU:HA	1.95	0.41
20:AT:54:MET:HE3	20:AT:58:VAL:HG21	2.02	0.41
20:AT:69:LYS:HB2	20:AT:69:LYS:HZ3	1.84	0.41
22:BA:92:U:O2	22:BA:92:U:H2'	2.19	0.41
22:BA:532:A:N3	22:BA:532:A:H2'	2.35	0.41
22:BA:974:G:C8	22:BA:989:G:N3	2.89	0.41
22:BA:1041:G:O2'	22:BA:1042:G:H5'	2.19	0.41
22:BA:1107:G:C4	22:BA:1108:U:C6	3.08	0.41
22:BA:1179:G:N7	22:BA:1180:U:O4'	2.52	0.41
22:BA:1301:A:C2	22:BA:1303:G:C5	3.08	0.41
22:BA:1324:G:N2	22:BA:1328:A:N1	2.69	0.41
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.19	0.41
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.20	0.41
22:BA:1617:C:OP1	57:BA:3644:HOH:O	2.22	0.41
22:BA:1623:G:C2'	22:BA:1624:U:H5'	2.50	0.41
22:BA:1669:A:H5"	22:BA:2550:G:OP1	2.20	0.41
22:BA:1800:C:H3'	24:BC:146:MET:HE1	2.01	0.41
22:BA:2055:C:H5'	22:BA:2056:G:OP1	2.20	0.41
22:BA:2125:G:N2	22:BA:2171:A:O5'	2.48	0.41
22:BA:2346:A:H3'	22:BA:2347:C:H5"	2.02	0.41
22:BA:2418:A:C5	22:BA:2419:U:C5	3.07	0.41
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	2.20	0.41
23:BB:58:A:H2'	23:BB:59:A:O4'	2.20	0.41
24:BC:167:ARG:O	24:BC:168:ASP:HB3	2.19	0.41
25:BD:14:ILE:N	25:BD:14:ILE:HD13	2.35	0.41
25:BD:25:THR:HG22	25:BD:27:ILE:HG13	2.02	0.41
26:BE:58:LYS:HZ2	26:BE:62:GLN:N	2.18	0.41
27:BF:175:PHE:HA	27:BF:176:PRO:HD2	1.84	0.41
35:BN:55:ALA:CB	35:BN:79:LEU:HB3	2.50	0.41
39:BR:69:GLY:C	39:BR:70:GLU:O	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:30:SER:O	40:BS:31:GLN:C	2.57	0.41
43:BV:85:LYS:HE3	43:BV:85:LYS:HB3	1.83	0.41
47:BZ:23:THR:HG21	47:BZ:51:VAL:HG13	2.02	0.41
1:CA:435:A:C2	1:CA:436:C:C1'	3.03	0.41
1:CA:683:G:C6	1:CA:708:C:N3	2.88	0.41
1:CA:690:G:H2'	1:CA:691:G:O4'	2.19	0.41
1:CA:1025:U:H5"	1:CA:1026:G:OP1	2.20	0.41
1:CA:1166:G:H2'	1:CA:1168:U:OP2	2.20	0.41
1:CA:1319:A:OP2	19:CS:5:LEU:HD21	2.21	0.41
3:CC:50:ALA:O	3:CC:51:SER:HB2	2.20	0.41
3:CC:53:SER:HB2	3:CC:115:LEU:HG	2.01	0.41
3:CC:120:ILE:HD11	3:CC:137:ALA:CB	2.49	0.41
3:CC:124:LEU:HD13	3:CC:196:ILE:HG21	2.01	0.41
3:CC:184:TYR:CD1	3:CC:201:TRP:CD1	3.07	0.41
7:CG:13:LEU:HD13	7:CG:14:PRO:HD2	2.02	0.41
9:CI:26:GLY:HA2	9:CI:61:LEU:O	2.19	0.41
12:CL:24:LEU:HD22	12:CL:59:ASN:OD1	2.20	0.41
15:CO:67:LEU:HD23	15:CO:78:TYR:CE1	2.55	0.41
16:CP:74:LEU:N	16:CP:74:LEU:HD23	2.35	0.41
20:CT:5:LYS:O	20:CT:6:SER:C	2.57	0.41
22:DA:228:C:O2	22:DA:418:C:H4'	2.19	0.41
22:DA:239:C:O2	22:DA:239:C:H2'	2.21	0.41
22:DA:467:G:H4'	22:DA:796:C:O2'	2.19	0.41
22:DA:529:A:C6	22:DA:2023:C:C2	3.08	0.41
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.19	0.41
22:DA:1083:U:H2'	22:DA:1085:A:OP2	2.20	0.41
22:DA:1091:G:N3	22:DA:1092:C:C5	2.88	0.41
22:DA:1299:G:H5'	22:DA:1301:A:O4'	2.20	0.41
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.55	0.41
22:DA:1364:G:OP2	45:DX:50:ARG:NH2	2.52	0.41
22:DA:1475:G:O2'	22:DA:1476:U:P	2.78	0.41
22:DA:2078:C:H1'	22:DA:2434:A:H1'	2.03	0.41
22:DA:2103:C:C2	22:DA:2104:C:C5	3.08	0.41
22:DA:2230:G:O3'	45:DX:30:LEU:HB2	2.20	0.41
22:DA:2323:G:H2'	22:DA:2324:U:C6	2.54	0.41
22:DA:2788:C:H2'	22:DA:2789:C:H6	1.84	0.41
23:DB:65:U:C4	23:DB:108:A:C4	3.08	0.41
23:DB:100:G:H2'	23:DB:101:A:O4'	2.19	0.41
25:DD:32:ASN:N	25:DD:96:ILE:O	2.52	0.41
25:DD:104:VAL:O	25:DD:105:LYS:HB2	2.20	0.41
27:DF:100:PHE:O	27:DF:104:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
30:DI:75:PRO:HG2	30:DI:78:VAL:CG2	2.50	0.41
30:DI:92:LYS:HB3	30:DI:95:LYS:HE3	2.01	0.41
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.35	0.41
35:DN:106:ASP:OD1	35:DN:106:ASP:C	2.59	0.41
37:DP:51:ARG:O	37:DP:51:ARG:HG2	2.19	0.41
44:DW:75:LYS:HD2	44:DW:77:ARG:CZ	2.51	0.41
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.68	0.41
46:DY:28:LEU:HD12	46:DY:46:VAL:HG21	2.03	0.41
1:AA:452:A:N6	1:AA:480:U:C2	2.88	0.41
1:AA:523:A:C2	1:AA:527:G:O6	2.73	0.41
1:AA:549:C:C4	1:AA:550:G:N7	2.89	0.41
1:AA:559:A:H4’	1:AA:560:A:O5’	2.21	0.41
1:AA:594:U:O4	1:AA:595:A:N6	2.53	0.41
1:AA:654:G:C2’	1:AA:655:A:H5’	2.50	0.41
1:AA:982:U:H4’	1:AA:983:A:C5’	2.51	0.41
1:AA:1128:C:H4’	1:AA:1148:U:O2	2.20	0.41
1:AA:1143:G:C4	1:AA:1144:G:C8	3.08	0.41
1:AA:1296:C:H5”	1:AA:1297:G:OP2	2.20	0.41
1:AA:1335:U:H5”	1:AA:1336:C:H5’	2.03	0.41
1:AA:1355:G:O2’	1:AA:1356:G:H5’	2.20	0.41
1:AA:1408:A:H2’	1:AA:1409:C:C6	2.55	0.41
2:AB:55:ALA:O	2:AB:59:LYS:HB2	2.20	0.41
3:AC:108:LYS:O	3:AC:111:LEU:HB2	2.21	0.41
3:AC:156:ARG:NH2	3:AC:161:GLU:HA	2.35	0.41
4:AD:4:TYR:O	4:AD:5:LEU:CB	2.67	0.41
4:AD:44:ARG:O	4:AD:46:PRO:HD3	2.19	0.41
4:AD:123:ILE:HD13	4:AD:123:ILE:H	1.83	0.41
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	2.02	0.41
9:AI:127:PHE:CD2	9:AI:127:PHE:C	2.93	0.41
10:AJ:42:LEU:HB3	10:AJ:71:LEU:HB3	2.00	0.41
13:AM:22:ILE:HB	13:AM:25:VAL:CG2	2.50	0.41
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	2.01	0.41
17:AQ:29:VAL:O	17:AQ:38:ILE:HD12	2.19	0.41
22:BA:24:G:C2	22:BA:517:C:C2	3.07	0.41
22:BA:323:C:O2	26:BE:163:ASN:ND2	2.53	0.41
22:BA:616:A:H4’	26:BE:101:TYR:CE2	2.55	0.41
22:BA:818:G:H5’	22:BA:839:U:OP1	2.20	0.41
22:BA:1000:A:N6	22:BA:1001:A:N6	2.68	0.41
22:BA:1434:A:C2	22:BA:1435:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1449:G:H2'	22:BA:1450:G:O5'	2.20	0.41
22:BA:1474:U:C4	22:BA:1475:G:N2	2.87	0.41
22:BA:1490:A:N3	22:BA:1490:A:H2'	2.35	0.41
22:BA:1813:G:N3	24:BC:50:THR:OG1	2.46	0.41
22:BA:1919:A:N1	22:BA:1920:C:O4'	2.54	0.41
22:BA:2174:C:O2'	22:BA:2175:C:H5'	2.20	0.41
22:BA:2508:G:C2	22:BA:2582:G:C6	3.09	0.41
23:BB:53:A:N3	23:BB:53:A:H2'	2.34	0.41
23:BB:77:U:H2'	23:BB:78:A:H5'	2.01	0.41
25:BD:39:ASP:O	25:BD:43:ASP:N	2.51	0.41
25:BD:142:VAL:HB	25:BD:143:PRO:HD3	2.02	0.41
26:BE:91:ASP:OD1	26:BE:91:ASP:C	2.58	0.41
27:BF:99:PHE:O	27:BF:102:ARG:N	2.53	0.41
30:BI:11:LEU:O	30:BI:24:VAL:HG11	2.20	0.41
39:BR:1:MET:HG3	39:BR:42:ALA:O	2.20	0.41
40:BS:28:LYS:O	40:BS:30:SER:N	2.53	0.41
40:BS:37:THR:HG21	40:BS:38:TYR:CE1	2.54	0.41
41:BT:47:VAL:HG11	41:BT:85:VAL:HG11	2.02	0.41
45:BX:12:PRO:HB3	45:BX:30:LEU:CD2	2.47	0.41
48:B0:13:ARG:HD2	48:B0:17:ARG:CZ	2.50	0.41
1:CA:39:G:N2	1:CA:40:C:C2	2.88	0.41
1:CA:790:A:N6	1:CA:791:G:N1	2.68	0.41
1:CA:965:U:OP1	1:CA:1198:G:H5"	2.20	0.41
1:CA:991:U:H4'	1:CA:992:U:OP1	2.21	0.41
1:CA:1022:A:C5	1:CA:1023:U:C5	3.09	0.41
1:CA:1240:U:H3'	1:CA:1241:G:H5'	2.02	0.41
2:CB:130:THR:HB	2:CB:132:LYS:HB3	2.02	0.41
2:CB:154:MET:CE	2:CB:158:PRO:HG3	2.51	0.41
2:CB:211:THR:HA	2:CB:214:LEU:HB2	2.02	0.41
3:CC:6:HIS:C	3:CC:8:ASN:H	2.23	0.41
4:CD:15:GLU:HA	4:CD:15:GLU:OE1	2.20	0.41
4:CD:195:ILE:O	4:CD:195:ILE:CG1	2.68	0.41
9:CI:128:SER:O	9:CI:129:LYS:C	2.59	0.41
13:CM:54:ASP:HA	13:CM:57:ARG:CB	2.50	0.41
15:CO:45:GLU:O	15:CO:46:HIS:CB	2.67	0.41
17:CQ:11:ARG:CZ	17:CQ:12:VAL:O	2.68	0.41
22:DA:371:A:H61	22:DA:401:A:H3'	1.85	0.41
22:DA:404:A:H1'	22:DA:405:U:P	2.60	0.41
22:DA:770:G:O4'	22:DA:1379:U:C5	2.73	0.41
22:DA:788:A:H1'	50:D2:4:THR:CG2	2.50	0.41
22:DA:870:U:H5"	34:DM:6:ARG:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1096:A:N1	22:DA:1097:U:C5	2.88	0.41
22:DA:1211:C:H5"	22:DA:1212:G:C8	2.55	0.41
22:DA:1365:A:C5	22:DA:1366:A:N7	2.88	0.41
22:DA:1456:G:C4	22:DA:1457:U:C6	3.09	0.41
22:DA:1664:A:C8	22:DA:1664:A:OP2	2.73	0.41
22:DA:2133:G:N3	22:DA:2158:A:C6	2.88	0.41
22:DA:2346:A:C3'	22:DA:2347:C:C5'	2.97	0.41
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.20	0.41
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.53	0.41
22:DA:2645:G:OP2	22:DA:2645:G:N2	2.46	0.41
22:DA:2786:U:O2'	25:DD:63:PRO:O	2.34	0.41
24:DC:189:ARG:O	24:DC:190:ALA:HB2	2.21	0.41
25:DD:15:PHE:HA	25:DD:20:VAL:O	2.21	0.41
26:DE:108:ILE:HD11	26:DE:180:LEU:CB	2.50	0.41
28:DG:41:VAL:HG23	28:DG:64:GLN:HB3	2.02	0.41
30:DI:57:VAL:CG2	30:DI:58:VAL:N	2.83	0.41
34:DM:36:VAL:HG22	34:DM:129:THR:HB	2.02	0.41
35:DN:12:ARG:CZ	35:DN:20:MET:HE3	2.51	0.41
35:DN:25:ALA:HA	35:DN:48:VAL:HG22	2.02	0.41
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	2.03	0.41
42:DU:83:VAL:CG1	42:DU:84:GLY:N	2.83	0.41
47:DZ:13:ALA:HB2	47:DZ:24:LEU:CD1	2.50	0.41
1:AA:192:A:C6	1:AA:193:C:C4	3.08	0.41
1:AA:269:C:N4	1:AA:270:A:N6	2.69	0.41
1:AA:422:C:O4'	1:AA:422:C:OP1	2.38	0.41
1:AA:568:G:H2'	1:AA:569:C:H6	1.84	0.41
1:AA:663:A:H5'	1:AA:836:G:OP1	2.20	0.41
1:AA:670:G:C2'	1:AA:671:G:O5'	2.67	0.41
1:AA:821:G:H4'	57:AA:1741:HOH:O	2.19	0.41
1:AA:1160:G:C6	1:AA:1181:G:O6	2.73	0.41
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.85	0.41
2:AB:68:LEU:CD2	2:AB:92:VAL:HG23	2.51	0.41
3:AC:130:PHE:O	3:AC:134:MET:HG3	2.19	0.41
4:AD:90:LEU:HD23	4:AD:200:ILE:HD11	2.01	0.41
6:AF:38:ARG:HG3	6:AF:39:LEU:H	1.85	0.41
9:AI:22:LYS:HE3	9:AI:22:LYS:HB3	1.90	0.41
10:AJ:5:ARG:HG2	10:AJ:79:PRO:HG3	2.03	0.41
10:AJ:49:PHE:CD1	10:AJ:49:PHE:N	2.88	0.41
11:AK:37:ARG:O	11:AK:39:GLY:N	2.52	0.41
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.20	0.41
19:AS:11:ILE:HG13	19:AS:15:LEU:HD23	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:3:ASN:OD1	20:AT:3:ASN:C	2.59	0.41
22:BA:563:A:C8	22:BA:2018:G:N1	2.88	0.41
22:BA:1027:A:N1	22:BA:1126:A:N9	2.68	0.41
22:BA:1489:C:C2	22:BA:1501:G:N2	2.88	0.41
22:BA:1649:G:C2	22:BA:1650:A:C8	3.08	0.41
22:BA:1784:A:P	57:BA:3698:HOH:O	2.77	0.41
22:BA:1838:C:N4	22:BA:1899:A:O4'	2.53	0.41
22:BA:1842:G:C4	22:BA:1901:A:C2	3.08	0.41
22:BA:1914:C:C4	22:BA:1915:U:C4	3.08	0.41
22:BA:2599:G:OP2	24:BC:235:GLY:O	2.39	0.41
22:BA:2648:G:H2'	22:BA:2649:C:O4'	2.21	0.41
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.20	0.41
27:BF:17:MET:HE1	27:BF:22:TYR:O	2.21	0.41
27:BF:174:ASP:O	27:BF:175:PHE:C	2.59	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
30:BI:43:ASN:HA	30:BI:46:THR:HB	2.01	0.41
33:BL:116:VAL:HG13	33:BL:116:VAL:O	2.21	0.41
40:BS:36:LEU:HD13	40:BS:48:LYS:HB2	2.03	0.41
50:B2:31:LEU:HD22	50:B2:42:LEU:HG	2.03	0.41
50:B2:43:THR:O	50:B2:44:VAL:HB	2.20	0.41
53:B5:192:ALA:O	53:B5:196:ALA:HB3	2.20	0.41
1:CA:558:G:O5'	1:CA:558:G:H8	2.03	0.41
1:CA:632:U:H3'	1:CA:633:G:H5'	2.03	0.41
1:CA:851:G:C2	1:CA:852:G:C8	3.08	0.41
1:CA:920:U:H2'	1:CA:921:U:H6	1.85	0.41
1:CA:1036:A:H5'	1:CA:1037:C:OP2	2.20	0.41
1:CA:1232:U:OP1	9:CI:126:GLN:NE2	2.53	0.41
1:CA:1308:U:OP2	13:CM:98:ARG:HG3	2.20	0.41
2:CB:68:LEU:HD13	2:CB:161:LEU:HD11	2.02	0.41
3:CC:64:ILE:HG22	3:CC:97:VAL:HG23	2.02	0.41
3:CC:172:ARG:C	3:CC:174:PRO:HD3	2.40	0.41
7:CG:106:GLU:O	7:CG:110:LYS:HG2	2.20	0.41
8:CH:41:LYS:HD2	8:CH:48:ASP:HA	2.03	0.41
9:CI:57:MET:SD	9:CI:57:MET:N	2.94	0.41
9:CI:114:LYS:HG2	9:CI:115:LYS:N	2.35	0.41
9:CI:118:LEU:HD12	9:CI:118:LEU:N	2.36	0.41
11:CK:88:GLY:H	11:CK:114:THR:HG22	1.85	0.41
12:CL:116:LYS:O	12:CL:117:TYR:CD1	2.73	0.41
13:CM:4:ILE:O	13:CM:6:GLY:N	2.53	0.41
16:CP:39:PHE:CD1	16:CP:39:PHE:C	2.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:55:ASP:O	16:CP:58:ALA:HB3	2.20	0.41
18:CR:27:ALA:O	18:CR:30:LYS:HG2	2.21	0.41
20:CT:44:LYS:HD3	20:CT:87:ALA:HA	2.03	0.41
21:CU:11:PRO:O	21:CU:12:PHE:CB	2.68	0.41
22:DA:16:C:H4'	48:D0:11:SER:OG	2.20	0.41
22:DA:247:G:N7	22:DA:249:C:N1	2.67	0.41
22:DA:475:C:N3	22:DA:481:G:C6	2.89	0.41
22:DA:937:C:H2'	22:DA:938:G:O4'	2.21	0.41
22:DA:976:G:O6	22:DA:988:A:C2	2.73	0.41
22:DA:1313:U:O2	22:DA:1313:U:H2'	2.20	0.41
22:DA:1350:C:C2	22:DA:1382:G:C2	3.08	0.41
22:DA:1364:G:H2'	22:DA:1365:A:H5'	2.02	0.41
22:DA:1366:A:C2	22:DA:1367:A:C1'	3.03	0.41
22:DA:1384:A:H1'	22:DA:1405:U:H1'	2.03	0.41
22:DA:1567:G:O2'	24:DC:63:ARG:NH1	2.54	0.41
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.20	0.41
22:DA:1786:A:H1'	22:DA:1938:A:N6	2.35	0.41
22:DA:1831:G:H2'	22:DA:1832:C:C6	2.55	0.41
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.56	0.41
22:DA:2246:G:H2'	22:DA:2247:A:O4'	2.20	0.41
22:DA:2276:G:C2'	22:DA:2277:G:O5'	2.68	0.41
22:DA:2286:G:H5'	22:DA:2287:A:O4'	2.20	0.41
22:DA:2290:G:H4'	22:DA:2381:A:O2'	2.20	0.41
22:DA:2355:G:OP1	44:DW:25:ARG:NH2	2.53	0.41
22:DA:2444:G:P	26:DE:63:LYS:HD2	2.60	0.41
22:DA:2572:A:N7	25:DD:150:GLN:HB3	2.36	0.41
22:DA:2586:U:O2	22:DA:2586:U:H2'	2.20	0.41
23:DB:40:U:N3	23:DB:44:G:OP2	2.46	0.41
24:DC:154:LEU:HD13	24:DC:176:LEU:HD21	2.03	0.41
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.36	0.41
27:DF:40:VAL:HG11	27:DF:50:LEU:HD13	2.01	0.41
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.68	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
35:DN:69:ARG:C	35:DN:70:THR:HG23	2.40	0.41
41:DT:22:THR:HA	41:DT:25:GLU:CG	2.51	0.41
1:AA:119:A:C4	1:AA:240:G:C8	3.08	0.41
1:AA:263:A:P	20:AT:74:ARG:HH12	2.42	0.41
1:AA:457:G:N7	1:AA:458:U:C5	2.89	0.41
1:AA:615:G:C2	1:AA:616:G:C8	3.09	0.41
1:AA:838:G:H2'	1:AA:839:C:C6	2.55	0.41
1:AA:872:A:N7	1:AA:874:G:C8	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:953:G:H2'	1:AA:954:G:O4'	2.21	0.41
1:AA:1133:G:N2	1:AA:1142:G:C4	2.88	0.41
1:AA:1164:G:C2	1:AA:1173:U:O2	2.74	0.41
1:AA:1299:A:C5	1:AA:1301:U:O2	2.73	0.41
1:AA:1425:U:O2	1:AA:1476:A:C2	2.74	0.41
1:AA:1501:C:N3	1:AA:1504:G:C6	2.89	0.41
3:AC:155:GLY:CA	3:AC:163:ALA:HB1	2.50	0.41
8:AH:111:MET:HE1	8:AH:119:ALA:HB2	2.02	0.41
10:AJ:7:ARG:CB	10:AJ:75:ASP:OD1	2.69	0.41
10:AJ:8:ILE:HD11	10:AJ:74:VAL:HG11	2.02	0.41
11:AK:63:ALA:HB2	11:AK:92:GLY:HA3	2.03	0.41
14:AN:28:LYS:HG3	14:AN:29:ALA:N	2.35	0.41
21:AU:40:LYS:N	21:AU:41:PRO:HD2	2.36	0.41
22:BA:64:A:H2'	22:BA:65:U:H6	1.77	0.41
22:BA:86:G:C2	22:BA:97:C:C2	3.09	0.41
22:BA:735:A:H3'	22:BA:736:C:H6	1.85	0.41
22:BA:966:G:C6	22:BA:967:U:C4	3.08	0.41
22:BA:1056:G:C4'	22:BA:1086:A:C8	3.03	0.41
22:BA:1153:C:N4	22:BA:1154:G:C2	2.88	0.41
22:BA:1244:A:C2'	22:BA:1245:G:H5'	2.51	0.41
22:BA:1300:G:O4'	22:BA:1626:A:H2	2.03	0.41
22:BA:1518:C:C2	22:BA:1519:G:C8	3.08	0.41
22:BA:1983:G:H2'	22:BA:1984:G:O5'	2.21	0.41
22:BA:1983:G:C6	22:BA:1984:G:N7	2.88	0.41
22:BA:2509:G:N2	22:BA:2510:C:H1'	2.36	0.41
22:BA:2687:U:O4	22:BA:2688:G:C2	2.74	0.41
24:BC:122:ALA:O	24:BC:123:ALA:C	2.58	0.41
26:BE:7:ASP:C	26:BE:9:GLN:N	2.74	0.41
30:BI:33:VAL:CG1	30:BI:34:ASN:N	2.83	0.41
32:BK:107:LEU:C	32:BK:109:SER:N	2.74	0.41
39:BR:46:GLU:OE1	39:BR:46:GLU:CA	2.67	0.41
41:BT:19:LYS:O	41:BT:20:ALA:C	2.59	0.41
41:BT:73:ARG:HB3	41:BT:73:ARG:CZ	2.50	0.41
42:BU:16:GLY:C	42:BU:18:ASP:H	2.24	0.41
48:B0:13:ARG:HD2	48:B0:17:ARG:NH1	2.36	0.41
52:B4:7:VAL:HG22	52:B4:38:GLY:HA3	2.02	0.41
1:CA:213:G:C8	1:CA:214:C:C6	3.08	0.41
1:CA:247:G:O6	1:CA:278:G:C6	2.74	0.41
1:CA:491:G:O2'	1:CA:492:C:H5'	2.20	0.41
1:CA:728:A:N1	1:CA:729:A:C6	2.88	0.41
1:CA:1036:A:N3	1:CA:1036:A:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1089:G:C5	1:CA:1090:U:C5	3.09	0.41
1:CA:1262:C:C4	1:CA:1263:C:C4	3.09	0.41
1:CA:1318:A:O2'	19:CS:37:ARG:HD3	2.20	0.41
1:CA:1516:G:C2	1:CA:1520:C:O2	2.74	0.41
2:CB:10:LEU:HB2	2:CB:43:LEU:HD22	2.03	0.41
3:CC:71:ALA:O	3:CC:73:PRO:HD3	2.20	0.41
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.67	0.41
3:CC:181:ASP:OD2	3:CC:204:LYS:HB2	2.19	0.41
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.88	0.41
7:CG:40:GLU:HB2	7:CG:44:TYR:CE2	2.56	0.41
9:CI:18:ARG:HG3	9:CI:66:THR:OG1	2.21	0.41
10:CJ:34:ALA:O	10:CJ:78:GLU:HB3	2.20	0.41
13:CM:96:PRO:HB2	13:CM:100:GLN:OE1	2.20	0.41
14:CN:36:ALA:CB	14:CN:41:ARG:HG3	2.50	0.41
18:CR:23:TYR:O	18:CR:23:TYR:CD1	2.74	0.41
19:CS:6:LYS:CB	19:CS:7:LYS:HE3	2.50	0.41
22:DA:526:A:C6	22:DA:2626:C:H4'	2.55	0.41
22:DA:1231:U:O5'	22:DA:1231:U:H6	2.04	0.41
22:DA:1257:C:C4	22:DA:1258:U:C4	3.08	0.41
22:DA:1332:G:N3	22:DA:1332:G:H2'	2.36	0.41
22:DA:1336:A:H2'	22:DA:1337:G:C8	2.54	0.41
22:DA:1362:C:H2'	22:DA:1363:C:H5'	2.02	0.41
22:DA:1475:G:H4'	22:DA:1732:C:C5	2.55	0.41
22:DA:1562:U:C4	22:DA:1563:U:C4	3.09	0.41
22:DA:1570:A:C6	22:DA:1571:A:C6	3.08	0.41
22:DA:1731:G:C6	22:DA:1733:G:C5	3.08	0.41
22:DA:2241:A:H2'	22:DA:2242:G:C8	2.55	0.41
22:DA:2347:C:O2'	49:D1:39:PHE:HB3	2.20	0.41
22:DA:2410:G:C6	22:DA:2411:A:C4	3.09	0.41
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.35	0.41
22:DA:2752:C:C5	22:DA:2753:A:N7	2.89	0.41
23:DB:4:C:H2'	23:DB:5:U:O4'	2.21	0.41
23:DB:94:A:OP1	43:DV:19:ARG:HD3	2.20	0.41
24:DC:95:LEU:HD13	24:DC:101:ARG:CZ	2.51	0.41
26:DE:59:PRO:HB2	26:DE:70:SER:OG	2.20	0.41
27:DF:42:GLU:O	27:DF:44:ILE:N	2.53	0.41
27:DF:121:SER:O	27:DF:128:TYR:HA	2.21	0.41
30:DI:46:THR:CG2	30:DI:51:LYS:HG3	2.51	0.41
30:DI:80:LEU:HD22	30:DI:138:LEU:HD11	2.02	0.41
30:DI:117:MET:SD	30:DI:125:MET:HG2	2.60	0.41
35:DN:79:LEU:O	35:DN:80:PHE:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:37:ALA:HB2	36:DO:106:LEU:HD11	2.02	0.41
36:DO:66:GLY:HA2	36:DO:102:ARG:NH2	2.36	0.41
52:D4:1:MET:HB2	52:D4:34:LYS:O	2.21	0.41
1:AA:64:G:C2	1:AA:67:C:C4	3.09	0.41
1:AA:159:G:N2	1:AA:163:C:C4	2.89	0.41
1:AA:883:C:N3	1:AA:884:U:C4	2.88	0.41
1:AA:1058:G:C5	1:AA:1059:C:C5	3.09	0.41
1:AA:1309:G:C6	1:AA:1329:A:C6	3.09	0.41
1:AA:1448:C:O2	1:AA:1448:C:H2'	2.21	0.41
2:AB:49:MET:O	2:AB:53:ALA:CB	2.65	0.41
2:AB:54:LEU:HA	2:AB:57:LEU:HB3	2.02	0.41
3:AC:172:ARG:HB3	3:AC:203:PHE:CD2	2.55	0.41
7:AG:79:ARG:NH1	7:AG:82:GLY:O	2.53	0.41
7:AG:125:SER:O	7:AG:128:ALA:HB3	2.21	0.41
8:AH:83:LEU:C	8:AH:83:LEU:HD22	2.40	0.41
11:AK:32:VAL:O	11:AK:32:VAL:HG12	2.20	0.41
14:AN:10:GLU:OE2	14:AN:61:ARG:N	2.51	0.41
16:AP:46:LYS:HD3	16:AP:46:LYS:C	2.41	0.41
22:BA:140:C:O2	22:BA:140:C:O4'	2.37	0.41
22:BA:250:G:P	51:B3:13:ARG:HH12	2.44	0.41
22:BA:659:G:C6	22:BA:660:C:C4	3.09	0.41
22:BA:784:G:O2'	22:BA:785:G:C5'	2.68	0.41
22:BA:1047:G:N3	22:BA:1110:G:C2	2.89	0.41
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.21	0.41
22:BA:2192:U:H2'	22:BA:2193:G:O4'	2.21	0.41
22:BA:2443:C:H2'	22:BA:2444:G:C8	2.56	0.41
23:BB:94:A:H2'	23:BB:95:U:O5'	2.20	0.41
24:BC:201:MET:HG3	24:BC:202:LEU:HD13	2.03	0.41
25:BD:87:GLY:O	25:BD:88:GLU:C	2.58	0.41
26:BE:164:LEU:HB3	26:BE:167:VAL:HB	2.03	0.41
27:BF:36:LEU:HD11	27:BF:99:PHE:CZ	2.55	0.41
28:BG:124:GLU:OE1	28:BG:124:GLU:HA	2.20	0.41
30:BI:105:GLN:O	30:BI:106:LEU:CB	2.68	0.41
31:BJ:140:LEU:HG	31:BJ:142:ILE:HB	2.02	0.41
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.35	0.41
39:BR:51:VAL:O	39:BR:52:PRO:O	2.38	0.41
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.99	0.41
42:BU:5:ILE:CD1	42:BU:72:ILE:HG23	2.50	0.41
43:BV:9:ARG:HD2	43:BV:40:ILE:O	2.21	0.41
1:CA:31:G:C5	1:CA:306:A:H1'	2.55	0.41
1:CA:188:C:O2	1:CA:188:C:H2'	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:216:U:C4	1:CA:217:C:N4	2.88	0.41
1:CA:439:U:H4'	4:CD:121:LYS:HG3	2.02	0.41
1:CA:652:U:C5	1:CA:752:G:C2	3.08	0.41
1:CA:942:G:C2	1:CA:1342:C:C2	3.09	0.41
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.20	0.41
1:CA:1271:A:H2'	1:CA:1272:G:C8	2.55	0.41
1:CA:1375:A:C5	1:CA:1376:U:C5	3.08	0.41
3:CC:23:PHE:CD2	3:CC:24:ALA:N	2.88	0.41
4:CD:130:VAL:HG11	4:CD:135:TYR:CG	2.55	0.41
5:CE:103:THR:O	5:CE:121:HIS:O	2.39	0.41
5:CE:153:VAL:HG23	5:CE:157:ARG:HB2	2.02	0.41
6:CF:10:VAL:HG21	6:CF:18:VAL:CG2	2.50	0.41
6:CF:18:VAL:CG1	6:CF:19:PRO:N	2.80	0.41
8:CH:21:ASN:O	8:CH:22:LYS:C	2.59	0.41
10:CJ:53:ILE:HG13	14:CN:85:ARG:HD2	2.02	0.41
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	2.03	0.41
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.88	0.41
13:CM:5:ALA:O	13:CM:7:ILE:N	2.54	0.41
22:DA:60:G:H3'	22:DA:60:G:P	2.61	0.41
22:DA:333:G:C5	22:DA:334:C:C5	3.09	0.41
22:DA:425:G:C2	22:DA:426:C:C2	3.09	0.41
22:DA:491:G:O6	22:DA:492:A:C6	2.74	0.41
22:DA:672:C:H4'	26:DE:84:THR:CG2	2.51	0.41
22:DA:995:C:O2	31:DJ:3:THR:OG1	2.27	0.41
22:DA:1234:U:H2'	22:DA:1235:G:O4'	2.21	0.41
22:DA:1240:U:HO2'	22:DA:1241:A:C5'	2.33	0.41
22:DA:1359:A:N7	22:DA:1373:A:C2	2.89	0.41
22:DA:1585:C:C5	22:DA:1586:A:C5	3.08	0.41
22:DA:1707:G:C5	22:DA:1708:C:C4	3.09	0.41
22:DA:1790:C:C5	22:DA:1828:G:C2	3.08	0.41
22:DA:1843:C:H4'	24:DC:251:GLN:OE1	2.21	0.41
22:DA:2118:U:O4	22:DA:2149:U:H1'	2.20	0.41
22:DA:2235:G:C4	22:DA:2236:U:C6	3.08	0.41
22:DA:2242:G:C5	22:DA:2243:U:C5	3.08	0.41
22:DA:2284:A:OP1	49:D1:4:GLY:O	2.39	0.41
22:DA:2323:G:H2'	22:DA:2324:U:O4'	2.21	0.41
23:DB:6:G:C2	23:DB:115:A:C2	3.09	0.41
26:DE:126:VAL:HG22	26:DE:133:LEU:HD22	2.03	0.41
27:DF:31:VAL:HG22	27:DF:96:MET:SD	2.60	0.41
27:DF:134:GLU:HB3	27:DF:137:ILE:HG23	2.02	0.41
28:DG:60:ASP:O	28:DG:61:GLY:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
30:DI:80:LEU:HD11	30:DI:133:ALA:HB2	2.03	0.41
30:DI:105:GLN:O	30:DI:106:LEU:CB	2.68	0.41
30:DI:105:GLN:O	30:DI:106:LEU:HG	2.21	0.41
33:DL:57:LEU:HD12	33:DL:60:ARG:HD2	2.03	0.41
35:DN:8:ARG:HB3	35:DN:10:LEU:HG	2.03	0.41
45:DX:13:VAL:CG2	45:DX:29:PHE:HB2	2.50	0.41
1:AA:195:A:H1'	1:AA:222:C:O2'	2.20	0.41
1:AA:411:A:C6	1:AA:429:U:C5	3.09	0.41
1:AA:419:C:C5	1:AA:420:U:C5	3.08	0.41
1:AA:675:A:O2'	11:AK:116:ILE:O	2.39	0.41
1:AA:771:G:H2'	1:AA:772:U:H5'	2.00	0.41
1:AA:880:C:H2'	1:AA:881:G:H5'	2.03	0.41
1:AA:968:A:H4'	1:AA:969:A:OP2	2.21	0.41
1:AA:978:A:C5	1:AA:1318:A:C6	3.09	0.41
1:AA:980:C:H2'	1:AA:981:U:H5'	2.03	0.41
1:AA:1141:C:O2'	1:AA:1142:G:O5'	2.39	0.41
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.56	0.41
2:AB:99:GLY:O	2:AB:103:ASN:HB2	2.20	0.41
2:AB:117:LEU:HA	2:AB:120:GLN:OE1	2.20	0.41
2:AB:139:ARG:HG3	2:AB:140:GLU:N	2.36	0.41
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	2.01	0.41
11:AK:102:ALA:C	11:AK:104:GLY:N	2.72	0.41
13:AM:3:ARG:HG2	13:AM:4:ILE:N	2.33	0.41
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.21	0.41
19:AS:7:LYS:HD2	19:AS:7:LYS:HA	1.93	0.41
21:AU:4:ILE:HD13	21:AU:20:LYS:NZ	2.35	0.41
21:AU:41:PRO:HA	21:AU:45:ARG:HH11	1.85	0.41
22:BA:65:U:H2'	22:BA:66:C:C6	2.55	0.41
22:BA:387:U:H4'	22:BA:388:G:O5'	2.21	0.41
22:BA:481:G:N3	22:BA:507:A:C2	2.88	0.41
22:BA:499:U:O4	22:BA:500:G:C6	2.74	0.41
22:BA:585:G:O2'	26:BE:77:ILE:HG23	2.21	0.41
22:BA:589:U:H2'	22:BA:590:A:H8	1.86	0.41
22:BA:1006:C:C2	22:BA:1138:G:C2	3.08	0.41
22:BA:1258:U:C2	22:BA:1259:G:C8	3.08	0.41
22:BA:1414:C:N3	22:BA:1415:U:H5	2.17	0.41
22:BA:1482:G:C6	22:BA:1508:A:N1	2.89	0.41
22:BA:1607:C:C4	22:BA:1622:G:N7	2.89	0.41
22:BA:1687:G:C6	22:BA:1688:U:O4	2.73	0.41
22:BA:1826:G:C6	22:BA:1827:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1832:C:C4	22:BA:1833:C:C5	3.09	0.41
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.35	0.41
22:BA:1961:C:H5	22:BA:1962:C:C4	2.38	0.41
24:BC:201:MET:HG3	24:BC:202:LEU:CD1	2.50	0.41
25:BD:42:ASN:O	25:BD:42:ASN:CG	2.59	0.41
25:BD:57:ALA:C	25:BD:59:ARG:N	2.74	0.41
25:BD:85:ALA:HB3	25:BD:88:GLU:HG3	2.03	0.41
27:BF:99:PHE:O	27:BF:100:PHE:C	2.59	0.41
28:BG:105:LEU:HD13	28:BG:107:LEU:HD11	2.02	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41
33:BL:4:ASN:ND2	33:BL:4:ASN:O	2.54	0.41
37:BP:22:PRO:HA	37:BP:47:VAL:HG12	2.01	0.41
37:BP:52:ASN:C	37:BP:53:ARG:HG2	2.40	0.41
44:BW:66:LYS:HG3	44:BW:85:GLU:HB3	2.02	0.41
48:B0:20:ASP:OD2	48:B0:20:ASP:N	2.53	0.41
53:B5:23:ILE:O	53:B5:26:ALA:HB3	2.21	0.41
1:CA:106:C:O2	1:CA:379:C:C5'	2.68	0.41
1:CA:483:C:H2'	1:CA:484:G:C8	2.56	0.41
1:CA:509:A:C6	1:CA:510:A:C6	3.09	0.41
1:CA:755:G:C2	1:CA:756:C:C6	3.09	0.41
1:CA:853:C:C2	1:CA:854:U:C6	3.08	0.41
1:CA:860:A:N6	1:CA:861:G:C2	2.89	0.41
1:CA:1107:C:C4	1:CA:1108:G:N7	2.89	0.41
1:CA:1202:U:H2'	1:CA:1203:C:H5'	2.03	0.41
8:CH:20:ALA:O	8:CH:21:ASN:HB2	2.21	0.41
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.55	0.41
14:CN:3:LYS:HB3	14:CN:6:MET:HG2	2.01	0.41
14:CN:22:ALA:N	14:CN:25:ALA:CB	2.83	0.41
15:CO:23:GLY:O	15:CO:24:SER:C	2.59	0.41
17:CQ:24:ALA:HB1	17:CQ:41:THR:CG2	2.51	0.41
20:CT:35:VAL:HG21	20:CT:54:MET:HG2	2.02	0.41
21:CU:21:ARG:NH1	21:CU:25:LYS:HG3	2.36	0.41
22:DA:352:A:C6	22:DA:353:C:N3	2.89	0.41
22:DA:475:C:H6	22:DA:475:C:O5'	2.04	0.41
22:DA:527:C:OP2	22:DA:2779:U:N3	2.51	0.41
22:DA:833:A:H2'	22:DA:834:G:H8	1.86	0.41
22:DA:892:A:N3	22:DA:892:A:H2'	2.35	0.41
22:DA:942:G:C2'	22:DA:943:A:H5'	2.51	0.41
22:DA:1290:C:C4	22:DA:1291:C:C5	3.09	0.41
22:DA:1352:U:H5	57:DA:3395:HOH:O	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1410:G:C2	22:DA:1593:A:C6	3.09	0.41
22:DA:1525:A:C6	22:DA:1526:C:N3	2.88	0.41
22:DA:1581:G:C6	22:DA:1582:C:N4	2.89	0.41
22:DA:1652:A:C2	22:DA:2006:C:O2	2.74	0.41
22:DA:2044:C:N3	22:DA:2045:C:C5	2.88	0.41
22:DA:2199:A:N7	22:DA:2225:A:C6	2.89	0.41
22:DA:2215:C:H2'	22:DA:2216:G:C8	2.56	0.41
22:DA:2789:C:H5'	22:DA:2809:A:H1'	2.01	0.41
26:DE:136:GLN:O	26:DE:138:LEU:N	2.53	0.41
27:DF:166:GLY:O	27:DF:167:ARG:C	2.59	0.41
28:DG:123:ALA:HB2	28:DG:133:LEU:HB3	2.03	0.41
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.19	0.41
39:DR:6:GLN:O	39:DR:7:SER:HB2	2.20	0.41
47:DZ:38:ARG:HA	47:DZ:38:ARG:HD3	1.86	0.41
1:AA:1079:G:P	57:AA:1791:HOH:O	2.78	0.41
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.55	0.41
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.55	0.41
1:AA:1277:C:C2'	1:AA:1279:G:H8	2.33	0.41
1:AA:1441:A:H2	37:BP:114:LEU:HD22	1.86	0.41
1:AA:1524:C:OP2	11:AK:125:LYS:NZ	2.41	0.41
2:AB:87:CYS:HB2	2:AB:89:GLN:CD	2.41	0.41
3:AC:14:ILE:O	3:AC:15:VAL:HG22	2.21	0.41
3:AC:79:LYS:O	3:AC:82:GLU:HG3	2.20	0.41
3:AC:89:LYS:HG2	3:AC:90:VAL:N	2.36	0.41
3:AC:172:ARG:O	3:AC:173:VAL:HG22	2.20	0.41
4:AD:160:GLU:C	4:AD:162:ALA:N	2.74	0.41
8:AH:47:GLU:HG2	8:AH:64:LYS:HG2	2.03	0.41
9:AI:6:TYR:HB3	9:AI:89:GLU:HG2	2.01	0.41
9:AI:97:GLU:N	9:AI:97:GLU:OE2	2.54	0.41
9:AI:130:ARG:NH1	9:AI:130:ARG:HB3	2.35	0.41
11:AK:25:ALA:O	11:AK:88:GLY:HA3	2.21	0.41
12:AL:43:LYS:O	12:AL:44:LYS:C	2.59	0.41
22:BA:190:A:C8	22:BA:207:A:C6	3.09	0.41
22:BA:195:A:C4	22:BA:198:C:N4	2.89	0.41
22:BA:225:C:H2'	22:BA:226:A:O4'	2.21	0.41
22:BA:463:G:N2	22:BA:467:G:C4	2.89	0.41
22:BA:679:C:H2'	22:BA:680:C:C6	2.56	0.41
22:BA:958:U:H2'	23:BB:89:U:C2	2.55	0.41
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.85	0.41
22:BA:1139:G:O3'	31:BJ:26:GLY:HA3	2.21	0.41
22:BA:1189:A:N7	22:BA:1190:G:C8	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1206:G:C6	22:BA:1207:C:C4	3.09	0.41
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.20	0.41
22:BA:1907:G:H3'	22:BA:1908:C:H6	1.85	0.41
22:BA:2541:A:H4'	22:BA:2764:A:N1	2.35	0.41
22:BA:2620:C:N3	22:BA:2621:G:C8	2.88	0.41
24:BC:24:LEU:HD12	24:BC:24:LEU:HA	1.89	0.41
30:BI:45:LYS:HB2	30:BI:45:LYS:HE2	1.90	0.41
35:BN:36:THR:CG2	35:BN:37:THR:N	2.84	0.41
39:BR:74:ILE:HD12	39:BR:74:ILE:N	2.36	0.41
42:BU:40:ASN:HB3	42:BU:63:ALA:O	2.21	0.41
43:BV:55:GLU:N	43:BV:55:GLU:OE2	2.54	0.41
46:BY:56:LEU:O	46:BY:57:LEU:HB2	2.18	0.41
48:B0:53:LYS:HE2	48:B0:56:ALA:HA	2.01	0.41
49:B1:52:ALA:O	49:B1:53:LYS:OXT	2.38	0.41
50:B2:42:LEU:HD12	50:B2:42:LEU:HA	1.87	0.41
53:B5:65:LEU:HD11	53:B5:191:ARG:HA	2.03	0.41
1:CA:73:C:O2	1:CA:74:A:C8	2.73	0.41
1:CA:174:A:C2	1:CA:175:C:H1'	2.56	0.41
1:CA:250:A:H5'	1:CA:250:A:N3	2.36	0.41
1:CA:355:C:C2	1:CA:356:A:C8	3.08	0.41
1:CA:429:U:H3'	4:CD:9:LEU:CD2	2.47	0.41
1:CA:496:A:H2'	1:CA:496:A:N3	2.34	0.41
1:CA:509:A:N1	1:CA:510:A:N1	2.68	0.41
1:CA:622:A:H5"	1:CA:623:C:OP2	2.21	0.41
1:CA:670:G:N2	1:CA:737:C:C2	2.88	0.41
1:CA:735:C:H2'	1:CA:736:C:C6	2.56	0.41
1:CA:899:C:H6	1:CA:899:C:OP1	2.04	0.41
2:CB:68:LEU:HD12	2:CB:158:PRO:CG	2.50	0.41
4:CD:124:MET:O	4:CD:143:VAL:HA	2.20	0.41
4:CD:155:VAL:O	4:CD:155:VAL:CG2	2.68	0.41
4:CD:173:VAL:CG1	4:CD:174:ASP:N	2.83	0.41
6:CF:6:ILE:O	6:CF:61:LEU:HD12	2.21	0.41
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.20	0.41
7:CG:70:ARG:HG3	7:CG:96:ARG:HG2	2.03	0.41
7:CG:138:ARG:HE	7:CG:138:ARG:HB3	1.69	0.41
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	2.03	0.41
15:CO:55:GLY:O	15:CO:59:MET:HG3	2.21	0.41
16:CP:77:GLU:C	16:CP:79:ASN:H	2.24	0.41
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.47	0.41
21:CU:12:PHE:HD1	21:CU:13:ASP:N	2.19	0.41
21:CU:18:ARG:O	21:CU:21:ARG:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:67:U:C4	22:DA:68:G:N7	2.89	0.41
22:DA:83:A:H5"	22:DA:84:A:OP1	2.21	0.41
22:DA:167:A:H2'	22:DA:168:G:O4'	2.21	0.41
22:DA:197:A:H62	22:DA:2430:A:C2'	2.28	0.41
22:DA:279:A:H61	22:DA:361:G:C2'	2.33	0.41
22:DA:487:C:H1'	40:DS:53:SER:OG	2.21	0.41
22:DA:618:G:C2	22:DA:619:G:H1'	2.55	0.41
22:DA:691:C:H5'	24:DC:217:ARG:HD2	2.03	0.41
22:DA:783:A:C4	22:DA:785:G:H1'	2.56	0.41
22:DA:950:G:C2	22:DA:951:C:C2	3.08	0.41
22:DA:995:C:N3	31:DJ:3:THR:HB	2.36	0.41
22:DA:1109:C:C4	22:DA:1110:G:O6	2.74	0.41
22:DA:1273:U:H4'	22:DA:1275:A:P	2.60	0.41
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.56	0.41
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.36	0.41
22:DA:1683:U:O5'	22:DA:1683:U:H6	2.02	0.41
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.56	0.41
22:DA:2038:G:C5	22:DA:2039:U:C5	3.09	0.41
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.56	0.41
22:DA:2045:C:H2'	22:DA:2046:G:O5'	2.20	0.41
22:DA:2051:A:C2	22:DA:2052:A:N6	2.89	0.41
22:DA:2131:U:H1'	22:DA:2158:A:H61	1.86	0.41
22:DA:2222:C:N3	22:DA:2223:G:C8	2.89	0.41
22:DA:2345:G:C5	22:DA:2347:C:C4	3.09	0.41
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.21	0.41
25:DD:22:ILE:HG22	25:DD:24:VAL:HG13	2.02	0.41
26:DE:59:PRO:HG2	26:DE:70:SER:HB2	2.02	0.41
26:DE:170:ARG:NH1	26:DE:176:ASP:OD1	2.53	0.41
27:DF:106:ILE:HD11	27:DF:139:PRO:HG2	2.02	0.41
28:DG:9:VAL:O	28:DG:49:THR:HA	2.21	0.41
28:DG:91:GLY:HA3	28:DG:160:LYS:CG	2.50	0.41
28:DG:139:GLN:CD	28:DG:139:GLN:C	2.80	0.41
35:DN:55:ALA:CB	35:DN:79:LEU:HB3	2.50	0.41
36:DO:31:THR:HG23	36:DO:32:PRO:HD2	2.02	0.41
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.53	0.41
38:DQ:9:ILE:HG13	38:DQ:10:ALA:N	2.33	0.41
40:DS:44:ALA:O	40:DS:48:LYS:HB3	2.21	0.41
43:DV:75:GLN:HB2	43:DV:92:VAL:HG23	2.03	0.41
47:DZ:52:SER:HA	47:DZ:55:VAL:CG2	2.51	0.41
51:D3:25:LYS:HG2	51:D3:26:HIS:N	2.36	0.41
1:AA:22:G:C6	1:AA:23:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:66:A:H4'	1:AA:173:U:C5	2.56	0.41
1:AA:100:G:C6	1:AA:101:A:C6	3.09	0.41
1:AA:100:G:C8	1:AA:101:A:N7	2.89	0.41
1:AA:134:G:H1'	1:AA:325:A:C5	2.56	0.41
1:AA:141:G:C4	1:AA:142:G:C8	3.09	0.41
1:AA:155:A:C2	1:AA:167:A:C2	3.09	0.41
1:AA:251:G:O6	1:AA:266:G:O6	2.39	0.41
1:AA:300:A:H2'	1:AA:301:G:O4'	2.21	0.41
1:AA:338:A:N6	1:AA:339:C:N4	2.69	0.41
1:AA:353:A:H2'	1:AA:354:G:OP2	2.21	0.41
1:AA:624:C:N3	1:AA:625:U:C4	2.89	0.41
1:AA:662:U:H2'	1:AA:663:A:C8	2.55	0.41
1:AA:692:U:O2	1:AA:694:A:C8	2.74	0.41
1:AA:723:U:O2'	1:AA:855:U:H4'	2.21	0.41
1:AA:923:A:N6	1:AA:1392:G:O6	2.53	0.41
1:AA:925:G:C2	1:AA:927:G:C8	3.09	0.41
1:AA:1074:G:N2	1:AA:1075:U:H1'	2.36	0.41
1:AA:1107:C:N3	1:AA:1108:G:C8	2.89	0.41
1:AA:1211:U:O2'	1:AA:1212:U:O5'	2.34	0.41
1:AA:1270:G:C2	1:AA:1271:A:C4	3.08	0.41
1:AA:1280:A:H5"	10:AJ:42:LEU:HD21	2.03	0.41
1:AA:1317:C:H2'	1:AA:1318:A:C5'	2.51	0.41
1:AA:1350:A:P	9:AI:123:ARG:HD3	2.60	0.41
2:AB:130:THR:HB	2:AB:132:LYS:HB3	2.01	0.41
2:AB:132:LYS:O	2:AB:133:GLU:C	2.59	0.41
3:AC:59:ARG:HA	3:AC:63:SER:O	2.21	0.41
4:AD:61:VAL:HA	4:AD:64:ILE:HD12	2.03	0.41
4:AD:126:ASN:HA	4:AD:142:VAL:CG2	2.51	0.41
4:AD:145:ILE:N	4:AD:145:ILE:CD1	2.84	0.41
4:AD:147:GLU:O	4:AD:150:LYS:HB2	2.20	0.41
5:AE:57:PRO:O	5:AE:61:GLN:HB2	2.20	0.41
5:AE:151:GLU:O	5:AE:153:VAL:N	2.54	0.41
6:AF:16:GLU:OE1	4:CD:188:ARG:NH2	2.54	0.41
7:AG:88:PRO:HG3	7:AG:145:ALA:HA	2.03	0.41
7:AG:135:VAL:HB	7:AG:138:ARG:HH21	1.84	0.41
9:AI:39:PHE:CZ	9:AI:76:ALA:HB2	2.56	0.41
11:AK:51:GLY:O	11:AK:52:PHE:CD2	2.74	0.41
11:AK:89:PRO:HB3	21:AU:29:LEU:HD13	2.01	0.41
12:AL:24:LEU:CG	12:AL:25:GLU:H	2.27	0.41
15:AO:33:THR:HG21	15:AO:85:LEU:HG	2.02	0.41
16:AP:36:VAL:O	16:AP:36:VAL:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:48:ASP:OD2	17:AQ:48:ASP:N	2.54	0.41
22:BA:12:U:O2	22:BA:12:U:C2'	2.65	0.41
22:BA:31:C:O3'	22:BA:1238:G:H5'	2.20	0.41
22:BA:115:C:O2'	22:BA:127:A:O2'	2.36	0.41
22:BA:600:G:H2'	22:BA:601:C:C6	2.56	0.41
22:BA:709:U:H2'	22:BA:710:U:C6	2.55	0.41
22:BA:825:A:H4'	22:BA:2428:G:C5	2.56	0.41
22:BA:854:C:C2'	22:BA:855:G:H5'	2.51	0.41
22:BA:854:C:O2	22:BA:924:G:C2	2.73	0.41
22:BA:1062:G:N2	22:BA:1077:A:C2	2.89	0.41
22:BA:1178:C:O3'	22:BA:1179:G:C8	2.74	0.41
22:BA:1275:A:C1'	35:BN:16:HIS:CE1	3.04	0.41
22:BA:1641:A:H2'	22:BA:1642:G:O4'	2.21	0.41
22:BA:1680:U:C2'	22:BA:1681:G:H5'	2.51	0.41
22:BA:1769:U:O4'	22:BA:1958:C:H5"	2.21	0.41
22:BA:1794:A:H1'	22:BA:1900:A:C2	2.56	0.41
22:BA:1817:G:H2'	22:BA:1818:U:H5'	2.02	0.41
22:BA:1840:G:C6	22:BA:1841:U:C4	3.09	0.41
22:BA:1875:G:HO2'	22:BA:1876:A:P	2.43	0.41
22:BA:1897:G:C2	22:BA:1898:U:C2	3.09	0.41
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.21	0.41
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.56	0.41
22:BA:2284:A:C6	22:BA:2285:C:C4	3.09	0.41
22:BA:2343:U:O2	22:BA:2343:U:C2'	2.67	0.41
22:BA:2397:G:C6	22:BA:2398:U:C4	3.09	0.41
22:BA:2414:G:O2'	22:BA:2415:G:H5'	2.21	0.41
22:BA:2451:A:C2	55:BA:3001:VIF:C15	3.03	0.41
22:BA:2810:A:O3'	25:BD:62:LYS:HB2	2.20	0.41
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.21	0.41
23:BB:7:G:H5'	36:BO:29:HIS:CE1	2.56	0.41
23:BB:36:C:H5"	23:BB:37:C:OP2	2.21	0.41
23:BB:62:C:H2'	23:BB:63:C:C6	2.56	0.41
25:BD:62:LYS:CB	25:BD:63:PRO:HD3	2.51	0.41
25:BD:103:ASP:CG	25:BD:104:VAL:N	2.74	0.41
26:BE:79:ARG:O	26:BE:80:SER:CB	2.69	0.41
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.36	0.41
27:BF:126:GLY:O	27:BF:158:THR:HG22	2.21	0.41
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.86	0.41
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.41	0.41
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.41
32:BK:68:GLY:HA3	32:BK:77:ILE:O	2.21	0.41
33:BL:130:GLY:O	33:BL:133:ALA:N	2.53	0.41
34:BM:11:LYS:HD3	34:BM:86:LYS:HG2	2.03	0.41
34:BM:50:ARG:O	34:BM:53:MET:HG3	2.20	0.41
34:BM:72:PRO:C	34:BM:73:ILE:HD13	2.41	0.41
35:BN:38:LEU:N	35:BN:109:PRO:O	2.51	0.41
39:BR:8:GLY:O	39:BR:10:LYS:NZ	2.40	0.41
39:BR:40:MET:HG2	39:BR:41:ILE:N	2.36	0.41
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	2.02	0.41
39:BR:76:LYS:CD	39:BR:85:LYS:HD2	2.48	0.41
40:BS:41:LYS:O	40:BS:44:ALA:HB3	2.21	0.41
40:BS:48:LYS:HG2	40:BS:48:LYS:O	2.21	0.41
43:BV:35:GLU:HB2	43:BV:93:ARG:NH1	2.36	0.41
1:CA:130:A:OP1	17:CQ:65:ARG:HD2	2.21	0.41
1:CA:182:A:C8	1:CA:184:G:N7	2.89	0.41
1:CA:358:U:H2'	1:CA:359:G:C8	2.56	0.41
1:CA:374:A:OP1	1:CA:452:A:N1	2.54	0.41
1:CA:421:U:OP1	1:CA:421:U:H4'	2.21	0.41
1:CA:464:U:N3	1:CA:467:U:OP2	2.47	0.41
1:CA:503:C:H2'	1:CA:504:C:H6	1.86	0.41
1:CA:619:U:C2	4:CD:132:ILE:HD11	2.56	0.41
1:CA:642:A:N3	8:CH:105:SER:OG	2.50	0.41
1:CA:715:A:N6	1:CA:716:A:N6	2.69	0.41
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.54	0.41
1:CA:756:C:C4	1:CA:757:U:C5	3.08	0.41
1:CA:913:A:H4'	1:CA:914:A:H4'	2.03	0.41
1:CA:977:A:O2'	1:CA:1223:C:N4	2.53	0.41
1:CA:1007:U:C2'	1:CA:1008:U:H5"	2.51	0.41
1:CA:1061:G:C2	1:CA:1197:A:N3	2.89	0.41
1:CA:1085:U:C2	1:CA:1094:G:O6	2.74	0.41
1:CA:1157:A:C5	1:CA:1181:G:C6	3.08	0.41
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.74	0.41
1:CA:1213:A:C5	1:CA:1215:G:C4	3.08	0.41
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.50	0.41
1:CA:1399:C:C2	1:CA:1401:G:C5	3.09	0.41
1:CA:1492:A:H3'	1:CA:1493:A:H8	1.86	0.41
2:CB:117:LEU:HB3	2:CB:141:LEU:HD11	2.03	0.41
2:CB:219:ALA:O	2:CB:220:THR:HB	2.21	0.41
3:CC:182:ILE:HD11	3:CC:203:PHE:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:43:GLU:HA	8:CH:43:GLU:OE2	2.21	0.41
9:CI:44:ALA:HB1	9:CI:47:VAL:CG2	2.51	0.41
10:CJ:89:ARG:NH1	10:CJ:89:ARG:HB2	2.36	0.41
11:CK:20:VAL:HB	11:CK:35:THR:CG2	2.49	0.41
11:CK:72:ASP:O	11:CK:73:ALA:HB3	2.21	0.41
12:CL:24:LEU:CD2	12:CL:59:ASN:OD1	2.68	0.41
13:CM:90:ARG:HD2	13:CM:96:PRO:O	2.21	0.41
14:CN:26:GLU:C	14:CN:28:LYS:H	2.23	0.41
14:CN:46:LEU:HD12	14:CN:49:GLN:HB2	2.03	0.41
16:CP:20:VAL:HG21	16:CP:32:PHE:CG	2.56	0.41
17:CQ:31:HIS:CD2	17:CQ:34:TYR:HD1	2.38	0.41
17:CQ:51:ASN:O	17:CQ:51:ASN:ND2	2.54	0.41
18:CR:40:VAL:HA	18:CR:41:PRO:HD2	1.91	0.41
22:DA:295:G:C2	22:DA:296:U:C6	3.09	0.41
22:DA:308:G:H4'	42:DU:17:LYS:NZ	2.36	0.41
22:DA:340:A:H2'	22:DA:341:C:O4'	2.20	0.41
22:DA:460:A:H2'	22:DA:461:C:O4'	2.21	0.41
22:DA:566:U:O4	39:DR:80:ARG:HD3	2.20	0.41
22:DA:567:U:C2'	22:DA:568:U:O5'	2.68	0.41
22:DA:595:C:O2	22:DA:663:G:C2	2.74	0.41
22:DA:648:G:H1'	22:DA:2351:G:OP1	2.21	0.41
22:DA:684:G:P	50:D2:16:HIS:HD1	2.40	0.41
22:DA:697:G:C6	22:DA:698:C:N4	2.89	0.41
22:DA:905:A:H2'	22:DA:906:U:H5'	2.01	0.41
22:DA:952:G:C2	22:DA:966:G:C2	3.09	0.41
22:DA:976:G:H5'	22:DA:1156:A:C6	2.56	0.41
22:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.36	0.41
22:DA:1187:G:OP1	39:DR:85:LYS:CE	2.66	0.41
22:DA:1193:G:C2	22:DA:1194:A:C4	3.09	0.41
22:DA:1301:A:H2'	22:DA:1301:A:N3	2.36	0.41
22:DA:1500:G:C6	22:DA:1501:G:C5	3.08	0.41
22:DA:1582:C:H2'	22:DA:1583:A:H1'	2.03	0.41
22:DA:1805:A:O2'	24:DC:50:THR:HA	2.21	0.41
22:DA:1838:C:C5	22:DA:1899:A:C5	3.09	0.41
22:DA:1906:G:C2	22:DA:1907:G:C8	3.09	0.41
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.35	0.41
22:DA:2134:A:C8	22:DA:2158:A:N3	2.89	0.41
22:DA:2199:A:C6	22:DA:2200:C:N3	2.89	0.41
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.51	0.41
22:DA:2261:C:C2	22:DA:2280:G:C2	3.09	0.41
22:DA:2283:C:C4	22:DA:2389:G:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2286:G:OP1	49:D1:30:LYS:HE3	2.20	0.41
22:DA:2297:A:N7	22:DA:2320:U:C4	2.89	0.41
22:DA:2355:G:C6	22:DA:2356:U:N3	2.89	0.41
22:DA:2391:G:H1'	22:DA:2424:C:H41	1.86	0.41
22:DA:2395:C:O5'	22:DA:2395:C:H6	2.03	0.41
22:DA:2460:U:H2'	22:DA:2461:A:O4'	2.21	0.41
22:DA:2508:G:N2	22:DA:2582:G:C6	2.89	0.41
22:DA:2526:G:O2'	52:D4:34:LYS:HE2	2.20	0.41
22:DA:2540:C:C2	22:DA:2541:A:C8	3.09	0.41
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.56	0.41
22:DA:2648:G:H2'	22:DA:2649:C:C6	2.56	0.41
22:DA:2688:G:C8	22:DA:2719:G:C6	3.08	0.41
22:DA:2794:C:H2'	22:DA:2794:C:O2	2.21	0.41
22:DA:2818:U:H2'	22:DA:2819:G:C8	2.55	0.41
22:DA:2899:A:H2'	22:DA:2900:A:H8	1.85	0.41
24:DC:25:HIS:HB2	24:DC:80:ARG:HG3	2.02	0.41
24:DC:92:ALA:HB2	24:DC:106:ALA:HB2	2.02	0.41
24:DC:182:ARG:NH1	24:DC:266:PHE:HB2	2.36	0.41
25:DD:1:MET:SD	25:DD:100:LEU:HD11	2.61	0.41
26:DE:31:VAL:O	26:DE:31:VAL:HG12	2.21	0.41
27:DF:136:ILE:HA	27:DF:141:ILE:HG21	2.03	0.41
28:DG:85:LYS:HG3	28:DG:141:ILE:HD12	2.02	0.41
28:DG:137:ASP:HB3	28:DG:140:VAL:HG23	2.03	0.41
28:DG:148:LEU:HA	28:DG:151:TYR:HD1	1.86	0.41
28:DG:156:PRO:O	28:DG:171:THR:HG22	2.20	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
30:DI:32:GLY:HA3	30:DI:61:VAL:HG11	2.02	0.41
30:DI:57:VAL:HB	30:DI:71:THR:HB	2.03	0.41
31:DJ:140:LEU:HD12	31:DJ:140:LEU:C	2.41	0.41
35:DN:55:ALA:HB1	35:DN:80:PHE:N	2.36	0.41
38:DQ:79:PHE:CE2	38:DQ:110:VAL:HG22	2.56	0.41
38:DQ:81:ASN:ND2	38:DQ:117:LEU:HD11	2.35	0.41
40:DS:28:LYS:HD3	40:DS:31:GLN:OE1	2.20	0.41
41:DT:23:ALA:O	41:DT:27:SER:N	2.50	0.41
42:DU:71:ALA:HB3	42:DU:80:ALA:HB1	2.03	0.41
42:DU:72:ILE:H	42:DU:72:ILE:HG13	1.75	0.41
45:DX:69:ALA:O	45:DX:72:ARG:N	2.54	0.41
45:DX:69:ALA:HA	45:DX:72:ARG:HB3	2.03	0.41
46:DY:45:GLN:O	46:DY:46:VAL:C	2.59	0.41
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:7:ILE:CG2	47:DZ:8:THR:N	2.83	0.41
49:D1:9:ILE:HD11	49:D1:11:LEU:HD21	2.02	0.41
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.54	0.41
1:AA:19:A:C2	1:AA:917:G:C5	3.09	0.41
1:AA:66:A:C6	1:AA:67:C:C5	3.09	0.41
1:AA:139:A:O2'	1:AA:140:U:H5'	2.21	0.41
1:AA:481:G:OP1	1:AA:481:G:H4'	2.20	0.41
1:AA:594:U:C4	1:AA:595:A:N6	2.89	0.41
1:AA:720:C:H5'	18:AR:41:PRO:HA	2.02	0.41
1:AA:721:G:C6	1:AA:733:G:C2	3.09	0.41
1:AA:1211:U:HO2'	1:AA:1212:U:C5'	2.33	0.41
1:AA:1370:G:C2	1:AA:1371:G:C8	3.09	0.41
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.51	0.41
2:AB:64:LYS:HD3	2:AB:65:GLY:N	2.36	0.41
2:AB:148:LEU:CA	2:AB:151:ILE:HG22	2.51	0.41
2:AB:151:ILE:HG23	2:AB:152:LYS:H	1.85	0.41
3:AC:138:VAL:CG1	3:AC:170:GLU:HB3	2.51	0.41
4:AD:34:ILE:HG12	4:AD:35:GLU:N	2.35	0.41
7:AG:27:VAL:CG2	7:AG:28:ASN:N	2.84	0.41
9:AI:12:ARG:O	9:AI:15:SER:HB2	2.21	0.41
9:AI:52:LEU:HA	9:AI:55:VAL:HG23	2.02	0.41
9:AI:57:MET:HB3	9:AI:61:LEU:CD2	2.51	0.41
9:AI:104:VAL:HG23	9:AI:105:THR:N	2.36	0.41
10:AJ:41:PRO:O	10:AJ:42:LEU:CB	2.68	0.41
10:AJ:86:ALA:O	10:AJ:90:LEU:HB2	2.20	0.41
11:AK:87:LYS:HE2	11:AK:113:VAL:HG23	2.02	0.41
15:AO:35:GLN:HB3	15:AO:59:MET:HE1	2.02	0.41
16:AP:75:ILE:HG13	16:AP:75:ILE:H	1.66	0.41
17:AQ:81:LYS:N	17:AQ:81:LYS:HD3	2.36	0.41
18:AR:20:GLU:HA	18:AR:55:LEU:HD23	2.02	0.41
20:AT:44:LYS:HE2	20:AT:86:LEU:O	2.21	0.41
22:BA:361:G:OP2	22:BA:361:G:H8	2.04	0.41
22:BA:478:A:N1	22:BA:500:G:H4'	2.36	0.41
22:BA:493:G:O2'	40:BS:7:HIS:HA	2.21	0.41
22:BA:540:C:C2	22:BA:541:A:C8	3.08	0.41
22:BA:747:U:C5	22:BA:2613:U:C6	3.07	0.41
22:BA:753:A:H2'	22:BA:754:U:H6	1.85	0.41
22:BA:783:A:H8	22:BA:784:G:H4'	1.86	0.41
22:BA:812:C:O2	22:BA:812:C:C2'	2.68	0.41
22:BA:832:U:H2'	22:BA:833:A:C8	2.56	0.41
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1067:A:N3	22:BA:1067:A:H2'	2.34	0.41
22:BA:1254:A:N6	26:BE:77:ILE:CG2	2.84	0.41
22:BA:1351:C:H2'	22:BA:1352:U:C1'	2.51	0.41
22:BA:1467:U:C5	22:BA:1546:G:N3	2.89	0.41
22:BA:1846:G:H2'	22:BA:1847:A:N9	2.35	0.41
22:BA:1936:A:C5	22:BA:1945:G:C5	3.09	0.41
22:BA:1985:C:C2'	22:BA:1986:C:O5'	2.69	0.41
22:BA:2176:A:C5	22:BA:2177:C:N4	2.89	0.41
22:BA:2459:A:C5	22:BA:2460:U:C5	3.09	0.41
22:BA:2627:G:C6	22:BA:2628:C:C4	3.09	0.41
24:BC:21:ASN:HB3	24:BC:24:LEU:HD22	2.02	0.41
24:BC:107:PRO:HD2	24:BC:110:LEU:HD22	2.02	0.41
25:BD:4:LEU:HD22	25:BD:100:LEU:HD23	1.99	0.41
25:BD:101:PHE:HE2	25:BD:203:VAL:HG11	1.86	0.41
26:BE:147:LEU:HD23	26:BE:180:LEU:HD23	2.03	0.41
28:BG:154:PRO:HD3	28:BG:162:VAL:O	2.20	0.41
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.41
30:BI:76:ALA:HB1	30:BI:129:ILE:HG23	2.03	0.41
30:BI:136:MET:SD	30:BI:138:LEU:HD11	2.61	0.41
31:BJ:30:THR:HG22	31:BJ:31:GLU:H	1.86	0.41
32:BK:61:VAL:HG12	32:BK:87:LEU:HD11	2.03	0.41
32:BK:63:VAL:HG12	32:BK:107:LEU:HD21	2.02	0.41
33:BL:63:LYS:HA	51:B3:12:LYS:O	2.21	0.41
39:BR:57:GLY:C	39:BR:58:VAL:HG12	2.42	0.41
49:B1:34:LEU:H	49:B1:52:ALA:HB3	1.85	0.41
1:CA:49:U:C6	1:CA:364:A:N6	2.89	0.41
1:CA:55:A:C5	1:CA:56:U:C4	3.09	0.41
1:CA:57:G:H2'	1:CA:58:C:C6	2.56	0.41
1:CA:513:C:H2'	1:CA:514:C:C6	2.56	0.41
1:CA:570:G:N3	1:CA:571:U:C6	2.89	0.41
1:CA:662:U:O2	1:CA:662:U:H2'	2.21	0.41
1:CA:676:A:N1	1:CA:677:U:C4	2.89	0.41
1:CA:731:G:OP1	1:CA:766:A:H1'	2.21	0.41
1:CA:815:A:H4'	1:CA:817:C:C5	2.57	0.41
1:CA:842:U:O2	1:CA:845:A:OP1	2.38	0.41
1:CA:857:C:H2'	1:CA:858:G:O4'	2.21	0.41
1:CA:978:A:C5	1:CA:1318:A:N6	2.89	0.41
1:CA:1240:U:H5'	1:CA:1241:G:C8	2.56	0.41
1:CA:1308:U:O3'	13:CM:91:HIS:CE1	2.74	0.41
1:CA:1431:A:C5	1:CA:1432:G:C6	3.09	0.41
1:CA:1479:C:C2	1:CA:1480:A:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1493:A:H8	1:CA:1493:A:OP2	2.04	0.41
2:CB:47:VAL:O	2:CB:50:PHE:HD2	2.04	0.41
2:CB:71:GLY:CA	2:CB:164:ILE:CG2	2.99	0.41
5:CE:44:GLY:O	5:CE:45:ARG:C	2.59	0.41
7:CG:66:LEU:HG	7:CG:66:LEU:O	2.20	0.41
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD1	2.21	0.41
10:CJ:15:HIS:CG	10:CJ:16:ARG:N	2.88	0.41
14:CN:51:LEU:HB3	14:CN:52:PRO:HD2	2.01	0.41
17:CQ:13:VAL:HG12	17:CQ:22:VAL:O	2.21	0.41
22:DA:449:A:C5	22:DA:450:G:C8	3.09	0.41
22:DA:1270:C:O2'	22:DA:1648:U:OP2	2.37	0.41
22:DA:1308:A:C6	22:DA:1309:G:C2	3.09	0.41
22:DA:1464:G:H2'	22:DA:1465:G:C8	2.56	0.41
22:DA:1659:G:C5	22:DA:1660:G:C8	3.09	0.41
22:DA:1667:G:H5"	32:DK:5:GLN:O	2.21	0.41
22:DA:1782:U:O2	22:DA:2608:G:O2'	2.19	0.41
22:DA:2210:U:H4'	22:DA:2211:A:H5'	2.02	0.41
22:DA:2531:A:H4'	28:DG:157:TYR:CD1	2.56	0.41
22:DA:2674:G:H2'	22:DA:2675:A:C8	2.56	0.41
22:DA:2784:U:C4	22:DA:2785:C:C5	3.09	0.41
23:DB:11:C:H6	23:DB:11:C:O5'	2.03	0.41
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.51	0.41
25:DD:173:GLN:O	25:DD:175:LEU:N	2.54	0.41
26:DE:61:ARG:O	26:DE:62:GLN:C	2.60	0.41
30:DI:17:MET:SD	30:DI:23:PRO:HG2	2.61	0.41
36:DO:17:LYS:HA	36:DO:17:LYS:HD3	1.88	0.41
38:DQ:47:TYR:CZ	38:DQ:51:ARG:NH2	2.89	0.41
40:DS:59:GLU:HA	40:DS:64:ALA:HA	2.03	0.41
40:DS:86:MET:HA	40:DS:87:PRO:HD3	1.93	0.41
41:DT:8:LEU:HD21	46:DY:22:LEU:HA	2.03	0.41
41:DT:21:SER:O	41:DT:22:THR:C	2.59	0.41
42:DU:24:LYS:N	42:DU:37:GLU:HG2	2.35	0.41
43:DV:32:GLY:O	43:DV:93:ARG:HD3	2.21	0.41
44:DW:37:ILE:HG21	44:DW:80:ILE:HG21	2.03	0.41
1:AA:170:U:O2'	1:AA:171:A:H5'	2.21	0.40
1:AA:510:A:H5"	1:AA:511:C:P	2.61	0.40
1:AA:590:U:N3	1:AA:591:U:C4	2.90	0.40
1:AA:604:G:C6	1:AA:635:A:N1	2.89	0.40
1:AA:750:C:O2	15:AO:23:GLY:HA3	2.22	0.40
1:AA:957:U:H4'	19:AS:79:THR:O	2.21	0.40
1:AA:1249:C:O2'	9:AI:71:GLY:HA2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1359:C:H4'	1:AA:1362:A:N6	2.36	0.40
1:AA:1371:G:C5	1:AA:1372:U:C4	3.10	0.40
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.36	0.40
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.21	0.40
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.36	0.40
4:AD:191:LEU:O	4:AD:192:SER:HB2	2.20	0.40
6:AF:38:ARG:CG	6:AF:39:LEU:N	2.84	0.40
15:AO:28:GLN:O	15:AO:31:LEU:HD12	2.21	0.40
16:AP:28:ARG:HG2	16:AP:29:ASN:OD1	2.21	0.40
16:AP:78:VAL:O	16:AP:79:ASN:C	2.60	0.40
17:AQ:27:ARG:HG2	17:AQ:40:ARG:O	2.21	0.40
22:BA:271:G:C4'	22:BA:272:A:OP1	2.69	0.40
22:BA:553:G:C5	22:BA:554:U:C5	3.09	0.40
22:BA:669:G:N3	22:BA:669:G:H2'	2.34	0.40
22:BA:832:U:OP1	33:BL:39:LYS:HG2	2.21	0.40
22:BA:945:A:N7	57:BA:3263:HOH:O	2.50	0.40
22:BA:976:G:C2	22:BA:977:G:C8	3.09	0.40
22:BA:1223:G:N2	22:BA:1227:G:C4	2.90	0.40
22:BA:1241:A:H2'	22:BA:1242:U:H5'	2.02	0.40
22:BA:1248:G:O2'	38:BQ:3:ARG:HA	2.21	0.40
22:BA:1334:G:C2	22:BA:1335:C:C2	3.09	0.40
22:BA:1820:U:O2'	24:BC:158:ALA:O	2.16	0.40
22:BA:1842:G:N2	22:BA:1901:A:C4	2.89	0.40
22:BA:1860:G:O2'	22:BA:1861:G:H5'	2.22	0.40
22:BA:1925:C:C5'	22:BA:1926:U:C4	3.05	0.40
22:BA:2051:A:OP2	57:BA:3484:HOH:O	2.22	0.40
22:BA:2796:U:C4	22:BA:2798:U:C5	3.08	0.40
24:BC:29:PRO:HG2	24:BC:34:LEU:HD11	2.02	0.40
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.54	0.40
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.40
46:BY:12:GLU:O	46:BY:15:ASN:HB2	2.21	0.40
1:CA:15:G:H4'	5:CE:29:ARG:NH1	2.36	0.40
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.40
1:CA:38:G:C2	1:CA:397:A:C2	3.09	0.40
1:CA:55:A:C6	1:CA:56:U:N3	2.89	0.40
1:CA:246:A:C4	1:CA:279:A:C6	3.08	0.40
1:CA:268:U:C4	1:CA:269:C:N4	2.89	0.40
1:CA:289:G:C2	1:CA:290:C:C4	3.09	0.40
1:CA:455:G:C2	1:CA:478:A:C2	3.09	0.40
1:CA:505:G:C2	1:CA:506:G:C5	3.10	0.40
1:CA:570:G:C2	1:CA:571:U:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:750:C:H4'	15:CO:21:ASP:HA	2.02	0.40
1:CA:775:G:C2'	1:CA:776:G:H5'	2.51	0.40
1:CA:951:G:C4	1:CA:1231:G:C2	3.09	0.40
1:CA:1249:C:O3'	9:CI:75:GLN:NE2	2.51	0.40
1:CA:1313:U:P	19:CS:6:LYS:HB3	2.62	0.40
2:CB:211:THR:HA	2:CB:214:LEU:CB	2.52	0.40
3:CC:80:LYS:HE3	3:CC:80:LYS:HA	2.02	0.40
5:CE:34:THR:HB	5:CE:50:TYR:CZ	2.56	0.40
7:CG:28:ASN:O	7:CG:31:MET:HB3	2.21	0.40
7:CG:79:ARG:HG2	7:CG:84:THR:HG23	2.03	0.40
9:CI:20:PHE:O	9:CI:63:LEU:HA	2.21	0.40
11:CK:35:THR:HG23	11:CK:36:ASP:O	2.21	0.40
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.59	0.40
22:DA:218:A:C2	22:DA:219:A:C4	3.09	0.40
22:DA:219:A:N3	22:DA:234:U:O2'	2.47	0.40
22:DA:223:A:C4	22:DA:422:A:C8	3.09	0.40
22:DA:286:U:H2'	22:DA:287:G:C8	2.56	0.40
22:DA:353:C:H3'	22:DA:354:A:H8	1.86	0.40
22:DA:615:U:O4	26:DE:39:ALA:HB2	2.21	0.40
22:DA:679:C:H2'	22:DA:680:C:H6	1.85	0.40
22:DA:1549:A:C6	22:DA:1550:C:N3	2.89	0.40
22:DA:1668:A:N3	22:DA:1674:G:C8	2.89	0.40
22:DA:1801:A:OP2	24:DC:153:GLN:NE2	2.48	0.40
22:DA:2109:U:H4'	22:DA:2110:G:OP1	2.19	0.40
22:DA:2211:A:H5"	22:DA:2211:A:N3	2.36	0.40
22:DA:2340:A:H2'	22:DA:2341:G:C8	2.56	0.40
22:DA:2370:G:H4'	49:D1:44:ARG:NH1	2.36	0.40
23:DB:15:A:H1'	23:DB:109:A:C5	2.57	0.40
23:DB:23:G:N2	23:DB:61:G:C4	2.89	0.40
23:DB:66:A:H61	23:DB:107:G:H2'	1.86	0.40
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.51	0.40
26:DE:48:THR:HG22	26:DE:86:ALA:HB3	2.02	0.40
28:DG:131:ILE:HG22	28:DG:132:VAL:N	2.36	0.40
31:DJ:99:ARG:HB3	31:DJ:103:ILE:HD12	2.03	0.40
34:DM:41:LEU:HD21	34:DM:124:LEU:HD13	2.02	0.40
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.87	0.40
38:DQ:90:ILE:HG22	38:DQ:95:LEU:HG	2.04	0.40
41:DT:48:GLN:O	41:DT:52:GLU:HA	2.22	0.40
1:AA:74:A:C2	1:AA:97:G:C5	3.09	0.40
1:AA:125:U:O2'	1:AA:126:G:H5'	2.21	0.40
1:AA:246:A:C6	1:AA:282:A:N7	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:291:U:H2'	1:AA:292:G:O4'	2.22	0.40
1:AA:457:G:H5'	1:AA:458:U:OP2	2.20	0.40
1:AA:635:A:H2'	1:AA:636:U:C6	2.56	0.40
1:AA:648:A:H2'	1:AA:649:A:C8	2.56	0.40
1:AA:934:C:OP1	57:AA:1769:HOH:O	2.22	0.40
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.37	0.40
1:AA:1407:C:HO2'	22:BA:1912:A:N6	1.95	0.40
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.42	0.40
5:AE:111:MET:O	5:AE:115:LEU:HB2	2.21	0.40
6:AF:72:ASP:C	6:AF:74:LEU:H	2.24	0.40
7:AG:83:SER:HB2	7:AG:85:TYR:CE2	2.56	0.40
8:AH:76:GLN:O	8:AH:127:CYS:HB2	2.21	0.40
10:AJ:80:THR:C	10:AJ:82:LYS:N	2.74	0.40
11:AK:77:TYR:O	11:AK:78:GLY:C	2.59	0.40
11:AK:107:ILE:HG23	11:AK:107:ILE:O	2.21	0.40
12:AL:66:TYR:CD2	12:AL:87:VAL:HG21	2.56	0.40
13:AM:27:LYS:O	13:AM:31:LYS:HG3	2.22	0.40
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.56	0.40
17:AQ:81:LYS:N	17:AQ:81:LYS:HE2	2.36	0.40
22:BA:138:U:OP2	22:BA:139:U:H5"	2.21	0.40
22:BA:304:U:H2'	22:BA:305:C:C6	2.56	0.40
22:BA:324:A:N6	22:BA:338:G:O2'	2.48	0.40
22:BA:499:U:C4	22:BA:500:G:C5	3.09	0.40
22:BA:576:U:H2'	22:BA:577:G:H8	1.80	0.40
22:BA:796:C:H2'	22:BA:797:G:H8	1.87	0.40
22:BA:966:G:C6	22:BA:967:U:N3	2.89	0.40
22:BA:1054:A:H3'	22:BA:1055:G:H8	1.87	0.40
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.86	0.40
22:BA:1180:U:C2'	22:BA:1181:U:C5'	2.96	0.40
22:BA:1250:G:H5"	38:BQ:6:ARG:HD3	2.03	0.40
22:BA:1434:A:C2	22:BA:1435:G:C4	3.09	0.40
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.57	0.40
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.36	0.40
22:BA:2114:A:N3	22:BA:2114:A:C2'	2.81	0.40
22:BA:2306:C:C4	22:BA:2307:G:C5	3.09	0.40
22:BA:2318:G:C5	22:BA:2319:G:C6	3.10	0.40
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.21	0.40
22:BA:2820:A:H2'	22:BA:2821:A:OP1	2.21	0.40
57:BA:3784:HOH:O	31:BJ:39:LYS:HE3	2.20	0.40
23:BB:42:C:OP1	27:BF:64:LYS:HE3	2.21	0.40
24:BC:124:ILE:O	24:BC:124:ILE:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:38:MET:HE3	27:BF:57:LEU:HG	2.04	0.40
27:BF:41:GLY:O	27:BF:42:GLU:C	2.58	0.40
27:BF:88:LYS:HG3	27:BF:89:VAL:N	2.36	0.40
28:BG:6:LYS:HD3	28:BG:62:TRP:CH2	2.57	0.40
30:BI:124:ALA:C	30:BI:126:THR:N	2.73	0.40
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	2.04	0.40
34:BM:92:TRP:CD1	34:BM:92:TRP:N	2.89	0.40
38:BQ:31:VAL:HB	38:BQ:34:VAL:HG23	2.03	0.40
39:BR:79:ARG:O	39:BR:80:ARG:HB2	2.22	0.40
42:BU:102:THR:HG22	42:BU:103:ILE:N	2.35	0.40
53:B5:63:VAL:O	53:B5:164:PHE:CB	2.69	0.40
1:CA:117:G:O6	1:CA:289:G:H1'	2.21	0.40
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.21	0.40
1:CA:805:C:N3	1:CA:806:C:C5	2.89	0.40
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.21	0.40
1:CA:931:C:H2'	1:CA:932:C:H6	1.87	0.40
1:CA:1243:C:N4	1:CA:1244:G:O6	2.54	0.40
1:CA:1253:G:C2	1:CA:1285:A:N6	2.89	0.40
1:CA:1262:C:H2'	1:CA:1263:C:O4'	2.22	0.40
1:CA:1343:G:C5	1:CA:1344:C:C4	3.09	0.40
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.57	0.40
2:CB:151:ILE:O	2:CB:152:LYS:C	2.59	0.40
3:CC:3:GLN:OE1	3:CC:3:GLN:N	2.54	0.40
3:CC:12:LEU:HD23	3:CC:12:LEU:HA	1.84	0.40
3:CC:56:VAL:O	3:CC:66:VAL:HA	2.21	0.40
4:CD:58:LYS:HG3	4:CD:59:GLN:N	2.33	0.40
5:CE:105:ILE:H	5:CE:122:ASN:C	2.24	0.40
7:CG:125:SER:O	7:CG:127:ALA:N	2.54	0.40
17:CQ:57:ASP:OD2	17:CQ:57:ASP:N	2.55	0.40
22:DA:591:U:HO2'	51:D3:2:PRO:N	2.19	0.40
22:DA:722:A:H2'	22:DA:723:C:O4'	2.20	0.40
22:DA:1087:G:N9	22:DA:1089:A:H1'	2.36	0.40
22:DA:1121:C:C2	22:DA:1122:G:C8	3.09	0.40
22:DA:1280:G:C6	22:DA:1281:G:C5	3.09	0.40
22:DA:1353:A:C4	22:DA:1378:A:C6	3.10	0.40
22:DA:1439:A:C2	22:DA:1553:A:C5	3.08	0.40
22:DA:1601:G:C6	22:DA:1602:U:C4	3.09	0.40
22:DA:1838:C:C5	22:DA:1899:A:C6	3.09	0.40
22:DA:2290:G:N2	22:DA:2343:U:H1'	2.36	0.40
22:DA:2444:G:OP2	26:DE:63:LYS:HD2	2.20	0.40
22:DA:2571:U:C4	22:DA:2574:G:H8	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:118:LEU:HD11	26:DE:188:MET:HG3	2.03	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
31:DJ:58:ASN:HA	31:DJ:126:ALA:O	2.21	0.40
33:DL:58:TYR:O	51:D3:13:ARG:CD	2.69	0.40
34:DM:33:LEU:HB2	34:DM:117:PHE:CD2	2.57	0.40
41:DT:76:ARG:O	41:DT:77:ARG:O	2.40	0.40
45:DX:41:GLU:O	45:DX:42:SER:C	2.58	0.40
48:D0:26:THR:O	48:D0:28:LEU:HD12	2.21	0.40
50:D2:1:MET:O	50:D2:2:LYS:C	2.60	0.40
50:D2:9:VAL:O	50:D2:13:ASN:ND2	2.43	0.40
52:D4:12:ARG:HB2	52:D4:12:ARG:CZ	2.51	0.40
1:AA:26:A:H5"	1:AA:27:G:OP2	2.21	0.40
1:AA:36:C:H2'	1:AA:37:U:O4'	2.22	0.40
1:AA:97:G:H2'	1:AA:98:A:O5'	2.22	0.40
1:AA:303:A:C5	1:AA:304:U:C5	3.10	0.40
1:AA:390:U:H2'	1:AA:391:G:C8	2.56	0.40
1:AA:712:A:O2'	1:AA:713:G:H5'	2.22	0.40
1:AA:763:G:N2	1:AA:764:C:C2	2.90	0.40
1:AA:895:G:H2'	1:AA:896:C:C6	2.56	0.40
1:AA:1032:G:C2	1:AA:1033:G:H1'	2.57	0.40
1:AA:1033:G:H2'	1:AA:1033:G:N3	2.36	0.40
1:AA:1152:A:H5'	10:AJ:15:HIS:CD2	2.57	0.40
2:AB:23:TRP:HB3	2:AB:39:HIS:HE1	1.87	0.40
2:AB:132:LYS:O	2:AB:136:MET:SD	2.79	0.40
2:AB:184:PHE:N	2:AB:184:PHE:HD2	2.18	0.40
4:AD:125:VAL:HG11	4:AD:135:TYR:CE2	2.56	0.40
5:AE:48:PHE:O	5:AE:70:ASN:ND2	2.55	0.40
20:AT:51:PHE:O	20:AT:54:MET:HG3	2.21	0.40
22:BA:20:C:H2'	22:BA:21:A:H8	1.86	0.40
22:BA:278:A:H2'	22:BA:278:A:N3	2.36	0.40
22:BA:370:G:O2'	22:BA:424:G:OP1	2.26	0.40
22:BA:580:U:H2'	22:BA:581:C:C6	2.56	0.40
22:BA:622:G:C6	22:BA:623:C:C4	3.09	0.40
22:BA:747:U:C4	22:BA:2613:U:C6	3.10	0.40
22:BA:987:C:C2'	22:BA:988:A:H5'	2.51	0.40
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	2.04	0.40
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.52	0.40
22:BA:1355:G:N2	22:BA:1377:G:H1'	2.36	0.40
22:BA:1635:A:H2'	22:BA:1635:A:N3	2.35	0.40
22:BA:1638:C:O3'	22:BA:2709:G:N2	2.54	0.40
22:BA:1735:A:C2	22:BA:1736:U:N1	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1769:U:H2'	22:BA:1770:G:O5'	2.22	0.40
22:BA:1844:C:C2	22:BA:1897:G:N2	2.89	0.40
22:BA:1963:U:O5'	22:BA:1963:U:H6	2.04	0.40
22:BA:1964:G:N2	22:BA:1967:C:C6	2.89	0.40
22:BA:2227:A:H2'	22:BA:2228:G:O4'	2.21	0.40
22:BA:2544:G:H2'	22:BA:2545:G:O4'	2.21	0.40
22:BA:2603:G:C5	22:BA:2604:U:C5	3.10	0.40
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.22	0.40
24:BC:141:VAL:CG2	24:BC:192:LEU:HD13	2.52	0.40
24:BC:235:GLY:HA3	24:BC:239:ASN:HB2	2.02	0.40
27:BF:31:VAL:O	27:BF:31:VAL:CG2	2.69	0.40
27:BF:114:PHE:CZ	27:BF:116:GLY:HA2	2.56	0.40
30:BI:113:LYS:HE3	30:BI:116:ASP:HB3	2.04	0.40
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.22	0.40
34:BM:47:GLU:OE2	34:BM:51:ARG:NE	2.55	0.40
34:BM:117:PHE:HD2	34:BM:130:PHE:CE1	2.39	0.40
37:BP:5:ILE:HG22	37:BP:6:LYS:N	2.36	0.40
38:BQ:105:ALA:HA	39:BR:46:GLU:OE2	2.21	0.40
39:BR:43:ASN:HB3	39:BR:44:GLY:H	1.73	0.40
40:BS:59:GLU:HG3	40:BS:66:ILE:HD11	2.03	0.40
1:CA:28:A:N7	1:CA:29:U:C5	2.90	0.40
1:CA:178:C:H2'	1:CA:179:A:O4'	2.21	0.40
1:CA:389:A:C6	1:CA:390:U:H1'	2.56	0.40
1:CA:409:U:C4	1:CA:410:G:C5	3.10	0.40
1:CA:652:U:C5	1:CA:752:G:C4	3.09	0.40
1:CA:805:C:H2'	1:CA:806:C:H6	1.87	0.40
1:CA:1044:A:N7	1:CA:1045:C:H1'	2.37	0.40
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.21	0.40
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	2.04	0.40
1:CA:1416:G:C2	1:CA:1485:U:O2	2.73	0.40
1:CA:1520:C:H2'	1:CA:1521:C:H6	1.86	0.40
2:CB:58:ASN:HA	2:CB:61:ALA:HB3	2.03	0.40
4:CD:99:ASP:OD1	4:CD:100:ASN:N	2.53	0.40
5:CE:12:GLN:O	5:CE:12:GLN:HG3	2.20	0.40
5:CE:25:VAL:HG22	5:CE:28:GLY:O	2.22	0.40
5:CE:83:HIS:HB2	5:CE:84:PRO:HD2	2.02	0.40
5:CE:134:ILE:HD12	5:CE:134:ILE:H	1.86	0.40
6:CF:70:VAL:CG2	6:CF:71:ILE:N	2.84	0.40
7:CG:138:ARG:CZ	7:CG:139:GLU:HG2	2.52	0.40
11:CK:112:ASP:OD1	11:CK:114:THR:HG23	2.21	0.40
22:DA:46:G:N3	22:DA:47:C:C6	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:105:C:H2'	22:DA:106:C:H6	1.84	0.40
22:DA:319:G:C5	22:DA:333:G:C2	3.09	0.40
22:DA:371:A:N6	22:DA:401:A:H3'	2.36	0.40
22:DA:681:G:N3	22:DA:682:G:C8	2.89	0.40
22:DA:777:G:N7	22:DA:793:A:C2	2.86	0.40
22:DA:948:C:H2'	22:DA:949:G:C8	2.57	0.40
22:DA:950:G:H2'	22:DA:951:C:O4'	2.22	0.40
22:DA:1127:A:C3'	22:DA:1128:G:H5"	2.50	0.40
22:DA:1306:C:C2	22:DA:1307:A:C8	3.09	0.40
22:DA:1385:A:H1'	22:DA:1386:C:C6	2.56	0.40
22:DA:1453:A:C2	35:DN:77:ALA:HB2	2.56	0.40
22:DA:1509:A:HO2'	22:DA:1510:G:P	2.44	0.40
22:DA:2054:A:C2	22:DA:2616:C:O2	2.74	0.40
22:DA:2135:A:H4'	22:DA:2160:C:H4'	2.04	0.40
22:DA:2196:C:N3	22:DA:2197:U:C4	2.89	0.40
22:DA:2261:C:N3	22:DA:2280:G:C2	2.90	0.40
22:DA:2369:A:H2'	22:DA:2370:G:O4'	2.21	0.40
22:DA:2685:G:C2	22:DA:2686:G:C8	3.10	0.40
22:DA:2688:G:N7	22:DA:2719:G:C6	2.89	0.40
22:DA:2756:U:H1'	22:DA:2757:A:H5"	2.02	0.40
22:DA:2862:G:C2	22:DA:2863:C:C2	3.09	0.40
24:DC:29:PRO:HB2	24:DC:30:PHE:H	1.78	0.40
25:DD:31:ALA:HB1	25:DD:96:ILE:O	2.21	0.40
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.84	0.40
32:DK:1:MET:HG2	32:DK:32:TYR:CD1	2.56	0.40
32:DK:73:ASP:OD2	32:DK:75:SER:OG	2.38	0.40
32:DK:76:VAL:CG1	37:DP:73:VAL:CG2	2.97	0.40
35:DN:53:THR:HA	35:DN:56:LYS:CG	2.52	0.40
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.74	0.40
43:DV:9:ARG:CG	43:DV:41:GLU:HB3	2.51	0.40
45:DX:12:PRO:HB3	45:DX:28:ARG:HH21	1.85	0.40
1:AA:155:A:N1	1:AA:167:A:C2	2.90	0.40
1:AA:363:A:C2	1:AA:364:A:C4	3.10	0.40
1:AA:381:C:H2'	1:AA:382:A:O5'	2.22	0.40
1:AA:469:C:N4	1:AA:470:C:N4	2.69	0.40
1:AA:600:A:OP1	8:AH:89:LYS:HG2	2.22	0.40
1:AA:1225:A:N3	1:AA:1225:A:O2'	2.53	0.40
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.55	0.40
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	2.03	0.40
3:AC:167:TRP:C	3:AC:167:TRP:HE3	2.25	0.40
4:AD:198:HIS:HA	4:AD:201:VAL:HB	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	2.04	0.40
8:AH:18:GLN:NE2	8:AH:72:VAL:HG23	2.37	0.40
8:AH:59:LEU:HD11	8:AH:61:LEU:HD21	2.03	0.40
9:AI:11:ARG:HA	9:AI:78:ALA:CB	2.52	0.40
9:AI:91:ASP:OD2	9:AI:91:ASP:C	2.59	0.40
11:AK:21:ALA:HB2	11:AK:34:ILE:CD1	2.50	0.40
11:AK:87:LYS:HG3	11:AK:114:THR:HA	2.02	0.40
16:AP:42:ILE:O	16:AP:43:ALA:C	2.58	0.40
17:AQ:14:SER:HB3	17:AQ:22:VAL:HG12	2.02	0.40
22:BA:186:G:O2'	22:BA:187:G:H5'	2.21	0.40
22:BA:950:G:H2'	22:BA:951:C:H6	1.86	0.40
22:BA:1199:U:H5"	57:BA:3707:HOH:O	2.21	0.40
22:BA:1422:G:C2	22:BA:1423:G:C8	3.10	0.40
22:BA:1663:G:H5'	22:BA:2687:U:OP1	2.22	0.40
22:BA:1689:A:C6	22:BA:1700:A:C2	3.10	0.40
22:BA:1744:A:H2'	22:BA:1745:A:O4'	2.20	0.40
22:BA:1946:U:C2	22:BA:1947:C:C5	3.10	0.40
22:BA:2380:C:H2'	22:BA:2381:A:C8	2.56	0.40
22:BA:2544:G:H5'	22:BA:2645:G:C2	2.56	0.40
22:BA:2747:G:P	28:BG:138:LYS:HE2	2.61	0.40
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.50	0.40
23:BB:14:U:H3'	23:BB:15:A:H5'	2.04	0.40
27:BF:12:VAL:HG13	27:BF:172:ALA:CB	2.52	0.40
28:BG:62:TRP:O	28:BG:65:ALA:HB3	2.21	0.40
33:BL:129:LYS:O	33:BL:130:GLY:C	2.59	0.40
35:BN:108:ALA:O	35:BN:110:MET:N	2.54	0.40
37:BP:27:GLU:O	37:BP:27:GLU:CG	2.70	0.40
38:BQ:112:LYS:O	38:BQ:115:ALA:HB3	2.21	0.40
42:BU:6:ARG:O	42:BU:7:ARG:C	2.58	0.40
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.34	0.40
1:CA:64:G:C8	1:CA:99:C:C4	3.09	0.40
1:CA:521:G:O6	1:CA:529:G:C6	2.75	0.40
1:CA:728:A:N6	1:CA:729:A:N6	2.68	0.40
1:CA:765:G:C6	1:CA:812:G:C4	3.10	0.40
1:CA:840:C:C2	1:CA:842:U:H4'	2.57	0.40
1:CA:931:C:H2'	1:CA:932:C:C6	2.56	0.40
1:CA:1071:C:C2	1:CA:1072:G:C8	3.09	0.40
1:CA:1348:U:OP1	9:CI:111:VAL:HA	2.21	0.40
1:CA:1350:A:N6	1:CA:1373:G:N2	2.70	0.40
1:CA:1408:A:N1	1:CA:1494:G:C5	2.89	0.40
1:CA:1415:G:C6	1:CA:1486:G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1443:C:C2	1:CA:1444:U:C6	3.09	0.40
1:CA:1540:U:H4'	21:CU:18:ARG:HG2	2.04	0.40
2:CB:21:ARG:C	2:CB:22:TYR:CD1	2.95	0.40
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.22	0.40
3:CC:43:LEU:CD2	3:CC:68:ILE:HD11	2.51	0.40
4:CD:57:GLU:HA	4:CD:57:GLU:OE1	2.21	0.40
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.21	0.40
5:CE:149:SER:CB	5:CE:152:MET:HG3	2.50	0.40
10:CJ:22:THR:O	10:CJ:22:THR:HG23	2.20	0.40
11:CK:122:ARG:CZ	21:CU:36:GLU:CG	3.00	0.40
12:CL:102:LEU:HB3	12:CL:103:ASP:H	1.77	0.40
17:CQ:14:SER:HB3	17:CQ:22:VAL:CG1	2.52	0.40
18:CR:25:ASP:O	18:CR:26:ILE:C	2.60	0.40
21:CU:15:ALA:O	21:CU:16:LEU:C	2.59	0.40
22:DA:84:A:C2	22:DA:98:G:N3	2.89	0.40
22:DA:231:A:N6	22:DA:232:G:N1	2.70	0.40
22:DA:295:G:H2'	22:DA:295:G:N3	2.37	0.40
22:DA:647:G:C5	22:DA:648:G:C5	3.09	0.40
22:DA:686:U:H2'	22:DA:788:A:N1	2.36	0.40
22:DA:775:G:C2	22:DA:794:A:C8	3.10	0.40
22:DA:942:G:H2'	22:DA:943:A:H5'	2.03	0.40
22:DA:1057:A:C2	22:DA:1082:U:N3	2.90	0.40
22:DA:1463:C:H2'	22:DA:1464:G:O4'	2.21	0.40
22:DA:1483:G:N3	22:DA:1483:G:H2'	2.37	0.40
22:DA:1520:U:O4	22:DA:1521:G:C6	2.74	0.40
22:DA:1609:A:O2'	22:DA:1610:A:H5'	2.22	0.40
22:DA:1773:A:H2'	22:DA:1774:C:H5'	2.03	0.40
22:DA:1806:C:O2	24:DC:44:ASN:ND2	2.55	0.40
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.35	0.40
22:DA:2066:C:C2	22:DA:2445:G:N2	2.90	0.40
22:DA:2088:A:C6	22:DA:2089:C:N4	2.90	0.40
22:DA:2189:U:C2'	22:DA:2190:G:H5"	2.51	0.40
22:DA:2347:C:H2'	22:DA:2348:U:C6	2.56	0.40
22:DA:2389:G:C5'	22:DA:2390:U:H5'	2.50	0.40
22:DA:2486:C:N3	22:DA:2487:G:C8	2.90	0.40
22:DA:2529:G:H4'	28:DG:175:LYS:HG3	2.02	0.40
22:DA:2856:A:C6	22:DA:2857:G:C5	3.09	0.40
23:DB:34:A:H2'	23:DB:35:C:OP2	2.21	0.40
25:DD:103:ASP:O	25:DD:104:VAL:C	2.59	0.40
26:DE:52:VAL:O	26:DE:74:LYS:HD3	2.21	0.40
30:DI:54:PRO:O	30:DI:75:PRO:CD	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.62	0.40
30:DI:114:ALA:O	30:DI:115:ALA:HB2	2.22	0.40
33:DL:109:LYS:CG	33:DL:126:ARG:HB3	2.51	0.40
39:DR:46:GLU:C	39:DR:46:GLU:CD	2.79	0.40
42:DU:87:PHE:HA	42:DU:91:LYS:O	2.21	0.40
43:DV:49:ASN:O	43:DV:52:ALA:HB3	2.21	0.40
45:DX:10:LYS:HE3	45:DX:54:LYS:HD2	2.02	0.40
45:DX:42:SER:OG	45:DX:43:GLU:N	2.54	0.40
46:DY:1:MET:CA	46:DY:4:LYS:HD3	2.52	0.40
46:DY:7:ARG:HG3	46:DY:7:ARG:O	2.21	0.40
47:DZ:31:ARG:HG2	47:DZ:34:HIS:HB2	2.03	0.40
48:D0:12:LYS:HD2	48:D0:12:LYS:HA	1.94	0.40
48:D0:55:ILE:CG2	48:D0:56:ALA:N	2.76	0.40
50:D2:25:LYS:O	50:D2:25:LYS:HG3	2.21	0.40
1:AA:587:G:H4'	8:AH:4:GLN:CA	2.51	0.40
1:AA:597:G:C2	1:AA:644:U:C2	3.09	0.40
1:AA:613:C:N4	1:AA:614:C:N4	2.70	0.40
1:AA:715:A:H2'	1:AA:716:A:C8	2.57	0.40
1:AA:809:G:C6	1:AA:810:C:C5	3.10	0.40
1:AA:1074:G:C6	1:AA:1075:U:C4	3.10	0.40
2:AB:20:THR:HB	2:AB:37:LYS:O	2.22	0.40
2:AB:114:LEU:O	2:AB:118:GLU:HG2	2.22	0.40
3:AC:22:TRP:CZ2	3:AC:32:ASN:HB3	2.56	0.40
3:AC:64:ILE:HG12	3:AC:66:VAL:HG23	2.03	0.40
6:AF:52:ASN:OD1	6:AF:85:ILE:HG22	2.22	0.40
8:AH:6:PRO:O	8:AH:9:ASP:HB3	2.21	0.40
8:AH:54:ASP:CG	8:AH:55:THR:H	2.24	0.40
9:AI:12:ARG:NH2	9:AI:107:ASP:OD1	2.54	0.40
10:AJ:74:VAL:O	10:AJ:75:ASP:HB2	2.21	0.40
17:AQ:61:ILE:HG23	17:AQ:73:TRP:HE3	1.86	0.40
20:AT:44:LYS:HD3	20:AT:87:ALA:OXT	2.22	0.40
20:AT:74:ARG:O	20:AT:78:ASN:OD1	2.39	0.40
22:BA:63:A:C2	22:BA:64:A:C5	3.10	0.40
22:BA:127:A:H5"	22:BA:128:C:O4'	2.22	0.40
22:BA:277:G:H1'	22:BA:361:G:O6	2.21	0.40
22:BA:354:A:C6	22:BA:355:U:C4	3.10	0.40
22:BA:441:U:H2'	22:BA:442:G:C8	2.56	0.40
22:BA:511:U:O4	22:BA:512:G:N1	2.54	0.40
22:BA:521:U:H2'	22:BA:522:A:C8	2.56	0.40
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.57	0.40
22:BA:1738:G:O2'	22:BA:1739:A:H8	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1907:G:C6	22:BA:1908:C:C4	3.09	0.40
22:BA:2076:U:O2	22:BA:2076:U:C4'	2.70	0.40
22:BA:2186:G:C5	22:BA:2187:U:C4	3.09	0.40
22:BA:2252:G:H2'	22:BA:2253:G:O4'	2.22	0.40
22:BA:2392:A:C8	22:BA:2429:G:N1	2.90	0.40
24:BC:137:VAL:O	24:BC:137:VAL:HG12	2.22	0.40
25:BD:13:ARG:CD	25:BD:15:PHE:CZ	3.01	0.40
26:BE:5:LEU:HD11	26:BE:12:LEU:HB2	2.03	0.40
27:BF:38:MET:CE	27:BF:57:LEU:HG	2.51	0.40
28:BG:5:ALA:HB2	28:BG:66:GLY:HA2	2.04	0.40
28:BG:24:ILE:CD1	28:BG:72:LEU:HD21	2.51	0.40
28:BG:30:ASN:O	28:BG:30:ASN:CG	2.60	0.40
30:BI:11:LEU:HD12	30:BI:24:VAL:HG12	2.04	0.40
30:BI:101:ILE:HD11	30:BI:138:LEU:HD13	2.02	0.40
32:BK:107:LEU:O	32:BK:108:ARG:C	2.58	0.40
39:BR:42:ALA:CA	39:BR:46:GLU:HB2	2.48	0.40
49:B1:33:LYS:HA	49:B1:52:ALA:HB3	2.03	0.40
1:CA:308:C:H2'	1:CA:309:A:C8	2.56	0.40
1:CA:354:G:C4	1:CA:355:C:C5	3.10	0.40
1:CA:474:G:C6	1:CA:475:C:C4	3.10	0.40
1:CA:496:A:H2'	1:CA:497:G:N7	2.36	0.40
1:CA:570:G:C5	1:CA:873:A:C6	3.09	0.40
1:CA:572:A:H5'	1:CA:573:A:P	2.61	0.40
1:CA:1255:G:C6	1:CA:1279:G:N7	2.89	0.40
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.36	0.40
1:CA:1306:A:H2'	1:CA:1307:U:O4'	2.21	0.40
2:CB:117:LEU:O	2:CB:118:GLU:C	2.59	0.40
5:CE:66:LYS:O	5:CE:70:ASN:HB2	2.21	0.40
6:CF:55:HIS:O	6:CF:56:LYS:O	2.40	0.40
6:CF:64:VAL:CG1	6:CF:65:GLU:N	2.83	0.40
8:CH:77:ARG:CZ	8:CH:79:SER:O	2.69	0.40
20:CT:3:ASN:O	20:CT:4:ILE:C	2.59	0.40
22:DA:301:G:N2	22:DA:302:C:C2	2.89	0.40
22:DA:478:A:C2	22:DA:480:A:C5	3.10	0.40
22:DA:491:G:C2	22:DA:492:A:C4	3.10	0.40
22:DA:927:A:H2'	22:DA:928:A:C8	2.56	0.40
22:DA:1034:G:C5	22:DA:1035:U:C5	3.10	0.40
22:DA:1063:G:H2'	22:DA:1064:C:O4'	2.21	0.40
22:DA:1067:A:C2	22:DA:1068:G:N7	2.89	0.40
22:DA:1082:U:H5"	22:DA:1083:U:OP2	2.22	0.40
22:DA:1344:U:H6	22:DA:1344:U:O5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1526:C:H2'	22:DA:1527:G:O4'	2.22	0.40
22:DA:1922:G:H2'	22:DA:1923:U:O4'	2.21	0.40
22:DA:1997:C:OP2	25:DD:129:THR:OG1	2.36	0.40
22:DA:2046:G:OP1	48:D0:12:LYS:NZ	2.54	0.40
22:DA:2728:U:O2'	22:DA:2729:G:H5'	2.22	0.40
23:DB:21:G:N2	23:DB:63:C:C2	2.89	0.40
23:DB:51:G:C8	36:DO:64:TYR:HE2	2.39	0.40
24:DC:31:ALA:O	24:DC:33:LEU:N	2.53	0.40
25:DD:51:THR:HB	25:DD:79:LEU:HD23	2.04	0.40
26:DE:147:LEU:HB3	26:DE:186:VAL:HG13	2.02	0.40
31:DJ:113:PRO:HA	31:DJ:116:ARG:NH2	2.36	0.40
32:DK:104:THR:HB	32:DK:106:GLU:OE1	2.21	0.40
37:DP:55:LEU:HA	37:DP:77:HIS:CD2	2.56	0.40
40:DS:36:LEU:HD13	40:DS:48:LYS:HB2	2.04	0.40
41:DT:22:THR:HA	41:DT:25:GLU:HG2	2.03	0.40
44:DW:57:HIS:CD2	44:DW:57:HIS:N	2.90	0.40
46:DY:20:ASN:CB	46:DY:50:VAL:HG22	2.51	0.40
46:DY:45:GLN:O	46:DY:48:ARG:N	2.54	0.40

All (5) 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)
1:AA:368:U:OP2	29:DH:123:ARG:NE[4_455]	1.71	0.49
1:AA:368:U:OP2	29:DH:123:ARG:CZ[4_455]	1.89	0.31
1:AA:368:U:OP2	29:DH:123:ARG:NH2[4_455]	2.04	0.16
1:AA:368:U:OP1	29:DH:93:SER:OG[4_455]	2.10	0.10
1:CA:204:G:OP1	22:DA:289:G:O2'[3_545]	2.12	0.08

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	AB	216/218 (99%)	125 (58%)	36 (17%)	55 (26%)	0	0
2	CB	216/218 (99%)	126 (58%)	54 (25%)	36 (17%)	0	0
3	AC	204/206 (99%)	144 (71%)	48 (24%)	12 (6%)	1	5
3	CC	204/206 (99%)	146 (72%)	41 (20%)	17 (8%)	1	2
4	AD	203/205 (99%)	140 (69%)	38 (19%)	25 (12%)	0	1
4	CD	203/205 (99%)	148 (73%)	35 (17%)	20 (10%)	0	1
5	AE	148/150 (99%)	107 (72%)	24 (16%)	17 (12%)	0	1
5	CE	148/150 (99%)	100 (68%)	25 (17%)	23 (16%)	0	0
6	AF	98/100 (98%)	67 (68%)	17 (17%)	14 (14%)	0	0
6	CF	98/100 (98%)	65 (66%)	16 (16%)	17 (17%)	0	0
7	AG	149/151 (99%)	101 (68%)	33 (22%)	15 (10%)	0	1
7	CG	149/151 (99%)	120 (80%)	19 (13%)	10 (7%)	1	3
8	AH	127/129 (98%)	88 (69%)	29 (23%)	10 (8%)	1	2
8	CH	127/129 (98%)	101 (80%)	19 (15%)	7 (6%)	2	5
9	AI	125/127 (98%)	87 (70%)	23 (18%)	15 (12%)	0	1
9	CI	125/127 (98%)	91 (73%)	25 (20%)	9 (7%)	1	3
10	AJ	96/98 (98%)	63 (66%)	12 (12%)	21 (22%)	0	0
10	CJ	96/98 (98%)	72 (75%)	15 (16%)	9 (9%)	0	1
11	AK	115/117 (98%)	85 (74%)	17 (15%)	13 (11%)	0	1
11	CK	115/117 (98%)	83 (72%)	23 (20%)	9 (8%)	1	2
12	AL	121/123 (98%)	96 (79%)	15 (12%)	10 (8%)	1	2
12	CL	121/123 (98%)	92 (76%)	17 (14%)	12 (10%)	0	1
13	AM	112/114 (98%)	83 (74%)	17 (15%)	12 (11%)	0	1
13	CM	112/114 (98%)	80 (71%)	21 (19%)	11 (10%)	0	1
14	AN	92/100 (92%)	55 (60%)	25 (27%)	12 (13%)	0	0
14	CN	92/100 (92%)	57 (62%)	20 (22%)	15 (16%)	0	0
15	AO	86/88 (98%)	63 (73%)	18 (21%)	5 (6%)	1	5
15	CO	86/88 (98%)	63 (73%)	19 (22%)	4 (5%)	2	8
16	AP	80/82 (98%)	44 (55%)	17 (21%)	19 (24%)	0	0
16	CP	80/82 (98%)	57 (71%)	18 (22%)	5 (6%)	1	4
17	AQ	78/80 (98%)	53 (68%)	16 (20%)	9 (12%)	0	1
17	CQ	78/80 (98%)	55 (70%)	14 (18%)	9 (12%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
18	AR	53/55 (96%)	44 (83%)	7 (13%)	2 (4%)	3 13
18	CR	53/55 (96%)	42 (79%)	7 (13%)	4 (8%)	1 2
19	AS	77/79 (98%)	53 (69%)	16 (21%)	8 (10%)	0 1
19	CS	77/79 (98%)	61 (79%)	13 (17%)	3 (4%)	3 12
20	AT	83/85 (98%)	57 (69%)	20 (24%)	6 (7%)	1 3
20	CT	83/85 (98%)	62 (75%)	13 (16%)	8 (10%)	0 1
21	AU	49/51 (96%)	27 (55%)	10 (20%)	12 (24%)	0 0
21	CU	49/51 (96%)	24 (49%)	12 (24%)	13 (26%)	0 0
24	BC	269/271 (99%)	213 (79%)	39 (14%)	17 (6%)	1 4
24	DC	269/271 (99%)	200 (74%)	49 (18%)	20 (7%)	1 2
25	BD	207/209 (99%)	167 (81%)	33 (16%)	7 (3%)	3 15
25	DD	207/209 (99%)	165 (80%)	33 (16%)	9 (4%)	2 10
26	BE	199/201 (99%)	153 (77%)	39 (20%)	7 (4%)	3 14
26	DE	199/201 (99%)	146 (73%)	40 (20%)	13 (6%)	1 3
27	BF	175/177 (99%)	136 (78%)	30 (17%)	9 (5%)	2 7
27	DF	175/177 (99%)	136 (78%)	26 (15%)	13 (7%)	1 2
28	BG	174/176 (99%)	145 (83%)	19 (11%)	10 (6%)	1 5
28	DG	174/176 (99%)	129 (74%)	30 (17%)	15 (9%)	1 2
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0 0
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	0 1
30	BI	139/141 (99%)	71 (51%)	44 (32%)	24 (17%)	0 0
30	DI	139/141 (99%)	75 (54%)	49 (35%)	15 (11%)	0 1
31	BJ	140/142 (99%)	124 (89%)	12 (9%)	4 (3%)	4 18
31	DJ	140/142 (99%)	123 (88%)	12 (9%)	5 (4%)	3 14
32	BK	120/122 (98%)	96 (80%)	16 (13%)	8 (7%)	1 3
32	DK	120/122 (98%)	97 (81%)	16 (13%)	7 (6%)	1 5
33	BL	141/143 (99%)	106 (75%)	20 (14%)	15 (11%)	0 1
33	DL	141/143 (99%)	104 (74%)	27 (19%)	10 (7%)	1 3
34	BM	134/136 (98%)	117 (87%)	15 (11%)	2 (2%)	10 34
34	DM	134/136 (98%)	111 (83%)	17 (13%)	6 (4%)	2 9
35	BN	118/120 (98%)	92 (78%)	19 (16%)	7 (6%)	1 5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
35	DN	118/120 (98%)	91 (77%)	19 (16%)	8 (7%)	1 3
36	BO	114/116 (98%)	91 (80%)	19 (17%)	4 (4%)	3 14
36	DO	114/116 (98%)	97 (85%)	11 (10%)	6 (5%)	2 6
37	BP	112/114 (98%)	101 (90%)	6 (5%)	5 (4%)	2 9
37	DP	112/114 (98%)	89 (80%)	16 (14%)	7 (6%)	1 4
38	BQ	115/117 (98%)	93 (81%)	16 (14%)	6 (5%)	2 6
38	DQ	115/117 (98%)	104 (90%)	10 (9%)	1 (1%)	17 48
39	BR	101/103 (98%)	83 (82%)	9 (9%)	9 (9%)	1 1
39	DR	101/103 (98%)	80 (79%)	14 (14%)	7 (7%)	1 3
40	BS	108/110 (98%)	83 (77%)	18 (17%)	7 (6%)	1 3
40	DS	108/110 (98%)	88 (82%)	13 (12%)	7 (6%)	1 3
41	BT	91/93 (98%)	69 (76%)	8 (9%)	14 (15%)	0 0
41	DT	91/93 (98%)	65 (71%)	14 (15%)	12 (13%)	0 0
42	BU	100/102 (98%)	75 (75%)	16 (16%)	9 (9%)	1 1
42	DU	100/102 (98%)	70 (70%)	19 (19%)	11 (11%)	0 1
43	BV	92/94 (98%)	85 (92%)	6 (6%)	1 (1%)	14 42
43	DV	92/94 (98%)	76 (83%)	14 (15%)	2 (2%)	6 24
44	BW	74/76 (97%)	70 (95%)	4 (5%)	0	100 100
44	DW	73/76 (96%)	59 (81%)	11 (15%)	3 (4%)	3 11
45	BX	75/77 (97%)	66 (88%)	6 (8%)	3 (4%)	3 11
45	DX	75/77 (97%)	57 (76%)	14 (19%)	4 (5%)	2 6
46	BY	61/63 (97%)	35 (57%)	19 (31%)	7 (12%)	0 1
46	DY	61/63 (97%)	42 (69%)	14 (23%)	5 (8%)	1 2
47	BZ	56/58 (97%)	47 (84%)	9 (16%)	0	100 100
47	DZ	56/58 (97%)	53 (95%)	1 (2%)	2 (4%)	3 14
48	B0	54/56 (96%)	44 (82%)	7 (13%)	3 (6%)	2 5
48	D0	54/56 (96%)	38 (70%)	12 (22%)	4 (7%)	1 2
49	B1	48/50 (96%)	39 (81%)	5 (10%)	4 (8%)	1 2
49	D1	48/50 (96%)	40 (83%)	5 (10%)	3 (6%)	1 4
50	B2	44/46 (96%)	36 (82%)	7 (16%)	1 (2%)	6 23
50	D2	44/46 (96%)	36 (82%)	6 (14%)	2 (4%)	2 9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
51	B3	62/64 (97%)	54 (87%)	7 (11%)	1 (2%)	9 32
51	D3	62/64 (97%)	49 (79%)	10 (16%)	3 (5%)	2 8
52	B4	36/38 (95%)	31 (86%)	5 (14%)	0	100 100
52	D4	36/38 (95%)	28 (78%)	4 (11%)	4 (11%)	0 1
53	B5	183/228 (80%)	100 (55%)	49 (27%)	34 (19%)	0 0
All	All	11418/11672 (98%)	8486 (74%)	1941 (17%)	991 (9%)	1 2

All (991) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	12	ALA
2	AB	16	PHE
2	AB	22	TYR
2	AB	34	ALA
2	AB	64	LYS
2	AB	73	LYS
2	AB	74	ARG
2	AB	75	ALA
2	AB	76	ALA
2	AB	83	ALA
2	AB	87	CYS
2	AB	107	VAL
2	AB	116	ASP
2	AB	120	GLN
2	AB	129	LEU
2	AB	133	GLU
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	201	PRO
2	AB	207	ILE
2	AB	212	LEU
2	AB	220	THR
3	AC	3	GLN
3	AC	17	PRO
3	AC	18	TRP
3	AC	26	THR
3	AC	139	GLN
3	AC	140	ASN
4	AD	7	PRO

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Mol	Chain	Res	Type
4	AD	23	SER
4	AD	29	ASP
4	AD	33	LYS
4	AD	35	GLU
4	AD	49	SER
4	AD	126	ASN
4	AD	151	LYS
4	AD	153	SER
4	AD	160	GLU
4	AD	168	PRO
4	AD	191	LEU
4	AD	192	SER
5	AE	26	LYS
5	AE	43	ASN
5	AE	100	SER
5	AE	105	ILE
5	AE	122	ASN
5	AE	138	ARG
6	AF	68	GLN
6	AF	91	ARG
6	AF	92	THR
6	AF	99	ALA
7	AG	51	ALA
7	AG	130	ASN
8	AH	3	MET
8	AH	67	GLN
8	AH	88	ARG
9	AI	41	ARG
9	AI	44	ALA
9	AI	91	ASP
10	AJ	33	GLY
10	AJ	34	ALA
10	AJ	57	VAL
10	AJ	101	SER
11	AK	14	LYS
11	AK	52	PHE
11	AK	73	ALA
12	AL	23	ALA
12	AL	24	LEU
12	AL	44	LYS
13	AM	4	ILE
13	AM	5	ALA

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Mol	Chain	Res	Type
13	AM	11	ASP
13	AM	12	HIS
13	AM	27	LYS
13	AM	100	GLN
13	AM	114	LYS
14	AN	21	PHE
14	AN	28	LYS
14	AN	47	LYS
14	AN	49	GLN
14	AN	52	PRO
14	AN	62	ASN
14	AN	64	CYS
14	AN	92	GLU
16	AP	8	ARG
16	AP	43	ALA
16	AP	46	LYS
16	AP	53	ASP
16	AP	65	ALA
16	AP	79	ASN
17	AQ	13	VAL
17	AQ	51	ASN
17	AQ	69	LYS
18	AR	50	LYS
19	AS	5	LEU
19	AS	29	LYS
19	AS	65	GLU
20	AT	4	ILE
20	AT	6	SER
21	AU	11	PRO
21	AU	24	GLU
21	AU	36	GLU
21	AU	38	TYR
21	AU	40	LYS
24	BC	71	LYS
24	BC	122	ALA
24	BC	196	GLY
25	BD	152	PRO
26	BE	86	ALA
27	BF	41	GLY
27	BF	42	GLU
27	BF	73	SER
27	BF	176	PRO

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Mol	Chain	Res	Type
28	BG	119	ALA
29	BH	10	ALA
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	118	PRO
29	BH	121	VAL
29	BH	140	ALA
30	BI	6	GLN
30	BI	19	ASN
30	BI	45	LYS
30	BI	60	THR
30	BI	63	ALA
30	BI	90	SER
30	BI	117	MET
30	BI	134	ARG
31	BJ	81	ILE
32	BK	35	VAL
32	BK	91	SER
32	BK	108	ARG
33	BL	15	ALA
33	BL	29	LYS
33	BL	30	THR
33	BL	31	GLY
33	BL	88	GLY
33	BL	94	THR
33	BL	111	ILE
33	BL	115	GLU
34	BM	69	PRO
36	BO	77	ALA
36	BO	87	ILE
36	BO	88	LYS
37	BP	16	ASP
37	BP	94	LYS
37	BP	105	GLY
38	BQ	25	TYR
38	BQ	83	LEU
38	BQ	102	ASP
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE

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Mol	Chain	Res	Type
39	BR	55	ASP
40	BS	29	VAL
40	BS	64	ALA
41	BT	25	GLU
41	BT	72	GLN
41	BT	88	LYS
41	BT	89	GLU
42	BU	8	ASP
42	BU	100	SER
43	BV	24	ASN
45	BX	3	ARG
46	BY	22	LEU
46	BY	24	GLU
46	BY	36	GLN
46	BY	46	VAL
48	B0	56	ALA
49	B1	17	THR
49	B1	52	ALA
53	B5	41	THR
53	B5	53	ARG
53	B5	62	THR
53	B5	134	PRO
53	B5	141	PRO
53	B5	154	ILE
53	B5	174	ALA
53	B5	175	PRO
53	B5	205	ALA
53	B5	210	LEU
53	B5	221	PRO
2	CB	16	PHE
2	CB	36	ASN
2	CB	73	LYS
2	CB	74	ARG
2	CB	86	SER
2	CB	87	CYS
2	CB	100	MET
2	CB	126	PHE
2	CB	136	MET
2	CB	170	HIS
2	CB	193	PRO
2	CB	207	ILE
2	CB	220	THR

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Mol	Chain	Res	Type
2	CB	222	ARG
3	CC	17	PRO
3	CC	146	ALA
4	CD	29	ASP
4	CD	33	LYS
4	CD	35	GLU
4	CD	36	GLN
5	CE	45	ARG
5	CE	98	PRO
5	CE	101	GLU
5	CE	103	THR
5	CE	111	MET
5	CE	123	VAL
5	CE	158	GLY
6	CF	27	ALA
6	CF	55	HIS
6	CF	56	LYS
6	CF	86	ARG
6	CF	91	ARG
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
7	CG	56	LYS
7	CG	130	ASN
7	CG	146	GLU
8	CH	66	PHE
9	CI	41	ARG
9	CI	120	LYS
9	CI	129	LYS
10	CJ	57	VAL
10	CJ	86	ALA
10	CJ	93	ALA
11	CK	52	PHE
11	CK	91	PRO
11	CK	127	ARG
12	CL	4	VAL
12	CL	17	ALA
12	CL	34	CYS
12	CL	44	LYS
12	CL	76	GLU
12	CL	77	HIS
12	CL	89	ASP

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Mol	Chain	Res	Type
12	CL	117	TYR
13	CM	7	ILE
13	CM	11	ASP
13	CM	41	GLU
13	CM	114	LYS
14	CN	22	ALA
14	CN	52	PRO
14	CN	59	ARG
14	CN	92	GLU
17	CQ	5	ILE
17	CQ	51	ASN
17	CQ	52	GLU
17	CQ	53	CYS
18	CR	21	ILE
18	CR	47	THR
19	CS	5	LEU
20	CT	4	ILE
20	CT	6	SER
20	CT	41	ALA
20	CT	68	HIS
21	CU	9	ASN
21	CU	12	PHE
21	CU	24	GLU
21	CU	36	GLU
21	CU	37	PHE
21	CU	40	LYS
21	CU	46	LYS
21	CU	52	ALA
24	DC	10	SER
24	DC	29	PRO
24	DC	35	GLU
24	DC	36	LYS
24	DC	58	HIS
24	DC	71	LYS
24	DC	239	ASN
24	DC	255	LYS
25	DD	104	VAL
25	DD	151	THR
25	DD	152	PRO
25	DD	174	SER
26	DE	6	LYS
26	DE	86	ALA

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Mol	Chain	Res	Type
26	DE	122	GLU
27	DF	9	LYS
27	DF	123	ASP
27	DF	176	PRO
28	DG	61	GLY
28	DG	92	VAL
28	DG	119	ALA
28	DG	159	GLY
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS
29	DH	53	GLU
29	DH	54	LEU
29	DH	83	LYS
29	DH	109	GLU
30	DI	7	ALA
30	DI	19	ASN
30	DI	93	PRO
30	DI	102	SER
31	DJ	81	ILE
32	DK	92	GLU
32	DK	108	ARG
34	DM	3	GLN
34	DM	69	PRO
35	DN	2	ARG
35	DN	88	ALA
35	DN	104	ALA
35	DN	119	SER
36	DO	34	HIS
36	DO	116	GLN
37	DP	66	ASN
39	DR	31	GLU
39	DR	102	SER
40	DS	28	LYS
40	DS	29	VAL
40	DS	62	ASP
41	DT	18	GLU
41	DT	39	THR
41	DT	52	GLU
41	DT	73	ARG

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Mol	Chain	Res	Type
41	DT	77	ARG
41	DT	88	LYS
42	DU	7	ARG
42	DU	19	LYS
42	DU	53	ASN
42	DU	55	PRO
42	DU	89	ASP
45	DX	3	ARG
45	DX	62	LYS
46	DY	61	ALA
47	DZ	4	THR
47	DZ	14	ILE
48	D0	56	ALA
49	D1	5	ILE
50	D2	44	VAL
50	D2	45	SER
2	AB	14	VAL
2	AB	52	GLU
2	AB	68	LEU
2	AB	97	LEU
2	AB	117	LEU
2	AB	126	PHE
2	AB	143	LYS
2	AB	150	GLY
2	AB	170	HIS
2	AB	183	VAL
2	AB	203	ASN
2	AB	210	VAL
3	AC	15	VAL
3	AC	80	LYS
3	AC	141	ALA
4	AD	24	GLY
4	AD	101	VAL
4	AD	107	PHE
4	AD	175	ALA
5	AE	12	GLN
5	AE	45	ARG
5	AE	51	GLY
5	AE	78	ASN
5	AE	88	VAL
5	AE	110	ALA
6	AF	6	ILE

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Mol	Chain	Res	Type
6	AF	7	VAL
6	AF	69	GLU
6	AF	95	ALA
7	AG	15	ASP
7	AG	59	LEU
7	AG	69	VAL
7	AG	81	GLY
7	AG	96	ARG
8	AH	35	ALA
9	AI	72	ILE
9	AI	116	VAL
10	AJ	17	LEU
10	AJ	38	GLY
10	AJ	41	PRO
10	AJ	61	ALA
10	AJ	74	VAL
10	AJ	81	GLU
11	AK	72	ASP
11	AK	103	ALA
11	AK	125	LYS
11	AK	126	LYS
12	AL	25	GLU
12	AL	89	ASP
12	AL	98	VAL
12	AL	123	LYS
13	AM	67	GLY
14	AN	4	GLN
14	AN	34	VAL
14	AN	53	ARG
15	AO	25	THR
16	AP	16	PHE
16	AP	31	ARG
16	AP	68	SER
16	AP	78	VAL
16	AP	80	LYS
17	AQ	10	GLY
17	AQ	18	GLU
17	AQ	70	THR
19	AS	4	SER
20	AT	68	HIS
21	AU	35	ARG
21	AU	37	PHE

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Mol	Chain	Res	Type
24	BC	13	ARG
24	BC	190	ALA
24	BC	223	THR
24	BC	233	GLY
25	BD	114	LYS
26	BE	8	ALA
26	BE	110	SER
27	BF	3	LYS
27	BF	21	ASN
28	BG	32	GLU
28	BG	39	ASP
28	BG	61	GLY
28	BG	80	THR
28	BG	82	GLY
28	BG	173	GLU
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	66	ASN
29	BH	119	ASN
30	BI	24	VAL
30	BI	65	ARG
30	BI	75	PRO
30	BI	83	ALA
30	BI	98	VAL
30	BI	106	LEU
33	BL	69	ARG
33	BL	86	GLU
35	BN	52	ILE
38	BQ	7	GLY
38	BQ	46	ALA
39	BR	31	GLU
39	BR	102	SER
40	BS	89	ALA
41	BT	20	ALA
41	BT	71	GLY
42	BU	19	LYS
42	BU	99	ASN
46	BY	10	SER
46	BY	62	GLY
50	B2	44	VAL

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Mol	Chain	Res	Type
51	B3	28	ASN
53	B5	36	ALA
53	B5	51	ASP
53	B5	90	ALA
53	B5	136	GLY
53	B5	144	GLY
53	B5	146	VAL
53	B5	171	ALA
53	B5	180	SER
53	B5	185	LYS
2	CB	33	GLY
2	CB	34	ALA
2	CB	51	ASN
2	CB	82	ASP
2	CB	103	ASN
2	CB	120	GLN
2	CB	124	GLY
2	CB	141	LEU
3	CC	80	LYS
3	CC	82	GLU
3	CC	84	VAL
3	CC	101	ILE
3	CC	127	ARG
4	CD	4	TYR
4	CD	27	ALA
4	CD	32	CYS
4	CD	34	ILE
4	CD	47	ARG
4	CD	85	ASN
4	CD	174	ASP
4	CD	175	ALA
5	CE	51	GLY
5	CE	70	ASN
5	CE	99	ALA
5	CE	102	GLY
5	CE	138	ARG
5	CE	150	PRO
6	CF	14	GLN
6	CF	68	GLN
7	CG	9	GLN
7	CG	140	ASP
8	CH	89	LYS

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Mol	Chain	Res	Type
9	CI	55	VAL
9	CI	72	ILE
10	CJ	17	LEU
10	CJ	35	GLN
10	CJ	36	VAL
11	CK	17	SER
11	CK	92	GLY
11	CK	93	ARG
12	CL	102	LEU
12	CL	123	LYS
13	CM	6	GLY
13	CM	82	ASP
14	CN	11	VAL
14	CN	16	LEU
14	CN	23	LYS
14	CN	29	ALA
14	CN	31	ILE
14	CN	62	ASN
16	CP	77	GLU
16	CP	80	LYS
18	CR	25	ASP
18	CR	26	ILE
19	CS	6	LYS
20	CT	7	ALA
21	CU	13	ASP
24	DC	218	PRO
24	DC	240	PHE
24	DC	251	GLN
25	DD	105	LYS
26	DE	7	ASP
26	DE	8	ALA
26	DE	61	ARG
26	DE	69	ARG
26	DE	81	GLY
26	DE	84	THR
26	DE	144	GLU
27	DF	21	ASN
27	DF	71	ARG
27	DF	103	LEU
27	DF	150	ARG
28	DG	20	ASN
29	DH	31	VAL

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Mol	Chain	Res	Type
29	DH	77	THR
29	DH	118	PRO
30	DI	72	LYS
30	DI	88	SER
30	DI	90	SER
30	DI	106	LEU
30	DI	115	ALA
31	DJ	6	ALA
31	DJ	25	LEU
31	DJ	127	GLY
32	DK	35	VAL
32	DK	105	ARG
33	DL	9	ALA
33	DL	17	LYS
33	DL	111	ILE
35	DN	3	HIS
35	DN	106	ASP
37	DP	80	VAL
37	DP	94	LYS
37	DP	105	GLY
38	DQ	87	SER
39	DR	7	SER
39	DR	50	GLY
40	DS	63	GLY
41	DT	21	SER
41	DT	72	GLN
42	DU	57	GLY
43	DV	65	VAL
46	DY	57	LEU
49	D1	16	GLY
52	D4	20	ASP
2	AB	115	LYS
2	AB	128	LYS
2	AB	147	SER
2	AB	182	PRO
2	AB	188	ASP
2	AB	209	ALA
3	AC	61	ALA
4	AD	161	LEU
4	AD	167	LYS
4	AD	169	THR
5	AE	24	THR

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Mol	Chain	Res	Type
5	AE	76	LEU
5	AE	134	ILE
5	AE	157	ARG
6	AF	56	LYS
7	AG	14	PRO
7	AG	50	LEU
8	AH	54	ASP
9	AI	88	MET
9	AI	99	ARG
9	AI	100	LYS
10	AJ	32	THR
10	AJ	36	VAL
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	93	ALA
11	AK	36	ASP
11	AK	38	GLN
11	AK	56	ARG
11	AK	127	ARG
12	AL	22	PRO
12	AL	26	ALA
13	AM	112	PRO
15	AO	20	ASN
15	AO	46	HIS
15	AO	73	LYS
16	AP	10	GLY
16	AP	24	SER
16	AP	49	GLY
17	AQ	82	ALA
18	AR	30	LYS
19	AS	30	PRO
21	AU	10	GLU
21	AU	25	LYS
21	AU	31	GLU
24	BC	131	PRO
24	BC	137	VAL
24	BC	189	ARG
25	BD	86	GLU
25	BD	159	LYS
26	BE	125	SER
28	BG	12	PRO
28	BG	79	VAL

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Mol	Chain	Res	Type
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	4	LYS
30	BI	7	ALA
30	BI	31	GLN
30	BI	113	LYS
32	BK	93	GLN
33	BL	68	SER
34	BM	58	LYS
35	BN	109	PRO
35	BN	118	ARG
36	BO	60	GLU
37	BP	111	LYS
38	BQ	82	GLY
39	BR	24	LYS
39	BR	52	PRO
39	BR	70	GLU
41	BT	26	LYS
41	BT	52	GLU
42	BU	7	ARG
42	BU	98	SER
46	BY	23	ARG
48	B0	55	ILE
53	B5	46	ALA
53	B5	86	GLU
53	B5	133	GLY
53	B5	183	PRO
53	B5	203	GLU
53	B5	214	TYR
2	CB	21	ARG
2	CB	75	ALA
2	CB	102	THR
2	CB	129	LEU
2	CB	135	LEU
3	CC	54	ARG
3	CC	89	LYS
3	CC	166	GLU
4	CD	10	LYS
4	CD	26	ARG

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Mol	Chain	Res	Type
4	CD	154	ARG
4	CD	165	ARG
5	CE	24	THR
5	CE	26	LYS
5	CE	68	ARG
5	CE	100	SER
5	CE	155	ALA
6	CF	13	ASP
6	CF	17	GLN
6	CF	53	LYS
6	CF	54	LEU
6	CF	63	ASN
7	CG	10	ARG
7	CG	84	THR
8	CH	22	LYS
8	CH	31	LYS
9	CI	91	ASP
10	CJ	92	LEU
11	CK	15	GLN
12	CL	22	PRO
12	CL	23	ALA
13	CM	24	GLY
14	CN	34	VAL
14	CN	42	TRP
15	CO	18	ASP
15	CO	20	ASN
15	CO	46	HIS
15	CO	60	VAL
16	CP	10	GLY
16	CP	26	ASN
17	CQ	13	VAL
19	CS	32	ARG
20	CT	20	HIS
21	CU	11	PRO
24	DC	13	ARG
24	DC	205	LEU
24	DC	238	ARG
25	DD	36	GLN
25	DD	43	ASP
26	DE	18	THR
27	DF	27	GLN
27	DF	43	ALA

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Mol	Chain	Res	Type
27	DF	174	ASP
28	DG	8	PRO
28	DG	46	ALA
28	DG	175	LYS
29	DH	16	GLY
29	DH	40	THR
30	DI	101	ILE
32	DK	109	SER
33	DL	4	ASN
33	DL	115	GLU
34	DM	59	ARG
35	DN	70	THR
35	DN	118	ARG
36	DO	68	LYS
36	DO	99	TYR
37	DP	111	LYS
37	DP	114	LEU
41	DT	22	THR
41	DT	37	ASP
41	DT	40	LYS
42	DU	9	ASP
42	DU	98	SER
44	DW	21	LEU
44	DW	35	SER
45	DX	6	GLN
45	DX	32	ASN
46	DY	37	LEU
48	D0	55	ILE
52	D4	29	ALA
2	AB	25	PRO
2	AB	53	ALA
2	AB	88	ASP
2	AB	95	ARG
2	AB	132	LYS
2	AB	161	LEU
2	AB	224	GLY
4	AD	26	ARG
4	AD	85	ASN
4	AD	149	ALA
5	AE	69	ARG
7	AG	18	PHE
7	AG	77	SER

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Mol	Chain	Res	Type
7	AG	78	ARG
7	AG	113	ASP
8	AH	97	ALA
9	AI	57	MET
10	AJ	42	LEU
10	AJ	58	ASN
10	AJ	62	ARG
10	AJ	95	GLY
11	AK	41	ALA
11	AK	89	PRO
13	AM	41	GLU
14	AN	24	ARG
15	AO	26	GLU
16	AP	11	ALA
16	AP	50	THR
17	AQ	12	VAL
17	AQ	81	LYS
19	AS	6	LYS
20	AT	20	HIS
21	AU	27	GLY
24	BC	36	LYS
24	BC	37	ASN
24	BC	236	GLU
25	BD	104	VAL
26	BE	104	ALA
29	BH	83	LYS
30	BI	58	VAL
30	BI	66	SER
30	BI	72	LYS
30	BI	84	ALA
32	BK	72	PRO
32	BK	119	ALA
33	BL	12	SER
35	BN	2	ARG
35	BN	119	SER
37	BP	35	GLY
40	BS	55	ILE
41	BT	17	SER
41	BT	19	LYS
49	B1	23	THR
53	B5	65	LEU
53	B5	202	PRO

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Mol	Chain	Res	Type
2	CB	88	ASP
2	CB	152	LYS
2	CB	166	ALA
2	CB	205	ASP
3	CC	12	LEU
3	CC	191	THR
5	CE	151	GLU
6	CF	60	VAL
9	CI	57	MET
9	CI	58	VAL
10	CJ	41	PRO
13	CM	12	HIS
14	CN	3	LYS
17	CQ	20	SER
17	CQ	49	GLU
20	CT	73	ALA
20	CT	74	ARG
21	CU	35	ARG
21	CU	53	VAL
26	DE	200	LEU
27	DF	116	GLY
28	DG	17	VAL
28	DG	47	ASP
28	DG	80	THR
29	DH	9	VAL
30	DI	9	VAL
30	DI	84	ALA
32	DK	93	GLN
32	DK	110	GLU
36	DO	57	ALA
40	DS	67	ASP
41	DT	24	MET
44	DW	20	ARG
48	D0	26	THR
51	D3	18	GLY
2	AB	63	ARG
2	AB	124	GLY
2	AB	157	LEU
2	AB	193	PRO
3	AC	66	VAL
6	AF	16	GLU
6	AF	42	TRP

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Mol	Chain	Res	Type
6	AF	54	LEU
6	AF	82	ASP
9	AI	9	THR
9	AI	37	GLN
10	AJ	43	PRO
10	AJ	75	ASP
12	AL	85	GLY
13	AM	66	GLU
16	AP	15	PRO
16	AP	77	GLU
19	AS	76	PRO
20	AT	9	LYS
24	BC	29	PRO
25	BD	18	ASP
25	BD	88	GLU
26	BE	6	LYS
26	BE	105	LEU
27	BF	134	GLU
27	BF	146	VAL
27	BF	175	PHE
29	BH	120	GLY
30	BI	101	ILE
31	BJ	25	LEU
31	BJ	39	LYS
31	BJ	60	ASP
32	BK	48	PRO
35	BN	30	ARG
35	BN	51	LEU
40	BS	15	GLN
40	BS	30	SER
45	BX	60	ASP
53	B5	104	ILE
53	B5	126	SER
2	CB	134	ALA
2	CB	209	ALA
3	CC	14	ILE
4	CD	149	ALA
5	CE	113	ALA
5	CE	122	ASN
5	CE	126	LYS
5	CE	143	GLY
7	CG	126	ASP

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Mol	Chain	Res	Type
8	CH	67	GLN
11	CK	89	PRO
13	CM	5	ALA
13	CM	94	GLY
14	CN	50	THR
14	CN	81	ARG
16	CP	11	ALA
17	CQ	17	MET
17	CQ	70	THR
21	CU	38	TYR
24	DC	66	ASP
24	DC	260	ASN
26	DE	72	SER
31	DJ	93	ILE
33	DL	30	THR
33	DL	42	SER
33	DL	69	ARG
36	DO	77	ALA
39	DR	53	PHE
46	DY	55	THR
51	D3	57	LEU
52	D4	23	ILE
52	D4	37	GLN
4	AD	156	LYS
7	AG	87	VAL
8	AH	31	LYS
8	AH	57	PRO
9	AI	24	GLY
16	AP	36	VAL
20	AT	67	ILE
32	BK	92	GLU
33	BL	71	ALA
40	BS	66	ILE
41	BT	14	PRO
41	BT	18	GLU
41	BT	57	VAL
42	BU	50	PRO
53	B5	50	ILE
53	B5	66	PRO
53	B5	215	VAL
2	CB	17	GLY
2	CB	19	GLN

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Mol	Chain	Res	Type
6	CF	33	GLU
7	CG	8	GLY
7	CG	80	VAL
8	CH	44	GLY
13	CM	10	PRO
24	DC	57	GLY
27	DF	41	GLY
27	DF	175	PHE
28	DG	154	PRO
30	DI	5	VAL
30	DI	13	VAL
33	DL	29	LYS
34	DM	53	MET
42	DU	41	LEU
42	DU	52	LEU
46	DY	36	GLN
49	D1	27	LYS
2	AB	202	GLY
7	AG	71	PRO
8	AH	14	ILE
9	AI	51	PRO
24	BC	136	PRO
24	BC	169	GLY
49	B1	47	VAL
3	CC	66	VAL
3	CC	103	ILE
9	CI	10	GLY
11	CK	120	GLY
34	DM	23	GLY
34	DM	77	PRO
40	DS	35	ILE
40	DS	74	ILE
2	AB	41	ILE
4	AD	125	VAL
6	AF	36	ILE
21	AU	28	VAL
24	BC	227	PRO
28	BG	54	PRO
41	BT	2	ILE
2	CB	180	GLY
24	DC	73	GLY
24	DC	245	VAL

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Mol	Chain	Res	Type
25	DD	120	GLY
28	DG	4	VAL
33	DL	103	ILE
39	DR	47	VAL
48	D0	43	ILE
2	AB	155	GLY
3	AC	101	ILE
9	AI	50	GLN
19	AS	11	ILE
30	BI	52	GLY
33	BL	114	GLY
42	BU	16	GLY
42	BU	54	GLN
4	CD	37	ALA
4	CD	167	LYS
8	CH	78	VAL
10	CJ	42	LEU
24	DC	235	GLY
30	DI	24	VAL
42	DU	25	VAL
8	AH	25	VAL
9	AI	23	PRO
33	BL	130	GLY
48	B0	54	VAL
53	B5	181	PHE
3	CC	64	ILE
3	CC	174	PRO
4	CD	28	ILE
28	DG	12	PRO
28	DG	79	VAL
37	DP	32	VAL
39	DR	49	ILE
43	DV	81	PRO
51	D3	20	GLY
13	AM	65	VAL
45	BX	64	ILE
25	DD	2	ILE

5.3.2 Protein sidechains (i)

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

resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	180/180 (100%)	117 (65%)	63 (35%)	0	0
2	CB	180/180 (100%)	130 (72%)	50 (28%)	0	1
3	AC	170/170 (100%)	134 (79%)	36 (21%)	1	3
3	CC	170/170 (100%)	134 (79%)	36 (21%)	1	3
4	AD	172/172 (100%)	135 (78%)	37 (22%)	1	3
4	CD	172/172 (100%)	136 (79%)	36 (21%)	1	3
5	AE	113/113 (100%)	86 (76%)	27 (24%)	0	2
5	CE	113/113 (100%)	85 (75%)	28 (25%)	0	2
6	AF	87/87 (100%)	60 (69%)	27 (31%)	0	1
6	CF	87/87 (100%)	61 (70%)	26 (30%)	0	1
7	AG	124/124 (100%)	94 (76%)	30 (24%)	0	2
7	CG	124/124 (100%)	91 (73%)	33 (27%)	0	1
8	AH	104/104 (100%)	81 (78%)	23 (22%)	1	3
8	CH	104/104 (100%)	81 (78%)	23 (22%)	1	3
9	AI	105/105 (100%)	75 (71%)	30 (29%)	0	1
9	CI	105/105 (100%)	76 (72%)	29 (28%)	0	1
10	AJ	86/86 (100%)	63 (73%)	23 (27%)	0	1
10	CJ	86/86 (100%)	68 (79%)	18 (21%)	1	3
11	AK	90/90 (100%)	67 (74%)	23 (26%)	0	1
11	CK	90/90 (100%)	71 (79%)	19 (21%)	1	3
12	AL	103/103 (100%)	81 (79%)	22 (21%)	1	3
12	CL	103/103 (100%)	76 (74%)	27 (26%)	0	1
13	AM	92/92 (100%)	73 (79%)	19 (21%)	1	3
13	CM	92/92 (100%)	71 (77%)	21 (23%)	1	2
14	AN	79/83 (95%)	62 (78%)	17 (22%)	1	3
14	CN	79/83 (95%)	69 (87%)	10 (13%)	4	13
15	AO	75/76 (99%)	58 (77%)	17 (23%)	1	2
15	CO	75/76 (99%)	59 (79%)	16 (21%)	1	3
16	AP	65/65 (100%)	47 (72%)	18 (28%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
16	CP	65/65 (100%)	52 (80%)	13 (20%)	1 4
17	AQ	74/74 (100%)	49 (66%)	25 (34%)	0 0
17	CQ	74/74 (100%)	52 (70%)	22 (30%)	0 1
18	AR	48/48 (100%)	42 (88%)	6 (12%)	4 14
18	CR	48/48 (100%)	39 (81%)	9 (19%)	1 4
19	AS	70/70 (100%)	61 (87%)	9 (13%)	4 13
19	CS	70/70 (100%)	57 (81%)	13 (19%)	1 5
20	AT	65/65 (100%)	52 (80%)	13 (20%)	1 4
20	CT	65/65 (100%)	49 (75%)	16 (25%)	0 2
21	AU	44/44 (100%)	25 (57%)	19 (43%)	0 0
21	CU	44/44 (100%)	29 (66%)	15 (34%)	0 0
24	BC	216/216 (100%)	187 (87%)	29 (13%)	4 11
24	DC	216/216 (100%)	185 (86%)	31 (14%)	3 9
25	BD	164/164 (100%)	150 (92%)	14 (8%)	10 31
25	DD	164/164 (100%)	148 (90%)	16 (10%)	8 24
26	BE	165/165 (100%)	134 (81%)	31 (19%)	1 4
26	DE	165/165 (100%)	134 (81%)	31 (19%)	1 4
27	BF	148/148 (100%)	122 (82%)	26 (18%)	2 5
27	DF	148/148 (100%)	120 (81%)	28 (19%)	1 4
28	BG	137/137 (100%)	120 (88%)	17 (12%)	4 14
28	DG	137/137 (100%)	123 (90%)	14 (10%)	7 22
29	BH	114/114 (100%)	88 (77%)	26 (23%)	1 2
29	DH	114/114 (100%)	88 (77%)	26 (23%)	1 2
30	BI	109/109 (100%)	81 (74%)	28 (26%)	0 1
30	DI	109/109 (100%)	86 (79%)	23 (21%)	1 3
31	BJ	116/116 (100%)	97 (84%)	19 (16%)	2 7
31	DJ	116/116 (100%)	100 (86%)	16 (14%)	3 10
32	BK	103/103 (100%)	86 (84%)	17 (16%)	2 7
32	DK	103/103 (100%)	91 (88%)	12 (12%)	5 16
33	BL	102/102 (100%)	83 (81%)	19 (19%)	1 5
33	DL	102/102 (100%)	78 (76%)	24 (24%)	1 2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
34	BM	109/109 (100%)	96 (88%)	13 (12%)	5 15
34	DM	109/109 (100%)	98 (90%)	11 (10%)	7 23
35	BN	100/100 (100%)	85 (85%)	15 (15%)	3 9
35	DN	100/100 (100%)	82 (82%)	18 (18%)	1 5
36	BO	86/86 (100%)	68 (79%)	18 (21%)	1 3
36	DO	86/86 (100%)	70 (81%)	16 (19%)	1 5
37	BP	99/99 (100%)	91 (92%)	8 (8%)	11 33
37	DP	99/99 (100%)	82 (83%)	17 (17%)	2 6
38	BQ	89/89 (100%)	77 (86%)	12 (14%)	4 11
38	DQ	89/89 (100%)	74 (83%)	15 (17%)	2 6
39	BR	84/84 (100%)	71 (84%)	13 (16%)	2 8
39	DR	84/84 (100%)	74 (88%)	10 (12%)	5 15
40	BS	93/93 (100%)	75 (81%)	18 (19%)	1 4
40	DS	93/93 (100%)	80 (86%)	13 (14%)	3 10
41	BT	80/80 (100%)	70 (88%)	10 (12%)	4 14
41	DT	80/80 (100%)	67 (84%)	13 (16%)	2 7
42	BU	83/83 (100%)	71 (86%)	12 (14%)	3 9
42	DU	83/83 (100%)	63 (76%)	20 (24%)	0 2
43	BV	78/78 (100%)	63 (81%)	15 (19%)	1 4
43	DV	78/78 (100%)	68 (87%)	10 (13%)	4 13
44	BW	57/58 (98%)	49 (86%)	8 (14%)	3 10
44	DW	56/58 (97%)	51 (91%)	5 (9%)	9 29
45	BX	67/67 (100%)	57 (85%)	10 (15%)	3 9
45	DX	67/67 (100%)	55 (82%)	12 (18%)	2 5
46	BY	55/55 (100%)	48 (87%)	7 (13%)	4 13
46	DY	55/55 (100%)	43 (78%)	12 (22%)	1 3
47	BZ	48/48 (100%)	38 (79%)	10 (21%)	1 3
47	DZ	48/48 (100%)	37 (77%)	11 (23%)	1 2
48	B0	47/47 (100%)	40 (85%)	7 (15%)	3 9
48	D0	47/47 (100%)	41 (87%)	6 (13%)	4 13
49	B1	45/45 (100%)	41 (91%)	4 (9%)	9 29

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
49	D1	45/45 (100%)	37 (82%)	8 (18%)	2 5
50	B2	38/38 (100%)	31 (82%)	7 (18%)	1 5
50	D2	38/38 (100%)	31 (82%)	7 (18%)	1 5
51	B3	51/51 (100%)	45 (88%)	6 (12%)	5 16
51	D3	51/51 (100%)	45 (88%)	6 (12%)	5 16
52	B4	34/34 (100%)	31 (91%)	3 (9%)	10 30
52	D4	34/34 (100%)	26 (76%)	8 (24%)	1 2
53	B5	61/180 (34%)	48 (79%)	13 (21%)	1 3
All	All	9386/9518 (99%)	7568 (81%)	1818 (19%)	1 4

All (1818) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LEU
2	AB	14	VAL
2	AB	15	HIS
2	AB	19	GLN
2	AB	20	THR
2	AB	21	ARG
2	AB	22	TYR
2	AB	23	TRP
2	AB	27	MET
2	AB	31	ILE
2	AB	32	PHE
2	AB	38	VAL
2	AB	39	HIS
2	AB	41	ILE
2	AB	43	LEU
2	AB	44	GLU
2	AB	46	THR
2	AB	50	PHE
2	AB	52	GLU
2	AB	56	GLU
2	AB	57	LEU
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	82	ASP
2	AB	85	LEU

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Mol	Chain	Res	Type
2	AB	89	GLN
2	AB	90	PHE
2	AB	91	PHE
2	AB	100	MET
2	AB	101	LEU
2	AB	111	ILE
2	AB	112	LYS
2	AB	117	LEU
2	AB	126	PHE
2	AB	129	LEU
2	AB	130	THR
2	AB	131	LYS
2	AB	132	LYS
2	AB	133	GLU
2	AB	135	LEU
2	AB	136	MET
2	AB	139	ARG
2	AB	140	GLU
2	AB	141	LEU
2	AB	144	LEU
2	AB	151	ILE
2	AB	152	LYS
2	AB	161	LEU
2	AB	163	VAL
2	AB	164	ILE
2	AB	174	LYS
2	AB	181	ILE
2	AB	186	ILE
2	AB	188	ASP
2	AB	199	VAL
2	AB	205	ASP
2	AB	207	ILE
2	AB	208	ARG
2	AB	210	VAL
2	AB	213	TYR
2	AB	220	THR
2	AB	225	ARG
3	AC	3	GLN
3	AC	11	ARG
3	AC	14	ILE
3	AC	15	VAL
3	AC	16	LYS

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Mol	Chain	Res	Type
3	AC	18	TRP
3	AC	19	ASN
3	AC	26	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	33	LEU
3	AC	35	SER
3	AC	37	PHE
3	AC	43	LEU
3	AC	51	SER
3	AC	52	VAL
3	AC	55	ILE
3	AC	58	GLU
3	AC	59	ARG
3	AC	64	ILE
3	AC	82	GLU
3	AC	86	LYS
3	AC	93	ASP
3	AC	103	ILE
3	AC	107	ARG
3	AC	119	SER
3	AC	121	THR
3	AC	140	ASN
3	AC	142	MET
3	AC	144	LEU
3	AC	165	THR
3	AC	166	GLU
3	AC	167	TRP
3	AC	173	VAL
3	AC	185	ASN
3	AC	200	VAL
4	AD	5	LEU
4	AD	9	LEU
4	AD	13	ARG
4	AD	17	THR
4	AD	23	SER
4	AD	26	ARG
4	AD	31	LYS
4	AD	32	CYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG

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Mol	Chain	Res	Type
4	AD	53	VAL
4	AD	58	LYS
4	AD	60	LYS
4	AD	63	ARG
4	AD	69	GLU
4	AD	70	ARG
4	AD	83	LYS
4	AD	104	ARG
4	AD	110	THR
4	AD	111	ARG
4	AD	116	GLN
4	AD	123	ILE
4	AD	128	ARG
4	AD	138	SER
4	AD	143	VAL
4	AD	152	GLN
4	AD	161	LEU
4	AD	163	GLU
4	AD	164	GLN
4	AD	167	LYS
4	AD	171	LEU
4	AD	177	LYS
4	AD	190	ASP
4	AD	195	ILE
4	AD	197	GLU
4	AD	206	LYS
5	AE	10	GLU
5	AE	15	LEU
5	AE	18	VAL
5	AE	21	VAL
5	AE	22	SER
5	AE	29	ARG
5	AE	32	SER
5	AE	38	VAL
5	AE	46	VAL
5	AE	54	ARG
5	AE	56	VAL
5	AE	69	ARG
5	AE	73	ASN
5	AE	83	HIS
5	AE	92	SER
5	AE	93	ARG

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Mol	Chain	Res	Type
5	AE	114	VAL
5	AE	115	LEU
5	AE	122	ASN
5	AE	123	VAL
5	AE	124	LEU
5	AE	126	LYS
5	AE	131	THR
5	AE	134	ILE
5	AE	136	VAL
5	AE	149	SER
5	AE	153	VAL
6	AF	5	GLU
6	AF	7	VAL
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG
6	AF	35	LYS
6	AF	39	LEU
6	AF	44	ARG
6	AF	45	ARG
6	AF	51	ILE
6	AF	52	ASN
6	AF	54	LEU
6	AF	55	HIS
6	AF	62	MET
6	AF	63	ASN
6	AF	68	GLN
6	AF	77	THR
6	AF	82	ASP
6	AF	84	VAL
6	AF	85	ILE
6	AF	86	ARG
6	AF	87	SER
6	AF	93	LYS
6	AF	96	VAL
6	AF	97	THR
6	AF	100	SER
7	AG	4	ARG
7	AG	6	VAL
7	AG	7	ILE
7	AG	9	GLN

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Mol	Chain	Res	Type
7	AG	10	ARG
7	AG	13	LEU
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	37	SER
7	AG	43	VAL
7	AG	48	GLU
7	AG	49	THR
7	AG	52	GLN
7	AG	59	LEU
7	AG	62	PHE
7	AG	63	GLU
7	AG	75	VAL
7	AG	76	LYS
7	AG	78	ARG
7	AG	79	ARG
7	AG	80	VAL
7	AG	89	VAL
7	AG	95	ARG
7	AG	115	SER
7	AG	120	LEU
7	AG	135	VAL
7	AG	136	LYS
7	AG	142	HIS
7	AG	144	MET
8	AH	3	MET
8	AH	11	LEU
8	AH	13	ARG
8	AH	22	LYS
8	AH	26	THR
8	AH	30	SER
8	AH	32	LEU
8	AH	42	GLU
8	AH	47	GLU
8	AH	49	PHE
8	AH	77	ARG
8	AH	79	SER
8	AH	83	LEU
8	AH	87	LYS
8	AH	89	LYS
8	AH	90	ASP

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Mol	Chain	Res	Type
8	AH	99	LEU
8	AH	104	VAL
8	AH	107	SER
8	AH	111	MET
8	AH	112	THR
8	AH	121	LEU
8	AH	125	ILE
9	AI	7	TYR
9	AI	11	ARG
9	AI	12	ARG
9	AI	18	ARG
9	AI	22	LYS
9	AI	30	ILE
9	AI	33	ARG
9	AI	36	GLU
9	AI	43	THR
9	AI	45	ARG
9	AI	46	MET
9	AI	48	VAL
9	AI	49	ARG
9	AI	55	VAL
9	AI	57	MET
9	AI	60	LYS
9	AI	61	LEU
9	AI	63	LEU
9	AI	68	LYS
9	AI	85	ARG
9	AI	88	MET
9	AI	89	GLU
9	AI	90	TYR
9	AI	94	LEU
9	AI	97	GLU
9	AI	106	ARG
9	AI	119	ARG
9	AI	127	PHE
9	AI	129	LYS
9	AI	130	ARG
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	17	LEU
10	AJ	25	ILE
10	AJ	27	GLU

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Mol	Chain	Res	Type
10	AJ	28	THR
10	AJ	40	ILE
10	AJ	42	LEU
10	AJ	44	THR
10	AJ	47	GLU
10	AJ	50	THR
10	AJ	52	LEU
10	AJ	53	ILE
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	73	LEU
10	AJ	75	ASP
10	AJ	83	THR
10	AJ	84	VAL
10	AJ	89	ARG
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	101	SER
11	AK	16	VAL
11	AK	17	SER
11	AK	23	ILE
11	AK	31	ILE
11	AK	38	GLN
11	AK	50	SER
11	AK	52	PHE
11	AK	58	SER
11	AK	65	VAL
11	AK	74	VAL
11	AK	76	GLU
11	AK	79	ILE
11	AK	81	ASN
11	AK	97	ILE
11	AK	101	ASN
11	AK	107	ILE
11	AK	111	THR
11	AK	112	ASP
11	AK	114	THR
11	AK	119	ASN
11	AK	126	LYS
11	AK	128	ARG
11	AK	129	VAL
12	AL	4	VAL

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Mol	Chain	Res	Type
12	AL	5	ASN
12	AL	10	LYS
12	AL	21	VAL
12	AL	25	GLU
12	AL	29	GLN
12	AL	44	LYS
12	AL	51	LYS
12	AL	54	ARG
12	AL	58	THR
12	AL	62	GLU
12	AL	63	VAL
12	AL	74	LEU
12	AL	76	GLU
12	AL	80	ILE
12	AL	86	ARG
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	110	ARG
12	AL	116	LYS
12	AL	121	ARG
13	AM	4	ILE
13	AM	7	ILE
13	AM	11	ASP
13	AM	13	LYS
13	AM	14	HIS
13	AM	16	VAL
13	AM	25	VAL
13	AM	27	LYS
13	AM	29	ARG
13	AM	55	THR
13	AM	63	PHE
13	AM	68	ASP
13	AM	72	GLU
13	AM	80	LEU
13	AM	87	ARG
13	AM	89	LEU
13	AM	90	ARG
13	AM	107	ARG
13	AM	108	THR
14	AN	7	LYS
14	AN	24	ARG

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Mol	Chain	Res	Type
14	AN	26	GLU
14	AN	28	LYS
14	AN	41	ARG
14	AN	43	ASN
14	AN	46	LEU
14	AN	49	GLN
14	AN	51	LEU
14	AN	59	ARG
14	AN	62	ASN
14	AN	63	ARG
14	AN	69	ARG
14	AN	76	LYS
14	AN	85	ARG
14	AN	98	LYS
14	AN	100	SER
15	AO	4	SER
15	AO	6	GLU
15	AO	17	ARG
15	AO	18	ASP
15	AO	31	LEU
15	AO	39	LEU
15	AO	40	GLN
15	AO	48	LYS
15	AO	57	LEU
15	AO	58	ARG
15	AO	59	MET
15	AO	67	LEU
15	AO	70	LEU
15	AO	75	VAL
15	AO	79	THR
15	AO	85	LEU
15	AO	87	LEU
16	AP	1	MET
16	AP	2	VAL
16	AP	5	ARG
16	AP	6	LEU
16	AP	8	ARG
16	AP	20	VAL
16	AP	31	ARG
16	AP	33	ILE
16	AP	39	PHE
16	AP	46	LYS

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Mol	Chain	Res	Type
16	AP	51	ARG
16	AP	63	GLN
16	AP	67	ILE
16	AP	71	VAL
16	AP	75	ILE
16	AP	76	LYS
16	AP	78	VAL
16	AP	80	LYS
17	AQ	4	LYS
17	AQ	11	ARG
17	AQ	13	VAL
17	AQ	14	SER
17	AQ	16	LYS
17	AQ	17	MET
17	AQ	19	LYS
17	AQ	21	ILE
17	AQ	22	VAL
17	AQ	26	GLU
17	AQ	28	PHE
17	AQ	29	VAL
17	AQ	38	ILE
17	AQ	51	ASN
17	AQ	52	GLU
17	AQ	53	CYS
17	AQ	55	ILE
17	AQ	59	VAL
17	AQ	64	CYS
17	AQ	67	LEU
17	AQ	75	LEU
17	AQ	76	VAL
17	AQ	77	ARG
17	AQ	81	LYS
17	AQ	83	VAL
18	AR	29	LEU
18	AR	30	LYS
18	AR	36	SER
18	AR	43	ARG
18	AR	55	LEU
18	AR	71	THR
19	AS	6	LYS
19	AS	15	LEU
19	AS	21	LYS

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Mol	Chain	Res	Type
19	AS	27	ASP
19	AS	55	ARG
19	AS	63	THR
19	AS	65	GLU
19	AS	71	LEU
19	AS	79	THR
20	AT	3	ASN
20	AT	5	LYS
20	AT	8	LYS
20	AT	12	ILE
20	AT	27	MET
20	AT	30	THR
20	AT	34	LYS
20	AT	36	TYR
20	AT	54	MET
20	AT	69	LYS
20	AT	70	ASN
20	AT	76	LYS
20	AT	84	ASN
21	AU	5	LYS
21	AU	9	ASN
21	AU	10	GLU
21	AU	12	PHE
21	AU	16	LEU
21	AU	17	ARG
21	AU	18	ARG
21	AU	19	PHE
21	AU	20	LYS
21	AU	28	VAL
21	AU	29	LEU
21	AU	33	ARG
21	AU	34	ARG
21	AU	37	PHE
21	AU	44	GLU
21	AU	46	LYS
21	AU	47	ARG
21	AU	53	VAL
21	AU	54	LYS
24	BC	5	LYS
24	BC	14	ARG
24	BC	18	LYS
24	BC	24	LEU

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Mol	Chain	Res	Type
24	BC	39	LYS
24	BC	50	THR
24	BC	64	ILE
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	117	GLN
24	BC	121	ASP
24	BC	125	LYS
24	BC	130	LEU
24	BC	139	SER
24	BC	156	ARG
24	BC	164	ILE
24	BC	174	LEU
24	BC	177	ARG
24	BC	181	MET
24	BC	187	ASP
24	BC	195	VAL
24	BC	197	ASN
24	BC	199	GLU
24	BC	213	TRP
24	BC	245	VAL
24	BC	258	ARG
24	BC	265	LYS
24	BC	268	VAL
25	BD	12	THR
25	BD	13	ARG
25	BD	52	THR
25	BD	73	VAL
25	BD	83	ARG
25	BD	89	GLU
25	BD	95	SER
25	BD	116	LYS
25	BD	121	THR
25	BD	136	ASN
25	BD	150	GLN
25	BD	157	LYS
25	BD	177	VAL
25	BD	204	LYS
26	BE	4	VAL
26	BE	40	ARG
26	BE	44	ARG

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Mol	Chain	Res	Type
26	BE	49	ARG
26	BE	55	SER
26	BE	72	SER
26	BE	77	ILE
26	BE	80	SER
26	BE	88	ARG
26	BE	90	GLN
26	BE	93	SER
26	BE	107	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	111	GLU
26	BE	114	ARG
26	BE	115	GLN
26	BE	116	ASP
26	BE	120	VAL
26	BE	123	LYS
26	BE	126	VAL
26	BE	136	GLN
26	BE	149	ILE
26	BE	159	LEU
26	BE	163	ASN
26	BE	170	ARG
26	BE	171	ASP
26	BE	176	ASP
26	BE	181	ILE
26	BE	189	THR
26	BE	198	GLU
27	BF	3	LYS
27	BF	14	LYS
27	BF	17	MET
27	BF	25	VAL
27	BF	27	GLN
27	BF	31	VAL
27	BF	35	THR
27	BF	36	LEU
27	BF	42	GLU
27	BF	44	ILE
27	BF	48	LYS
27	BF	51	ASP
27	BF	57	LEU
27	BF	61	SER

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Mol	Chain	Res	Type
27	BF	78	LYS
27	BF	83	TYR
27	BF	95	ARG
27	BF	105	THR
27	BF	108	VAL
27	BF	113	ASP
27	BF	141	ILE
27	BF	142	ASP
27	BF	147	ASP
27	BF	155	THR
27	BF	158	THR
27	BF	176	PRO
28	BG	10	VAL
28	BG	11	VAL
28	BG	20	ASN
28	BG	27	LYS
28	BG	39	ASP
28	BG	67	THR
28	BG	77	ILE
28	BG	80	THR
28	BG	87	LEU
28	BG	92	VAL
28	BG	124	GLU
28	BG	139	GLN
28	BG	149	ARG
28	BG	152	ARG
28	BG	155	GLU
28	BG	166	ASP
28	BG	170	ARG
29	BH	1	MET
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	15	LEU
29	BH	27	ARG
29	BH	50	ARG
29	BH	60	GLU
29	BH	62	LEU
29	BH	66	ASN
29	BH	75	LEU
29	BH	77	THR
29	BH	79	THR

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Mol	Chain	Res	Type
29	BH	86	ASP
29	BH	91	PHE
29	BH	112	LYS
29	BH	119	ASN
29	BH	122	LEU
29	BH	123	ARG
29	BH	125	THR
29	BH	129	GLU
29	BH	131	SER
29	BH	137	GLU
29	BH	142	VAL
29	BH	145	ASN
29	BH	146	VAL
30	BI	3	LYS
30	BI	8	TYR
30	BI	9	VAL
30	BI	11	LEU
30	BI	28	LEU
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	47	ASP
30	BI	50	GLU
30	BI	60	THR
30	BI	62	TYR
30	BI	67	PHE
30	BI	69	PHE
30	BI	72	LYS
30	BI	82	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	96	ASP
30	BI	97	LYS
30	BI	100	LYS
30	BI	102	SER
30	BI	103	ARG
30	BI	108	GLU
30	BI	111	GLN
30	BI	132	THR
30	BI	135	SER
30	BI	136	MET
31	BJ	1	MET

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Mol	Chain	Res	Type
31	BJ	13	ARG
31	BJ	23	LYS
31	BJ	27	ARG
31	BJ	30	THR
31	BJ	39	LYS
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	65	THR
31	BJ	69	ARG
31	BJ	70	THR
31	BJ	78	THR
31	BJ	96	ARG
31	BJ	101	ILE
31	BJ	109	LEU
31	BJ	124	VAL
31	BJ	135	GLN
32	BK	20	MET
32	BK	21	CYS
32	BK	38	ILE
32	BK	41	ILE
32	BK	49	ARG
32	BK	58	LEU
32	BK	61	VAL
32	BK	66	LYS
32	BK	70	ARG
32	BK	77	ILE
32	BK	80	ASP
32	BK	84	CYS
32	BK	88	ASN
32	BK	91	SER
32	BK	92	GLU
32	BK	107	LEU
32	BK	117	SER
33	BL	2	ARG
33	BL	7	SER
33	BL	19	LEU
33	BL	21	ARG
33	BL	27	LEU
33	BL	39	LYS
33	BL	40	SER

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Mol	Chain	Res	Type
33	BL	47	ARG
33	BL	48	ARG
33	BL	76	GLU
33	BL	78	ARG
33	BL	82	LEU
33	BL	85	VAL
33	BL	86	GLU
33	BL	93	ASN
33	BL	100	ILE
33	BL	115	GLU
33	BL	126	ARG
33	BL	144	GLU
34	BM	10	ARG
34	BM	18	ARG
34	BM	24	THR
34	BM	46	ILE
34	BM	58	LYS
34	BM	69	PRO
34	BM	70	ASP
34	BM	100	LYS
34	BM	106	ASP
34	BM	110	GLU
34	BM	115	GLU
34	BM	134	THR
34	BM	135	VAL
35	BN	2	ARG
35	BN	15	SER
35	BN	24	MET
35	BN	27	SER
35	BN	32	GLU
35	BN	36	THR
35	BN	69	ARG
35	BN	70	THR
35	BN	71	ARG
35	BN	89	SER
35	BN	90	ARG
35	BN	96	ARG
35	BN	116	VAL
35	BN	117	ASP
35	BN	120	GLU
36	BO	2	ASP
36	BO	4	LYS

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Mol	Chain	Res	Type
36	BO	5	SER
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	45	SER
36	BO	47	VAL
36	BO	49	VAL
36	BO	65	THR
36	BO	74	VAL
36	BO	78	VAL
36	BO	88	LYS
36	BO	89	ASP
36	BO	102	ARG
37	BP	2	SER
37	BP	27	GLU
37	BP	63	LYS
37	BP	68	GLU
37	BP	72	ARG
37	BP	109	ARG
37	BP	110	ILE
37	BP	114	LEU
38	BQ	6	ARG
38	BQ	9	ILE
38	BQ	17	ILE
38	BQ	18	LEU
38	BQ	29	SER
38	BQ	51	ARG
38	BQ	52	GLN
38	BQ	58	ARG
38	BQ	78	LYS
38	BQ	87	SER
38	BQ	92	ARG
38	BQ	112	LYS
39	BR	6	GLN
39	BR	10	LYS
39	BR	14	VAL
39	BR	16	GLU
39	BR	20	VAL
39	BR	38	VAL

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Mol	Chain	Res	Type
39	BR	41	ILE
39	BR	48	LYS
39	BR	54	VAL
39	BR	58	VAL
39	BR	85	LYS
39	BR	94	THR
39	BR	102	SER
40	BS	1	MET
40	BS	4	ILE
40	BS	6	LYS
40	BS	11	ARG
40	BS	15	GLN
40	BS	19	LEU
40	BS	28	LYS
40	BS	30	SER
40	BS	47	VAL
40	BS	76	VAL
40	BS	81	SER
40	BS	82	MET
40	BS	95	ARG
40	BS	97	LEU
40	BS	101	SER
40	BS	107	VAL
40	BS	108	SER
40	BS	109	ASP
41	BT	1	MET
41	BT	5	GLU
41	BT	11	LEU
41	BT	22	THR
41	BT	30	ILE
41	BT	39	THR
41	BT	49	LYS
41	BT	50	LEU
41	BT	74	ILE
41	BT	89	GLU
42	BU	9	ASP
42	BU	14	LEU
42	BU	21	LYS
42	BU	24	LYS
42	BU	26	LYS
42	BU	29	LEU
42	BU	52	LEU

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Mol	Chain	Res	Type
42	BU	61	LYS
42	BU	62	GLU
42	BU	68	SER
42	BU	72	ILE
42	BU	100	SER
43	BV	1	MET
43	BV	3	THR
43	BV	8	VAL
43	BV	10	LYS
43	BV	11	GLU
43	BV	17	SER
43	BV	18	ARG
43	BV	20	LEU
43	BV	29	ILE
43	BV	53	LYS
43	BV	58	SER
43	BV	61	LEU
43	BV	65	VAL
43	BV	77	VAL
43	BV	85	LYS
44	BW	20	ARG
44	BW	44	LYS
44	BW	60	PHE
44	BW	64	ASP
44	BW	66	LYS
44	BW	72	LYS
44	BW	77	ARG
44	BW	81	SER
45	BX	2	SER
45	BX	5	CYS
45	BX	18	ARG
45	BX	25	THR
45	BX	28	ARG
45	BX	37	ARG
45	BX	40	VAL
45	BX	48	THR
45	BX	51	VAL
45	BX	77	LYS
46	BY	6	LEU
46	BY	12	GLU
46	BY	13	GLU
46	BY	16	THR

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Mol	Chain	Res	Type
46	BY	29	ARG
46	BY	37	LEU
46	BY	59	GLU
47	BZ	3	LYS
47	BZ	8	THR
47	BZ	10	THR
47	BZ	23	THR
47	BZ	25	LEU
47	BZ	31	ARG
47	BZ	32	ILE
47	BZ	45	ARG
47	BZ	57	VAL
47	BZ	59	GLU
48	B0	15	MET
48	B0	17	ARG
48	B0	23	THR
48	B0	29	SER
48	B0	36	GLU
48	B0	40	ARG
48	B0	57	LYS
49	B1	43	VAL
49	B1	46	HIS
49	B1	47	VAL
49	B1	51	GLU
50	B2	1	MET
50	B2	8	SER
50	B2	11	LYS
50	B2	15	SER
50	B2	35	ARG
50	B2	42	LEU
50	B2	45	SER
51	B3	15	LYS
51	B3	16	LYS
51	B3	17	THR
51	B3	31	HIS
51	B3	41	LYS
51	B3	47	LYS
52	B4	3	VAL
52	B4	6	SER
52	B4	18	LYS
53	B5	21	TYR
53	B5	35	THR

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Mol	Chain	Res	Type
53	B5	37	LYS
53	B5	38	PHE
53	B5	39	ASP
53	B5	47	LYS
53	B5	48	LEU
53	B5	58	ASN
53	B5	59	VAL
53	B5	65	LEU
53	B5	73	VAL
53	B5	78	ILE
53	B5	86	GLU
2	CB	9	MET
2	CB	14	VAL
2	CB	15	HIS
2	CB	16	PHE
2	CB	18	HIS
2	CB	19	GLN
2	CB	20	THR
2	CB	23	TRP
2	CB	24	ASN
2	CB	27	MET
2	CB	28	LYS
2	CB	35	ARG
2	CB	40	ILE
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	62	SER
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	77	SER
2	CB	88	ASP
2	CB	89	GLN
2	CB	91	PHE
2	CB	94	HIS
2	CB	95	ARG
2	CB	96	TRP
2	CB	103	ASN
2	CB	106	THR
2	CB	117	LEU
2	CB	122	GLN

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Mol	Chain	Res	Type
2	CB	125	THR
2	CB	126	PHE
2	CB	130	THR
2	CB	133	GLU
2	CB	136	MET
2	CB	139	ARG
2	CB	140	GLU
2	CB	143	LYS
2	CB	144	LEU
2	CB	163	VAL
2	CB	164	ILE
2	CB	174	LYS
2	CB	188	ASP
2	CB	205	ASP
2	CB	207	ILE
2	CB	210	VAL
2	CB	220	THR
2	CB	222	ARG
2	CB	223	GLU
3	CC	3	GLN
3	CC	15	VAL
3	CC	16	LYS
3	CC	18	TRP
3	CC	25	ASN
3	CC	26	THR
3	CC	27	LYS
3	CC	28	GLU
3	CC	29	PHE
3	CC	33	LEU
3	CC	36	ASP
3	CC	37	PHE
3	CC	43	LEU
3	CC	45	LYS
3	CC	70	THR
3	CC	80	LYS
3	CC	102	ASN
3	CC	103	ILE
3	CC	107	ARG
3	CC	111	LEU
3	CC	119	SER
3	CC	121	THR
3	CC	129	MET

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Mol	Chain	Res	Type
3	CC	131	ARG
3	CC	132	ARG
3	CC	140	ASN
3	CC	144	LEU
3	CC	151	VAL
3	CC	153	VAL
3	CC	167	TRP
3	CC	168	TYR
3	CC	175	LEU
3	CC	179	ARG
3	CC	190	HIS
3	CC	192	THR
3	CC	193	TYR
4	CD	8	LYS
4	CD	9	LEU
4	CD	12	SER
4	CD	23	SER
4	CD	28	ILE
4	CD	29	ASP
4	CD	32	CYS
4	CD	33	LYS
4	CD	47	ARG
4	CD	48	LEU
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	60	LYS
4	CD	63	ARG
4	CD	69	GLU
4	CD	83	LYS
4	CD	125	VAL
4	CD	126	ASN
4	CD	129	VAL
4	CD	138	SER
4	CD	151	LYS
4	CD	152	GLN
4	CD	153	SER
4	CD	155	VAL
4	CD	161	LEU
4	CD	163	GLU

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Mol	Chain	Res	Type
4	CD	179	GLU
4	CD	184	ARG
4	CD	191	LEU
4	CD	199	LEU
4	CD	200	ILE
4	CD	203	LEU
4	CD	206	LYS
5	CE	10	GLU
5	CE	15	LEU
5	CE	26	LYS
5	CE	32	SER
5	CE	39	VAL
5	CE	46	VAL
5	CE	52	LYS
5	CE	65	GLU
5	CE	69	ARG
5	CE	77	ASN
5	CE	81	LEU
5	CE	92	SER
5	CE	93	ARG
5	CE	96	MET
5	CE	101	GLU
5	CE	112	ARG
5	CE	114	VAL
5	CE	115	LEU
5	CE	120	VAL
5	CE	124	LEU
5	CE	126	LYS
5	CE	131	THR
5	CE	137	VAL
5	CE	140	THR
5	CE	149	SER
5	CE	151	GLU
5	CE	152	MET
5	CE	156	LYS
6	CF	1	MET
6	CF	2	ARG
6	CF	7	VAL
6	CF	8	PHE
6	CF	18	VAL
6	CF	23	GLU
6	CF	24	ARG

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Mol	Chain	Res	Type
6	CF	26	THR
6	CF	29	ILE
6	CF	35	LYS
6	CF	36	ILE
6	CF	38	ARG
6	CF	51	ILE
6	CF	53	LYS
6	CF	54	LEU
6	CF	55	HIS
6	CF	63	ASN
6	CF	68	GLN
6	CF	69	GLU
6	CF	71	ILE
6	CF	73	GLU
6	CF	75	GLU
6	CF	80	PHE
6	CF	87	SER
6	CF	93	LYS
6	CF	97	THR
7	CG	3	ARG
7	CG	4	ARG
7	CG	5	ARG
7	CG	6	VAL
7	CG	11	LYS
7	CG	22	LEU
7	CG	23	LEU
7	CG	30	LEU
7	CG	36	LYS
7	CG	47	LEU
7	CG	48	GLU
7	CG	53	ARG
7	CG	59	LEU
7	CG	60	GLU
7	CG	62	PHE
7	CG	66	LEU
7	CG	69	VAL
7	CG	70	ARG
7	CG	75	VAL
7	CG	78	ARG
7	CG	84	THR
7	CG	87	VAL
7	CG	91	VAL

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Mol	Chain	Res	Type
7	CG	95	ARG
7	CG	120	LEU
7	CG	123	GLU
7	CG	129	GLU
7	CG	133	THR
7	CG	135	VAL
7	CG	138	ARG
7	CG	139	GLU
7	CG	140	ASP
7	CG	146	GLU
8	CH	3	MET
8	CH	13	ARG
8	CH	22	LYS
8	CH	31	LYS
8	CH	33	LYS
8	CH	42	GLU
8	CH	45	PHE
8	CH	47	GLU
8	CH	49	PHE
8	CH	54	ASP
8	CH	55	THR
8	CH	59	LEU
8	CH	75	ILE
8	CH	77	ARG
8	CH	80	ARG
8	CH	87	LYS
8	CH	90	ASP
8	CH	92	LEU
8	CH	104	VAL
8	CH	111	MET
8	CH	112	THR
8	CH	121	LEU
8	CH	125	ILE
9	CI	9	THR
9	CI	11	ARG
9	CI	13	LYS
9	CI	18	ARG
9	CI	33	ARG
9	CI	34	SER
9	CI	43	THR
9	CI	45	ARG
9	CI	46	MET

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Mol	Chain	Res	Type
9	CI	48	VAL
9	CI	49	ARG
9	CI	56	ASP
9	CI	57	MET
9	CI	61	LEU
9	CI	68	LYS
9	CI	85	ARG
9	CI	88	MET
9	CI	89	GLU
9	CI	90	TYR
9	CI	94	LEU
9	CI	96	SER
9	CI	97	GLU
9	CI	99	ARG
9	CI	100	LYS
9	CI	105	THR
9	CI	112	GLU
9	CI	126	GLN
9	CI	127	PHE
9	CI	129	LYS
10	CJ	9	ARG
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	27	GLU
10	CJ	32	THR
10	CJ	35	GLN
10	CJ	45	ARG
10	CJ	48	ARG
10	CJ	51	VAL
10	CJ	59	LYS
10	CJ	63	ASP
10	CJ	66	GLU
10	CJ	80	THR
10	CJ	83	THR
10	CJ	84	VAL
10	CJ	87	LEU
10	CJ	89	ARG
10	CJ	92	LEU
11	CK	13	ARG
11	CK	14	LYS
11	CK	15	GLN
11	CK	31	ILE

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Mol	Chain	Res	Type
11	CK	50	SER
11	CK	52	PHE
11	CK	64	GLN
11	CK	65	VAL
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	87	LYS
11	CK	96	THR
11	CK	101	ASN
11	CK	105	PHE
11	CK	106	ARG
11	CK	107	ILE
11	CK	126	LYS
11	CK	128	ARG
12	CL	3	THR
12	CL	4	VAL
12	CL	5	ASN
12	CL	10	LYS
12	CL	12	ARG
12	CL	16	VAL
12	CL	18	LYS
12	CL	20	ASN
12	CL	21	VAL
12	CL	29	GLN
12	CL	30	LYS
12	CL	44	LYS
12	CL	58	THR
12	CL	59	ASN
12	CL	62	GLU
12	CL	63	VAL
12	CL	82	ILE
12	CL	83	ARG
12	CL	89	ASP
12	CL	90	LEU
12	CL	93	VAL
12	CL	94	ARG
12	CL	105	SER
12	CL	110	ARG
12	CL	111	LYS
12	CL	116	LYS
12	CL	121	ARG

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Mol	Chain	Res	Type
13	CM	19	LEU
13	CM	25	VAL
13	CM	29	ARG
13	CM	30	SER
13	CM	31	LYS
13	CM	33	ILE
13	CM	34	LEU
13	CM	41	GLU
13	CM	48	LEU
13	CM	53	ILE
13	CM	56	LEU
13	CM	59	GLU
13	CM	60	VAL
13	CM	63	PHE
13	CM	68	ASP
13	CM	72	GLU
13	CM	80	LEU
13	CM	83	LEU
13	CM	90	ARG
13	CM	91	HIS
13	CM	101	ARG
14	CN	4	GLN
14	CN	23	LYS
14	CN	26	GLU
14	CN	28	LYS
14	CN	35	ASN
14	CN	48	LEU
14	CN	53	ARG
14	CN	71	HIS
14	CN	80	SER
14	CN	90	ARG
15	CO	6	GLU
15	CO	17	ARG
15	CO	18	ASP
15	CO	22	THR
15	CO	26	GLU
15	CO	35	GLN
15	CO	38	HIS
15	CO	48	LYS
15	CO	58	ARG
15	CO	64	ARG
15	CO	70	LEU

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Mol	Chain	Res	Type
15	CO	73	LYS
15	CO	79	THR
15	CO	85	LEU
15	CO	87	LEU
15	CO	88	ARG
16	CP	1	MET
16	CP	2	VAL
16	CP	3	THR
16	CP	5	ARG
16	CP	20	VAL
16	CP	26	ASN
16	CP	31	ARG
16	CP	36	VAL
16	CP	46	LYS
16	CP	63	GLN
16	CP	74	LEU
16	CP	77	GLU
16	CP	80	LYS
17	CQ	4	LYS
17	CQ	5	ILE
17	CQ	11	ARG
17	CQ	14	SER
17	CQ	17	MET
17	CQ	18	GLU
17	CQ	23	VAL
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	29	VAL
17	CQ	40	ARG
17	CQ	48	ASP
17	CQ	50	ASN
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	65	ARG
17	CQ	75	LEU
17	CQ	76	VAL
17	CQ	78	VAL
17	CQ	79	VAL
17	CQ	81	LYS
17	CQ	83	VAL
18	CR	29	LEU
18	CR	33	ILE

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Mol	Chain	Res	Type
18	CR	42	SER
18	CR	45	THR
18	CR	47	THR
18	CR	48	ARG
18	CR	57	ARG
18	CR	59	ILE
18	CR	67	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	11	ILE
19	CS	13	LEU
19	CS	14	HIS
19	CS	16	LEU
19	CS	23	VAL
19	CS	27	ASP
19	CS	28	LYS
19	CS	33	THR
19	CS	49	ILE
19	CS	56	GLN
19	CS	73	GLU
20	CT	5	LYS
20	CT	6	SER
20	CT	8	LYS
20	CT	10	ARG
20	CT	14	SER
20	CT	15	GLU
20	CT	24	ARG
20	CT	27	MET
20	CT	29	ARG
20	CT	36	TYR
20	CT	49	LYS
20	CT	64	LYS
20	CT	67	ILE
20	CT	76	LYS
20	CT	78	ASN
20	CT	79	LEU
21	CU	5	LYS
21	CU	7	ARG
21	CU	10	GLU
21	CU	12	PHE
21	CU	14	VAL
21	CU	16	LEU

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Mol	Chain	Res	Type
21	CU	19	PHE
21	CU	24	GLU
21	CU	28	VAL
21	CU	34	ARG
21	CU	36	GLU
21	CU	37	PHE
21	CU	38	TYR
21	CU	43	THR
21	CU	47	ARG
24	DC	3	VAL
24	DC	20	VAL
24	DC	28	LYS
24	DC	36	LYS
24	DC	40	SER
24	DC	48	ARG
24	DC	52	ARG
24	DC	54	ILE
24	DC	64	ILE
24	DC	80	ARG
24	DC	98	ASP
24	DC	103	TYR
24	DC	104	ILE
24	DC	105	LEU
24	DC	111	LYS
24	DC	130	LEU
24	DC	156	ARG
24	DC	157	SER
24	DC	160	THR
24	DC	174	LEU
24	DC	175	ARG
24	DC	189	ARG
24	DC	191	THR
24	DC	195	VAL
24	DC	202	LEU
24	DC	205	LEU
24	DC	250	VAL
24	DC	256	LYS
24	DC	259	SER
24	DC	266	PHE
24	DC	267	ILE
25	DD	1	MET
25	DD	4	LEU

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Mol	Chain	Res	Type
25	DD	12	THR
25	DD	28	GLU
25	DD	33	ARG
25	DD	86	GLU
25	DD	91	THR
25	DD	95	SER
25	DD	100	LEU
25	DD	104	VAL
25	DD	150	GLN
25	DD	154	LYS
25	DD	170	VAL
25	DD	172	VAL
25	DD	189	VAL
25	DD	200	ASP
26	DE	22	ASP
26	DE	32	VAL
26	DE	40	ARG
26	DE	41	GLN
26	DE	46	GLN
26	DE	63	LYS
26	DE	69	ARG
26	DE	77	ILE
26	DE	78	TRP
26	DE	83	VAL
26	DE	84	THR
26	DE	91	ASP
26	DE	102	ARG
26	DE	107	SER
26	DE	108	ILE
26	DE	114	ARG
26	DE	118	LEU
26	DE	120	VAL
26	DE	125	SER
26	DE	127	GLU
26	DE	131	THR
26	DE	133	LEU
26	DE	149	ILE
26	DE	159	LEU
26	DE	164	LEU
26	DE	170	ARG
26	DE	171	ASP
26	DE	173	THR

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Mol	Chain	Res	Type
26	DE	181	ILE
26	DE	187	VAL
26	DE	200	LEU
27	DF	4	LEU
27	DF	6	ASP
27	DF	10	ASP
27	DF	14	LYS
27	DF	21	ASN
27	DF	26	MET
27	DF	28	VAL
27	DF	32	GLU
27	DF	35	THR
27	DF	36	LEU
27	DF	52	ASN
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	81	GLN
27	DF	83	TYR
27	DF	87	CYS
27	DF	92	ARG
27	DF	95	ARG
27	DF	106	ILE
27	DF	125	ARG
27	DF	133	ARG
27	DF	147	ASP
27	DF	149	VAL
27	DF	157	THR
27	DF	162	SER
27	DF	174	ASP
27	DF	178	ARG
28	DG	11	VAL
28	DG	29	LYS
28	DG	30	ASN
28	DG	42	GLU
28	DG	44	LYS
28	DG	48	ASN
28	DG	51	THR
28	DG	89	LEU
28	DG	95	ARG
28	DG	127	THR
28	DG	129	THR

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Mol	Chain	Res	Type
28	DG	141	ILE
28	DG	152	ARG
28	DG	155	GLU
29	DH	7	ASP
29	DH	12	LEU
29	DH	41	LYS
29	DH	42	LYS
29	DH	48	GLU
29	DH	50	ARG
29	DH	53	GLU
29	DH	54	LEU
29	DH	57	LYS
29	DH	62	LEU
29	DH	77	THR
29	DH	78	VAL
29	DH	87	GLU
29	DH	89	LYS
29	DH	94	ILE
29	DH	109	GLU
29	DH	114	GLU
29	DH	116	ARG
29	DH	117	LEU
29	DH	119	ASN
29	DH	121	VAL
29	DH	124	THR
29	DH	125	THR
29	DH	129	GLU
29	DH	142	VAL
29	DH	149	GLU
30	DI	3	LYS
30	DI	4	LYS
30	DI	8	TYR
30	DI	11	LEU
30	DI	12	GLN
30	DI	17	MET
30	DI	24	VAL
30	DI	31	GLN
30	DI	40	LYS
30	DI	48	SER
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS

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Mol	Chain	Res	Type
30	DI	87	LYS
30	DI	95	LYS
30	DI	96	ASP
30	DI	97	LYS
30	DI	105	GLN
30	DI	117	MET
30	DI	125	MET
30	DI	127	ARG
30	DI	128	SER
30	DI	134	ARG
31	DJ	1	MET
31	DJ	3	THR
31	DJ	37	ARG
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	64	VAL
31	DJ	72	LYS
31	DJ	73	VAL
31	DJ	81	ILE
31	DJ	86	GLN
31	DJ	90	GLU
31	DJ	129	GLU
31	DJ	131	ASN
31	DJ	138	GLN
31	DJ	140	LEU
31	DJ	142	ILE
32	DK	41	ILE
32	DK	42	THR
32	DK	49	ARG
32	DK	53	LYS
32	DK	67	LYS
32	DK	70	ARG
32	DK	90	ASN
32	DK	92	GLU
32	DK	95	ILE
32	DK	104	THR
32	DK	110	GLU
32	DK	114	LYS
33	DL	6	LEU
33	DL	12	SER
33	DL	19	LEU
33	DL	27	LEU

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Mol	Chain	Res	Type
33	DL	42	SER
33	DL	46	VAL
33	DL	47	ARG
33	DL	48	ARG
33	DL	59	ARG
33	DL	60	ARG
33	DL	78	ARG
33	DL	80	SER
33	DL	82	LEU
33	DL	85	VAL
33	DL	91	ASP
33	DL	94	THR
33	DL	95	LEU
33	DL	96	LYS
33	DL	100	ILE
33	DL	103	ILE
33	DL	107	PHE
33	DL	118	THR
33	DL	126	ARG
33	DL	143	GLU
34	DM	6	ARG
34	DM	14	LYS
34	DM	59	ARG
34	DM	70	ASP
34	DM	74	THR
34	DM	108	VAL
34	DM	124	LEU
34	DM	126	ILE
34	DM	127	LYS
34	DM	128	THR
34	DM	132	THR
35	DN	2	ARG
35	DN	6	SER
35	DN	8	ARG
35	DN	14	SER
35	DN	20	MET
35	DN	22	ARG
35	DN	53	THR
35	DN	63	ARG
35	DN	70	THR
35	DN	71	ARG
35	DN	76	VAL

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Mol	Chain	Res	Type
35	DN	79	LEU
35	DN	82	GLU
35	DN	96	ARG
35	DN	100	CYS
35	DN	114	GLU
35	DN	115	LEU
35	DN	116	VAL
36	DO	9	ARG
36	DO	18	LEU
36	DO	26	LEU
36	DO	31	THR
36	DO	47	VAL
36	DO	48	LEU
36	DO	67	ASN
36	DO	74	VAL
36	DO	78	VAL
36	DO	88	LYS
36	DO	89	ASP
36	DO	95	SER
36	DO	100	HIS
36	DO	102	ARG
36	DO	103	VAL
36	DO	116	GLN
37	DP	19	SER
37	DP	26	VAL
37	DP	32	VAL
37	DP	34	GLU
37	DP	36	SER
37	DP	37	LYS
37	DP	51	ARG
37	DP	64	ILE
37	DP	65	SER
37	DP	66	ASN
37	DP	80	VAL
37	DP	81	VAL
37	DP	85	SER
37	DP	93	ARG
37	DP	109	ARG
37	DP	110	ILE
37	DP	114	LEU
38	DQ	5	LYS
38	DQ	8	VAL

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Mol	Chain	Res	Type
38	DQ	9	ILE
38	DQ	11	ARG
38	DQ	13	ARG
38	DQ	16	LYS
38	DQ	22	LYS
38	DQ	33	ARG
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	53	ARG
38	DQ	54	LYS
38	DQ	92	ARG
38	DQ	94	ILE
38	DQ	100	VAL
39	DR	12	HIS
39	DR	38	VAL
39	DR	43	ASN
39	DR	46	GLU
39	DR	47	VAL
39	DR	48	LYS
39	DR	51	VAL
39	DR	58	VAL
39	DR	86	GLN
39	DR	94	THR
40	DS	3	THR
40	DS	4	ILE
40	DS	6	LYS
40	DS	13	SER
40	DS	19	LEU
40	DS	23	LEU
40	DS	67	ASP
40	DS	78	GLU
40	DS	86	MET
40	DS	96	ILE
40	DS	97	LEU
40	DS	104	THR
40	DS	109	ASP
41	DT	3	ARG
41	DT	7	LEU
41	DT	16	VAL
41	DT	30	ILE
41	DT	31	VAL
41	DT	44	LYS

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Mol	Chain	Res	Type
41	DT	49	LYS
41	DT	52	GLU
41	DT	57	VAL
41	DT	70	HIS
41	DT	77	ARG
41	DT	86	THR
41	DT	91	GLN
42	DU	7	ARG
42	DU	11	VAL
42	DU	15	THR
42	DU	18	ASP
42	DU	21	LYS
42	DU	28	VAL
42	DU	29	LEU
42	DU	31	SER
42	DU	40	ASN
42	DU	41	LEU
42	DU	45	HIS
42	DU	46	GLN
42	DU	47	LYS
42	DU	53	ASN
42	DU	54	GLN
42	DU	68	SER
42	DU	72	ILE
42	DU	81	ASP
42	DU	99	ASN
42	DU	100	SER
43	DV	2	PHE
43	DV	8	VAL
43	DV	21	ARG
43	DV	26	PHE
43	DV	29	ILE
43	DV	42	LEU
43	DV	45	ASP
43	DV	50	MET
43	DV	53	LYS
43	DV	61	LEU
44	DW	16	SER
44	DW	20	ARG
44	DW	39	ARG
44	DW	41	ARG
44	DW	77	ARG

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Mol	Chain	Res	Type
45	DX	11	ARG
45	DX	18	ARG
45	DX	23	ASN
45	DX	25	THR
45	DX	33	LEU
45	DX	40	VAL
45	DX	46	PHE
45	DX	48	THR
45	DX	54	LYS
45	DX	64	ILE
45	DX	66	THR
45	DX	71	LEU
46	DY	2	LYS
46	DY	6	LEU
46	DY	8	GLU
46	DY	13	GLU
46	DY	16	THR
46	DY	29	ARG
46	DY	37	LEU
46	DY	38	GLN
46	DY	39	GLN
46	DY	49	ASP
46	DY	56	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	10	THR
47	DZ	11	ARG
47	DZ	16	ARG
47	DZ	25	LEU
47	DZ	31	ARG
47	DZ	36	VAL
47	DZ	41	THR
47	DZ	45	ARG
47	DZ	57	VAL
47	DZ	58	GLU
48	D0	23	THR
48	D0	25	VAL
48	D0	28	LEU
48	D0	37	LYS
48	D0	46	ASP
48	D0	52	ARG
49	D1	6	ARG

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Mol	Chain	Res	Type
49	D1	9	ILE
49	D1	10	LYS
49	D1	12	VAL
49	D1	25	LYS
49	D1	26	ASN
49	D1	30	LYS
49	D1	38	LYS
50	D2	1	MET
50	D2	4	THR
50	D2	10	LEU
50	D2	24	THR
50	D2	41	ARG
50	D2	44	VAL
50	D2	46	LYS
51	D3	6	THR
51	D3	8	ARG
51	D3	13	ARG
51	D3	30	ARG
51	D3	31	HIS
51	D3	47	LYS
52	D4	2	LYS
52	D4	3	VAL
52	D4	4	ARG
52	D4	11	CYS
52	D4	12	ARG
52	D4	17	VAL
52	D4	26	ILE
52	D4	35	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (40) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	15	HIS
3	AC	6	HIS
5	AE	82	GLN
5	AE	122	ASN
8	AH	18	GLN
10	AJ	56	HIS
10	AJ	70	HIS
11	AK	22	HIS
15	AO	46	HIS
24	BC	142	HIS

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Mol	Chain	Res	Type
25	BD	136	ASN
29	BH	119	ASN
29	BH	135	HIS
49	B1	19	HIS
2	CB	18	HIS
2	CB	103	ASN
2	CB	177	ASN
3	CC	6	HIS
3	CC	176	HIS
4	CD	152	GLN
5	CE	89	HIS
10	CJ	70	HIS
13	CM	91	HIS
13	CM	105	ASN
24	DC	134	ASN
25	DD	150	GLN
27	DF	63	GLN
28	DG	115	HIS
28	DG	139	GLN
28	DG	143	GLN
29	DH	128	HIS
33	DL	35	HIS
38	DQ	37	GLN
39	DR	89	HIS
40	DS	7	HIS
42	DU	74	ASN
46	DY	41	HIS
49	D1	19	HIS
49	D1	26	ASN
51	D3	31	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	349 (22%)	15 (0%)
1	CA	1538/1539 (99%)	331 (21%)	9 (0%)
22	BA	2895/2903 (99%)	643 (22%)	30 (1%)
22	DA	2895/2903 (99%)	637 (22%)	29 (1%)
23	BB	118/119 (99%)	21 (17%)	0
23	DB	117/119 (98%)	25 (21%)	0
All	All	9100/9122 (99%)	2006 (22%)	83 (0%)

All (2006) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	13	U
1	AA	22	G
1	AA	28	A
1	AA	32	A
1	AA	39	G
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	74	A
1	AA	75	G
1	AA	76	G
1	AA	77	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	108	G
1	AA	109	A
1	AA	111	G
1	AA	115	G
1	AA	116	A
1	AA	117	G
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	131	A

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Mol	Chain	Res	Type
1	AA	137	U
1	AA	138	G
1	AA	141	G
1	AA	142	G
1	AA	143	A
1	AA	144	G
1	AA	149	A
1	AA	159	G
1	AA	162	A
1	AA	168	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	185	U
1	AA	195	A
1	AA	204	G
1	AA	205	A
1	AA	209	U
1	AA	210	C
1	AA	214	C
1	AA	226	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	260	G
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	292	G
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	331	G
1	AA	332	G
1	AA	338	A
1	AA	341	C
1	AA	346	G
1	AA	352	C

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Mol	Chain	Res	Type
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	382	A
1	AA	384	G
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	414	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	439	U
1	AA	440	C
1	AA	445	G
1	AA	453	G
1	AA	454	G
1	AA	456	A
1	AA	457	G
1	AA	458	U
1	AA	459	A
1	AA	462	G
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	474	G
1	AA	479	U
1	AA	481	G
1	AA	482	A
1	AA	485	U
1	AA	486	U
1	AA	491	G

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Mol	Chain	Res	Type
1	AA	492	C
1	AA	495	A
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	570	G
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	615	G
1	AA	650	G
1	AA	653	U
1	AA	661	G
1	AA	665	A
1	AA	671	G
1	AA	702	A
1	AA	703	G
1	AA	720	C
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	753	A
1	AA	755	G
1	AA	766	A
1	AA	772	U
1	AA	773	G
1	AA	777	A
1	AA	778	G
1	AA	792	A
1	AA	793	U
1	AA	794	A

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Mol	Chain	Res	Type
1	AA	815	A
1	AA	817	C
1	AA	828	U
1	AA	829	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	849	G
1	AA	859	G
1	AA	860	A
1	AA	870	U
1	AA	910	C
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	938	A
1	AA	960	U
1	AA	963	G
1	AA	964	A
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	986	U
1	AA	987	G
1	AA	988	G
1	AA	989	U
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	995	C
1	AA	1002	G
1	AA	1004	A

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Mol	Chain	Res	Type
1	AA	1007	U
1	AA	1008	U
1	AA	1009	U
1	AA	1016	A
1	AA	1017	U
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1035	A
1	AA	1036	A
1	AA	1037	C
1	AA	1039	G
1	AA	1042	A
1	AA	1043	G
1	AA	1044	A
1	AA	1047	G
1	AA	1049	U
1	AA	1050	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1061	G
1	AA	1065	U
1	AA	1066	C
1	AA	1069	C
1	AA	1086	U
1	AA	1089	G
1	AA	1094	G
1	AA	1098	C
1	AA	1101	A
1	AA	1103	C
1	AA	1104	G
1	AA	1124	G
1	AA	1125	U
1	AA	1127	G

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Mol	Chain	Res	Type
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1145	A
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1168	U
1	AA	1169	A
1	AA	1171	A
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1188	A
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1260	G
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1287	A

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Mol	Chain	Res	Type
1	AA	1293	C
1	AA	1299	A
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1317	C
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1325	C
1	AA	1328	C
1	AA	1329	A
1	AA	1332	A
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1368	A
1	AA	1370	G
1	AA	1378	C
1	AA	1379	G
1	AA	1398	A
1	AA	1401	G
1	AA	1418	A
1	AA	1419	G
1	AA	1425	U
1	AA	1426	G
1	AA	1429	A
1	AA	1430	A
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1493	A

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Mol	Chain	Res	Type
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1526	G
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
1	AA	1535	C
1	AA	1539	C
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	19	A
22	BA	23	G
22	BA	26	G
22	BA	31	C
22	BA	34	U
22	BA	35	G
22	BA	46	G
22	BA	58	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	72	U
22	BA	74	A
22	BA	75	G
22	BA	87	U
22	BA	98	G
22	BA	101	A
22	BA	103	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	128	C
22	BA	131	A
22	BA	137	U
22	BA	138	U
22	BA	139	U

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Mol	Chain	Res	Type
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	143	C
22	BA	148	U
22	BA	158	U
22	BA	180	G
22	BA	181	A
22	BA	196	A
22	BA	200	U
22	BA	207	A
22	BA	208	C
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	248	G
22	BA	255	A
22	BA	265	A
22	BA	266	G
22	BA	267	C
22	BA	272	A
22	BA	273	G
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	279	A
22	BA	302	C
22	BA	310	A
22	BA	311	A
22	BA	329	G
22	BA	330	A
22	BA	331	C
22	BA	339	U
22	BA	343	C
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G

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Mol	Chain	Res	Type
22	BA	389	G
22	BA	404	A
22	BA	405	U
22	BA	406	G
22	BA	411	G
22	BA	424	G
22	BA	429	A
22	BA	443	A
22	BA	451	U
22	BA	455	C
22	BA	457	A
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	489	G
22	BA	491	G
22	BA	504	A
22	BA	505	A
22	BA	508	A
22	BA	509	C
22	BA	514	A
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	538	A
22	BA	543	G
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	557	C
22	BA	560	C
22	BA	563	A
22	BA	571	U
22	BA	573	U
22	BA	575	A
22	BA	576	U
22	BA	581	C
22	BA	585	G

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Mol	Chain	Res	Type
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	618	G
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	644	A
22	BA	645	C
22	BA	647	G
22	BA	648	G
22	BA	654	A
22	BA	655	A
22	BA	668	A
22	BA	670	A
22	BA	671	C
22	BA	686	U
22	BA	702	U
22	BA	713	G
22	BA	716	A
22	BA	730	A
22	BA	731	C
22	BA	738	G
22	BA	740	C
22	BA	744	U
22	BA	747	U
22	BA	756	A
22	BA	757	G
22	BA	762	U
22	BA	765	C
22	BA	769	U
22	BA	775	G
22	BA	776	G
22	BA	778	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	791	C
22	BA	792	A

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Mol	Chain	Res	Type
22	BA	801	G
22	BA	805	G
22	BA	806	C
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	831	G
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	855	G
22	BA	858	G
22	BA	859	G
22	BA	861	A
22	BA	866	A
22	BA	869	G
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	900	A
22	BA	910	A
22	BA	913	U
22	BA	914	G
22	BA	915	C
22	BA	919	U
22	BA	932	U
22	BA	941	A
22	BA	946	C
22	BA	961	C
22	BA	974	G
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	990	A
22	BA	991	C
22	BA	992	C
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	999	U

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Mol	Chain	Res	Type
22	BA	1005	C
22	BA	1012	U
22	BA	1013	C
22	BA	1023	U
22	BA	1024	G
22	BA	1026	G
22	BA	1033	U
22	BA	1046	A
22	BA	1047	G
22	BA	1051	G
22	BA	1057	A
22	BA	1061	U
22	BA	1062	G
22	BA	1066	U
22	BA	1068	G
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1081	U
22	BA	1087	G
22	BA	1088	A
22	BA	1089	A
22	BA	1092	C
22	BA	1098	A
22	BA	1099	G
22	BA	1100	C
22	BA	1101	U
22	BA	1104	C
22	BA	1106	G
22	BA	1112	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1138	G
22	BA	1139	G
22	BA	1141	U
22	BA	1142	A
22	BA	1145	C

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Mol	Chain	Res	Type
22	BA	1150	C
22	BA	1168	G
22	BA	1170	C
22	BA	1171	G
22	BA	1172	C
22	BA	1173	U
22	BA	1174	U
22	BA	1175	A
22	BA	1176	U
22	BA	1178	C
22	BA	1179	G
22	BA	1180	U
22	BA	1181	U
22	BA	1185	G
22	BA	1186	G
22	BA	1187	G
22	BA	1205	A
22	BA	1211	C
22	BA	1212	G
22	BA	1222	U
22	BA	1238	G
22	BA	1247	A
22	BA	1249	U
22	BA	1252	G
22	BA	1253	A
22	BA	1255	U
22	BA	1256	G
22	BA	1258	U
22	BA	1265	A
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1311	G
22	BA	1321	A
22	BA	1325	U
22	BA	1329	U
22	BA	1332	G

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Mol	Chain	Res	Type
22	BA	1345	C
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1367	A
22	BA	1368	G
22	BA	1370	C
22	BA	1374	G
22	BA	1378	A
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1407	G
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1428	C
22	BA	1435	G
22	BA	1450	G
22	BA	1452	G
22	BA	1453	A
22	BA	1460	U
22	BA	1461	C
22	BA	1482	G
22	BA	1483	G
22	BA	1493	C
22	BA	1494	A
22	BA	1495	A
22	BA	1504	A
22	BA	1508	A
22	BA	1509	A
22	BA	1510	G
22	BA	1515	A
22	BA	1523	U
22	BA	1528	A
22	BA	1529	G
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C

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Mol	Chain	Res	Type
22	BA	1554	U
22	BA	1558	C
22	BA	1561	C
22	BA	1566	A
22	BA	1569	A
22	BA	1575	C
22	BA	1576	U
22	BA	1578	U
22	BA	1582	C
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1597	A
22	BA	1607	C
22	BA	1608	A
22	BA	1609	A
22	BA	1610	A
22	BA	1616	A
22	BA	1619	G
22	BA	1632	A
22	BA	1634	A
22	BA	1646	C
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1651	G
22	BA	1652	A
22	BA	1674	G
22	BA	1677	A
22	BA	1695	G
22	BA	1714	U
22	BA	1715	G
22	BA	1717	A
22	BA	1718	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1755	A
22	BA	1758	U

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Mol	Chain	Res	Type
22	BA	1764	C
22	BA	1773	A
22	BA	1782	U
22	BA	1786	A
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1804	C
22	BA	1806	C
22	BA	1808	A
22	BA	1813	G
22	BA	1816	C
22	BA	1828	G
22	BA	1829	A
22	BA	1842	G
22	BA	1844	C
22	BA	1859	U
22	BA	1865	U
22	BA	1870	C
22	BA	1873	G
22	BA	1876	A
22	BA	1884	G
22	BA	1885	A
22	BA	1897	G
22	BA	1902	C
22	BA	1906	G
22	BA	1909	C
22	BA	1910	G
22	BA	1911	U
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1920	C
22	BA	1921	G
22	BA	1923	U
22	BA	1925	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G

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Mol	Chain	Res	Type
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1935	G
22	BA	1936	A
22	BA	1937	A
22	BA	1938	A
22	BA	1944	U
22	BA	1951	U
22	BA	1955	U
22	BA	1960	A
22	BA	1965	C
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1983	G
22	BA	1986	C
22	BA	1991	U
22	BA	1993	U
22	BA	1997	C
22	BA	2001	C
22	BA	2008	C
22	BA	2009	A
22	BA	2021	C
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2035	G
22	BA	2043	C
22	BA	2051	A
22	BA	2053	G
22	BA	2054	A
22	BA	2055	C
22	BA	2056	G
22	BA	2059	A
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2064	C

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Mol	Chain	Res	Type
22	BA	2066	C
22	BA	2067	G
22	BA	2069	G
22	BA	2072	C
22	BA	2077	A
22	BA	2092	U
22	BA	2093	G
22	BA	2096	C
22	BA	2101	A
22	BA	2102	G
22	BA	2107	G
22	BA	2110	G
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U
22	BA	2119	A
22	BA	2122	U
22	BA	2123	G
22	BA	2126	A
22	BA	2128	G
22	BA	2132	U
22	BA	2133	G
22	BA	2136	G
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2157	G
22	BA	2158	A
22	BA	2159	G
22	BA	2162	G
22	BA	2164	C
22	BA	2165	C
22	BA	2167	U
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U

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Mol	Chain	Res	Type
22	BA	2173	A
22	BA	2178	C
22	BA	2179	C
22	BA	2183	A
22	BA	2187	U
22	BA	2188	U
22	BA	2190	G
22	BA	2195	U
22	BA	2198	A
22	BA	2203	U
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2220	U
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2242	G
22	BA	2243	U
22	BA	2258	C
22	BA	2267	A
22	BA	2268	A
22	BA	2278	A
22	BA	2280	G
22	BA	2283	C
22	BA	2286	G
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2311	A
22	BA	2312	U
22	BA	2322	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2331	G
22	BA	2333	A
22	BA	2335	A

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Mol	Chain	Res	Type
22	BA	2340	A
22	BA	2345	G
22	BA	2347	C
22	BA	2350	C
22	BA	2354	C
22	BA	2357	G
22	BA	2361	G
22	BA	2376	A
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2391	G
22	BA	2392	A
22	BA	2393	U
22	BA	2396	G
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2410	G
22	BA	2412	A
22	BA	2421	G
22	BA	2422	C
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2441	U
22	BA	2443	C
22	BA	2448	A
22	BA	2465	C
22	BA	2474	U
22	BA	2476	A
22	BA	2478	A
22	BA	2491	U
22	BA	2496	C
22	BA	2497	A
22	BA	2498	C
22	BA	2499	C
22	BA	2500	U

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Mol	Chain	Res	Type
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2516	A
22	BA	2518	A
22	BA	2520	C
22	BA	2525	G
22	BA	2529	G
22	BA	2554	U
22	BA	2555	U
22	BA	2566	A
22	BA	2567	G
22	BA	2572	A
22	BA	2573	C
22	BA	2574	G
22	BA	2578	G
22	BA	2584	U
22	BA	2599	G
22	BA	2601	C
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U
22	BA	2627	G
22	BA	2629	U
22	BA	2662	A
22	BA	2685	G
22	BA	2689	U
22	BA	2690	U
22	BA	2700	A
22	BA	2702	G
22	BA	2714	G
22	BA	2721	A
22	BA	2725	A
22	BA	2726	A
22	BA	2729	G
22	BA	2733	A
22	BA	2748	A
22	BA	2751	G
22	BA	2752	C

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Mol	Chain	Res	Type
22	BA	2756	U
22	BA	2757	A
22	BA	2778	A
22	BA	2791	G
22	BA	2792	A
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2811	G
22	BA	2818	U
22	BA	2820	A
22	BA	2821	A
22	BA	2827	C
22	BA	2836	U
22	BA	2837	A
22	BA	2858	C
22	BA	2862	G
22	BA	2867	G
22	BA	2873	A
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2885	G
22	BA	2886	A
22	BA	2887	A
22	BA	2903	U
23	BB	2	G
23	BB	4	C
23	BB	9	G
23	BB	13	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	36	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	56	G
23	BB	66	A
23	BB	89	U
23	BB	90	C

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Mol	Chain	Res	Type
23	BB	91	C
23	BB	98	G
23	BB	99	A
23	BB	109	A
23	BB	119	A
1	CA	5	U
1	CA	9	G
1	CA	17	U
1	CA	19	A
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	56	U
1	CA	67	C
1	CA	68	G
1	CA	70	U
1	CA	71	A
1	CA	74	A
1	CA	81	A
1	CA	83	C
1	CA	84	U
1	CA	85	U
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	94	G
1	CA	95	C
1	CA	108	G
1	CA	116	A
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	129	A
1	CA	130	A
1	CA	131	A
1	CA	137	U
1	CA	142	G
1	CA	143	A
1	CA	144	G

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Mol	Chain	Res	Type
1	CA	154	U
1	CA	155	A
1	CA	159	G
1	CA	163	C
1	CA	181	A
1	CA	182	A
1	CA	183	C
1	CA	184	G
1	CA	187	G
1	CA	189	A
1	CA	197	A
1	CA	200	G
1	CA	201	G
1	CA	204	G
1	CA	206	C
1	CA	207	C
1	CA	208	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	240	G
1	CA	241	G
1	CA	245	U
1	CA	247	G
1	CA	249	U
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	269	C
1	CA	280	C
1	CA	289	G
1	CA	298	A
1	CA	308	C
1	CA	309	A
1	CA	320	A
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	333	U
1	CA	337	G

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Mol	Chain	Res	Type
1	CA	347	G
1	CA	352	C
1	CA	354	G
1	CA	357	G
1	CA	358	U
1	CA	359	G
1	CA	367	U
1	CA	370	C
1	CA	372	C
1	CA	373	A
1	CA	377	G
1	CA	378	G
1	CA	384	G
1	CA	389	A
1	CA	398	U
1	CA	399	G
1	CA	406	G
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	458	U
1	CA	459	A
1	CA	463	U
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	474	G
1	CA	477	C
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	482	A
1	CA	484	G
1	CA	485	U

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Mol	Chain	Res	Type
1	CA	486	U
1	CA	495	A
1	CA	498	A
1	CA	499	A
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	519	C
1	CA	524	G
1	CA	527	G
1	CA	532	A
1	CA	533	A
1	CA	545	C
1	CA	547	A
1	CA	550	G
1	CA	559	A
1	CA	564	C
1	CA	568	G
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	581	G
1	CA	582	C
1	CA	619	U
1	CA	622	A
1	CA	650	G
1	CA	653	U
1	CA	654	G
1	CA	665	A
1	CA	666	G
1	CA	687	A
1	CA	695	A
1	CA	719	C
1	CA	720	C
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	734	G
1	CA	747	A
1	CA	752	G

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Mol	Chain	Res	Type
1	CA	754	C
1	CA	755	G
1	CA	758	C
1	CA	765	G
1	CA	777	A
1	CA	778	G
1	CA	785	G
1	CA	793	U
1	CA	794	A
1	CA	802	A
1	CA	804	U
1	CA	809	G
1	CA	814	A
1	CA	815	A
1	CA	817	C
1	CA	821	G
1	CA	827	U
1	CA	828	U
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	874	G
1	CA	876	C
1	CA	914	A
1	CA	922	G
1	CA	926	G
1	CA	931	C
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	966	G
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	983	A
1	CA	987	G
1	CA	989	U

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Mol	Chain	Res	Type
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	996	A
1	CA	1004	A
1	CA	1005	A
1	CA	1008	U
1	CA	1009	U
1	CA	1017	U
1	CA	1018	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1039	G
1	CA	1043	G
1	CA	1044	A
1	CA	1047	G
1	CA	1050	G
1	CA	1054	C
1	CA	1055	A
1	CA	1056	U
1	CA	1065	U
1	CA	1072	G
1	CA	1073	U
1	CA	1084	G
1	CA	1086	U
1	CA	1088	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1124	G
1	CA	1125	U
1	CA	1129	C
1	CA	1132	C

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Mol	Chain	Res	Type
1	CA	1133	G
1	CA	1134	G
1	CA	1136	C
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1145	A
1	CA	1154	G
1	CA	1155	A
1	CA	1156	G
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1167	A
1	CA	1183	U
1	CA	1184	G
1	CA	1192	C
1	CA	1196	A
1	CA	1202	U
1	CA	1203	C
1	CA	1212	U
1	CA	1213	A
1	CA	1227	A
1	CA	1238	A
1	CA	1240	U
1	CA	1243	C
1	CA	1253	G
1	CA	1260	G
1	CA	1275	A
1	CA	1280	A
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1292	G
1	CA	1293	C
1	CA	1299	A
1	CA	1300	G
1	CA	1302	C
1	CA	1304	G

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Mol	Chain	Res	Type
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1322	C
1	CA	1324	A
1	CA	1331	G
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1370	G
1	CA	1377	A
1	CA	1378	C
1	CA	1379	G
1	CA	1394	A
1	CA	1398	A
1	CA	1419	G
1	CA	1440	U
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1452	C
1	CA	1454	G
1	CA	1480	A
1	CA	1491	G
1	CA	1492	A
1	CA	1497	G
1	CA	1503	A
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1509	C
1	CA	1517	G
1	CA	1528	U
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
1	CA	1533	C
1	CA	1535	C
1	CA	1537	U

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Mol	Chain	Res	Type
22	DA	10	A
22	DA	12	U
22	DA	15	G
22	DA	30	G
22	DA	31	C
22	DA	34	U
22	DA	41	C
22	DA	42	A
22	DA	46	G
22	DA	55	G
22	DA	57	C
22	DA	58	G
22	DA	61	C
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	82	U
22	DA	84	A
22	DA	91	A
22	DA	98	G
22	DA	101	A
22	DA	102	U
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	128	C
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	149	A
22	DA	155	A
22	DA	162	U
22	DA	163	C
22	DA	166	U
22	DA	181	A
22	DA	196	A
22	DA	197	A
22	DA	199	A
22	DA	206	U

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Mol	Chain	Res	Type
22	DA	212	G
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	225	C
22	DA	248	G
22	DA	249	C
22	DA	250	G
22	DA	255	A
22	DA	264	C
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	279	A
22	DA	280	U
22	DA	281	C
22	DA	285	G
22	DA	294	A
22	DA	299	A
22	DA	311	A
22	DA	329	G
22	DA	330	A
22	DA	350	G
22	DA	353	C
22	DA	354	A
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	385	C
22	DA	386	G
22	DA	396	G
22	DA	399	U
22	DA	405	U
22	DA	411	G
22	DA	412	A
22	DA	417	C
22	DA	424	G

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Mol	Chain	Res	Type
22	DA	447	A
22	DA	449	A
22	DA	451	U
22	DA	455	C
22	DA	478	A
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	504	A
22	DA	505	A
22	DA	508	A
22	DA	509	C
22	DA	510	C
22	DA	511	U
22	DA	526	A
22	DA	529	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	538	A
22	DA	543	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	573	U
22	DA	575	A
22	DA	586	A
22	DA	587	C
22	DA	593	U
22	DA	603	A
22	DA	613	A
22	DA	615	U
22	DA	622	G
22	DA	627	A
22	DA	630	G
22	DA	631	A

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Mol	Chain	Res	Type
22	DA	637	A
22	DA	641	U
22	DA	642	U
22	DA	645	C
22	DA	646	U
22	DA	647	G
22	DA	648	G
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	663	G
22	DA	664	G
22	DA	676	A
22	DA	686	U
22	DA	695	G
22	DA	702	U
22	DA	715	A
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	740	C
22	DA	746	U
22	DA	747	U
22	DA	749	A
22	DA	751	A
22	DA	752	A
22	DA	755	U
22	DA	764	A
22	DA	771	G
22	DA	775	G
22	DA	776	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	802	A
22	DA	805	G
22	DA	812	C
22	DA	819	A
22	DA	820	A

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Mol	Chain	Res	Type
22	DA	827	U
22	DA	828	U
22	DA	829	A
22	DA	830	G
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	878	A
22	DA	880	G
22	DA	881	G
22	DA	882	G
22	DA	885	C
22	DA	896	A
22	DA	897	C
22	DA	902	C
22	DA	910	A
22	DA	914	G
22	DA	915	C
22	DA	931	U
22	DA	932	U
22	DA	934	U
22	DA	941	A
22	DA	946	C
22	DA	953	G
22	DA	961	C
22	DA	974	G
22	DA	982	C
22	DA	983	A
22	DA	995	C
22	DA	996	A
22	DA	997	G
22	DA	998	C
22	DA	1005	C
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1023	U
22	DA	1025	G
22	DA	1026	G
22	DA	1033	U

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Mol	Chain	Res	Type
22	DA	1041	G
22	DA	1046	A
22	DA	1047	G
22	DA	1053	C
22	DA	1058	U
22	DA	1060	U
22	DA	1061	U
22	DA	1062	G
22	DA	1065	U
22	DA	1066	U
22	DA	1067	A
22	DA	1068	G
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1074	G
22	DA	1075	C
22	DA	1077	A
22	DA	1079	C
22	DA	1082	U
22	DA	1088	A
22	DA	1089	A
22	DA	1090	A
22	DA	1092	C
22	DA	1094	U
22	DA	1097	U
22	DA	1098	A
22	DA	1100	C
22	DA	1104	C
22	DA	1105	U
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1119	U
22	DA	1122	G
22	DA	1128	G
22	DA	1132	U
22	DA	1133	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1141	U

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Mol	Chain	Res	Type
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1156	A
22	DA	1168	G
22	DA	1171	G
22	DA	1172	C
22	DA	1173	U
22	DA	1175	A
22	DA	1176	U
22	DA	1178	C
22	DA	1179	G
22	DA	1180	U
22	DA	1186	G
22	DA	1197	G
22	DA	1205	A
22	DA	1208	C
22	DA	1212	G
22	DA	1221	C
22	DA	1230	A
22	DA	1231	U
22	DA	1232	G
22	DA	1236	G
22	DA	1238	G
22	DA	1241	A
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1257	C
22	DA	1262	A
22	DA	1264	A
22	DA	1266	G
22	DA	1269	A
22	DA	1271	G
22	DA	1272	A
22	DA	1275	A
22	DA	1276	A
22	DA	1300	G
22	DA	1301	A
22	DA	1305	C
22	DA	1318	U
22	DA	1325	U

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Mol	Chain	Res	Type
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1365	A
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1386	C
22	DA	1387	A
22	DA	1390	U
22	DA	1391	U
22	DA	1395	A
22	DA	1411	U
22	DA	1414	C
22	DA	1416	G
22	DA	1419	A
22	DA	1420	A
22	DA	1423	G
22	DA	1426	G
22	DA	1428	C
22	DA	1434	A
22	DA	1436	G
22	DA	1452	G
22	DA	1455	G
22	DA	1456	G
22	DA	1458	U
22	DA	1462	C
22	DA	1471	G
22	DA	1478	G
22	DA	1482	G
22	DA	1493	C
22	DA	1495	A
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1515	A
22	DA	1523	U
22	DA	1527	G
22	DA	1530	G

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Mol	Chain	Res	Type
22	DA	1531	C
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1565	C
22	DA	1566	A
22	DA	1569	A
22	DA	1576	U
22	DA	1578	U
22	DA	1581	G
22	DA	1582	C
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1603	A
22	DA	1604	C
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1613	G
22	DA	1616	A
22	DA	1623	G
22	DA	1625	C
22	DA	1639	C
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1651	G
22	DA	1660	G
22	DA	1664	A
22	DA	1665	A
22	DA	1674	G
22	DA	1690	A
22	DA	1694	C
22	DA	1705	A
22	DA	1714	U
22	DA	1715	G

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Mol	Chain	Res	Type
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1735	A
22	DA	1738	G
22	DA	1739	A
22	DA	1740	G
22	DA	1744	A
22	DA	1756	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1774	C
22	DA	1776	G
22	DA	1782	U
22	DA	1800	C
22	DA	1801	A
22	DA	1802	A
22	DA	1808	A
22	DA	1811	G
22	DA	1816	C
22	DA	1823	G
22	DA	1829	A
22	DA	1847	A
22	DA	1848	A
22	DA	1858	A
22	DA	1859	U
22	DA	1869	G
22	DA	1870	C
22	DA	1871	A
22	DA	1874	C
22	DA	1876	A
22	DA	1880	U
22	DA	1884	G
22	DA	1893	C
22	DA	1903	G
22	DA	1906	G
22	DA	1907	G
22	DA	1913	A
22	DA	1914	C

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Mol	Chain	Res	Type
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1935	G
22	DA	1937	A
22	DA	1947	C
22	DA	1955	U
22	DA	1961	C
22	DA	1964	G
22	DA	1965	C
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1991	U
22	DA	1992	G
22	DA	1993	U
22	DA	1997	C
22	DA	2020	A
22	DA	2021	C
22	DA	2022	U
22	DA	2023	C
22	DA	2030	A
22	DA	2031	A
22	DA	2033	A
22	DA	2043	C
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2069	G
22	DA	2072	C
22	DA	2073	C
22	DA	2080	A
22	DA	2083	G
22	DA	2092	U
22	DA	2093	G
22	DA	2095	A
22	DA	2102	G
22	DA	2103	C

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Mol	Chain	Res	Type
22	DA	2107	G
22	DA	2108	A
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A
22	DA	2137	U
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2173	A
22	DA	2177	C
22	DA	2178	C
22	DA	2181	U
22	DA	2184	A
22	DA	2189	U
22	DA	2190	G
22	DA	2194	U
22	DA	2198	A
22	DA	2203	U

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Mol	Chain	Res	Type
22	DA	2204	G
22	DA	2211	A
22	DA	2212	A
22	DA	2225	A
22	DA	2226	C
22	DA	2230	G
22	DA	2238	G
22	DA	2239	G
22	DA	2241	A
22	DA	2242	G
22	DA	2243	U
22	DA	2268	A
22	DA	2269	G
22	DA	2273	A
22	DA	2278	A
22	DA	2280	G
22	DA	2283	C
22	DA	2287	A
22	DA	2297	A
22	DA	2305	U
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2311	A
22	DA	2312	U
22	DA	2320	U
22	DA	2322	A
22	DA	2324	U
22	DA	2325	G
22	DA	2327	A
22	DA	2333	A
22	DA	2344	U
22	DA	2347	C
22	DA	2350	C
22	DA	2354	C
22	DA	2356	U
22	DA	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2402	U
22	DA	2403	C

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Mol	Chain	Res	Type
22	DA	2406	A
22	DA	2407	A
22	DA	2410	G
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2441	U
22	DA	2446	G
22	DA	2447	G
22	DA	2448	A
22	DA	2449	U
22	DA	2455	G
22	DA	2476	A
22	DA	2484	G
22	DA	2491	U
22	DA	2498	C
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G
22	DA	2534	A
22	DA	2535	G
22	DA	2547	A
22	DA	2554	U
22	DA	2566	A
22	DA	2567	G
22	DA	2572	A
22	DA	2573	C
22	DA	2580	U
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2586	U
22	DA	2589	A

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Mol	Chain	Res	Type
22	DA	2600	A
22	DA	2602	A
22	DA	2603	G
22	DA	2606	C
22	DA	2609	U
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2624	G
22	DA	2629	U
22	DA	2630	G
22	DA	2646	C
22	DA	2663	G
22	DA	2682	A
22	DA	2689	U
22	DA	2690	U
22	DA	2703	C
22	DA	2714	G
22	DA	2716	C
22	DA	2718	G
22	DA	2726	A
22	DA	2729	G
22	DA	2748	A
22	DA	2757	A
22	DA	2758	A
22	DA	2764	A
22	DA	2765	A
22	DA	2768	U
22	DA	2770	G
22	DA	2778	A
22	DA	2791	G
22	DA	2794	C
22	DA	2798	U
22	DA	2799	A
22	DA	2818	U
22	DA	2820	A
22	DA	2826	A
22	DA	2833	U
22	DA	2835	A
22	DA	2861	U
22	DA	2867	G
22	DA	2872	A

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Mol	Chain	Res	Type
22	DA	2873	A
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2891	U
22	DA	2894	G
22	DA	2901	C
23	DB	13	G
23	DB	15	A
23	DB	16	G
23	DB	22	U
23	DB	24	G
23	DB	25	U
23	DB	35	C
23	DB	36	C
23	DB	40	U
23	DB	44	G
23	DB	51	G
23	DB	54	G
23	DB	56	G
23	DB	58	A
23	DB	64	G
23	DB	66	A
23	DB	67	G
23	DB	73	A
23	DB	88	C
23	DB	89	U
23	DB	90	C
23	DB	91	C
23	DB	99	A
23	DB	105	G
23	DB	109	A

All (83) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	115	G
1	AA	148	G
1	AA	209	U
1	AA	351	G
1	AA	353	A
1	AA	429	U

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Mol	Chain	Res	Type
1	AA	653	U
1	AA	772	U
1	AA	793	U
1	AA	1031	C
1	AA	1049	U
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U
1	AA	1533	C
22	BA	70	G
22	BA	196	A
22	BA	199	A
22	BA	271	G
22	BA	310	A
22	BA	404	A
22	BA	479	A
22	BA	585	G
22	BA	764	A
22	BA	800	A
22	BA	960	A
22	BA	984	A
22	BA	1185	G
22	BA	1344	U
22	BA	1378	A
22	BA	1494	A
22	BA	1606	C
22	BA	1610	A
22	BA	1738	G
22	BA	1757	A
22	BA	1875	G
22	BA	2062	A
22	BA	2127	G
22	BA	2211	A
22	BA	2282	G
22	BA	2286	G
22	BA	2324	U
22	BA	2326	C
22	BA	2425	A
22	BA	2873	A
1	CA	115	G
1	CA	209	U
1	CA	429	U

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Mol	Chain	Res	Type
1	CA	559	A
1	CA	733	G
1	CA	793	U
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
22	DA	60	G
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	503	A
22	DA	614	A
22	DA	846	U
22	DA	982	C
22	DA	1240	U
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1606	C
22	DA	1738	G
22	DA	2109	U
22	DA	2127	G
22	DA	2146	C
22	DA	2162	G
22	DA	2211	A
22	DA	2225	A
22	DA	2286	G
22	DA	2296	U
22	DA	2308	G
22	DA	2311	A
22	DA	2326	C
22	DA	2425	A
22	DA	2585	U
22	DA	2602	A
22	DA	2756	U

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 502 ligands modelled in this entry, 500 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
55	VIF	BA	3001	-	35,40,40	2.30	13 (37%)	43,55,55	1.99	11 (25%)
55	VIF	DA	3001	-	35,40,40	2.26	12 (34%)	43,55,55	2.24	15 (34%)

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	VIF	BA	3001	-	-	9/42/58/58	0/2/3/3
55	VIF	DA	3001	-	-	9/42/58/58	0/2/3/3

All (25) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BA	3001	VIF	O01-C06	-4.92	1.37	1.44
55	BA	3001	VIF	C11-C09	-4.46	1.43	1.53
55	DA	3001	VIF	C15-N01	4.39	1.44	1.34
55	BA	3001	VIF	O01-C08	-4.38	1.24	1.34
55	DA	3001	VIF	O01-C06	-4.29	1.38	1.44
55	DA	3001	VIF	O04-C22	-4.28	1.35	1.43
55	BA	3001	VIF	C15-N01	4.18	1.44	1.34
55	DA	3001	VIF	C11-C09	-4.12	1.43	1.53
55	DA	3001	VIF	O01-C08	-4.01	1.25	1.34
55	DA	3001	VIF	F-C07	-3.81	1.25	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BA	3001	VIF	C09-N01	-3.76	1.39	1.47
55	BA	3001	VIF	F-C07	-3.57	1.26	1.40
55	BA	3001	VIF	C03-N02	3.54	1.41	1.34
55	BA	3001	VIF	C09-C08	-3.04	1.46	1.52
55	DA	3001	VIF	C03-N02	3.01	1.40	1.34
55	DA	3001	VIF	C09-N01	-3.00	1.40	1.47
55	BA	3001	VIF	O04-C22	-2.73	1.38	1.43
55	DA	3001	VIF	C26-C05	-2.61	1.46	1.53
55	BA	3001	VIF	C26-C05	-2.50	1.46	1.53
55	BA	3001	VIF	C13-N01	-2.43	1.42	1.47
55	DA	3001	VIF	C23-N	-2.35	1.30	1.37
55	DA	3001	VIF	C13-N01	-2.26	1.43	1.47
55	BA	3001	VIF	C23-N	-2.24	1.30	1.37
55	BA	3001	VIF	O-C03	-2.11	1.20	1.24
55	DA	3001	VIF	C14-C22	-2.02	1.48	1.52

All (26) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	DA	3001	VIF	C02-C01-C03	-7.56	103.77	122.69
55	BA	3001	VIF	C02-C01-C03	-5.72	108.38	122.69
55	BA	3001	VIF	C18-C10-C20	-4.96	118.40	125.89
55	DA	3001	VIF	C06-O01-C08	4.67	125.80	117.78
55	DA	3001	VIF	C18-C10-C20	-4.50	119.09	125.89
55	BA	3001	VIF	C06-O01-C08	4.43	125.39	117.78
55	DA	3001	VIF	C17-N02-C03	-4.05	115.49	122.03
55	DA	3001	VIF	O01-C08-C09	3.68	118.88	110.78
55	BA	3001	VIF	O01-C08-C09	3.47	118.43	110.78
55	BA	3001	VIF	O04-C22-C21	3.41	115.89	109.17
55	BA	3001	VIF	C18-C17-N02	-3.04	100.43	111.93
55	DA	3001	VIF	C01-C03-N02	3.01	120.64	114.97
55	DA	3001	VIF	O-C03-N02	-2.98	117.31	122.23
55	DA	3001	VIF	C26-C05-C02	-2.85	103.11	109.99
55	BA	3001	VIF	C26-C05-C02	-2.73	103.38	109.99
55	DA	3001	VIF	C19-C-C16	-2.73	102.97	110.59
55	BA	3001	VIF	C14-C22-C21	-2.62	106.66	111.94
55	DA	3001	VIF	C10-C20-C21	-2.58	110.95	119.42
55	DA	3001	VIF	C26-C05-C06	2.41	115.56	111.11
55	DA	3001	VIF	O01-C08-O02	-2.36	119.53	123.94
55	DA	3001	VIF	C24-C20-C10	2.32	121.72	118.08
55	DA	3001	VIF	O01-C06-C05	2.24	110.83	107.09
55	DA	3001	VIF	F-C07-C14	-2.24	104.82	108.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BA	3001	VIF	C11-C09-N01	2.19	106.28	103.03
55	BA	3001	VIF	C17-N02-C03	2.17	125.53	122.03
55	BA	3001	VIF	C24-C20-C10	2.03	121.28	118.08

There are no chirality outliers.

All (18) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	BA	3001	VIF	C19-C-C06-O01
55	BA	3001	VIF	C27-C04-C07-C14
55	BA	3001	VIF	C27-C04-C07-F
55	DA	3001	VIF	C18-C10-C20-C24
55	DA	3001	VIF	C27-C04-C07-F
55	DA	3001	VIF	F-C07-C14-C22
55	DA	3001	VIF	C02-C01-C03-N02
55	BA	3001	VIF	C16-C-C06-O01
55	DA	3001	VIF	C02-C01-C03-O
55	BA	3001	VIF	C07-C14-C22-O04
55	DA	3001	VIF	C18-C10-C20-C21
55	DA	3001	VIF	C05-C06-O01-C08
55	BA	3001	VIF	C19-C-C06-C05
55	DA	3001	VIF	C-C06-O01-C08
55	BA	3001	VIF	N02-C17-C18-C10
55	BA	3001	VIF	C01-C02-C05-C26
55	BA	3001	VIF	C16-C-C06-C05
55	DA	3001	VIF	C01-C02-C05-C26

There are no ring outliers.

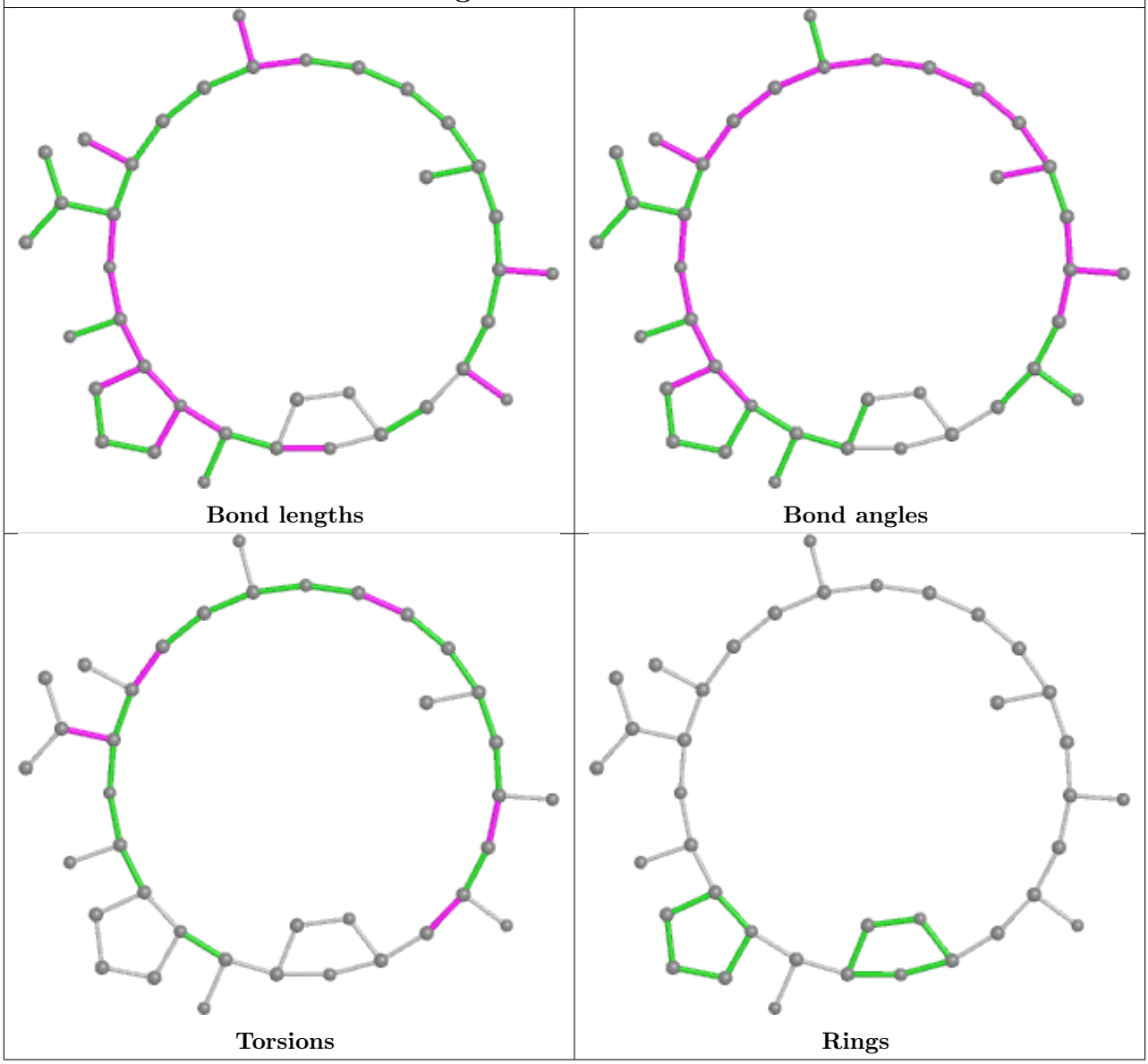
2 monomers are involved in 16 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	BA	3001	VIF	5	0
55	DA	3001	VIF	11	0

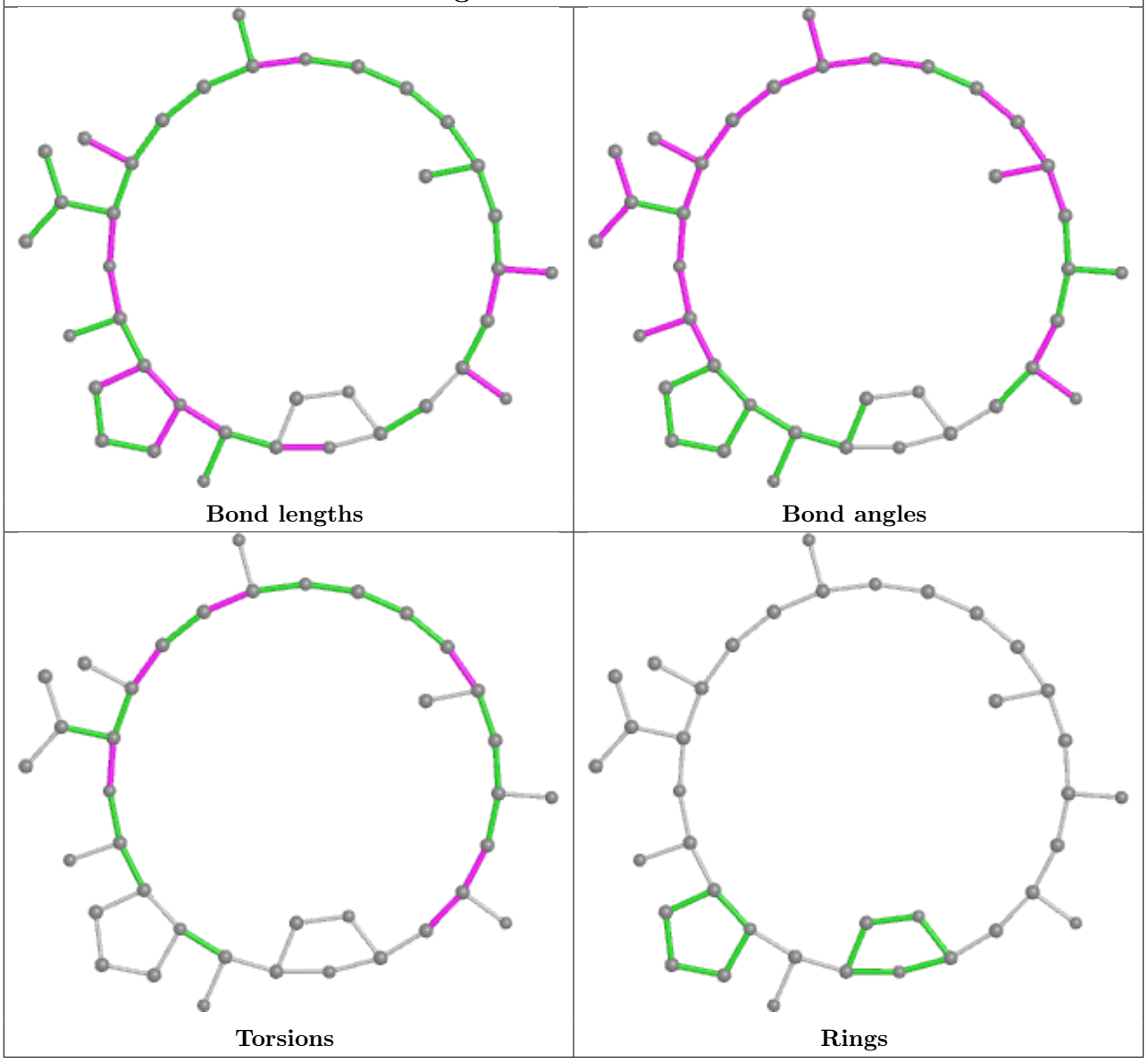
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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 VIF BA 3001



Ligand VIF DA 3001



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

6.1 Protein, DNA and RNA chains

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, 95^{th} 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	1538/1539 (99%)	-0.04	39 (2%) 57 55	13, 51, 135, 177	0
1	CA	1539/1539 (100%)	0.25	82 (5%) 26 22	27, 71, 143, 176	0
2	AB	218/218 (100%)	1.03	42 (19%) 1 0	40, 71, 99, 129	0
2	CB	218/218 (100%)	1.42	64 (29%) 0 0	57, 81, 107, 126	0
3	AC	206/206 (100%)	0.22	9 (4%) 34 30	36, 57, 81, 94	0
3	CC	206/206 (100%)	1.34	47 (22%) 0 0	53, 75, 93, 113	0
4	AD	205/205 (100%)	0.36	12 (5%) 22 18	33, 55, 79, 108	0
4	CD	205/205 (100%)	0.17	8 (3%) 39 35	21, 40, 74, 90	0
5	AE	150/150 (100%)	0.24	6 (4%) 38 33	28, 50, 82, 111	0
5	CE	150/150 (100%)	0.49	9 (6%) 21 18	33, 57, 84, 105	0
6	AF	100/100 (100%)	0.02	1 (1%) 82 82	33, 56, 75, 84	0
6	CF	100/100 (100%)	0.53	8 (8%) 12 9	47, 72, 95, 105	0
7	AG	151/151 (100%)	0.84	27 (17%) 1 1	49, 74, 98, 107	0
7	CG	151/151 (100%)	2.55	88 (58%) 0 0	77, 94, 106, 113	0
8	AH	129/129 (100%)	0.20	2 (1%) 72 71	29, 48, 71, 80	0
8	CH	129/129 (100%)	0.60	11 (8%) 10 8	47, 63, 82, 88	0
9	AI	127/127 (100%)	1.00	22 (17%) 1 1	45, 70, 95, 115	0
9	CI	127/127 (100%)	1.74	46 (36%) 0 0	68, 88, 106, 130	0
10	AJ	98/98 (100%)	0.88	15 (15%) 2 1	44, 64, 93, 121	0
10	CJ	98/98 (100%)	2.65	57 (58%) 0 0	68, 90, 109, 123	0
11	AK	117/117 (100%)	0.68	15 (12%) 3 2	27, 61, 87, 107	0
11	CK	117/117 (100%)	0.44	6 (5%) 28 24	37, 65, 83, 90	0
12	AL	123/123 (100%)	0.28	5 (4%) 37 32	24, 37, 71, 101	0
12	CL	123/123 (100%)	0.53	9 (7%) 15 11	38, 51, 79, 102	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/114 (100%)	0.51	10 (8%) 10 7	46, 67, 90, 104	0
13	CM	114/114 (100%)	3.11	79 (69%) 0 0	84, 100, 114, 118	0
14	AN	96/100 (96%)	0.79	17 (17%) 1 1	41, 58, 92, 107	0
14	CN	96/100 (96%)	2.30	50 (52%) 0 0	64, 88, 107, 118	0
15	AO	88/88 (100%)	0.16	5 (5%) 23 19	31, 50, 66, 98	0
15	CO	88/88 (100%)	0.39	5 (5%) 23 19	39, 62, 84, 105	0
16	AP	82/82 (100%)	0.78	11 (13%) 3 2	33, 45, 80, 103	0
16	CP	82/82 (100%)	1.34	20 (24%) 0 0	44, 62, 89, 105	0
17	AQ	80/80 (100%)	0.54	6 (7%) 14 11	29, 54, 83, 123	0
17	CQ	80/80 (100%)	1.43	25 (31%) 0 0	41, 70, 96, 108	0
18	AR	55/55 (100%)	0.03	4 (7%) 15 11	37, 51, 76, 113	0
18	CR	55/55 (100%)	0.46	3 (5%) 25 21	39, 54, 82, 112	0
19	AS	79/79 (100%)	1.07	17 (21%) 0 0	46, 67, 92, 97	0
19	CS	79/79 (100%)	4.26	62 (78%) 0 0	82, 100, 113, 125	0
20	AT	85/85 (100%)	0.69	7 (8%) 11 9	33, 48, 72, 115	0
20	CT	85/85 (100%)	1.99	34 (40%) 0 0	53, 69, 91, 97	0
21	AU	51/51 (100%)	1.27	13 (25%) 0 0	45, 71, 92, 105	0
21	CU	51/51 (100%)	0.70	8 (15%) 2 1	42, 69, 92, 107	0
22	BA	2897/2903 (99%)	0.23	123 (4%) 36 32	2, 18, 128, 195	0
22	DA	2897/2903 (99%)	0.43	162 (5%) 24 20	44, 82, 142, 183	0
23	BB	119/119 (100%)	-0.30	0 100 100	5, 27, 53, 94	0
23	DB	118/119 (99%)	0.22	4 (3%) 45 40	68, 110, 132, 142	0
24	BC	271/271 (100%)	-0.04	1 (0%) 92 93	6, 24, 44, 62	0
24	DC	271/271 (100%)	0.93	41 (15%) 2 1	40, 61, 75, 83	0
25	BD	209/209 (100%)	-0.15	0 100 100	2, 14, 42, 69	0
25	DD	209/209 (100%)	1.04	39 (18%) 1 0	47, 65, 84, 98	0
26	BE	201/201 (100%)	-0.15	2 (0%) 82 82	4, 27, 55, 94	0
26	DE	201/201 (100%)	1.89	80 (39%) 0 0	38, 78, 97, 108	0
27	BF	177/177 (100%)	0.31	11 (6%) 20 16	23, 45, 85, 101	0
27	DF	177/177 (100%)	3.49	138 (77%) 0 0	80, 99, 114, 125	0
28	BG	176/176 (100%)	0.16	5 (2%) 53 49	21, 40, 66, 93	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	176/176 (100%)	2.40	99 (56%) 0 0	68, 87, 103, 118	0
29	BH	149/149 (100%)	3.55	95 (63%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.82	62 (41%) 0 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	3.64	95 (67%) 0 0	82, 105, 120, 135	0
30	DI	141/141 (100%)	5.32	132 (93%) 0 0	95, 111, 121, 124	0
31	BJ	142/142 (100%)	-0.19	0 100 100	2, 11, 33, 52	0
31	DJ	142/142 (100%)	1.06	30 (21%) 1 0	50, 65, 81, 97	0
32	BK	122/122 (100%)	-0.27	0 100 100	6, 18, 37, 68	0
32	DK	122/122 (100%)	1.02	24 (19%) 1 0	46, 61, 80, 94	0
33	BL	143/143 (100%)	-0.07	0 100 100	3, 24, 50, 81	0
33	DL	143/143 (100%)	2.10	65 (45%) 0 0	45, 74, 91, 111	0
34	BM	136/136 (100%)	-0.23	0 100 100	3, 14, 33, 93	0
34	DM	136/136 (100%)	1.19	33 (24%) 0 0	44, 66, 82, 109	0
35	BN	120/120 (100%)	-0.23	0 100 100	6, 13, 25, 68	0
35	DN	120/120 (100%)	1.42	29 (24%) 0 0	53, 71, 88, 111	0
36	BO	116/116 (100%)	-0.03	1 (0%) 84 84	19, 29, 51, 57	0
36	DO	116/116 (100%)	3.08	78 (67%) 0 0	70, 88, 102, 113	0
37	BP	114/114 (100%)	-0.10	0 100 100	11, 21, 49, 73	0
37	DP	114/114 (100%)	1.06	21 (18%) 1 0	54, 67, 84, 91	0
38	BQ	117/117 (100%)	-0.18	0 100 100	3, 8, 19, 51	0
38	DQ	117/117 (100%)	0.91	21 (17%) 1 1	51, 65, 79, 82	0
39	BR	103/103 (100%)	-0.14	1 (0%) 82 82	3, 17, 36, 65	0
39	DR	103/103 (100%)	1.67	35 (33%) 0 0	52, 73, 87, 96	0
40	BS	110/110 (100%)	-0.12	1 (0%) 84 84	3, 8, 28, 88	0
40	DS	110/110 (100%)	2.03	50 (45%) 0 0	56, 70, 88, 96	0
41	BT	93/93 (100%)	0.32	2 (2%) 62 59	13, 30, 83, 101	0
41	DT	93/93 (100%)	2.96	64 (68%) 0 0	62, 81, 103, 109	0
42	BU	102/102 (100%)	-0.09	2 (1%) 65 63	13, 31, 60, 95	0
42	DU	102/102 (100%)	3.54	64 (62%) 0 0	66, 84, 105, 111	0
43	BV	94/94 (100%)	-0.13	1 (1%) 80 80	10, 24, 47, 58	0
43	DV	94/94 (100%)	1.12	22 (23%) 0 0	65, 79, 94, 97	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BW	76/76 (100%)	-0.08	1 (1%) 77 77	9, 16, 38, 57	0
44	DW	75/76 (98%)	2.17	35 (46%) 0 0	51, 77, 88, 108	0
45	BX	77/77 (100%)	-0.20	1 (1%) 77 77	10, 26, 52, 79	0
45	DX	77/77 (100%)	0.99	14 (18%) 1 1	47, 67, 84, 89	0
46	BY	63/63 (100%)	0.40	5 (7%) 12 10	20, 44, 71, 96	0
46	DY	63/63 (100%)	2.07	30 (47%) 0 0	68, 88, 96, 103	0
47	BZ	58/58 (100%)	-0.14	0 100 100	6, 11, 36, 41	0
47	DZ	58/58 (100%)	0.97	12 (20%) 1 0	52, 70, 83, 88	0
48	B0	56/56 (100%)	-0.19	0 100 100	3, 14, 40, 75	0
48	D0	56/56 (100%)	1.38	17 (30%) 0 0	51, 71, 91, 105	0
49	B1	50/50 (100%)	-0.08	1 (2%) 65 63	20, 32, 58, 92	0
49	D1	50/50 (100%)	1.67	13 (26%) 0 0	64, 80, 92, 104	0
50	B2	46/46 (100%)	0.01	1 (2%) 62 59	7, 13, 20, 95	0
50	D2	46/46 (100%)	1.83	17 (36%) 0 0	51, 66, 79, 99	0
51	B3	64/64 (100%)	-0.09	0 100 100	9, 15, 25, 33	0
51	D3	64/64 (100%)	1.48	16 (25%) 0 0	54, 68, 79, 83	0
52	B4	38/38 (100%)	0.06	0 100 100	15, 22, 37, 55	0
52	D4	38/38 (100%)	2.21	21 (55%) 0 0	59, 72, 84, 97	0
53	B5	191/228 (83%)	6.51	186 (97%) 0 0	78, 108, 120, 133	0
All	All	20734/20794 (99%)	0.73	3009 (14%) 2 1	2, 62, 117, 195	0

All (3009) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	DI	2	ALA	21.5
30	DI	3	LYS	18.8
22	BA	2184	A	18.5
22	BA	2104	C	17.8
30	BI	53	LEU	17.4
22	BA	2100	G	17.3
53	B5	111	PHE	17.2
10	AJ	102	LEU	17.1
22	BA	2103	C	16.9
22	BA	2185	U	16.4
53	B5	55	SER	16.2

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Mol	Chain	Res	Type	RSRZ
29	BH	96	THR	16.0
30	DI	67	PHE	15.9
53	B5	110	ASP	15.2
1	AA	1535	C	15.1
30	BI	3	LYS	14.0
30	DI	68	THR	13.9
53	B5	218	THR	13.9
29	BH	110	VAL	13.8
29	BH	97	ARG	13.8
22	BA	2102	G	13.5
29	BH	115	VAL	13.3
22	BA	2101	A	13.2
53	B5	157	ILE	13.1
53	B5	203	GLU	12.9
1	AA	1536	C	12.9
1	AA	1534	A	12.8
53	B5	156	GLU	12.8
22	BA	2158	A	12.8
30	BI	2	ALA	12.6
22	BA	2135	A	12.6
53	B5	109	MET	12.4
22	BA	2189	U	12.4
53	B5	97	GLY	12.3
30	DI	69	PHE	12.1
19	CS	74	PHE	12.1
42	DU	26	LYS	12.0
30	DI	6	GLN	12.0
27	DF	128	TYR	11.7
53	B5	48	LEU	11.5
7	CG	62	PHE	11.5
30	DI	63	ALA	11.5
29	BH	146	VAL	11.4
53	B5	207	GLY	11.3
30	DI	7	ALA	11.3
2	AB	155	GLY	11.3
22	BA	2140	G	11.3
22	BA	2159	G	11.3
13	CM	84	GLY	11.2
29	BH	113	SER	11.2
22	BA	2178	C	11.1
1	CA	1536	C	11.0
53	B5	52	PRO	11.0

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Mol	Chain	Res	Type	RSRZ
53	B5	60	ARG	10.8
36	DO	24	THR	10.7
53	B5	208	THR	10.7
22	BA	2136	G	10.6
22	BA	2144	G	10.6
30	BI	13	VAL	10.6
29	BH	130	VAL	10.6
53	B5	217	THR	10.6
30	DI	61	VAL	10.6
42	DU	77	THR	10.6
53	B5	204	GLY	10.6
42	DU	78	GLY	10.5
53	B5	20	VAL	10.5
22	BA	2145	C	10.4
33	DL	92	LEU	10.4
17	AQ	83	VAL	10.4
30	BI	4	LYS	10.4
53	B5	54	ARG	10.3
22	BA	2099	U	10.3
30	DI	34	ASN	10.2
30	DI	5	VAL	10.2
30	DI	4	LYS	10.1
7	CG	39	ALA	10.1
53	B5	122	GLY	10.1
19	CS	66	MET	10.0
53	B5	224	ARG	9.9
10	CJ	74	VAL	9.9
53	B5	143	ALA	9.9
22	BA	2117	A	9.8
22	BA	2138	G	9.8
29	BH	68	ARG	9.8
19	CS	37	ARG	9.8
22	BA	2139	U	9.8
22	BA	2165	C	9.7
2	AB	157	LEU	9.7
53	B5	132	LEU	9.7
22	BA	2163	A	9.6
1	CA	1539	C	9.6
22	BA	2142	A	9.6
22	BA	2183	A	9.6
53	B5	141	PRO	9.6
53	B5	173	HIS	9.6

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Mol	Chain	Res	Type	RSRZ
9	CI	128	SER	9.6
22	DA	1175	A	9.5
53	B5	66	PRO	9.5
53	B5	223	VAL	9.5
29	BH	144	VAL	9.5
30	DI	66	SER	9.5
30	DI	60	THR	9.5
41	DT	15	HIS	9.5
30	DI	58	VAL	9.4
46	BY	63	ALA	9.4
1	CA	1535	C	9.4
22	BA	2177	C	9.4
53	B5	183	PRO	9.4
42	DU	25	VAL	9.3
30	DI	8	TYR	9.3
27	DF	156	ILE	9.3
42	DU	60	GLU	9.3
42	DU	79	LYS	9.3
30	BI	14	ALA	9.2
42	DU	58	ILE	9.2
29	BH	148	ALA	9.1
53	B5	59	VAL	9.1
28	DG	52	PHE	9.1
29	BH	91	PHE	9.0
29	BH	136	SER	9.0
19	CS	29	LYS	9.0
22	BA	2148	G	9.0
53	B5	202	PRO	9.0
19	CS	39	THR	8.9
9	AI	43	THR	8.9
30	DI	31	GLN	8.9
30	BI	39	CYS	8.9
53	B5	67	HIS	8.9
30	DI	59	ILE	8.9
29	BH	106	ALA	8.8
29	BH	123	ARG	8.8
19	CS	12	ASP	8.8
42	DU	36	VAL	8.7
27	DF	130	MET	8.7
53	B5	182	PRO	8.7
53	B5	96	GLY	8.7
22	BA	2182	U	8.7

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Mol	Chain	Res	Type	RSRZ
30	BI	22	PRO	8.7
53	B5	221	PRO	8.7
13	CM	85	CYS	8.7
42	DU	52	LEU	8.7
22	BA	2176	A	8.6
29	BH	98	ASP	8.6
53	B5	53	ARG	8.6
27	DF	176	PRO	8.6
22	BA	2150	C	8.6
30	BI	41	ALA	8.5
36	DO	117	PHE	8.5
2	CB	32	PHE	8.5
53	B5	45	HIS	8.4
30	DI	30	GLN	8.4
53	B5	107	GLY	8.4
29	DH	142	VAL	8.4
53	B5	62	THR	8.4
53	B5	200	HIS	8.4
53	B5	65	LEU	8.4
42	DU	12	ILE	8.4
30	DI	53	LEU	8.4
53	B5	50	ILE	8.4
22	BA	2152	G	8.4
30	DI	47	ASP	8.3
22	BA	2115	G	8.3
30	BI	11	LEU	8.3
42	DU	13	VAL	8.3
22	BA	2127	G	8.3
7	AG	88	PRO	8.3
36	DO	40	ILE	8.3
30	DI	70	VAL	8.3
53	B5	184	GLU	8.2
22	BA	2162	G	8.2
22	BA	2114	A	8.2
53	B5	106	ASP	8.2
27	DF	155	THR	8.1
22	BA	2106	U	8.1
53	B5	108	TRP	8.1
26	DE	119	ILE	8.1
53	B5	94	TYR	8.1
22	BA	2143	C	8.1
22	BA	2175	C	8.1

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Mol	Chain	Res	Type	RSRZ
29	BH	69	ALA	8.1
1	CA	1534	A	8.1
30	BI	12	GLN	8.1
42	DU	80	ALA	8.0
53	B5	146	VAL	8.0
9	CI	129	LYS	8.0
30	DI	35	ILE	8.0
22	BA	2147	A	8.0
30	DI	112	THR	8.0
29	BH	55	GLU	7.9
1	CA	1032	G	7.9
20	CT	3	ASN	7.9
53	B5	133	GLY	7.9
30	BI	23	PRO	7.9
30	DI	11	LEU	7.9
27	DF	120	LYS	7.9
2	CB	151	ILE	7.9
22	BA	2161	C	7.9
36	DO	19	GLN	7.9
53	B5	105	LEU	7.8
53	B5	216	THR	7.8
7	CG	66	LEU	7.8
53	B5	149	ASN	7.8
19	CS	30	PRO	7.8
27	DF	117	LEU	7.8
46	DY	10	SER	7.7
53	B5	49	GLY	7.7
5	AE	159	LYS	7.7
33	DL	144	GLU	7.7
30	BI	79	LEU	7.7
27	DF	118	SER	7.7
30	BI	87	LYS	7.7
53	B5	199	ALA	7.7
30	DI	48	SER	7.7
22	BA	2153	C	7.7
53	B5	76	LEU	7.7
41	DT	2	ILE	7.7
22	BA	2188	U	7.7
29	BH	120	GLY	7.7
49	D1	36	LEU	7.6
1	AA	1538	C	7.6
9	CI	43	THR	7.6

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Mol	Chain	Res	Type	RSRZ
29	BH	112	LYS	7.6
22	BA	2160	C	7.6
7	CG	18	PHE	7.6
53	B5	95	VAL	7.6
22	BA	2174	C	7.6
30	DI	32	GLY	7.6
30	BI	83	ALA	7.6
48	D0	27	SER	7.5
27	DF	113	ASP	7.5
20	AT	68	HIS	7.5
19	CS	42	PRO	7.5
19	CS	60	VAL	7.5
53	B5	89	GLU	7.5
33	DL	101	ILE	7.5
53	B5	159	ALA	7.5
53	B5	38	PHE	7.5
27	DF	67	ILE	7.5
30	BI	114	ALA	7.5
22	BA	2179	C	7.4
1	AA	1030	U	7.4
22	BA	2113	U	7.4
20	CT	4	ILE	7.4
19	CS	24	GLU	7.4
22	BA	138	U	7.4
22	BA	2172	U	7.4
19	CS	49	ILE	7.4
2	AB	156	GLY	7.3
27	DF	65	PRO	7.3
53	B5	68	GLY	7.3
28	DG	45	HIS	7.3
22	DA	1536	C	7.2
19	CS	71	LEU	7.2
46	DY	13	GLU	7.2
40	DS	84	ARG	7.2
14	CN	44	ALA	7.2
13	CM	98	ARG	7.2
36	DO	64	TYR	7.2
53	B5	206	LYS	7.2
27	DF	106	ILE	7.2
30	DI	64	ASP	7.2
30	BI	5	VAL	7.2
2	CB	164	ILE	7.2

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Mol	Chain	Res	Type	RSRZ
13	CM	64	VAL	7.2
53	B5	152	GLU	7.2
30	BI	120	ALA	7.1
19	CS	41	PHE	7.1
53	B5	194	ILE	7.1
22	BA	2112	G	7.1
53	B5	169	THR	7.1
10	CJ	16	ARG	7.1
53	B5	69	LEU	7.1
30	DI	133	ALA	7.1
44	DW	63	ALA	7.1
53	B5	147	GLY	7.1
53	B5	39	ASP	7.1
30	DI	13	VAL	7.1
30	BI	69	PHE	7.1
29	BH	54	LEU	7.1
41	DT	10	VAL	7.1
27	DF	175	PHE	7.1
30	DI	21	SER	7.1
44	DW	83	GLU	7.1
4	CD	25	VAL	7.0
53	B5	150	ILE	7.0
53	B5	213	VAL	7.0
53	B5	148	PHE	7.0
22	BA	2149	U	7.0
53	B5	77	ALA	7.0
53	B5	123	ALA	7.0
22	DA	613	A	7.0
10	CJ	77	VAL	7.0
30	DI	52	GLY	7.0
20	CT	38	ALA	7.0
53	B5	41	THR	7.0
50	D2	46	LYS	7.0
22	BA	2164	C	7.0
29	BH	58	LEU	7.0
53	B5	140	ASN	6.9
40	DS	92	ARG	6.9
22	BA	2154	A	6.9
42	DU	43	LYS	6.9
29	DH	12	LEU	6.9
35	DN	28	LEU	6.9
29	BH	72	ILE	6.9

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Mol	Chain	Res	Type	RSRZ
53	B5	214	TYR	6.9
30	BI	67	PHE	6.9
27	DF	114	PHE	6.9
53	B5	174	ALA	6.8
33	DL	3	LEU	6.8
22	BA	2123	G	6.8
53	B5	98	GLU	6.8
28	DG	105	LEU	6.8
9	AI	130	ARG	6.8
53	B5	73	VAL	6.8
30	DI	54	PRO	6.8
19	CS	43	ASN	6.8
24	DC	27	GLY	6.8
27	DF	115	ARG	6.8
30	BI	115	ALA	6.8
53	B5	179	ALA	6.8
36	DO	92	PHE	6.8
13	CM	63	PHE	6.8
53	B5	104	ILE	6.7
30	DI	43	ASN	6.7
1	CA	1538	C	6.7
14	CN	36	ALA	6.7
29	DH	15	LEU	6.7
42	DU	63	ALA	6.7
22	BA	2156	G	6.7
22	BA	2186	G	6.7
53	B5	165	ARG	6.7
41	DT	83	ALA	6.7
53	B5	84	ILE	6.7
2	AB	9	MET	6.6
30	DI	62	TYR	6.6
33	DL	106	GLU	6.6
1	CA	1537	U	6.6
30	BI	101	ILE	6.6
13	CM	45	ILE	6.6
49	D1	53	LYS	6.6
53	B5	222	SER	6.6
29	DH	18	GLN	6.6
53	B5	225	ILE	6.6
53	B5	42	VAL	6.6
1	AA	1537	U	6.6
19	CS	76	PRO	6.6

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Mol	Chain	Res	Type	RSRZ
42	DU	62	GLU	6.6
53	B5	70	GLY	6.6
22	BA	2107	G	6.6
36	DO	25	ARG	6.6
27	DF	121	SER	6.5
27	DF	154	ILE	6.5
10	CJ	76	ILE	6.5
53	B5	28	ARG	6.5
53	B5	57	GLN	6.5
39	DR	50	GLY	6.5
14	CN	48	LEU	6.5
30	BI	17	MET	6.5
30	DI	15	ALA	6.5
19	CS	75	ALA	6.5
22	BA	885	C	6.5
1	AA	1539	C	6.5
30	DI	106	LEU	6.5
7	AG	147	ALA	6.5
7	CG	85	TYR	6.5
14	CN	21	PHE	6.5
19	CS	11	ILE	6.5
29	BH	101	ASP	6.5
30	BI	20	PRO	6.5
52	D4	10	LEU	6.5
3	CC	144	LEU	6.4
26	DE	55	SER	6.4
34	DM	56	ALA	6.4
22	BA	2125	G	6.4
53	B5	170	GLY	6.4
22	BA	2116	G	6.4
53	B5	212	SER	6.4
19	CS	44	MET	6.4
28	DG	9	VAL	6.4
19	CS	15	LEU	6.4
42	DU	50	PRO	6.4
22	DA	1537	G	6.4
53	B5	64	SER	6.4
19	CS	67	VAL	6.4
53	B5	134	PRO	6.4
30	DI	20	PRO	6.4
22	BA	2166	U	6.3
34	DM	136	MET	6.3

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Mol	Chain	Res	Type	RSRZ
41	DT	60	THR	6.3
46	DY	16	THR	6.3
53	B5	209	PHE	6.3
53	B5	126	SER	6.3
29	BH	129	GLU	6.3
19	AS	3	ARG	6.3
22	BA	2121	G	6.3
22	BA	2105	U	6.3
53	B5	161	ARG	6.3
41	DT	34	VAL	6.3
8	CH	122	GLY	6.3
53	B5	85	LYS	6.3
19	CS	10	PHE	6.3
22	BA	2120	G	6.3
27	DF	122	PHE	6.3
29	BH	102	ALA	6.3
30	BI	54	PRO	6.3
1	CA	1030	U	6.3
10	CJ	87	LEU	6.2
51	D3	61	CYS	6.2
27	DF	79	ILE	6.2
9	CI	130	ARG	6.2
27	DF	35	THR	6.2
41	DT	1	MET	6.2
53	B5	79	ALA	6.2
29	DH	117	LEU	6.2
30	DI	89	GLY	6.2
41	DT	43	ILE	6.2
27	DF	54	ALA	6.2
8	CH	123	GLY	6.2
10	CJ	100	ILE	6.2
29	BH	118	PRO	6.2
53	B5	160	GLY	6.2
27	DF	13	VAL	6.2
53	B5	187	ALA	6.2
22	BA	2122	U	6.2
22	BA	2124	G	6.2
30	DI	46	THR	6.2
29	BH	119	ASN	6.2
30	DI	78	VAL	6.2
1	AA	78	A	6.2
30	BI	99	GLY	6.2

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Mol	Chain	Res	Type	RSRZ
21	AU	38	TYR	6.2
28	DG	2	SER	6.1
53	B5	61	GLY	6.1
28	DG	148	LEU	6.1
53	B5	92	ALA	6.1
29	DH	79	THR	6.1
27	DF	129	SER	6.1
53	B5	193	PHE	6.1
53	B5	211	ARG	6.1
30	BI	68	THR	6.1
53	B5	46	ALA	6.1
10	CJ	8	ILE	6.1
14	CN	51	LEU	6.1
36	DO	87	ILE	6.0
41	DT	6	ARG	6.0
30	DI	55	ILE	6.0
53	B5	93	ASP	6.0
29	BH	89	LYS	6.0
30	BI	71	THR	6.0
53	B5	198	GLU	6.0
27	DF	177	PHE	6.0
19	CS	51	VAL	6.0
19	CS	64	ASP	6.0
22	DA	345	A	6.0
36	DO	58	ILE	6.0
28	DG	33	LEU	6.0
53	B5	121	MET	6.0
20	AT	36	TYR	6.0
9	AI	41	ARG	5.9
1	AA	1017	U	5.9
9	CI	58	VAL	5.9
22	BA	2108	A	5.9
36	DO	88	LYS	5.9
53	B5	145	THR	5.9
53	B5	27	ALA	5.9
17	CQ	4	LYS	5.9
53	B5	88	GLU	5.9
3	CC	37	PHE	5.9
27	DF	149	VAL	5.9
30	DI	139	VAL	5.9
16	AP	80	LYS	5.9
9	CI	38	TYR	5.9

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Mol	Chain	Res	Type	RSRZ
30	BI	52	GLY	5.9
22	DA	1174	U	5.9
43	DV	94	ALA	5.9
53	B5	78	ILE	5.9
22	DA	1535	A	5.8
19	CS	18	LYS	5.8
22	BA	2131	U	5.8
30	DI	45	LYS	5.8
31	DJ	97	PRO	5.8
42	DU	48	PRO	5.8
17	CQ	50	ASN	5.8
52	D4	8	LYS	5.8
53	B5	87	ALA	5.8
22	DA	1073	A	5.8
2	CB	9	MET	5.8
27	DF	133	ARG	5.8
35	DN	76	VAL	5.8
2	CB	139	ARG	5.8
39	DR	37	GLU	5.8
30	DI	25	GLY	5.8
22	BA	139	U	5.8
22	BA	2181	U	5.8
34	DM	124	LEU	5.8
49	D1	52	ALA	5.7
53	B5	100	ILE	5.7
36	DO	90	VAL	5.7
22	BA	2098	U	5.7
22	BA	2155	U	5.7
13	CM	80	LEU	5.7
53	B5	142	LYS	5.7
30	DI	22	PRO	5.7
53	B5	166	ASN	5.7
13	CM	95	LEU	5.7
42	DU	20	GLY	5.7
29	DH	6	LEU	5.7
13	CM	99	GLY	5.7
20	CT	24	ARG	5.7
1	AA	1018	G	5.7
16	CP	47	GLU	5.7
13	CM	12	HIS	5.7
30	BI	8	TYR	5.7
29	BH	132	PHE	5.6

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Mol	Chain	Res	Type	RSRZ
19	CS	13	LEU	5.6
53	B5	82	GLU	5.6
13	CM	46	SER	5.6
29	DH	123	ARG	5.6
53	B5	63	VAL	5.6
22	BA	2134	A	5.6
29	BH	67	ALA	5.6
2	AB	131	LYS	5.6
41	DT	55	VAL	5.6
30	BI	80	LEU	5.6
22	BA	2130	U	5.6
35	DN	63	ARG	5.6
50	B2	46	LYS	5.6
13	CM	115	PRO	5.6
16	AP	81	ALA	5.6
29	BH	149	GLU	5.6
14	CN	95	GLY	5.6
13	CM	113	ARG	5.6
13	CM	10	PRO	5.6
19	CS	52	HIS	5.6
53	B5	192	ALA	5.6
33	DL	89	VAL	5.5
29	BH	105	ALA	5.5
27	DF	152	LEU	5.5
42	DU	28	VAL	5.5
28	DG	6	LYS	5.5
30	BI	100	LYS	5.5
12	CL	124	ALA	5.5
30	DI	14	ALA	5.5
30	DI	120	ALA	5.5
51	D3	14	PHE	5.5
29	BH	83	LYS	5.5
53	B5	103	LYS	5.5
33	DL	80	SER	5.5
41	DT	3	ARG	5.5
30	BI	55	ILE	5.5
33	DL	121	THR	5.5
30	BI	24	VAL	5.5
1	CA	1540	U	5.5
29	BH	86	ASP	5.5
13	CM	40	ALA	5.5
53	B5	22	THR	5.5

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Mol	Chain	Res	Type	RSRZ
2	CB	191	SER	5.5
32	DK	111	LYS	5.4
30	DI	29	GLY	5.4
53	B5	74	ARG	5.4
10	CJ	86	ALA	5.4
53	B5	215	VAL	5.4
27	DF	21	ASN	5.4
18	AR	20	GLU	5.4
46	DY	59	GLU	5.4
1	AA	1020	G	5.4
9	CI	90	TYR	5.4
20	CT	42	GLY	5.4
22	BA	2118	U	5.4
22	BA	1175	A	5.4
22	BA	2173	A	5.4
30	DI	17	MET	5.4
42	DU	35	ILE	5.4
7	CG	134	ALA	5.4
28	DG	32	GLU	5.4
1	CA	1021	A	5.4
53	B5	81	GLY	5.4
22	DA	138	U	5.4
30	DI	28	LEU	5.4
36	DO	26	LEU	5.4
40	DS	19	LEU	5.4
27	DF	116	GLY	5.4
30	DI	16	GLY	5.4
26	DE	175	ILE	5.4
27	DF	111	ILE	5.4
19	CS	63	THR	5.4
7	CG	118	LEU	5.4
30	DI	77	ALA	5.4
42	DU	70	VAL	5.4
22	BA	2157	G	5.4
29	DH	82	SER	5.4
30	DI	36	MET	5.4
10	CJ	41	PRO	5.4
13	CM	83	LEU	5.4
28	DG	4	VAL	5.3
29	BH	121	VAL	5.3
24	DC	26	LYS	5.3
22	BA	2141	G	5.3

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Mol	Chain	Res	Type	RSRZ
22	DA	1067	A	5.3
27	DF	23	ASN	5.3
29	BH	122	LEU	5.3
30	DI	76	ALA	5.3
42	DU	61	LYS	5.3
53	B5	125	GLY	5.3
27	DF	34	ILE	5.3
17	CQ	8	LEU	5.3
53	B5	26	ALA	5.3
30	DI	96	ASP	5.3
2	CB	161	LEU	5.3
28	DG	50	LEU	5.3
28	DG	57	GLY	5.3
53	B5	220	GLY	5.3
19	CS	40	ILE	5.3
42	DU	39	ILE	5.3
27	DF	142	ASP	5.3
33	DL	108	ALA	5.3
29	DH	144	VAL	5.3
22	BA	2146	C	5.3
30	DI	126	THR	5.3
36	DO	61	GLN	5.3
41	DT	36	LYS	5.3
47	DZ	2	ALA	5.2
7	CG	151	PHE	5.2
53	B5	47	LYS	5.2
28	DG	131	ILE	5.2
26	DE	172	ALA	5.2
39	DR	27	ILE	5.2
29	BH	84	ALA	5.2
13	CM	97	VAL	5.2
36	DO	51	ALA	5.2
30	DI	38	PHE	5.2
29	BH	142	VAL	5.2
30	DI	75	PRO	5.2
27	DF	170	LEU	5.2
10	AJ	89	ARG	5.2
40	DS	110	ARG	5.2
28	DG	80	THR	5.1
30	DI	86	ILE	5.1
22	DA	546	U	5.1
41	DT	37	ASP	5.1

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Mol	Chain	Res	Type	RSRZ
53	B5	51	ASP	5.1
27	DF	164	GLU	5.1
29	BH	109	GLU	5.1
30	BI	40	LYS	5.1
30	DI	49	ILE	5.1
21	CU	38	TYR	5.1
7	CG	27	VAL	5.1
42	DU	27	ASN	5.1
46	DY	33	ALA	5.1
2	AB	221	VAL	5.1
28	DG	10	VAL	5.1
53	B5	154	ILE	5.1
7	CG	72	THR	5.1
22	DA	1172	C	5.1
1	AA	1492	A	5.1
45	DX	49	LEU	5.1
7	CG	16	PRO	5.1
53	B5	131	ILE	5.1
26	DE	143	LEU	5.1
2	CB	136	MET	5.1
21	AU	32	VAL	5.1
27	DF	25	VAL	5.1
27	DF	26	MET	5.1
2	CB	186	ILE	5.1
19	CS	38	SER	5.1
22	DA	2174	C	5.1
13	CM	77	ILE	5.0
45	DX	11	ARG	5.0
22	BA	2171	A	5.0
26	DE	148	ILE	5.0
53	B5	201	LYS	5.0
53	B5	210	LEU	5.0
30	DI	99	GLY	5.0
30	DI	12	GLN	5.0
7	CG	17	LYS	5.0
33	DL	73	ILE	5.0
10	CJ	102	LEU	5.0
27	DF	112	ARG	5.0
36	DO	85	LYS	5.0
40	DS	20	VAL	5.0
22	BA	2109	U	5.0
7	AG	79	ARG	5.0

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Mol	Chain	Res	Type	RSRZ
53	B5	43	GLU	5.0
52	D4	1	MET	5.0
28	DG	62	TRP	5.0
2	CB	213	TYR	5.0
53	B5	180	SER	5.0
52	D4	9	LYS	5.0
35	DN	73	ASN	5.0
53	B5	130	ARG	5.0
30	BI	142	ASP	5.0
30	DI	39	CYS	5.0
2	CB	40	ILE	5.0
44	DW	32	LEU	5.0
53	B5	58	ASN	5.0
30	DI	98	VAL	5.0
39	DR	20	VAL	5.0
53	B5	196	ALA	5.0
10	CJ	71	LEU	5.0
27	DF	66	LEU	5.0
1	CA	82	G	5.0
22	BA	2168	G	5.0
22	DA	2126	A	5.0
53	B5	124	VAL	5.0
13	AM	114	LYS	5.0
22	DA	1100	C	5.0
42	DU	51	ALA	5.0
10	CJ	72	ARG	5.0
50	D2	33	ARG	5.0
25	DD	25	THR	4.9
27	DF	10	ASP	4.9
30	BI	47	ASP	4.9
53	B5	136	GLY	4.9
42	DU	31	SER	4.9
7	CG	38	THR	4.9
27	DF	153	ASP	4.9
29	DH	13	GLY	4.9
40	DS	46	LEU	4.9
53	B5	191	ARG	4.9
2	CB	148	LEU	4.9
53	B5	19	LYS	4.9
53	B5	83	LYS	4.9
22	BA	2190	G	4.9
44	DW	38	VAL	4.9

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Mol	Chain	Res	Type	RSRZ
26	DE	104	ALA	4.9
22	BA	1926	U	4.9
26	DE	120	VAL	4.9
33	DL	71	ALA	4.9
1	CA	209	U	4.9
16	CP	80	LYS	4.9
39	DR	38	VAL	4.9
26	DE	124	PHE	4.9
53	B5	153	ILE	4.9
30	DI	65	ARG	4.9
11	AK	19	GLY	4.9
29	BH	85	GLY	4.9
42	DU	71	ALA	4.9
28	DG	166	ASP	4.8
42	DU	29	LEU	4.8
53	B5	75	VAL	4.8
27	DF	100	PHE	4.8
42	DU	72	ILE	4.8
8	AH	2	SER	4.8
7	CG	49	THR	4.8
29	BH	61	VAL	4.8
16	CP	54	LEU	4.8
36	DO	60	GLU	4.8
22	DA	139	U	4.8
42	DU	59	VAL	4.8
4	AD	28	ILE	4.8
40	DS	85	ILE	4.8
51	D3	57	LEU	4.8
53	B5	219	MET	4.8
30	DI	80	LEU	4.8
30	DI	83	ALA	4.8
39	DR	29	THR	4.8
27	DF	85	ILE	4.8
22	DA	1093	G	4.8
30	DI	130	GLU	4.8
7	CG	13	LEU	4.8
30	DI	79	LEU	4.8
41	DT	87	LEU	4.8
27	DF	8	TYR	4.8
27	DF	76	GLY	4.8
29	BH	116	ARG	4.8
30	BI	88	SER	4.8

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Mol	Chain	Res	Type	RSRZ
13	CM	61	ALA	4.8
22	BA	2169	A	4.8
53	B5	24	ASP	4.8
27	DF	32	GLU	4.8
27	DF	38	MET	4.8
49	D1	47	VAL	4.8
50	D2	42	LEU	4.8
13	AM	115	PRO	4.8
40	DS	5	ALA	4.7
18	CR	20	GLU	4.7
30	BI	118	THR	4.7
10	AJ	74	VAL	4.7
19	CS	28	LYS	4.7
29	DH	130	VAL	4.7
26	DE	118	LEU	4.7
26	DE	128	ALA	4.7
27	DF	93	GLY	4.7
53	B5	158	LYS	4.7
28	DG	151	TYR	4.7
41	BT	69	ARG	4.7
53	B5	164	PHE	4.7
19	CS	31	LEU	4.7
20	CT	79	LEU	4.7
22	BA	2126	A	4.7
22	DA	2150	C	4.7
24	DC	49	ILE	4.7
14	CN	34	VAL	4.7
2	AB	57	LEU	4.7
26	DE	147	LEU	4.7
20	CT	67	ILE	4.7
28	DG	82	GLY	4.7
6	CF	39	LEU	4.7
53	B5	151	GLY	4.7
22	BA	2132	U	4.7
26	DE	121	VAL	4.7
30	DI	24	VAL	4.7
53	B5	102	GLN	4.7
36	DO	65	THR	4.7
53	B5	144	GLY	4.7
28	DG	168	VAL	4.6
30	DI	57	VAL	4.6
44	DW	52	GLY	4.6

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Mol	Chain	Res	Type	RSRZ
30	DI	27	ALA	4.6
30	BI	96	ASP	4.6
26	DE	23	PHE	4.6
29	DH	47	PHE	4.6
30	BI	26	PRO	4.6
7	CG	53	ARG	4.6
7	CG	139	GLU	4.6
28	DG	103	ILE	4.6
10	CJ	39	PRO	4.6
22	DA	2172	U	4.6
30	DI	42	PHE	4.6
9	CI	64	TYR	4.6
27	DF	83	TYR	4.6
53	B5	101	ILE	4.6
32	DK	68	GLY	4.6
1	AA	1019	A	4.6
22	BA	2110	G	4.6
41	DT	16	VAL	4.6
48	D0	57	LYS	4.6
7	CG	88	PRO	4.6
14	CN	11	VAL	4.6
19	CS	68	GLY	4.6
27	DF	40	VAL	4.6
31	DJ	55	ILE	4.6
53	B5	72	GLN	4.6
53	B5	86	GLU	4.6
7	CG	69	VAL	4.6
44	DW	68	LYS	4.6
30	DI	41	ALA	4.6
38	DQ	29	SER	4.6
53	B5	195	ARG	4.6
9	CI	20	PHE	4.6
11	AK	14	LYS	4.6
27	DF	103	LEU	4.5
30	DI	82	LYS	4.5
36	DO	78	VAL	4.5
2	CB	132	LYS	4.5
33	DL	122	VAL	4.5
36	DO	103	VAL	4.5
14	CN	43	ASN	4.5
40	DS	54	ALA	4.5
29	BH	95	GLY	4.5

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Mol	Chain	Res	Type	RSRZ
26	DE	186	VAL	4.5
46	DY	28	LEU	4.5
51	D3	58	VAL	4.5
27	DF	17	MET	4.5
14	CN	27	LEU	4.5
33	DL	143	GLU	4.5
1	CA	211	G	4.5
7	CG	148	ASN	4.5
53	B5	162	ILE	4.5
7	CG	15	ASP	4.5
7	CG	131	LYS	4.5
19	CS	72	GLY	4.5
19	CS	58	VAL	4.5
22	BA	1094	U	4.5
2	CB	206	ALA	4.5
7	CG	111	ARG	4.5
13	CM	33	ILE	4.5
25	DD	27	ILE	4.5
35	DN	111	ALA	4.5
30	BI	95	LYS	4.5
44	DW	26	PHE	4.5
49	D1	45	GLN	4.5
7	CG	30	LEU	4.5
10	CJ	96	VAL	4.5
22	DA	280	U	4.5
28	DG	102	VAL	4.5
29	BH	19	VAL	4.5
1	CA	1020	G	4.5
22	DA	2168	G	4.5
19	CS	16	LEU	4.5
52	D4	33	HIS	4.5
7	AG	75	VAL	4.5
27	DF	12	VAL	4.5
41	DT	53	VAL	4.5
2	CB	34	ALA	4.5
7	CG	152	ALA	4.5
28	DG	20	ASN	4.5
35	DN	24	MET	4.5
20	CT	86	LEU	4.5
7	CG	20	SER	4.5
13	CM	86	TYR	4.5
16	CP	17	TYR	4.5

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Mol	Chain	Res	Type	RSRZ
36	DO	52	SER	4.5
42	DU	33	LYS	4.5
17	CQ	5	ILE	4.4
20	CT	39	ILE	4.4
30	BI	82	LYS	4.4
36	DO	76	LYS	4.4
24	DC	93	LEU	4.4
36	DO	106	LEU	4.4
30	DI	9	VAL	4.4
4	AD	36	GLN	4.4
21	CU	37	PHE	4.4
1	CA	1031	C	4.4
4	AD	151	LYS	4.4
13	CM	47	GLU	4.4
24	DC	237	GLY	4.4
27	DF	119	ALA	4.4
33	DL	107	PHE	4.4
1	CA	94	G	4.4
14	CN	46	LEU	4.4
22	BA	1847	A	4.4
10	CJ	9	ARG	4.4
24	DC	249	GLY	4.4
41	DT	76	ARG	4.4
44	DW	42	GLY	4.4
29	DH	21	VAL	4.4
36	DO	16	ARG	4.4
53	B5	155	ARG	4.4
53	B5	171	ALA	4.4
26	DE	168	ASP	4.4
29	BH	137	GLU	4.4
3	CC	192	THR	4.4
26	DE	13	THR	4.4
28	DG	58	TYR	4.4
30	BI	21	SER	4.4
19	AS	9	PRO	4.4
13	CM	69	LEU	4.4
36	DO	54	VAL	4.4
13	CM	108	THR	4.4
35	DN	119	SER	4.4
53	B5	40	GLU	4.4
30	DI	85	GLY	4.4
20	CT	85	LYS	4.4

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Mol	Chain	Res	Type	RSRZ
19	CS	3	ARG	4.4
41	DT	73	ARG	4.4
41	DT	49	LYS	4.4
35	DN	25	ALA	4.3
53	B5	25	GLU	4.3
10	CJ	89	ARG	4.3
33	DL	132	ARG	4.3
29	BH	147	VAL	4.3
7	AG	151	PHE	4.3
36	DO	57	ALA	4.3
42	DU	21	LYS	4.3
19	CS	59	PRO	4.3
30	DI	88	SER	4.3
30	BI	140	VAL	4.3
28	DG	104	ASN	4.3
24	DC	242	LYS	4.3
29	DH	81	ALA	4.3
2	CB	212	LEU	4.3
10	CJ	10	LEU	4.3
3	CC	173	VAL	4.3
19	CS	25	SER	4.3
19	CS	48	THR	4.3
19	AS	41	PHE	4.3
1	CA	1314	C	4.3
12	CL	25	GLU	4.3
41	DT	58	VAL	4.3
42	DU	49	VAL	4.3
13	CM	39	ILE	4.3
29	DH	132	PHE	4.3
10	CJ	45	ARG	4.3
13	CM	71	ARG	4.3
36	DO	2	ASP	4.3
42	DU	87	PHE	4.3
7	CG	103	TRP	4.3
25	DD	31	ALA	4.3
13	CM	48	LEU	4.3
22	DA	1171	G	4.3
30	BI	78	VAL	4.3
2	CB	135	LEU	4.3
3	CC	167	TRP	4.2
33	DL	114	GLY	4.2
30	DI	72	LYS	4.2

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Mol	Chain	Res	Type	RSRZ
46	DY	29	ARG	4.2
1	AA	87	C	4.2
53	B5	90	ALA	4.2
22	BA	2193	G	4.2
25	DD	6	GLY	4.2
30	BI	119	GLY	4.2
2	CB	104	TRP	4.2
7	CG	57	SER	4.2
1	AA	86	G	4.2
1	CA	79	G	4.2
29	DH	19	VAL	4.2
31	DJ	119	PHE	4.2
22	BA	2111	U	4.2
20	CT	71	LYS	4.2
36	DO	63	LYS	4.2
51	D3	37	ALA	4.2
27	DF	68	THR	4.2
29	BH	11	ASN	4.2
19	CS	19	VAL	4.2
27	DF	22	TYR	4.2
42	DU	37	GLU	4.2
22	DA	2903	U	4.2
36	DO	107	ALA	4.2
10	CJ	90	LEU	4.2
30	BI	135	SER	4.2
40	DS	36	LEU	4.2
41	DT	50	LEU	4.2
7	CG	68	ASN	4.2
28	DG	43	VAL	4.2
35	DN	120	GLU	4.2
44	DW	62	LYS	4.2
24	DC	172	VAL	4.2
41	DT	24	MET	4.2
14	CN	20	TYR	4.2
40	DS	97	LEU	4.2
42	DU	41	LEU	4.2
48	D0	39	LEU	4.2
16	AP	22	ALA	4.2
26	DE	190	ALA	4.2
30	DI	44	ALA	4.2
53	B5	197	LEU	4.2
53	B5	205	ALA	4.2

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Mol	Chain	Res	Type	RSRZ
22	BA	2133	G	4.2
53	B5	99	GLU	4.2
7	AG	5	ARG	4.2
40	DS	3	THR	4.2
29	DH	90	LEU	4.1
14	CN	32	SER	4.1
53	B5	120	VAL	4.1
4	CD	28	ILE	4.1
16	CP	57	ILE	4.1
12	AL	25	GLU	4.1
36	DO	116	GLN	4.1
42	DU	42	VAL	4.1
42	DU	40	ASN	4.1
30	DI	23	PRO	4.1
22	BA	1065	U	4.1
35	DN	83	LEU	4.1
30	DI	87	LYS	4.1
48	D0	55	ILE	4.1
24	DC	112	ALA	4.1
41	DT	8	LEU	4.1
10	CJ	99	GLN	4.1
30	BI	30	GLN	4.1
39	DR	96	VAL	4.1
16	CP	4	ILE	4.1
36	DO	112	GLU	4.1
28	DG	133	LEU	4.1
22	DA	1095	A	4.1
28	DG	132	VAL	4.1
13	CM	79	ARG	4.1
52	D4	16	ILE	4.1
25	DD	105	LYS	4.1
25	DD	96	ILE	4.1
28	DG	44	LYS	4.1
29	BH	80	ILE	4.1
30	BI	98	VAL	4.1
2	CB	129	LEU	4.1
26	DE	164	LEU	4.1
27	DF	91	LEU	4.1
53	B5	137	LEU	4.1
26	DE	144	GLU	4.1
27	DF	110	ARG	4.1
29	BH	17	ASP	4.1

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Mol	Chain	Res	Type	RSRZ
13	CM	38	GLY	4.1
9	CI	39	PHE	4.1
16	CP	39	PHE	4.1
22	BA	2192	U	4.1
28	DG	83	PHE	4.1
30	DI	81	LYS	4.1
36	DO	82	ALA	4.1
51	D3	52	LYS	4.1
27	DF	157	THR	4.0
35	DN	29	VAL	4.0
30	BI	92	LYS	4.0
33	DL	70	LYS	4.0
28	DG	106	SER	4.0
13	CM	68	ASP	4.0
33	DL	28	GLY	4.0
40	DS	68	ASP	4.0
9	AI	90	TYR	4.0
30	DI	118	THR	4.0
40	DS	95	ARG	4.0
47	DZ	29	LEU	4.0
22	BA	884	U	4.0
22	DA	2402	U	4.0
44	DW	78	LYS	4.0
53	B5	80	LYS	4.0
13	CM	74	SER	4.0
14	CN	58	SER	4.0
30	BI	48	SER	4.0
32	DK	89	ASN	4.0
7	CG	73	VAL	4.0
13	CM	29	ARG	4.0
31	DJ	54	ILE	4.0
22	DA	2112	G	4.0
36	DO	77	ALA	4.0
4	CD	24	GLY	4.0
22	DA	2797	U	4.0
29	BH	92	GLY	4.0
53	B5	56	ASP	4.0
29	DH	4	ILE	4.0
29	DH	143	ILE	4.0
4	CD	36	GLN	4.0
19	CS	61	PHE	4.0
49	D1	24	THR	4.0

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Mol	Chain	Res	Type	RSRZ
3	CC	180	ALA	4.0
22	BA	2128	G	4.0
1	CA	1313	U	4.0
11	AK	82	LEU	4.0
2	CB	71	GLY	4.0
27	DF	107	ALA	4.0
28	DG	40	ALA	4.0
30	BI	76	ALA	4.0
48	D0	23	THR	4.0
43	DV	84	PRO	4.0
30	DI	129	ILE	4.0
3	CC	42	TYR	4.0
4	AD	21	LEU	4.0
28	DG	72	LEU	4.0
2	CB	83	ALA	4.0
36	DO	46	GLU	4.0
27	DF	136	ILE	4.0
14	AN	24	ARG	4.0
30	BI	38	PHE	4.0
28	DG	174	ALA	4.0
7	CG	35	LYS	3.9
40	DS	16	LYS	3.9
44	DW	85	GLU	4.0
53	B5	44	VAL	3.9
29	BH	93	SER	3.9
29	BH	87	GLU	3.9
27	DF	108	VAL	3.9
30	DI	121	ASP	3.9
53	B5	167	ASP	3.9
22	DA	2158	A	3.9
15	AO	89	ARG	3.9
30	DI	127	ARG	3.9
26	DE	24	ASN	3.9
2	AB	90	PHE	3.9
27	DF	78	LYS	3.9
3	CC	193	TYR	3.9
22	DA	2124	G	3.9
30	BI	15	ALA	3.9
1	AA	88	U	3.9
4	CD	177	LYS	3.9
25	DD	97	SER	3.9
31	DJ	74	TYR	3.9

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Mol	Chain	Res	Type	RSRZ
42	DU	64	ALA	3.9
10	CJ	82	LYS	3.9
13	CM	43	VAL	3.9
35	DN	47	VAL	3.9
13	CM	96	PRO	3.9
22	DA	1870	C	3.9
7	CG	26	PHE	3.9
29	BH	82	SER	3.9
10	CJ	46	LYS	3.9
25	DD	26	VAL	3.9
7	CG	23	LEU	3.9
22	BA	2119	A	3.9
27	DF	95	ARG	3.9
27	DF	33	LYS	3.9
22	BA	2137	U	3.9
7	CG	91	VAL	3.9
14	AN	30	ILE	3.9
42	DU	89	ASP	3.9
47	DZ	48	ILE	3.9
7	CG	71	PRO	3.9
16	CP	60	TRP	3.9
30	BI	16	GLY	3.9
36	DO	86	GLY	3.9
40	DS	37	THR	3.9
40	BS	110	ARG	3.9
25	DD	185	ASN	3.9
29	BH	73	ASN	3.9
9	CI	108	ALA	3.9
27	DF	165	GLU	3.9
10	CJ	67	ILE	3.9
34	DM	80	VAL	3.9
44	DW	60	PHE	3.9
36	DO	111	ARG	3.9
53	B5	168	LYS	3.9
30	DI	114	ALA	3.9
35	DN	62	ASN	3.9
26	DE	72	SER	3.9
29	DH	78	VAL	3.9
13	AM	92	ARG	3.9
32	DK	112	PHE	3.9
33	DL	123	ARG	3.9
53	B5	37	LYS	3.9

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Mol	Chain	Res	Type	RSRZ
19	AS	49	ILE	3.8
14	AN	21	PHE	3.8
42	DU	73	PHE	3.8
43	DV	74	ALA	3.8
13	CM	109	ARG	3.8
2	CB	67	ILE	3.8
2	CB	107	VAL	3.8
14	CN	47	LYS	3.8
49	B1	53	LYS	3.8
9	AI	17	ALA	3.8
13	CM	2	ALA	3.8
29	DH	74	ALA	3.8
40	DS	40	ASN	3.8
13	CM	52	GLN	3.8
1	CA	1033	G	3.8
7	CG	14	PRO	3.8
9	AI	129	LYS	3.8
36	DO	109	ALA	3.8
10	CJ	15	HIS	3.8
22	DA	2106	U	3.8
7	CG	59	LEU	3.8
30	DI	18	ALA	3.8
3	CC	102	ASN	3.8
41	DT	71	GLY	3.8
46	DY	9	LYS	3.8
51	D3	49	MET	3.8
53	B5	172	ILE	3.8
51	D3	48	ALA	3.8
19	AS	56	GLN	3.8
30	BI	97	LYS	3.8
42	DU	47	LYS	3.8
7	CG	67	GLU	3.8
17	CQ	21	ILE	3.8
48	D0	38	HIS	3.8
6	CF	91	ARG	3.8
16	CP	81	ALA	3.8
28	DG	125	CYS	3.8
36	DO	56	LYS	3.8
36	DO	38	GLN	3.8
17	CQ	65	ARG	3.8
28	DG	164	TYR	3.8
37	DP	9	GLU	3.8

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Mol	Chain	Res	Type	RSRZ
19	CS	23	VAL	3.8
2	AB	88	ASP	3.8
29	BH	94	ILE	3.8
30	BI	94	ASN	3.8
39	DR	32	THR	3.8
2	AB	134	ALA	3.8
14	CN	53	ARG	3.8
31	DJ	95	ARG	3.8
22	DA	1094	U	3.7
30	DI	122	ILE	3.8
36	DO	93	ASP	3.7
36	DO	108	ASP	3.7
46	DY	21	LEU	3.7
22	BA	2191	A	3.7
1	CA	999	C	3.7
29	DH	92	GLY	3.7
33	DL	142	ILE	3.7
20	CT	84	ASN	3.7
30	DI	97	LYS	3.7
41	DT	88	LYS	3.7
22	DA	1068	G	3.7
27	DF	77	PHE	3.7
3	CC	79	LYS	3.7
36	DO	41	ALA	3.7
22	BA	715	A	3.7
40	DS	47	VAL	3.7
1	CA	1312	G	3.7
8	CH	59	LEU	3.7
22	DA	1066	U	3.7
26	DE	157	LEU	3.7
53	B5	23	ILE	3.7
27	DF	174	ASP	3.7
41	DT	5	GLU	3.7
35	DN	21	PHE	3.7
7	CG	12	ILE	3.7
16	AP	4	ILE	3.7
22	DA	143	C	3.7
22	DA	2173	A	3.7
27	DF	9	LYS	3.7
34	DM	99	GLY	3.7
41	DT	91	GLN	3.7
3	CC	23	PHE	3.7

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Mol	Chain	Res	Type	RSRZ
36	DO	37	ALA	3.7
36	DO	115	LEU	3.7
1	CA	1017	U	3.7
22	DA	549	G	3.7
2	CB	108	ARG	3.7
37	DP	84	ILE	3.7
36	DO	89	ASP	3.7
38	DQ	23	GLY	3.7
53	B5	91	GLY	3.7
26	DE	88	ARG	3.7
30	BI	103	ARG	3.7
7	CG	65	ALA	3.7
14	AN	52	PRO	3.7
36	DO	99	TYR	3.7
7	CG	41	SER	3.7
16	CP	52	LEU	3.7
26	DE	173	THR	3.7
41	BT	2	ILE	3.7
26	DE	165	HIS	3.7
2	CB	92	VAL	3.7
27	DF	60	ILE	3.7
46	DY	14	LEU	3.7
13	CM	78	LYS	3.6
22	BA	1925	C	3.6
42	DU	76	ALA	3.6
28	DG	87	LEU	3.6
10	CJ	19	ASP	3.6
45	DX	50	ARG	3.6
36	DO	80	GLU	3.6
7	CG	61	ALA	3.6
30	DI	84	ALA	3.6
43	DV	82	TYR	3.6
53	B5	129	GLY	3.6
19	AS	39	THR	3.6
41	DT	62	VAL	3.6
28	DG	53	GLY	3.6
7	CG	137	LYS	3.6
20	CT	81	ALA	3.6
3	CC	109	PRO	3.6
26	DE	155	GLU	3.6
40	DS	94	ASP	3.6
26	DE	17	THR	3.6

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Mol	Chain	Res	Type	RSRZ
53	B5	135	ARG	3.6
36	DO	59	ALA	3.6
13	CM	4	ILE	3.6
17	CQ	46	VAL	3.6
25	DD	186	LEU	3.6
39	DR	59	ILE	3.6
40	DS	4	ILE	3.6
14	CN	52	PRO	3.6
29	BH	76	GLU	3.6
13	CM	76	SER	3.6
21	CU	47	ARG	3.6
27	DF	99	PHE	3.6
28	DG	84	THR	3.6
13	CM	32	ALA	3.6
14	CN	22	ALA	3.6
33	DL	83	ALA	3.6
20	CT	9	LYS	3.6
37	DP	110	ILE	3.6
50	D2	1	MET	3.6
30	BI	66	SER	3.6
7	AG	84	THR	3.6
28	DG	25	THR	3.6
41	DT	45	ALA	3.6
40	DS	107	VAL	3.6
53	B5	190	ILE	3.6
11	AK	126	LYS	3.6
27	DF	87	CYS	3.6
53	B5	181	PHE	3.6
50	D2	37	LYS	3.6
32	DK	2	ILE	3.6
7	CG	5	ARG	3.6
7	CG	143	ARG	3.6
44	DW	70	GLU	3.5
1	AA	844	G	3.5
27	DF	86	GLY	3.5
28	DG	107	LEU	3.5
39	DR	54	VAL	3.5
10	CJ	75	ASP	3.5
13	CM	58	ASP	3.5
14	CN	68	GLY	3.5
3	CC	196	ILE	3.5
11	CK	42	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
14	CN	24	ARG	3.5
7	CG	87	VAL	3.5
28	DG	92	VAL	3.5
37	DP	50	ILE	3.5
28	DG	12	PRO	3.5
30	DI	56	PRO	3.5
13	CM	75	MET	3.5
13	CM	51	GLY	3.5
50	D2	32	ALA	3.5
42	DU	5	ILE	3.5
27	DF	90	THR	3.5
22	BA	2151	U	3.5
7	CG	109	ARG	3.5
22	DA	228	C	3.5
24	DC	241	GLY	3.5
28	DG	78	GLY	3.5
42	DU	86	ARG	3.5
44	DW	25	ARG	3.5
41	DT	61	LEU	3.5
29	BH	44	ILE	3.5
44	DW	80	ILE	3.5
14	CN	56	SER	3.5
36	DO	104	GLN	3.5
13	CM	8	ASN	3.5
26	DE	102	ARG	3.5
30	DI	95	LYS	3.5
2	CB	154	MET	3.5
25	DD	74	GLU	3.5
2	AB	74	ARG	3.5
6	CF	79	ARG	3.5
19	CS	27	ASP	3.5
27	DF	138	PHE	3.5
30	BI	116	ASP	3.5
43	DV	56	PHE	3.5
14	AN	43	ASN	3.5
9	AI	89	GLU	3.5
31	DJ	56	VAL	3.5
30	BI	33	VAL	3.5
45	DX	61	LYS	3.5
1	AA	1016	A	3.5
11	AK	43	GLY	3.5
22	BA	546	U	3.5

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Mol	Chain	Res	Type	RSRZ
19	CS	80	TYR	3.5
25	DD	1	MET	3.5
30	DI	37	GLU	3.5
53	B5	185	LYS	3.5
30	DI	101	ILE	3.5
30	BI	42	PHE	3.5
21	AU	35	ARG	3.4
27	DF	55	ALA	3.4
29	BH	39	ALA	3.4
30	BI	122	ILE	3.4
39	DR	53	PHE	3.4
12	CL	44	LYS	3.4
20	CT	43	ASP	3.4
24	DC	28	LYS	3.4
22	BA	2167	U	3.4
22	BA	2180	U	3.4
2	CB	55	ALA	3.4
12	AL	124	ALA	3.4
28	DG	96	ALA	3.4
30	BI	133	ALA	3.4
36	DO	113	ALA	3.4
46	DY	32	ALA	3.4
28	DG	79	VAL	3.4
37	DP	43	PHE	3.4
52	D4	15	LYS	3.4
33	DL	81	ASP	3.4
29	BH	14	SER	3.4
13	CM	22	ILE	3.4
14	AN	36	ALA	3.4
24	DC	245	VAL	3.4
30	BI	43	ASN	3.4
40	DS	73	LYS	3.4
12	CL	14	ARG	3.4
42	DU	32	GLY	3.4
1	AA	1031	C	3.4
1	CA	207	C	3.4
48	D0	34	SER	3.4
1	CA	1271	A	3.4
24	DC	18	LYS	3.4
30	BI	84	ALA	3.4
38	DQ	99	ALA	3.4
51	D3	24	HIS	3.4

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Mol	Chain	Res	Type	RSRZ
7	CG	44	TYR	3.4
27	DF	37	ASN	3.4
29	DH	124	THR	3.4
53	B5	176	VAL	3.4
7	CG	79	ARG	3.4
9	AI	20	PHE	3.4
13	CM	70	ARG	3.4
42	DU	38	GLY	3.4
1	CA	85	U	3.4
13	CM	114	LYS	3.4
20	CT	34	LYS	3.4
22	DA	1065	U	3.4
27	DF	64	LYS	3.4
28	DG	126	PRO	3.4
2	AB	34	ALA	3.4
3	CC	92	ALA	3.4
30	BI	7	ALA	3.4
30	DI	109	ILE	3.4
38	DQ	65	ILE	3.4
1	AA	412	A	3.4
10	CJ	26	VAL	3.4
2	CB	133	GLU	3.4
43	DV	57	TYR	3.4
49	D1	21	TYR	3.4
1	AA	1032	G	3.4
37	DP	111	LYS	3.4
1	CA	206	C	3.4
7	CG	52	GLN	3.4
27	DF	171	ALA	3.4
33	DL	100	ILE	3.4
2	AB	30	PHE	3.4
5	AE	65	GLU	3.4
10	CJ	27	GLU	3.4
24	DC	94	VAL	3.4
26	DE	33	VAL	3.4
36	DO	39	VAL	3.4
19	AS	74	PHE	3.4
22	BA	2170	A	3.4
27	DF	20	PHE	3.4
30	DI	91	GLY	3.4
27	DF	47	LYS	3.4
42	DU	44	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
3	CC	156	ARG	3.4
7	CG	86	GLN	3.4
31	DJ	13	ARG	3.4
42	DU	95	PHE	3.4
32	DK	82	ASN	3.4
44	DW	50	ASN	3.4
10	CJ	80	THR	3.4
14	AN	50	THR	3.4
22	DA	2169	A	3.4
1	CA	1028	C	3.4
10	CJ	94	ALA	3.4
13	CM	62	LYS	3.4
29	BH	111	ALA	3.4
34	DM	79	ALA	3.4
41	DT	68	LYS	3.4
32	DK	101	GLY	3.4
44	DW	23	VAL	3.4
7	AG	143	ARG	3.3
33	DL	78	ARG	3.3
41	DT	12	ARG	3.3
22	DA	2796	U	3.3
26	DE	134	LEU	3.3
3	CC	71	ALA	3.3
7	AG	69	VAL	3.3
31	DJ	62	VAL	3.3
39	DR	47	VAL	3.3
42	DU	75	ALA	3.3
9	CI	103	PHE	3.3
22	DA	2300	C	3.3
22	DA	2313	C	3.3
16	CP	35	ARG	3.3
28	BG	166	ASP	3.3
22	BA	613	A	3.3
26	DE	129	PRO	3.3
9	CI	127	PHE	3.3
7	CG	83	SER	3.3
10	CJ	101	SER	3.3
46	DY	47	ARG	3.3
41	DT	33	LYS	3.3
1	CA	1257	A	3.3
2	CB	225	ARG	3.3
40	DS	9	HIS	3.3

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Mol	Chain	Res	Type	RSRZ
29	DH	86	ASP	3.3
45	DX	78	TYR	3.3
9	AI	19	VAL	3.3
17	CQ	78	VAL	3.3
29	BH	139	PHE	3.3
27	DF	96	MET	3.3
34	DM	33	LEU	3.3
47	DZ	56	LYS	3.3
27	DF	132	VAL	3.3
17	CQ	53	CYS	3.3
27	DF	51	ASP	3.3
40	DS	31	GLN	3.3
2	AB	139	ARG	3.3
21	CU	45	ARG	3.3
24	DC	12	GLY	3.3
33	DL	20	GLY	3.3
33	DL	126	ARG	3.3
13	CM	37	ALA	3.3
19	CS	69	HIS	3.3
25	DD	55	LYS	3.3
3	CC	72	ARG	3.3
30	DI	105	GLN	3.3
46	DY	40	SER	3.3
1	CA	83	C	3.3
27	DF	7	TYR	3.3
26	DE	199	MET	3.3
30	DI	51	LYS	3.3
22	DA	101	A	3.3
22	DA	896	A	3.3
30	DI	140	VAL	3.3
13	CM	103	LYS	3.3
13	CM	55	THR	3.3
21	CU	35	ARG	3.3
2	CB	88	ASP	3.3
30	BI	6	GLN	3.3
13	CM	30	SER	3.2
30	DI	102	SER	3.2
26	DE	183	PHE	3.2
28	BG	24	ILE	3.2
2	CB	217	VAL	3.2
29	BH	74	ALA	3.2
3	CC	67	THR	3.2

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Mol	Chain	Res	Type	RSRZ
16	CP	3	THR	3.2
28	DG	51	THR	3.2
35	DN	38	LEU	3.2
26	DE	127	GLU	3.2
19	CS	4	SER	3.2
30	BI	81	LYS	3.2
22	DA	2109	U	3.2
31	DJ	142	ILE	3.2
2	CB	216	ALA	3.2
7	CG	64	VAL	3.2
44	DW	84	ALA	3.2
13	CM	89	LEU	3.2
14	CN	10	GLU	3.2
14	CN	33	ASP	3.2
19	CS	17	LYS	3.2
27	DF	39	GLY	3.2
40	DS	98	LYS	3.2
53	B5	186	LEU	3.2
27	DF	24	SER	3.2
29	DH	100	ALA	3.2
1	CA	90	C	3.2
22	BA	1067	A	3.2
30	DI	74	PRO	3.2
40	DS	82	MET	3.2
10	CJ	52	LEU	3.2
12	CL	92	GLY	3.2
27	DF	57	LEU	3.2
27	DF	147	ASP	3.2
41	DT	75	GLY	3.2
19	CS	14	HIS	3.2
45	DX	3	ARG	3.2
9	CI	44	ALA	3.2
9	CI	63	LEU	3.2
20	CT	66	LEU	3.2
33	DL	19	LEU	3.2
31	DJ	96	ARG	3.2
44	DW	43	THR	3.2
33	DL	72	ALA	3.2
34	DM	103	TYR	3.2
27	DF	41	GLY	3.2
33	DL	102	GLY	3.2
10	CJ	49	PHE	3.2

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Mol	Chain	Res	Type	RSRZ
30	DI	71	THR	3.2
1	CA	4	U	3.2
13	CM	73	ILE	3.2
19	CS	22	ALA	3.2
20	CT	87	ALA	3.2
7	CG	4	ARG	3.2
33	DL	124	GLY	3.2
36	DO	9	ARG	3.2
1	AA	990	C	3.2
1	CA	1132	C	3.2
26	DE	153	LEU	3.2
36	DO	62	LEU	3.2
45	DX	46	PHE	3.2
7	CG	133	THR	3.2
39	DR	101	ILE	3.2
19	CS	65	GLU	3.2
24	DC	92	ALA	3.2
28	BG	111	HIS	3.2
29	BH	59	ALA	3.2
36	DO	50	ALA	3.2
41	DT	4	GLU	3.2
53	B5	21	TYR	3.2
14	CN	57	PRO	3.2
10	CJ	85	ASP	3.2
27	DF	173	PHE	3.2
9	CI	21	ILE	3.2
31	DJ	98	GLU	3.2
1	CA	81	A	3.2
39	DR	28	ALA	3.2
1	CA	204	G	3.2
27	BF	116	GLY	3.2
33	DL	88	GLY	3.2
42	BU	52	LEU	3.2
21	AU	31	GLU	3.2
21	CU	44	GLU	3.2
26	DE	14	VAL	3.1
33	DL	18	ARG	3.1
27	DF	43	ALA	3.1
40	DS	105	VAL	3.1
28	DG	88	GLN	3.1
13	CM	23	TYR	3.1
17	AQ	20	SER	3.1

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Mol	Chain	Res	Type	RSRZ
22	DA	2157	G	3.1
16	AP	47	GLU	3.1
50	D2	18	PHE	3.1
27	DF	102	ARG	3.1
30	BI	49	ILE	3.1
2	AB	187	VAL	3.1
22	DA	2149	U	3.1
29	DH	140	ALA	3.1
27	DF	36	LEU	3.1
22	DA	2120	G	3.1
28	DG	176	LYS	3.1
35	DN	46	ARG	3.1
34	DM	126	ILE	3.1
49	D1	48	ILE	3.1
7	CG	43	VAL	3.1
10	CJ	51	VAL	3.1
22	BA	2402	U	3.1
3	CC	70	THR	3.1
19	CS	47	LEU	3.1
30	BI	62	TYR	3.1
33	DL	79	LEU	3.1
9	CI	124	ARG	3.1
1	AA	81	A	3.1
14	CN	19	LYS	3.1
9	AI	51	PRO	3.1
1	AA	79	G	3.1
1	CA	1018	G	3.1
28	DG	169	VAL	3.1
36	DO	66	GLY	3.1
37	DP	42	ALA	3.1
14	CN	9	ARG	3.1
15	CO	89	ARG	3.1
50	D2	43	THR	3.1
7	CG	130	ASN	3.1
40	DS	108	SER	3.1
44	DW	74	PRO	3.1
1	AA	1003	G	3.1
1	CA	208	U	3.1
33	DL	85	VAL	3.1
13	CM	44	LYS	3.1
22	DA	289	G	3.1
41	DT	35	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
40	DS	49	LYS	3.1
22	DA	1092	C	3.1
45	DX	20	HIS	3.1
28	DG	127	THR	3.1
31	DJ	21	THR	3.1
17	CQ	17	MET	3.1
30	BI	59	ILE	3.1
35	DN	97	ILE	3.1
6	CF	17	GLN	3.1
14	CN	61	ARG	3.1
20	CT	13	GLN	3.1
22	DA	2181	U	3.1
24	DC	101	ARG	3.1
32	DK	108	ARG	3.1
5	AE	31	PHE	3.1
9	CI	4	ASN	3.1
24	DC	239	ASN	3.1
26	DE	191	ASP	3.1
27	BF	72	LYS	3.1
14	CN	49	GLN	3.1
14	CN	63	ARG	3.1
24	DC	3	VAL	3.1
22	DA	653	U	3.1
22	DA	846	U	3.1
41	DT	56	GLU	3.1
9	CI	98	LEU	3.1
46	DY	41	HIS	3.1
2	CB	22	TYR	3.1
28	DG	27	LYS	3.1
29	BH	124	THR	3.1
34	DM	132	THR	3.1
43	DV	34	LYS	3.1
51	D3	47	LYS	3.1
27	DF	45	ALA	3.1
39	DR	103	ALA	3.1
33	DL	6	LEU	3.1
33	DL	82	LEU	3.1
41	DT	40	LYS	3.1
22	DA	268	C	3.1
22	DA	1076	C	3.1
22	DA	2125	G	3.1
32	DK	35	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
25	DD	38	LYS	3.0
35	DN	102	PHE	3.0
22	DA	344	A	3.0
50	D2	34	ARG	3.0
3	CC	14	ILE	3.0
46	DY	36	GLN	3.0
3	CC	195	VAL	3.0
26	DE	10	SER	3.0
50	D2	30	VAL	3.0
11	AK	53	ARG	3.0
21	AU	21	ARG	3.0
24	DC	238	ARG	3.0
37	DP	74	PHE	3.0
39	DR	35	PHE	3.0
2	CB	167	ASP	3.0
22	DA	2163	A	3.0
27	DF	28	VAL	3.0
28	DG	41	VAL	3.0
30	BI	61	VAL	3.0
13	CM	56	LEU	3.0
5	CE	10	GLU	3.0
30	DI	117	MET	3.0
22	DA	2309	A	3.0
30	DI	33	VAL	3.0
39	DR	63	VAL	3.0
13	CM	15	ALA	3.0
26	DE	11	ALA	3.0
26	DE	150	THR	3.0
42	DU	99	ASN	3.0
10	AJ	87	LEU	3.0
22	DA	2110	G	3.0
30	DI	119	GLY	3.0
13	AM	4	ILE	3.0
18	AR	73	ARG	3.0
24	DC	103	TYR	3.0
36	DO	13	ARG	3.0
14	CN	29	ALA	3.0
22	DA	1103	A	3.0
22	DA	2602	A	3.0
29	DH	65	ALA	3.0
41	DT	20	ALA	3.0
7	CG	60	GLU	3.0

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Mol	Chain	Res	Type	RSRZ
16	CP	45	GLU	3.0
22	BA	2187	U	3.0
29	DH	125	THR	3.0
38	DQ	112	LYS	3.0
41	DT	32	LEU	3.0
43	DV	58	SER	3.0
21	AU	7	ARG	3.0
22	DA	356	G	3.0
30	BI	86	ILE	3.0
40	DS	71	VAL	3.0
43	DV	81	PRO	3.0
13	CM	27	LYS	3.0
1	CA	1302	C	3.0
22	DA	1176	U	3.0
29	BH	20	ASN	3.0
24	DC	110	LEU	3.0
26	DE	131	THR	3.0
2	AB	35	ARG	3.0
3	CC	88	ARG	3.0
9	CI	30	ILE	3.0
14	AN	33	ASP	3.0
20	CT	72	ALA	3.0
14	CN	35	ASN	3.0
42	DU	22	ARG	3.0
10	CJ	11	LYS	3.0
26	DE	149	ILE	3.0
40	DS	35	ILE	3.0
43	DV	43	ASP	3.0
2	CB	209	ALA	3.0
7	CG	97	ASN	3.0
10	AJ	90	LEU	3.0
10	CJ	73	LEU	3.0
1	CA	210	C	3.0
17	CQ	7	THR	3.0
22	DA	1117	C	3.0
27	BF	80	ARG	3.0
12	CL	123	LYS	3.0
22	DA	654	A	3.0
10	CJ	81	GLU	3.0
34	DM	96	ILE	3.0
3	CC	153	VAL	3.0
9	AI	23	PRO	2.9

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Mol	Chain	Res	Type	RSRZ
48	D0	24	ALA	2.9
38	DQ	117	LEU	2.9
30	DI	128	SER	2.9
19	AS	40	ILE	2.9
44	DW	64	ASP	2.9
46	DY	24	GLU	2.9
2	AB	217	VAL	2.9
17	CQ	83	VAL	2.9
26	DE	4	VAL	2.9
26	DE	193	VAL	2.9
2	AB	18	HIS	2.9
24	DC	232	HIS	2.9
48	D0	42	HIS	2.9
29	BH	12	LEU	2.9
40	DS	83	LYS	2.9
46	DY	37	LEU	2.9
7	AG	48	GLU	2.9
21	AU	44	GLU	2.9
1	AA	82	G	2.9
44	DW	53	CYS	2.9
1	CA	1044	A	2.9
2	AB	210	VAL	2.9
4	AD	27	ALA	2.9
6	CF	28	ALA	2.9
8	CH	130	ALA	2.9
11	AK	42	LEU	2.9
24	DC	99	GLY	2.9
29	DH	75	LEU	2.9
29	BH	143	ILE	2.9
34	DM	63	ILE	2.9
20	CT	64	LYS	2.9
26	DE	141	MET	2.9
39	DR	51	VAL	2.9
1	CA	1270	G	2.9
51	D3	11	ALA	2.9
35	DN	26	GLY	2.9
11	AK	96	THR	2.9
27	DF	74	VAL	2.9
40	DS	106	VAL	2.9
25	DD	47	ALA	2.9
28	DG	71	LEU	2.9
27	DF	42	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
22	BA	1063	G	2.9
27	DF	109	PRO	2.9
21	AU	4	ILE	2.9
1	AA	1027	C	2.9
2	AB	27	MET	2.9
29	BH	138	VAL	2.9
38	DQ	39	VAL	2.9
39	DR	75	VAL	2.9
24	DC	106	ALA	2.9
27	DF	172	ALA	2.9
18	AR	74	HIS	2.9
22	BA	846	U	2.9
22	DA	2690	U	2.9
28	DG	111	HIS	2.9
34	DM	6	ARG	2.9
9	AI	28	ILE	2.9
53	B5	188	ASP	2.9
7	CG	37	SER	2.9
14	AN	26	GLU	2.9
31	DJ	73	VAL	2.9
19	AS	71	LEU	2.9
28	DG	28	GLY	2.9
29	BH	63	ALA	2.9
39	DR	39	LEU	2.9
40	DS	48	LYS	2.9
46	DY	30	MET	2.9
14	CN	101	TRP	2.9
14	CN	69	ARG	2.9
33	DL	8	PRO	2.9
3	AC	168	TYR	2.9
29	DH	119	ASN	2.9
26	DE	1	MET	2.9
26	DE	56	GLY	2.9
29	BH	117	LEU	2.9
37	DP	97	LEU	2.9
37	DP	108	ALA	2.9
42	DU	14	LEU	2.9
45	DX	22	LEU	2.9
19	CS	9	PRO	2.9
22	DA	2118	U	2.9
12	AL	123	LYS	2.9
9	CI	112	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
39	DR	43	ASN	2.9
41	DT	52	GLU	2.9
2	CB	163	VAL	2.9
14	CN	45	VAL	2.9
20	CT	25	ARG	2.9
23	DB	119	A	2.9
24	DC	235	GLY	2.9
25	DD	104	VAL	2.9
26	DE	32	VAL	2.9
29	BH	47	PHE	2.9
30	BI	9	VAL	2.9
30	BI	58	VAL	2.9
39	DR	33	VAL	2.9
41	DT	67	VAL	2.9
22	DA	1715	G	2.9
29	BH	64	ALA	2.9
36	DO	21	LEU	2.9
7	CG	54	SER	2.8
7	CG	2	PRO	2.8
52	D4	32	LYS	2.8
2	CB	74	ARG	2.8
9	AI	39	PHE	2.8
15	CO	15	PHE	2.8
26	DE	187	VAL	2.8
42	DU	53	ASN	2.8
44	DW	79	PHE	2.8
7	AG	150	ALA	2.8
22	DA	2119	A	2.8
36	DO	110	ALA	2.8
48	D0	28	LEU	2.8
1	CA	1025	U	2.8
22	DA	1112	G	2.8
25	DD	154	LYS	2.8
42	DU	30	SER	2.8
17	CQ	45	HIS	2.8
22	DA	267	C	2.8
41	DT	80	TRP	2.8
2	AB	222	ARG	2.8
3	CC	126	ARG	2.8
19	CS	46	GLY	2.8
24	DC	240	PHE	2.8
30	BI	25	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
25	DD	180	VAL	2.8
38	DQ	106	PHE	2.8
29	BH	75	LEU	2.8
31	DJ	140	LEU	2.8
9	CI	57	MET	2.8
22	DA	1468	U	2.8
28	DG	167	GLU	2.8
30	DI	50	GLU	2.8
1	CA	1043	G	2.8
7	CG	78	ARG	2.8
17	CQ	11	ARG	2.8
22	DA	1170	C	2.8
36	DO	53	THR	2.8
47	DZ	8	THR	2.8
47	DZ	34	HIS	2.8
33	DL	120	VAL	2.8
16	CP	82	ALA	2.8
1	AA	842	U	2.8
22	DA	884	U	2.8
37	DP	65	SER	2.8
22	DA	2143	C	2.8
22	DA	2165	C	2.8
31	DJ	106	LYS	2.8
25	DD	54	ALA	2.8
28	DG	38	ASN	2.8
30	DI	94	ASN	2.8
41	DT	59	ASN	2.8
10	CJ	66	GLU	2.8
28	DG	75	MET	2.8
50	D2	35	ARG	2.8
7	CG	110	LYS	2.8
9	AI	27	LYS	2.8
1	AA	1493	A	2.8
29	BH	128	HIS	2.8
33	DL	31	GLY	2.8
30	DI	142	ASP	2.8
33	DL	74	THR	2.8
33	DL	77	ILE	2.8
34	DM	29	GLY	2.8
44	DW	82	ILE	2.8
26	DE	158	PHE	2.8
4	AD	25	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
29	BH	5	LEU	2.8
13	CM	36	ALA	2.8
27	DF	92	ARG	2.8
30	DI	104	ALA	2.8
30	DI	110	ALA	2.8
13	AM	7	ILE	2.8
13	CM	94	GLY	2.8
17	CQ	20	SER	2.8
10	CJ	91	ASP	2.8
22	DA	357	C	2.8
22	DA	2795	C	2.8
25	DD	84	LEU	2.8
26	DE	28	VAL	2.8
51	D3	64	TYR	2.8
2	CB	23	TRP	2.8
52	D4	2	LYS	2.8
2	AB	151	ILE	2.8
6	CF	8	PHE	2.8
9	CI	73	SER	2.8
24	DC	64	ILE	2.8
30	DI	131	GLY	2.8
43	DV	32	GLY	2.8
30	BI	102	SER	2.8
21	AU	13	ASP	2.8
31	DJ	47	HIS	2.8
9	CI	100	LYS	2.8
10	CJ	22	THR	2.8
14	AN	51	LEU	2.8
41	DT	54	GLU	2.8
22	DA	281	C	2.8
26	DE	98	LYS	2.8
30	DI	10	LYS	2.8
31	DJ	92	MET	2.8
22	DA	2131	U	2.8
3	CC	107	ARG	2.8
3	CC	130	PHE	2.8
12	CL	76	GLU	2.8
13	CM	72	GLU	2.8
29	BH	51	ARG	2.8
38	DQ	89	GLU	2.8
11	AK	129	VAL	2.8
26	DE	169	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
27	DF	143	TYR	2.8
34	DM	35	ALA	2.8
36	DO	14	ALA	2.8
3	CC	197	GLY	2.7
2	CB	90	PHE	2.7
10	CJ	30	LYS	2.7
20	AT	4	ILE	2.7
20	CT	16	LYS	2.7
28	BG	26	ILE	2.7
28	DG	3	ARG	2.7
29	BH	8	LYS	2.7
33	DL	86	GLU	2.7
27	BF	113	ASP	2.7
35	DN	72	ASP	2.7
32	DK	107	LEU	2.7
1	AA	1001	C	2.7
13	CM	31	LYS	2.7
17	CQ	51	ASN	2.7
21	AU	9	ASN	2.7
35	DN	56	LYS	2.7
38	DQ	30	ARG	2.7
42	BU	53	ASN	2.7
52	D4	38	GLY	2.7
7	CG	123	GLU	2.7
22	DA	2180	U	2.7
10	CJ	97	ASP	2.7
33	DL	61	LEU	2.7
44	DW	61	ALA	2.7
3	CC	62	LYS	2.7
16	CP	76	LYS	2.7
25	DD	8	LYS	2.7
44	DW	75	LYS	2.7
1	CA	1296	C	2.7
7	AG	148	ASN	2.7
13	CM	67	GLY	2.7
24	DC	127	GLY	2.7
29	BH	145	ASN	2.7
30	BI	137	GLY	2.7
46	BY	23	ARG	2.7
25	DD	88	GLU	2.7
46	DY	58	ASN	2.7
22	DA	547	A	2.7

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Mol	Chain	Res	Type	RSRZ
11	CK	16	VAL	2.7
40	DS	45	VAL	2.7
41	DT	85	VAL	2.7
36	DO	5	SER	2.7
9	AI	123	ARG	2.7
14	CN	2	ALA	2.7
28	DG	170	ARG	2.7
30	DI	103	ARG	2.7
26	DE	2	GLU	2.7
7	CG	56	LYS	2.7
20	CT	19	LYS	2.7
27	DF	89	VAL	2.7
10	CJ	23	ALA	2.7
29	DH	93	SER	2.7
2	AB	65	GLY	2.7
30	DI	132	THR	2.7
27	DF	52	ASN	2.7
7	AG	53	ARG	2.7
7	CG	141	VAL	2.7
9	CI	126	GLN	2.7
13	CM	3	ARG	2.7
32	DK	37	ASP	2.7
22	DA	1057	A	2.7
22	DA	1111	A	2.7
8	CH	60	GLU	2.7
44	DW	33	ALA	2.7
26	DE	188	MET	2.7
28	DG	157	TYR	2.7
22	DA	290	U	2.7
31	DJ	123	LYS	2.7
7	CG	70	ARG	2.7
23	DB	18	G	2.7
29	BH	133	GLN	2.7
48	D0	54	VAL	2.7
20	CT	47	ALA	2.7
37	DP	95	ALA	2.7
37	DP	19	SER	2.7
45	BX	77	LYS	2.7
8	CH	49	PHE	2.7
14	CN	6	MET	2.7
9	CI	41	ARG	2.7
22	DA	1217	U	2.7

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Mol	Chain	Res	Type	RSRZ
29	BH	4	ILE	2.7
1	CA	1317	C	2.7
3	AC	157	LEU	2.7
22	DA	436	C	2.7
22	DA	1064	C	2.7
26	BE	7	ASP	2.7
26	DE	196	VAL	2.7
33	DL	57	LEU	2.7
36	DO	20	GLU	2.7
41	DT	42	GLU	2.7
22	DA	1530	G	2.7
22	DA	2156	G	2.7
20	CT	8	LYS	2.7
49	D1	18	GLY	2.7
19	CS	81	ARG	2.7
24	DC	105	LEU	2.7
26	DE	12	LEU	2.7
27	DF	159	THR	2.7
32	DK	110	GLU	2.7
46	DY	62	GLY	2.7
25	DD	209	ALA	2.7
28	DG	165	ALA	2.7
31	DJ	94	ALA	2.7
7	AG	78	ARG	2.7
22	BA	549	G	2.7
22	DA	2116	G	2.7
41	DT	70	HIS	2.7
30	DI	90	SER	2.6
32	DK	14	SER	2.6
10	CJ	47	GLU	2.6
15	CO	6	GLU	2.6
2	CB	101	LEU	2.6
7	CG	76	LYS	2.6
48	D0	37	LYS	2.6
3	CC	91	VAL	2.6
26	DE	178	VAL	2.6
28	DG	49	THR	2.6
44	DW	51	VAL	2.6
48	D0	26	THR	2.6
29	BH	13	GLY	2.6
22	DA	1044	C	2.6
27	DF	75	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
40	DS	93	ALA	2.6
2	AB	136	MET	2.6
7	CG	144	MET	2.6
9	CI	83	ILE	2.6
22	DA	880	G	2.6
40	DS	6	LYS	2.6
42	DU	98	SER	2.6
1	CA	1441	A	2.6
18	CR	51	TYR	2.6
22	DA	2749	A	2.6
29	DH	147	VAL	2.6
48	D0	30	VAL	2.6
7	CG	84	THR	2.6
42	DU	6	ARG	2.6
17	CQ	63	GLU	2.6
39	DR	49	ILE	2.6
27	BF	83	TYR	2.6
5	AE	102	GLY	2.6
7	AG	68	ASN	2.6
21	AU	47	ARG	2.6
22	DA	1046	A	2.6
28	DG	59	ALA	2.6
28	DG	85	LYS	2.6
28	DG	24	ILE	2.6
26	DE	114	ARG	2.6
27	DF	169	LEU	2.6
53	B5	128	LEU	2.6
13	CM	65	VAL	2.6
19	CS	26	GLY	2.6
36	DO	114	GLY	2.6
2	CB	37	LYS	2.6
9	CI	31	ASN	2.6
22	BA	1171	G	2.6
22	DA	291	G	2.6
22	DA	1529	G	2.6
14	AN	22	ALA	2.6
36	BO	50	ALA	2.6
1	CA	87	C	2.6
22	DA	646	U	2.6
29	BH	1	MET	2.6
30	BI	125	MET	2.6
24	BC	272	SER	2.6

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Mol	Chain	Res	Type	RSRZ
3	CC	106	VAL	2.6
30	BI	121	ASP	2.6
36	DO	74	VAL	2.6
1	AA	1042	A	2.6
9	CI	84	THR	2.6
36	DO	12	THR	2.6
41	DT	29	THR	2.6
26	DE	21	ARG	2.6
22	DA	1173	U	2.6
34	DM	41	LEU	2.6
36	DO	4	LYS	2.6
8	CH	2	SER	2.6
28	DG	74	SER	2.6
41	DT	47	VAL	2.6
50	D2	9	VAL	2.6
41	DT	25	GLU	2.6
17	CQ	82	ALA	2.6
30	DI	115	ALA	2.6
52	D4	31	PRO	2.6
19	AS	32	ARG	2.6
36	DO	102	ARG	2.6
51	D3	8	ARG	2.6
3	CC	77	ILE	2.6
22	DA	2128	G	2.6
14	CN	71	HIS	2.6
3	AC	193	TYR	2.6
7	AG	80	VAL	2.6
16	AP	20	VAL	2.6
44	DW	31	VAL	2.6
31	DJ	15	TRP	2.6
37	DP	72	ARG	2.6
49	D1	27	LYS	2.6
10	AJ	8	ILE	2.6
19	CS	45	ILE	2.6
46	DY	45	GLN	2.6
1	AA	85	U	2.6
2	AB	154	MET	2.6
31	DJ	118	MET	2.6
22	DA	75	G	2.6
22	DA	1087	G	2.6
30	BI	64	ASP	2.6
34	DM	26	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
19	AS	55	ARG	2.6
36	DO	81	ARG	2.6
2	CB	69	PHE	2.6
7	AG	86	GLN	2.5
40	DS	72	THR	2.5
40	DS	103	ILE	2.5
10	CJ	17	LEU	2.5
24	DC	47	GLY	2.5
27	DF	101	GLU	2.5
36	DO	84	GLU	2.5
9	AI	104	VAL	2.5
10	AJ	77	VAL	2.5
16	CP	20	VAL	2.5
22	BA	1100	C	2.5
22	BA	2885	G	2.5
22	DA	88	G	2.5
25	DD	46	ARG	2.5
36	DO	27	VAL	2.5
2	CB	110	SER	2.5
2	AB	209	ALA	2.5
17	CQ	73	TRP	2.5
26	DE	156	ASN	2.5
28	DG	112	PRO	2.5
8	CH	46	ILE	2.5
11	CK	43	GLY	2.5
16	CP	33	ILE	2.5
46	BY	6	LEU	2.5
46	DY	17	GLU	2.5
9	CI	68	LYS	2.5
17	CQ	6	ARG	2.5
38	DQ	15	LYS	2.5
10	CJ	63	ASP	2.5
17	CQ	13	VAL	2.5
17	CQ	23	VAL	2.5
20	AT	87	ALA	2.5
28	DG	46	ALA	2.5
29	BH	25	TYR	2.5
29	DH	136	SER	2.5
30	BI	77	ALA	2.5
38	DQ	101	PHE	2.5
44	DW	69	PHE	2.5
22	DA	70	G	2.5

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Mol	Chain	Res	Type	RSRZ
33	DL	38	GLN	2.5
14	CN	30	ILE	2.5
28	DG	26	ILE	2.5
28	DG	99	LYS	2.5
30	BI	91	GLY	2.5
38	DQ	22	LYS	2.5
3	CC	54	ARG	2.5
13	CM	34	LEU	2.5
24	DC	48	ARG	2.5
34	DM	78	LEU	2.5
7	AG	144	MET	2.5
26	DE	189	THR	2.5
30	DI	73	THR	2.5
48	D0	3	VAL	2.5
13	AM	5	ALA	2.5
20	CT	11	ALA	2.5
22	BA	654	A	2.5
42	DU	3	ALA	2.5
44	DW	72	LYS	2.5
53	B5	163	GLU	2.5
1	AA	993	G	2.5
15	CO	17	ARG	2.5
24	DC	104	ILE	2.5
41	DT	69	ARG	2.5
2	CB	210	VAL	2.5
26	DE	126	VAL	2.5
13	CM	11	ASP	2.5
26	DE	22	ASP	2.5
42	DU	88	GLU	2.5
1	CA	1022	A	2.5
7	CG	19	GLY	2.5
27	DF	27	GLN	2.5
9	CI	125	PRO	2.5
26	DE	180	LEU	2.5
47	DZ	24	LEU	2.5
50	D2	13	ASN	2.5
15	AO	29	VAL	2.5
30	DI	125	MET	2.5
44	DW	71	VAL	2.5
13	CM	54	ASP	2.5
29	DH	104	THR	2.5
33	DL	67	THR	2.5

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Mol	Chain	Res	Type	RSRZ
5	AE	50	TYR	2.5
11	AK	13	ARG	2.5
20	CT	41	ALA	2.5
34	DM	40	ARG	2.5
43	DV	33	GLY	2.5
52	D4	21	GLY	2.5
2	AB	67	ILE	2.5
28	DG	101	ASN	2.5
7	AG	27	VAL	2.5
7	CG	116	MET	2.5
14	AN	12	LYS	2.5
22	DA	1083	U	2.5
34	DM	105	MET	2.5
53	B5	178	LYS	2.5
2	CB	96	TRP	2.5
5	CE	112	ARG	2.5
7	CG	129	GLU	2.5
41	DT	79	ASP	2.5
12	AL	14	ARG	2.5
25	DD	77	ARG	2.5
27	DF	150	ARG	2.5
28	DG	69	ARG	2.5
50	D2	3	ARG	2.5
10	AJ	35	GLN	2.5
10	CJ	20	GLN	2.5
38	DQ	71	GLN	2.5
13	AM	19	LEU	2.5
17	AQ	5	ILE	2.5
22	DA	1043	C	2.5
36	DO	18	LEU	2.5
22	DA	1048	A	2.5
22	DA	1085	A	2.5
29	BH	66	ASN	2.5
8	CH	110	VAL	2.5
19	CS	73	GLU	2.5
39	DR	55	ASP	2.5
13	CM	18	ALA	2.5
14	CN	99	ALA	2.5
19	AS	33	THR	2.5
19	AS	48	THR	2.5
41	DT	13	ALA	2.5
14	CN	98	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
41	DT	81	LYS	2.5
25	DD	95	SER	2.5
1	CA	843	U	2.5
3	AC	39	VAL	2.5
11	AK	113	VAL	2.5
35	DN	30	ARG	2.5
34	DM	117	PHE	2.5
43	DV	66	ASP	2.5
2	AB	39	HIS	2.5
2	CB	15	HIS	2.5
2	AB	101	LEU	2.5
10	CJ	92	LEU	2.5
35	DN	52	ILE	2.5
43	DV	89	ILE	2.5
22	DA	343	C	2.4
33	DL	68	SER	2.4
29	DH	9	VAL	2.4
34	DM	67	VAL	2.4
45	DX	47	VAL	2.4
3	CC	135	LYS	2.4
19	CS	21	LYS	2.4
43	DV	45	ASP	2.4
28	DG	5	ALA	2.4
29	DH	128	HIS	2.4
33	DL	15	ALA	2.4
24	DC	81	LEU	2.4
25	DD	188	LEU	2.4
27	DF	4	LEU	2.4
27	DF	44	ILE	2.4
27	DF	137	ILE	2.4
26	DE	122	GLU	2.4
32	DK	49	ARG	2.4
33	DL	27	LEU	2.4
33	DL	69	ARG	2.4
27	DF	139	PRO	2.4
44	DW	29	GLU	2.4
22	DA	1450	G	2.4
28	DG	110	SER	2.4
7	CG	122	ASN	2.4
19	CS	62	VAL	2.4
23	DB	19	C	2.4
29	DH	61	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
30	DI	100	LYS	2.4
39	DR	58	VAL	2.4
33	DL	34	GLY	2.4
34	DM	61	GLY	2.4
1	CA	80	A	2.4
22	DA	1596	A	2.4
24	DC	248	TRP	2.4
25	DD	125	TRP	2.4
30	BI	35	ILE	2.4
41	DT	74	ILE	2.4
52	D4	26	ILE	2.4
26	BE	6	LYS	2.4
9	AI	93	SER	2.4
11	AK	52	PHE	2.4
22	DA	931	U	2.4
2	CB	192	ASP	2.4
22	DA	2164	C	2.4
36	DO	44	GLY	2.4
38	DQ	44	GLN	2.4
7	AG	4	ARG	2.4
1	CA	77	A	2.4
1	CA	205	A	2.4
1	CA	1019	A	2.4
16	AP	6	LEU	2.4
27	BF	79	ILE	2.4
33	DL	125	LEU	2.4
49	D1	37	LYS	2.4
1	CA	632	U	2.4
34	DM	27	SER	2.4
39	DR	67	GLY	2.4
22	DA	1606	C	2.4
29	BH	18	GLN	2.4
2	AB	85	LEU	2.4
3	CC	165	THR	2.4
22	DA	1532	A	2.4
28	DG	8	PRO	2.4
39	DR	19	THR	2.4
9	CI	48	VAL	2.4
40	DS	17	VAL	2.4
22	DA	1534	U	2.4
27	DF	144	ASP	2.4
33	DL	139	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
9	CI	92	GLU	2.4
26	DE	16	GLU	2.4
28	DG	86	LYS	2.4
33	DL	84	LYS	2.4
37	DP	102	GLU	2.4
1	AA	998	C	2.4
22	DA	1045	C	2.4
9	CI	87	LEU	2.4
13	CM	19	LEU	2.4
22	DA	1168	G	2.4
22	DA	1407	G	2.4
22	DA	2121	G	2.4
31	DJ	32	LEU	2.4
2	AB	50	PHE	2.4
27	DF	80	ARG	2.4
32	DK	69	VAL	2.4
37	DP	25	THR	2.4
8	CH	94	LYS	2.4
5	CE	149	SER	2.4
36	DO	95	SER	2.4
29	DH	105	ALA	2.4
9	CI	61	LEU	2.4
13	AM	33	ILE	2.4
14	AN	16	LEU	2.4
1	CA	86	G	2.4
16	AP	45	GLU	2.4
21	AU	24	GLU	2.4
30	BI	75	PRO	2.4
27	DF	158	THR	2.4
28	DG	66	GLY	2.4
43	DV	37	PRO	2.4
51	D3	21	GLY	2.4
1	CA	1035	A	2.4
22	BA	1098	A	2.4
22	DA	89	A	2.4
33	DL	91	ASP	2.4
39	DR	26	ASP	2.4
30	DI	19	ASN	2.4
7	CG	99	LEU	2.4
35	DN	113	ILE	2.4
49	D1	34	LEU	2.4
50	D2	14	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
2	AB	213	TYR	2.4
14	CN	14	VAL	2.4
14	CN	70	PRO	2.4
27	DF	11	GLU	2.4
51	D3	22	PHE	2.4
45	DX	13	VAL	2.4
10	CJ	28	THR	2.4
22	DA	266	G	2.4
27	DF	63	GLN	2.4
33	DL	104	GLN	2.4
28	DG	68	ALA	2.4
52	D4	6	SER	2.4
52	D4	29	ALA	2.4
20	CT	57	ILE	2.4
29	DH	80	ILE	2.4
32	DK	67	LYS	2.4
33	DL	21	ARG	2.4
35	DN	17	ARG	2.4
22	DA	544	C	2.4
22	DA	885	C	2.4
22	DA	2129	C	2.4
27	DF	124	GLY	2.3
27	DF	134	GLU	2.3
43	BV	69	GLU	2.3
10	CJ	98	VAL	2.3
37	DP	17	VAL	2.3
45	DX	7	VAL	2.3
30	BI	93	PRO	2.3
2	CB	152	LYS	2.3
22	DA	2307	G	2.3
29	DH	83	LYS	2.3
53	B5	71	LYS	2.3
53	B5	127	LYS	2.3
20	AT	66	LEU	2.3
24	DC	272	SER	2.3
10	CJ	40	ILE	2.3
22	BA	1918	A	2.3
40	DS	33	LEU	2.3
27	DF	140	GLU	2.3
2	CB	18	HIS	2.3
31	DJ	89	PHE	2.3
33	DL	50	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
35	DN	101	GLY	2.3
1	AA	209	U	2.3
22	DA	1078	U	2.3
3	CC	172	ARG	2.3
2	CB	102	THR	2.3
7	CG	51	ALA	2.3
11	AK	111	THR	2.3
31	DJ	20	ALA	2.3
3	CC	206	GLU	2.3
22	DA	277	G	2.3
40	DS	59	GLU	2.3
43	DV	29	ILE	2.3
1	CA	1362	A	2.3
1	CA	1493	A	2.3
3	AC	37	PHE	2.3
7	CG	112	GLY	2.3
22	DA	1205	A	2.3
2	CB	187	VAL	2.3
13	CM	14	HIS	2.3
25	DD	140	HIS	2.3
28	DG	172	LYS	2.3
38	DQ	100	VAL	2.3
52	D4	35	GLN	2.3
1	AA	121	U	2.3
22	DA	2111	U	2.3
5	CE	152	MET	2.3
28	DG	97	ALA	2.3
30	BI	36	MET	2.3
30	BI	44	ALA	2.3
14	CN	79	LEU	2.3
38	DQ	98	ILE	2.3
26	DE	103	GLY	2.3
33	DL	96	LYS	2.3
46	DY	54	LYS	2.3
4	AD	67	VAL	2.3
9	AI	33	ARG	2.3
29	BH	135	HIS	2.3
29	DH	135	HIS	2.3
34	DM	36	VAL	2.3
22	DA	1075	C	2.3
1	CA	1286	U	2.3
25	DD	200	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
40	DS	38	TYR	2.3
20	CT	45	ALA	2.3
10	CJ	42	LEU	2.3
27	DF	50	LEU	2.3
27	DF	162	SER	2.3
41	DT	17	SER	2.3
13	CM	87	ARG	2.3
29	DH	134	VAL	2.3
30	DI	107	GLN	2.3
1	CA	1002	G	2.3
22	DA	146	A	2.3
4	CD	163	GLU	2.3
36	DO	42	PRO	2.3
2	CB	160	ALA	2.3
28	DG	7	ALA	2.3
31	DJ	53	TYR	2.3
34	DM	100	LYS	2.3
2	CB	35	ARG	2.3
6	CF	80	PHE	2.3
14	CN	72	GLY	2.3
33	DL	87	GLY	2.3
47	DZ	4	THR	2.3
35	DN	9	GLN	2.3
28	DG	54	PRO	2.3
3	CC	133	ALA	2.3
20	CT	22	ALA	2.3
22	DA	2148	G	2.3
2	AB	40	ILE	2.3
2	AB	135	LEU	2.3
36	DO	73	ALA	2.3
9	CI	80	ARG	2.3
27	DF	82	GLY	2.3
32	DK	115	ILE	2.3
45	DX	18	ARG	2.3
10	AJ	36	VAL	2.3
27	BF	78	LYS	2.3
29	DH	149	GLU	2.3
42	DU	91	LYS	2.3
46	BY	2	LYS	2.3
22	DA	2167	U	2.3
1	CA	998	C	2.3
9	AI	63	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
14	CN	16	LEU	2.3
15	AO	31	LEU	2.3
16	CP	65	ALA	2.3
29	BH	90	LEU	2.3
29	DH	68	ARG	2.3
32	DK	98	ARG	2.3
1	CA	988	G	2.3
20	AT	61	GLN	2.3
4	CD	143	VAL	2.3
29	DH	11	ASN	2.3
3	AC	136	ARG	2.3
30	DI	134	ARG	2.3
40	DS	109	ASP	2.3
32	DK	48	PRO	2.3
2	CB	84	ALA	2.3
7	CG	47	LEU	2.3
29	DH	39	ALA	2.3
2	AB	60	ILE	2.3
13	CM	9	ILE	2.3
17	CQ	16	LYS	2.3
46	DY	60	LYS	2.3
1	CA	1024	G	2.3
22	BA	1068	G	2.3
41	DT	89	GLU	2.3
24	DC	44	ASN	2.2
29	DH	3	VAL	2.2
29	DH	14	SER	2.2
22	DA	2130	U	2.2
9	AI	40	GLY	2.2
24	DC	154	LEU	2.2
30	DI	138	LEU	2.2
33	DL	131	ALA	2.2
39	DR	52	PRO	2.2
41	DT	84	TYR	2.2
13	AM	47	GLU	2.2
22	DA	1077	A	2.2
22	DA	1084	A	2.2
3	CC	136	ARG	2.2
5	CE	80	THR	2.2
5	CE	103	THR	2.2
2	CB	159	ASP	2.2
11	CK	126	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	790	U	2.2
27	DF	69	LYS	2.2
41	DT	11	LEU	2.2
43	DV	54	ALA	2.2
12	CL	62	GLU	2.2
28	DG	17	VAL	2.2
9	CI	9	THR	2.2
1	CA	987	G	2.2
23	DB	20	G	2.2
24	DC	205	LEU	2.2
42	DU	57	GLY	2.2
2	AB	69	PHE	2.2
7	AG	26	PHE	2.2
25	DD	89	GLU	2.2
29	BH	29	PHE	2.2
50	D2	21	ARG	2.2
4	AD	177	LYS	2.2
1	CA	1167	A	2.2
22	DA	892	A	2.2
25	DD	153	GLY	2.2
19	AS	50	ALA	2.2
21	CU	41	PRO	2.2
25	DD	14	ILE	2.2
28	DG	121	ILE	2.2
29	BH	100	ALA	2.2
30	BI	117	MET	2.2
32	DK	77	ILE	2.2
38	DQ	74	ILE	2.2
46	DY	3	ALA	2.2
46	DY	26	PHE	2.2
1	CA	1013	G	2.2
10	AJ	31	ARG	2.2
15	AO	17	ARG	2.2
22	DA	882	G	2.2
20	CT	49	LYS	2.2
26	DE	60	TRP	2.2
38	DQ	45	TYR	2.2
35	DN	60	VAL	2.2
29	DH	88	GLY	2.2
30	BI	85	GLY	2.2
46	BY	62	GLY	2.2
1	CA	89	U	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	121	U	2.2
1	AA	1036	A	2.2
1	CA	1275	A	2.2
14	AN	27	LEU	2.2
47	DZ	39	GLU	2.2
27	DF	178	ARG	2.2
29	DH	72	ILE	2.2
33	DL	117	THR	2.2
47	DZ	12	SER	2.2
5	CE	147	MET	2.2
13	CM	81	MET	2.2
19	AS	6	LYS	2.2
30	BI	72	LYS	2.2
33	DL	119	PRO	2.2
38	DQ	84	LYS	2.2
43	DV	10	LYS	2.2
52	D4	34	LYS	2.2
22	DA	1026	G	2.2
5	AE	123	VAL	2.2
21	AU	28	VAL	2.2
21	CU	24	GLU	2.2
7	AG	23	LEU	2.2
15	AO	57	LEU	2.2
22	DA	405	U	2.2
26	DE	138	LEU	2.2
28	DG	48	ASN	2.2
50	D2	12	ARG	2.2
7	AG	38	THR	2.2
9	AI	128	SER	2.2
14	CN	31	ILE	2.2
14	CN	50	THR	2.2
29	DH	10	ALA	2.2
26	DE	9	GLN	2.2
27	DF	81	GLN	2.2
7	CG	135	VAL	2.2
28	DG	11	VAL	2.2
39	DR	72	VAL	2.2
13	CM	110	LYS	2.2
25	DD	117	GLY	2.2
29	DH	85	GLY	2.2
45	DX	74	ARG	2.2
2	AB	123	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
18	CR	55	LEU	2.2
42	DU	9	ASP	2.2
46	DY	56	LEU	2.2
3	CC	207	ILE	2.2
10	CJ	12	ALA	2.2
26	DE	73	ILE	2.2
29	BH	81	ALA	2.2
26	DE	125	SER	2.2
29	BH	104	THR	2.2
44	DW	58	THR	2.2
1	CA	71	A	2.2
25	DD	9	VAL	2.2
42	DU	83	VAL	2.2
2	CB	149	GLY	2.2
13	CM	93	ARG	2.2
46	DY	4	LYS	2.2
36	DO	22	GLY	2.2
5	CE	124	LEU	2.2
2	AB	51	ASN	2.2
22	BA	2129	C	2.2
17	CQ	38	ILE	2.2
41	DT	72	GLN	2.2
19	CS	35	SER	2.2
20	CT	20	HIS	2.2
32	DK	104	THR	2.2
34	DM	24	THR	2.2
44	BW	10	THR	2.2
7	CG	63	GLU	2.2
39	DR	46	GLU	2.2
22	DA	1614	A	2.2
29	BH	78	VAL	2.2
31	DJ	17	VAL	2.2
30	BI	89	GLY	2.1
43	DV	67	GLY	2.1
44	DW	73	GLY	2.1
10	AJ	14	ASP	2.1
17	CQ	75	LEU	2.1
26	DE	171	ASP	2.1
28	DG	37	LEU	2.1
34	DM	102	LEU	2.1
8	CH	75	ILE	2.1
9	CI	72	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
12	AL	73	ASN	2.1
25	DD	2	ILE	2.1
29	DH	111	ALA	2.1
30	DI	111	GLN	2.1
34	DM	17	ASN	2.1
48	D0	2	ALA	2.1
22	DA	2123	G	2.1
29	BH	141	LYS	2.1
11	AK	50	SER	2.1
30	DI	26	PRO	2.1
17	AQ	7	THR	2.1
37	DP	101	ARG	2.1
27	DF	31	VAL	2.1
39	DR	30	GLY	2.1
22	DA	1383	A	2.1
31	DJ	14	ASP	2.1
4	AD	37	ALA	2.1
16	CP	42	ILE	2.1
28	DG	136	ALA	2.1
17	AQ	11	ARG	2.1
24	DC	37	ASN	2.1
31	DJ	35	ARG	2.1
40	DS	2	GLU	2.1
10	CJ	70	HIS	2.1
22	DA	1435	G	2.1
28	DG	113	VAL	2.1
33	DL	5	THR	2.1
40	DS	39	THR	2.1
1	CA	101	A	2.1
14	CN	60	GLN	2.1
22	DA	1551	A	2.1
14	AN	25	ALA	2.1
22	DA	2151	U	2.1
24	DC	122	ALA	2.1
26	DE	67	ARG	2.1
30	DI	123	GLU	2.1
37	DP	66	ASN	2.1
1	CA	215	C	2.1
3	CC	128	VAL	2.1
4	CD	130	VAL	2.1
9	CI	40	GLY	2.1
11	CK	19	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
19	CS	54	GLY	2.1
27	DF	131	GLY	2.1
29	BH	9	VAL	2.1
1	CA	203	G	2.1
1	CA	942	G	2.1
41	DT	86	THR	2.1
2	CB	16	PHE	2.1
10	AJ	73	LEU	2.1
30	BI	138	LEU	2.1
2	CB	145	GLU	2.1
28	DG	116	GLN	2.1
28	DG	128	GLN	2.1
29	BH	99	ILE	2.1
32	DK	47	ILE	2.1
35	DN	82	GLU	2.1
37	DP	109	ARG	2.1
46	DY	7	ARG	2.1
20	CT	63	ALA	2.1
22	DA	288	U	2.1
28	DG	73	ASN	2.1
36	DO	67	ASN	2.1
41	DT	92	ASN	2.1
14	AN	23	LYS	2.1
22	DA	318	C	2.1
25	DD	60	VAL	2.1
34	DM	118	LYS	2.1
39	BR	50	GLY	2.1
2	AB	32	PHE	2.1
3	AC	175	LEU	2.1
3	CC	29	PHE	2.1
9	CI	95	ARG	2.1
31	DJ	50	THR	2.1
10	AJ	78	GLU	2.1
27	DF	94	GLU	2.1
38	DQ	60	LEU	2.1
22	DA	1228	G	2.1
39	DR	45	GLU	2.1
3	CC	117	ALA	2.1
10	AJ	100	ILE	2.1
52	D4	37	GLN	2.1
40	DS	32	ALA	2.1
4	AD	22	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
26	DE	123	LYS	2.1
3	CC	129	MET	2.1
7	CG	132	GLY	2.1
14	CN	78	GLY	2.1
10	AJ	98	VAL	2.1
39	DR	64	VAL	2.1
29	DH	122	LEU	2.1
40	DS	69	LEU	2.1
3	CC	168	TYR	2.1
34	DM	60	GLN	2.1
5	CE	110	ALA	2.1
9	CI	28	ILE	2.1
22	BA	1729	U	2.1
22	DA	361	G	2.1
27	DF	14	LYS	2.1
39	DR	48	LYS	2.1
9	AI	102	GLY	2.1
7	CG	75	VAL	2.1
22	DA	1420	A	2.1
27	BF	74	VAL	2.1
43	DV	1	MET	2.1
52	D4	36	ARG	2.1
9	CI	89	GLU	2.1
14	CN	42	TRP	2.1
22	DA	2177	C	2.1
4	AD	182	PHE	2.1
10	CJ	13	PHE	2.1
18	AR	68	LEU	2.1
9	CI	37	GLN	2.1
10	CJ	69	THR	2.1
25	DD	56	LYS	2.1
26	DE	185	LYS	2.1
28	DG	22	GLN	2.1
30	DI	92	LYS	2.1
34	DM	54	THR	2.1
11	CK	99	ALA	2.1
32	DK	60	ALA	2.1
36	DO	79	ALA	2.1
46	DY	61	ALA	2.1
32	DK	81	GLY	2.1
1	CA	1134	G	2.1
7	AG	109	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	1074	G	2.1
27	BF	71	ARG	2.1
52	D4	19	ARG	2.1
2	CB	182	PRO	2.1
2	CB	201	PRO	2.1
3	CC	46	GLU	2.1
6	CF	12	PRO	2.1
30	DI	108	GLU	2.1
40	DS	87	PRO	2.1
2	CB	91	PHE	2.1
6	AF	61	LEU	2.1
26	DE	194	LYS	2.1
48	D0	5	GLN	2.1
8	AH	26	THR	2.1
28	DG	34	THR	2.1
36	DO	71	ALA	2.1
7	CG	10	ARG	2.1
16	AP	14	ARG	2.1
25	DD	19	GLY	2.1
42	DU	23	GLY	2.1
11	AK	94	GLU	2.1
43	DV	69	GLU	2.1
2	AB	36	ASN	2.1
33	DL	4	ASN	2.1
47	DZ	3	LYS	2.1
3	AC	12	LEU	2.0
4	AD	72	PHE	2.1
19	AS	13	LEU	2.0
29	DH	139	PHE	2.1
51	D3	55	LEU	2.0
1	CA	461	A	2.0
1	CA	1492	A	2.0
14	AN	32	SER	2.0
22	DA	2103	C	2.0
22	DA	2175	C	2.0
3	CC	143	ARG	2.0
15	CO	88	ARG	2.0
27	DF	53	ALA	2.0
28	DG	19	ILE	2.0
27	DF	105	THR	2.0
29	DH	64	ALA	2.0
2	CB	33	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
7	CG	55	GLY	2.0
40	DS	90	LYS	2.0
9	CI	111	VAL	2.0
16	AP	19	VAL	2.0
7	CG	50	LEU	2.0
29	DH	54	LEU	2.0
49	D1	19	HIS	2.0
1	CA	76	G	2.0
19	CS	32	ARG	2.0
22	BA	883	G	2.0
1	AA	1441	A	2.0
1	CA	1042	A	2.0
2	AB	164	ILE	2.0
3	AC	141	ALA	2.0
7	CG	108	ALA	2.0
22	DA	501	A	2.0
47	DZ	44	ILE	2.0
16	CP	48	GLU	2.0
27	DF	161	LYS	2.0
28	BG	177	LYS	2.0
12	CL	93	VAL	2.0
29	DH	121	VAL	2.0
29	DH	91	PHE	2.0
34	DM	72	PRO	2.0
9	CI	94	LEU	2.0
19	AS	31	LEU	2.0
2	AB	95	ARG	2.0
27	BF	115	ARG	2.0
29	DH	116	ARG	2.0
2	CB	26	LYS	2.0
20	AT	59	ASP	2.0
26	DE	184	ASP	2.0
1	AA	999	C	2.0
16	AP	43	ALA	2.0
27	BF	73	SER	2.0
27	DF	61	SER	2.0
1	CA	1034	G	2.0
22	DA	1071	G	2.0
7	AG	89	VAL	2.0
29	DH	1	MET	2.0
37	DP	73	VAL	2.0
7	AG	2	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
9	CI	5	GLN	2.0
41	DT	26	LYS	2.0
2	CB	65	GLY	2.0
7	CG	77	SER	2.0
13	CM	5	ALA	2.0
7	AG	85	TYR	2.0
1	CA	250	A	2.0
1	CA	1242	G	2.0
13	AM	97	VAL	2.0
22	DA	1413	A	2.0
52	D4	24	ARG	2.0
3	CC	33	LEU	2.0
17	AQ	9	GLN	2.0
27	DF	29	PRO	2.0
27	DF	135	GLN	2.0
28	DG	134	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, 95^{th} 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	DA	3134	1/1	0.12	0.63	75,75,75,75	0
54	MG	CA	1611	1/1	0.21	0.21	68,68,68,68	0
54	MG	CA	1635	1/1	0.23	0.15	91,91,91,91	0
54	MG	DA	3136	1/1	0.30	0.25	67,67,67,67	0
54	MG	DA	3132	1/1	0.34	0.91	83,83,83,83	0
54	MG	DA	3137	1/1	0.34	0.14	69,69,69,69	0
54	MG	DA	3007	1/1	0.36	0.20	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3029	1/1	0.39	0.32	63,63,63,63	0
54	MG	DA	3094	1/1	0.48	0.40	78,78,78,78	0
54	MG	DA	3093	1/1	0.49	0.46	79,79,79,79	0
54	MG	AA	1627	1/1	0.49	0.22	50,50,50,50	0
54	MG	DA	3049	1/1	0.56	0.35	84,84,84,84	0
54	MG	DA	3006	1/1	0.57	0.12	76,76,76,76	0
54	MG	DA	3014	1/1	0.58	0.16	59,59,59,59	0
54	MG	DA	3035	1/1	0.58	0.20	52,52,52,52	0
54	MG	DA	3042	1/1	0.58	0.27	67,67,67,67	0
54	MG	DA	3125	1/1	0.58	0.43	76,76,76,76	0
54	MG	DA	3073	1/1	0.61	0.46	76,76,76,76	0
54	MG	DA	3072	1/1	0.61	0.23	63,63,63,63	0
54	MG	CA	1604	1/1	0.62	0.22	80,80,80,80	0
54	MG	DA	3105	1/1	0.63	0.09	57,57,57,57	0
54	MG	DA	3043	1/1	0.63	0.34	68,68,68,68	0
54	MG	DA	3025	1/1	0.64	0.10	40,40,40,40	0
54	MG	DA	3015	1/1	0.65	0.12	57,57,57,57	0
54	MG	DA	3017	1/1	0.65	0.35	65,65,65,65	0
54	MG	DA	3120	1/1	0.66	0.56	80,80,80,80	0
54	MG	DA	3089	1/1	0.66	0.10	57,57,57,57	0
54	MG	DA	3047	1/1	0.66	0.12	60,60,60,60	0
54	MG	DA	3048	1/1	0.69	0.17	59,59,59,59	0
54	MG	DA	3135	1/1	0.69	0.12	41,41,41,41	0
54	MG	DA	3027	1/1	0.70	0.44	60,60,60,60	0
54	MG	DA	3085	1/1	0.70	0.20	72,72,72,72	0
54	MG	CA	1631	1/1	0.70	0.17	76,76,76,76	0
54	MG	AA	1658	1/1	0.70	0.49	47,47,47,47	0
54	MG	DA	3129	1/1	0.70	0.10	65,65,65,65	0
54	MG	D2	101	1/1	0.70	0.15	63,63,63,63	0
54	MG	AA	1638	1/1	0.71	0.13	57,57,57,57	0
54	MG	DA	3045	1/1	0.71	0.19	68,68,68,68	0
54	MG	BA	3169	1/1	0.71	0.33	25,25,25,25	0
54	MG	BA	3015	1/1	0.72	0.15	22,22,22,22	0
54	MG	CA	1615	1/1	0.72	0.19	38,38,38,38	0
54	MG	CA	1628	1/1	0.72	0.29	70,70,70,70	0
54	MG	AA	1645	1/1	0.73	0.48	41,41,41,41	0
54	MG	DA	3058	1/1	0.73	0.31	65,65,65,65	0
54	MG	CA	1602	1/1	0.73	0.10	69,69,69,69	0
54	MG	BA	3193	1/1	0.74	0.51	10,10,10,10	0
54	MG	DA	3095	1/1	0.74	0.13	75,75,75,75	0
54	MG	BA	3171	1/1	0.74	0.32	34,34,34,34	0
54	MG	CA	1636	1/1	0.74	0.27	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3041	1/1	0.75	0.13	62,62,62,62	0
54	MG	DA	3102	1/1	0.75	0.08	49,49,49,49	0
54	MG	DA	3148	1/1	0.75	0.20	47,47,47,47	0
54	MG	CA	1630	1/1	0.75	0.36	81,81,81,81	0
54	MG	DA	3028	1/1	0.76	0.08	62,62,62,62	0
54	MG	DA	3005	1/1	0.76	0.43	76,76,76,76	0
54	MG	CA	1626	1/1	0.76	0.08	48,48,48,48	0
54	MG	DA	3019	1/1	0.76	0.20	66,66,66,66	0
54	MG	DA	3144	1/1	0.76	1.42	57,57,57,57	0
54	MG	BA	3154	1/1	0.76	0.28	11,11,11,11	0
54	MG	DA	3154	1/1	0.76	0.58	63,63,63,63	0
54	MG	AA	1672	1/1	0.76	0.33	40,40,40,40	0
54	MG	CA	1641	1/1	0.77	0.49	59,59,59,59	0
54	MG	DA	3100	1/1	0.77	0.53	68,68,68,68	0
54	MG	BA	3031	1/1	0.77	0.13	10,10,10,10	0
54	MG	DA	3163	1/1	0.77	0.35	49,49,49,49	0
54	MG	CA	1605	1/1	0.77	0.16	57,57,57,57	0
54	MG	BA	3016	1/1	0.78	0.38	67,67,67,67	0
54	MG	DA	3079	1/1	0.78	0.12	74,74,74,74	0
54	MG	DA	3080	1/1	0.78	0.11	79,79,79,79	0
54	MG	DA	3104	1/1	0.78	0.34	59,59,59,59	0
54	MG	BA	3191	1/1	0.78	0.23	43,43,43,43	0
54	MG	DA	3088	1/1	0.78	0.07	53,53,53,53	0
54	MG	CA	1638	1/1	0.78	0.10	54,54,54,54	0
54	MG	BA	3050	1/1	0.78	0.08	15,15,15,15	0
54	MG	DA	3046	1/1	0.78	0.12	72,72,72,72	0
54	MG	DA	3008	1/1	0.79	0.46	70,70,70,70	0
54	MG	DA	3092	1/1	0.79	0.09	60,60,60,60	0
54	MG	DA	3106	1/1	0.79	0.21	61,61,61,61	0
54	MG	DA	3011	1/1	0.79	0.08	65,65,65,65	0
54	MG	AA	1623	1/1	0.79	0.06	42,42,42,42	0
54	MG	AA	1617	1/1	0.79	0.18	55,55,55,55	0
54	MG	CA	1649	1/1	0.79	0.28	48,48,48,48	0
54	MG	DA	3070	1/1	0.79	0.27	69,69,69,69	0
54	MG	DA	3030	1/1	0.80	0.26	61,61,61,61	0
54	MG	CA	1650	1/1	0.80	0.31	45,45,45,45	0
54	MG	DA	3038	1/1	0.80	0.16	74,74,74,74	0
54	MG	CA	1653	1/1	0.80	0.25	48,48,48,48	0
54	MG	CA	1627	1/1	0.80	0.29	69,69,69,69	0
54	MG	AA	1647	1/1	0.80	0.30	40,40,40,40	0
54	MG	AA	1614	1/1	0.80	0.18	52,52,52,52	0
54	MG	DA	3003	1/1	0.81	0.40	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3047	1/1	0.81	0.15	19,19,19,19	0
54	MG	CA	1617	1/1	0.81	0.08	33,33,33,33	0
54	MG	CA	1621	1/1	0.81	0.12	63,63,63,63	0
54	MG	DA	3145	1/1	0.81	0.07	60,60,60,60	0
54	MG	DA	3078	1/1	0.81	0.17	64,64,64,64	0
54	MG	BA	3195	1/1	0.81	0.16	31,31,31,31	0
54	MG	DA	3039	1/1	0.81	0.13	54,54,54,54	0
54	MG	AA	1631	1/1	0.81	0.08	39,39,39,39	0
54	MG	DA	3059	1/1	0.82	0.48	63,63,63,63	0
54	MG	BA	3107	1/1	0.82	0.15	1,1,1,1	0
54	MG	BA	3145	1/1	0.82	0.37	37,37,37,37	0
54	MG	DA	3107	1/1	0.82	0.12	47,47,47,47	0
54	MG	BA	3049	1/1	0.82	0.10	37,37,37,37	0
54	MG	AA	1604	1/1	0.82	0.07	43,43,43,43	0
54	MG	DA	3152	1/1	0.82	0.36	54,54,54,54	0
54	MG	CA	1618	1/1	0.82	0.16	38,38,38,38	0
54	MG	BA	3104	1/1	0.82	0.14	16,16,16,16	0
54	MG	DA	3012	1/1	0.82	0.24	54,54,54,54	0
54	MG	BA	3174	1/1	0.83	0.22	24,24,24,24	0
54	MG	CA	1644	1/1	0.83	0.17	38,38,38,38	0
54	MG	DA	3020	1/1	0.83	0.24	75,75,75,75	0
54	MG	DA	3022	1/1	0.83	0.18	50,50,50,50	0
54	MG	BA	3075	1/1	0.83	0.19	3,3,3,3	0
54	MG	DA	3009	1/1	0.83	0.19	62,62,62,62	0
54	MG	CA	1633	1/1	0.83	0.48	61,61,61,61	0
54	MG	BA	3100	1/1	0.83	0.18	52,52,52,52	0
54	MG	DA	3147	1/1	0.83	0.17	45,45,45,45	0
54	MG	BA	3035	1/1	0.83	0.14	4,4,4,4	0
54	MG	DA	3114	1/1	0.83	0.13	57,57,57,57	0
54	MG	DA	3033	1/1	0.83	0.15	53,53,53,53	0
54	MG	DA	3157	1/1	0.83	0.21	42,42,42,42	0
54	MG	BA	3027	1/1	0.83	0.15	47,47,47,47	0
54	MG	DA	3127	1/1	0.83	0.13	59,59,59,59	0
54	MG	BA	3092	1/1	0.84	0.11	20,20,20,20	0
54	MG	AA	1612	1/1	0.84	0.13	33,33,33,33	0
54	MG	BA	3057	1/1	0.84	0.39	37,37,37,37	0
54	MG	AA	1663	1/1	0.84	0.15	51,51,51,51	0
54	MG	BA	3116	1/1	0.84	0.17	29,29,29,29	0
54	MG	DA	3002	1/1	0.84	0.09	52,52,52,52	0
54	MG	DB	201	1/1	0.84	0.12	83,83,83,83	0
54	MG	BA	3080	1/1	0.84	0.06	50,50,50,50	0
54	MG	AA	1602	1/1	0.85	0.14	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3061	1/1	0.85	0.34	69,69,69,69	0
54	MG	CA	1614	1/1	0.85	0.08	45,45,45,45	0
54	MG	AA	1628	1/1	0.85	0.10	45,45,45,45	0
54	MG	BA	3085	1/1	0.85	0.17	29,29,29,29	0
54	MG	DA	3074	1/1	0.85	0.11	49,49,49,49	0
54	MG	BA	3127	1/1	0.85	0.17	7,7,7,7	0
54	MG	DA	3146	1/1	0.85	0.17	54,54,54,54	0
54	MG	BA	3134	1/1	0.85	0.11	32,32,32,32	0
54	MG	BA	3135	1/1	0.85	0.21	46,46,46,46	0
54	MG	DA	3149	1/1	0.85	0.22	53,53,53,53	0
54	MG	AA	1601	1/1	0.85	0.15	53,53,53,53	0
54	MG	DA	3153	1/1	0.85	0.11	56,56,56,56	0
54	MG	DA	3119	1/1	0.85	0.09	52,52,52,52	0
54	MG	AA	1656	1/1	0.85	0.26	43,43,43,43	0
54	MG	BA	3167	1/1	0.85	0.27	35,35,35,35	0
54	MG	DA	3090	1/1	0.85	0.42	66,66,66,66	0
54	MG	CA	1654	1/1	0.85	0.23	40,40,40,40	0
54	MG	BA	3126	1/1	0.86	0.26	25,25,25,25	0
54	MG	AA	1670	1/1	0.86	0.31	50,50,50,50	0
54	MG	DA	3116	1/1	0.86	0.24	64,64,64,64	0
54	MG	BA	3101	1/1	0.86	0.10	8,8,8,8	0
54	MG	DA	3062	1/1	0.86	1.27	73,73,73,73	0
54	MG	CA	1655	1/1	0.86	0.31	53,53,53,53	0
54	MG	CA	1622	1/1	0.86	0.06	53,53,53,53	0
54	MG	BA	3173	1/1	0.86	0.27	24,24,24,24	0
54	MG	BA	3082	1/1	0.86	0.10	12,12,12,12	0
54	MG	AA	1616	1/1	0.86	0.10	57,57,57,57	0
54	MG	AA	1667	1/1	0.86	0.27	47,47,47,47	0
54	MG	DA	3050	1/1	0.86	0.23	58,58,58,58	0
54	MG	DB	203	1/1	0.86	0.05	70,70,70,70	0
54	MG	DA	3056	1/1	0.86	0.10	52,52,52,52	0
54	MG	CA	1646	1/1	0.87	0.17	40,40,40,40	0
54	MG	AA	1660	1/1	0.87	0.54	38,38,38,38	0
54	MG	BA	3181	1/1	0.87	0.24	8,8,8,8	0
54	MG	CA	1652	1/1	0.87	0.10	45,45,45,45	0
54	MG	DA	3115	1/1	0.87	0.14	45,45,45,45	0
54	MG	BA	3079	1/1	0.87	0.06	30,30,30,30	0
54	MG	BA	3018	1/1	0.87	0.15	4,4,4,4	0
54	MG	BA	3137	1/1	0.87	0.14	44,44,44,44	0
54	MG	CA	1616	1/1	0.87	0.12	31,31,31,31	0
54	MG	AA	1630	1/1	0.87	0.11	53,53,53,53	0
54	MG	DA	3091	1/1	0.88	0.07	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3120	1/1	0.88	0.08	24,24,24,24	0
54	MG	BA	3073	1/1	0.88	0.16	30,30,30,30	0
54	MG	DA	3076	1/1	0.88	0.10	55,55,55,55	0
54	MG	AA	1626	1/1	0.88	0.11	24,24,24,24	0
54	MG	AA	1668	1/1	0.88	0.20	41,41,41,41	0
54	MG	DA	3004	1/1	0.88	0.08	58,58,58,58	0
54	MG	CA	1624	1/1	0.88	0.11	33,33,33,33	0
54	MG	DA	3156	1/1	0.88	0.31	44,44,44,44	0
54	MG	DA	3086	1/1	0.88	0.12	61,61,61,61	0
54	MG	DA	3161	1/1	0.88	0.22	39,39,39,39	0
54	MG	DA	3016	1/1	0.88	0.76	65,65,65,65	0
54	MG	BB	204	1/1	0.88	0.35	15,15,15,15	0
54	MG	DA	3109	1/1	0.88	0.11	54,54,54,54	0
54	MG	BA	3163	1/1	0.88	0.18	31,31,31,31	0
54	MG	DA	3083	1/1	0.89	0.11	52,52,52,52	0
54	MG	AA	1618	1/1	0.89	0.08	41,41,41,41	0
54	MG	DA	3067	1/1	0.89	0.08	48,48,48,48	0
54	MG	DA	3150	1/1	0.89	0.27	41,41,41,41	0
54	MG	BA	3046	1/1	0.89	0.13	13,13,13,13	0
54	MG	DA	3036	1/1	0.89	0.18	65,65,65,65	0
54	MG	DA	3133	1/1	0.89	0.13	51,51,51,51	0
54	MG	DA	3024	1/1	0.89	0.08	63,63,63,63	0
54	MG	CA	1610	1/1	0.89	0.10	57,57,57,57	0
54	MG	DA	3111	1/1	0.89	0.23	45,45,45,45	0
54	MG	CA	1639	1/1	0.89	0.12	32,32,32,32	0
54	MG	BB	203	1/1	0.89	0.07	6,6,6,6	0
54	MG	BA	3170	1/1	0.89	0.16	29,29,29,29	0
54	MG	BA	3025	1/1	0.89	0.11	4,4,4,4	0
54	MG	BA	3093	1/1	0.90	0.06	43,43,43,43	0
54	MG	CA	1613	1/1	0.90	0.14	16,16,16,16	0
54	MG	AA	1655	1/1	0.90	0.22	50,50,50,50	0
54	MG	AA	1641	1/1	0.90	0.11	16,16,16,16	0
54	MG	DA	3101	1/1	0.90	0.18	54,54,54,54	0
54	MG	DA	3138	1/1	0.90	0.29	42,42,42,42	0
54	MG	AA	1603	1/1	0.90	0.18	48,48,48,48	0
54	MG	DA	3103	1/1	0.90	0.09	45,45,45,45	0
54	MG	BA	3062	1/1	0.90	0.43	36,36,36,36	0
54	MG	BA	3065	1/1	0.90	0.19	2,2,2,2	0
54	MG	DA	3075	1/1	0.90	0.05	47,47,47,47	0
54	MG	BA	3068	1/1	0.90	0.14	8,8,8,8	0
54	MG	BA	3029	1/1	0.90	0.26	38,38,38,38	0
54	MG	DA	3151	1/1	0.90	0.33	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3044	1/1	0.90	0.10	54,54,54,54	0
54	MG	BA	3074	1/1	0.90	0.14	3,3,3,3	0
54	MG	BA	3129	1/1	0.90	0.09	7,7,7,7	0
54	MG	AA	1625	1/1	0.90	0.06	35,35,35,35	0
54	MG	BA	3009	1/1	0.90	0.16	10,10,10,10	0
54	MG	BA	3038	1/1	0.90	0.13	30,30,30,30	0
54	MG	DA	3026	1/1	0.90	0.09	43,43,43,43	0
54	MG	DA	3164	1/1	0.90	0.23	50,50,50,50	0
54	MG	BA	3042	1/1	0.90	0.35	7,7,7,7	0
54	MG	AA	1661	1/1	0.90	0.16	49,49,49,49	0
54	MG	AA	1653	1/1	0.90	0.15	40,40,40,40	0
54	MG	BA	3146	1/1	0.91	0.23	12,12,12,12	0
54	MG	DA	3142	1/1	0.91	0.19	30,30,30,30	0
54	MG	BA	3151	1/1	0.91	0.32	44,44,44,44	0
54	MG	AA	1605	1/1	0.91	0.19	36,36,36,36	0
54	MG	DA	3113	1/1	0.91	0.27	56,56,56,56	0
54	MG	BA	3155	1/1	0.91	0.18	37,37,37,37	0
54	MG	DA	3065	1/1	0.91	0.23	46,46,46,46	0
54	MG	DA	3066	1/1	0.91	0.11	40,40,40,40	0
54	MG	DA	3118	1/1	0.91	0.06	56,56,56,56	0
54	MG	BA	3161	1/1	0.91	0.18	19,19,19,19	0
54	MG	BA	3059	1/1	0.91	0.30	23,23,23,23	0
54	MG	BA	3110	1/1	0.91	0.24	4,4,4,4	0
54	MG	DA	3126	1/1	0.91	0.17	51,51,51,51	0
54	MG	BA	3113	1/1	0.91	0.14	30,30,30,30	0
54	MG	CA	1642	1/1	0.91	0.19	31,31,31,31	0
54	MG	AA	1664	1/1	0.91	0.19	30,30,30,30	0
54	MG	CA	1625	1/1	0.91	0.15	26,26,26,26	0
54	MG	AA	1650	1/1	0.91	0.15	31,31,31,31	0
54	MG	BA	3172	1/1	0.91	0.14	22,22,22,22	0
54	MG	DA	3031	1/1	0.91	0.26	49,49,49,49	0
54	MG	BA	3121	1/1	0.91	0.23	50,50,50,50	0
54	MG	BA	3048	1/1	0.92	0.09	25,25,25,25	0
54	MG	DA	3032	1/1	0.92	0.12	46,46,46,46	0
54	MG	BA	3177	1/1	0.92	0.14	13,13,13,13	0
54	MG	BA	3180	1/1	0.92	0.17	10,10,10,10	0
54	MG	CA	1640	1/1	0.92	0.17	22,22,22,22	0
54	MG	BA	3004	1/1	0.92	0.11	24,24,24,24	0
54	MG	BA	3188	1/1	0.92	0.21	19,19,19,19	0
54	MG	DA	3040	1/1	0.92	0.16	39,39,39,39	0
54	MG	CA	1643	1/1	0.92	0.39	54,54,54,54	0
54	MG	CA	1619	1/1	0.92	0.07	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3078	1/1	0.92	0.21	26,26,26,26	0
54	MG	CA	1648	1/1	0.92	0.20	45,45,45,45	0
54	MG	BA	3007	1/1	0.92	0.15	17,17,17,17	0
54	MG	AA	1608	1/1	0.92	0.15	20,20,20,20	0
54	MG	DA	3021	1/1	0.92	0.16	50,50,50,50	0
54	MG	AA	1624	1/1	0.92	0.05	30,30,30,30	0
54	MG	AA	1669	1/1	0.92	0.15	28,28,28,28	0
54	MG	DA	3155	1/1	0.92	0.17	43,43,43,43	0
54	MG	DA	3124	1/1	0.92	0.12	52,52,52,52	0
54	MG	AA	1635	1/1	0.92	0.14	49,49,49,49	0
54	MG	DA	3159	1/1	0.92	0.14	57,57,57,57	0
54	MG	BA	3067	1/1	0.92	0.11	4,4,4,4	0
54	MG	BA	3021	1/1	0.92	0.21	0,0,0,0	0
54	MG	DA	3128	1/1	0.92	0.10	61,61,61,61	0
54	MG	DA	3167	1/1	0.92	0.12	39,39,39,39	0
54	MG	BA	3072	1/1	0.92	0.08	6,6,6,6	0
54	MG	AA	1620	1/1	0.92	0.04	51,51,51,51	0
54	MG	BA	3139	1/1	0.92	0.34	0,0,0,0	0
55	VIF	DA	3001	38/38	0.92	0.26	40,51,59,60	0
54	MG	AA	1606	1/1	0.93	0.08	36,36,36,36	0
54	MG	BA	3102	1/1	0.93	0.12	10,10,10,10	0
54	MG	DA	3131	1/1	0.93	0.12	58,58,58,58	0
54	MG	BA	3076	1/1	0.93	0.06	29,29,29,29	0
54	MG	DA	3018	1/1	0.93	0.14	53,53,53,53	0
54	MG	BA	3143	1/1	0.93	0.21	7,7,7,7	0
54	MG	AA	1640	1/1	0.93	0.08	41,41,41,41	0
54	MG	BA	3064	1/1	0.93	0.17	0,0,0,0	0
54	MG	BA	3186	1/1	0.93	0.15	10,10,10,10	0
54	MG	DA	3097	1/1	0.93	0.06	49,49,49,49	0
54	MG	DA	3099	1/1	0.93	0.09	37,37,37,37	0
54	MG	BA	3187	1/1	0.93	0.27	16,16,16,16	0
54	MG	AA	1621	1/1	0.93	0.06	30,30,30,30	0
54	MG	BA	3190	1/1	0.93	0.20	19,19,19,19	0
54	MG	BA	3152	1/1	0.93	0.15	27,27,27,27	0
54	MG	BA	3002	1/1	0.93	0.08	15,15,15,15	0
54	MG	AA	1629	1/1	0.93	0.12	42,42,42,42	0
54	MG	CM	201	1/1	0.93	0.30	50,50,50,50	0
54	MG	BA	3087	1/1	0.93	0.14	0,0,0,0	0
54	MG	DA	3108	1/1	0.93	0.07	60,60,60,60	0
54	MG	BA	3088	1/1	0.93	0.21	8,8,8,8	0
54	MG	AA	1665	1/1	0.93	0.14	48,48,48,48	0
54	MG	DA	3034	1/1	0.93	0.06	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1632	1/1	0.93	0.14	66,66,66,66	0
54	MG	BA	3168	1/1	0.93	0.17	32,32,32,32	0
54	MG	CA	1634	1/1	0.93	0.12	55,55,55,55	0
54	MG	AA	1636	1/1	0.93	0.12	31,31,31,31	0
54	MG	CA	1608	1/1	0.93	0.26	56,56,56,56	0
54	MG	DA	3081	1/1	0.93	0.09	67,67,67,67	0
54	MG	DA	3121	1/1	0.93	0.07	54,54,54,54	0
54	MG	DA	3082	1/1	0.93	0.09	42,42,42,42	0
54	MG	CA	1637	1/1	0.93	0.26	52,52,52,52	0
54	MG	BA	3133	1/1	0.93	0.30	48,48,48,48	0
54	MG	AA	1659	1/1	0.93	0.15	43,43,43,43	0
54	MG	AA	1644	1/1	0.94	0.29	41,41,41,41	0
54	MG	DA	3122	1/1	0.94	0.07	42,42,42,42	0
54	MG	BA	3117	1/1	0.94	0.28	40,40,40,40	0
54	MG	BA	3012	1/1	0.94	0.06	17,17,17,17	0
54	MG	BA	3014	1/1	0.94	0.18	0,0,0,0	0
54	MG	AA	1615	1/1	0.94	0.07	43,43,43,43	0
54	MG	AA	1632	1/1	0.94	0.11	41,41,41,41	0
54	MG	BA	3017	1/1	0.94	0.10	9,9,9,9	0
54	MG	BA	3081	1/1	0.94	0.14	28,28,28,28	0
54	MG	DA	3087	1/1	0.94	0.13	48,48,48,48	0
54	MG	AA	1639	1/1	0.94	0.06	56,56,56,56	0
54	MG	AA	1671	1/1	0.94	0.32	37,37,37,37	0
54	MG	BA	3184	1/1	0.94	0.20	21,21,21,21	0
54	MG	AA	1662	1/1	0.94	0.14	25,25,25,25	0
54	MG	BA	3061	1/1	0.94	0.20	22,22,22,22	0
54	MG	BA	3141	1/1	0.94	0.17	8,8,8,8	0
54	MG	DA	3139	1/1	0.94	0.46	35,35,35,35	0
54	MG	DA	3010	1/1	0.94	0.13	57,57,57,57	0
54	MG	AA	1634	1/1	0.94	0.11	40,40,40,40	0
54	MG	DA	3096	1/1	0.94	0.22	62,62,62,62	0
54	MG	BA	3144	1/1	0.94	0.27	14,14,14,14	0
54	MG	BA	3192	1/1	0.94	0.17	22,22,22,22	0
54	MG	AA	1607	1/1	0.94	0.10	47,47,47,47	0
54	MG	BA	3097	1/1	0.94	0.06	18,18,18,18	0
54	MG	BA	3030	1/1	0.94	0.11	4,4,4,4	0
54	MG	BA	3066	1/1	0.94	0.12	6,6,6,6	0
54	MG	DA	3060	1/1	0.94	0.10	43,43,43,43	0
54	MG	AA	1642	1/1	0.94	0.10	21,21,21,21	0
54	MG	BA	3034	1/1	0.94	0.14	20,20,20,20	0
54	MG	BA	3069	1/1	0.94	0.17	2,2,2,2	0
54	MG	CA	1606	1/1	0.94	0.08	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1607	1/1	0.94	0.10	46,46,46,46	0
54	MG	DA	3158	1/1	0.94	0.22	46,46,46,46	0
54	MG	DA	3068	1/1	0.94	0.10	43,43,43,43	0
54	MG	DA	3112	1/1	0.94	0.18	67,67,67,67	0
54	MG	BA	3162	1/1	0.94	0.23	17,17,17,17	0
54	MG	DA	3071	1/1	0.94	0.13	75,75,75,75	0
54	MG	BA	3008	1/1	0.94	0.09	29,29,29,29	0
54	MG	CA	1645	1/1	0.94	0.12	50,50,50,50	0
54	MG	DB	202	1/1	0.94	0.08	49,49,49,49	0
54	MG	BA	3166	1/1	0.94	0.09	6,6,6,6	0
54	MG	CA	1612	1/1	0.94	0.12	43,43,43,43	0
54	MG	BA	3036	1/1	0.94	0.18	9,9,9,9	0
54	MG	DA	3052	1/1	0.95	0.08	32,32,32,32	0
54	MG	DA	3053	1/1	0.95	0.07	44,44,44,44	0
54	MG	DA	3054	1/1	0.95	0.16	40,40,40,40	0
54	MG	BA	3124	1/1	0.95	0.22	0,0,0,0	0
54	MG	DA	3023	1/1	0.95	0.14	36,36,36,36	0
54	MG	CA	1651	1/1	0.95	0.05	54,54,54,54	0
54	MG	CA	1601	1/1	0.95	0.09	34,34,34,34	0
54	MG	BA	3147	1/1	0.95	0.23	25,25,25,25	0
54	MG	CA	1603	1/1	0.95	0.12	43,43,43,43	0
54	MG	DA	3141	1/1	0.95	0.40	39,39,39,39	0
54	MG	CA	1629	1/1	0.95	0.07	67,67,67,67	0
54	MG	AA	1649	1/1	0.95	0.12	34,34,34,34	0
54	MG	BA	3089	1/1	0.95	0.07	13,13,13,13	0
54	MG	BA	3178	1/1	0.95	0.09	27,27,27,27	0
54	MG	BA	3040	1/1	0.95	0.14	3,3,3,3	0
54	MG	BA	3132	1/1	0.95	0.18	2,2,2,2	0
54	MG	BA	3182	1/1	0.95	0.12	26,26,26,26	0
54	MG	BA	3112	1/1	0.95	0.08	16,16,16,16	0
54	MG	AA	1613	1/1	0.95	0.08	25,25,25,25	0
54	MG	DA	3037	1/1	0.95	0.12	46,46,46,46	0
54	MG	BA	3115	1/1	0.95	0.16	11,11,11,11	0
54	MG	BA	3164	1/1	0.95	0.14	27,27,27,27	0
54	MG	BA	3189	1/1	0.95	0.09	25,25,25,25	0
54	MG	BA	3044	1/1	0.95	0.14	4,4,4,4	0
54	MG	DA	3117	1/1	0.95	0.14	54,54,54,54	0
54	MG	DA	3013	1/1	0.95	0.20	40,40,40,40	0
54	MG	BA	3054	1/1	0.95	0.15	6,6,6,6	0
54	MG	DA	3160	1/1	0.95	0.15	47,47,47,47	0
54	MG	BA	3119	1/1	0.95	0.07	9,9,9,9	0
54	MG	DA	3084	1/1	0.95	0.06	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3020	1/1	0.95	0.09	24,24,24,24	0
54	MG	DA	3166	1/1	0.95	0.32	41,41,41,41	0
54	MG	CA	1620	1/1	0.95	0.07	49,49,49,49	0
54	MG	BA	3058	1/1	0.95	0.11	11,11,11,11	0
54	MG	CA	1647	1/1	0.95	0.20	19,19,19,19	0
54	MG	BB	202	1/1	0.95	0.09	12,12,12,12	0
54	MG	BA	3122	1/1	0.95	0.11	10,10,10,10	0
54	MG	DA	3051	1/1	0.95	0.19	43,43,43,43	0
54	MG	DA	3130	1/1	0.96	0.18	35,35,35,35	0
54	MG	BA	3157	1/1	0.96	0.14	7,7,7,7	0
54	MG	AA	1651	1/1	0.96	0.44	36,36,36,36	0
54	MG	AA	1652	1/1	0.96	0.24	28,28,28,28	0
54	MG	BA	3039	1/1	0.96	0.20	2,2,2,2	0
54	MG	BA	3094	1/1	0.96	0.23	23,23,23,23	0
54	MG	BA	3095	1/1	0.96	0.07	26,26,26,26	0
54	MG	BA	3026	1/1	0.96	0.11	9,9,9,9	0
54	MG	AA	1611	1/1	0.96	0.09	25,25,25,25	0
54	MG	DA	3098	1/1	0.96	0.08	46,46,46,46	0
54	MG	BA	3077	1/1	0.96	0.18	11,11,11,11	0
54	MG	AA	1654	1/1	0.96	0.21	25,25,25,25	0
54	MG	DA	3143	1/1	0.96	0.18	28,28,28,28	0
54	MG	BA	3103	1/1	0.96	0.15	0,0,0,0	0
54	MG	CA	1609	1/1	0.96	0.04	57,57,57,57	0
54	MG	DA	3063	1/1	0.96	0.46	52,52,52,52	0
54	MG	DA	3064	1/1	0.96	0.15	43,43,43,43	0
54	MG	BA	3063	1/1	0.96	0.20	41,41,41,41	0
54	MG	BA	3136	1/1	0.96	0.14	1,1,1,1	0
54	MG	BA	3105	1/1	0.96	0.11	9,9,9,9	0
54	MG	BA	3175	1/1	0.96	0.12	11,11,11,11	0
54	MG	BA	3176	1/1	0.96	0.30	15,15,15,15	0
54	MG	BA	3138	1/1	0.96	0.39	8,8,8,8	0
54	MG	BA	3106	1/1	0.96	0.18	3,3,3,3	0
54	MG	BA	3140	1/1	0.96	0.27	0,0,0,0	0
54	MG	BA	3005	1/1	0.96	0.05	32,32,32,32	0
54	MG	BA	3006	1/1	0.96	0.13	46,46,46,46	0
54	MG	BA	3111	1/1	0.96	0.13	0,0,0,0	0
54	MG	BA	3185	1/1	0.96	0.14	16,16,16,16	0
54	MG	BA	3033	1/1	0.96	0.10	15,15,15,15	0
54	MG	BA	3084	1/1	0.96	0.06	10,10,10,10	0
54	MG	DA	3162	1/1	0.96	0.09	56,56,56,56	0
54	MG	AA	1609	1/1	0.96	0.06	28,28,28,28	0
54	MG	BA	3148	1/1	0.96	0.23	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3086	1/1	0.96	0.10	10,10,10,10	0
54	MG	AA	1610	1/1	0.96	0.18	53,53,53,53	0
54	MG	BA	3118	1/1	0.96	0.19	7,7,7,7	0
54	MG	BA	3052	1/1	0.96	0.07	8,8,8,8	0
54	MG	BA	3194	1/1	0.96	0.15	4,4,4,4	0
54	MG	DQ	201	1/1	0.96	0.34	36,36,36,36	0
54	MG	BA	3156	1/1	0.96	0.10	17,17,17,17	0
55	VIF	BA	3001	38/38	0.96	0.21	3,9,14,18	0
54	MG	BB	201	1/1	0.96	0.09	20,20,20,20	0
54	MG	AA	1633	1/1	0.97	0.14	29,29,29,29	0
54	MG	BN	201	1/1	0.97	0.06	6,6,6,6	0
54	MG	BA	3051	1/1	0.97	0.22	11,11,11,11	0
54	MG	AA	1619	1/1	0.97	0.19	44,44,44,44	0
54	MG	BA	3098	1/1	0.97	0.15	5,5,5,5	0
54	MG	BA	3142	1/1	0.97	0.30	1,1,1,1	0
54	MG	BA	3099	1/1	0.97	0.15	5,5,5,5	0
54	MG	BA	3022	1/1	0.97	0.12	3,3,3,3	0
54	MG	BA	3056	1/1	0.97	0.12	7,7,7,7	0
54	MG	BA	3043	1/1	0.97	0.14	11,11,11,11	0
54	MG	BA	3123	1/1	0.97	0.10	17,17,17,17	0
54	MG	BA	3070	1/1	0.97	0.16	0,0,0,0	0
54	MG	BA	3149	1/1	0.97	0.15	26,26,26,26	0
54	MG	BA	3125	1/1	0.97	0.21	6,6,6,6	0
54	MG	BA	3183	1/1	0.97	0.13	20,20,20,20	0
54	MG	BA	3023	1/1	0.97	0.15	0,0,0,0	0
54	MG	BA	3153	1/1	0.97	0.13	15,15,15,15	0
54	MG	BA	3010	1/1	0.97	0.12	3,3,3,3	0
54	MG	DA	3055	1/1	0.97	0.10	48,48,48,48	0
54	MG	BA	3128	1/1	0.97	0.15	5,5,5,5	0
54	MG	DA	3057	1/1	0.97	0.31	62,62,62,62	0
54	MG	BA	3060	1/1	0.97	0.06	16,16,16,16	0
54	MG	BA	3130	1/1	0.97	0.20	4,4,4,4	0
54	MG	BA	3159	1/1	0.97	0.15	25,25,25,25	0
54	MG	DA	3165	1/1	0.97	0.05	46,46,46,46	0
54	MG	BA	3131	1/1	0.97	0.14	0,0,0,0	0
54	MG	AA	1622	1/1	0.97	0.22	17,17,17,17	0
54	MG	CA	1623	1/1	0.97	0.15	42,42,42,42	0
54	MG	BA	3108	1/1	0.97	0.16	0,0,0,0	0
54	MG	BA	3090	1/1	0.97	0.12	28,28,28,28	0
54	MG	BA	3165	1/1	0.97	0.23	9,9,9,9	0
54	MG	BA	3091	1/1	0.97	0.10	4,4,4,4	0
54	MG	BA	3013	1/1	0.97	0.16	3,3,3,3	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3028	1/1	0.97	0.11	4,4,4,4	0
54	MG	BA	3071	1/1	0.98	0.11	45,45,45,45	0
54	MG	BA	3179	1/1	0.98	0.21	7,7,7,7	0
54	MG	DA	3069	1/1	0.98	0.08	56,56,56,56	0
54	MG	DA	3110	1/1	0.98	0.19	36,36,36,36	0
54	MG	AA	1666	1/1	0.98	0.37	25,25,25,25	0
54	MG	BA	3037	1/1	0.98	0.14	1,1,1,1	0
54	MG	AA	1637	1/1	0.98	0.10	17,17,17,17	0
54	MG	AA	1648	1/1	0.98	0.16	54,54,54,54	0
54	MG	BA	3024	1/1	0.98	0.13	5,5,5,5	0
54	MG	BA	3150	1/1	0.98	0.27	0,0,0,0	0
54	MG	BA	3041	1/1	0.98	0.16	7,7,7,7	0
54	MG	DA	3140	1/1	0.98	0.30	36,36,36,36	0
54	MG	DA	3077	1/1	0.98	0.13	56,56,56,56	0
54	MG	BA	3053	1/1	0.98	0.15	6,6,6,6	0
54	MG	BA	3032	1/1	0.98	0.25	6,6,6,6	0
54	MG	BA	3055	1/1	0.98	0.14	5,5,5,5	0
54	MG	AA	1643	1/1	0.98	0.13	12,12,12,12	0
54	MG	DA	3123	1/1	0.98	0.16	35,35,35,35	0
54	MG	BA	3019	1/1	0.98	0.10	17,17,17,17	0
54	MG	BA	3083	1/1	0.98	0.15	0,0,0,0	0
54	MG	BA	3158	1/1	0.98	0.25	17,17,17,17	0
54	MG	BA	3003	1/1	0.98	0.04	19,19,19,19	0
54	MG	BA	3160	1/1	0.98	0.18	16,16,16,16	0
56	ZN	B4	101	1/1	0.98	0.14	102,102,102,102	0
56	ZN	D4	101	1/1	0.98	0.10	78,78,78,78	0
54	MG	AA	1646	1/1	0.99	0.10	39,39,39,39	0
54	MG	AA	1657	1/1	0.99	0.07	28,28,28,28	0
54	MG	BA	3096	1/1	0.99	0.06	17,17,17,17	0
54	MG	BA	3011	1/1	0.99	0.11	3,3,3,3	0
54	MG	BA	3114	1/1	0.99	0.06	18,18,18,18	0
54	MG	BA	3045	1/1	0.99	0.07	14,14,14,14	0
54	MG	BA	3109	1/1	0.99	0.12	20,20,20,20	0

6.5 Other polymers (i)

There are no such residues in this entry.