Full wwPDB X-ray Structure Validation Report ⓘ

Jun 21, 2026 – 04:16 pm BST

PDB ID	:	6I7V / pdb_00006i7v
Title	:	Ribosomal protein paralogs bL31 and bL36
Authors	:	Pulk, A.; Cate, J.H.D.; Remme, J.; Lilleorg, S.; Reier, K.; Peil, L.; Liiv, A.; Tammsalu, T.
Deposited on	:	2018-11-19
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:

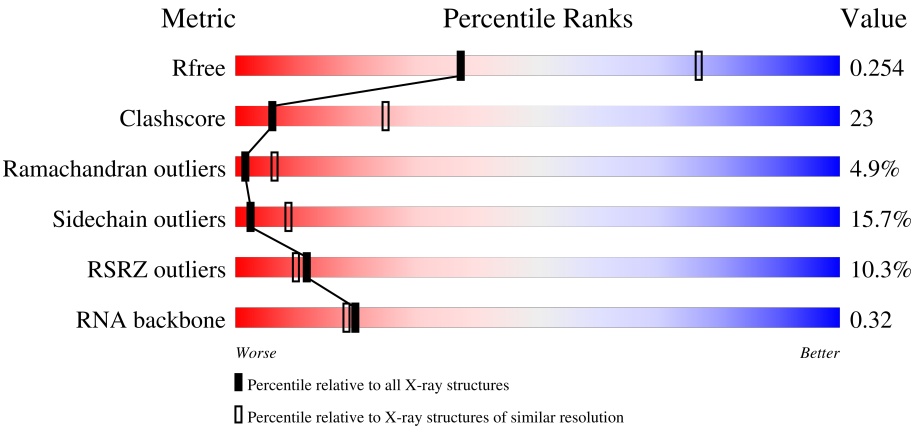
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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}	180053	2481 (2.90-2.90)
Clashscore	190562	2690 (2.90-2.90)
Ramachandran outliers	187476	2623 (2.90-2.90)
Sidechain outliers	187428	2625 (2.90-2.90)
RSRZ outliers	180081	2481 (2.90-2.90)
RNA backbone	3983	1120 (3.10-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	1533	26% 55% 18%
2	BA	1533	3% 26% 55% 19%
3	DA	2903	31% 49% 19%
4	CA	2904	10% 23% 56% 20%

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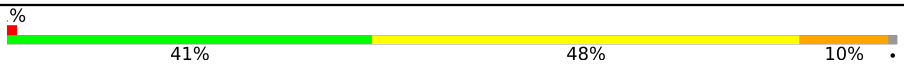
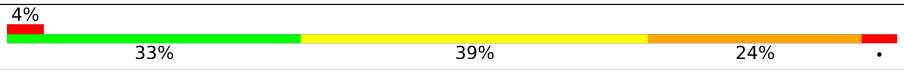
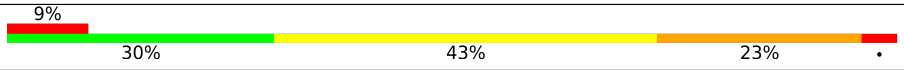
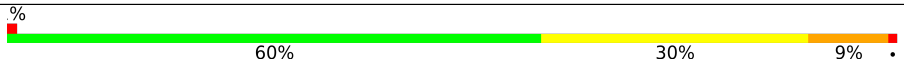
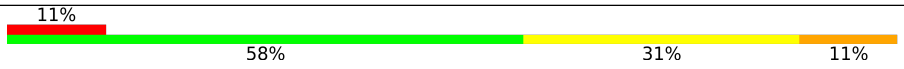
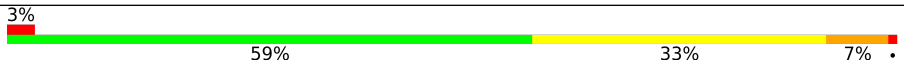
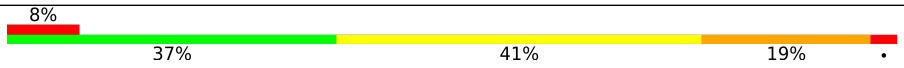
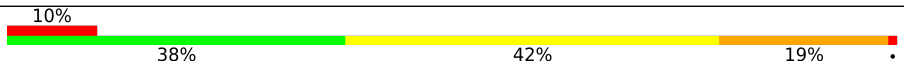
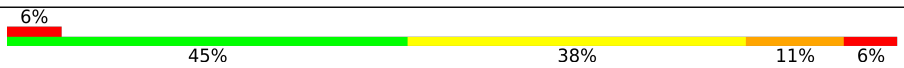
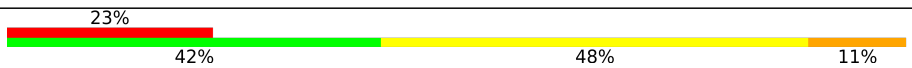
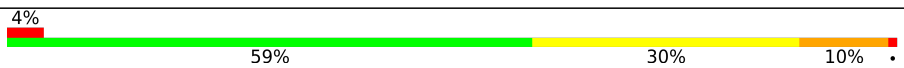
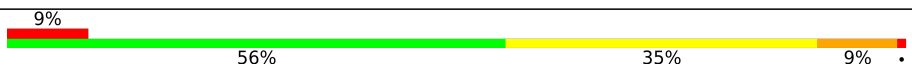
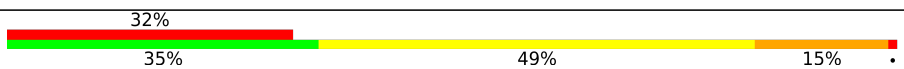
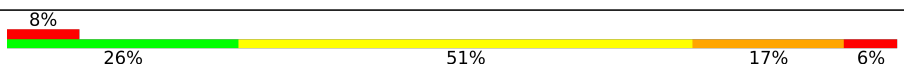
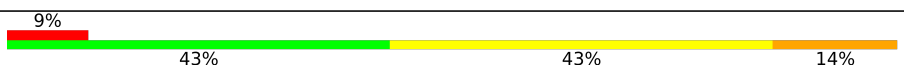
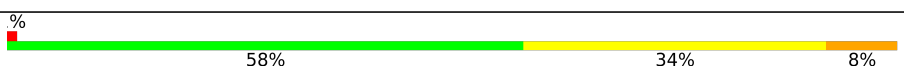
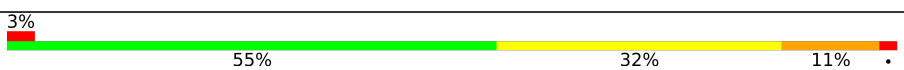
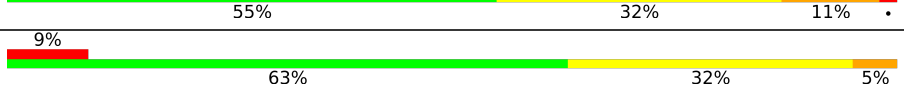
Mol	Chain	Length	Quality of chain
5	CB	119	
5	DB	119	
6	AB	218	
6	BB	218	
7	AC	206	
7	BC	206	
8	AD	205	
8	BD	205	
9	AE	150	
9	BE	150	
10	AF	100	
10	BF	100	
11	AG	151	
11	BG	151	
12	AH	129	
12	BH	129	
13	AI	127	
13	BI	127	
14	AJ	98	
14	BJ	98	
15	AK	117	
15	BK	117	
16	AL	123	
17	AM	114	
17	BM	114	

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Mol	Chain	Length	Quality of chain
18	AN	100	14% 32% 41% 20%
18	BN	100	33% 38% 41% 16%
19	AO	88	3% 44% 40% 14%
19	BO	88	5% 50% 38% 11%
20	AP	82	10% 51% 37% 11%
20	BP	82	46% 43% 44% 13%
21	AQ	80	6% 48% 38% 11%
21	BQ	80	12% 45% 38% 14%
22	AR	55	9% 71% 22% 7%
22	BR	55	5% 47% 42% 7%
23	AS	79	18% 56% 37% 6%
23	BS	79	38% 59% 33% 6%
24	AT	85	8% 40% 46% 8% 6%
24	BT	85	25% 53% 31% 15%
25	AU	54	17% 63% 19% 11% 7%
25	BU	54	4% 41% 39% 17%
26	BL	123	17% 54% 36% 7%
27	CC	271	24% 58% 35% 6%
27	DC	271	% 62% 31% 6%
28	CD	209	36% 58% 36% 5%
29	CE	201	43% 52% 40% 7%
29	DE	201	% 66% 28% 5%
30	CF	177	19% 55% 38% 7%
30	DF	177	2% 55% 39% 6%
31	CG	176	14% 66% 28% 6%

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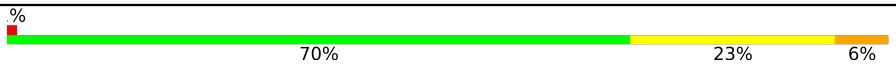
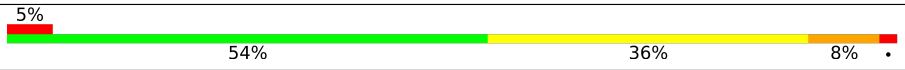
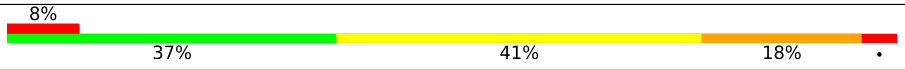
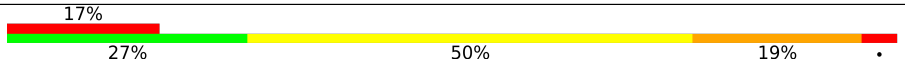
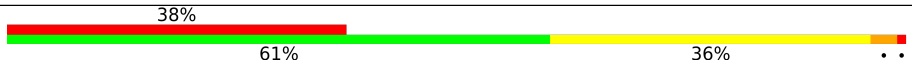
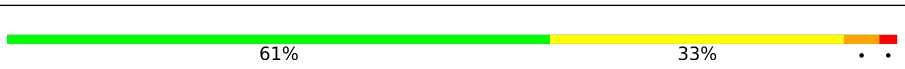
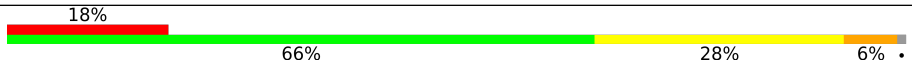
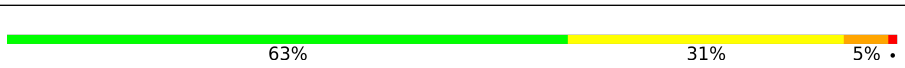
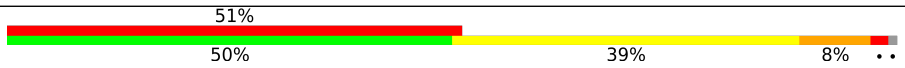
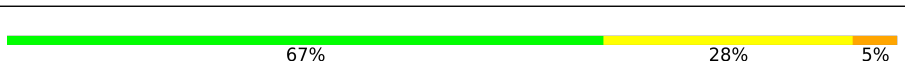
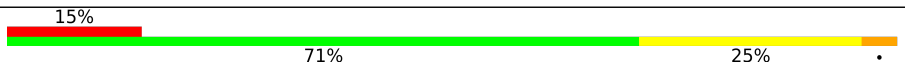
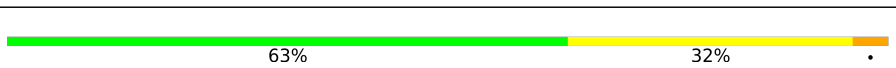
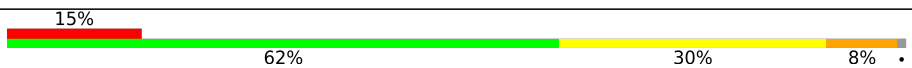
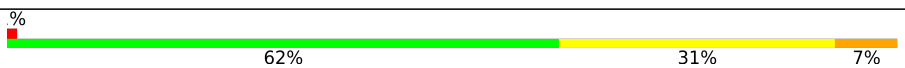
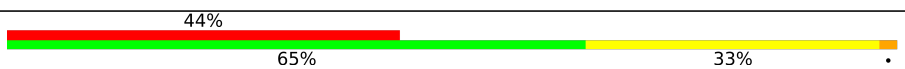
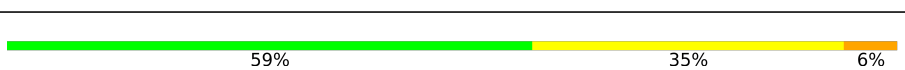
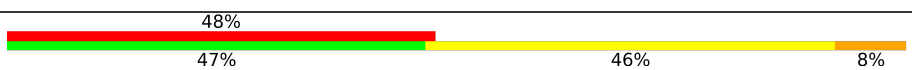
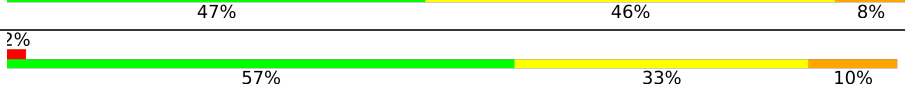
Mol	Chain	Length	Quality of chain
31	DG	176	
32	CH	148	
32	DH	148	
33	CJ	141	
33	DJ	141	
34	CK	142	
34	DK	142	
35	CL	123	
35	DL	123	
36	CM	144	
36	DM	144	
37	CN	136	
37	DN	136	
38	CO	120	
38	DO	120	
39	CP	117	
39	DP	117	
40	CQ	114	
40	DQ	114	
41	CR	117	
41	DR	117	
42	CS	103	
42	DS	103	
43	CT	110	
43	DT	110	

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Mol	Chain	Length	Quality of chain
44	CU	93	62% 49% 35% 14%
44	DU	93	8% 61% 34%
45	CV	102	84% 47% 44% 8%
45	DV	102	% 66% 25% 5%
46	CW	94	5% 71% 24%
46	DW	94	69% 23% 6%
47	CX	76	42% 74% 21%
47	DX	76	% 62% 32% 7%
48	CY	77	42% 47% 47% 6%
48	DY	77	70% 27%
49	CZ	62	53% 56% 35% 6%
49	DZ	62	2% 48% 39% 11%
50	C0	58	14% 50% 41% 7%
50	D0	58	2% 62% 31% 7%
51	C1	56	55% 43% 45% 11%
51	D1	56	4% 57% 34% 7%
52	C2	51	12% 55% 43%
52	D2	51	6% 75% 24%
53	C3	46	65% 43% 43% 11%
53	D3	46	2% 78% 11% 11%
54	C4	64	58% 48% 45% 5%
54	D4	64	67% 28% 5%
55	C5	45	64% 40% 42% 13%
55	D5	45	40% 31% 27%
56	DD	209	68% 26% 6%

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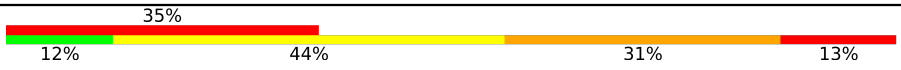
Mol	Chain	Length	Quality of chain
57	D7	68	

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
1	MA6	AA	1519	-	-	X	-
3	2MG	DA	1835	-	-	X	-
3	OMC	DA	2498	-	-	X	-
3	5MU	DA	747	-	-	X	-
58	MG	CA	3017	-	-	-	X
58	MG	CA	3083	-	-	-	X
58	MG	CA	3154	-	-	-	X
61	PG4	DR	202	-	-	X	-
63	PUT	DA	3037	-	-	X	-
63	PUT	DA	3054	-	-	X	-
63	PUT	DP	202	-	-	X	-
65	ACY	DA	3064	-	-	X	-
67	EDO	DA	3059	-	-	X	-
67	EDO	DA	3060	-	-	X	-

2 Entry composition (i)

There are 69 unique types of molecules in this entry. The entry contains 484785 atoms, of which 191884 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 ribosomal RNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	P			
1	AA	1533	49352	14684	16444	6036	10655	1533	0	0	0

- Molecule 2 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	P			
2	BA	1533	49448	14671	16553	6036	10655	1533	0	0	0

- Molecule 3 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trac
			Total	C	H	N	O	P			
3	DA	2897	93383	27779	31129	11456	20120	2899	0	2	0

- Molecule 4 is a RNA chain called 23S ribsomal RNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trac
			Total	C	H	N	O	P			
4	CA	2898	93503	27754	31288	11448	20115	2898	0	0	0

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

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	P			
5	DB	119	3840	1135	1291	466	829	119	0	0	0
5	CB	118	Total	C	H	N	O	P	0	0	0
			3810	1126	1281	464	821	118			

- Molecule 6 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
6	AB	218	Total	C	H	N	O	S	0	0	0
			3431	1081	1726	305	312	7			
6	BB	218	Total	C	H	N	O	S	0	0	0
			3431	1081	1726	305	312	7			

- Molecule 7 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
7	AC	206	Total	C	H	N	O	S	0	0	0
			3317	1028	1692	305	289	3			
7	BC	206	Total	C	H	N	O	S	0	0	0
			3317	1028	1692	305	289	3			

- Molecule 8 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
8	AD	205	Total	C	H	N	O	S	0	0	0
			3347	1026	1704	315	298	4			
8	BD	205	Total	C	H	N	O	S	0	0	0
			3347	1026	1704	315	298	4			

- Molecule 9 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
9	AE	150	Total	C	H	N	O	S	0	0	0
			2251	687	1145	211	202	6			
9	BE	150	Total	C	H	N	O	S	0	0	0
			2251	687	1145	211	202	6			

- Molecule 10 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
10	AF	100	Total	C	H	N	O	S	0	0	0
			1617	515	799	148	149	6			
10	BF	100	Total	C	H	N	O	S	0	0	0
			1617	515	799	148	149	6			

- Molecule 11 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
11	AG	151	Total	C	H	N	O	S	0	0	0
			2419	735	1237	227	216	4			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
11	BG	151	Total	C	H	N	O	S	0	0	0
			2419	735	1237	227	216	4			

- Molecule 12 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
12	AH	129	Total	C	H	N	O	S	0	0	0
			2010	616	1031	173	184	6			
12	BH	129	Total	C	H	N	O	S	0	0	0
			2010	616	1031	173	184	6			

- Molecule 13 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
13	AI	127	Total	C	H	N	O	S	0	0	0
			2091	634	1069	206	179	3			
13	BI	127	Total	C	H	N	O	S	0	0	0
			2091	634	1069	206	179	3			

- Molecule 14 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
14	AJ	98	Total	C	H	N	O	S	0	0	0
			1612	493	825	150	143	1			
14	BJ	98	Total	C	H	N	O	S	0	0	0
			1612	493	825	150	143	1			

- Molecule 15 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
15	AK	117	Total	C	H	N	O	S	0	0	0
			1761	540	884	174	160	3			
15	BK	117	Total	C	H	N	O	S	0	0	0
			1761	540	884	174	160	3			

- Molecule 16 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
16	AL	123	Total	C	H	N	O	S	0	0	0
			1966	591	1009	196	165	5			

- Molecule 17 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
17	AM	114	Total	C	H	N	O	S	0	0	0
			1822	546	938	178	157	3			
17	BM	114	Total	C	H	N	O	S	0	0	0
			1822	546	938	178	157	3			

- Molecule 18 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
18	AN	96	Total	C	H	N	O	S	0	0	0
			1597	483	823	160	128	3			
18	BN	96	Total	C	H	N	O	S	0	0	0
			1597	483	823	160	128	3			

- Molecule 19 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
19	AO	88	Total	C	H	N	O	S	0	0	0
			1450	440	734	146	129	1			
19	BO	88	Total	C	H	N	O	S	0	0	0
			1450	440	734	146	129	1			

- Molecule 20 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
20	AP	82	Total	C	H	N	O	S	0	0	0
			1310	406	661	128	114	1			
20	BP	82	Total	C	H	N	O	S	0	0	0
			1310	406	661	128	114	1			

- Molecule 21 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
21	AQ	80	Total	C	H	N	O	S	0	0	0
			1337	411	688	121	114	3			
21	BQ	80	Total	C	H	N	O	S	0	0	0
			1337	411	688	121	114	3			

- Molecule 22 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AR	55	Total	C	H	N	O	0	0	0
			933	288	477	86	82			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BR	55	Total	C	H	N	O	0	0	0
			933	288	477	86	82			

- Molecule 23 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
23	AS	79	Total	C	H	N	O	S	0	0	0
			1295	408	657	120	108	2			
23	BS	79	Total	C	H	N	O	S	0	0	0
			1299	408	661	120	108	2			

- Molecule 24 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	AT	85	Total	C	H	N	O	S	0	0	0
			1376	411	711	137	114	3			
24	BT	85	Total	C	H	N	O	S	0	0	0
			1376	411	711	137	114	3			

- Molecule 25 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
25	AU	54	Total	C	H	N	O	S	0	0	0
			924	280	473	94	76	1			
25	BU	54	Total	C	H	N	O	S	0	0	0
			924	280	473	94	76	1			

- Molecule 26 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
26	BL	123	Total	C	H	N	O	S	0	0	0
			1968	590	1013	196	165	4			

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
27	CC	271	Total	C	H	N	O	S	0	0	0
			4231	1288	2148	423	365	7			
27	DC	271	Total	C	H	N	O	S	0	0	0
			4231	1288	2148	423	365	7			

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
28	CD	209	Total	C	H	N	O	S	0	0	0
			3175	979	1610	288	294	4			

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

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
29	CE	201	Total	C	H	N	O	S	0	0	0
			3165	974	1613	283	290	5			
29	DE	201	Total	C	H	N	O	S	0	0	0
			3165	974	1613	283	290	5			

- Molecule 30 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
30	CF	177	Total	C	H	N	O	S	0	0	0
			2854	899	1443	249	257	6			
30	DF	177	Total	C	H	N	O	S	0	0	0
			2854	899	1443	249	257	6			

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
31	CG	176	Total	C	H	N	O	S	0	0	0
			2691	832	1368	243	246	2			
31	DG	176	Total	C	H	N	O	S	0	0	0
			2691	832	1368	243	246	2			

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
32	CH	148	Total	C	H	N	O	S	0	0	0
			2236	693	1134	197	211	1			
32	DH	148	Total	C	H	N	O	S	0	0	0
			2236	693	1134	197	211	1			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
CH	?	-	LEU	deletion	UNP P0A7R1
CH	148	GLN	GLU	conflict	UNP P0A7R1
DH	?	-	LEU	deletion	UNP P0A7R1
DH	148	GLN	GLU	conflict	UNP P0A7R1

- Molecule 33 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
33	CJ	141	Total	C	H	N	O	S	0	0	0
			2117	651	1085	179	196	6			
33	DJ	141	Total	C	H	N	O	S	0	0	0
			2117	651	1085	179	196	6			

- Molecule 34 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
34	CK	142	Total	C	H	N	O	S	0	0	0
			2281	714	1152	212	199	4			
34	DK	142	Total	C	H	N	O	S	0	0	0
			2281	714	1152	212	199	4			

- Molecule 35 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
35	CL	122	Total	C	H	N	O	S	0	0	0
			1946	587	1008	180	165	6			
35	DL	123	Total	C	H	N	O	S	0	0	0
			1965	593	1019	181	166	6			

- Molecule 36 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
36	CM	143	Total	C	H	N	O	S	0	0	0
			2161	649	1116	206	189	1			
36	DM	144	Total	C	H	N	O	S	0	0	0
			2178	654	1125	207	190	2			

- Molecule 37 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
37	CN	136	Total	C	H	N	O	S	0	0	0
			2227	686	1153	205	177	6			
37	DN	136	Total	C	H	N	O	S	0	1	0
			2248	691	1166	208	177	6			

- Molecule 38 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
38	CO	120	Total	C	H	N	O	S	0	0	0
			1955	593	994	196	167	5			
38	DO	120	Total	C	H	N	O	S	0	0	0
			1955	593	994	196	167	5			

- Molecule 39 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
39	CP	116	Total	C	H	N	O		0	0	0
			1812	552	920	178	162				
39	DP	117	Total	C	H	N	O	S	0	0	0
			1829	557	929	179	163	1			

- Molecule 40 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
40	CQ	114	Total	C	H	N	O	S	0	0	0
			1877	574	960	179	163	1			
40	DQ	114	Total	C	H	N	O	S	0	0	0
			1877	574	960	179	163	1			

- Molecule 41 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	CR	117	Total	C	H	N	O	0	0	0
			1965	604	1018	192	151			
41	DR	117	Total	C	H	N	O	0	0	0
			1965	604	1018	192	151			

- Molecule 42 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
42	CS	103	Total	C	H	N	O	S	0	0	0
			1648	516	832	153	145	2			
42	DS	103	Total	C	H	N	O	S	0	0	0
			1648	516	832	153	145	2			

- Molecule 43 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
43	CT	110	Total	C	H	N	O	S	0	0	0
			1772	532	915	166	156	3			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
43	DT	110	Total	C	H	N	O	S	0	0	0
			1772	532	915	166	156	3			

- Molecule 44 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
44	CU	93	Total	C	H	N	O	S	0	0	0
			1541	466	802	139	132	2			
44	DU	92	Total	C	H	N	O	S	0	0	0
			1525	461	794	138	131	1			

- Molecule 45 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	CV	102	Total	C	H	N	O	0	0	0
			1610	492	830	146	142			
45	DV	102	Total	C	H	N	O	0	0	0
			1610	492	830	146	142			

- Molecule 46 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
46	CW	94	Total	C	H	N	O	S	0	0	0
			1527	479	774	137	134	3			
46	DW	94	Total	C	H	N	O	S	0	0	0
			1527	479	774	137	134	3			

- Molecule 47 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
47	CX	75	Total	C	H	N	O	S	0	0	0
			1148	353	579	113	102	1			
47	DX	76	Total	C	H	N	O	S	0	2	0
			1197	365	606	121	104	1			

- Molecule 48 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
48	CY	77	Total	C	H	N	O	S	0	0	0
			1274	388	649	129	106	2			
48	DY	77	Total	C	H	N	O	S	0	0	0
			1274	388	649	129	106	2			

- Molecule 49 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
49	CZ	62	Total	C	H	N	O	S	0	0	0
			1031	308	530	98	94	1			
49	DZ	62	Total	C	H	N	O	S	0	0	0
			1031	308	530	98	94	1			

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

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
50	C0	58	Total	C	H	N	O	S	0	0	0
			935	281	486	87	79	2			
50	D0	58	Total	C	H	N	O	S	0	1	0
			935	281	486	87	79	2			

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
51	C1	56	Total	C	H	N	O	S	0	0	0
			898	269	454	94	80	1			
51	D1	56	Total	C	H	N	O	S	0	0	0
			898	269	454	94	80	1			

- Molecule 52 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	C2	50	Total	C	H	N	O	0	0	0
			847	263	438	75	71			
52	D2	51	Total	C	H	N	O	0	0	0
			857	266	443	76	72			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C2	53	ALA	-	expression tag	UNP P0A7N9
D2	53	ALA	-	expression tag	UNP P0A7N9

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
53	C3	46	Total	C	H	N	O	S	0	0	0
			791	228	414	90	57	2			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
53	D3	46	Total	C	H	N	O	S	0	0	0
			791	228	414	90	57	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
54	C4	64	Total	C	H	N	O	S	0	0	0
			1072	323	568	105	74	2			
54	D4	64	Total	C	H	N	O	S	0	0	0
			1072	323	568	105	74	2			

- Molecule 55 is a protein called 50S ribosomal protein L36 2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
55	C5	44	Total	C	H	N	O	S	0	0	0
			754	224	395	76	56	3			
55	D5	45	Total	C	H	N	O	S	0	0	0
			763	230	395	78	57	3			

- Molecule 56 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
56	DD	209	Total	C	H	N	O	S	0	0	0
			3178	980	1612	288	294	4			

- Molecule 57 is a protein called 50S ribosomal protein L31 type B.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
57	D7	68	Total	C	H	N	O	S	0	0	0
			707	336	177	89	104	1			

- Molecule 58 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AA	57	Total	Mg	0	0
			57	57		
58	BA	49	Total	Mg	0	0
			49	49		
58	DA	156	Total	Mg	0	0
			156	156		
58	CA	176	Total	Mg	0	0
			176	176		

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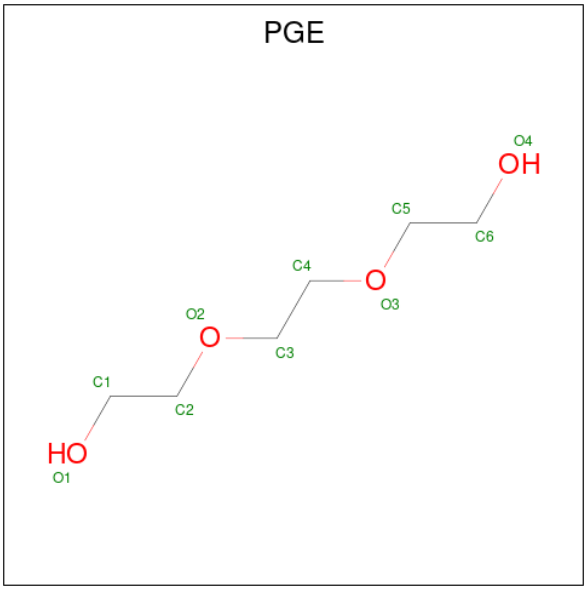
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	DB	4	Total Mg 4 4	0	0
58	CB	3	Total Mg 3 3	0	0
58	CM	1	Total Mg 1 1	0	0
58	CR	1	Total Mg 1 1	0	0
58	C3	1	Total Mg 1 1	0	0
58	DD	1	Total Mg 1 1	0	0
58	DM	1	Total Mg 1 1	0	0
58	DR	2	Total Mg 2 2	0	0
58	D5	1	Total Mg 1 1	0	0

- Molecule 59 is TRIETHYLENE GLYCOL (CCD ID: PGE) (formula: $C_6H_{14}O_4$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AA	1	Total C H O 24 6 14 4	0	0
59	DA	1	Total C H O 24 6 14 4	0	0

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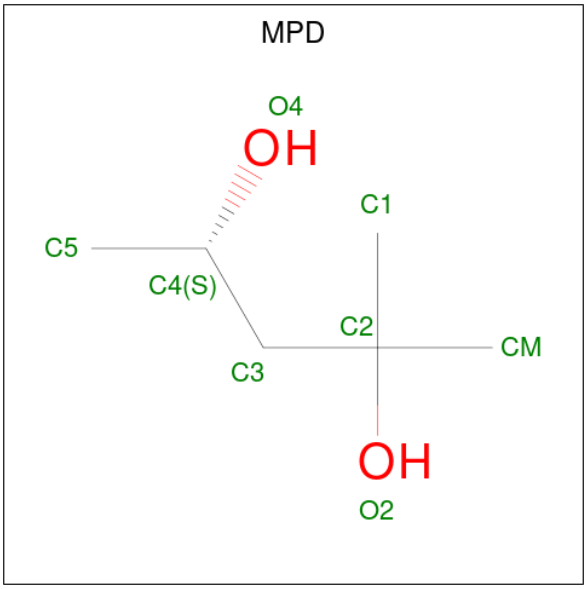
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
59	DA	1	Total	C	H	O	0	0
			24	6	14	4		
59	DD	1	Total	C	H	O	0	0
			24	6	14	4		
59	DS	1	Total	C	H	O	0	0
			24	6	14	4		
59	DT	1	Total	C	H	O	0	0
			24	6	14	4		
59	DU	1	Total	C	H	O	0	0
			24	6	14	4		
59	D3	1	Total	C	H	O	0	0
			24	6	14	4		

- Molecule 60 is (4S)-2-METHYL-2,4-PENTANEDIOL (CCD ID: MPD) (formula: $C_6H_{14}O_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
60	AA	1	Total	C	H	O	0	0
			22	6	14	2		
60	DA	1	Total	C	H	O	0	0
			22	6	14	2		
60	DA	1	Total	C	H	O	0	0
			22	6	14	2		
60	DA	1	Total	C	H	O	0	0
			22	6	14	2		
60	DA	1	Total	C	H	O	0	0
			22	6	14	2		

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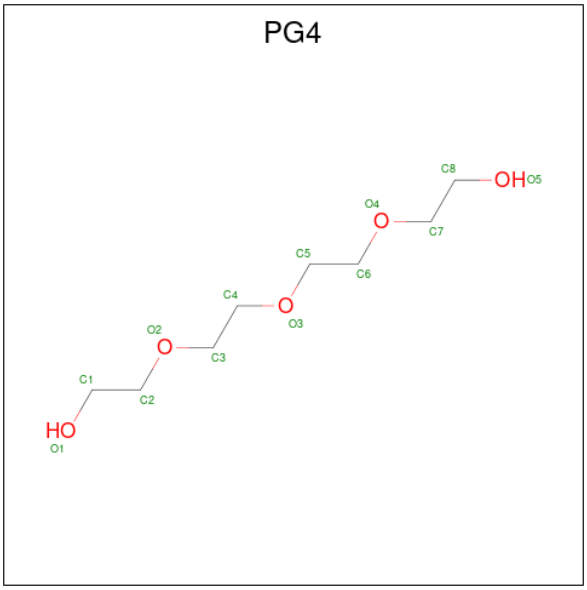
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	DA	1	Total C H O 22 6 14 2	0	0
60	DA	1	Total C H O 22 6 14 2	0	0
60	DA	1	Total C H O 22 6 14 2	0	0
60	DE	1	Total C H O 22 6 14 2	0	0
60	DE	1	Total C H O 22 6 14 2	0	0
60	DK	1	Total C H O 22 6 14 2	0	0
60	DN	1	Total C H O 22 6 14 2	0	0
60	DT	1	Total C H O 22 6 14 2	0	0

- Molecule 61 is TETRAETHYLENE GLYCOL (CCD ID: PG4) (formula: $C_8H_{18}O_5$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	BA	1	Total C O 13 8 5	0	0
61	DA	1	Total C O 13 8 5	0	0
61	DQ	1	Total C O 13 8 5	0	0

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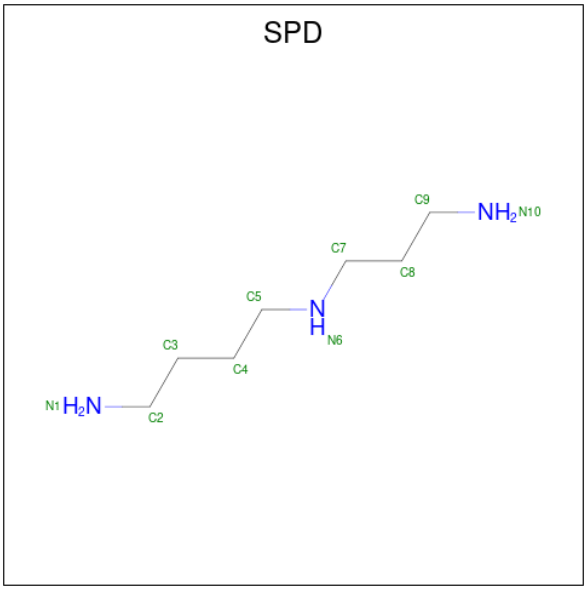
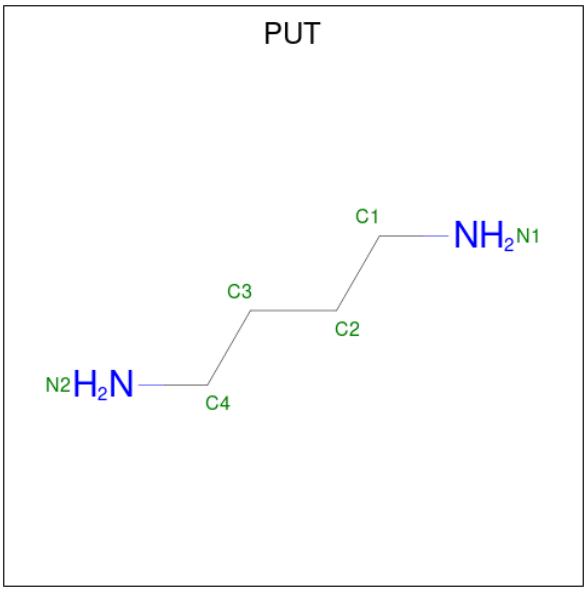
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	DR	1	Total C O 13 8 5	0	0
61	DS	1	Total C O 13 8 5	0	0

- Molecule 62 is SPERMIDINE (CCD ID: SPD) (formula: $C_7H_{19}N_3$).



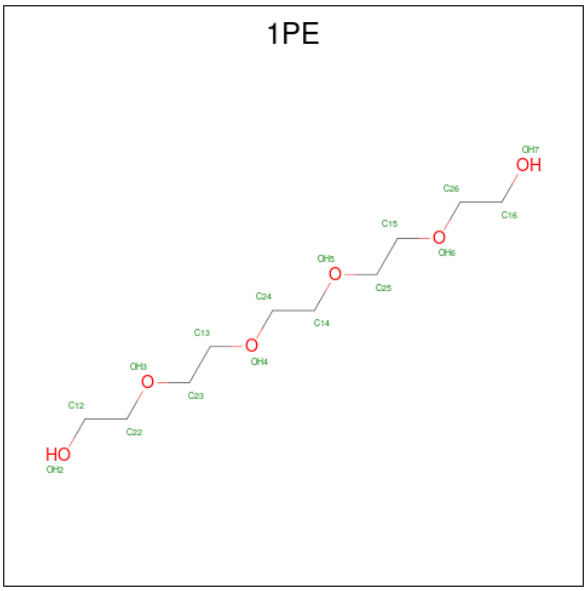
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	DA	1	Total C N 10 7 3	0	0
62	DA	1	Total C N 10 7 3	0	0
62	DA	1	Total C N 10 7 3	0	0

- Molecule 63 is 1,4-DIAMINOBUTANE (CCD ID: PUT) (formula: $C_4H_{12}N_2$).



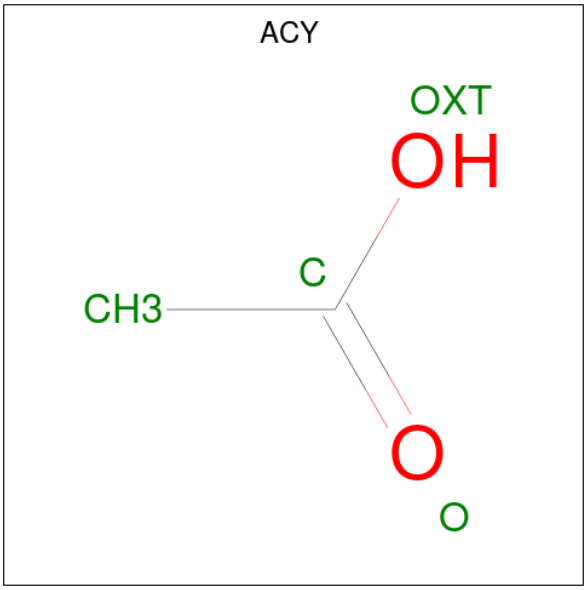
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	DA	1	Total C N 6 4 2	0	0
63	DA	1	Total C N 6 4 2	0	0
63	DA	1	Total C N 6 4 2	0	0
63	DA	1	Total C N 6 4 2	0	0
63	DM	1	Total C N 6 4 2	0	0
63	DP	1	Total C N 6 4 2	0	0
63	D5	1	Total C N 6 4 2	0	0

- Molecule 64 is PENTAETHYLENE GLYCOL (CCD ID: 1PE) (formula: $C_{10}H_{22}O_6$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
64	DA	1	Total C O 16 10 6	0	0
64	DA	1	Total C O 16 10 6	0	0

- Molecule 65 is ACETIC ACID (CCD ID: ACY) (formula: $C_2H_4O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	DA	1	Total C H O 7 2 3 2	0	0
65	DA	1	Total C H O 7 2 3 2	0	0

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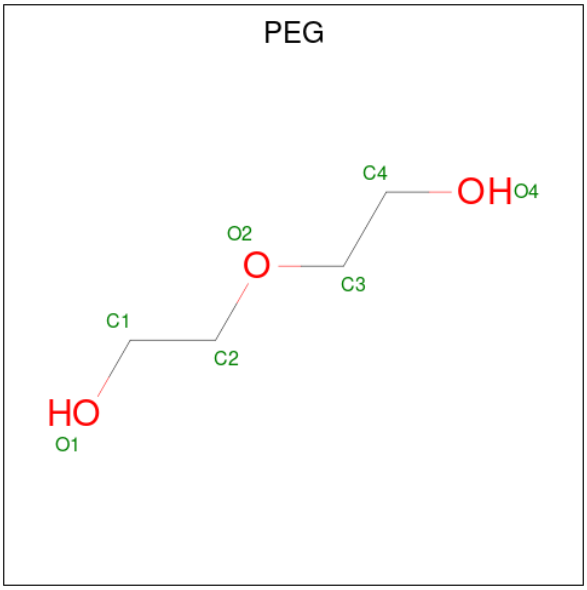
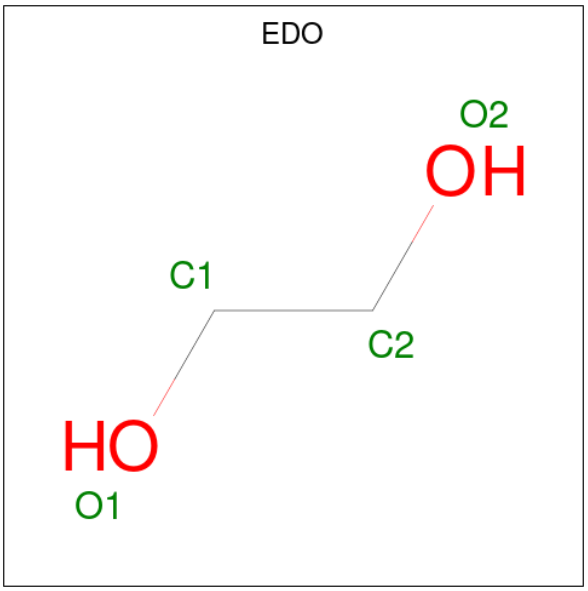
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	DA	1	Total C H O 7 2 3 2	0	0

- Molecule 66 is DI(HYDROXYETHYL)ETHER (CCD ID: PEG) (formula: $C_4H_{10}O_3$).



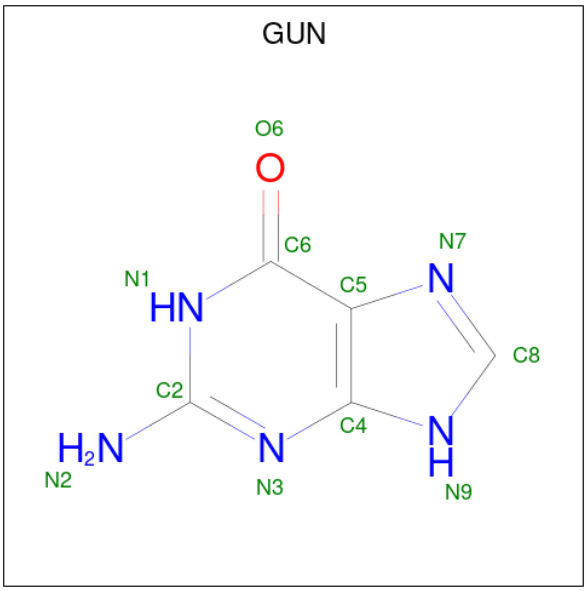
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
66	DA	1	Total C O 7 4 3	0	0
66	DA	1	Total C O 7 4 3	0	0
66	DA	1	Total C O 7 4 3	0	0
66	DA	1	Total C O 7 4 3	0	0
66	DA	1	Total C O 7 4 3	0	0
66	DP	1	Total C O 7 4 3	0	0
66	DQ	1	Total C O 7 4 3	0	0
66	D1	1	Total C O 7 4 3	0	0
66	D3	1	Total C O 7 4 3	0	0

- Molecule 67 is 1,2-ETHANEDIOL (CCD ID: EDO) (formula: $C_2H_6O_2$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
67	DA	1	Total	C	O	0	0
			4	2	2		
67	DA	1	Total	C	O	0	0
			4	2	2		
67	DA	1	Total	C	O	0	0
			4	2	2		
67	DA	1	Total	C	O	0	0
			4	2	2		
67	DA	1	Total	C	O	0	0
			4	2	2		
67	DA	1	Total	C	O	0	0
			4	2	2		
67	DA	1	Total	C	O	0	0
			4	2	2		
67	DB	1	Total	C	O	0	0
			4	2	2		
67	DB	1	Total	C	O	0	0
			4	2	2		
67	DB	1	Total	C	O	0	0
			4	2	2		
67	DR	1	Total	C	O	0	0
			4	2	2		
67	D1	1	Total	C	O	0	0
			4	2	2		

- Molecule 68 is GUANINE (CCD ID: GUN) (formula: $C_5H_5N_5O$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
68	DA	1	Total C N O 11 5 5 1	0	0

- Molecule 69 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	AA	371	Total O 371 371	0	0
69	BA	389	Total O 389 389	0	0
69	DA	3565	Total O 3565 3565	0	0
69	CA	1042	Total O 1042 1042	0	0
69	DB	90	Total O 90 90	0	0
69	CB	19	Total O 19 19	0	0
69	AB	11	Total O 11 11	0	0
69	AC	6	Total O 6 6	0	0
69	AD	3	Total O 3 3	0	0
69	AE	11	Total O 11 11	0	0
69	AF	5	Total O 5 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	AG	7	Total O 7 7	0	0
69	AH	2	Total O 2 2	0	0
69	AI	1	Total O 1 1	0	0
69	AJ	2	Total O 2 2	0	0
69	AK	8	Total O 8 8	0	0
69	AL	5	Total O 5 5	0	0
69	AM	7	Total O 7 7	0	0
69	AN	7	Total O 7 7	0	0
69	AO	1	Total O 1 1	0	0
69	AP	2	Total O 2 2	0	0
69	AQ	5	Total O 5 5	0	0
69	AS	3	Total O 3 3	0	0
69	AT	5	Total O 5 5	0	0
69	AU	2	Total O 2 2	0	0
69	BB	5	Total O 5 5	0	0
69	BC	3	Total O 3 3	0	0
69	BD	9	Total O 9 9	0	0
69	BE	5	Total O 5 5	0	0
69	BF	7	Total O 7 7	0	0
69	BG	7	Total O 7 7	0	0
69	BH	5	Total O 5 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	BI	4	Total O 4 4	0	0
69	BJ	1	Total O 1 1	0	0
69	BK	1	Total O 1 1	0	0
69	BL	3	Total O 3 3	0	0
69	BM	3	Total O 3 3	0	0
69	BN	8	Total O 8 8	0	0
69	BO	4	Total O 4 4	0	0
69	BP	4	Total O 4 4	0	0
69	BQ	1	Total O 1 1	0	0
69	BS	2	Total O 2 2	0	0
69	BT	5	Total O 5 5	0	0
69	BU	3	Total O 3 3	0	0
69	CC	8	Total O 8 8	0	0
69	CD	8	Total O 8 8	0	0
69	CE	7	Total O 7 7	0	0
69	CF	2	Total O 2 2	0	0
69	CG	4	Total O 4 4	0	0
69	CH	4	Total O 4 4	0	0
69	CK	5	Total O 5 5	0	0
69	CL	5	Total O 5 5	0	0
69	CM	8	Total O 8 8	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	CN	5	Total O 5 5	0	0
69	CO	5	Total O 5 5	0	0
69	CP	1	Total O 1 1	0	0
69	CQ	5	Total O 5 5	0	0
69	CR	3	Total O 3 3	0	0
69	CS	5	Total O 5 5	0	0
69	CT	3	Total O 3 3	0	0
69	CU	6	Total O 6 6	0	0
69	CV	7	Total O 7 7	0	0
69	CW	1	Total O 1 1	0	0
69	CZ	2	Total O 2 2	0	0
69	C0	3	Total O 3 3	0	0
69	C1	1	Total O 1 1	0	0
69	C2	1	Total O 1 1	0	0
69	C3	5	Total O 5 5	0	0
69	C4	3	Total O 3 3	0	0
69	C5	1	Total O 1 1	0	0
69	DC	59	Total O 59 59	0	0
69	DD	80	Total O 80 80	0	0
69	DE	51	Total O 51 51	0	0
69	DF	5	Total O 5 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	DG	5	Total O 5 5	0	0
69	DH	2	Total O 2 2	0	0
69	DJ	4	Total O 4 4	0	0
69	DK	37	Total O 37 37	0	0
69	DL	30	Total O 30 30	0	0
69	DM	52	Total O 52 52	0	0
69	DN	47	Total O 47 47	0	0
69	DO	33	Total O 33 33	0	0
69	DP	14	Total O 14 14	0	0
69	DQ	33	Total O 33 33	0	0
69	DR	52	Total O 52 52	0	0
69	DS	40	Total O 40 40	0	0
69	DT	57	Total O 57 57	0	0
69	DU	10	Total O 10 10	0	0
69	DV	14	Total O 14 14	0	0
69	DW	18	Total O 18 18	0	0
69	DX	15	Total O 15 15	0	0
69	DY	7	Total O 7 7	0	0
69	DZ	2	Total O 2 2	0	0
69	D0	14	Total O 14 14	0	0
69	D1	48	Total O 48 48	0	0

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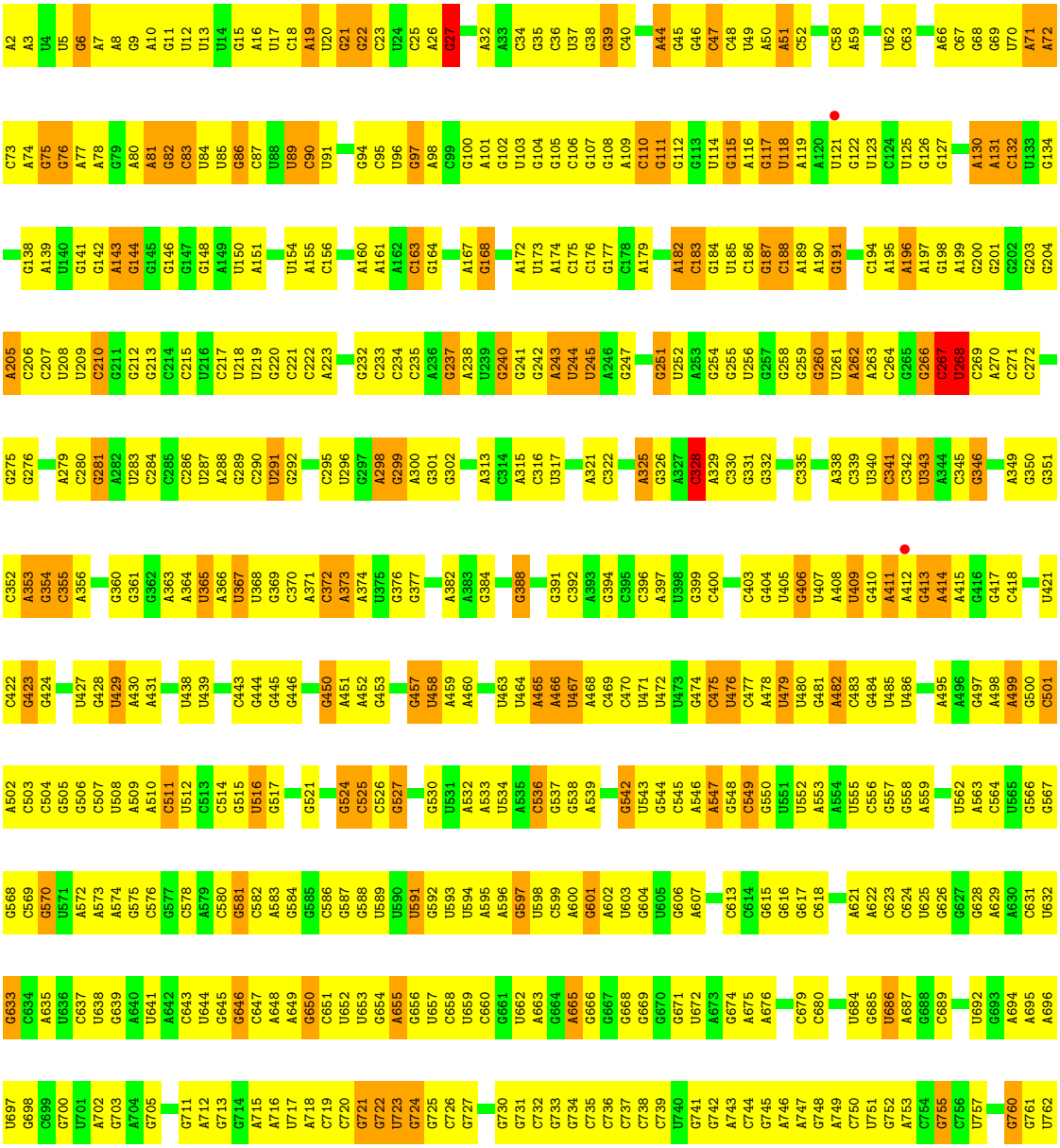
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	D2	4	Total O 4 4	0	0
69	D3	24	Total O 24 24	0	0
69	D4	27	Total O 27 27	0	0
69	D5	9	Total O 9 9	0	0

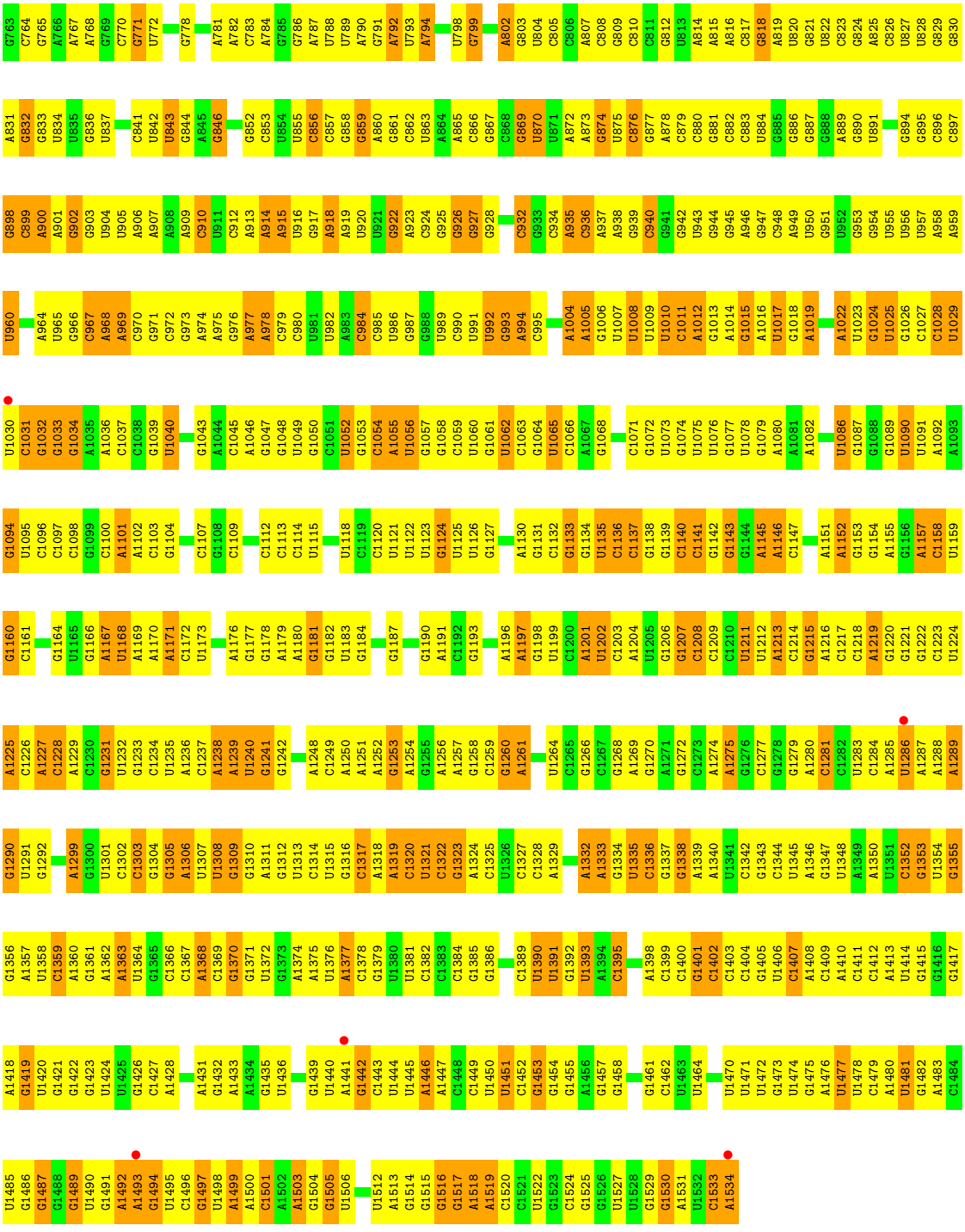
3 Residue-property plots (i)

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 ribosomal RNA

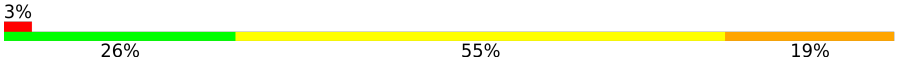
Chain AA: 26% 55% 18%

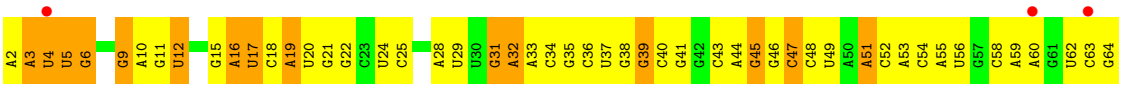


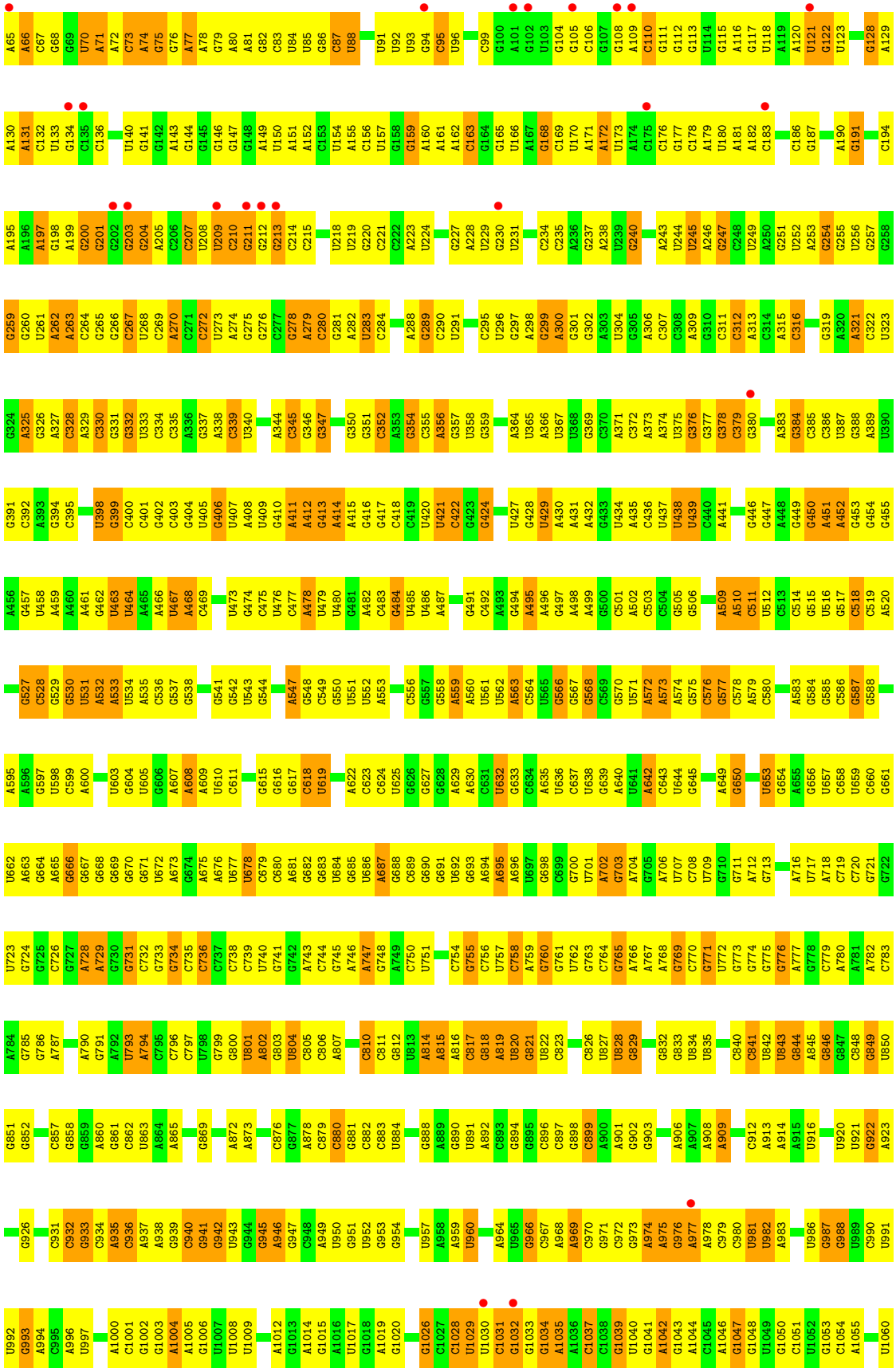


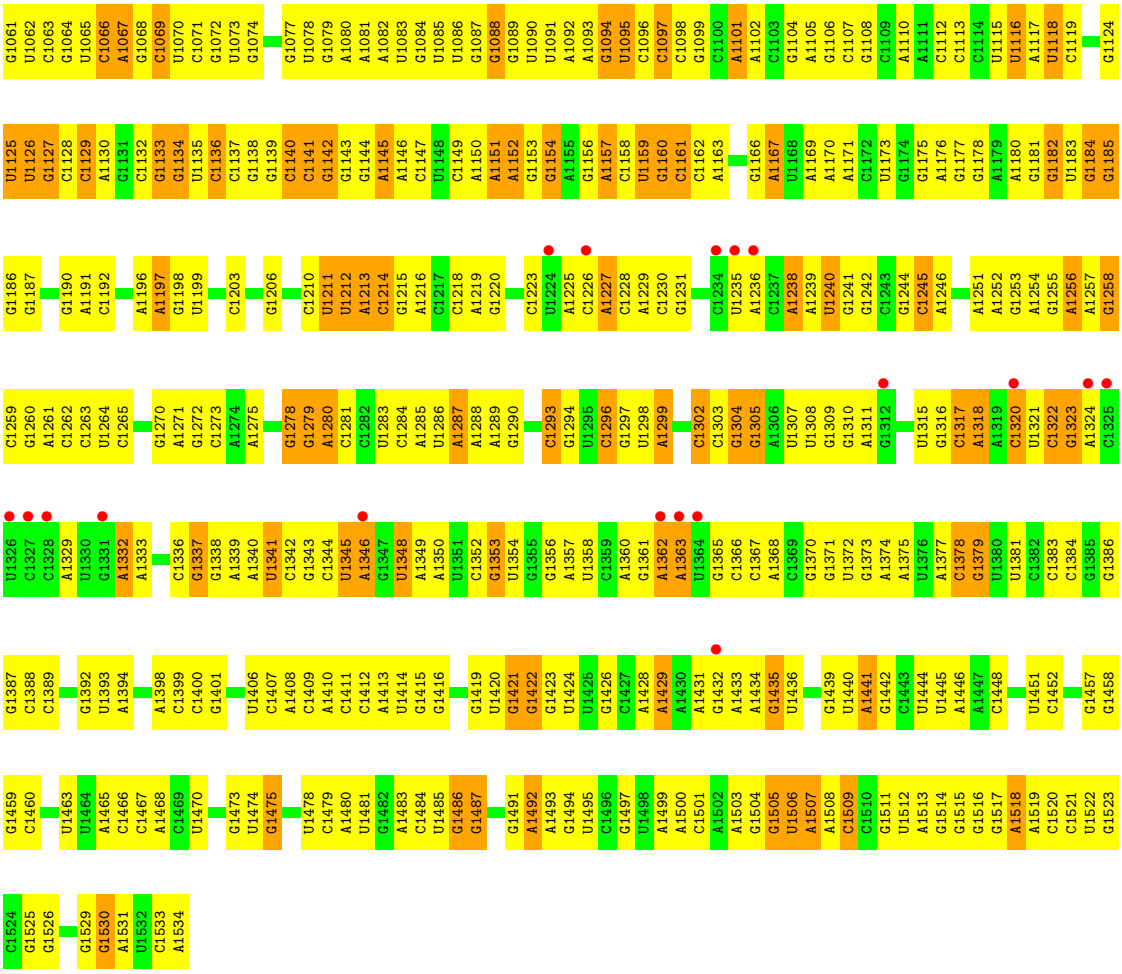
• Molecule 2: 16S ribosomal RNA

Chain BA:



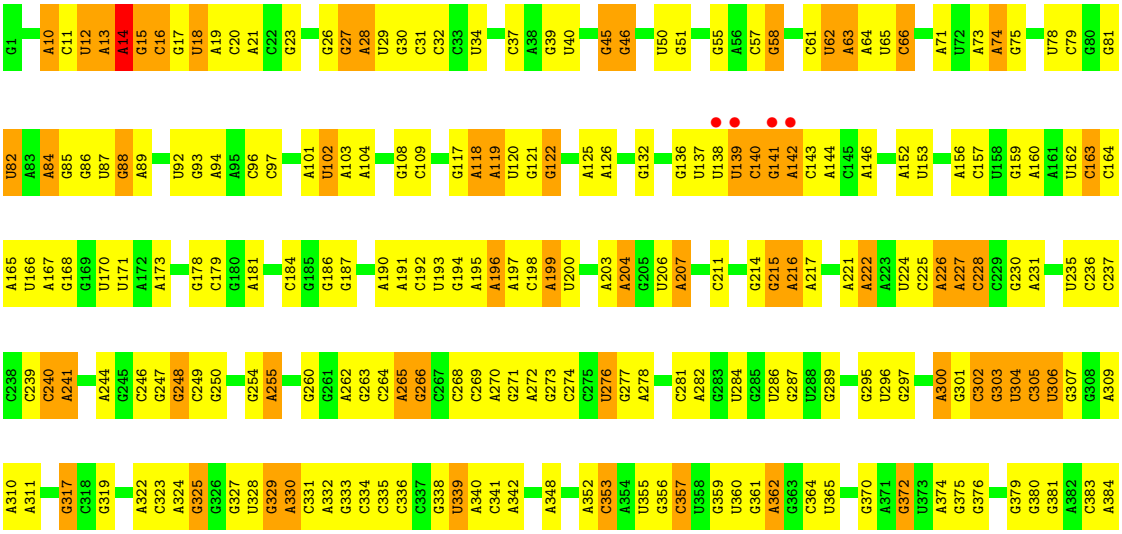


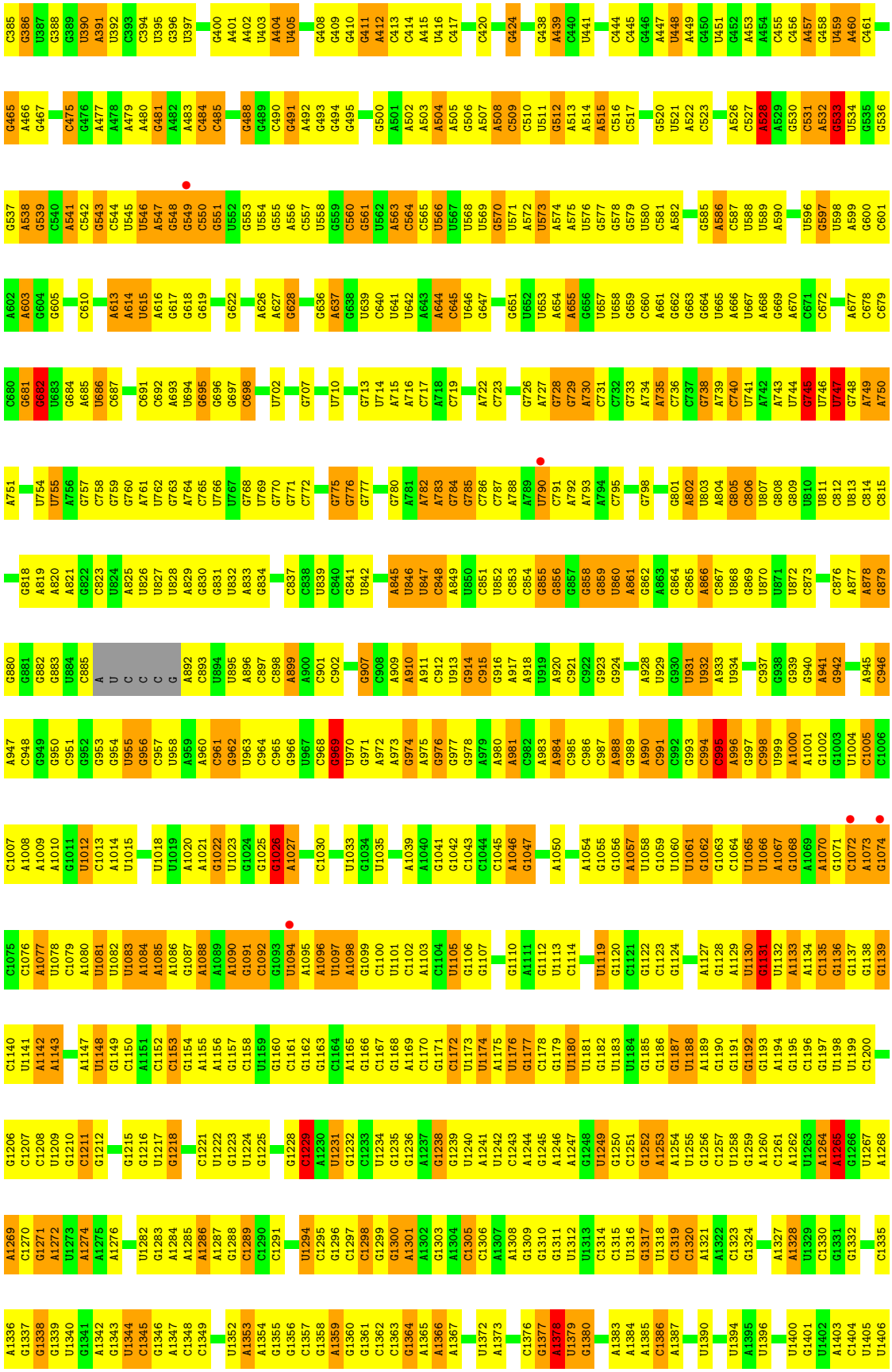


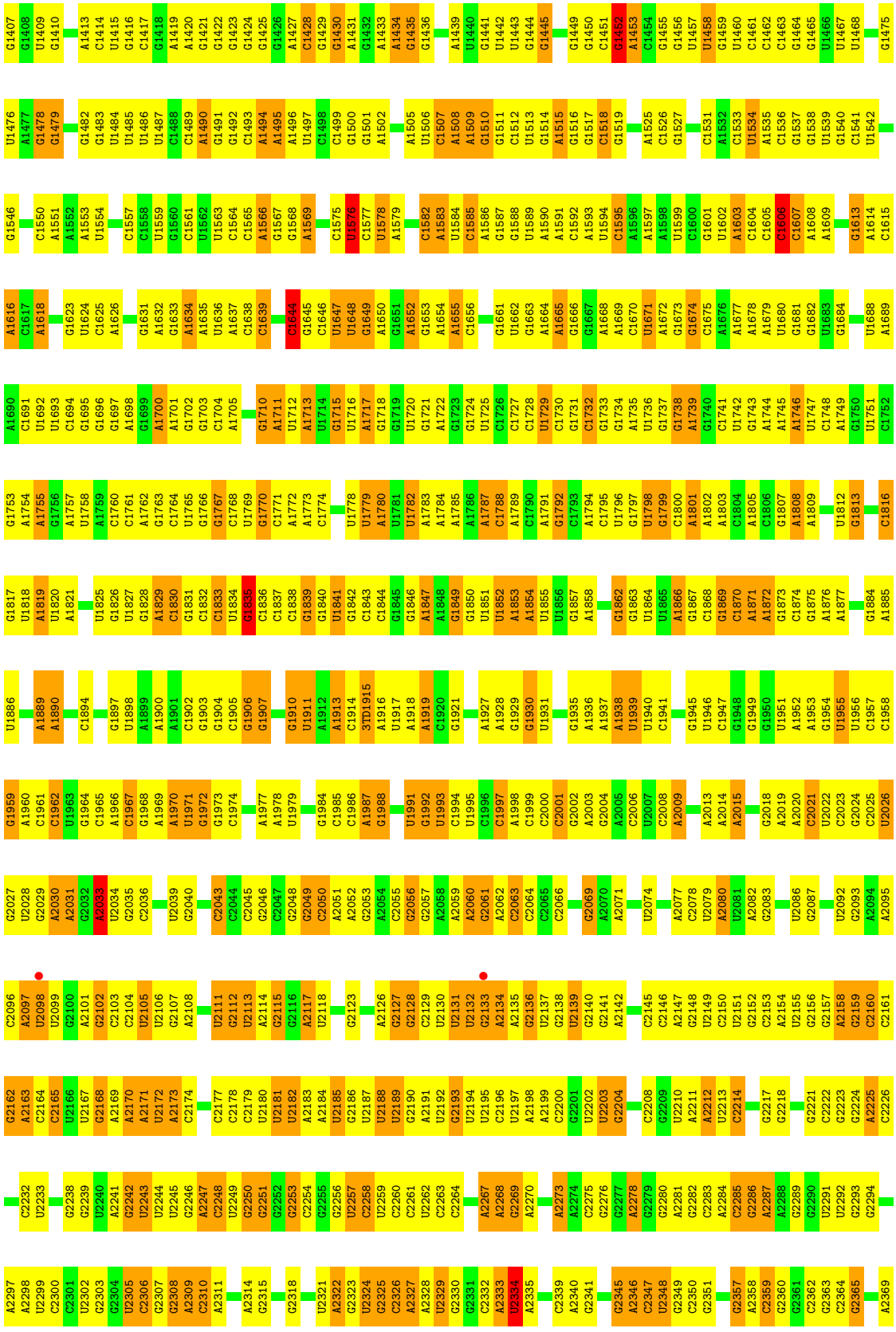


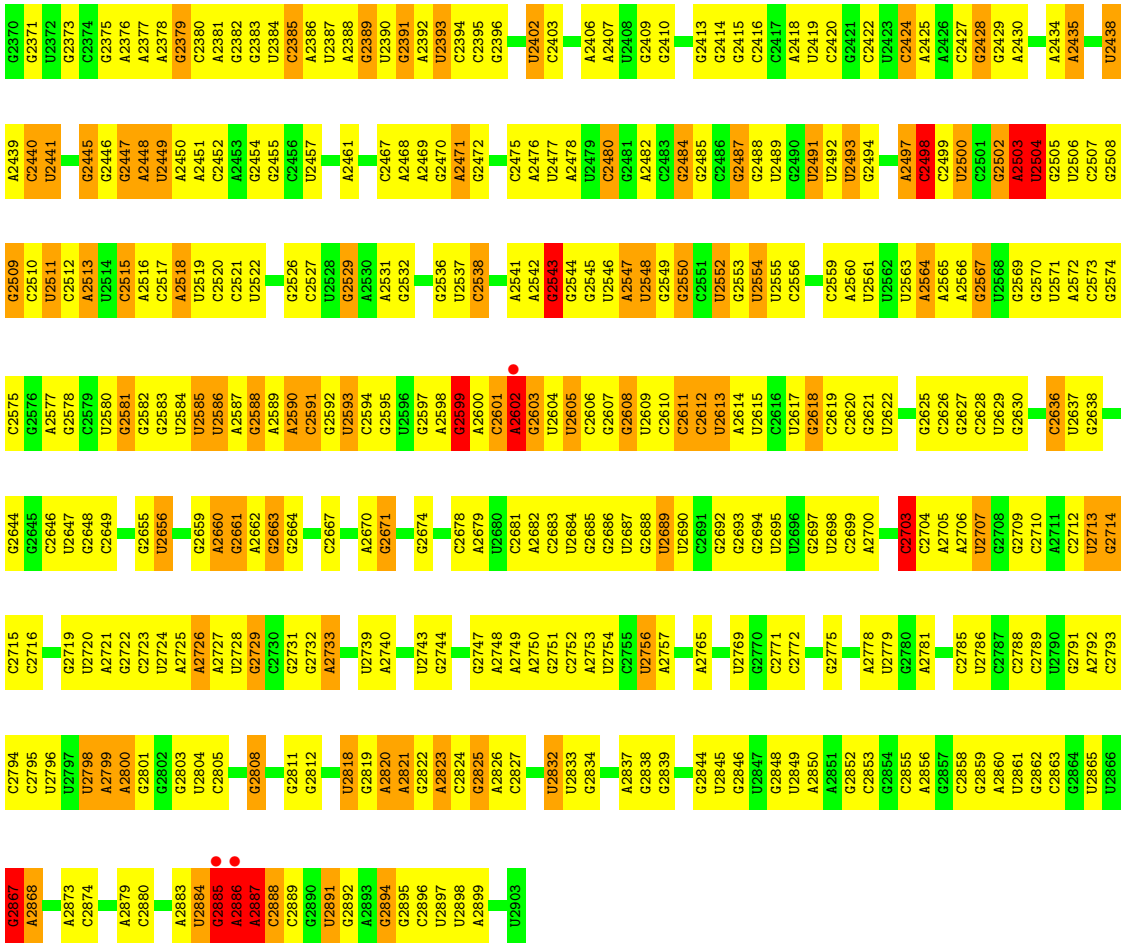
• Molecule 3: 23S ribosomal RNA

Chain DA:



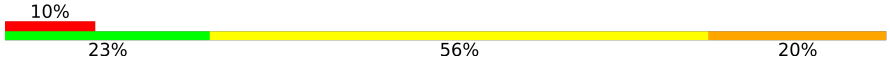


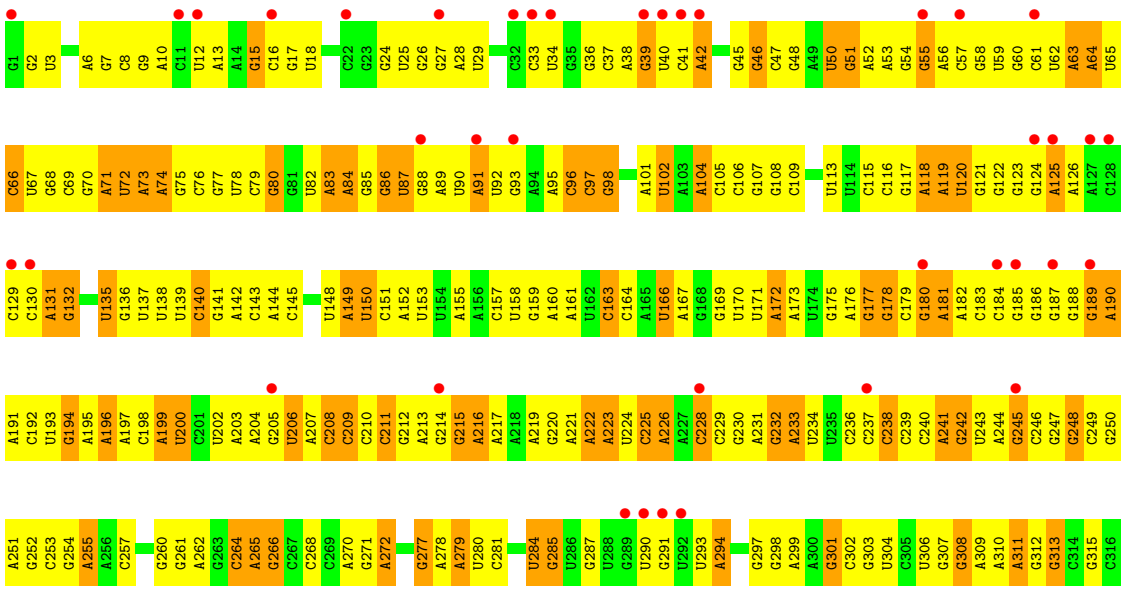


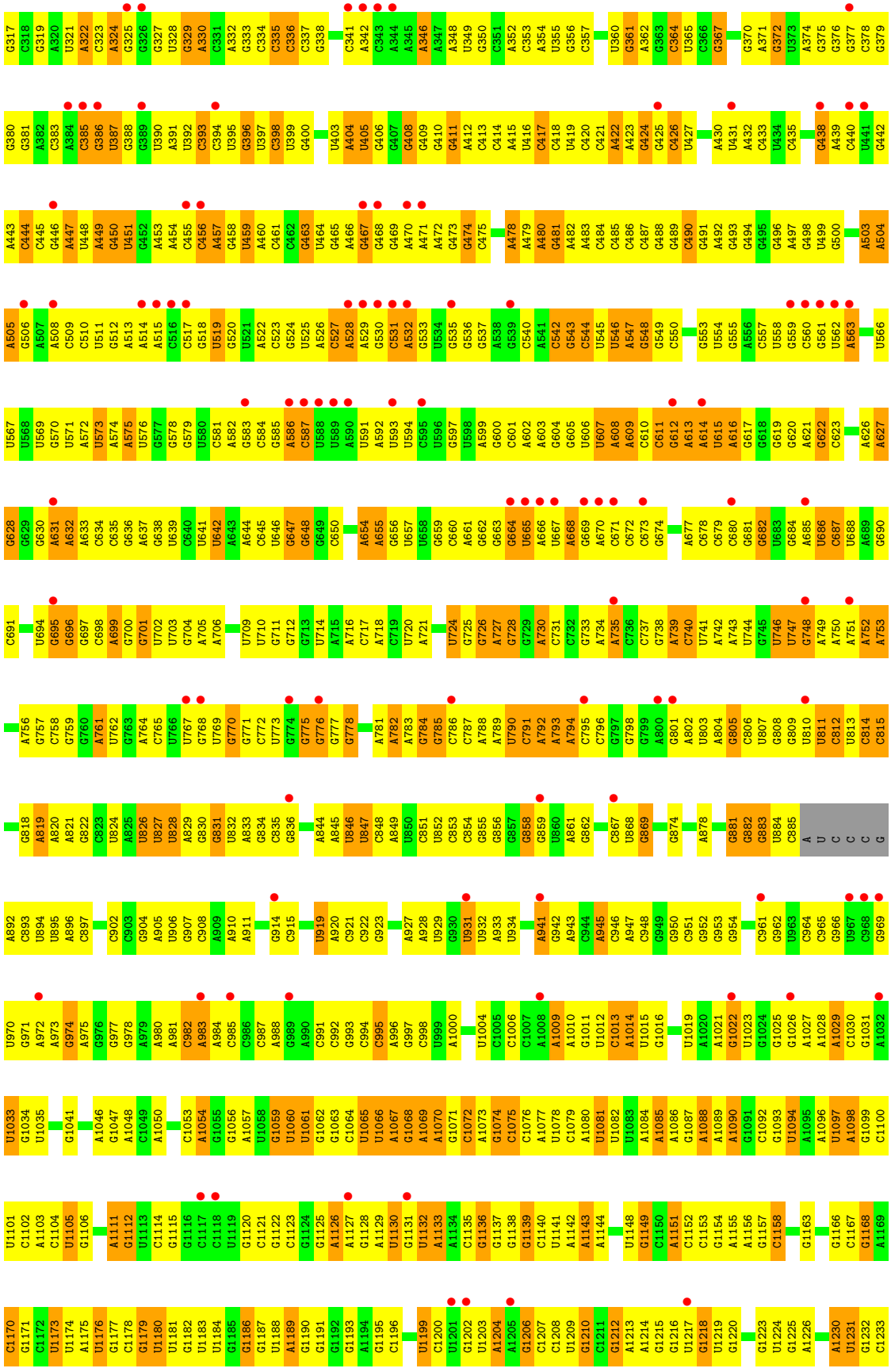


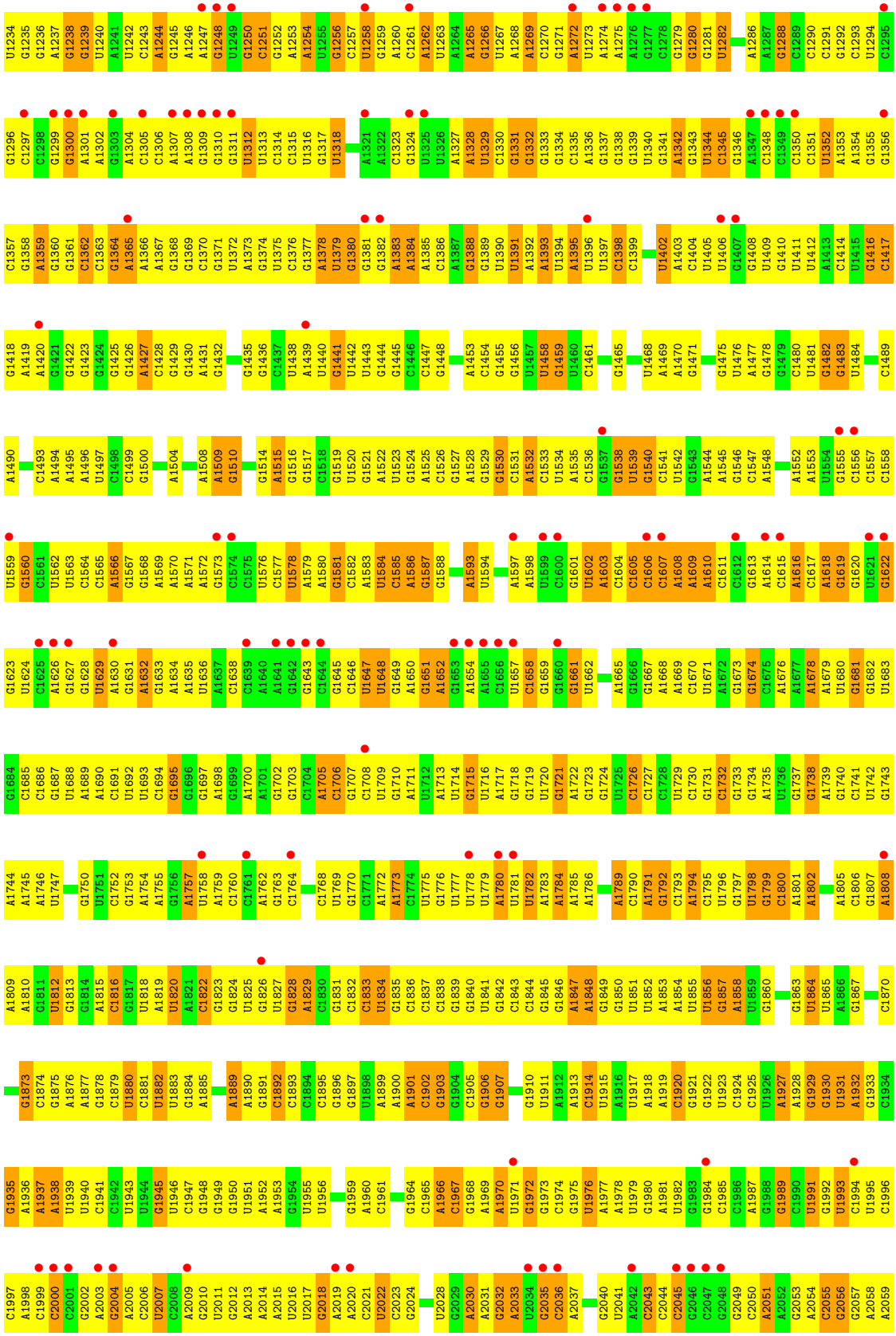
• Molecule 4: 23S ribsomal RNA

Chain CA:





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G1296 C1297 C1298 G1299 G1300 A1301 A1302 G1303 A1304 C1305 C1306 A1307 A1308 G1309 G1310 G1311 U1312 U1313 C1314 C1315 U1316 G1317 U1318 A1321 A1322 C1323 G1324 U1325 U1326 A1327 A1328 U1329 C1330 G1331 G1332 G1333 G1334 C1335 A1336 G1337 G1338 G1339 U1340 G1341 A1342 G1343 U1344 C1345 G1346 A1347 C1348 C1349 C1350 C1351 U1352 A1353 A1354 G1355 G1356
C1357 G1358 A1359 G1360 G1361 C1362 C1363 G1364 A1365 A1366 A1367 G1368 G1369 C1370 G1371 U1372 A1373 G1374 U1375 C1376 G1377 A1378 U1379 G1380 G1381 G1382 A1383 A1384 A1385 C1386 A1387 G1388 G1389 U1390 U1391 A1392 A1393 U1394 A1395 U1396 U1397 C1398 C1399 U1402 A1403 C1404 U1405 U1406 G1407 G1408 U1409 G1410 U1411 U1412 A1413 C1414 A1415 G1416 C1417
G1418 A1419 A1420 G1421 G1422 G1423 G1424 G1425 G1426 A1427 C1428 G1429 G1430 A1431 G1432 G1435 G1436 C1437 U1438 A1439 U1440 G1441 U1442 U1443 G1444 G1445 C1446 C1447 G1448 A1453 C1454 G1455 G1456 U1457 U1458 G1459 U1460 C1461 G1465 U1468 A1469 A1470 G1471 G1475 U1476 A1477 G1478 G1479 C1480 U1481 G1482 G1483 U1484 C1489
A1490 C1493 A1494 A1495 A1496 U1497 C1498 C1499 G1500 A1504 A1508 A1509 G1510 G1514 A1515 G1516 G1517 C1518 G1519 U1520 G1521 A1522 U1523 G1524 A1525 C1526 G1527 A1528 G1529 G1530 C1531 A1532 C1533 U1534 A1535 C1536 G1537 G1538 U1539 G1540 C1541 U1542 G1543 A1544 A1545 G1546 C1547 A1548 A1552 A1553 U1554 G1555 C1556 C1557 C1558
U1559 G1560 C1561 U1562 U1563 C1564 C1565 A1566 G1567 G1568 A1569 A1570 A1571 A1572 G1573 C1574 C1575 U1576 C1577 U1578 A1579 A1580 G1581 C1582 A1583 U1584 C1585 A1586 G1587 G1588 A1593 U1594 A1597 A1598 U1599 C1600 G1601 U1602 A1603 C1604 C1605 C1606 C1607 A1608 A1609 A1610 C1611 C1612 G1613 A1614 C1615 A1616 C1617 A1618 G1619 G1620 U1621 G1622
G1623 U1624 C1625 A1626 G1627 G1628 U1629 A1630 G1631 A1632 G1633 A1634 A1635 U1636 A1637 C1638 C1639 A1640 A1641 G1642 G1643 C1644 G1645 C1646 U1647 U1648 G1649 A1650 G1651 A1652 G1653 A1654 A1655 C1656 U1657 C1658 G1659 G1660 G1661 U1662 A1665 G1666 G1667 A1668 A1669 C1670 U1671 A1672 G1673 G1674 C1675 A1676 A1677 A1678 A1679 U1680 G1681 G1682 U1683
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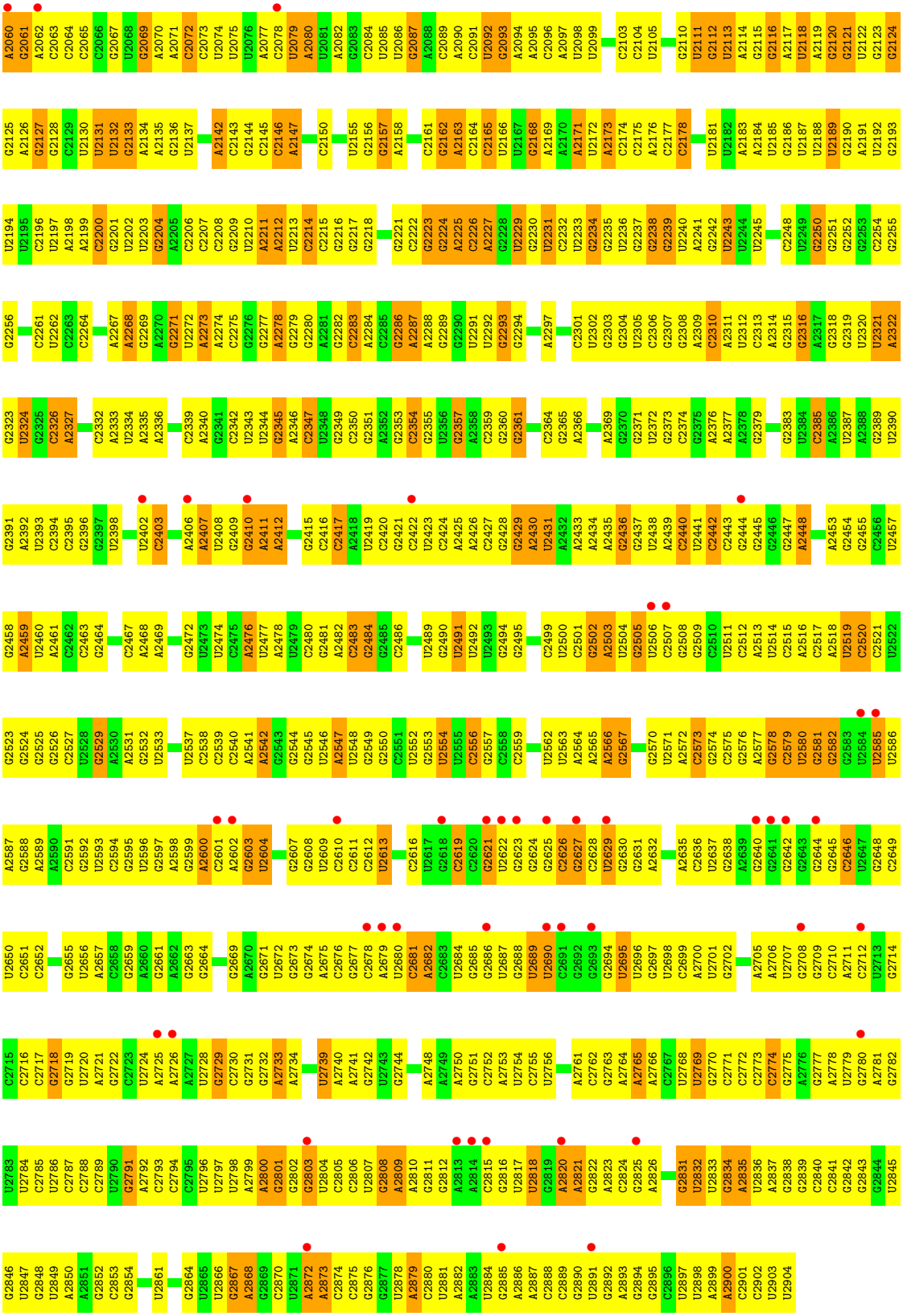
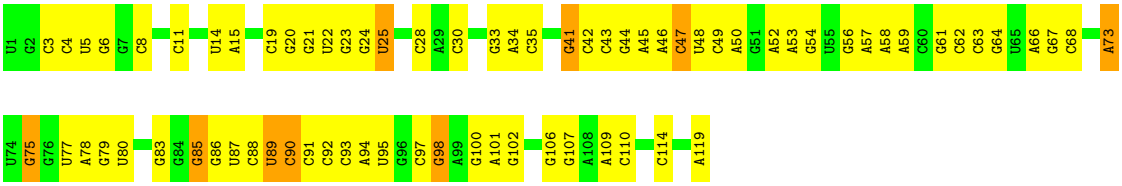


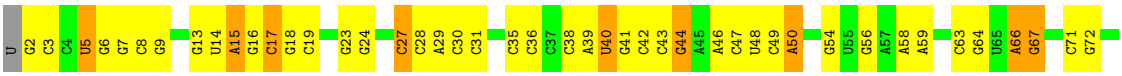
• Molecule 5: 5S ribosomal RNA

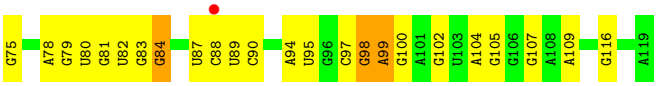
Chain DB: 39% 54% 8%



• Molecule 5: 5S ribosomal RNA

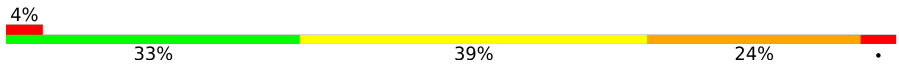
Chain CB:

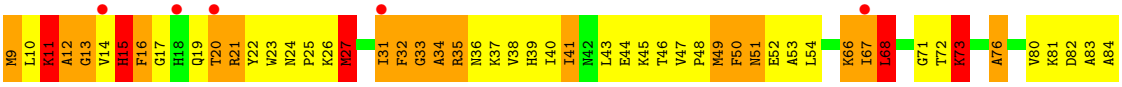


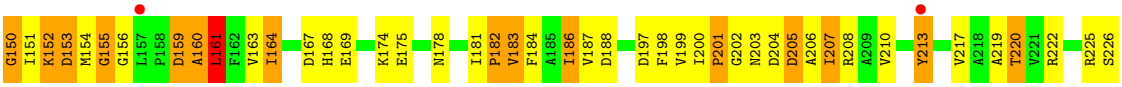


• Molecule 6: 30S ribosomal protein S2

Chain AB:

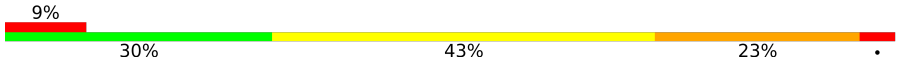


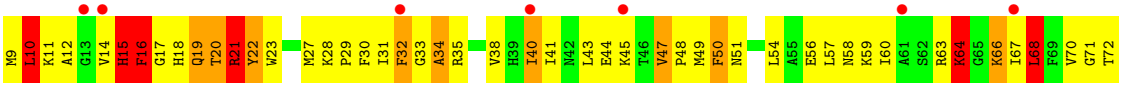


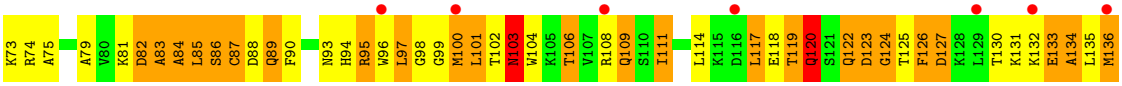


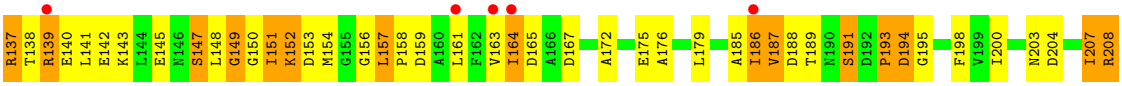
• Molecule 6: 30S ribosomal protein S2

Chain BB:



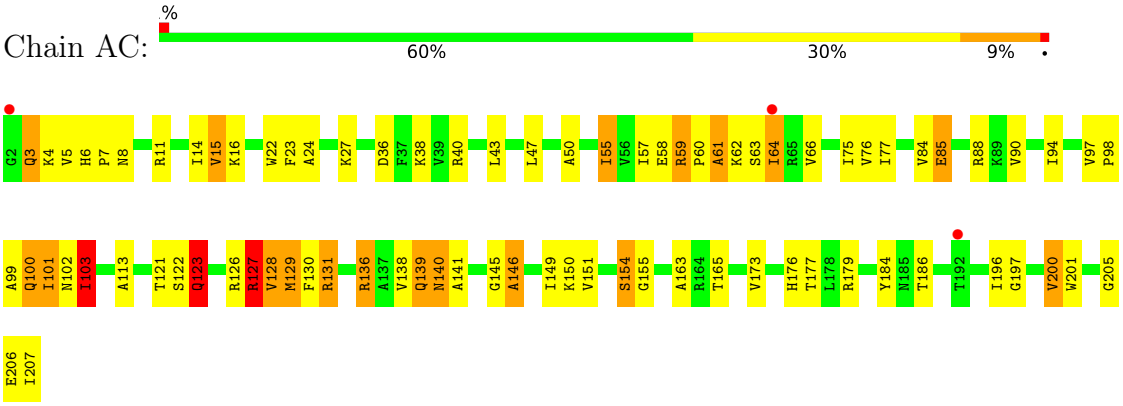






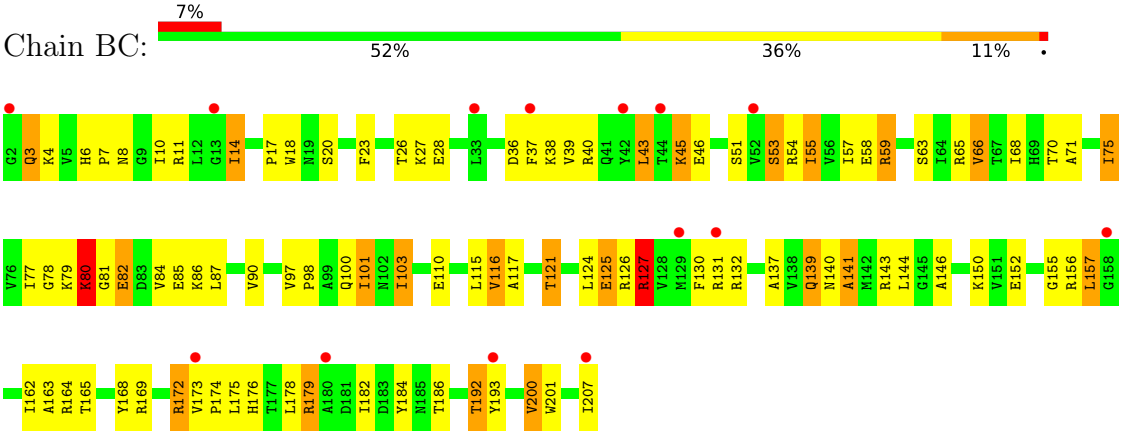
• Molecule 7: 30S ribosomal protein S3

Chain AC:



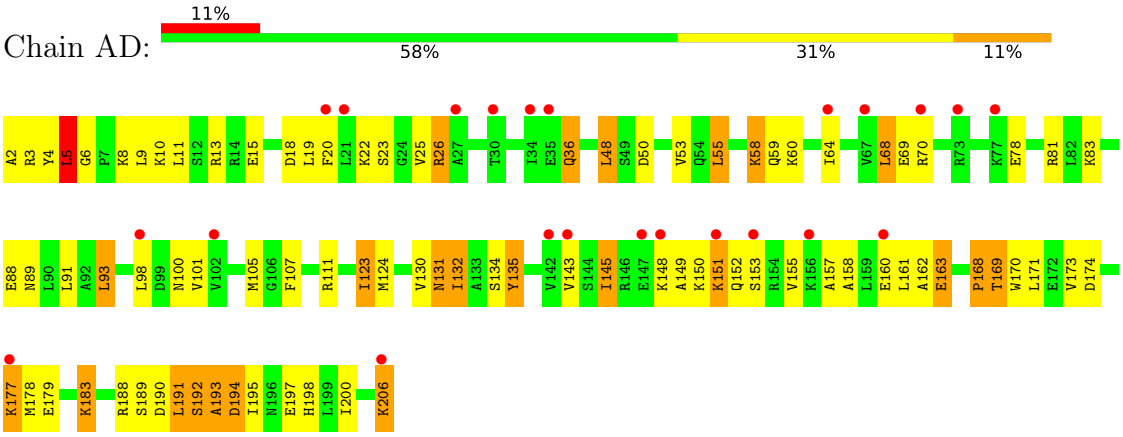
• Molecule 7: 30S ribosomal protein S3

Chain BC:



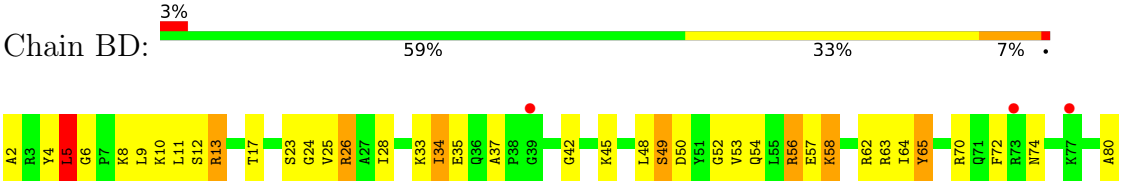
• Molecule 8: 30S ribosomal protein S4

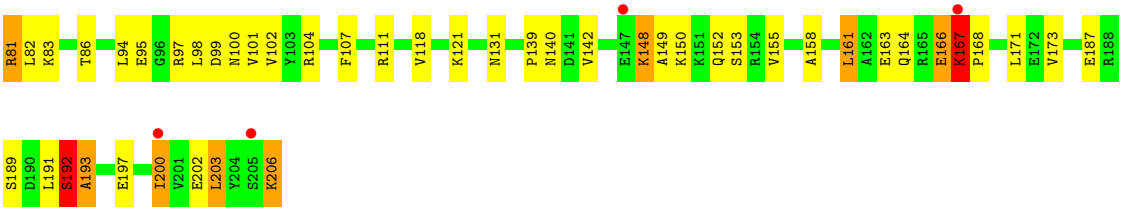
Chain AD:



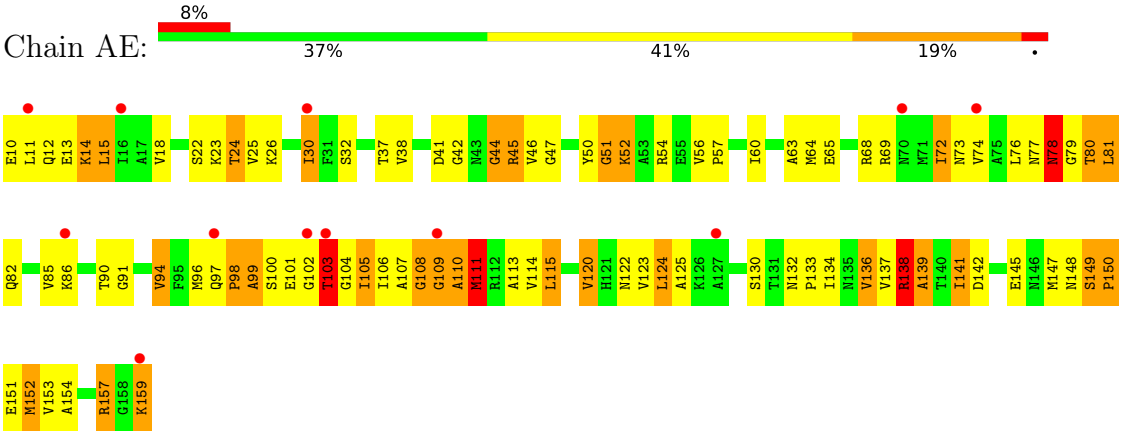
• Molecule 8: 30S ribosomal protein S4

Chain BD:

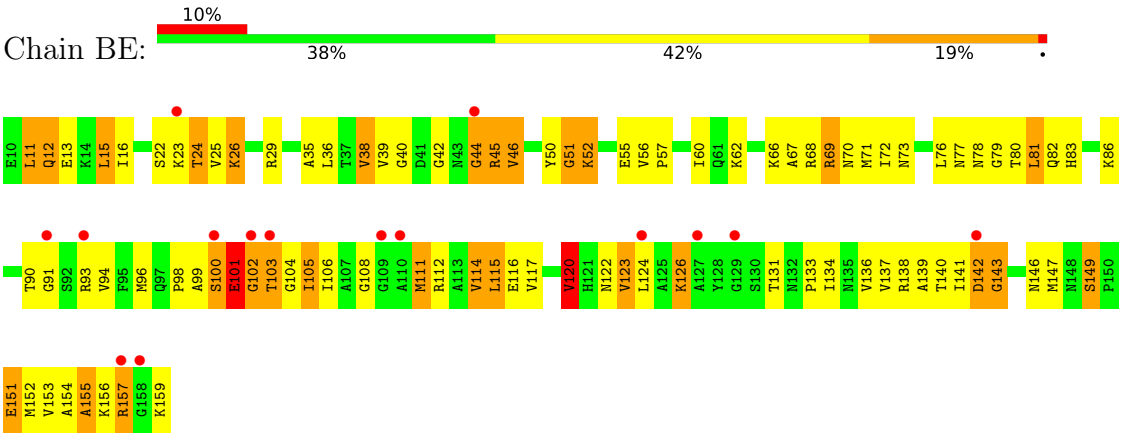




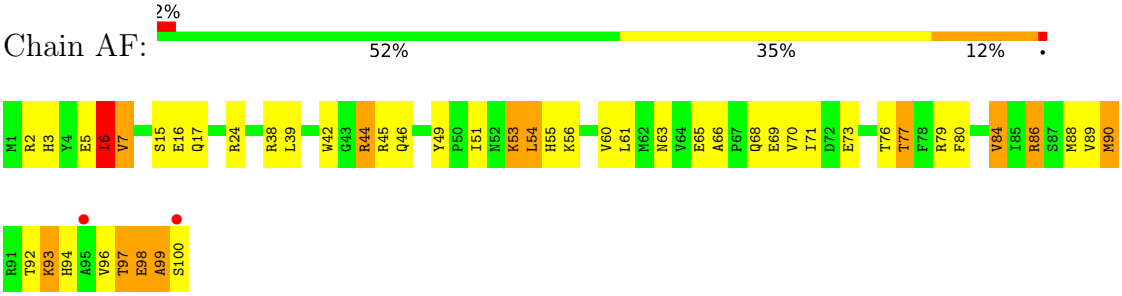
• Molecule 9: 30S ribosomal protein S5



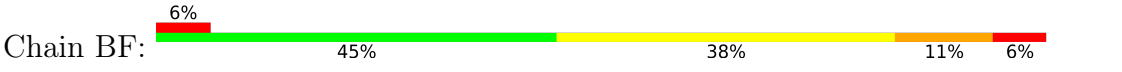
• Molecule 9: 30S ribosomal protein S5

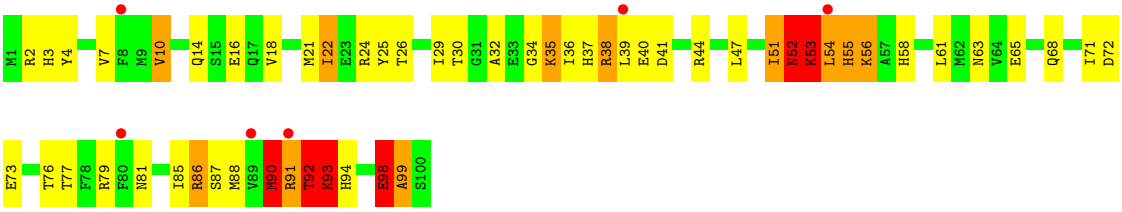


• Molecule 10: 30S ribosomal protein S6



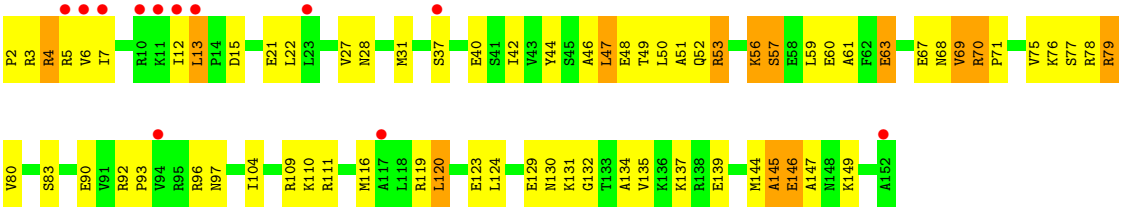
• Molecule 10: 30S ribosomal protein S6





• Molecule 11: 30S ribosomal protein S7

Chain AG:

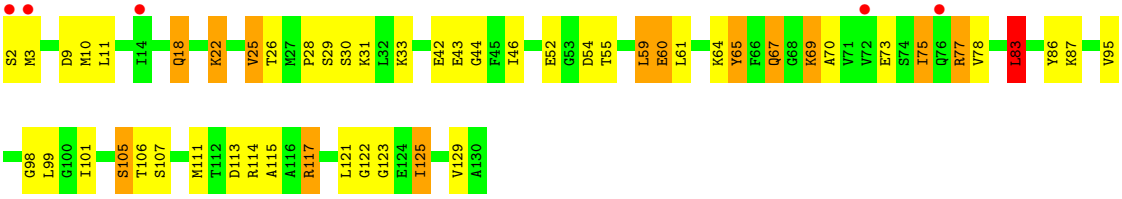


• Molecule 11: 30S ribosomal protein S7

Chain BG:

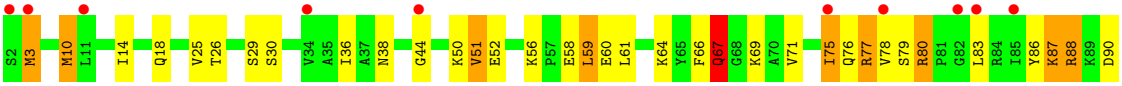
• Molecule 12: 30S ribosomal protein S8

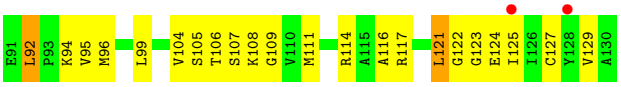
Chain AH:



• Molecule 12: 30S ribosomal protein S8

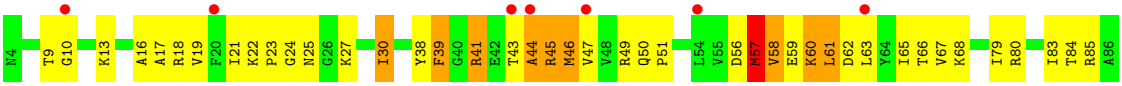
Chain BH:





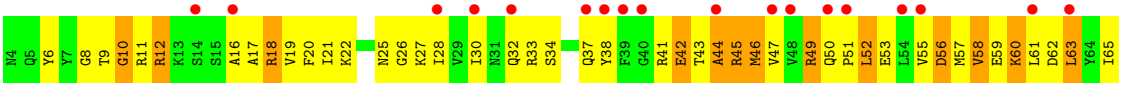
• Molecule 13: 30S ribosomal protein S9

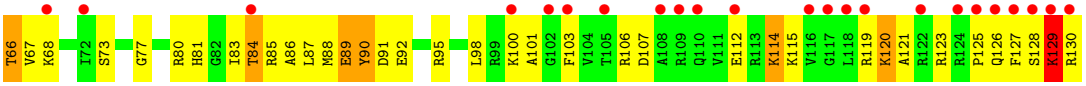
Chain AI:



• Molecule 13: 30S ribosomal protein S9

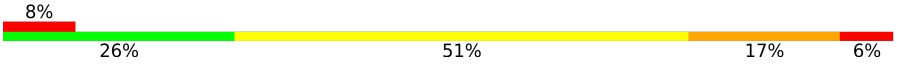
Chain BI:

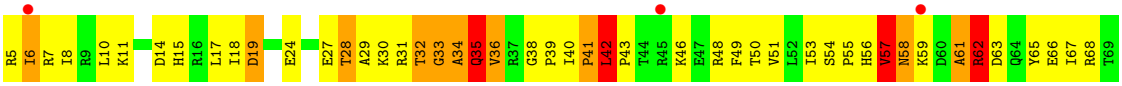


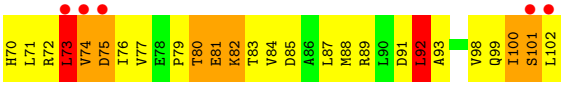


• Molecule 14: 30S ribosomal protein S10

Chain AJ:

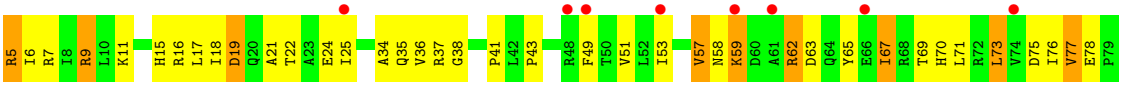


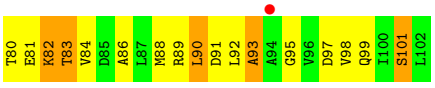




• Molecule 14: 30S ribosomal protein S10

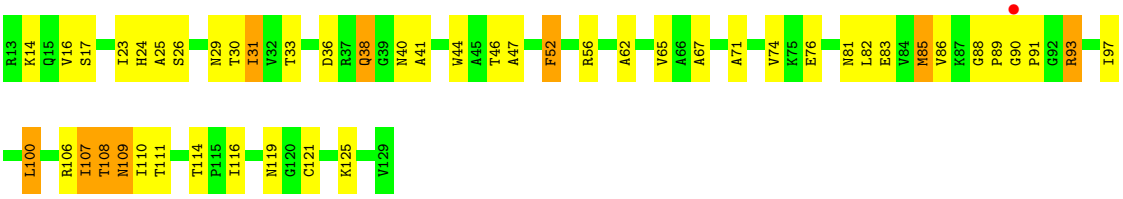
Chain BJ:





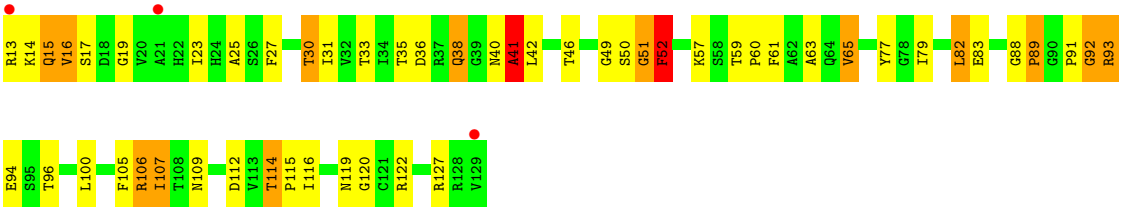
• Molecule 15: 30S ribosomal protein S11

Chain AK:



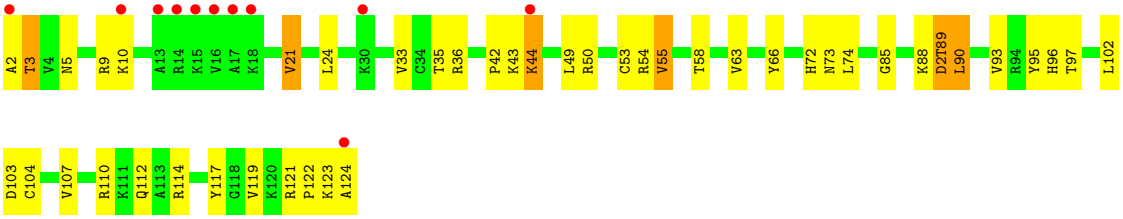
• Molecule 15: 30S ribosomal protein S11

Chain BK:



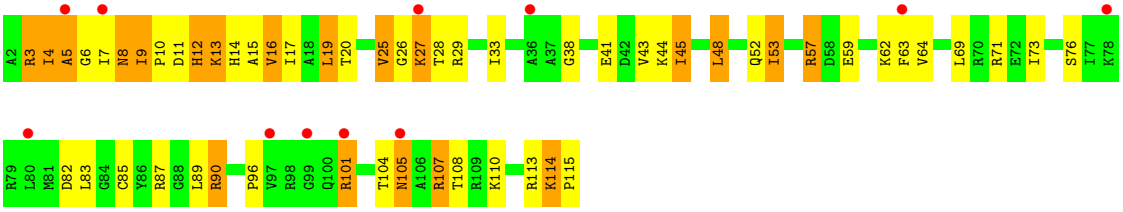
• Molecule 16: 30S ribosomal protein S12

Chain AL:



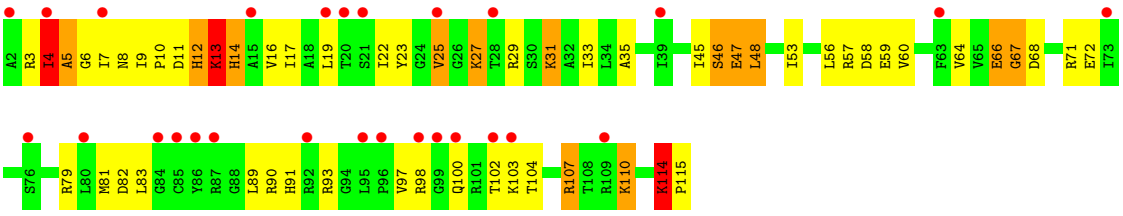
• Molecule 17: 30S ribosomal protein S13

Chain AM:



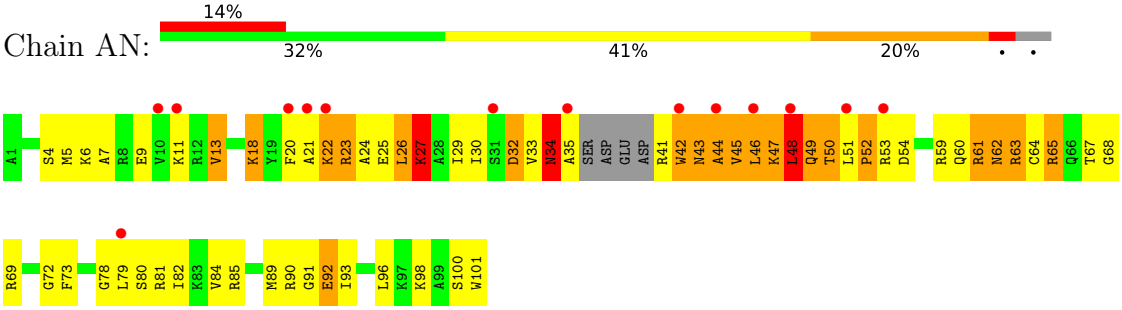
• Molecule 17: 30S ribosomal protein S13

Chain BM:



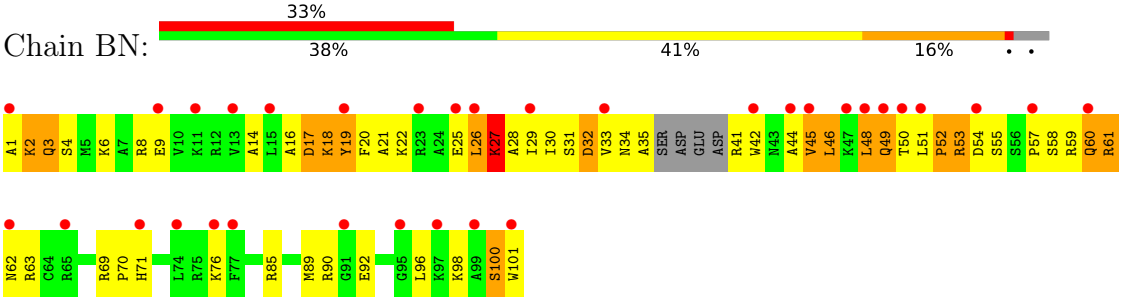
• Molecule 18: 30S ribosomal protein S14

Chain AN:



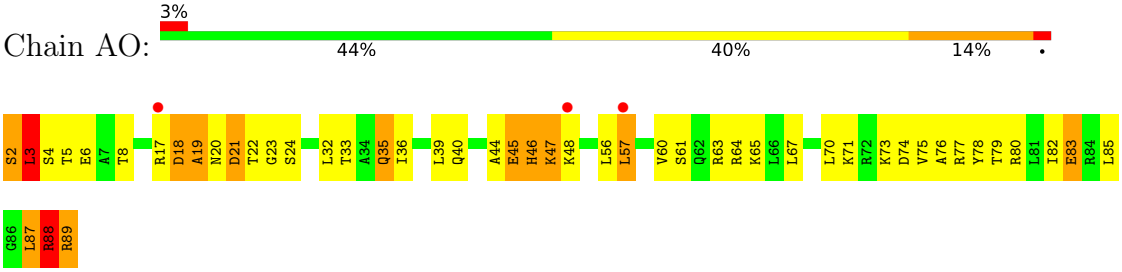
• Molecule 18: 30S ribosomal protein S14

Chain BN:



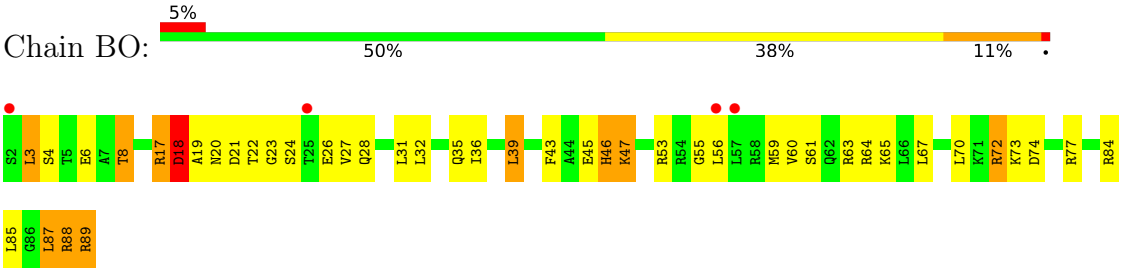
• Molecule 19: 30S ribosomal protein S15

Chain AO:



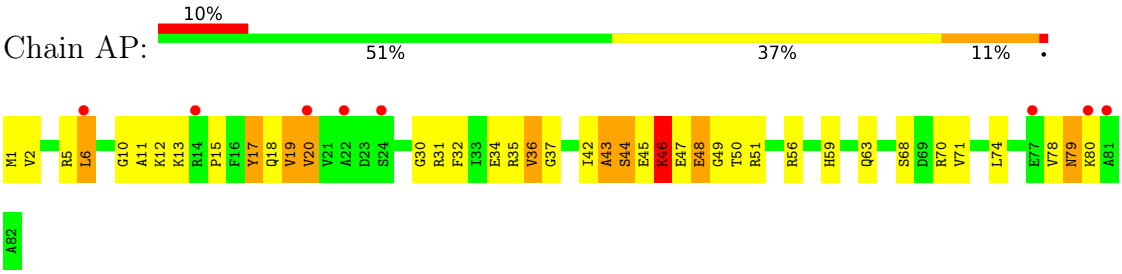
• Molecule 19: 30S ribosomal protein S15

Chain BO:



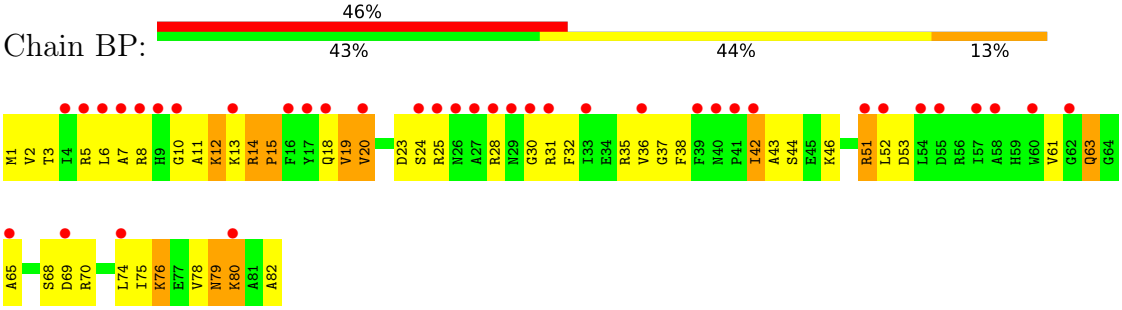
• Molecule 20: 30S ribosomal protein S16

Chain AP:



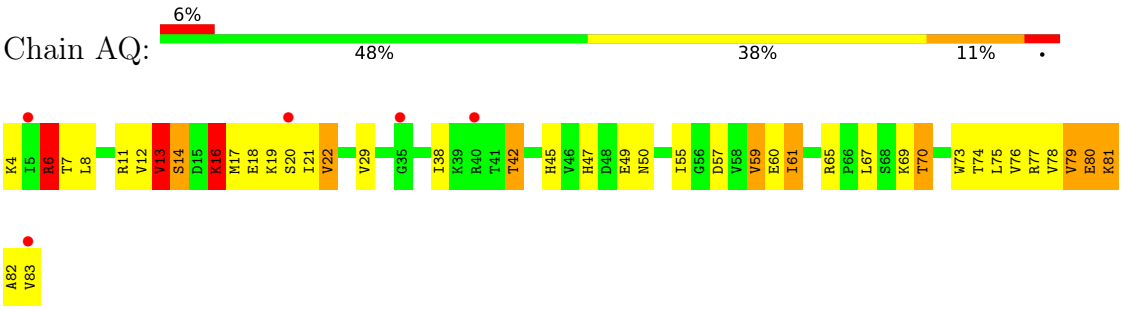
• Molecule 20: 30S ribosomal protein S16

Chain BP:



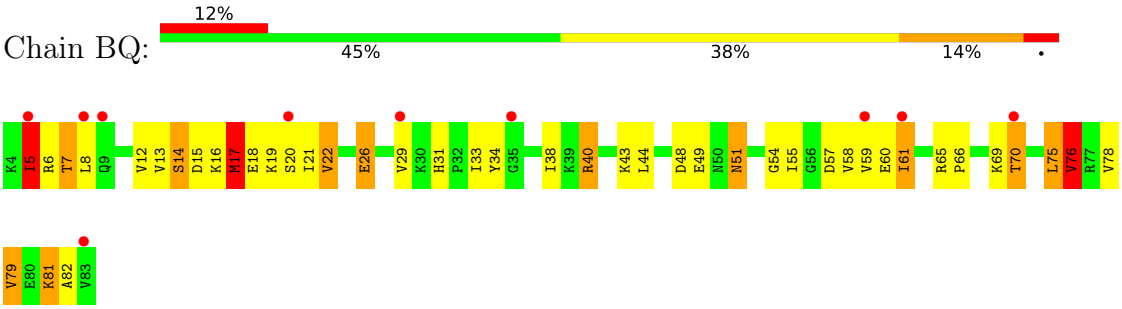
• Molecule 21: 30S ribosomal protein S17

Chain AQ:



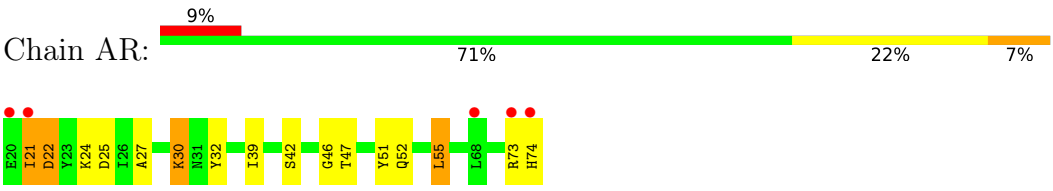
• Molecule 21: 30S ribosomal protein S17

Chain BQ:



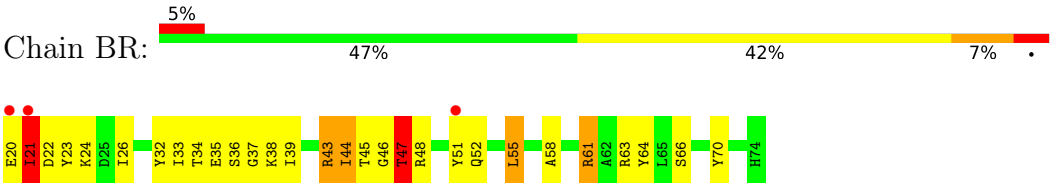
• Molecule 22: 30S ribosomal protein S18

Chain AR:



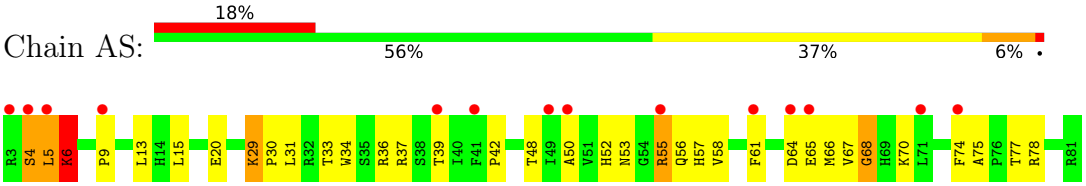
• Molecule 22: 30S ribosomal protein S18

Chain BR:



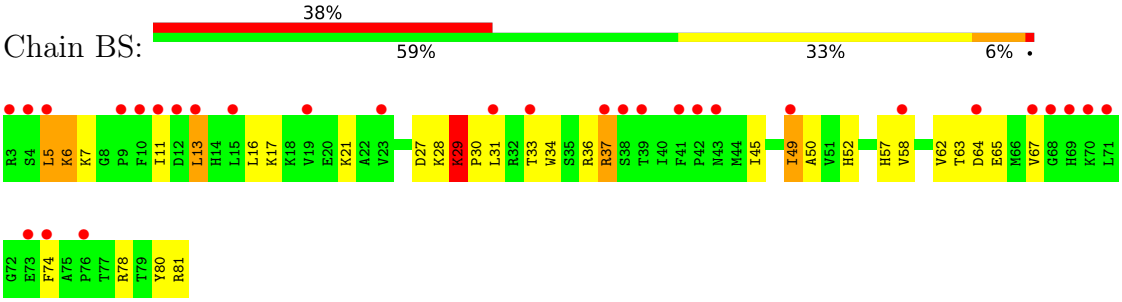
• Molecule 23: 30S ribosomal protein S19

Chain AS:



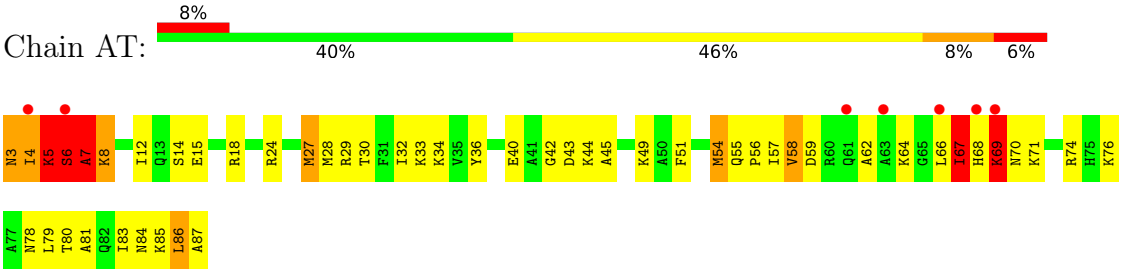
• Molecule 23: 30S ribosomal protein S19

Chain BS:



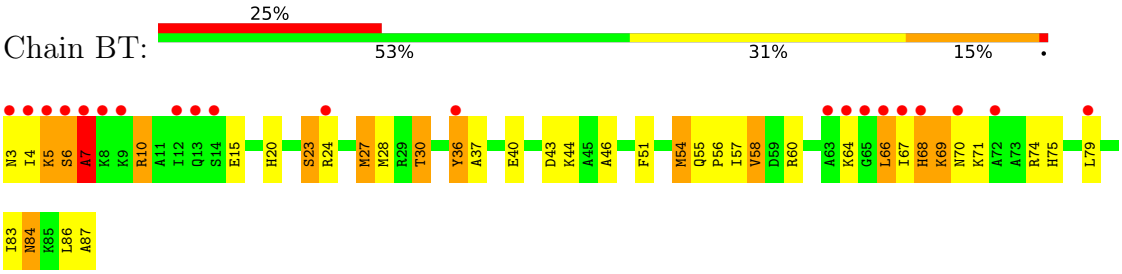
• Molecule 24: 30S ribosomal protein S20

Chain AT:



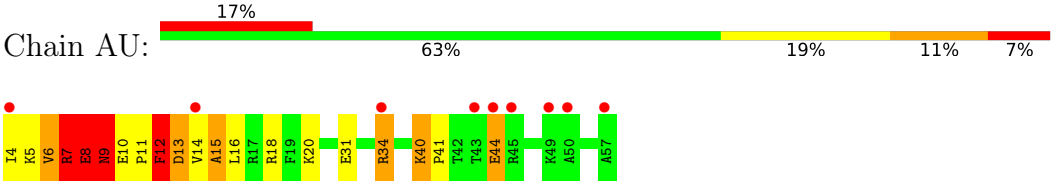
• Molecule 24: 30S ribosomal protein S20

Chain BT:



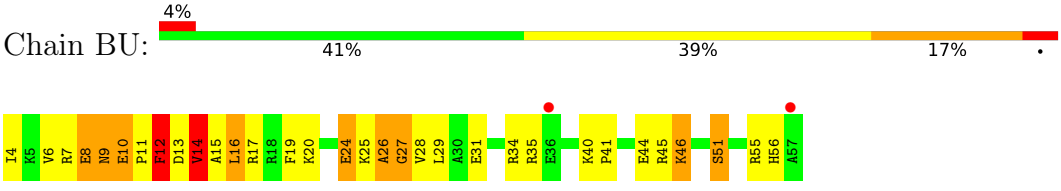
• Molecule 25: 30S ribosomal protein S21

Chain AU:



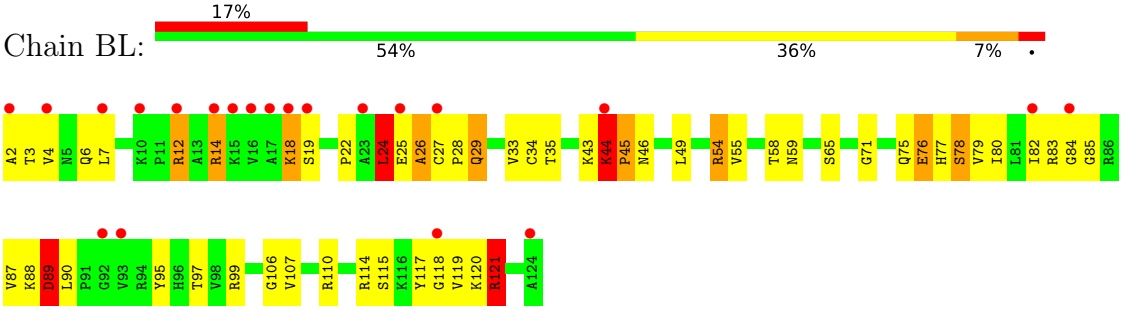
• Molecule 25: 30S ribosomal protein S21

Chain BU:



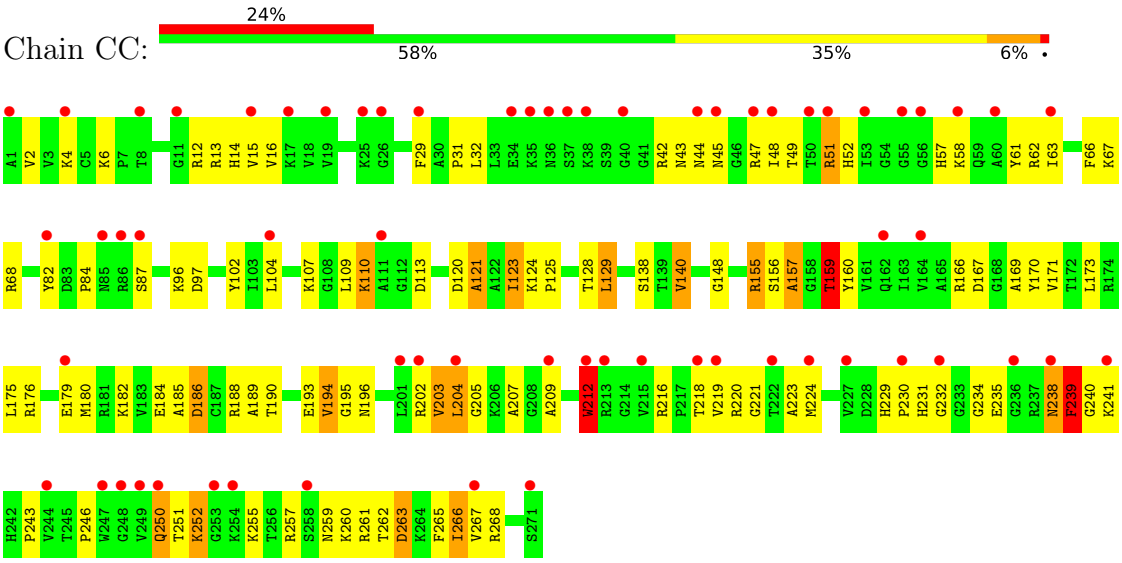
• Molecule 26: 30S ribosomal protein S12

Chain BL:



• Molecule 27: 50S ribosomal protein L2

Chain CC:

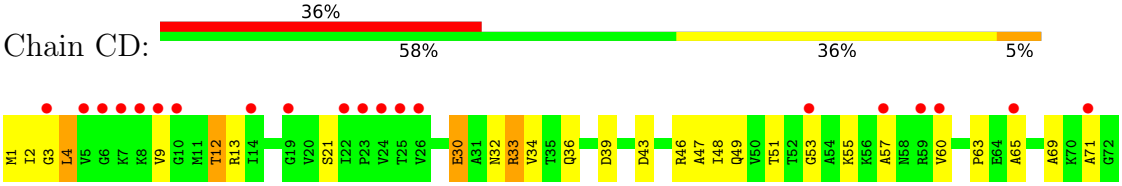


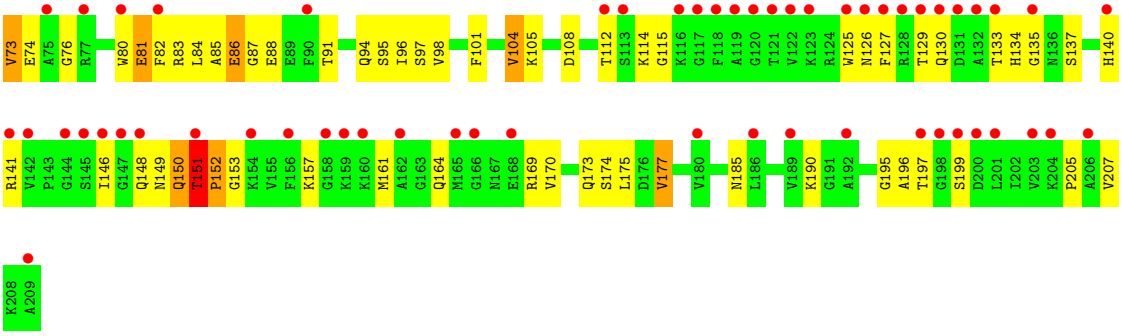
• Molecule 27: 50S ribosomal protein L2

Chain DC:

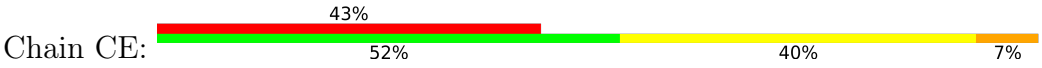
• Molecule 28: 50S ribosomal protein L3

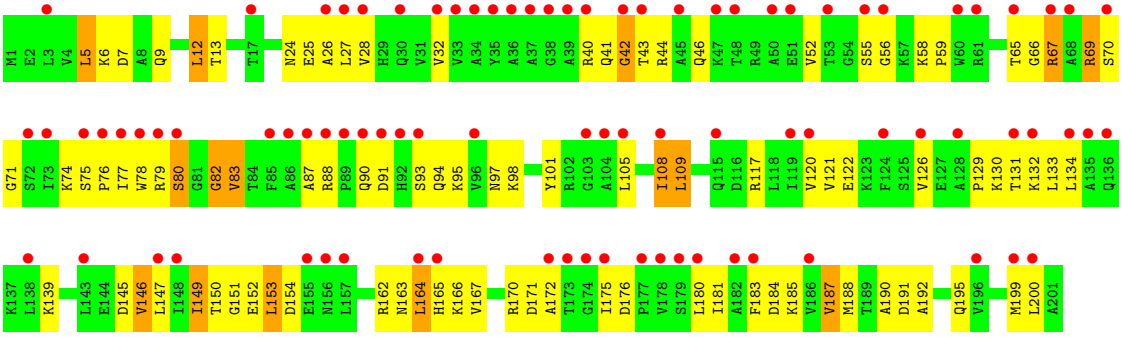
Chain CD:



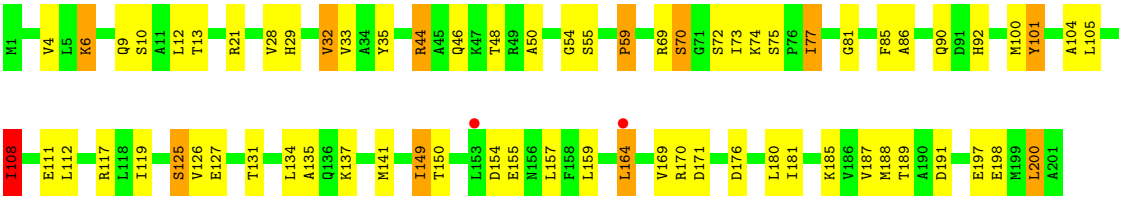


• Molecule 29: 50S ribosomal protein L4

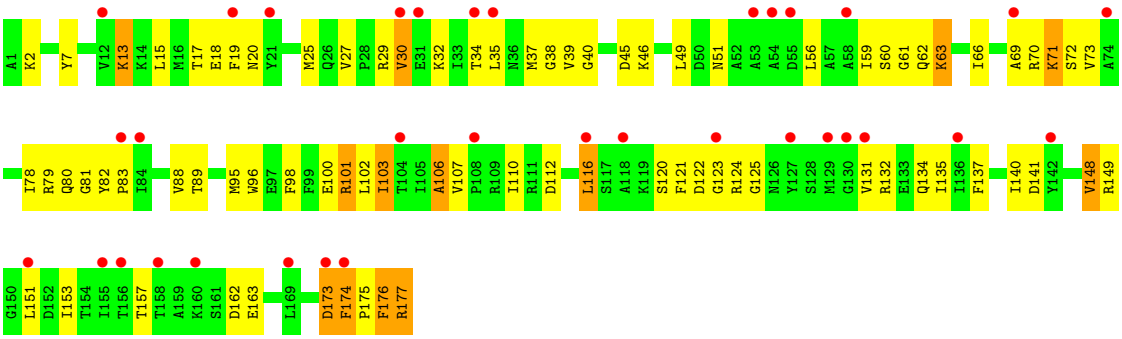




• Molecule 29: 50S ribosomal protein L4

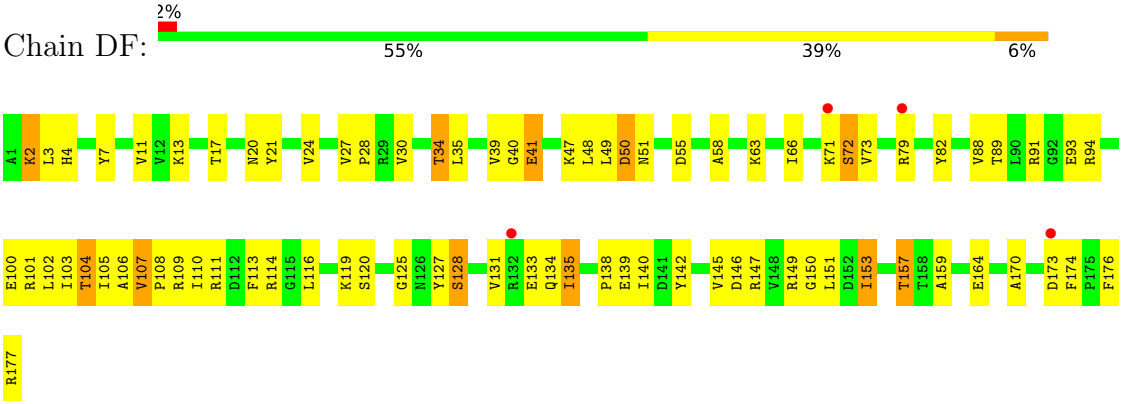


• Molecule 30: 50S ribosomal protein L5



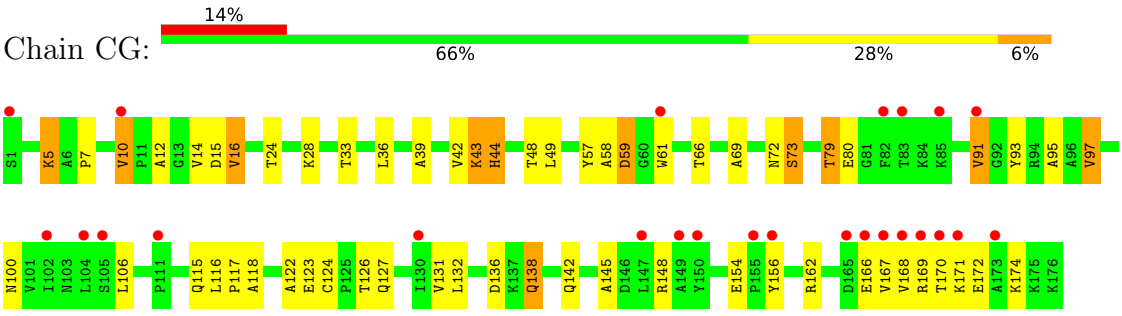
• Molecule 30: 50S ribosomal protein L5

Chain DF:



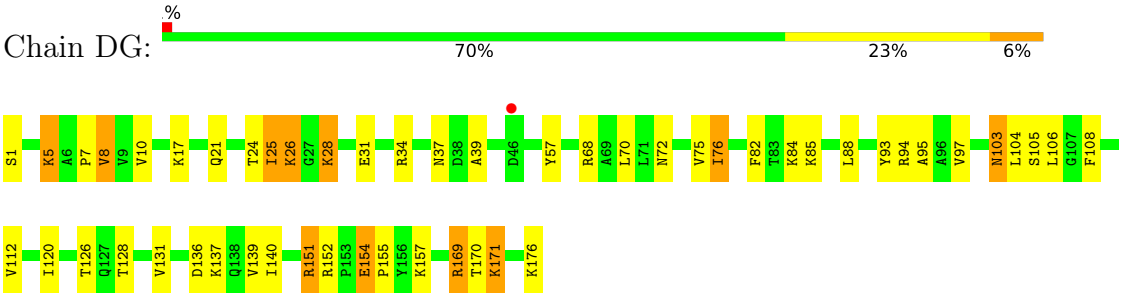
• Molecule 31: 50S ribosomal protein L6

Chain CG:



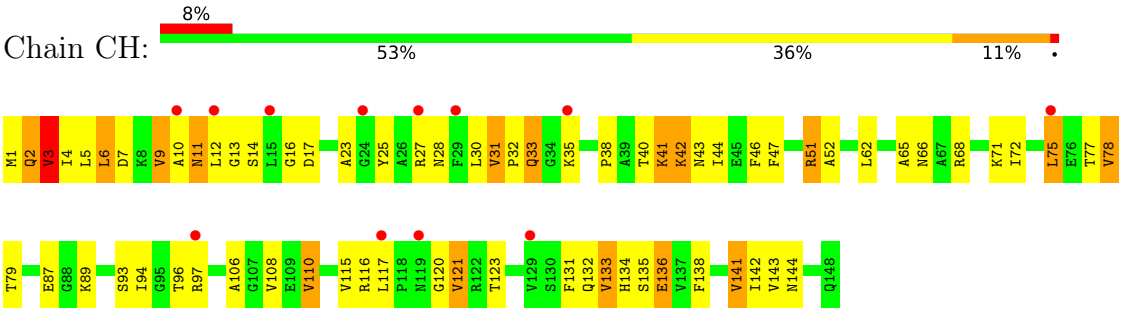
• Molecule 31: 50S ribosomal protein L6

Chain DG:



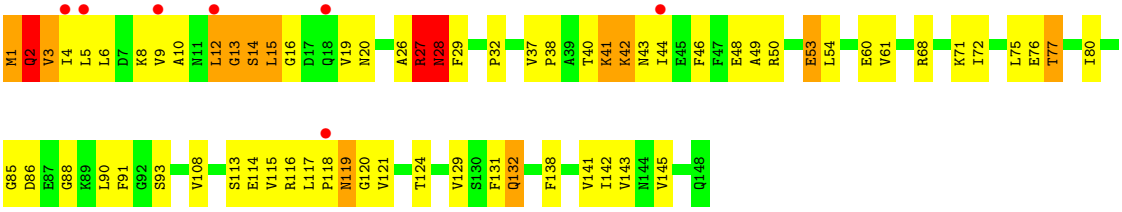
• Molecule 32: 50S ribosomal protein L9

Chain CH:



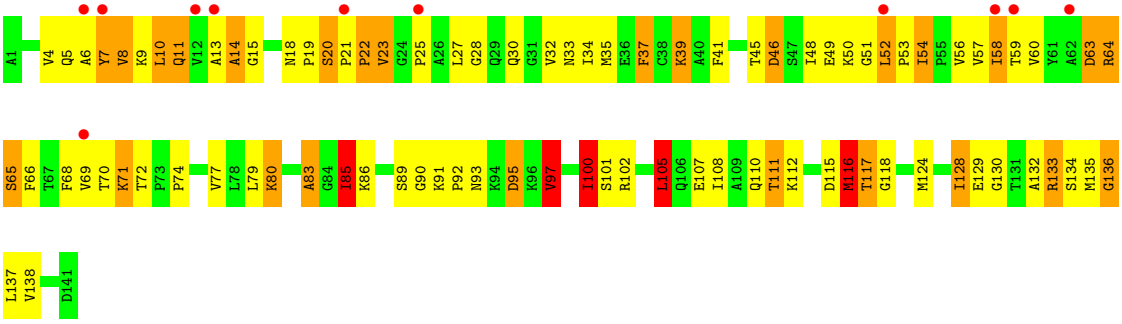
• Molecule 32: 50S ribosomal protein L9

Chain DH:



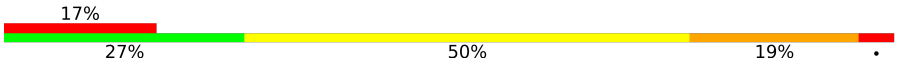
• Molecule 33: 50S ribosomal protein L11

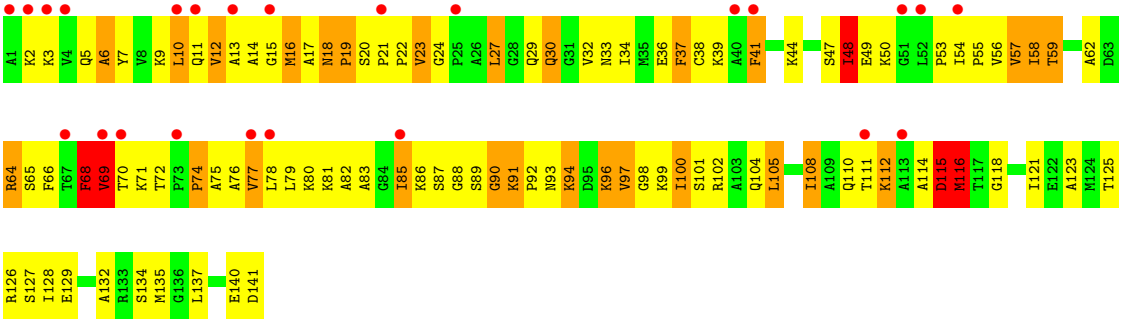
Chain CJ:



• Molecule 33: 50S ribosomal protein L11

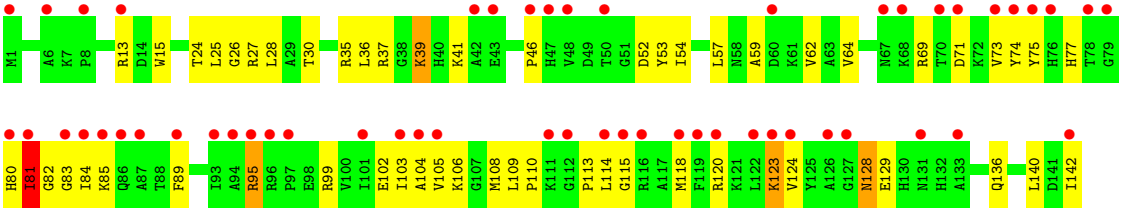
Chain DJ:





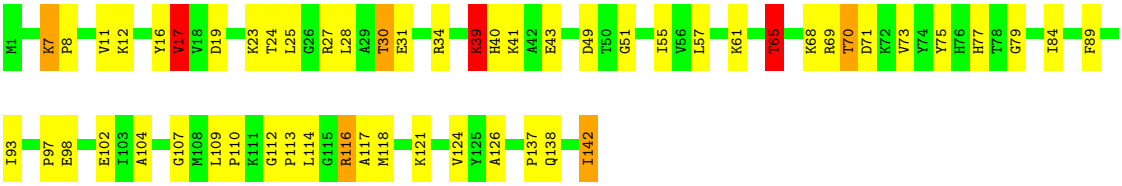
• Molecule 34: 50S ribosomal protein L13

Chain CK:



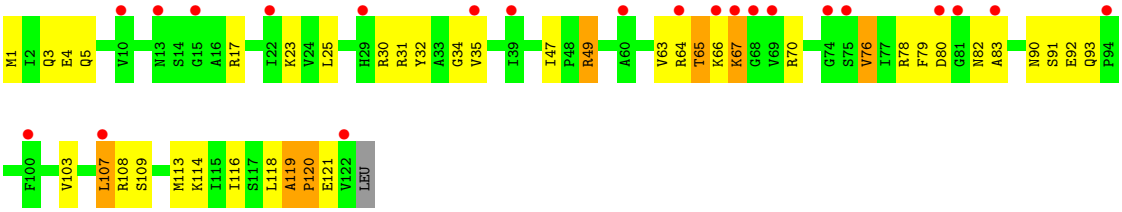
• Molecule 34: 50S ribosomal protein L13

Chain DK:



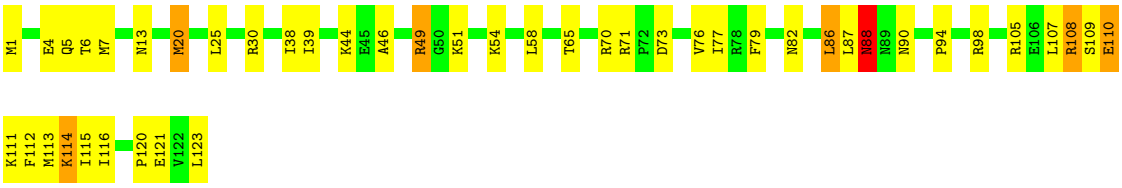
• Molecule 35: 50S ribosomal protein L14

Chain CL:



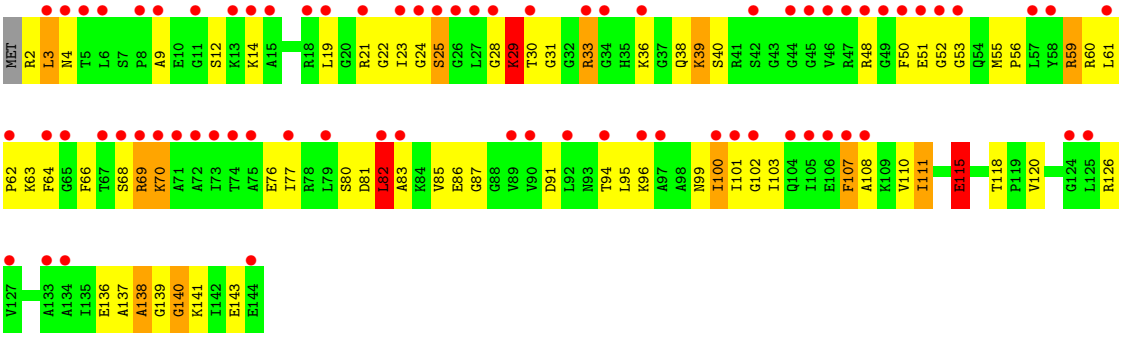
• Molecule 35: 50S ribosomal protein L14

Chain DL:



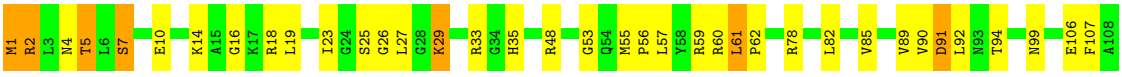
• Molecule 36: 50S ribosomal protein L15

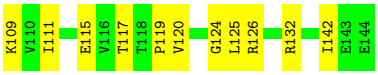
Chain CM:



• Molecule 36: 50S ribosomal protein L15

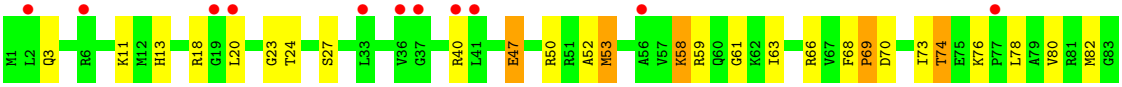
Chain DM:

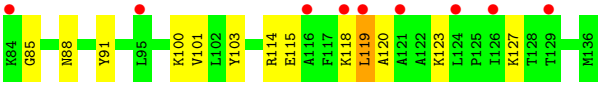




• Molecule 37: 50S ribosomal protein L16

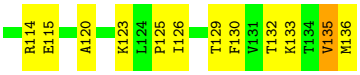
Chain CN:





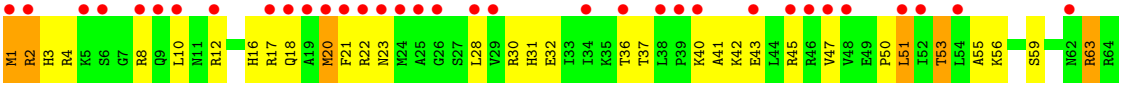
• Molecule 37: 50S ribosomal protein L16

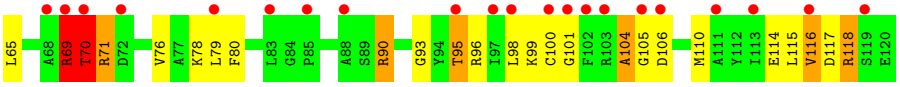
Chain DN:



• Molecule 38: 50S ribosomal protein L17

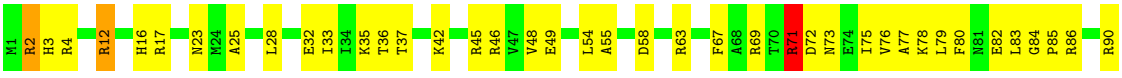
Chain CO:

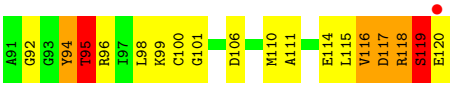




• Molecule 38: 50S ribosomal protein L17

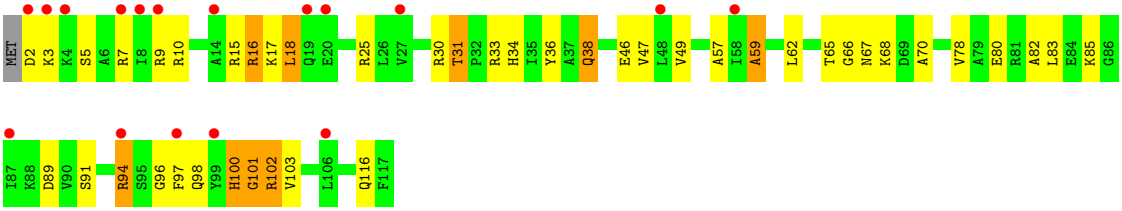
Chain DO:



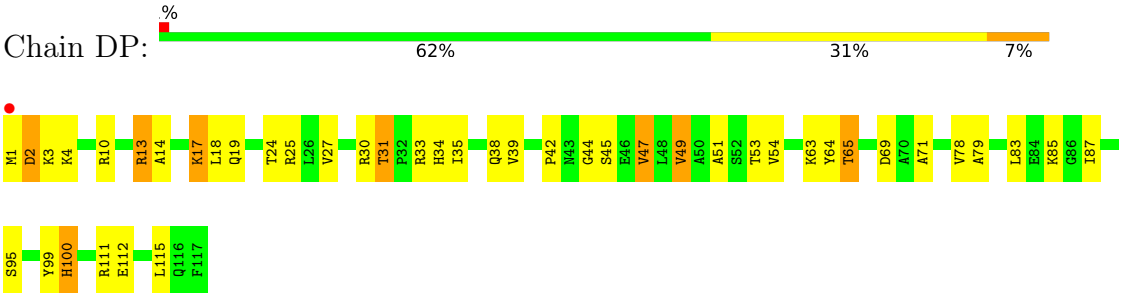


• Molecule 39: 50S ribosomal protein L18

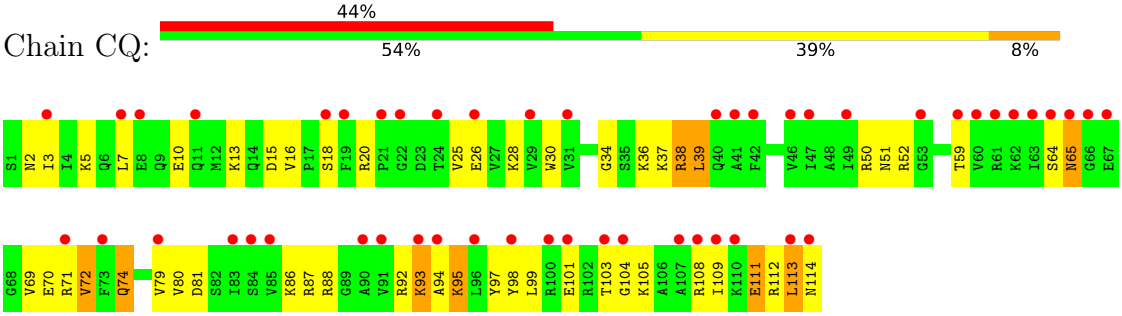
Chain CP:



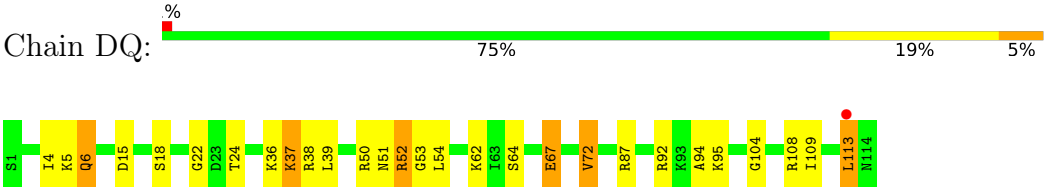
• Molecule 39: 50S ribosomal protein L18



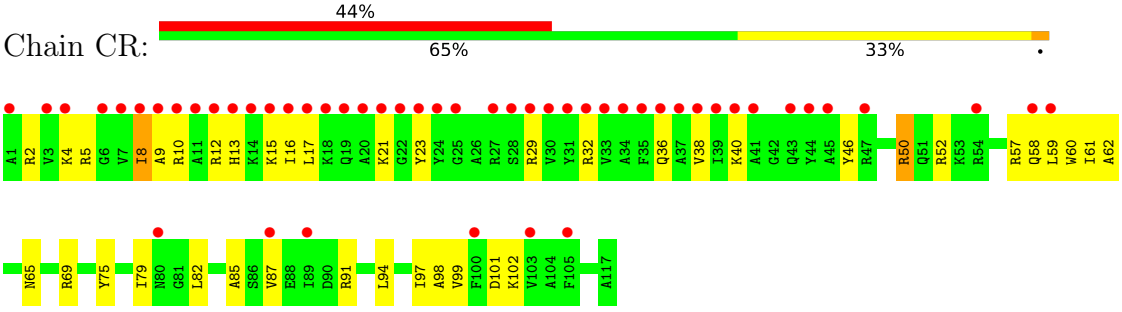
• Molecule 40: 50S ribosomal protein L19



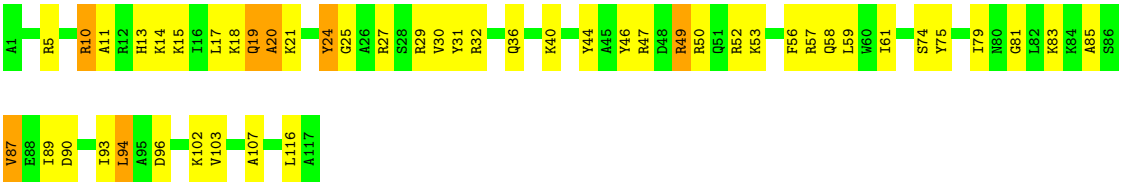
• Molecule 40: 50S ribosomal protein L19



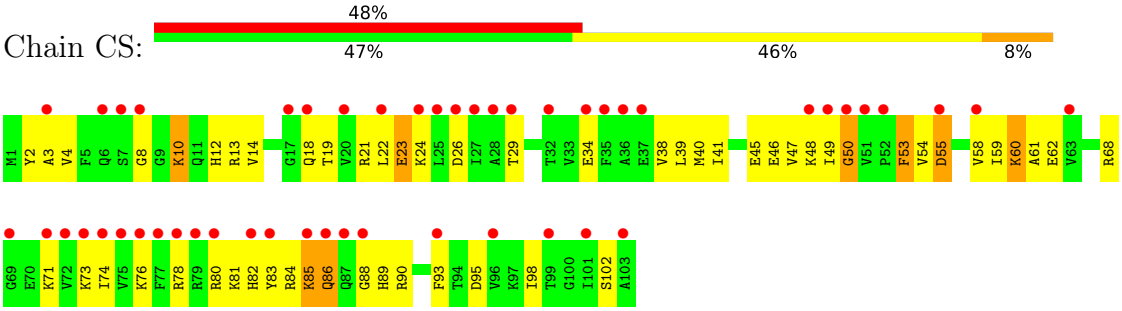
• Molecule 41: 50S ribosomal protein L20



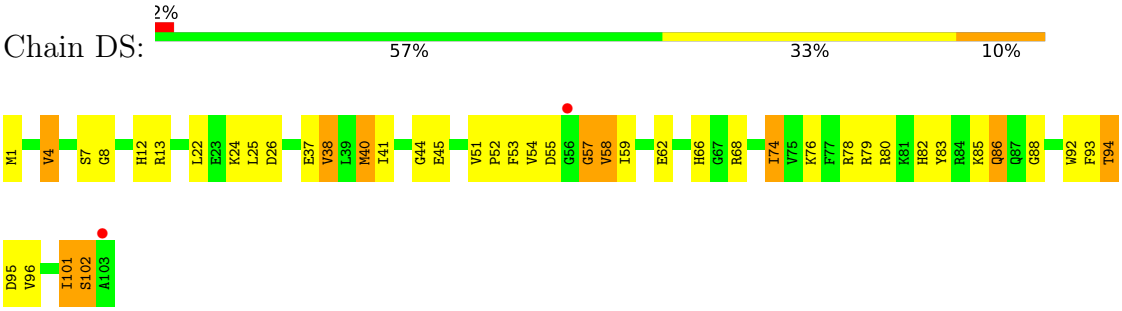
• Molecule 41: 50S ribosomal protein L20



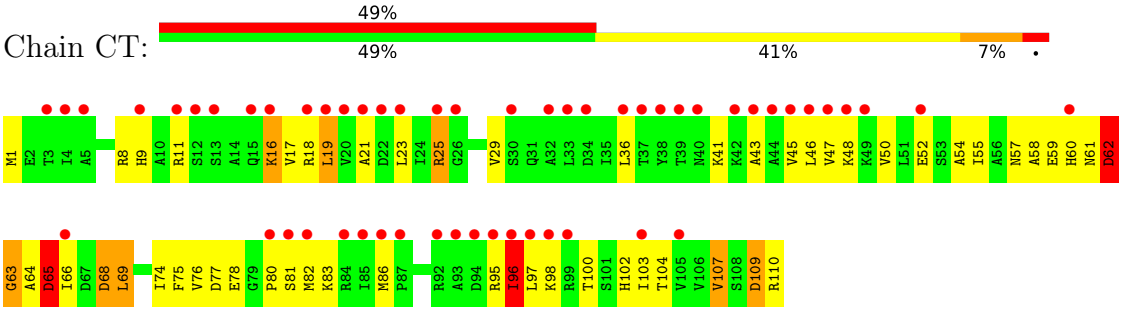
• Molecule 42: 50S ribosomal protein L21



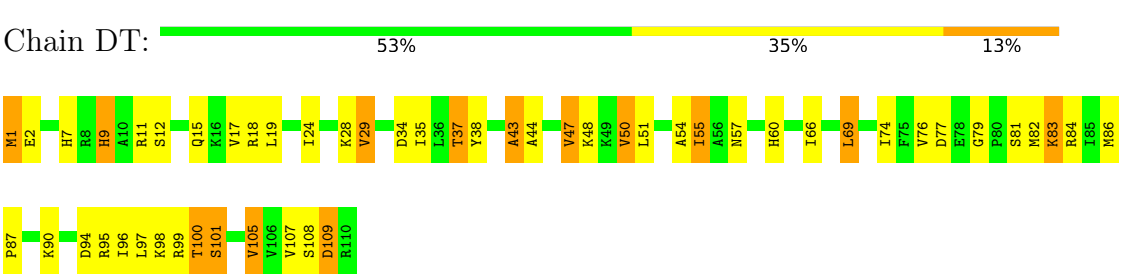
• Molecule 42: 50S ribosomal protein L21



• Molecule 43: 50S ribosomal protein L22

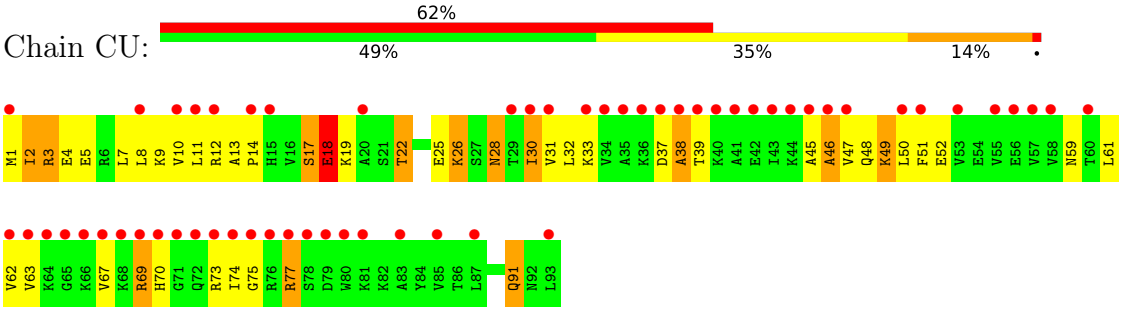


• Molecule 43: 50S ribosomal protein L22



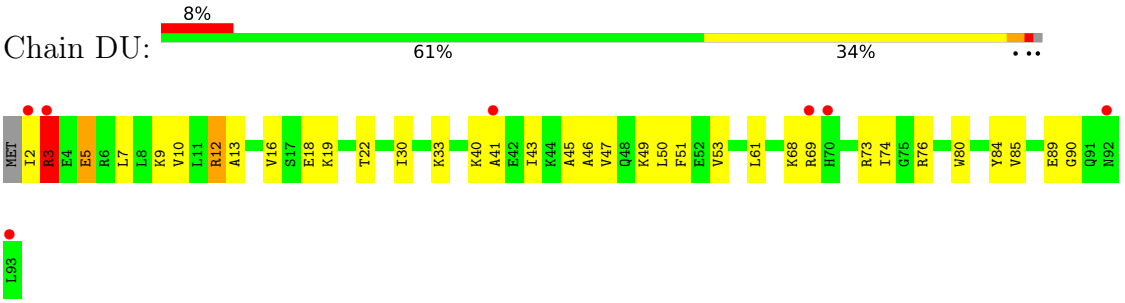
• Molecule 44: 50S ribosomal protein L23

Chain CU:



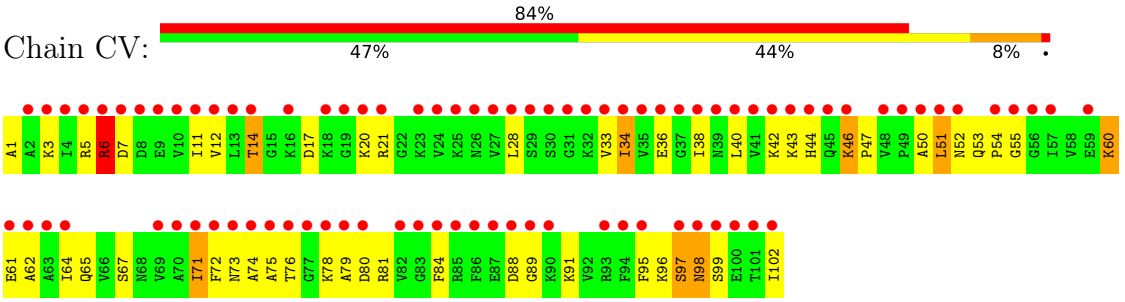
• Molecule 44: 50S ribosomal protein L23

Chain DU:



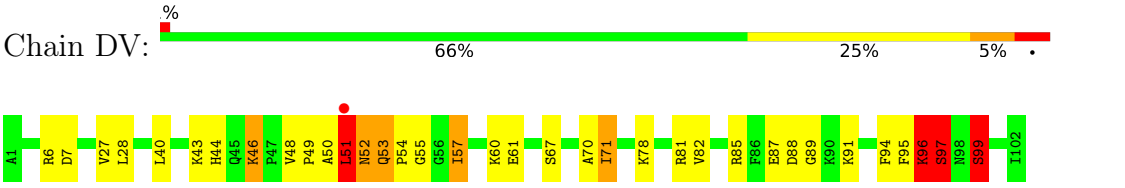
• Molecule 45: 50S ribosomal protein L24

Chain CV:



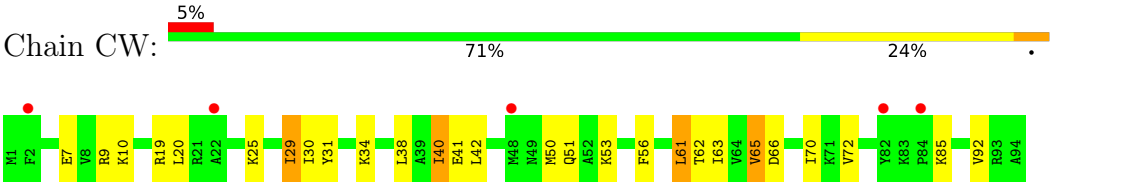
• Molecule 45: 50S ribosomal protein L24

Chain DV:



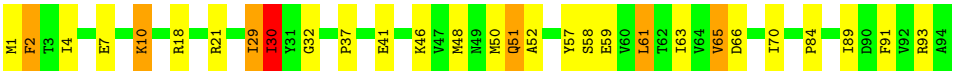
• Molecule 46: 50S ribosomal protein L25

Chain CW:

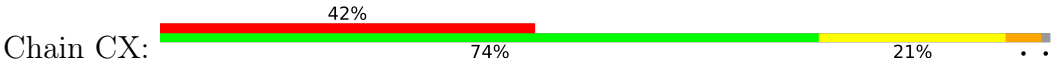


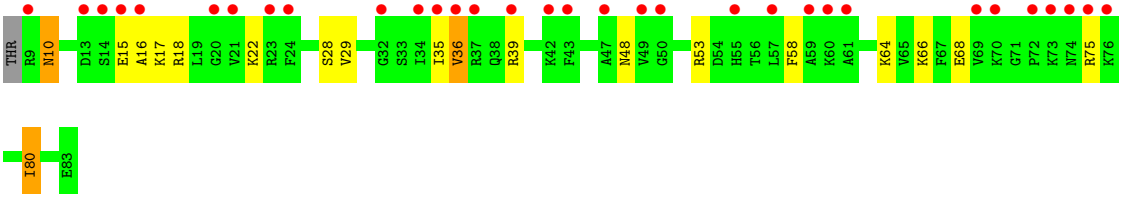
• Molecule 46: 50S ribosomal protein L25

Chain DW:

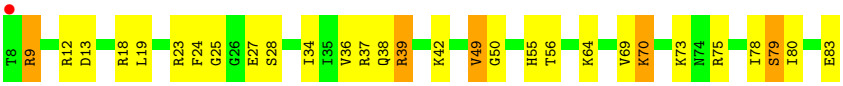


• Molecule 47: 50S ribosomal protein L27

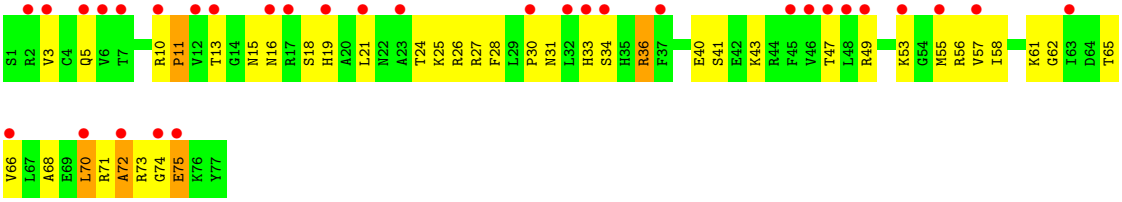




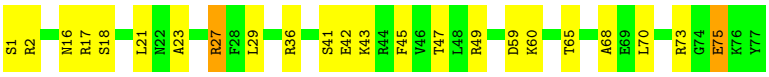
• Molecule 47: 50S ribosomal protein L27



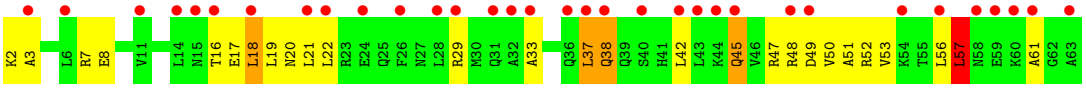
• Molecule 48: 50S ribosomal protein L28



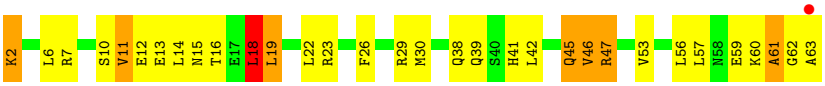
• Molecule 48: 50S ribosomal protein L28



• Molecule 49: 50S ribosomal protein L29

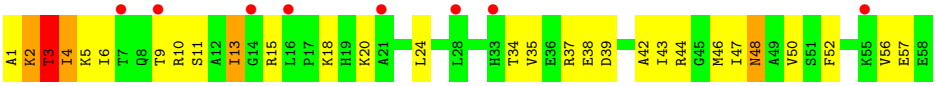


• Molecule 49: 50S ribosomal protein L29



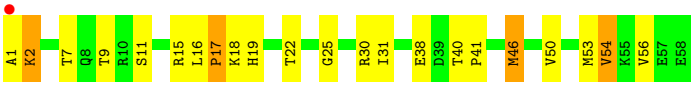
• Molecule 50: 50S ribosomal protein L30

Chain C0:



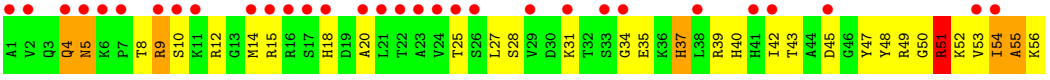
• Molecule 50: 50S ribosomal protein L30

Chain D0:



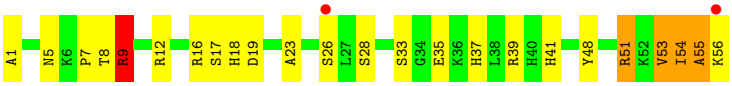
• Molecule 51: 50S ribosomal protein L32

Chain C1:



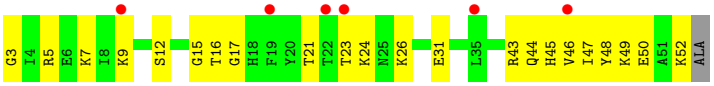
• Molecule 51: 50S ribosomal protein L32

Chain D1:



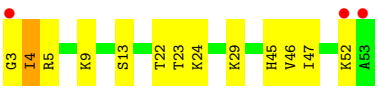
• Molecule 52: 50S ribosomal protein L33

Chain C2:



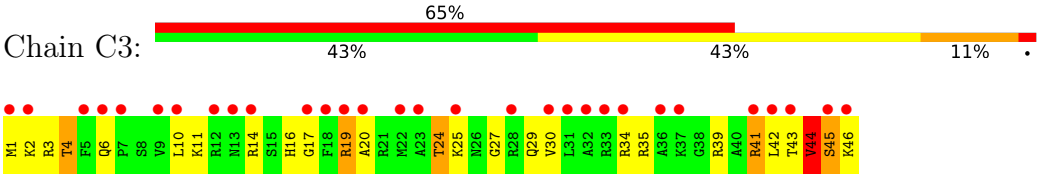
• Molecule 52: 50S ribosomal protein L33

Chain D2:



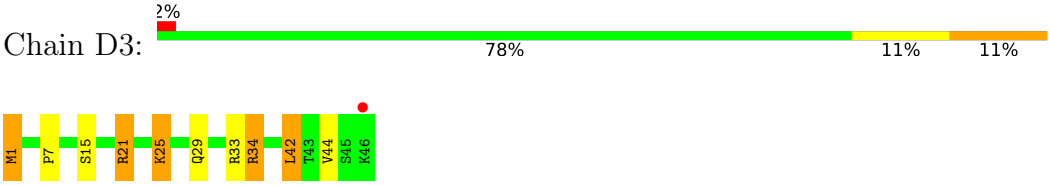
• Molecule 53: 50S ribosomal protein L34

Chain C3:



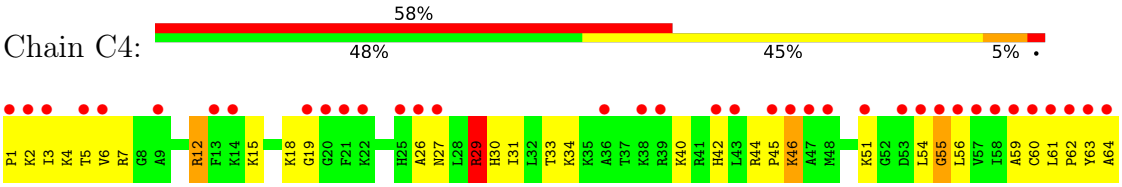
• Molecule 53: 50S ribosomal protein L34

Chain D3:



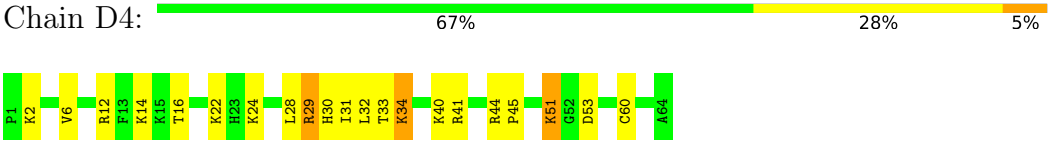
• Molecule 54: 50S ribosomal protein L35

Chain C4:



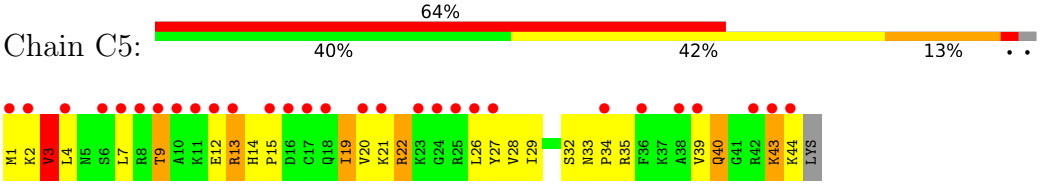
• Molecule 54: 50S ribosomal protein L35

Chain D4:



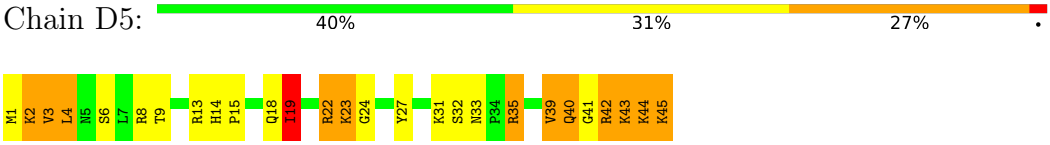
• Molecule 55: 50S ribosomal protein L36 2

Chain C5:



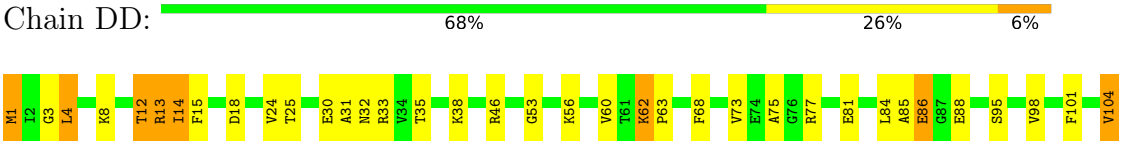
• Molecule 55: 50S ribosomal protein L36 2

Chain D5:



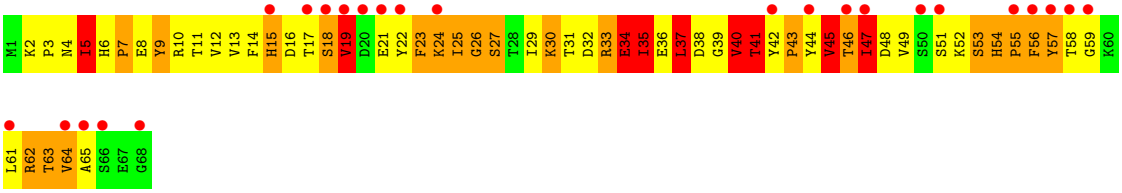
• Molecule 56: 50S ribosomal protein L3

Chain DD:



• Molecule 57: 50S ribosomal protein L31 type B

Chain D7:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	212.02Å 434.57Å 623.13Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.32 – 2.90 69.32 – 2.90	Depositor EDS
% Data completeness (in resolution range)	85.2 (69.32-2.90) 85.2 (69.32-2.90)	Depositor EDS
R_{merge}	0.21	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.26 (at 2.81Å)	Xtriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.186 , 0.255 0.186 , 0.254	Depositor DCC
R_{free} test set	5389 reflections (0.43%)	wwPDB-VP
Wilson B-factor (Å^2)	45.6	Xtriage
Anisotropy	0.488	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 107.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.44$, $< L^2 > = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	484785	wwPDB-VP
Average B, all atoms (Å^2)	124.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.34% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MEQ, MG, 4OC, PEG, D2T, PSU, SPD, 1MG, H2U, EDO, MA6, PUT, PGE, 2MA, 2MG, 3TD, OMC, 1PE, GUN, 5MC, 6MZ, OMU, UR3, G7M, MPD, PG4, OMG, 5MU, ACY

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	0.60	0/36568	0.86	21/57042 (0.0%)
2	BA	0.51	0/36834	0.75	5/57462 (0.0%)
3	DA	0.96	14/69150 (0.0%)	1.10	121/107874 (0.1%)
4	CA	0.43	0/69681	0.65	1/108706 (0.0%)
5	CB	0.30	0/2828	0.48	0/4410
5	DB	0.89	0/2850	1.08	6/4444 (0.1%)
6	AB	0.69	0/1736	1.37	12/2338 (0.5%)
6	BB	0.62	0/1736	1.30	10/2338 (0.4%)
7	AC	0.65	0/1652	1.09	3/2225 (0.1%)
7	BC	0.58	0/1652	1.12	5/2225 (0.2%)
8	AD	0.60	0/1665	1.06	2/2227 (0.1%)
8	BD	0.71	0/1665	1.14	3/2227 (0.1%)
9	AE	0.76	0/1119	1.36	8/1504 (0.5%)
9	BE	0.73	0/1119	1.32	6/1504 (0.4%)
10	AF	0.69	0/836	1.15	4/1128 (0.4%)
10	BF	0.67	0/836	1.27	8/1128 (0.7%)
11	AG	0.51	0/1196	1.00	1/1602 (0.1%)
11	BG	0.50	0/1196	1.13	1/1602 (0.1%)
12	AH	0.68	0/989	1.18	6/1326 (0.5%)
12	BH	0.60	0/989	1.12	1/1326 (0.1%)
13	AI	0.57	0/1034	1.15	2/1375 (0.1%)
13	BI	0.53	0/1034	1.20	3/1375 (0.2%)
14	AJ	0.73	0/797	1.24	5/1077 (0.5%)
14	BJ	0.76	0/797	1.12	1/1077 (0.1%)
15	AK	0.54	0/893	1.07	0/1205
15	BK	0.62	0/893	1.27	7/1205 (0.6%)
16	AL	0.74	0/960	1.13	1/1286 (0.1%)
17	AM	0.57	0/893	1.13	1/1193 (0.1%)
17	BM	0.47	0/893	1.18	5/1193 (0.4%)
18	AN	0.68	0/785	1.24	3/1043 (0.3%)
18	BN	0.49	0/785	1.08	1/1043 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
19	AO	0.67	0/724	1.15	4/966 (0.4%)
19	BO	0.61	0/724	1.11	0/966
20	AP	0.65	0/659	1.17	0/884
20	BP	0.66	0/659	1.22	1/884 (0.1%)
21	AQ	0.66	0/658	1.17	1/881 (0.1%)
21	BQ	0.58	0/658	1.09	1/881 (0.1%)
22	AR	0.61	0/463	1.10	0/621
22	BR	0.71	0/463	1.16	0/621
23	AS	0.70	0/653	1.11	0/877
23	BS	0.44	0/653	1.12	0/877
24	AT	0.72	0/671	1.16	3/888 (0.3%)
24	BT	0.57	0/671	1.15	2/888 (0.2%)
25	AU	0.64	0/457	1.27	6/606 (1.0%)
25	BU	0.75	0/457	1.53	8/606 (1.3%)
26	BL	0.72	0/969	1.28	4/1300 (0.3%)
27	CC	0.65	0/2122	1.17	6/2852 (0.2%)
27	DC	1.03	1/2122 (0.0%)	1.29	6/2852 (0.2%)
28	CD	0.51	0/1586	1.02	0/2134
29	CE	0.46	0/1571	1.08	3/2113 (0.1%)
29	DE	0.99	1/1571 (0.1%)	1.26	3/2113 (0.1%)
30	CF	0.47	0/1435	1.12	2/1926 (0.1%)
30	DF	0.80	0/1435	1.19	2/1926 (0.1%)
31	CG	0.36	0/1343	0.77	0/1816
31	DG	0.81	0/1343	1.11	2/1816 (0.1%)
32	CH	0.50	0/1113	0.93	0/1504
32	DH	0.50	0/1113	1.06	6/1504 (0.4%)
33	CJ	0.46	0/1046	1.17	8/1410 (0.6%)
33	DJ	0.52	0/1046	1.25	10/1410 (0.7%)
34	CK	0.60	1/1152 (0.1%)	0.90	1/1551 (0.1%)
34	DK	1.31	2/1152 (0.2%)	1.40	5/1551 (0.3%)
35	CL	0.57	0/947	1.00	0/1268
35	DL	1.03	0/955	1.29	4/1279 (0.3%)
36	CM	0.50	0/1054	1.15	4/1403 (0.3%)
36	DM	1.05	0/1062	1.28	2/1413 (0.1%)
37	CN	0.52	0/1093	0.99	0/1460
37	DN	1.08	0/1104	1.33	5/1474 (0.3%)
38	CO	0.54	0/974	1.12	3/1301 (0.2%)
38	DO	1.17	1/974 (0.1%)	1.52	7/1301 (0.5%)
39	CP	0.47	0/902	1.06	0/1209
39	DP	0.94	0/910	1.27	3/1219 (0.2%)
40	CQ	0.52	0/929	1.07	2/1242 (0.2%)
40	DQ	0.94	0/929	1.18	0/1242
41	CR	0.51	0/960	1.05	1/1278 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
41	DR	1.25	0/960	1.55	8/1278 (0.6%)
42	CS	0.45	0/829	1.08	1/1107 (0.1%)
42	DS	1.20	1/829 (0.1%)	1.37	3/1107 (0.3%)
43	CT	0.49	0/864	1.05	4/1156 (0.3%)
43	DT	1.21	0/864	1.52	1/1156 (0.1%)
44	CU	0.47	0/745	1.07	1/994 (0.1%)
44	DU	0.94	0/737	1.16	0/984
45	CV	0.42	0/788	1.18	1/1051 (0.1%)
45	DV	0.99	0/788	1.35	10/1051 (1.0%)
46	CW	0.37	0/766	0.85	0/1025
46	DW	1.01	0/766	1.36	2/1025 (0.2%)
47	CX	0.52	0/576	0.96	0/762
47	DX	1.15	2/602 (0.3%)	1.37	0/795
48	CY	0.60	0/635	1.13	1/848 (0.1%)
48	DY	0.91	0/635	1.13	0/848
49	CZ	0.40	0/502	1.03	0/667
49	DZ	0.81	0/502	1.30	2/667 (0.3%)
50	C0	0.51	0/453	1.02	0/605
50	D0	1.25	0/460	1.44	1/615 (0.2%)
51	C1	0.51	0/450	1.05	1/599 (0.2%)
51	D1	1.11	0/450	1.59	3/599 (0.5%)
52	C2	0.47	0/416	0.95	0/554
52	D2	0.91	0/421	1.21	0/561
53	C3	0.68	0/380	1.16	1/498 (0.2%)
53	D3	1.10	0/380	1.40	1/498 (0.2%)
54	C4	0.59	0/513	1.16	1/676 (0.1%)
54	D4	1.04	0/513	1.32	2/676 (0.3%)
55	C5	0.49	0/363	0.62	0/479
55	D5	1.07	0/372	1.17	0/490
56	DD	1.10	0/1576	1.34	2/2119 (0.1%)
57	D7	0.60	0/542	0.95	0/736
All	All	0.70	23/309220 (0.0%)	0.96	414/462249 (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
7	AC	0	1
8	BD	0	1
10	BF	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
13	AI	0	1
14	AJ	0	1
15	BK	0	1
19	AO	0	1
19	BO	0	1
21	AQ	0	1
23	AS	0	1
24	AT	0	2
24	BT	0	1
25	AU	0	1
27	CC	0	1
27	DC	0	5
28	CD	0	2
29	DE	0	6
30	DF	0	1
32	CH	0	1
33	CJ	0	1
33	DJ	0	1
34	DK	0	8
35	CL	0	1
35	DL	0	1
36	DM	0	3
38	DO	0	4
39	DP	0	1
40	DQ	0	1
41	DR	0	6
42	DS	0	1
43	DT	0	9
45	DV	0	1
46	DW	0	4
47	DX	0	4
49	DZ	0	2
50	D0	0	4
51	D1	0	2
57	D7	0	1
All	All	0	85

All (23) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	CK	136	GLN	C-O	11.23	1.29	1.23
3	DA	2886	A	P-OP1	10.24	1.69	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2886	A	P-OP2	8.61	1.66	1.49
3	DA	2884	U	O3'-P	7.05	1.71	1.61
3	DA	2098	U	C4-O4	6.54	1.36	1.23
3	DA	2885	G	C2-N2	6.48	1.47	1.34
34	DK	17	VAL	CB-CG1	-6.36	1.31	1.52
3	DA	2887	A	P-O5'	5.98	1.68	1.59
3	DA	976	G	P-OP1	-5.97	1.37	1.49
3	DA	2885	G	C5-C6	5.83	1.54	1.42
3	DA	1265	A	P-OP2	-5.74	1.37	1.49
38	DO	2	ARG	CG-CD	5.64	1.69	1.52
3	DA	2885	G	P-OP2	5.62	1.60	1.49
47	DX	13	ASP	CB-CG	5.61	1.66	1.52
3	DA	2885	G	C6-O6	5.57	1.35	1.24
27	DC	52	HIS	CA-CB	-5.42	1.45	1.53
34	DK	65	THR	CB-CG2	-5.42	1.34	1.52
42	DS	74	ILE	CG1-CD1	-5.36	1.30	1.51
3	DA	2885	G	N9-C4	5.25	1.48	1.38
47	DX	69	VAL	CB-CG2	-5.23	1.35	1.52
3	DA	2098	U	N1-C6	5.12	1.48	1.38
29	DE	77	ILE	CB-CG2	5.10	1.69	1.52
3	DA	2887	A	P-OP2	5.03	1.59	1.49

All (414) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	DC	27	LYS	CA-C-N	11.27	133.93	119.84
27	DC	27	LYS	C-N-CA	11.27	133.93	119.84
46	DW	18	ARG	CA-CB-CG	10.00	134.11	114.10
49	DZ	45	GLN	N-CA-C	-9.68	94.90	110.20
9	AE	44	GLY	N-CA-C	-9.66	99.29	112.52
25	BU	12	PHE	CA-C-N	8.51	137.79	121.54
25	BU	12	PHE	C-N-CA	8.51	137.79	121.54
8	BD	192	SER	N-CA-C	8.50	128.91	110.80
34	CK	136	GLN	O-C-N	-8.02	117.84	121.53
6	AB	73	LYS	N-CA-C	-7.62	94.58	110.80
27	CC	212	TRP	CA-CB-CG	7.59	128.03	113.60
3	DA	1396	U	OP1-P-O3'	-7.52	85.44	108.00
13	AI	41	ARG	N-CA-C	-7.48	103.23	113.18
3	DA	2588	G	O5'-P-OP2	-7.44	85.68	108.00
26	BL	24	LEU	N-CA-C	7.29	126.33	110.80
38	DO	71	ARG	NE-CZ-NH2	7.25	125.73	119.20
3	DA	560	C	O3'-P-O5'	-7.22	93.17	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	561	G	O5'-P-OP2	7.20	129.59	108.00
38	DO	95	THR	N-CA-CB	-7.11	99.68	111.20
27	CC	195	GLY	N-CA-C	7.10	130.00	113.18
6	AB	32	PHE	N-CA-C	-7.08	102.96	112.94
36	CM	52	GLY	N-CA-C	-7.08	102.26	112.17
3	DA	842	U	OP1-P-O3'	-7.02	86.94	108.00
39	DP	100	HIS	N-CA-C	7.01	125.73	110.80
45	CV	42	LYS	N-CA-C	6.96	120.94	107.71
3	DA	1644	C	OP1-P-O3'	-6.96	87.12	108.00
16	AL	9	ARG	CA-CB-CG	6.95	128.00	114.10
3	DA	2373	G	OP1-P-O3'	-6.94	87.19	108.00
32	DH	27	ARG	N-CA-C	-6.89	99.69	110.36
9	BE	44	GLY	N-CA-C	-6.86	96.92	113.18
17	BM	35	ALA	N-CA-C	6.85	119.76	111.40
25	BU	14	VAL	N-CA-C	-6.84	106.63	113.20
33	CJ	105	LEU	N-CA-C	6.79	119.26	111.11
12	AH	67	GLN	N-CA-C	-6.79	96.35	110.80
45	DV	97	SER	CB-CA-C	-6.78	96.92	110.42
7	BC	172	ARG	CG-CD-NE	6.76	126.88	112.00
3	DA	541	A	O5'-P-OP2	-6.76	87.72	108.00
30	CF	18	GLU	N-CA-C	-6.73	104.11	112.72
3	DA	528	A	N9-C1'-C2'	6.70	122.05	112.00
3	DA	2868	A	O5'-P-OP2	-6.67	87.99	108.00
6	AB	106	THR	N-CA-C	-6.65	101.95	110.53
3	DA	956	G	OP1-P-O3'	6.63	127.90	108.00
18	AN	61	ARG	CA-C-N	6.63	134.20	121.54
18	AN	61	ARG	C-N-CA	6.63	134.20	121.54
3	DA	2590	A	OP1-P-OP2	-6.62	99.73	119.60
10	BF	99	ALA	N-CA-C	6.60	124.86	110.80
45	DV	97	SER	N-CA-C	6.55	124.75	110.80
33	DJ	72	THR	N-CA-C	6.55	119.12	110.08
3	DA	964	C	OP2-P-O3'	-6.54	88.36	108.00
19	AO	45	GLU	N-CA-C	-6.54	100.22	110.36
3	DA	1792	G	OP2-P-O3'	6.54	127.62	108.00
42	DS	57	GLY	N-CA-C	6.54	128.68	113.18
27	CC	159	THR	N-CA-C	6.51	118.42	110.41
9	BE	123	VAL	CB-CA-C	-6.51	100.61	111.29
45	DV	67	SER	CB-CA-C	-6.49	96.92	110.17
15	BK	52	PHE	N-CA-C	6.48	124.59	110.80
41	DR	19	GLN	CA-C-N	-6.47	112.30	122.65
41	DR	19	GLN	C-N-CA	-6.47	112.30	122.65
24	BT	69	LYS	N-CA-C	6.45	124.53	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	14	A	O5'-P-OP1	-6.44	88.67	108.00
34	DK	116	ARG	NE-CZ-NH2	-6.44	113.40	119.20
30	CF	71	LYS	CB-CG-CD	6.43	126.08	111.30
9	AE	138	ARG	N-CA-C	-6.42	97.14	110.80
6	AB	160	ALA	N-CA-C	6.40	124.44	110.80
10	BF	92	THR	CA-CB-CG2	6.40	121.38	110.50
18	AN	21	ALA	N-CA-C	-6.40	102.56	111.52
25	BU	8	GLU	CA-C-N	6.39	133.75	121.54
25	BU	8	GLU	C-N-CA	6.39	133.75	121.54
3	DA	740	C	O5'-P-OP1	6.39	127.17	108.00
12	AH	101	ILE	N-CA-C	6.39	119.50	108.90
3	DA	563	A	OP1-P-O3'	6.38	127.15	108.00
19	AO	19	ALA	N-CA-C	-6.37	99.85	109.79
3	DA	512	G	O4'-C1'-N9	6.36	117.73	108.20
25	AU	12	PHE	CA-C-N	6.36	133.68	121.54
25	AU	12	PHE	C-N-CA	6.36	133.68	121.54
3	DA	1143	A	O5'-P-OP2	-6.34	88.97	108.00
31	DG	171	LYS	CG-CD-CE	6.32	125.84	111.30
38	CO	69	ARG	N-CA-C	-6.32	101.43	110.59
45	DV	55	GLY	N-CA-C	-6.31	98.22	113.18
40	CQ	38	ARG	CA-CB-CG	6.31	126.72	114.10
10	AF	97	THR	CA-C-N	6.30	133.57	121.54
10	AF	97	THR	C-N-CA	6.30	133.57	121.54
41	DR	94	LEU	CD1-CG-CD2	-6.28	96.99	110.80
35	DL	39	ILE	CG1-CB-CG2	-6.27	91.90	110.70
3	DA	2867	G	O5'-P-OP1	-6.26	89.22	108.00
27	DC	110	LYS	CB-CG-CD	6.26	125.69	111.30
15	BK	106	ARG	N-CA-C	-6.23	99.06	108.96
35	DL	88	ASN	CB-CA-C	6.22	120.05	109.72
6	AB	159	ASP	N-CA-C	6.18	120.98	113.38
3	DA	2391	G	O5'-P-OP2	-6.18	89.47	108.00
3	DA	16	C	OP1-P-O3'	6.17	126.50	108.00
6	AB	132	LYS	N-CA-C	-6.15	104.84	112.90
43	CT	16	LYS	N-CA-CB	6.14	119.76	110.30
51	D1	53	VAL	N-CA-C	-6.13	96.59	109.34
6	BB	32	PHE	N-CA-C	-6.11	97.78	110.80
6	BB	89	GLN	N-CA-C	6.10	119.49	109.85
15	BK	41	ALA	N-CA-C	6.07	123.73	110.80
24	AT	7	ALA	CA-C-N	6.06	128.41	120.28
24	AT	7	ALA	C-N-CA	6.06	128.41	120.28
32	DH	28	ASN	CB-CA-C	-6.06	98.36	110.42
3	DA	2692	G	OP2-P-O3'	6.05	126.16	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AB	108	ARG	N-CA-C	-6.05	104.68	111.28
6	BB	109	GLN	N-CA-CB	6.04	119.53	110.22
1	AA	1400	C	O5'-P-OP1	-6.03	89.90	108.00
8	AD	5	LEU	N-CA-C	6.02	123.63	110.80
29	CE	88	ARG	CB-CG-CD	6.00	125.09	111.30
3	DA	2359	C	O5'-P-OP2	6.00	125.98	108.00
7	AC	3	GLN	CB-CG-CD	5.99	122.79	112.60
6	AB	15	HIS	N-CA-CB	5.99	120.60	110.49
51	D1	9	ARG	NE-CZ-NH2	5.98	124.58	119.20
7	AC	100	GLN	N-CA-C	-5.98	97.59	108.65
12	BH	67	GLN	N-CA-C	-5.97	100.83	109.31
6	AB	49	MET	CB-CG-SD	5.96	130.59	112.70
14	AJ	35	GLN	N-CA-C	-5.96	98.10	110.80
9	AE	102	GLY	N-CA-C	-5.96	105.39	113.37
38	DO	119	SER	N-CA-C	5.96	123.49	110.80
3	DA	537	G	O5'-P-OP2	5.96	125.87	108.00
5	DB	73	A	O5'-P-OP2	-5.94	90.19	108.00
17	BM	66	GLU	CB-CA-C	-5.92	108.05	116.34
1	AA	527	G7M	OP1-P-O3'	5.89	118.16	105.20
6	BB	109	GLN	CA-CB-CG	5.89	125.88	114.10
10	AF	53	LYS	N-CA-C	-5.88	98.27	110.80
25	BU	7	ARG	N-CA-C	5.88	117.73	108.96
3	DA	1695	G	O5'-P-OP1	-5.87	90.38	108.00
25	AU	8	GLU	CA-C-N	5.87	132.74	121.54
25	AU	8	GLU	C-N-CA	5.87	132.74	121.54
3	DA	2015	A	O3'-P-O5'	-5.85	95.22	104.00
3	DA	1294	U	O5'-P-OP1	-5.85	90.44	108.00
42	DS	44	GLY	N-CA-C	-5.85	99.31	113.18
39	DP	95	SER	N-CA-CB	-5.85	103.12	111.84
3	DA	2884	U	C3'-C2'-O2'	-5.83	101.96	110.70
5	DB	92	C	OP1-P-O3'	-5.83	90.52	108.00
27	CC	212	TRP	N-CA-CB	5.82	120.22	110.32
3	DA	1634	A	O5'-P-OP1	-5.82	90.55	108.00
33	DJ	68	PHE	N-CA-C	5.81	123.18	110.80
1	AA	586	C	O5'-P-OP2	-5.81	90.57	108.00
18	BN	19	TYR	N-CA-C	-5.81	98.42	110.80
33	DJ	19	PRO	CA-C-N	5.80	135.95	121.80
33	DJ	19	PRO	C-N-CA	5.80	135.95	121.80
3	DA	755	U	O5'-P-OP1	-5.79	90.62	108.00
3	DA	1026	G	OP2-P-O3'	5.79	125.36	108.00
1	AA	570	G	OP1-P-O3'	-5.78	90.68	108.00
1	AA	578	C	OP2-P-O3'	5.76	125.27	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	995	C	O4'-C1'-N1	-5.76	99.56	108.20
3	DA	1328	A	OP2-P-O3'	5.76	125.27	108.00
10	BF	81	ASN	N-CA-C	5.75	118.53	109.96
43	CT	25	ARG	CG-CD-NE	-5.75	99.35	112.00
11	AG	145	ALA	N-CA-C	-5.75	98.55	110.80
26	BL	85	GLY	N-CA-C	-5.74	99.58	113.18
15	BK	16	VAL	CA-C-N	5.74	132.49	121.54
15	BK	16	VAL	C-N-CA	5.74	132.49	121.54
37	DN	38	ARG	N-CA-C	-5.73	100.36	109.76
37	DN	22	GLN	CA-C-N	-5.73	110.18	121.41
37	DN	22	GLN	C-N-CA	-5.73	110.18	121.41
13	BI	89	GLU	N-CA-C	5.72	122.99	110.80
7	AC	136	ARG	CA-CB-CG	5.72	125.54	114.10
10	BF	92	THR	CA-C-N	5.72	132.47	121.54
10	BF	92	THR	C-N-CA	5.72	132.47	121.54
45	DV	96	LYS	N-CA-C	-5.72	98.62	110.80
3	DA	1187	G	OP2-P-O3'	5.71	125.15	108.00
3	DA	1767	G	OP2-P-O3'	5.71	125.13	108.00
27	DC	13	ARG	N-CA-CB	5.71	118.62	110.06
24	AT	8	LYS	N-CA-C	-5.69	105.07	111.28
1	AA	328	C	O5'-P-OP2	-5.68	90.95	108.00
3	DA	541	A	OP1-P-OP2	5.68	136.64	119.60
25	BU	7	ARG	CA-C-N	5.68	132.39	121.54
25	BU	7	ARG	C-N-CA	5.68	132.39	121.54
10	AF	6	ILE	CB-CA-C	-5.68	101.98	111.29
6	BB	84	ALA	N-CA-C	-5.67	105.17	111.36
33	DJ	90	GLY	N-CA-C	-5.67	99.74	113.18
26	BL	121	ARG	CA-CB-CG	5.67	125.44	114.10
3	DA	981	A	OP2-P-O3'	-5.66	91.02	108.00
46	DW	30	ILE	CA-CB-CG2	-5.65	100.90	110.50
3	DA	2779	U	O5'-P-OP2	-5.64	91.07	108.00
9	AE	102	GLY	CA-C-N	5.64	132.32	121.54
9	AE	102	GLY	C-N-CA	5.64	132.32	121.54
3	DA	2330	G	OP1-P-OP2	-5.64	102.68	119.60
3	DA	1131	G	OP1-P-O3'	5.64	124.91	108.00
43	CT	62	ASP	N-CA-C	5.63	122.80	110.80
24	BT	66	LEU	CA-CB-CG	5.63	135.99	116.30
36	CM	107	PHE	N-CA-CB	5.63	122.00	111.53
8	AD	18	ASP	N-CA-C	5.62	118.39	109.96
3	DA	1625	C	O5'-P-OP2	-5.62	91.14	108.00
32	DH	2	GLN	CA-C-N	5.62	132.08	121.97
32	DH	2	GLN	C-N-CA	5.62	132.08	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2359	C	P-O5'-C5'	-5.61	112.48	120.90
7	BC	179	ARG	CG-CD-NE	-5.61	99.66	112.00
3	DA	2593	U	O5'-P-OP1	-5.61	91.18	108.00
41	DR	49	ARG	CB-CG-CD	5.61	124.20	111.30
3	DA	2365	G	O5'-P-OP2	-5.60	91.19	108.00
38	DO	71	ARG	NE-CZ-NH1	-5.60	115.90	121.50
36	DM	119	PRO	N-CA-C	-5.59	102.36	110.80
45	DV	46	LYS	CB-CG-CD	5.59	124.16	111.30
41	CR	21	LYS	CG-CD-CE	5.59	124.16	111.30
3	DA	1264	A	OP1-P-O3'	5.58	124.76	108.00
3	DA	2285	C	P-O5'-C5'	-5.58	112.53	120.90
49	DZ	47	ARG	N-CA-C	-5.58	105.20	111.28
51	D1	51	ARG	NE-CZ-NH2	5.57	124.21	119.20
38	DO	98	LEU	CA-C-N	-5.56	112.97	120.87
38	DO	98	LEU	C-N-CA	-5.56	112.97	120.87
2	BA	814	A	OP1-P-O3'	-5.56	91.33	108.00
13	BI	47	VAL	N-CA-C	-5.55	104.15	111.09
5	DB	75	G	O5'-P-OP2	5.54	124.63	108.00
3	DA	991	C	OP2-P-O3'	5.54	124.62	108.00
9	AE	139	ALA	N-CA-C	-5.54	105.25	112.23
33	CJ	138	VAL	N-CA-C	-5.53	99.77	108.23
1	AA	1062	U	OP2-P-O3'	-5.52	91.43	108.00
12	AH	83	LEU	CA-C-N	5.52	128.71	120.87
12	AH	83	LEU	C-N-CA	5.52	128.71	120.87
14	AJ	73	LEU	N-CA-C	5.51	120.26	112.93
3	DA	1188	U	OP1-P-O3'	-5.51	91.47	108.00
3	DA	2885	G	C4'-C3'-O3'	5.50	121.25	113.00
37	DN	22	GLN	N-CA-C	5.50	118.78	109.76
29	CE	165	HIS	CA-C-N	-5.49	113.11	122.56
29	CE	165	HIS	C-N-CA	-5.49	113.11	122.56
9	BE	123	VAL	N-CA-C	5.49	120.76	109.34
11	BG	54	SER	N-CA-C	-5.49	99.11	110.80
56	DD	110	THR	CA-CB-CG2	-5.47	101.19	110.50
1	AA	244	U	O5'-P-OP1	-5.47	91.58	108.00
2	BA	769	G	O5'-P-OP2	-5.47	91.59	108.00
56	DD	156	PHE	N-CA-C	-5.47	101.56	110.20
29	DE	108	ILE	CB-CG1-CD1	-5.47	102.32	113.80
1	AA	27	G	OP1-P-O3'	5.45	124.35	108.00
3	DA	937	C	P-O3'-C3'	-5.45	112.03	120.20
25	AU	15	ALA	N-CA-C	-5.45	105.45	111.71
25	AU	14	VAL	N-CA-C	-5.44	107.82	113.10
27	CC	239	PHE	N-CA-C	-5.44	99.22	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	267	C	OP2-P-O3'	5.43	124.30	108.00
3	DA	2789	C	OP1-P-O3'	-5.43	91.70	108.00
3	DA	1597	A	OP1-P-O3'	5.43	124.29	108.00
45	DV	99	SER	CA-C-N	-5.42	114.57	122.65
45	DV	99	SER	C-N-CA	-5.42	114.57	122.65
3	DA	1131	G	OP2-P-O3'	-5.42	91.73	108.00
33	DJ	69	VAL	N-CA-C	-5.42	98.06	109.34
3	DA	2509	G	C3'-C2'-O2'	5.41	118.82	110.70
9	AE	103	THR	N-CA-C	-5.41	99.28	110.80
14	AJ	92	LEU	CA-C-N	5.41	131.87	121.54
14	AJ	92	LEU	C-N-CA	5.41	131.87	121.54
3	DA	560	C	OP1-P-O3'	5.40	124.21	108.00
21	AQ	11	ARG	CB-CA-C	5.40	120.14	109.66
3	DA	2033	A	O4'-C1'-N9	5.40	116.30	108.20
27	CC	157	ALA	N-CA-C	5.40	118.66	111.75
39	DP	31	THR	N-CA-C	-5.40	101.99	108.25
30	DF	107	VAL	N-CA-C	-5.40	104.79	112.61
34	DK	17	VAL	CB-CA-C	-5.39	102.45	110.33
10	BF	93	LYS	CB-CG-CD	5.39	123.70	111.30
36	DM	35	HIS	N-CA-C	5.38	117.28	108.52
3	DA	808	G	OP1-P-OP2	5.38	135.72	119.60
1	AA	971	G	O4'-C1'-N9	5.36	116.24	108.20
3	DA	1978	A	O3'-P-O5'	-5.36	95.96	104.00
9	BE	111	MET	N-CA-C	-5.36	106.67	113.43
36	CM	138	ALA	N-CA-C	-5.36	105.71	113.21
3	DA	570	G	P-O5'-C5'	-5.36	112.87	120.90
3	DA	2034	U	OP1-P-O3'	-5.35	91.94	108.00
3	DA	856	G	OP2-P-O3'	5.35	124.05	108.00
38	CO	100	CYS	N-CA-C	5.35	118.94	111.56
3	DA	2098	U	N1-C1'-C2'	-5.35	103.98	112.00
33	DJ	30	GLN	CA-C-N	5.34	129.88	122.29
33	DJ	30	GLN	C-N-CA	5.34	129.88	122.29
1	AA	268	U	OP1-P-O3'	-5.34	91.97	108.00
3	DA	132	G	OP1-P-O3'	-5.34	91.97	108.00
1	AA	900	A	O5'-P-OP2	5.34	124.01	108.00
34	DK	7	LYS	CB-CG-CD	5.33	123.57	111.30
3	DA	777	G	OP2-P-O3'	5.33	124.00	108.00
6	AB	27	MET	CA-CB-CG	5.33	124.75	114.10
3	DA	2703	C	OP1-P-O3'	-5.33	92.02	108.00
44	CU	74	ILE	N-CA-C	5.32	116.98	108.89
53	D3	34	ARG	CG-CD-NE	-5.32	100.29	112.00
33	CJ	63	ASP	N-CA-C	5.32	117.64	107.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1150	C	C2'-C3'-O3'	-5.31	105.73	113.70
3	DA	2543	G	OP1-P-O3'	-5.31	92.06	108.00
37	DN	55	ARG	CB-CG-CD	5.31	123.52	111.30
1	AA	1501	C	OP2-P-O3'	5.31	123.93	108.00
3	DA	488	G	O5'-P-OP2	-5.31	92.08	108.00
3	DA	1223	G	OP2-P-O3'	5.30	123.91	108.00
6	AB	11	LYS	N-CA-C	-5.30	105.50	111.28
9	BE	139	ALA	N-CA-C	-5.30	105.56	112.23
33	CJ	59	THR	CA-C-N	-5.29	115.34	122.91
33	CJ	59	THR	C-N-CA	-5.29	115.34	122.91
8	BD	5	LEU	N-CA-C	5.29	122.07	110.80
27	DC	217	PRO	N-CA-C	5.29	119.39	111.14
3	DA	2572	A	O5'-P-OP2	-5.29	92.14	108.00
21	BQ	38	ILE	N-CA-C	5.29	116.09	108.48
7	BC	18	TRP	CA-CB-CG	5.28	123.63	113.60
33	CJ	85	ILE	CA-C-N	5.28	128.33	120.31
33	CJ	85	ILE	C-N-CA	5.28	128.33	120.31
3	DA	1518	C	O5'-P-OP2	-5.27	92.19	108.00
3	DA	1452	G	C2'-C3'-O3'	5.27	117.40	109.50
3	DA	1799	G	OP2-P-O3'	5.27	123.80	108.00
1	AA	1391	U	OP1-P-O3'	-5.26	92.20	108.00
3	DA	707	G	OP1-P-O3'	-5.26	92.21	108.00
12	AH	99	LEU	N-CA-C	-5.24	103.11	110.50
3	DA	304	U	P-O5'-C5'	-5.24	113.04	120.90
3	DA	2499	C	OP1-P-O3'	5.24	123.72	108.00
12	AH	25	VAL	N-CA-C	5.24	117.30	108.81
3	DA	1282	U	P-O5'-C5'	-5.23	113.05	120.90
13	BI	60	LYS	N-CA-C	-5.22	106.59	113.12
3	DA	682	G	O5'-P-OP2	-5.22	92.34	108.00
3	DA	1576	U	OP1-P-O3'	-5.22	92.34	108.00
3	DA	1779	U	P-O5'-C5'	-5.22	113.07	120.90
3	DA	300	A	P-O5'-C5'	-5.22	113.08	120.90
3	DA	1959	G	OP2-P-O3'	5.21	123.64	108.00
3	DA	1188	U	OP2-P-O3'	5.21	123.64	108.00
26	BL	106	GLY	N-CA-C	-5.21	104.46	112.85
17	BM	12	HIS	N-CA-C	5.21	121.89	110.80
3	DA	1606	C	O5'-P-OP2	-5.20	92.39	108.00
3	DA	484	C	O3'-P-O5'	-5.20	96.20	104.00
38	DO	12	ARG	NE-CZ-NH2	5.20	123.88	119.20
5	DB	75	G	P-O3'-C3'	-5.20	112.40	120.20
3	DA	2788	C	OP1-P-O3'	-5.19	92.42	108.00
3	DA	1839	G	O5'-P-OP2	5.19	123.56	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1391	U	OP2-P-O3'	5.18	123.54	108.00
34	DK	39	LYS	CB-CG-CD	5.18	123.22	111.30
33	DJ	115	ASP	CA-C-N	5.18	131.43	121.54
33	DJ	115	ASP	C-N-CA	5.18	131.43	121.54
42	DS	86	GLN	N-CA-CB	-5.18	103.20	111.43
3	DA	1153	C	C3'-C2'-O2'	-5.18	102.93	110.70
34	DK	57	LEU	CD1-CG-CD2	-5.18	99.41	110.80
50	D0	46	MET	CG-SD-CE	5.18	112.29	100.90
3	DA	2063	C	OP1-P-O3'	-5.18	92.47	108.00
3	DA	968	C	OP2-P-O3'	5.17	123.53	108.00
9	AE	111	MET	N-CA-C	-5.17	105.33	111.69
15	BK	51	GLY	N-CA-C	-5.17	100.92	113.18
41	DR	87	VAL	O-C-N	-5.17	117.07	122.81
43	DT	84	ARG	NE-CZ-NH1	-5.17	116.33	121.50
38	CO	79	LEU	CB-CG-CD2	-5.17	95.20	110.70
54	D4	51	LYS	CB-CA-C	-5.17	102.21	110.79
1	AA	1512	U	OP1-P-O3'	-5.16	92.51	108.00
3	DA	2515	C	OP1-P-O3'	-5.16	92.52	108.00
5	DB	6	G	C2'-C3'-O3'	5.16	121.44	113.70
2	BA	24	U	OP2-P-O3'	5.16	123.47	108.00
6	BB	83	ALA	N-CA-C	-5.16	105.78	111.71
41	DR	87	VAL	CA-C-N	-5.16	114.55	122.60
41	DR	87	VAL	C-N-CA	-5.16	114.55	122.60
35	DL	115	ILE	CA-C-N	-5.15	113.10	120.42
35	DL	115	ILE	C-N-CA	-5.15	113.10	120.42
20	BP	51	ARG	CB-CG-CD	-5.15	99.45	111.30
53	C3	19	ARG	N-CA-C	-5.15	105.79	111.71
3	DA	807	U	P-O5'-C5'	-5.14	113.19	120.90
3	DA	1231	U	O5'-P-OP1	5.14	123.41	108.00
1	AA	291	U	OP1-P-O3'	-5.13	92.59	108.00
6	BB	122	GLN	N-CA-C	-5.13	107.40	113.97
3	DA	553	G	OP1-P-O3'	-5.13	92.61	108.00
6	BB	134	ALA	CA-C-N	-5.13	110.72	121.80
6	BB	134	ALA	C-N-CA	-5.13	110.72	121.80
3	DA	533	G	O5'-P-OP1	-5.13	92.62	108.00
3	DA	2253	G	O3'-P-O5'	-5.13	96.31	104.00
3	DA	495	G	OP1-P-O3'	-5.12	92.63	108.00
3	DA	1378	A	C4'-C3'-O3'	5.12	117.08	109.40
9	BE	120	VAL	N-CA-C	-5.11	103.00	109.80
17	AM	8	ASN	N-CA-C	5.11	117.30	110.35
2	BA	25	C	O5'-P-OP2	-5.11	92.68	108.00
3	DA	1298	C	OP2-P-O3'	5.11	123.32	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	DE	59	PRO	CB-CA-C	-5.11	104.24	112.21
30	DF	177	ARG	CG-CD-NE	-5.10	100.77	112.00
6	AB	51	ASN	N-CA-C	-5.10	103.75	110.43
3	DA	515	A	P-O5'-C5'	-5.10	113.25	120.90
3	DA	18	U	OP1-P-OP2	-5.10	104.30	119.60
7	BC	132	ARG	CA-CB-CG	-5.10	103.91	114.10
31	DG	169	ARG	N-CA-CB	5.10	117.85	109.95
3	DA	2438	U	O5'-P-OP2	-5.09	92.73	108.00
4	CA	2229	U	O5'-P-OP2	-5.09	92.74	108.00
17	BM	13	LYS	CA-C-N	5.09	131.25	121.54
17	BM	13	LYS	C-N-CA	5.09	131.25	121.54
29	DE	55	SER	N-CA-C	5.08	117.59	109.81
3	DA	166	U	OP1-P-O3'	-5.08	92.75	108.00
27	DC	155	ARG	CG-CD-NE	5.08	123.18	112.00
33	CJ	65	SER	N-CA-C	5.08	121.62	110.80
3	DA	1846	G	O5'-P-OP2	-5.08	92.77	108.00
19	AO	2	SER	CA-C-N	5.08	131.24	121.54
19	AO	2	SER	C-N-CA	5.08	131.24	121.54
15	BK	52	PHE	CB-CA-C	-5.08	100.32	110.42
32	DH	10	ALA	CA-C-N	5.08	131.23	121.54
32	DH	10	ALA	C-N-CA	5.08	131.23	121.54
3	DA	2334	U	OP1-P-O3'	5.07	123.22	108.00
3	DA	2886	A	O3'-P-O5'	5.07	111.61	104.00
14	AJ	62	ARG	N-CA-C	5.07	121.61	110.80
1	AA	570	G	OP2-P-O3'	5.07	123.21	108.00
3	DA	2506	U	OP1-P-OP2	-5.07	104.41	119.60
3	DA	1135	C	C4'-C3'-O3'	-5.06	105.41	113.00
41	DR	24	TYR	N-CA-C	5.06	118.20	110.20
42	CS	85	LYS	CA-CB-CG	5.06	124.22	114.10
5	DB	6	G	O3'-P-O5'	-5.06	96.41	104.00
48	CY	75	GLU	N-CA-C	-5.06	102.89	110.23
3	DA	2808	G	O5'-P-OP2	-5.06	92.83	108.00
45	DV	97	SER	CA-C-N	-5.06	114.04	122.08
45	DV	97	SER	C-N-CA	-5.06	114.04	122.08
2	BA	865	A	OP2-P-O3'	5.05	123.16	108.00
3	DA	1671	U	OP1-P-O3'	5.05	123.16	108.00
51	C1	53	VAL	N-CA-C	-5.05	102.48	109.46
3	DA	566	U	P-O5'-C5'	-5.05	113.32	120.90
40	CQ	39	LEU	N-CA-CB	5.05	118.64	110.41
3	DA	1386	C	O5'-P-OP2	-5.05	92.86	108.00
3	DA	1317	G	OP1-P-O3'	5.04	123.13	108.00
3	DA	2599	G	O5'-P-OP2	-5.04	92.87	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	771	G	O5'-P-OP1	5.04	123.12	108.00
36	CM	39	LYS	CA-CB-CG	5.04	124.18	114.10
43	CT	96	ILE	N-CA-CB	5.04	118.36	111.41
54	D4	16	THR	CB-CA-C	-5.04	101.53	111.60
14	BJ	91	ASP	N-CA-C	5.03	117.16	111.02
3	DA	1602	U	P-O5'-C5'	-5.03	113.35	120.90
8	BD	192	SER	N-CA-CB	-5.03	101.99	110.49
13	AI	44	ALA	N-CA-C	5.03	120.79	113.40
3	DA	2602	A	C1'-C2'-O2'	5.02	119.33	111.80
6	BB	40	ILE	N-CA-C	5.02	115.08	107.75
54	C4	46	LYS	CB-CG-CD	5.02	122.85	111.30
1	AA	1481	U	OP2-P-O3'	5.02	123.06	108.00
3	DA	969	G	O5'-P-OP1	5.02	123.05	108.00
3	DA	2681	C	O5'-P-OP2	-5.01	92.97	108.00
3	DA	1229	C	O5'-P-OP2	-5.00	92.99	108.00
10	BF	52	ASN	CA-C-N	5.00	131.10	121.54
10	BF	52	ASN	C-N-CA	5.00	131.10	121.54
3	DA	2267	A	OP1-P-O3'	5.00	123.01	108.00
7	BC	75	ILE	N-CA-CB	5.00	116.97	110.57

There are no chirality outliers.

All (85) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
7	AC	123	GLN	Sidechain
13	AI	57	MET	Peptide
14	AJ	58	ASN	Mainchain
19	AO	36	ILE	Mainchain
21	AQ	78	VAL	Peptide
23	AS	42	PRO	Mainchain
24	AT	67	ILE	Peptide
24	AT	7	ALA	Peptide
25	AU	7	ARG	Peptide
8	BD	65	TYR	Mainchain
10	BF	90	MET	Peptide
15	BK	30	THR	Mainchain
19	BO	84	ARG	Mainchain
24	BT	7	ALA	Peptide
27	CC	263	ASP	Sidechain
28	CD	126	ASN	Mainchain
28	CD	151	THR	Peptide
32	CH	120	GLY	Peptide

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Mol	Chain	Res	Type	Group
33	CJ	97	VAL	Peptide
35	CL	34	GLY	Peptide
50	D0	15	ARG	Mainchain
50	D0	17	PRO	Mainchain
50	D0	22	THR	Mainchain
50	D0	41	PRO	Mainchain
51	D1	17	SER	Mainchain
51	D1	48	TYR	Mainchain
57	D7	3	PRO	Peptide
27	DC	166	ARG	Mainchain
27	DC	171	VAL	Mainchain
27	DC	231	HIS	Peptide
27	DC	264	LYS	Mainchain
27	DC	52	HIS	Sidechain
29	DE	101	TYR	Mainchain
29	DE	32	VAL	Mainchain
29	DE	54	GLY	Mainchain
29	DE	70	SER	Mainchain
29	DE	81	GLY	Mainchain
29	DE	86	ALA	Mainchain
30	DF	20	ASN	Mainchain
33	DJ	91	LYS	Peptide
34	DK	104	ALA	Mainchain
34	DK	110	PRO	Mainchain
34	DK	121	LYS	Mainchain
34	DK	28	LEU	Mainchain
34	DK	40	HIS	Sidechain
34	DK	41	LYS	Mainchain
34	DK	51	GLY	Mainchain
34	DK	84	ILE	Mainchain
35	DL	25	LEU	Mainchain
36	DM	56	PRO	Mainchain
36	DM	61	LEU	Mainchain
36	DM	7	SER	Mainchain
38	DO	101	GLY	Mainchain
38	DO	117	ASP	Peptide
38	DO	77	ALA	Mainchain
38	DO	94	TYR	Mainchain
39	DP	30	ARG	Mainchain
40	DQ	52	ARG	Mainchain
41	DR	103	VAL	Mainchain
41	DR	107	ALA	Mainchain

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Mol	Chain	Res	Type	Group
41	DR	11	ALA	Mainchain
41	DR	13	HIS	Mainchain
41	DR	20	ALA	Mainchain
41	DR	87	VAL	Mainchain
42	DS	95	ASP	Mainchain
43	DT	1	MET	Mainchain
43	DT	100	THR	Mainchain
43	DT	24	ILE	Mainchain
43	DT	35	ILE	Mainchain
43	DT	37	THR	Mainchain
43	DT	43	ALA	Mainchain
43	DT	44	ALA	Mainchain
43	DT	77	ASP	Mainchain
43	DT	9	HIS	Sidechain
45	DV	99	SER	Mainchain
46	DW	2	PHE	Mainchain
46	DW	46	LYS	Mainchain
46	DW	51	GLN	Mainchain
46	DW	58	SER	Mainchain
47	DX	23	ARG	Mainchain
47	DX	27	GLU	Mainchain
47	DX	28	SER	Mainchain
47	DX	50	GLY	Mainchain
49	DZ	11	VAL	Mainchain
49	DZ	18	LEU	Mainchain

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	32908	16444	16574	1169	1
2	BA	32895	16553	16553	1228	0
3	DA	62254	31129	31238	2190	1
4	CA	62215	31288	31289	2251	0
5	CB	2529	1281	1281	54	0
5	DB	2549	1291	1289	63	0
6	AB	1705	1726	1732	155	0
6	BB	1705	1726	1732	163	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	AC	1625	1692	1696	68	0
7	BC	1625	1692	1696	82	0
8	AD	1643	1704	1707	90	0
8	BD	1643	1704	1707	70	0
9	AE	1106	1145	1148	86	0
9	BE	1106	1145	1148	105	0
10	AF	818	799	808	35	0
10	BF	818	799	808	46	0
11	AG	1182	1237	1238	54	0
11	BG	1182	1237	1238	62	0
12	AH	979	1031	1031	38	0
12	BH	979	1031	1031	43	0
13	AI	1022	1069	1070	56	0
13	BI	1022	1069	1070	73	0
14	AJ	787	825	828	85	0
14	BJ	787	825	828	29	0
15	AK	877	884	887	35	0
15	BK	877	884	887	53	0
16	AL	957	1009	1017	31	0
17	AM	884	938	941	53	0
17	BM	884	938	941	45	0
18	AN	774	823	827	70	0
18	BN	774	823	827	52	0
19	AO	716	734	739	40	0
19	BO	716	734	739	32	0
20	AP	649	661	666	29	0
20	BP	649	661	666	40	0
21	AQ	649	688	691	35	0
21	BQ	649	688	691	32	0
22	AR	456	477	478	10	0
22	BR	456	477	478	29	0
23	AS	638	657	665	30	0
23	BS	638	661	665	19	0
24	AT	665	711	714	41	0
24	BT	665	711	714	33	0
25	AU	451	473	474	16	0
25	BU	451	473	474	28	0
26	BL	955	1013	1016	47	0
27	CC	2083	2148	2157	96	0
27	DC	2083	2148	2157	77	0
28	CD	1565	1610	1616	74	0
29	CE	1552	1613	1619	77	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	DE	1552	1613	1619	45	0
30	CF	1411	1443	1447	49	0
30	DF	1411	1443	1447	63	0
31	CG	1323	1368	1374	31	0
31	DG	1323	1368	1374	32	0
32	CH	1102	1134	1139	43	1
32	DH	1102	1134	1139	51	0
33	CJ	1032	1085	1088	76	0
33	DJ	1032	1085	1088	89	0
34	CK	1129	1152	1162	38	0
34	DK	1129	1152	1162	41	0
35	CL	938	1008	1012	33	0
35	DL	946	1019	1023	38	0
36	CM	1045	1116	1117	77	0
36	DM	1053	1125	1129	43	0
37	CN	1074	1153	1157	28	0
37	DN	1082	1166	1170	46	0
38	CO	961	994	1000	57	0
38	DO	961	994	1000	48	0
39	CP	892	920	923	31	0
39	DP	900	929	935	40	0
40	CQ	917	960	965	39	0
40	DQ	917	960	965	25	0
41	CR	947	1018	1022	40	0
41	DR	947	1018	1022	49	0
42	CS	816	832	839	40	0
42	DS	816	832	839	38	0
43	CT	857	915	922	41	0
43	DT	857	915	922	38	0
44	CU	739	802	807	47	0
44	DU	731	794	795	24	0
45	CV	780	830	834	54	0
45	DV	780	830	834	22	0
46	CW	753	774	780	13	0
46	DW	753	774	780	22	0
47	CX	569	579	581	12	0
47	DX	591	606	604	19	0
48	CY	625	649	655	38	0
48	DY	625	649	655	16	0
49	CZ	501	530	531	23	0
49	DZ	501	530	531	23	0
50	C0	449	486	491	19	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
50	D0	449	486	484	14	1
51	C1	444	454	461	31	0
51	D1	444	454	461	28	0
52	C2	409	438	440	16	0
52	D2	414	443	445	9	0
53	C3	377	414	418	27	0
53	D3	377	414	418	9	0
54	C4	504	568	574	32	0
54	D4	504	568	574	23	0
55	C5	359	395	397	17	0
55	D5	368	395	410	35	0
56	DD	1566	1612	1618	59	0
57	D7	530	177	517	104	0
58	AA	57	0	0	0	0
58	BA	49	0	0	0	0
58	C3	1	0	0	0	0
58	CA	176	0	0	0	0
58	CB	3	0	0	0	0
58	CM	1	0	0	0	0
58	CR	1	0	0	0	0
58	D5	1	0	0	0	0
58	DA	156	0	0	0	0
58	DB	4	0	0	0	0
58	DD	1	0	0	0	0
58	DM	1	0	0	0	0
58	DR	2	0	0	0	0
59	AA	10	14	14	0	0
59	D3	10	14	14	0	0
59	DA	20	28	28	2	0
59	DD	10	14	14	0	0
59	DS	10	14	14	0	0
59	DT	10	14	14	2	0
59	DU	10	14	14	0	0
60	AA	8	14	14	1	0
60	DA	56	98	98	9	0
60	DE	16	28	28	1	0
60	DK	8	14	14	0	0
60	DN	8	14	14	1	0
60	DT	8	14	14	0	0
61	BA	13	0	18	0	0
61	DA	13	0	18	3	0
61	DQ	13	0	18	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	DR	13	0	18	8	0
61	DS	13	0	18	1	0
62	DA	30	0	57	4	0
63	D5	6	0	12	2	0
63	DA	24	0	48	13	0
63	DM	6	0	12	1	0
63	DP	6	0	12	10	0
64	DA	32	0	44	7	0
65	DA	12	9	9	6	0
66	D1	7	0	10	3	0
66	D3	7	0	10	2	0
66	DA	35	0	50	5	0
66	DP	7	0	10	1	0
66	DQ	7	0	10	1	0
67	D1	4	0	6	0	0
67	DA	28	0	42	9	0
67	DB	12	0	18	1	0
67	DR	4	0	6	2	0
68	DA	11	0	5	2	0
69	AA	371	0	0	95	0
69	AB	11	0	0	6	0
69	AC	6	0	0	2	0
69	AD	3	0	0	1	0
69	AE	11	0	0	9	0
69	AF	5	0	0	1	0
69	AG	7	0	0	6	0
69	AH	2	0	0	1	0
69	AI	1	0	0	0	0
69	AJ	2	0	0	0	0
69	AK	8	0	0	1	0
69	AL	5	0	0	1	0
69	AM	7	0	0	2	0
69	AN	7	0	0	4	0
69	AO	1	0	0	0	0
69	AP	2	0	0	0	0
69	AQ	5	0	0	0	0
69	AS	3	0	0	5	0
69	AT	5	0	0	2	0
69	AU	2	0	0	0	0
69	BA	389	0	0	122	0
69	BB	5	0	0	6	0
69	BC	3	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	BD	9	0	0	0	0
69	BE	5	0	0	2	0
69	BF	7	0	0	1	0
69	BG	7	0	0	1	0
69	BH	5	0	0	1	0
69	BI	4	0	0	2	0
69	BJ	1	0	0	0	0
69	BK	1	0	0	0	0
69	BL	3	0	0	0	0
69	BM	3	0	0	0	0
69	BN	8	0	0	3	0
69	BO	4	0	0	1	0
69	BP	4	0	0	5	0
69	BQ	1	0	0	0	0
69	BS	2	0	0	0	0
69	BT	5	0	0	2	0
69	BU	3	0	0	0	0
69	C0	3	0	0	1	0
69	C1	1	0	0	1	0
69	C2	1	0	0	0	0
69	C3	5	0	0	2	0
69	C4	3	0	0	1	0
69	C5	1	0	0	0	0
69	CA	1042	0	0	325	0
69	CB	19	0	0	2	0
69	CC	8	0	0	2	0
69	CD	8	0	0	2	0
69	CE	7	0	0	2	0
69	CF	2	0	0	1	0
69	CG	4	0	0	3	0
69	CH	4	0	0	4	0
69	CK	5	0	0	1	0
69	CL	5	0	0	1	0
69	CM	8	0	0	2	0
69	CN	5	0	0	0	0
69	CO	5	0	0	3	0
69	CP	1	0	0	0	0
69	CQ	5	0	0	3	0
69	CR	3	0	0	1	0
69	CS	5	0	0	4	0
69	CT	3	0	0	5	0
69	CU	6	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	CV	7	0	0	3	0
69	CW	1	0	0	1	0
69	CZ	2	0	0	2	0
69	D0	14	0	0	0	0
69	D1	48	0	0	11	0
69	D2	4	0	0	0	0
69	D3	24	0	0	3	0
69	D4	27	0	0	3	0
69	D5	9	0	0	6	0
69	DA	3565	0	0	604	0
69	DB	90	0	0	17	0
69	DC	59	0	0	10	0
69	DD	80	0	0	7	0
69	DE	51	0	0	7	0
69	DF	5	0	0	0	0
69	DG	5	0	0	1	0
69	DH	2	0	0	0	0
69	DJ	4	0	0	2	0
69	DK	37	0	0	4	0
69	DL	30	0	0	5	0
69	DM	52	0	0	8	0
69	DN	47	0	0	10	0
69	DO	33	0	0	10	0
69	DP	14	0	0	7	0
69	DQ	33	0	0	7	0
69	DR	52	0	0	7	0
69	DS	40	0	0	9	0
69	DT	57	0	0	11	0
69	DU	10	0	0	5	0
69	DV	14	0	0	1	0
69	DW	18	0	0	3	0
69	DX	15	0	0	6	0
69	DY	7	0	0	0	0
69	DZ	2	0	0	0	0
All	All	292901	191884	193327	10550	2

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 23.

All (10550) 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)
3:DA:783:A:OP1	69:DA:3201:HOH:O	1.53	1.22
3:DA:852:U:OP1	69:DA:3202:HOH:O	1.55	1.21
3:DA:1828:G:OP1	69:DA:3203:HOH:O	1.58	1.16
1:AA:411:A:OP2	8:AD:26:ARG:NH2	1.80	1.15
3:DA:576:U:OP1	69:DA:3205:HOH:O	1.64	1.15
3:DA:2507:C:OP2	69:DA:3204:HOH:O	1.63	1.14
4:CA:1896:G:O5'	69:CA:3201:HOH:O	1.62	1.14
4:CA:2268:A:OP1	69:CA:3203:HOH:O	1.67	1.12
3:DA:511:U:OP2	69:DA:3206:HOH:O	1.64	1.12
2:BA:536:C:OP1	69:BA:1701:HOH:O	1.66	1.11
4:CA:1604:C:OP1	69:CA:3202:HOH:O	1.67	1.09
2:BA:395:C:OP2	69:BA:1702:HOH:O	1.71	1.09
3:DA:1298:C:OP2	69:DA:3211:HOH:O	1.71	1.09
3:DA:2563:U:OP2	69:DA:3209:HOH:O	1.70	1.09
3:DA:456:C:O2	44:DU:73:ARG:NH1	1.86	1.08
3:DA:738:G:OP2	69:DA:3208:HOH:O	1.68	1.08
3:DA:1134:A:OP1	69:DA:3207:HOH:O	1.67	1.08
4:CA:192:C:OP1	69:CA:3208:HOH:O	1.71	1.08
4:CA:2033:A:OP1	69:CA:3207:HOH:O	1.71	1.08
4:CA:2579:C:OP1	69:CA:3206:HOH:O	1.70	1.08
3:DA:2484:G:OP2	69:DA:3210:HOH:O	1.70	1.08
4:CA:1343:G:OP1	69:CA:3204:HOH:O	1.69	1.07
4:CA:1824:G:OP2	69:CA:3205:HOH:O	1.70	1.07
55:D5:45:LYS:HE2	55:D5:45:LYS:H	1.00	1.07
4:CA:1439:A:OP2	69:CA:3209:HOH:O	1.74	1.06
1:AA:1449:C:OP2	69:AA:1701:HOH:O	1.71	1.06
4:CA:36:G:O2'	4:CA:450:G:O2'	1.70	1.06
1:AA:1475:G:OP2	69:AA:1702:HOH:O	1.71	1.05
3:DA:1289:C:O2	69:DA:3213:HOH:O	1.72	1.05
3:DA:1568:G:OP1	69:DA:3218:HOH:O	1.73	1.05
2:BA:810:C:OP2	69:BA:1704:HOH:O	1.74	1.05
2:BA:1530:G:N7	25:BU:46:LYS:NZ	2.03	1.05
3:DA:1272:A:OP1	69:DA:3220:HOH:O	1.74	1.05
3:DA:2057:G:OP1	69:DA:3214:HOH:O	1.72	1.05
1:AA:980:C:OP1	69:AA:1703:HOH:O	1.73	1.05
3:DA:667:U:OP2	69:DA:3217:HOH:O	1.73	1.05
3:DA:2429[A]:G:OP1	69:DA:3221:HOH:O	1.74	1.05
3:DA:1259:G:O2'	69:DA:3216:HOH:O	1.72	1.04
3:DA:2382:G:N3	69:DA:3253:HOH:O	1.87	1.04
3:DA:2577:A:OP1	69:DA:3219:HOH:O	1.74	1.04
24:BT:27:MET:SD	69:BT:104:HOH:O	2.16	1.04
57:D7:24:LYS:H	57:D7:24:LYS:HE2	1.22	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1154:G:OP2	41:CR:57:ARG:NH1	1.91	1.04
2:BA:509:A:OP2	69:BA:1705:HOH:O	1.75	1.03
3:DA:1803:A:OP1	69:DA:3225:HOH:O	1.76	1.03
3:DA:1311:G:N7	69:DA:3270:HOH:O	1.90	1.03
3:DA:1970:A:OP2	69:DA:3223:HOH:O	1.75	1.03
3:DA:92:U:OP2	69:DA:3224:HOH:O	1.76	1.02
42:CS:55:ASP:O	69:CS:201:HOH:O	1.77	1.02
57:D7:54:HIS:HB3	57:D7:55:PRO:HD2	1.39	1.02
3:DA:1267:U:OP2	69:DA:3226:HOH:O	1.77	1.02
4:CA:945:A:OP2	69:CA:3211:HOH:O	1.78	1.02
4:CA:2505:G:OP1	69:CA:3210:HOH:O	1.74	1.02
2:BA:1383:C:OP2	69:BA:1706:HOH:O	1.77	1.02
3:DA:2029:G:O3'	69:DA:3222:HOH:O	1.75	1.02
3:DA:2720:U:OP1	40:DQ:52:ARG:NH2	1.92	1.02
4:CA:279:A:N6	4:CA:361:G:O2'	1.94	1.01
8:BD:192:SER:OG	8:BD:193:ALA:N	1.86	1.01
2:BA:736:C:OP1	22:BR:61:ARG:NH1	1.94	1.01
3:DA:1102:C:O2	69:DA:3227:HOH:O	1.77	1.01
8:AD:78:GLU:OE2	8:AD:81:ARG:NH2	1.93	1.01
6:BB:97:LEU:O	69:BB:301:HOH:O	1.77	1.01
3:DA:1192:G:OP1	69:DA:3228:HOH:O	1.78	1.00
43:DT:95:ARG:NH1	69:DT:302:HOH:O	1.94	1.00
1:AA:100:G:OP2	69:AA:1706:HOH:O	1.80	0.99
4:CA:790:U:OP2	69:CA:3213:HOH:O	1.79	0.99
1:AA:241:G:O3'	69:AA:1705:HOH:O	1.78	0.99
3:DA:1954:G:O2'	3:DA:1956:U:O4	1.78	0.99
4:CA:1892:C:OP1	69:CA:3214:HOH:O	1.80	0.99
4:CA:2806:C:O2'	69:CA:3212:HOH:O	1.78	0.99
44:DU:43:ILE:N	69:DU:201:HOH:O	1.93	0.99
56:DD:128:ARG:O	69:DD:401:HOH:O	1.78	0.99
3:DA:2502:G:OP2	69:DA:3230:HOH:O	1.80	0.99
2:BA:1095:U:OP2	69:BA:1707:HOH:O	1.79	0.99
1:AA:1275:A:N3	69:AA:1717:HOH:O	1.95	0.98
3:DA:2686:G:OP2	69:DA:3231:HOH:O	1.81	0.98
3:DA:801:G:OP1	69:DA:3234:HOH:O	1.82	0.98
9:AE:60:ILE:O	69:AE:201:HOH:O	1.81	0.98
2:BA:47:C:OP1	69:BA:1708:HOH:O	1.82	0.98
4:CA:761:A:OP2	69:CA:3216:HOH:O	1.81	0.98
38:DO:111:ALA:O	69:DO:201:HOH:O	1.80	0.98
3:DA:2546:U:OP1	69:DA:3229:HOH:O	1.80	0.97
4:CA:1607:C:N4	4:CA:1622:G:N7	2.12	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:869:G:N7	69:BA:1719:HOH:O	1.95	0.97
4:CA:684:G:OP2	69:CA:3221:HOH:O	1.83	0.97
4:CA:1816:C:OP1	69:CA:3218:HOH:O	1.82	0.97
3:DA:2837:A:OP2	69:DA:3232:HOH:O	1.81	0.97
47:DX:39[B]:ARG:NH2	69:DX:102:HOH:O	1.97	0.97
3:DA:195:A:N7	69:DA:3298:HOH:O	1.96	0.97
4:CA:1191:G:OP1	69:CA:3215:HOH:O	1.81	0.96
2:BA:1481:U:O4	69:BA:1710:HOH:O	1.84	0.96
3:DA:510:C:OP1	69:DA:3235:HOH:O	1.82	0.96
3:DA:1236:G:N7	63:DA:3037:PUT:H32	1.81	0.96
4:CA:1995:U:OP1	69:CA:3222:HOH:O	1.83	0.96
3:DA:461:C:OP2	69:DA:3233:HOH:O	1.81	0.96
38:DO:36:THR:N	69:DO:201:HOH:O	1.97	0.96
3:DA:2276:G:N3	69:DA:3305:HOH:O	1.97	0.96
3:DA:10:A:OP2	69:DA:3236:HOH:O	1.83	0.96
4:CA:1269:A:N7	69:CA:3288:HOH:O	1.98	0.96
4:CA:2017:U:OP2	69:CA:3224:HOH:O	1.83	0.96
18:BN:41:ARG:NH1	18:BN:42:TRP:O	1.98	0.96
4:CA:166:U:OP2	69:CA:3217:HOH:O	1.82	0.96
1:AA:1123:U:O2'	14:AJ:39:PRO:O	1.82	0.96
3:DA:953:G:OP2	37:DN:18[B]:ARG:NH1	1.98	0.96
4:CA:2448:A:OP2	69:CA:3223:HOH:O	1.83	0.96
32:CH:1:MET:SD	32:CH:27:ARG:NH1	2.38	0.95
3:DA:204:A:OP1	69:DA:3238:HOH:O	1.83	0.95
3:DA:1055:G:O5'	69:DA:3237:HOH:O	1.83	0.95
3:DA:1309:G:O3'	69:DA:3242:HOH:O	1.84	0.95
4:CA:547:A:O2'	69:CA:3219:HOH:O	1.82	0.95
42:DS:93:PHE:HB3	61:DS:202:PG4:H51	1.45	0.95
4:CA:1427:A:N6	4:CA:1571:A:OP2	1.99	0.95
28:CD:151:THR:O	28:CD:153:GLY:N	1.99	0.95
40:CQ:16:VAL:O	69:CQ:201:HOH:O	1.83	0.95
3:DA:2030:6MZ:H1'	69:DA:3952:HOH:O	1.66	0.95
60:DN:201:MPD:O2	69:DN:301:HOH:O	1.85	0.95
57:D7:34:GLU:OE2	57:D7:35:ILE:HG22	1.66	0.95
3:DA:2683:C:O3'	69:DA:3247:HOH:O	1.85	0.95
4:CA:376:G:OP2	69:CA:3220:HOH:O	1.82	0.95
39:DP:25:ARG:NH2	69:DP:301:HOH:O	1.99	0.95
2:BA:1289:A:OP1	69:BA:1709:HOH:O	1.83	0.95
3:DA:2820:A:OP2	69:DA:3249:HOH:O	1.85	0.95
4:CA:1371:G:N7	69:CA:3289:HOH:O	1.98	0.95
18:AN:64:CYS:SG	69:AN:202:HOH:O	2.24	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1198:G:OP2	69:AA:1707:HOH:O	1.84	0.95
4:CA:450:G:O6	69:CA:3228:HOH:O	1.85	0.95
4:CA:602:A:O2'	4:CA:604:G:O2'	1.85	0.95
4:CA:1294:U:O2	38:CO:23:ASN:ND2	2.00	0.95
4:CA:1604:C:OP2	69:CA:3226:HOH:O	1.84	0.95
2:BA:1163:A:O2'	69:BA:1711:HOH:O	1.84	0.94
4:CA:444:C:N4	69:CA:3287:HOH:O	1.98	0.94
4:CA:1654:A:OP2	38:CO:1:MET:N	2.00	0.94
4:CA:2058:A:N7	69:CA:3290:HOH:O	1.98	0.94
3:DA:963:U:OP1	69:DA:3240:HOH:O	1.84	0.94
18:AN:54:ASP:OD1	18:AN:59:ARG:NH1	2.00	0.94
55:D5:45:LYS:HE2	55:D5:45:LYS:N	1.82	0.94
3:DA:254:G:OP1	69:DA:3244:HOH:O	1.85	0.94
1:AA:1228:C:OP2	17:AM:107:ARG:NH2	2.00	0.94
4:CA:2468:A:O5'	69:CA:3227:HOH:O	1.85	0.94
2:BA:597:G:OP2	69:BA:1712:HOH:O	1.85	0.94
4:CA:2171:A:O2'	4:CA:2173:A:OP1	1.86	0.94
5:CB:8:C:O3'	39:CP:25:ARG:NH1	2.01	0.94
1:AA:937:A:OP2	69:AA:1708:HOH:O	1.86	0.94
3:DA:2259:U:OP2	69:DA:3245:HOH:O	1.85	0.94
4:CA:1251:C:OP2	41:CR:5:ARG:NH2	2.00	0.94
3:DA:2074:U:OP2	69:DA:3246:HOH:O	1.85	0.94
3:DA:2682:A:OP2	69:DA:3250:HOH:O	1.86	0.94
4:CA:1013:C:OP2	69:CA:3232:HOH:O	1.86	0.94
1:AA:1028:C:O2	1:AA:1033:G:N2	2.02	0.93
3:DA:763:G:OP1	69:DA:3241:HOH:O	1.84	0.93
4:CA:2818:U:O2'	69:CA:3225:HOH:O	1.84	0.93
2:BA:1256:A:O2'	2:BA:1278:G:O6	1.85	0.93
3:DA:715:A:N1	69:DA:3334:HOH:O	2.00	0.93
1:AA:408:A:OP2	8:AD:8:LYS:NZ	2.00	0.93
4:CA:1237:A:O4'	69:CA:3234:HOH:O	1.87	0.93
20:BP:79:ASN:OD1	69:BP:101:HOH:O	1.87	0.93
4:CA:1715:G:O2'	4:CA:1743:G:O6	1.85	0.93
4:CA:1949:G:OP2	69:CA:3231:HOH:O	1.86	0.93
4:CA:827:U:OP2	69:CA:3237:HOH:O	1.87	0.93
3:DA:532:A:OP2	69:DA:3248:HOH:O	1.85	0.93
6:AB:154:MET:O	6:AB:156:GLY:N	2.01	0.93
5:DB:77:U:OP2	69:DB:302:HOH:O	1.87	0.93
57:D7:31:THR:HG21	57:D7:41:THR:HG23	1.47	0.93
3:DA:197:A:OP1	69:DA:3243:HOH:O	1.84	0.93
46:DW:59:GLU:OE1	69:DW:101:HOH:O	1.85	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:CZ:3:ALA:O	69:CZ:101:HOH:O	1.85	0.92
57:D7:24:LYS:HE2	57:D7:24:LYS:N	1.84	0.92
4:CA:1153:C:OP2	69:CA:3229:HOH:O	1.85	0.92
3:DA:163:C:O5'	69:DA:3251:HOH:O	1.87	0.92
4:CA:2711:A:OP2	69:CA:3239:HOH:O	1.88	0.92
4:CA:1260:A:OP1	69:CA:3233:HOH:O	1.86	0.92
4:CA:616:A:OP2	69:CA:3230:HOH:O	1.85	0.92
3:DA:1188:U:OP1	69:DA:3254:HOH:O	1.87	0.92
4:CA:1368:G:OP2	69:CA:3238:HOH:O	1.87	0.92
4:CA:2808:G:O2'	69:CA:3240:HOH:O	1.88	0.92
1:AA:69:G:O6	1:AA:98:A:N6	2.03	0.91
2:BA:533:A:O2'	2:BA:535:A:OP2	1.85	0.91
3:DA:555:G:OP1	69:DA:3256:HOH:O	1.88	0.91
4:CA:1605:C:N4	69:CA:3302:HOH:O	2.01	0.91
4:CA:1799:G:N2	4:CA:1818:U:O2'	2.03	0.91
1:AA:1197:A:OP1	69:AA:1707:HOH:O	1.87	0.91
4:CA:2511:U:O3'	69:CA:3242:HOH:O	1.89	0.91
3:DA:2440:C:O2'	69:DA:3255:HOH:O	1.88	0.91
4:CA:962:G:OP1	69:CA:3235:HOH:O	1.87	0.91
4:CA:1786:A:OP1	69:CA:3236:HOH:O	1.87	0.91
3:DA:1784:A:OP2	69:DA:3252:HOH:O	1.87	0.91
39:DP:42:PRO:O	63:DP:202:PUT:H11	1.70	0.91
1:AA:823:C:OP2	69:AA:1709:HOH:O	1.87	0.91
37:DN:9:PHE:O	69:DN:302:HOH:O	1.89	0.91
1:AA:1055:A:OP2	69:AA:1712:HOH:O	1.89	0.91
3:DA:957:C:OP2	69:DA:3258:HOH:O	1.89	0.91
9:BE:102:GLY:O	9:BE:104:GLY:N	2.04	0.91
1:AA:1222:G:O6	69:AA:1704:HOH:O	1.88	0.90
3:DA:768:G:O3'	69:DA:3268:HOH:O	1.90	0.90
3:DA:1073:A:O2'	3:DA:1074:G:OP1	1.88	0.90
57:D7:33:ARG:NH1	57:D7:33:ARG:HB3	1.87	0.90
57:D7:17:THR:O	57:D7:19:VAL:N	2.04	0.90
3:DA:2498:OMC:OP2	69:DA:3257:HOH:O	1.88	0.90
3:DA:2502:G:O3'	69:DA:3260:HOH:O	1.89	0.90
4:CA:1780:A:OP1	69:CA:3241:HOH:O	1.89	0.90
1:AA:1107:C:O3'	69:AA:1711:HOH:O	1.89	0.90
3:DA:731:C:OP2	69:DA:3265:HOH:O	1.90	0.90
4:CA:1019:U:OP1	4:CA:1035:U:O2'	1.88	0.90
4:CA:261:G:O2'	4:CA:610:C:O2'	1.89	0.90
4:CA:1665:A:OP2	69:CA:3244:HOH:O	1.89	0.90
1:AA:1444:U:OP2	69:AA:1710:HOH:O	1.89	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1656:C:OP2	69:DA:3262:HOH:O	1.89	0.89
3:DA:2552:OMU:OP1	69:DA:3266:HOH:O	1.90	0.89
4:CA:2642:G:O4'	69:CA:3247:HOH:O	1.90	0.89
2:BA:411:A:OP2	8:BD:26:ARG:NH2	2.05	0.89
3:DA:568:U:H1'	3:DA:2030:6MZ:H9C1	1.53	0.89
3:DA:614:A:O2'	3:DA:615:U:OP2	1.89	0.89
3:DA:878:A:N6	3:DA:899:A:O2'	2.05	0.89
4:CA:684:G:OP1	53:C3:16:HIS:ND1	2.04	0.89
2:BA:644:U:O5'	69:BA:1713:HOH:O	1.90	0.89
4:CA:622:G:OP2	69:CA:3245:HOH:O	1.90	0.89
4:CA:1396:U:O4'	69:CA:3249:HOH:O	1.91	0.89
24:AT:59:ASP:OD1	24:AT:76:LYS:NZ	2.04	0.89
57:D7:15:HIS:O	57:D7:43:PRO:HD2	1.73	0.89
2:BA:858:G:N7	69:BA:1719:HOH:O	2.05	0.89
3:DA:805:G:OP1	69:DA:3261:HOH:O	1.89	0.89
4:CA:1153:C:OP1	69:CA:3248:HOH:O	1.90	0.89
4:CA:1187:G:N7	69:CA:3311:HOH:O	2.04	0.89
3:DA:761:A:OP2	69:DA:3271:HOH:O	1.90	0.89
4:CA:186:G:N2	4:CA:211:C:O2	2.05	0.89
4:CA:1315:C:OP1	69:CA:3243:HOH:O	1.89	0.89
40:CQ:81:ASP:O	69:CQ:202:HOH:O	1.90	0.89
2:BA:978:A:OP2	2:BA:1362:A:N6	2.06	0.89
3:DA:861:A:OP2	69:DA:3259:HOH:O	1.89	0.89
3:DA:2513:A:OP1	69:DA:3274:HOH:O	1.91	0.89
1:AA:86:G:O2'	1:AA:87:C:OP2	1.89	0.89
2:BA:176:C:N4	69:BA:1731:HOH:O	2.04	0.89
4:CA:2392:A:N3	69:CA:3322:HOH:O	2.05	0.89
1:AA:1473:G:O3'	69:AA:1714:HOH:O	1.90	0.88
3:DA:1674:G:OP2	69:DA:3263:HOH:O	1.90	0.88
2:BA:1198:G:OP1	69:BA:1714:HOH:O	1.90	0.88
4:CA:51:G:OP2	69:CA:3246:HOH:O	1.90	0.88
3:DA:515:A:OP1	69:DA:3275:HOH:O	1.92	0.88
3:DA:2581:G:OP1	69:DA:3264:HOH:O	1.90	0.88
3:DA:975:A:OP2	69:DA:3272:HOH:O	1.90	0.88
55:D5:45:LYS:H	55:D5:45:LYS:CE	1.85	0.88
4:CA:332:A:O2'	4:CA:334:C:OP2	1.91	0.88
6:AB:167:ASP:OD1	6:AB:168:HIS:N	2.07	0.88
3:DA:678:C:OP1	69:DA:3269:HOH:O	1.90	0.88
4:CA:177:G:N3	69:CA:3317:HOH:O	2.05	0.88
4:CA:1030:C:OP2	37:CN:127:LYS:NZ	2.05	0.88
4:CA:2818:U:OP2	38:CO:42:LYS:NZ	2.07	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1965:C:OP2	69:CA:3252:HOH:O	1.91	0.87
6:AB:36:ASN:O	69:AB:301:HOH:O	1.90	0.87
3:DA:2004:G:OP2	69:DA:3277:HOH:O	1.92	0.87
2:BA:1320:C:O2	23:BS:36:ARG:NH1	2.07	0.87
4:CA:2312:U:O4	69:CA:3250:HOH:O	1.91	0.87
2:BA:115:G:O2'	2:BA:116:A:OP2	1.90	0.87
3:DA:2511:U:O3'	69:DD:401:HOH:O	1.92	0.87
3:DA:2625:G:OP2	69:DA:3267:HOH:O	1.90	0.87
4:CA:1468:U:O2'	69:CA:3251:HOH:O	1.91	0.87
3:DA:2427:C:OP1	69:DA:3221:HOH:O	1.91	0.87
4:CA:948:C:OP1	69:CA:3235:HOH:O	1.91	0.87
4:CA:2788:C:O2'	4:CA:2809:A:N3	2.08	0.87
3:DA:784:G:OP2	69:DA:3276:HOH:O	1.92	0.87
3:DA:1344:U:O2'	3:DA:1345:C:OP1	1.91	0.87
3:DA:2611:C:OP2	69:DA:3273:HOH:O	1.91	0.87
3:DA:444:C:OP2	69:DA:3280:HOH:O	1.93	0.87
3:DA:2268:A:OP1	69:DA:3282:HOH:O	1.93	0.87
4:CA:2326:C:O2'	4:CA:2327:A:OP1	1.91	0.87
27:DC:228:ASP:OD2	69:DC:301:HOH:O	1.91	0.87
35:DL:109:SER:O	35:DL:111:LYS:N	2.08	0.87
1:AA:1527:U:O4	69:AA:1713:HOH:O	1.90	0.87
3:DA:866:A:N7	69:DA:3401:HOH:O	2.07	0.87
3:DA:1669:A:N7	69:DA:3397:HOH:O	2.07	0.87
47:DX:70:LYS:O	69:DX:101:HOH:O	1.93	0.87
4:CA:301:G:OP1	69:CA:3253:HOH:O	1.91	0.86
4:CA:1213:A:N3	4:CA:1238:G:O2'	2.08	0.86
4:CA:1667:G:O2'	4:CA:1991:U:O4	1.92	0.86
2:BA:562:U:OP2	26:BL:14:ARG:NH2	2.08	0.86
3:DA:1410:G:N7	69:DA:3398:HOH:O	2.07	0.86
3:DA:2043:C:OP2	69:DA:3278:HOH:O	1.92	0.86
4:CA:621:A:OP2	36:CM:99:ASN:ND2	2.07	0.86
4:CA:1619:G:N7	69:CA:3341:HOH:O	2.09	0.86
17:AM:82:ASP:OD2	30:DF:111:ARG:NH2	2.08	0.86
4:CA:394:C:OP2	69:CA:3255:HOH:O	1.92	0.86
3:DA:1257:C:O3'	69:DA:3283:HOH:O	1.93	0.86
3:DA:1308:A:N6	3:DA:1606:C:O2	2.07	0.86
4:CA:831:G:O6	69:CA:3254:HOH:O	1.92	0.86
18:BN:52:PRO:O	18:BN:54:ASP:N	2.08	0.86
33:DJ:140:GLU:OE2	69:DJ:201:HOH:O	1.92	0.86
2:BA:717:U:O2'	2:BA:734:G:O4'	1.92	0.86
4:CA:445:C:O5'	69:CA:3256:HOH:O	1.92	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:820:A:N1	69:CA:3334:HOH:O	2.07	0.86
7:BC:168:TYR:OH	9:BE:55:GLU:OE2	1.93	0.86
4:CA:73:A:N6	69:CA:3344:HOH:O	2.09	0.86
4:CA:266:G:O2'	69:CA:3258:HOH:O	1.93	0.86
4:CA:1378:A:O2'	4:CA:1380:G:N7	2.08	0.86
5:DB:90:C:OP1	69:DB:303:HOH:O	1.93	0.86
17:AM:26:GLY:O	17:AM:28:THR:N	2.07	0.86
8:BD:100:ASN:OD1	8:BD:111:ARG:NH1	2.08	0.86
4:CA:15:G:OP2	69:CA:3263:HOH:O	1.94	0.86
11:AG:57:SER:O	69:AG:201:HOH:O	1.94	0.86
4:CA:784:G:OP1	69:CA:3257:HOH:O	1.92	0.86
21:AQ:17:MET:SD	21:AQ:17:MET:N	2.49	0.86
32:CH:132:GLN:OE1	69:CH:201:HOH:O	1.92	0.86
3:DA:1257:C:OP1	69:DA:3279:HOH:O	1.93	0.85
3:DA:1675:C:O2'	69:DA:3288:HOH:O	1.94	0.85
4:CA:1509:A:OP2	69:CA:3260:HOH:O	1.93	0.85
18:AN:43:ASN:OD1	18:AN:47:LYS:NZ	2.09	0.85
3:DA:741:U:OP1	69:DA:3281:HOH:O	1.93	0.85
3:DA:1176:U:O2'	3:DA:1177:G:O4'	1.94	0.85
4:CA:2385:C:OP1	69:CA:3261:HOH:O	1.93	0.85
20:BP:42:ILE:O	20:BP:44:SER:N	2.09	0.85
3:DA:907:G:N7	69:DA:3411:HOH:O	2.08	0.85
3:DA:2247:A:OP1	69:DA:3286:HOH:O	1.93	0.85
57:D7:21:GLU:OE2	57:D7:47:ILE:HD12	1.74	0.85
36:CM:141:LYS:NZ	36:CM:143:GLU:OE1	2.08	0.85
1:AA:1518:MA6:H103	1:AA:1519:MA6:N6	1.92	0.85
4:CA:2589:A:OP1	69:CA:3259:HOH:O	1.93	0.85
5:CB:39:A:O2'	5:CB:46:A:N1	2.08	0.85
57:D7:36:GLU:O	57:D7:37:LEU:HB2	1.77	0.85
2:BA:172:A:OP2	69:BA:1717:HOH:O	1.95	0.85
38:CO:63:ARG:NH1	69:CO:201:HOH:O	2.07	0.85
3:DA:2429[B]:G:OP1	69:DA:3221:HOH:O	1.94	0.85
3:DA:2511:U:OP2	69:DA:3287:HOH:O	1.93	0.85
17:AM:11:ASP:OD1	17:AM:12:HIS:N	2.09	0.85
43:DT:94:ASP:OD2	69:DT:301:HOH:O	1.93	0.85
2:BA:195:A:OP1	24:BT:60:ARG:NH1	2.09	0.85
3:DA:480:A:OP2	45:DV:43:LYS:NZ	2.10	0.85
3:DA:2487:G:OP1	69:DA:3290:HOH:O	1.94	0.85
2:BA:747:A:O4'	69:BA:1718:HOH:O	1.95	0.84
4:CA:1919:A:OP1	69:CA:3265:HOH:O	1.95	0.84
4:CA:1938:A:O4'	69:CA:3269:HOH:O	1.95	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2301:C:O2	4:CA:2316:G:N2	2.09	0.84
1:AA:970:C:OP2	69:AA:1715:HOH:O	1.94	0.84
18:AN:91:GLY:O	18:AN:93:ILE:N	2.09	0.84
3:DA:802:A:OP2	69:DA:3293:HOH:O	1.95	0.84
4:CA:2592:G:OP1	69:CA:3264:HOH:O	1.94	0.84
3:DA:854:C:OP1	69:DA:3289:HOH:O	1.94	0.84
3:DA:2363:G:OP2	69:DA:3284:HOH:O	1.93	0.84
1:AA:689:C:HO2'	1:AA:705:G:HO2'	1.05	0.84
1:AA:1381:U:O3'	69:AA:1716:HOH:O	1.94	0.84
2:BA:1054:C:OP1	69:BA:1716:HOH:O	1.94	0.84
4:CA:171:U:O3'	69:CA:3266:HOH:O	1.95	0.84
17:BM:11:ASP:OD1	17:BM:12:HIS:N	2.10	0.84
4:CA:529:A:N3	69:CA:3338:HOH:O	2.08	0.84
4:CA:2492:U:O3'	69:CA:3267:HOH:O	1.95	0.84
4:CA:2533:U:OP2	69:CA:3272:HOH:O	1.95	0.84
6:AB:87:CYS:O	6:AB:89:GLN:N	2.10	0.84
4:CA:1315:C:OP2	69:CA:3268:HOH:O	1.95	0.84
11:AG:145:ALA:O	11:AG:147:ALA:N	2.10	0.84
2:BA:374:A:O2'	2:BA:451:A:OP2	1.94	0.84
4:CA:2499:C:OP2	69:CA:3223:HOH:O	1.94	0.84
34:CK:120:ARG:O	34:CK:123:LYS:NZ	2.10	0.84
27:DC:106:PRO:HB3	27:DC:141:HIS:HE1	1.42	0.84
3:DA:981:A:OP1	69:DA:3299:HOH:O	1.96	0.83
3:DA:1057:A:OP2	69:DA:3294:HOH:O	1.95	0.83
2:BA:567:G:O2'	69:BA:1715:HOH:O	1.94	0.83
3:DA:846:U:O2'	3:DA:847:U:OP2	1.96	0.83
4:CA:1981:A:OP1	69:CA:3277:HOH:O	1.96	0.83
33:DJ:121:ILE:O	33:DJ:125:THR:OG1	1.95	0.83
3:DA:950:G:O6	69:DA:3297:HOH:O	1.96	0.83
3:DA:2273:A:OP1	69:DA:3303:HOH:O	1.97	0.83
4:CA:57:C:O2	69:CA:3271:HOH:O	1.95	0.83
4:CA:527:C:OP1	69:CA:3278:HOH:O	1.96	0.83
4:CA:1813:G:N3	27:CC:49:THR:OG1	2.10	0.83
54:C4:5:THR:N	69:C4:101:HOH:O	2.11	0.83
32:DH:40:THR:O	32:DH:42:LYS:N	2.10	0.83
3:DA:1455:G:OP2	69:DA:3301:HOH:O	1.96	0.83
1:AA:1335:U:O2'	1:AA:1336:C:OP2	1.96	0.83
3:DA:2449:H2U:O4	69:DA:3291:HOH:O	1.95	0.83
5:DB:64:G:O2'	69:DB:304:HOH:O	1.96	0.83
4:CA:965:C:OP2	69:CA:3270:HOH:O	1.95	0.83
4:CA:2581:G:OP1	69:CA:3274:HOH:O	1.96	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:73:C:N4	1:AA:94:G:O6	2.12	0.83
4:CA:2796:U:O2	4:CA:2799:A:N6	2.12	0.83
31:CG:123:GLU:N	69:CG:201:HOH:O	2.12	0.83
38:DO:36:THR:O	69:DO:201:HOH:O	1.96	0.83
38:DO:58:ASP:OD1	38:DO:63:ARG:NH2	2.11	0.83
2:BA:62:U:O2'	2:BA:379:C:O2	1.97	0.83
2:BA:1151:A:O2'	2:BA:1152:A:O4'	1.97	0.83
3:DA:600:G:O3'	69:DA:3292:HOH:O	1.95	0.83
2:BA:533:A:OP1	69:BA:1721:HOH:O	1.97	0.83
4:CA:1992:G:OP2	69:CA:3273:HOH:O	1.96	0.83
4:CA:2306:C:N4	30:CF:38:GLY:O	2.11	0.83
1:AA:1232:U:OP1	13:AI:126:GLN:NE2	2.12	0.83
2:BA:187:G:O3'	69:BA:1720:HOH:O	1.97	0.83
3:DA:336:C:OP1	69:DA:3295:HOH:O	1.96	0.83
4:CA:528:A:OP1	69:CA:3279:HOH:O	1.96	0.83
6:AB:12:ALA:O	69:AB:302:HOH:O	1.96	0.83
6:BB:9:MET:O	6:BB:11:LYS:N	2.12	0.83
6:BB:193:PRO:O	6:BB:195:GLY:N	2.12	0.83
3:DA:867:C:O2'	69:DA:3313:HOH:O	1.97	0.82
3:DA:1971:U:O2	69:DA:3296:HOH:O	1.96	0.82
4:CA:1601:G:N7	69:CA:3364:HOH:O	2.12	0.82
4:CA:1968:G:O2'	4:CA:1969:A:O4'	1.95	0.82
1:AA:1005:A:OP2	69:AA:1718:HOH:O	1.97	0.82
3:DA:2035:G:OP2	69:DA:3310:HOH:O	1.97	0.82
4:CA:433:C:OP2	69:CA:3281:HOH:O	1.97	0.82
3:DA:963:U:OP1	69:DA:3304:HOH:O	1.97	0.82
3:DA:1945:G:OP2	69:DA:3302:HOH:O	1.96	0.82
57:D7:32:ASP:O	57:D7:40:VAL:HG22	1.80	0.82
2:BA:1147:C:O2	13:BI:18:ARG:NH2	2.12	0.82
4:CA:1359:A:OP1	69:CA:3283:HOH:O	1.97	0.82
3:DA:1769:U:N3	69:DA:3434:HOH:O	2.11	0.82
39:DP:63:LYS:N	69:DP:302:HOH:O	2.11	0.82
4:CA:457:A:N6	4:CA:471:A:OP2	2.13	0.82
4:CA:543:G:O6	69:CA:3276:HOH:O	1.96	0.82
35:DL:54:LYS:N	69:DL:201:HOH:O	2.01	0.82
6:BB:151:ILE:O	6:BB:153:ASP:N	2.12	0.82
2:BA:257:G:N7	69:BA:1746:HOH:O	2.12	0.82
13:AI:45:ARG:NH2	13:AI:46:MET:SD	2.53	0.82
36:CM:81:ASP:O	36:CM:83:ALA:N	2.11	0.82
2:BA:1093:A:O2'	2:BA:1095:U:OP1	1.98	0.82
4:CA:1386:C:O2'	4:CA:1469:A:O2'	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:111:G:O6	1:AA:330:C:N4	2.12	0.81
1:AA:1367:C:OP2	13:AI:114:LYS:NZ	2.13	0.81
3:DA:1265:A:OP1	69:DA:3314:HOH:O	1.97	0.81
3:DA:2006:C:OP2	69:DA:3318:HOH:O	1.99	0.81
3:DA:716:A:OP2	19:AO:89:ARG:NH1	2.14	0.81
3:DA:729:G:O3'	69:DA:3306:HOH:O	1.97	0.81
4:CA:1975:G:OP2	69:CA:3285:HOH:O	1.98	0.81
63:DP:202:PUT:H12	69:DP:301:HOH:O	1.80	0.81
4:CA:2114:A:N6	4:CA:2119:A:N7	2.28	0.81
31:CG:138:GLN:O	31:CG:138:GLN:NE2	2.13	0.81
3:DA:1376:C:OP2	69:DA:3312:HOH:O	1.97	0.81
3:DA:2430[A]:A:OP2	69:DA:3311:HOH:O	1.97	0.81
4:CA:674:G:N2	4:CA:2445:G:OP1	2.13	0.81
4:CA:2740:A:OP1	69:CA:3280:HOH:O	1.97	0.81
27:DC:4:LYS:NZ	69:DC:304:HOH:O	2.12	0.81
3:DA:955:PSU:OP2	69:DA:3323:HOH:O	1.99	0.81
4:CA:576:U:OP1	69:CA:3291:HOH:O	1.99	0.81
4:CA:2684:U:OP2	40:CQ:50:ARG:NH2	2.14	0.81
36:CM:29:LYS:O	36:CM:30:THR:OG1	1.99	0.81
3:DA:658:U:OP2	69:DA:3321:HOH:O	1.99	0.81
3:DA:1655:A:OP1	69:DA:3324:HOH:O	1.99	0.81
3:DA:2098:U:H2'	3:DA:2099:U:O4'	1.81	0.81
4:CA:1523:U:O2	69:CA:3275:HOH:O	1.96	0.81
1:AA:826:C:OP1	69:AA:1720:HOH:O	1.99	0.81
3:DA:2359:C:N4	69:DA:3413:HOH:O	2.09	0.81
9:AE:152:MET:HB3	69:AE:204:HOH:O	1.79	0.81
47:DX:37:ARG:HD3	69:DX:111:HOH:O	1.80	0.81
3:DA:2269:G:O3'	69:DA:3317:HOH:O	1.98	0.81
4:CA:1157:G:OP2	69:CA:3282:HOH:O	1.97	0.81
3:DA:2550:G:OP2	69:DA:3320:HOH:O	1.99	0.80
3:DA:1023:U:OP2	69:DA:3322:HOH:O	1.99	0.80
3:DA:1239:G:O3'	69:DA:3319:HOH:O	1.99	0.80
3:DA:1783:A:OP1	69:DA:3307:HOH:O	1.97	0.80
4:CA:1266:G:O2'	4:CA:2012:G:O6	2.00	0.80
2:BA:846:G:OP2	22:BR:48:ARG:NH2	2.15	0.80
66:DA:3050:PEG:H21	69:DA:4678:HOH:O	1.79	0.80
4:CA:310:A:O2'	4:CA:311:A:OP2	1.99	0.80
4:CA:1779:U:OP1	69:CA:3293:HOH:O	1.99	0.80
4:CA:1824:G:O6	69:CA:3284:HOH:O	1.98	0.80
3:DA:1637:A:N3	69:DA:3456:HOH:O	2.14	0.80
3:DA:2233:U:OP1	69:DA:3316:HOH:O	1.98	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2619:C:N4	69:CA:3329:HOH:O	2.06	0.80
24:AT:68:HIS:O	24:AT:70:ASN:N	2.14	0.80
2:BA:684:U:O2'	15:BK:40:ASN:O	1.99	0.80
3:DA:15:G:OP1	69:DA:3326:HOH:O	1.99	0.80
20:AP:43:ALA:O	20:AP:44:SER:OG	1.98	0.80
3:DA:1124:G:OP2	69:DA:3329:HOH:O	2.00	0.80
3:DA:2825:G:O2'	69:DA:3308:HOH:O	1.97	0.80
4:CA:1532:A:N6	4:CA:1538:G:O6	2.15	0.80
8:AD:4:TYR:O	8:AD:6:GLY:N	2.15	0.80
9:BE:157:ARG:O	9:BE:159:LYS:N	2.13	0.80
41:DR:18:LYS:HB3	61:DR:202:PG4:H41	1.63	0.80
2:BA:455:G:O6	69:BA:1722:HOH:O	1.98	0.80
3:DA:1102:C:OP1	69:DA:3332:HOH:O	2.00	0.80
3:DA:2008:C:OP2	69:DA:3331:HOH:O	2.00	0.80
4:CA:1296:G:OP1	4:CA:2709:G:O2'	1.99	0.80
4:CA:2310:C:OP1	69:CA:3292:HOH:O	1.99	0.80
56:DD:85:ALA:O	56:DD:86:GLU:O	1.99	0.80
2:BA:487:A:O2'	69:BA:1725:HOH:O	1.99	0.80
2:BA:794:A:O2'	2:BA:1521:C:O2'	1.80	0.80
3:DA:853:C:OP2	69:DA:3309:HOH:O	1.97	0.80
4:CA:2245:U:O4	69:CA:3294:HOH:O	1.99	0.80
5:DB:46:A:OP2	69:DB:305:HOH:O	1.98	0.80
41:DR:19:GLN:HG2	61:DR:202:PG4:H42	1.64	0.80
2:BA:38:G:O2'	69:BA:1724:HOH:O	1.98	0.80
2:BA:577:G:OP2	69:BA:1723:HOH:O	1.98	0.80
3:DA:1189:A:OP2	69:DA:3327:HOH:O	1.99	0.80
1:AA:1439:G:OP2	69:AA:1719:HOH:O	1.99	0.80
3:DA:1119:U:OP2	69:DA:3335:HOH:O	2.00	0.80
4:CA:1828:G:OP1	69:CA:3295:HOH:O	1.99	0.80
13:BI:56:ASP:O	69:BI:201:HOH:O	1.99	0.80
1:AA:652:U:O4	1:AA:752:G:O2'	1.98	0.79
4:CA:1313:U:OP1	69:CA:3296:HOH:O	2.00	0.79
4:CA:2051:A:OP2	69:CA:3286:HOH:O	1.98	0.79
40:CQ:64:SER:OG	40:CQ:65:ASN:OD1	1.99	0.79
57:D7:61:LEU:HB3	57:D7:62:ARG:HH21	1.47	0.79
4:CA:2874:C:OP2	69:CA:3297:HOH:O	2.00	0.79
39:DP:19:GLN:HG3	63:DP:202:PUT:H22	1.65	0.79
4:CA:160:A:N3	4:CA:2208:C:O2'	2.14	0.79
4:CA:1088:A:N6	33:CJ:134:SER:OG	2.15	0.79
7:BC:71:ALA:N	69:BC:301:HOH:O	2.13	0.79
51:C1:45:ASP:OD2	69:C1:101:HOH:O	2.01	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D7:54:HIS:HB3	57:D7:55:PRO:CD	2.11	0.79
3:DA:1613:G:N3	69:DA:3471:HOH:O	2.15	0.79
4:CA:370:G:N7	69:CA:3374:HOH:O	2.15	0.79
13:AI:57:MET:O	13:AI:60:LYS:N	2.14	0.79
1:AA:1366:C:O2'	14:AJ:62:ARG:NH2	2.16	0.79
3:DA:2031:A:OP2	69:DA:3328:HOH:O	2.00	0.79
3:DA:2684:U:O4	69:DA:3315:HOH:O	1.97	0.79
1:AA:939:G:N7	69:AA:1740:HOH:O	2.15	0.79
3:DA:2646:C:OP1	69:DA:3337:HOH:O	2.01	0.79
3:DA:2659:G:O3'	69:DA:3340:HOH:O	2.01	0.79
8:AD:9:LEU:HD11	8:AD:22:LYS:HD3	1.64	0.79
8:AD:192:SER:OG	8:AD:193:ALA:N	2.13	0.79
19:BO:45:GLU:OE2	69:BO:101:HOH:O	2.00	0.79
44:DU:40:LYS:O	69:DU:201:HOH:O	1.99	0.79
1:AA:1423:G:OP1	35:DL:49:ARG:NH2	2.15	0.79
3:DA:1063:G:N2	33:DJ:89:SER:OG	2.16	0.79
3:DA:1067:A:N1	69:DA:3473:HOH:O	2.15	0.79
4:CA:404:A:N6	69:CA:3373:HOH:O	2.14	0.79
4:CA:1929:G:O6	69:CA:3301:HOH:O	2.01	0.79
4:CA:2640:G:OP1	34:CK:95:ARG:NH1	2.16	0.79
5:DB:90:C:H5"	5:DB:90:C:H6	1.48	0.79
27:DC:46:GLY:O	69:DC:302:HOH:O	1.99	0.79
4:CA:197:A:OP1	69:CA:3300:HOH:O	2.01	0.79
4:CA:447:A:N1	4:CA:454:A:O2'	2.13	0.79
2:BA:1000:A:N6	2:BA:1039:G:O6	2.15	0.78
3:DA:1734:G:N7	69:DA:3470:HOH:O	2.15	0.78
4:CA:1710:G:N2	69:CA:3312:HOH:O	2.04	0.78
7:BC:37:PHE:HB3	69:BN:206:HOH:O	1.82	0.78
28:CD:12:THR:OG1	28:CD:13:ARG:N	2.14	0.78
3:DA:2839:G:OP1	38:DO:46:ARG:HD2	1.84	0.78
4:CA:225:C:N4	4:CA:419:U:O2'	2.15	0.78
4:CA:2714:G:OP2	69:CA:3303:HOH:O	2.02	0.78
5:DB:79:G:OP1	69:DB:306:HOH:O	2.00	0.78
39:DP:64:TYR:N	69:DP:302:HOH:O	2.12	0.78
1:AA:6:G:O2'	1:AA:7:A:O5'	2.01	0.78
4:CA:1056:G:O2'	4:CA:1103:A:N6	2.17	0.78
20:BP:35:ARG:O	69:BP:102:HOH:O	2.01	0.78
4:CA:981:A:OP1	69:CA:3298:HOH:O	2.01	0.78
4:CA:1996:C:OP1	35:CL:31:ARG:NE	2.17	0.78
30:DF:101:ARG:NH1	57:D7:9:TYR:OH	2.16	0.78
3:DA:1239:G:OP1	69:DA:3330:HOH:O	2.00	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2030:6MZ:H8	69:DA:4660:HOH:O	1.82	0.78
4:CA:1620:G:N7	69:CA:3375:HOH:O	2.15	0.78
1:AA:1178:G:N2	1:AA:1181:G:OP2	2.17	0.78
2:BA:1512:U:OP1	69:BA:1726:HOH:O	2.01	0.78
3:DA:2494:G:OP2	69:DA:3341:HOH:O	2.01	0.78
4:CA:563:A:N3	41:CR:36:GLN:NE2	2.31	0.78
4:CA:2057:G:OP1	69:CA:3299:HOH:O	2.01	0.78
3:DA:855:G:OP1	62:DA:3031:SPD:H92	1.83	0.78
3:DA:1782:U:O3'	69:DA:3346:HOH:O	2.01	0.78
3:DA:2848:G:OP2	69:DA:3348:HOH:O	2.01	0.78
4:CA:458:G:O2'	4:CA:469:G:O6	2.01	0.78
3:DA:2552:OMU:O5'	3:DA:2552:OMU:H6	1.84	0.78
3:DA:2688:G:OP1	69:DA:3351:HOH:O	2.02	0.78
6:AB:9:MET:O	6:AB:11:LYS:N	2.17	0.78
3:DA:962:G:OP1	69:DA:3338:HOH:O	2.01	0.78
4:CA:246:C:O2	69:CA:3304:HOH:O	2.02	0.78
2:BA:439:U:H4'	8:BD:121:LYS:HD2	1.66	0.78
3:DA:1316:U:C2	3:DA:1337:G:N2	2.51	0.78
3:DA:2364:C:OP2	69:DA:3345:HOH:O	2.01	0.78
64:DA:3034:1PE:H161	69:DA:5583:HOH:O	1.84	0.78
4:CA:784:G:OP2	69:CA:3259:HOH:O	2.01	0.78
3:DA:1613:G:OP2	69:DA:3342:HOH:O	2.01	0.77
7:AC:36:ASP:OD1	7:AC:59:ARG:NH1	2.17	0.77
8:AD:100:ASN:OD1	8:AD:111:ARG:NH1	2.17	0.77
3:DA:2754:U:O4'	69:DA:3333:HOH:O	2.00	0.77
4:CA:123:G:N7	69:CA:3387:HOH:O	2.18	0.77
1:AA:39:G:O3'	69:AA:1721:HOH:O	2.00	0.77
2:BA:890:G:O2'	2:BA:906:A:N6	2.18	0.77
3:DA:581:C:OP2	69:DA:3336:HOH:O	2.00	0.77
3:DA:2256:G:N2	61:DA:3048:PG4:H61	1.99	0.77
10:BF:24:ARG:NE	69:BF:201:HOH:O	2.17	0.77
57:D7:33:ARG:HB3	57:D7:33:ARG:HH11	1.46	0.77
3:DA:1187:G:OP2	69:DA:3339:HOH:O	2.01	0.77
3:DA:1829:A:OP2	69:DA:3344:HOH:O	2.01	0.77
3:DA:1857:G:N2	3:DA:1884:G:O2'	2.16	0.77
4:CA:782:A:O2'	27:CC:223:ALA:O	2.01	0.77
9:BE:104:GLY:O	9:BE:105:ILE:HG22	1.84	0.77
1:AA:1395:C:O2'	1:AA:1401:G:O2'	1.97	0.77
2:BA:263:A:OP1	24:BT:74:ARG:NH1	2.17	0.77
2:BA:1308:U:OP1	17:BM:97:VAL:N	2.18	0.77
4:CA:46:G:OP2	69:CA:3305:HOH:O	2.02	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:196:A:O2'	4:CA:805:G:O6	2.02	0.77
4:CA:219:A:N7	69:CA:3391:HOH:O	2.18	0.77
4:CA:680:C:N4	4:CA:681:G:O6	2.17	0.77
1:AA:263:A:OP2	24:AT:74:ARG:NH1	2.16	0.77
4:CA:743:A:O2'	69:CA:3306:HOH:O	2.02	0.77
4:CA:1423:G:O6	69:CA:3310:HOH:O	2.03	0.77
29:DE:73:ILE:O	69:DE:401:HOH:O	2.01	0.77
1:AA:1011:C:N4	1:AA:1018:G:O6	2.17	0.77
2:BA:957:U:O2'	2:BA:959:A:N7	2.16	0.77
3:DA:978:G:OP1	69:DA:3350:HOH:O	2.02	0.77
3:DA:1951:U:O4	69:DA:3357:HOH:O	2.03	0.77
4:CA:684:G:N2	4:CA:788:A:OP2	2.17	0.77
4:CA:1378:A:O2'	69:CA:3308:HOH:O	2.02	0.77
9:AE:103:THR:O	9:AE:122:ASN:ND2	2.18	0.77
1:AA:686:U:O4	1:AA:703:G:O2'	2.01	0.77
2:BA:106:C:O2	2:BA:379:C:H4'	1.84	0.77
3:DA:1257:C:O5'	69:DA:3353:HOH:O	2.02	0.77
4:CA:1090:A:N6	4:CA:1102:C:O2	2.18	0.77
13:BI:49:ARG:NH2	13:BI:52:LEU:O	2.17	0.77
38:DO:49:GLU:OE2	69:DO:202:HOH:O	2.02	0.77
57:D7:35:ILE:HG12	57:D7:36:GLU:N	2.00	0.77
2:BA:1492:A:OP2	2:BA:1493:A:N6	2.18	0.76
3:DA:370:G:OP2	69:DA:3347:HOH:O	2.01	0.76
3:DA:1508:A:O2'	3:DA:1509:A:O4'	2.03	0.76
6:BB:15:HIS:O	6:BB:17:GLY:N	2.17	0.76
30:DF:72:SER:OG	30:DF:79:ARG:HA	1.85	0.76
2:BA:63:C:OP1	2:BA:383:A:N6	2.19	0.76
4:CA:107:G:O3'	4:CA:293:U:O2'	2.02	0.76
4:CA:1603:A:OP1	69:CA:3226:HOH:O	2.02	0.76
4:CA:1680:U:O2'	4:CA:1763:G:N7	2.17	0.76
2:BA:986:U:OP2	69:BA:1728:HOH:O	2.03	0.76
2:BA:1416:G:OP1	69:BA:1730:HOH:O	2.04	0.76
3:DA:1124:G:O6	69:DA:3354:HOH:O	2.02	0.76
6:BB:103:ASN:OD1	6:BB:106:THR:OG1	2.02	0.76
1:AA:956:U:O2'	69:AA:1722:HOH:O	2.03	0.76
2:BA:412:A:O2'	2:BA:413:G:O5'	2.03	0.76
3:DA:951:C:OP1	69:DA:3361:HOH:O	2.03	0.76
3:DA:1452:G:O6	69:DA:3343:HOH:O	2.01	0.76
3:DA:1946:U:OP2	69:DA:3352:HOH:O	2.02	0.76
3:DA:2615:U:OP1	69:DA:3349:HOH:O	2.02	0.76
4:CA:1395:A:OP2	69:CA:3226:HOH:O	2.04	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BI:114:LYS:NZ	13:BI:115:LYS:O	2.19	0.76
44:CU:91:GLN:OE1	69:CU:101:HOH:O	2.04	0.76
3:DA:845:A:O2'	69:DA:3285:HOH:O	1.93	0.76
3:DA:1188:U:O2'	3:DA:1189:A:H5'	1.84	0.76
3:DA:2346:A:O3'	69:DA:3358:HOH:O	2.03	0.76
4:CA:250:G:OP2	54:C4:12:ARG:NH1	2.17	0.76
2:BA:1160:G:O2'	2:BA:1161:C:O5'	2.03	0.76
3:DA:1697:G:OP1	69:DA:3367:HOH:O	2.04	0.76
11:BG:113:ASP:OD2	11:BG:122:ASN:ND2	2.18	0.76
2:BA:1251:A:N1	69:BA:1733:HOH:O	2.19	0.76
3:DA:766:U:OP1	69:DA:3371:HOH:O	2.04	0.76
3:DA:1710:G:O2'	3:DA:2858:C:N3	2.18	0.76
3:DA:2522:U:OP2	69:DA:3366:HOH:O	2.04	0.76
4:CA:2427:C:OP1	69:CA:3307:HOH:O	2.02	0.76
27:DC:135:PRO:O	27:DC:138:SER:OG	2.03	0.76
1:AA:1500:A:OP1	69:AA:1724:HOH:O	2.04	0.76
3:DA:1156:A:OP2	69:DA:3360:HOH:O	2.03	0.76
3:DA:2422:C:N3	69:DA:3506:HOH:O	2.18	0.76
4:CA:1305:C:N4	4:CA:1607:C:OP2	2.19	0.76
9:AE:63:ALA:N	69:AE:201:HOH:O	2.19	0.76
9:BE:45:ARG:HA	9:BE:72:ILE:O	1.86	0.76
4:CA:1844:C:O3'	27:CC:255:LYS:NZ	2.19	0.76
41:DR:96:ASP:OD2	42:DS:13:ARG:NE	2.18	0.76
1:AA:738:C:OP1	10:AF:2:ARG:NH2	2.19	0.75
2:BA:322:C:O2	2:BA:332:G:N2	2.19	0.75
2:BA:1409:C:OP2	69:BA:1729:HOH:O	2.04	0.75
3:DA:1430:G:O2'	3:DA:1431:A:H5'	1.86	0.75
3:DA:1509:A:O2'	3:DA:1510:G:OP2	2.03	0.75
4:CA:1394:U:OP1	69:CA:3202:HOH:O	2.03	0.75
4:CA:1941:C:OP2	69:CA:3309:HOH:O	2.03	0.75
5:DB:45:A:OP2	69:DB:307:HOH:O	2.04	0.75
38:CO:69:ARG:O	38:CO:71:ARG:N	2.19	0.75
3:DA:2886:A:C4	3:DA:2887:A:C8	2.74	0.75
4:CA:699:A:N6	4:CA:733:G:O2'	2.19	0.75
4:CA:1395:A:N3	69:CA:3390:HOH:O	2.18	0.75
2:BA:200:G:N2	2:BA:218:U:O2	2.19	0.75
3:DA:760:G:O3'	69:DA:3355:HOH:O	2.02	0.75
3:DA:2204:G:O5'	27:DC:149:LYS:HE3	1.86	0.75
63:DA:3054:PUT:H41	69:DA:5353:HOH:O	1.85	0.75
8:BD:202:GLU:OE2	9:BE:112:ARG:NH1	2.19	0.75
40:CQ:112:ARG:O	40:CQ:114:ASN:N	2.18	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:577:G:OP1	69:DA:3370:HOH:O	2.04	0.75
3:DA:1679:A:OP2	69:DA:3356:HOH:O	2.02	0.75
3:DA:2251:OMG:OP2	69:DA:3369:HOH:O	2.04	0.75
24:AT:6:SER:OG	24:AT:7:ALA:N	2.14	0.75
18:BN:60:GLN:OE1	18:BN:60:GLN:N	2.19	0.75
27:CC:257:ARG:NH1	27:CC:263:ASP:OD1	2.20	0.75
43:CT:68:ASP:OD1	43:CT:68:ASP:N	2.16	0.75
1:AA:194:C:OP1	69:AA:1723:HOH:O	2.04	0.75
4:CA:987:C:O2'	4:CA:1000:A:N3	2.18	0.75
41:DR:29:ARG:O	69:DR:301:HOH:O	2.04	0.75
3:DA:376:G:O6	69:DA:3375:HOH:O	2.05	0.75
3:DA:1546:G:N1	69:DA:3497:HOH:O	2.17	0.75
50:D0:9:THR:HG22	50:D0:53:MET:C	2.12	0.75
3:DA:2103:C:O2	3:DA:2186:G:N2	2.19	0.75
4:CA:1789:A:OP2	27:CC:220:ARG:NH1	2.18	0.75
4:CA:1902:C:OP1	69:CA:3313:HOH:O	2.04	0.75
14:AJ:35:GLN:HG2	14:AJ:77:VAL:HB	1.67	0.75
21:BQ:51:ASN:O	21:BQ:51:ASN:ND2	2.19	0.75
2:BA:552:U:O2'	26:BL:83:ARG:O	2.05	0.75
3:DA:1141:U:H4'	3:DA:1142:A:O4'	1.87	0.75
3:DA:2066:C:OP2	69:DA:3376:HOH:O	2.05	0.75
4:CA:1011:G:OP2	41:CR:69:ARG:NH1	2.19	0.75
5:CB:7:G:O2'	39:CP:38:GLN:NE2	2.20	0.75
43:CT:102:HIS:ND1	69:CT:201:HOH:O	2.18	0.75
1:AA:372:C:O2	69:AA:1725:HOH:O	2.05	0.75
3:DA:2507:C:OP1	69:DA:3373:HOH:O	2.05	0.75
2:BA:1178:G:O6	69:BA:1727:HOH:O	2.01	0.74
3:DA:2077:A:O5'	69:DA:3359:HOH:O	2.03	0.74
3:DA:62:U:H5'	60:DA:3067:MPD:H53	1.70	0.74
4:CA:856:G:OP1	47:CX:66:LYS:NZ	2.20	0.74
4:CA:1265:A:OP1	69:CA:3316:HOH:O	2.04	0.74
7:BC:51:SER:O	69:BC:301:HOH:O	2.04	0.74
41:DR:19:GLN:O	69:DR:302:HOH:O	2.05	0.74
1:AA:980:C:N3	69:AA:1744:HOH:O	2.20	0.74
3:DA:751:A:OP1	69:DA:3363:HOH:O	2.03	0.74
3:DA:2243:U:OP2	69:DA:3372:HOH:O	2.04	0.74
3:DA:2588:G:OP2	69:DA:3374:HOH:O	2.05	0.74
3:DA:2740:A:OP2	69:DA:3383:HOH:O	2.05	0.74
4:CA:184:C:O2'	4:CA:217:A:N3	2.19	0.74
19:BO:18:ASP:OD1	19:BO:19:ALA:N	2.20	0.74
2:BA:1354:U:O2'	69:BA:1733:HOH:O	2.05	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1244:A:OP2	69:DA:3365:HOH:O	2.04	0.74
3:DA:2022:U:O2	69:DA:3364:HOH:O	2.03	0.74
4:CA:993:G:N2	42:CS:23:GLU:OE1	2.21	0.74
4:CA:1209:U:O2	4:CA:1210:G:N2	2.21	0.74
10:BF:40:GLU:OE2	10:BF:99:ALA:HB3	1.88	0.74
35:DL:107:LEU:O	35:DL:109:SER:N	2.17	0.74
2:BA:971:G:HO2'	2:BA:1365:G:HO2'	1.25	0.74
3:DA:2039:U:OP2	69:DA:3386:HOH:O	2.06	0.74
3:DA:2188:U:OP1	69:DA:3381:HOH:O	2.05	0.74
3:DA:798:G:O3'	69:DA:3368:HOH:O	2.04	0.74
3:DA:1835:2MG:HM22	3:DA:1836:C:H1'	1.69	0.74
3:DA:1566:A:OP1	69:DA:3378:HOH:O	2.05	0.74
18:BN:60:GLN:O	69:BN:201:HOH:O	2.05	0.74
2:BA:1210:C:O4'	2:BA:1214:C:N4	2.21	0.74
3:DA:572:A:N3	69:DA:3531:HOH:O	2.20	0.74
3:DA:1296:G:OP1	3:DA:2709:G:O2'	2.04	0.74
4:CA:2613:U:OP2	69:CA:3321:HOH:O	2.05	0.74
57:D7:45:VAL:O	57:D7:48:ASP:HB2	1.88	0.74
3:DA:1938:A:O3'	69:DA:3388:HOH:O	2.06	0.74
4:CA:459:U:O2'	44:CU:73:ARG:NH2	2.21	0.74
4:CA:971:G:O2'	4:CA:983:A:N3	2.18	0.74
4:CA:2004:G:OP2	69:CA:3323:HOH:O	2.06	0.74
15:AK:88:GLY:H	15:AK:114:THR:HG22	1.52	0.74
2:BA:912:C:OP1	26:BL:43:LYS:NZ	2.19	0.74
4:CA:1798:U:O2'	4:CA:1802:A:N3	2.20	0.74
11:AG:132:GLY:N	69:AG:203:HOH:O	2.19	0.74
3:DA:747:5MU:H71	69:DA:5336:HOH:O	1.85	0.73
3:DA:1937:A:H1'	3:DA:1939:5MU:H72	1.68	0.73
4:CA:1515:A:O2'	4:CA:1556:C:O2'	2.06	0.73
4:CA:2588:G:OP1	69:CA:3257:HOH:O	2.06	0.73
7:AC:139:GLN:O	7:AC:141:ALA:N	2.18	0.73
30:DF:139:GLU:HA	57:D7:29:ILE:HG12	1.70	0.73
3:DA:1172:C:C4	3:DA:1173:U:H1'	2.23	0.73
3:DA:1774:C:OP2	69:DA:3377:HOH:O	2.05	0.73
4:CA:1938:A:OP2	69:CA:3327:HOH:O	2.06	0.73
4:CA:2541:A:N7	69:CA:3415:HOH:O	2.21	0.73
4:CA:2582:G:OP2	69:CA:3320:HOH:O	2.05	0.73
27:CC:68:ARG:O	27:CC:188:ARG:NH2	2.21	0.73
2:BA:109:A:O2'	69:BA:1736:HOH:O	2.06	0.73
2:BA:811:C:O2'	2:BA:901:A:N1	2.21	0.73
3:DA:761:A:OP1	69:DA:3265:HOH:O	2.06	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2484:G:OP1	37:DN:44:ARG:NH2	2.20	0.73
4:CA:1386:C:HO2'	4:CA:1469:A:HO2'	1.24	0.73
4:CA:2134:A:OP2	4:CA:2157:G:N2	2.21	0.73
5:DB:91:C:OP1	69:DB:308:HOH:O	2.05	0.73
12:BH:77:ARG:NE	12:BH:79:SER:O	2.20	0.73
34:DK:102:GLU:OE2	69:DK:301:HOH:O	2.05	0.73
2:BA:1384:C:OP2	69:BA:1732:HOH:O	2.05	0.73
3:DA:1475:G:OP1	69:DA:3379:HOH:O	2.05	0.73
4:CA:1085:A:N7	4:CA:1086:A:N6	2.36	0.73
33:CJ:13:ALA:O	33:CJ:15:GLY:N	2.21	0.73
51:D1:54:ILE:HG22	51:D1:55:ALA:H	1.51	0.73
2:BA:181:A:N7	69:BA:1762:HOH:O	2.21	0.73
4:CA:1166:G:OP1	69:CA:3319:HOH:O	2.05	0.73
3:DA:533:G:N7	69:DA:3547:HOH:O	2.21	0.73
3:DA:806:C:OP1	69:DA:3389:HOH:O	2.06	0.73
3:DA:939:G:OP2	69:DA:3390:HOH:O	2.06	0.73
3:DA:1378:A:O2'	3:DA:1380:G:OP2	2.05	0.73
4:CA:1064:C:N4	4:CA:1070:A:OP1	2.21	0.73
4:CA:1659:G:OP2	69:CA:3318:HOH:O	2.05	0.73
4:CA:2055:C:OP2	69:CA:3326:HOH:O	2.06	0.73
2:BA:1166:G:N1	2:BA:1169:A:OP2	2.20	0.73
4:CA:510:C:OP1	69:CA:3324:HOH:O	2.06	0.73
4:CA:777:G:N7	4:CA:793:A:H2	1.87	0.73
9:AE:41:ASP:OD1	9:AE:42:GLY:N	2.22	0.73
1:AA:1486:G:OP2	69:AA:1726:HOH:O	2.05	0.73
2:BA:1029:U:N3	2:BA:1031:C:O2	2.21	0.73
3:DA:1261:C:OP1	69:DA:3395:HOH:O	2.07	0.73
3:DA:2281:A:N3	69:DA:3545:HOH:O	2.21	0.73
3:DA:2321:U:O3'	69:DA:3380:HOH:O	2.05	0.73
3:DA:2445:2MG:N7	69:DA:3561:HOH:O	2.22	0.73
3:DA:2582:G:OP2	69:DA:3385:HOH:O	2.06	0.73
4:CA:27:G:O2'	4:CA:28:A:OP2	2.07	0.73
18:BN:48:LEU:O	18:BN:50:THR:N	2.22	0.73
30:CF:121:PHE:O	30:CF:123:GLY:N	2.22	0.73
3:DA:783:A:H2'	3:DA:784:G:H5'	1.70	0.73
4:CA:2022:U:OP1	69:CA:3335:HOH:O	2.07	0.73
4:CA:2303:G:OP2	69:CA:3315:HOH:O	2.04	0.73
5:CB:80:U:OP1	37:CN:18:ARG:NH1	2.21	0.73
13:AI:95:ARG:O	13:AI:98:LEU:N	2.22	0.73
2:BA:1419:G:O6	69:BA:1734:HOH:O	2.05	0.72
4:CA:1065:U:O4	4:CA:1069:A:N6	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AL:114:ARG:NH1	69:AL:201:HOH:O	2.22	0.72
36:DM:99:ASN:ND2	69:DM:302:HOH:O	2.15	0.72
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.22	0.72
3:DA:790:U:OP2	69:DA:3382:HOH:O	2.05	0.72
3:DA:1724:G:N1	3:DA:1736:U:O2	2.20	0.72
3:DA:2839:G:O2'	38:DO:49:GLU:OE1	2.06	0.72
4:CA:574:A:OP2	69:CA:3325:HOH:O	2.06	0.72
9:BE:13:GLU:HB2	9:BE:39:VAL:HG12	1.72	0.72
2:BA:869:G:H5"	69:BA:1816:HOH:O	1.89	0.72
3:DA:509:C:O2'	69:DA:3396:HOH:O	2.07	0.72
3:DA:2504:PSU:OP1	69:DA:3393:HOH:O	2.07	0.72
4:CA:1385:A:OP1	69:CA:3331:HOH:O	2.07	0.72
5:CB:44:G:OP2	69:CB:301:HOH:O	2.06	0.72
3:DA:1327:A:OP2	69:DA:3394:HOH:O	2.07	0.72
4:CA:2134:A:N6	4:CA:2157:G:O2'	2.23	0.72
4:CA:2304:G:O6	69:CA:3250:HOH:O	2.04	0.72
6:BB:21:ARG:CZ	6:BB:21:ARG:HA	2.19	0.72
3:DA:2549:G:OP2	69:DA:3392:HOH:O	2.07	0.72
3:DA:2728:U:O2'	3:DA:2729:G:OP2	2.08	0.72
4:CA:224:U:OP2	4:CA:408:G:N2	2.23	0.72
18:AN:65:ARG:HB2	18:AN:78:GLY:O	1.90	0.72
24:BT:84:ASN:ND2	69:BT:101:HOH:O	2.21	0.72
3:DA:2552:OMU:CM2	3:DA:2552:OMU:O3'	2.38	0.72
4:CA:1981:A:N6	69:CA:3383:HOH:O	2.16	0.72
39:DP:69:ASP:OD1	66:DP:201:PEG:H21	1.90	0.72
46:DW:32:GLY:O	46:DW:93:ARG:NH1	2.23	0.72
2:BA:453:G:N7	69:BA:1767:HOH:O	2.22	0.72
2:BA:1108:G:O6	69:BA:1737:HOH:O	2.06	0.72
4:CA:2597:G:OP1	69:CA:3337:HOH:O	2.08	0.72
1:AA:878:A:N3	69:AA:1753:HOH:O	2.23	0.72
3:DA:1340:U:OP1	44:DU:19:LYS:NZ	2.20	0.72
3:DA:1394:U:OP2	69:DA:3402:HOH:O	2.08	0.72
3:DA:1650:A:OP2	69:DA:3404:HOH:O	2.08	0.72
3:DA:2544:G:O2'	3:DA:2545:G:H5'	1.90	0.72
3:DA:2599:G:O2'	3:DA:2600:A:H5'	1.90	0.72
4:CA:941:A:O2'	4:CA:1190:G:O3'	2.06	0.72
57:D7:46:THR:OG1	57:D7:52:LYS:HD3	1.89	0.72
4:CA:1614:A:OP1	69:CA:3332:HOH:O	2.07	0.72
4:CA:1622:G:OP1	69:CA:3336:HOH:O	2.07	0.72
1:AA:784:A:N3	69:AA:1751:HOH:O	2.22	0.72
3:DA:276:U:O2'	3:DA:278:A:N7	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2685:G:O6	69:DA:3391:HOH:O	2.06	0.72
4:CA:1638:C:O2	4:CA:2698:U:O2'	2.04	0.72
4:CA:2209:G:OP2	4:CA:2210:U:O2'	2.06	0.72
4:CA:2594:C:N4	4:CA:2595:G:O6	2.22	0.72
6:BB:223:GLU:O	69:BB:302:HOH:O	2.08	0.72
9:BE:154:ALA:C	9:BE:156:LYS:H	1.96	0.72
29:DE:69:ARG:NH1	69:DE:405:HOH:O	2.23	0.72
35:DL:107:LEU:C	35:DL:109:SER:H	1.97	0.72
2:BA:506:G:OP1	69:BA:1739:HOH:O	2.07	0.71
3:DA:1414:C:O3'	69:DA:3405:HOH:O	2.08	0.71
8:AD:169:THR:N	69:AD:301:HOH:O	2.11	0.71
37:DN:49:ALA:HB1	37:DN:120:ALA:HB1	1.72	0.71
4:CA:699:A:H2'	4:CA:700:G:O4'	1.89	0.71
4:CA:1323:C:N4	4:CA:1324:G:O6	2.23	0.71
14:AJ:81:GLU:O	14:AJ:84:VAL:HG12	1.90	0.71
16:AL:43:LYS:HE2	16:AL:89:D2T:H8	1.72	0.71
8:BD:33:LYS:O	8:BD:35:GLU:N	2.23	0.71
3:DA:2053:G:N7	69:DA:3555:HOH:O	2.22	0.71
4:CA:540:C:N4	4:CA:553:G:O6	2.19	0.71
4:CA:1158:C:O2'	69:CA:3333:HOH:O	2.07	0.71
4:CA:2705:A:O2'	4:CA:2852:G:OP1	2.01	0.71
1:AA:675:A:OP1	22:AR:74:HIS:ND1	2.23	0.71
2:BA:667:G:C2	2:BA:740:U:O2	2.43	0.71
3:DA:1298:C:OP1	69:DA:3400:HOH:O	2.07	0.71
4:CA:567:U:OP1	69:CA:3340:HOH:O	2.09	0.71
4:CA:883:G:N1	4:CA:894:U:O2	2.22	0.71
4:CA:2407:A:OP1	69:CA:3339:HOH:O	2.08	0.71
29:CE:171:ASP:OD1	29:CE:172:ALA:N	2.24	0.71
2:BA:544:G:OP1	8:BD:56:ARG:NH2	2.23	0.71
3:DA:839:U:O2'	3:DA:1191:G:H1'	1.90	0.71
3:DA:978:G:H21	66:DA:3062:PEG:H21	1.56	0.71
3:DA:2601:C:O2'	3:DA:2602:A:H3'	1.90	0.71
25:AU:10:GLU:HB3	25:AU:11:PRO:HD3	1.72	0.71
36:CM:101:ILE:HG13	36:CM:102:GLY:H	1.55	0.71
34:DK:17:VAL:HG22	34:DK:137:PRO:HB2	1.71	0.71
1:AA:955:U:O4'	1:AA:1227:A:N6	2.23	0.71
2:BA:531:U:O4	69:BA:1735:HOH:O	2.06	0.71
3:DA:1525:A:N6	69:DA:3497:HOH:O	2.21	0.71
3:DA:2578:G:OP2	69:DA:3419:HOH:O	2.09	0.71
4:CA:1607:C:H4'	4:CA:1608:A:O5'	1.91	0.71
4:CA:2499:C:O2	69:CA:3330:HOH:O	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:506:G:OP2	69:DA:3416:HOH:O	2.09	0.71
1:AA:187:G:O6	69:AA:1730:HOH:O	2.09	0.71
3:DA:829:A:N7	3:DA:2247:A:O2'	2.23	0.71
3:DA:2066:C:O2	3:DA:2445:2MG:HM22	1.91	0.71
4:CA:2269:G:OP1	69:CA:3203:HOH:O	2.07	0.71
2:BA:450:G:OP2	69:BA:1738:HOH:O	2.07	0.71
3:DA:572:A:C2	3:DA:2033:A:C2	2.79	0.71
3:DA:1050:A:O2'	69:DA:3415:HOH:O	2.09	0.71
3:DA:1768:C:OP1	69:DA:3409:HOH:O	2.08	0.71
3:DA:2162:G:O2'	3:DA:2163:A:OP2	2.09	0.71
4:CA:705:A:N1	69:CA:3430:HOH:O	2.24	0.71
4:CA:1071:G:O2'	4:CA:1072:C:O4'	2.05	0.71
4:CA:1826:G:C6	4:CA:1827:U:C4	2.78	0.71
18:AN:46:LEU:O	18:AN:48:LEU:N	2.23	0.71
10:BF:51:ILE:C	10:BF:53:LYS:H	1.99	0.71
1:AA:1464:U:OP2	40:DQ:108:ARG:NH1	2.23	0.71
2:BA:509:A:OP2	69:BA:1740:HOH:O	2.09	0.71
3:DA:560:C:O3'	69:DA:3412:HOH:O	2.08	0.71
31:DG:85:LYS:HG2	31:DG:131:VAL:HG22	1.73	0.71
35:DL:13:ASN:OD1	35:DL:98:ARG:N	2.23	0.71
1:AA:843:U:OP1	1:AA:846:G:N1	2.23	0.70
2:BA:667:G:OP1	2:BA:732:C:O2'	2.08	0.70
4:CA:2357:G:N2	4:CA:2360:G:OP2	2.21	0.70
4:CA:2526:G:N3	55:C5:1:MET:N	2.39	0.70
1:AA:1207:2MG:H2'	1:AA:1208:C:O4'	1.92	0.70
2:BA:1117:A:O3'	69:BA:1744:HOH:O	2.10	0.70
3:DA:664:G:N3	69:DA:3572:HOH:O	2.23	0.70
3:DA:2832:U:OP1	69:DA:3406:HOH:O	2.08	0.70
4:CA:971:G:OP2	4:CA:974:G:N2	2.23	0.70
6:BB:35:ARG:O	6:BB:38:VAL:HG12	1.90	0.70
43:CT:50:VAL:O	43:CT:54:ALA:N	2.24	0.70
40:DQ:92:ARG:NH1	69:DQ:302:HOH:O	2.25	0.70
42:DS:25:LEU:H	42:DS:94:THR:CG2	2.04	0.70
3:DA:163:C:OP2	69:DA:3418:HOH:O	2.09	0.70
3:DA:1835:2MG:HM22	3:DA:1836:C:C1'	2.21	0.70
4:CA:1791:A:OP2	69:CA:3346:HOH:O	2.10	0.70
39:DP:53:THR:HB	39:DP:65:THR:HG22	1.74	0.70
41:DR:18:LYS:HD3	61:DR:202:PG4:H22	1.73	0.70
3:DA:1231:U:H1'	67:DA:3060:EDO:H21	1.73	0.70
60:DA:3067:MPD:H52	60:DA:3067:MPD:HM2	1.72	0.70
4:CA:1257:C:N4	69:CA:3427:HOH:O	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1568:G:OP2	69:CA:3342:HOH:O	2.09	0.70
4:CA:2056:G:O6	4:CA:2612:C:N3	2.24	0.70
4:CA:2070:A:N3	69:CA:3426:HOH:O	2.24	0.70
35:DL:1:MET:O	69:DL:202:HOH:O	2.09	0.70
1:AA:1048:G:OP1	69:AA:1727:HOH:O	2.08	0.70
2:BA:1156:G:O2'	2:BA:1180:A:N1	2.23	0.70
3:DA:577:G:O2'	3:DA:1254:A:OP1	2.08	0.70
3:DA:685:A:OP2	69:DA:3414:HOH:O	2.09	0.70
3:DA:2127:G:O2'	3:DA:2128:G:O4'	2.08	0.70
3:DA:2160:C:O3'	69:DA:3410:HOH:O	2.08	0.70
3:DA:2439:A:N3	69:DA:3588:HOH:O	2.23	0.70
3:DA:2599:G:OP1	69:DA:3407:HOH:O	2.08	0.70
37:CN:76:LYS:NZ	37:CN:85:GLY:O	2.23	0.70
3:DA:2549:G:OP2	69:DA:3399:HOH:O	2.07	0.70
38:CO:12:ARG:O	38:CO:17:ARG:NH2	2.23	0.70
3:DA:448:U:N3	69:DA:3570:HOH:O	2.22	0.70
3:DA:1900:A:OP2	69:DA:3417:HOH:O	2.09	0.70
3:DA:2327:A:H5"	69:DA:3715:HOH:O	1.91	0.70
65:DA:3064:ACY:H1	69:DA:3523:HOH:O	1.90	0.70
2:BA:207:C:O2'	2:BA:213:G:N2	2.25	0.70
2:BA:323:U:OP2	69:BA:1742:HOH:O	2.09	0.70
3:DA:297:G:OP1	45:DV:91:LYS:NZ	2.24	0.70
3:DA:1780:A:OP1	69:DA:3403:HOH:O	2.08	0.70
3:DA:2683:C:O2	35:DL:70:ARG:NH2	2.25	0.70
4:CA:2006:C:OP1	69:CA:3343:HOH:O	2.09	0.70
14:AJ:57:VAL:HG22	14:AJ:58:ASN:H	1.57	0.70
25:AU:7:ARG:O	25:AU:8:GLU:HB2	1.92	0.70
1:AA:662:U:O2'	1:AA:836:G:OP1	2.08	0.70
3:DA:2232:C:O2'	69:DA:3421:HOH:O	2.09	0.70
3:DA:2529:G:OP1	31:DG:171:LYS:NZ	2.25	0.70
3:DA:2705:A:OP2	69:DA:3408:HOH:O	2.08	0.70
4:CA:83:A:OP2	45:CV:91:LYS:NZ	2.24	0.70
4:CA:483:A:O2'	45:CV:55:GLY:O	2.09	0.70
11:AG:110:LYS:O	69:AG:202:HOH:O	2.10	0.70
6:BB:21:ARG:O	6:BB:23:TRP:N	2.25	0.70
4:CA:727:A:H2'	4:CA:728:G:C8	2.26	0.69
57:D7:15:HIS:O	57:D7:42:TYR:HA	1.92	0.69
2:BA:1307:U:OP1	17:BM:100:GLN:NE2	2.25	0.69
4:CA:1267:U:O3'	69:CA:3349:HOH:O	2.10	0.69
4:CA:2867:G:O2'	4:CA:2868:A:OP2	2.09	0.69
11:BG:77:SER:OG	11:BG:86:GLN:OE1	2.05	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:266:G:H3'	21:AQ:69:LYS:HB2	1.74	0.69
2:BA:656:G:O2'	19:BO:28:GLN:OE1	2.09	0.69
3:DA:2253:G:OP1	69:DA:3420:HOH:O	2.09	0.69
32:DH:2:GLN:O	32:DH:3:VAL:HG22	1.90	0.69
1:AA:207:C:O2	1:AA:213:G:N2	2.24	0.69
1:AA:626:G:O3'	20:AP:51:ARG:NH2	2.25	0.69
4:CA:1891:G:OP1	69:CA:3353:HOH:O	2.11	0.69
5:DB:58:A:N7	69:DB:312:HOH:O	2.25	0.69
15:BK:94:GLU:OE2	25:BU:20:LYS:NZ	2.23	0.69
39:CP:10:ARG:NH2	39:CP:96:GLY:O	2.24	0.69
3:DA:2697:G:N7	69:DA:3603:HOH:O	2.24	0.69
4:CA:425:G:O3'	69:CA:3348:HOH:O	2.10	0.69
4:CA:1604:C:N4	69:CA:3302:HOH:O	2.25	0.69
6:AB:104:TRP:O	6:AB:106:THR:O	2.09	0.69
17:BM:4:ILE:O	17:BM:6:GLY:N	2.25	0.69
27:DC:27:LYS:HB3	27:DC:28:PRO:HD2	1.75	0.69
1:AA:781:A:OP2	69:AA:1731:HOH:O	2.10	0.69
2:BA:586:C:OP2	69:BA:1741:HOH:O	2.09	0.69
3:DA:622:G:OP2	69:DA:3427:HOH:O	2.11	0.69
3:DA:636:G:OP2	36:DM:109:LYS:NZ	2.24	0.69
4:CA:532:A:N7	4:CA:2021:C:O2'	2.24	0.69
4:CA:1930:G:HO2'	4:CA:1968:G:H1	1.38	0.69
6:BB:96:TRP:CH2	6:BB:172:ALA:HA	2.28	0.69
2:BA:261:U:OP2	24:BT:71:LYS:NZ	2.26	0.69
2:BA:537:G:OP1	26:BL:110:ARG:NH2	2.24	0.69
3:DA:370:G:N7	69:DA:3617:HOH:O	2.25	0.69
3:DA:762:U:OP1	69:DA:3426:HOH:O	2.11	0.69
3:DA:861:A:H5"	3:DA:862:G:OP2	1.92	0.69
3:DA:1835:2MG:HM22	3:DA:1836:C:N1	2.08	0.69
4:CA:1670:C:OP1	69:CA:3352:HOH:O	2.10	0.69
6:AB:49:MET:O	6:AB:53:ALA:HB2	1.92	0.69
31:CG:131:VAL:O	69:CG:201:HOH:O	2.10	0.69
37:DN:95:LEU:O	69:DN:303:HOH:O	2.09	0.69
41:DR:27:ARG:HD3	69:DR:313:HOH:O	1.91	0.69
2:BA:1242:G:O2'	2:BA:1303:C:OP1	2.11	0.69
3:DA:686:U:OP2	69:DA:3424:HOH:O	2.10	0.69
3:DA:1258:U:O3'	69:DA:3428:HOH:O	2.11	0.69
17:AM:4:ILE:O	17:AM:6:GLY:N	2.25	0.69
33:CJ:56:VAL:HG21	33:CJ:68:PHE:HD2	1.58	0.69
2:BA:1026:G:N1	2:BA:1035:A:N1	2.40	0.69
3:DA:940:G:OP2	69:DA:3423:HOH:O	2.10	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2357:G:N3	69:DA:3602:HOH:O	2.25	0.69
3:DA:2455:G:OP1	69:DA:3437:HOH:O	2.11	0.69
4:CA:450:G:N1	4:CA:454:A:OP2	2.23	0.69
27:CC:44:ASN:OD1	27:CC:45:ASN:N	2.26	0.69
39:DP:19:GLN:HA	63:DP:202:PUT:HN11	1.58	0.69
1:AA:964:A:OP1	69:AA:1732:HOH:O	2.10	0.68
3:DA:561:G:N7	69:DA:3627:HOH:O	2.26	0.68
3:DA:855:G:OP2	62:DA:3031:SPD:N10	2.26	0.68
4:CA:1521:G:O6	4:CA:1522:A:N6	2.26	0.68
8:BD:70:ARG:O	8:BD:74:ASN:ND2	2.26	0.68
9:BE:154:ALA:O	9:BE:156:LYS:N	2.25	0.68
26:BL:75:GLN:O	26:BL:78:SER:OG	2.09	0.68
40:CQ:18:SER:OG	69:CQ:203:HOH:O	2.10	0.68
57:D7:25:ILE:HG22	57:D7:26:GLY:N	2.07	0.68
1:AA:1211:U:O4	69:AA:1729:HOH:O	2.09	0.68
3:DA:2592:G:OP1	69:DA:3430:HOH:O	2.11	0.68
4:CA:810:U:OP1	69:CA:3351:HOH:O	2.10	0.68
4:CA:2553:G:N1	4:CA:2554:U:O2	2.26	0.68
55:D5:41:GLY:N	69:D5:202:HOH:O	2.25	0.68
3:DA:447:A:OP2	69:DA:3441:HOH:O	2.12	0.68
3:DA:745:1MG:O6	69:DA:3425:HOH:O	2.10	0.68
4:CA:1854:A:N3	69:CA:3441:HOH:O	2.26	0.68
14:AJ:7:ARG:O	14:AJ:100:ILE:O	2.12	0.68
7:BC:70:THR:OG1	69:BC:301:HOH:O	2.11	0.68
9:BE:101:GLU:O	9:BE:103:THR:N	2.27	0.68
30:DF:55:ASP:OD2	30:DF:149:ARG:NH2	2.27	0.68
57:D7:35:ILE:HG12	57:D7:36:GLU:H	1.58	0.68
3:DA:1537:G:OP2	69:DA:3432:HOH:O	2.11	0.68
5:DB:94:A:OP1	69:DB:309:HOH:O	2.11	0.68
6:AB:49:MET:HG3	6:AB:201:PRO:HD2	1.75	0.68
57:D7:54:HIS:CB	57:D7:55:PRO:HD2	2.22	0.68
3:DA:1020:A:C2	3:DA:1141:U:C2	2.81	0.68
3:DA:1253:A:OP2	69:DA:3439:HOH:O	2.11	0.68
3:DA:2502:G:OP2	69:DA:3436:HOH:O	2.11	0.68
3:DA:2886:A:C2	3:DA:2887:A:H1'	2.29	0.68
4:CA:466:A:N1	4:CA:795:C:O2'	2.21	0.68
4:CA:1316:U:C2	4:CA:1337:G:N2	2.62	0.68
11:BG:25:LYS:O	11:BG:29:ILE:HG12	1.93	0.68
29:DE:119:ILE:HB	29:DE:187:VAL:HG22	1.74	0.68
57:D7:35:ILE:HG12	57:D7:36:GLU:HG2	1.74	0.68
2:BA:36:C:OP1	26:BL:120:LYS:NZ	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1255:G:O2'	2:BA:1258:G:O2'	2.10	0.68
3:DA:1376:C:OP1	69:DA:3445:HOH:O	2.12	0.68
3:DA:2861:U:O2	3:DA:2862:G:C8	2.47	0.68
23:AS:4:SER:O	23:AS:6:LYS:N	2.26	0.68
57:D7:57:TYR:HD2	57:D7:58:THR:H	1.39	0.68
2:BA:1074:G:H4'	6:BB:103:ASN:HB3	1.76	0.68
4:CA:1346:G:OP2	69:CA:3355:HOH:O	2.11	0.68
4:CA:1614:A:OP1	69:CA:3354:HOH:O	2.11	0.68
1:AA:919:A:O2'	1:AA:920:U:H5'	1.93	0.68
3:DA:1378:A:O3'	69:DA:3442:HOH:O	2.12	0.68
3:DA:1995:U:OP1	69:DA:3446:HOH:O	2.12	0.68
29:CE:170:ARG:NH2	29:CE:176:ASP:OD1	2.26	0.68
45:CV:61:GLU:OE1	45:CV:61:GLU:N	2.27	0.68
1:AA:1016:A:N6	1:AA:1017:U:O2'	2.27	0.68
3:DA:458:G:O5'	69:DA:3429:HOH:O	2.11	0.68
3:DA:636:G:C6	36:DM:111:ILE:HD11	2.29	0.68
3:DA:1130:U:H3'	69:DA:4781:HOH:O	1.95	0.68
3:DA:2892:G:H1'	69:DA:4461:HOH:O	1.94	0.68
4:CA:187:G:N2	4:CA:210:C:O2	2.27	0.68
4:CA:581:C:OP2	41:CR:32:ARG:NE	2.21	0.68
4:CA:2656:U:OP2	4:CA:2664:G:N1	2.27	0.68
6:AB:45:LYS:O	6:AB:49:MET:HG2	1.94	0.68
32:CH:78:VAL:O	32:CH:144:ASN:N	2.23	0.68
1:AA:587:G:N2	1:AA:755:G:C5	2.62	0.67
3:DA:217:A:OP2	69:DA:3448:HOH:O	2.12	0.67
4:CA:211:C:OP1	53:C3:25:LYS:NZ	2.24	0.67
4:CA:1263:U:O4	43:CT:95:ARG:NH1	2.26	0.67
15:BK:49:GLY:C	15:BK:51:GLY:H	2.02	0.67
30:DF:174:PHE:HD2	30:DF:176:PHE:CZ	2.12	0.67
2:BA:987:G:OP2	69:BA:1745:HOH:O	2.11	0.67
3:DA:1906:G:O3'	69:DA:3443:HOH:O	2.12	0.67
3:DA:2818:U:OP2	38:DO:42:LYS:NZ	2.27	0.67
13:AI:84:THR:HG21	13:AI:103:PHE:HB3	1.76	0.67
20:BP:82:ALA:OXT	69:BP:101:HOH:O	2.11	0.67
35:CL:78:ARG:NH1	40:CQ:70:GLU:OE2	2.28	0.67
2:BA:34:C:H2'	2:BA:35:G:C8	2.29	0.67
2:BA:574:A:OP2	69:BA:1747:HOH:O	2.12	0.67
3:DA:1712:U:OP2	3:DA:1713:A:O2'	2.08	0.67
64:DA:3065:1PE:H131	69:DA:6375:HOH:O	1.92	0.67
4:CA:447:A:OP2	69:CA:3360:HOH:O	2.12	0.67
4:CA:517:C:OP1	51:C1:12:ARG:NH1	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:761:A:N7	69:CA:3440:HOH:O	2.26	0.67
4:CA:2005:A:OP1	69:CA:3362:HOH:O	2.12	0.67
8:BD:23:SER:O	8:BD:25:VAL:N	2.27	0.67
9:BE:13:GLU:CB	9:BE:39:VAL:HG12	2.24	0.67
13:BI:89:GLU:OE2	13:BI:90:TYR:N	2.27	0.67
15:BK:13:ARG:NH1	15:BK:77:TYR:OH	2.27	0.67
19:BO:3:LEU:HD13	19:BO:35:GLN:HG2	1.77	0.67
37:DN:12:MET:O	69:DN:304:HOH:O	2.11	0.67
45:DV:48:VAL:O	45:DV:50:ALA:N	2.26	0.67
2:BA:1305:G:O6	69:BA:1743:HOH:O	2.09	0.67
3:DA:1968:G:OP2	63:DA:3069:PUT:H12	1.93	0.67
4:CA:478:A:N6	4:CA:500:G:O2'	2.27	0.67
4:CA:1331:G:N2	69:CA:3438:HOH:O	2.26	0.67
4:CA:1652:A:OP1	38:CO:8:ARG:NH2	2.28	0.67
4:CA:2050:C:N4	4:CA:2051:A:N1	2.43	0.67
6:AB:146:ASN:O	6:AB:147:SER:OG	2.11	0.67
9:AE:154:ALA:HB1	9:AE:159:LYS:HA	1.76	0.67
12:AH:28:PRO:O	12:AH:33:LYS:NZ	2.23	0.67
3:DA:160:A:O2'	69:DA:3438:HOH:O	2.11	0.67
3:DA:585:G:N7	41:DR:5:ARG:NH1	2.41	0.67
4:CA:818:G:N1	4:CA:1188:U:OP2	2.22	0.67
4:CA:934:U:OP1	69:CA:3357:HOH:O	2.12	0.67
6:AB:151:ILE:O	6:AB:153:ASP:N	2.28	0.67
57:D7:61:LEU:HD23	57:D7:62:ARG:NH2	2.09	0.67
3:DA:192:C:OP1	69:DA:3431:HOH:O	2.11	0.67
4:CA:2499:C:OP1	69:CA:3356:HOH:O	2.11	0.67
9:AE:78:ASN:OD1	9:AE:79:GLY:N	2.28	0.67
42:CS:34:GLU:HG2	42:CS:60:LYS:HB3	1.77	0.67
3:DA:1165:A:O3'	69:DA:3433:HOH:O	2.11	0.67
4:CA:180:G:OP1	53:C3:35:ARG:NH1	2.26	0.67
4:CA:1967:C:OP2	69:CA:3363:HOH:O	2.12	0.67
4:CA:1968:G:OP1	69:CA:3264:HOH:O	2.12	0.67
6:AB:66:LYS:HE3	6:AB:159:ASP:OD2	1.94	0.67
7:BC:77:ILE:HA	7:BC:84:VAL:HG23	1.76	0.67
1:AA:1359:C:OP2	18:AN:62:ASN:ND2	2.24	0.67
2:BA:246:A:N3	2:BA:279:A:N6	2.42	0.67
2:BA:1508:A:OP1	69:BA:1749:HOH:O	2.13	0.67
3:DA:1668:A:O2'	3:DA:1674:G:N7	2.24	0.67
4:CA:617:G:O6	69:CA:3345:HOH:O	2.09	0.67
6:BB:33:GLY:HA2	6:BB:40:ILE:H	1.60	0.67
29:CE:42:GLY:HA3	29:CE:90:GLN:O	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:C2:24:LYS:NZ	52:C2:31:GLU:O	2.19	0.67
1:AA:1516:2MG:N2	1:AA:1519:MA6:OP2	2.25	0.67
1:AA:1519:MA6:H92	1:AA:1520:C:O2'	1.94	0.67
2:BA:105:G:N2	2:BA:379:C:O3'	2.28	0.67
3:DA:841:G:N3	69:DA:3648:HOH:O	2.27	0.67
2:BA:680:C:N3	2:BA:711:G:N2	2.42	0.67
3:DA:37:C:OP1	69:DA:3453:HOH:O	2.12	0.67
3:DA:2254:C:N4	69:DA:3601:HOH:O	2.24	0.67
4:CA:1430:G:H2'	4:CA:1431:A:O4'	1.95	0.67
4:CA:1717:A:H2'	4:CA:1718:G:O4'	1.95	0.67
4:CA:2022:U:HO2'	4:CA:2616:C:HO2'	1.35	0.67
27:CC:235:GLU:OE1	69:CC:301:HOH:O	2.10	0.67
1:AA:71:A:O2'	1:AA:72:A:OP2	2.12	0.66
1:AA:674:G:N2	1:AA:717:U:O2	2.28	0.66
3:DA:1478:G:H2'	3:DA:1479:G:H5'	1.77	0.66
3:DA:2574:G:OP1	69:DA:3449:HOH:O	2.12	0.66
4:CA:1351:C:OP2	69:CA:3367:HOH:O	2.13	0.66
14:AJ:73:LEU:O	14:AJ:74:VAL:HB	1.92	0.66
27:CC:259:ASN:C	27:CC:261:ARG:H	2.03	0.66
34:CK:128:ASN:O	34:CK:128:ASN:ND2	2.25	0.66
45:CV:17:ASP:OD2	45:CV:38:ILE:HG23	1.95	0.66
2:BA:794:A:HO2'	2:BA:1521:C:HO2'	0.95	0.66
3:DA:954:G:P	69:DA:3463:HOH:O	2.52	0.66
3:DA:1603:A:H5"	3:DA:1604:C:OP2	1.96	0.66
3:DA:1757:A:N3	69:DA:3655:HOH:O	2.28	0.66
3:DA:2660:A:H2'	3:DA:2661:G:O4'	1.95	0.66
4:CA:2286:G:H4'	4:CA:2287:A:O5'	1.96	0.66
30:DF:101:ARG:HG3	57:D7:25:ILE:HG21	1.75	0.66
1:AA:894:G:N7	69:AA:1758:HOH:O	2.28	0.66
1:AA:1374:A:N3	1:AA:1375:A:C8	2.63	0.66
4:CA:1523:U:O4'	69:CA:3275:HOH:O	2.12	0.66
20:BP:5:ARG:HB3	69:BP:103:HOH:O	1.95	0.66
4:CA:532:A:N1	4:CA:2020:A:H1'	2.11	0.66
4:CA:981:A:OP2	4:CA:982:C:N4	2.27	0.66
4:CA:1477:A:N6	4:CA:1514:G:O2'	2.28	0.66
19:AO:83:GLU:N	19:AO:83:GLU:OE1	2.29	0.66
24:AT:71:LYS:N	69:AT:101:HOH:O	2.28	0.66
1:AA:1147:C:O2	13:AI:18:ARG:NH2	2.29	0.66
1:AA:1446:A:O3'	69:AA:1737:HOH:O	2.14	0.66
2:BA:106:C:O2'	2:BA:379:C:OP1	2.11	0.66
2:BA:1366:C:O2'	14:BJ:62:ARG:NH2	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1386:C:H2'	3:DA:1387:A:C8	2.31	0.66
4:CA:2550:G:OP1	69:CA:3371:HOH:O	2.14	0.66
8:AD:168:PRO:O	8:AD:169:THR:OG1	2.11	0.66
1:AA:1173:U:OP1	11:AG:5:ARG:NH1	2.28	0.66
1:AA:1405:G:H1'	1:AA:1519:MA6:O4'	1.96	0.66
3:DA:448:U:C2	69:DA:3570:HOH:O	2.49	0.66
3:DA:1088:A:H62	33:DJ:134:SER:HA	1.60	0.66
4:CA:2468:A:C8	69:CA:3227:HOH:O	2.48	0.66
6:AB:13:GLY:O	69:AB:302:HOH:O	2.12	0.66
18:AN:63:ARG:HG2	18:AN:68:GLY:O	1.95	0.66
1:AA:1486:G:P	69:AA:1736:HOH:O	2.54	0.66
3:DA:1616:A:OP1	69:DA:3454:HOH:O	2.13	0.66
3:DA:1671:U:C2	3:DA:1673:G:OP2	2.49	0.66
3:DA:2390:U:OP2	54:D4:34:LYS:NZ	2.28	0.66
4:CA:1823:G:O6	69:CA:3358:HOH:O	2.12	0.66
9:BE:26:LYS:HE2	9:BE:26:LYS:O	1.96	0.66
27:CC:259:ASN:O	27:CC:261:ARG:N	2.25	0.66
47:DX:19:LEU:HD11	47:DX:39[A]:ARG:HE	1.61	0.66
57:D7:31:THR:HG21	57:D7:41:THR:CG2	2.23	0.66
1:AA:405:U:OP2	8:AD:3:ARG:NH1	2.27	0.66
4:CA:122:G:N7	69:CA:3459:HOH:O	2.29	0.66
23:AS:50:ALA:HB1	23:AS:57:HIS:HB3	1.76	0.66
21:BQ:17:MET:HE3	21:BQ:20:SER:O	1.95	0.66
38:CO:28:LEU:O	38:CO:32:GLU:N	2.22	0.66
3:DA:1715:G:O2'	3:DA:1743:G:O6	2.07	0.66
3:DA:2454:G:OP1	69:DA:3444:HOH:O	2.12	0.66
4:CA:63:A:O2'	44:CU:77:ARG:NE	2.26	0.66
4:CA:613:A:N7	4:CA:616:A:N6	2.44	0.66
4:CA:2733:A:N1	69:CA:3446:HOH:O	2.27	0.66
6:AB:46:THR:O	6:AB:49:MET:HB2	1.96	0.66
25:BU:27:GLY:O	25:BU:29:LEU:N	2.29	0.66
2:BA:624:C:H2'	2:BA:625:U:O4'	1.96	0.65
3:DA:1283:G:N2	3:DA:1285:A:H3'	2.11	0.65
4:CA:1310:G:O6	69:CA:3302:HOH:O	2.12	0.65
4:CA:1719:G:N2	4:CA:1742:U:O2	2.29	0.65
1:AA:156:C:O2'	69:AA:1735:HOH:O	2.13	0.65
1:AA:956:U:O3'	69:AA:1722:HOH:O	2.12	0.65
3:DA:965:C:OP1	69:DA:3459:HOH:O	2.14	0.65
69:DA:3632:HOH:O	38:DO:99:LYS:NZ	2.29	0.65
6:AB:205:ASP:OD1	6:AB:206:ALA:N	2.29	0.65
14:AJ:53:ILE:HG22	14:AJ:62:ARG:N	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BU:12:PHE:CD1	25:BU:14:VAL:HG12	2.32	0.65
43:DT:7:HIS:ND1	69:DT:304:HOH:O	2.25	0.65
57:D7:46:THR:C	57:D7:48:ASP:H	2.03	0.65
1:AA:365:U:H5"	1:AA:366:A:OP1	1.96	0.65
1:AA:1071:C:OP1	9:AE:54:ARG:NH2	2.29	0.65
2:BA:1181:G:O2'	2:BA:1182:G:N7	2.30	0.65
3:DA:555:G:O2'	3:DA:556:A:OP2	2.15	0.65
3:DA:615:U:H4'	3:DA:616:A:OP2	1.96	0.65
3:DA:664:G:OP1	69:DA:3466:HOH:O	2.14	0.65
3:DA:787:C:OP1	69:DA:3469:HOH:O	2.15	0.65
4:CA:1394:U:H4'	4:CA:1603:A:H4'	1.78	0.65
6:AB:149:GLY:O	6:AB:151:ILE:N	2.29	0.65
17:AM:5:ALA:H	17:AM:57:ARG:HG3	1.60	0.65
27:DC:70:LYS:NZ	27:DC:97:ASP:OD2	2.28	0.65
51:D1:9:ARG:N	69:D1:201:HOH:O	2.29	0.65
55:D5:3:VAL:O	55:D5:39:VAL:O	2.15	0.65
3:DA:954:G:OP2	69:DA:3463:HOH:O	2.14	0.65
3:DA:1670:C:OP2	69:DA:3452:HOH:O	2.12	0.65
4:CA:2428:G:OP1	69:CA:3307:HOH:O	2.14	0.65
7:BC:77:ILE:HA	7:BC:84:VAL:CG2	2.26	0.65
27:DC:79:ARG:N	69:DC:303:HOH:O	2.03	0.65
37:DN:48:ALA:O	69:DN:305:HOH:O	2.14	0.65
1:AA:757:U:OP1	1:AA:822:U:O2'	2.14	0.65
2:BA:243:A:N7	69:BA:1782:HOH:O	2.30	0.65
2:BA:1140:C:O2'	2:BA:1141:C:OP2	2.11	0.65
2:BA:1160:G:O2'	2:BA:1161:C:P	2.55	0.65
3:DA:227:A:O2'	3:DA:228:C:OP2	2.13	0.65
4:CA:616:A:H4'	29:CE:101:TYR:CZ	2.30	0.65
4:CA:826:U:O2'	36:CM:53:GLY:HA3	1.97	0.65
4:CA:1163:G:OP1	42:CS:24:LYS:NZ	2.26	0.65
4:CA:1475:G:O4'	4:CA:1732:C:N4	2.30	0.65
20:AP:48:GLU:HG3	20:AP:49:GLY:H	1.61	0.65
53:C3:43:THR:OG1	53:C3:44:VAL:N	2.26	0.65
32:DH:40:THR:O	32:DH:43:ASN:N	2.26	0.65
36:DM:23:ILE:HG13	69:DM:317:HOH:O	1.96	0.65
4:CA:964:C:O2'	4:CA:2273:A:O2'	2.12	0.65
28:CD:149:ASN:OD1	28:CD:150:GLN:N	2.28	0.65
32:CH:6:LEU:N	32:CH:35:LYS:O	2.27	0.65
38:CO:101:GLY:O	69:CO:202:HOH:O	2.14	0.65
3:DA:1078:U:HO2'	3:DA:1088:A:H2	1.45	0.65
3:DA:1182:G:OP1	69:DA:3468:HOH:O	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1258:U:O2'	69:DA:3428:HOH:O	2.15	0.65
4:CA:117:G:OP2	69:CA:3365:HOH:O	2.13	0.65
4:CA:505:A:O2'	4:CA:509:C:O2'	2.15	0.65
18:AN:62:ASN:N	69:AN:201:HOH:O	2.29	0.65
20:AP:6:LEU:HB3	20:AP:17:TYR:HB3	1.79	0.65
32:CH:23:ALA:O	32:CH:27:ARG:N	2.28	0.65
57:D7:23:PHE:HZ	57:D7:45:VAL:HG21	1.61	0.65
1:AA:1485:U:O3'	69:AA:1736:HOH:O	2.14	0.65
2:BA:817:C:OP2	69:BA:1748:HOH:O	2.13	0.65
2:BA:1309:G:OP2	17:BM:98:ARG:NE	2.28	0.65
3:DA:139:U:O2'	3:DA:141:G:N2	2.26	0.65
3:DA:1670:C:H3'	3:DA:1671:U:H6	1.62	0.65
5:DB:93:C:OP2	69:DB:310:HOH:O	2.13	0.65
18:BN:54:ASP:OD1	18:BN:59:ARG:NH1	2.30	0.65
56:DD:1:MET:HG3	56:DD:205:PRO:HG2	1.79	0.65
57:D7:41:THR:O	57:D7:43:PRO:HD3	1.97	0.65
1:AA:568:G:C2	1:AA:569:C:C5	2.85	0.65
1:AA:1006:G:N7	69:AA:1718:HOH:O	2.29	0.65
2:BA:527:G:C2	2:BA:528:C:C6	2.84	0.65
2:BA:980:C:OP1	69:BA:1751:HOH:O	2.14	0.65
4:CA:749:A:O2'	4:CA:1618:A:OP1	2.13	0.65
4:CA:2845:U:H2'	4:CA:2846:G:O4'	1.97	0.65
6:AB:182:PRO:O	6:AB:183:VAL:HB	1.97	0.65
1:AA:515:G:O6	69:AA:1739:HOH:O	2.14	0.65
2:BA:380:G:N2	2:BA:383:A:OP2	2.30	0.65
3:DA:82:U:H5"	3:DA:296:U:H5"	1.77	0.65
3:DA:1332:G:O3'	69:DA:3461:HOH:O	2.14	0.65
3:DA:2517:C:C5	3:DA:2542:A:C5	2.85	0.65
4:CA:192:C:O2'	4:CA:802:A:N3	2.29	0.65
14:AJ:53:ILE:CG2	14:AJ:61:ALA:HB1	2.27	0.65
36:DM:10:GLU:O	69:DM:301:HOH:O	2.14	0.65
66:D1:102:PEG:H12	66:D1:102:PEG:H41	1.79	0.65
55:D5:1:MET:O	69:D5:201:HOH:O	2.14	0.65
1:AA:865:A:H2'	1:AA:866:C:C6	2.32	0.64
2:BA:110:C:H2'	2:BA:111:G:O4'	1.97	0.64
3:DA:642:U:O2'	3:DA:644:A:N7	2.29	0.64
3:DA:1782:U:OP1	69:DA:3403:HOH:O	2.13	0.64
3:DA:2430[B]:A:H2'	3:DA:2430[B]:A:N3	2.12	0.64
4:CA:1658:C:H6	4:CA:1658:C:O5'	1.80	0.64
21:BQ:14:SER:OG	21:BQ:17:MET:HE1	1.97	0.64
36:CM:101:ILE:HG13	36:CM:102:GLY:N	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DF:114:ARG:HH12	57:D7:62:ARG:NH1	1.94	0.64
52:D2:22:THR:OG1	52:D2:23:THR:N	2.30	0.64
1:AA:11:G:C5	1:AA:12:U:C5	2.84	0.64
3:DA:160:A:O3'	69:DA:3438:HOH:O	2.15	0.64
3:DA:1669:A:C8	69:DA:3397:HOH:O	2.47	0.64
3:DA:2061:G:OP1	69:DA:3467:HOH:O	2.14	0.64
3:DA:2256:G:H21	61:DA:3048:PG4:H61	1.63	0.64
3:DA:2414:G:C2'	3:DA:2415:G:H5'	2.27	0.64
3:DA:2683:C:OP1	40:DQ:50:ARG:NH2	2.30	0.64
4:CA:572:A:OP2	42:CS:80:ARG:NH2	2.29	0.64
4:CA:695:G:O2'	69:CA:3372:HOH:O	2.14	0.64
4:CA:1852:U:O2'	69:CA:3366:HOH:O	2.13	0.64
4:CA:1964:G:O4'	69:CA:3370:HOH:O	2.14	0.64
4:CA:2209:G:N7	4:CA:2210:U:N3	2.45	0.64
43:CT:9:HIS:N	69:CT:201:HOH:O	2.13	0.64
43:DT:74:ILE:HG23	43:DT:74:ILE:O	1.97	0.64
3:DA:515:A:H2'	3:DA:516:C:H5'	1.77	0.64
3:DA:1010:A:OP2	69:DA:3478:HOH:O	2.15	0.64
3:DA:1025:G:O2'	69:DA:3457:HOH:O	2.14	0.64
3:DA:2127:G:H4'	3:DA:2128:G:OP1	1.96	0.64
3:DA:2589:A:OP1	69:DA:3276:HOH:O	2.14	0.64
4:CA:1203:U:H1'	36:CM:4:ASN:HB3	1.77	0.64
4:CA:1300:G:OP1	69:CA:3369:HOH:O	2.14	0.64
11:AG:40:GLU:HB2	11:AG:44:TYR:CE2	2.33	0.64
6:BB:148:LEU:O	6:BB:150:GLY:N	2.30	0.64
9:BE:38:VAL:HG13	9:BE:117:VAL:HG21	1.78	0.64
9:BE:157:ARG:C	9:BE:159:LYS:N	2.56	0.64
56:DD:25:THR:OG1	69:DD:402:HOH:O	1.90	0.64
1:AA:901:A:N7	1:AA:902:G:H1'	2.12	0.64
1:AA:1074:G:OP1	9:AE:69:ARG:NH2	2.31	0.64
3:DA:560:C:OP1	69:DA:3464:HOH:O	2.14	0.64
3:DA:2364:C:OP1	69:DA:3462:HOH:O	2.14	0.64
4:CA:2093:G:O2'	4:CA:2094:A:H5'	1.98	0.64
18:AN:45:VAL:HG23	18:AN:46:LEU:H	1.61	0.64
10:BF:55:HIS:ND1	10:BF:55:HIS:N	2.44	0.64
1:AA:363:A:N7	69:AA:1761:HOH:O	2.30	0.64
3:DA:2450:A:OP2	69:DA:3474:HOH:O	2.15	0.64
4:CA:2548:U:O2	35:CL:23:LYS:NZ	2.30	0.64
24:AT:68:HIS:HB3	24:AT:69:LYS:HZ1	1.63	0.64
18:BN:29:ILE:O	18:BN:32:ASP:HB2	1.98	0.64
2:BA:261:U:O2'	2:BA:263:A:N7	2.22	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1001:C:H2'	2:BA:1002:G:N7	2.13	0.64
3:DA:966:G:OP1	69:DA:3472:HOH:O	2.15	0.64
4:CA:352:A:H2'	4:CA:353:C:O4'	1.98	0.64
9:AE:80:THR:OG1	9:AE:122:ASN:O	2.15	0.64
9:BE:99:ALA:O	9:BE:101:GLU:N	2.30	0.64
9:BE:157:ARG:O	9:BE:159:LYS:HG2	1.98	0.64
39:CP:33:ARG:O	39:CP:34:HIS:HB2	1.97	0.64
2:BA:1071:C:O2	2:BA:1104:G:N2	2.19	0.64
3:DA:1550:C:O2'	3:DA:1551:A:H5'	1.98	0.64
3:DA:2541:A:OP1	55:D5:43:LYS:NZ	2.29	0.64
6:AB:116:ASP:O	6:AB:120:GLN:HB2	1.98	0.64
14:AJ:8:ILE:O	14:AJ:73:LEU:O	2.16	0.64
12:BH:75:ILE:HD13	12:BH:129:VAL:HG22	1.80	0.64
45:CV:73:ASN:O	45:CV:73:ASN:ND2	2.31	0.64
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.33	0.64
3:DA:784:G:OP1	69:DA:3460:HOH:O	2.14	0.64
3:DA:1462:C:O2'	3:DA:1463:C:H5'	1.97	0.64
4:CA:182:A:N6	4:CA:214:G:O6	2.31	0.64
9:BE:100:SER:O	9:BE:102:GLY:N	2.27	0.64
9:BE:111:MET:O	9:BE:115:LEU:HD22	1.96	0.64
4:CA:132:G:N2	4:CA:148:U:O2	2.30	0.64
4:CA:2638:G:O2'	4:CA:2775:G:N2	2.30	0.64
1:AA:663:A:N1	1:AA:743:A:C2	2.66	0.64
3:DA:1678:A:N6	69:DA:3709:HOH:O	2.31	0.64
3:DA:1817:G:H2'	3:DA:1818:U:H5'	1.80	0.64
3:DA:1835:2MG:HM23	3:DA:1836:C:C2	2.33	0.64
4:CA:2644:G:N2	4:CA:2733:A:OP2	2.31	0.64
9:BE:141:ILE:C	9:BE:143:GLY:H	2.05	0.64
25:BU:26:ALA:O	25:BU:28:VAL:N	2.30	0.64
45:CV:73:ASN:O	45:CV:75:ALA:N	2.30	0.64
1:AA:80:A:N6	1:AA:89:U:O4	2.26	0.63
1:AA:1029:U:O2'	1:AA:1032:G:N1	2.31	0.63
3:DA:1359:A:OP1	69:DA:3447:HOH:O	2.15	0.63
4:CA:2144:G:O6	69:CA:3350:HOH:O	2.10	0.63
14:AJ:53:ILE:HG23	14:AJ:61:ALA:HB1	1.81	0.63
6:BB:164:ILE:HG23	6:BB:165:ASP:H	1.62	0.63
15:BK:35:THR:HA	15:BK:41:ALA:HA	1.79	0.63
30:CF:60:SER:O	30:CF:62:GLN:N	2.31	0.63
32:DH:71:LYS:O	32:DH:108:VAL:HG21	1.97	0.63
36:DM:26:GLY:O	36:DM:27:LEU:HD23	1.98	0.63
1:AA:1191:A:H5"	7:AC:4:LYS:HE2	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1304:G:OP2	69:AA:1738:HOH:O	2.14	0.63
2:BA:416:G:OP1	3:DA:2139:U:O2'	2.12	0.63
3:DA:1768:C:H1'	69:DA:5095:HOH:O	1.98	0.63
3:DA:2888:C:O2	3:DA:2888:C:H2'	1.98	0.63
4:CA:1188:U:H2'	4:CA:1189:A:O4'	1.98	0.63
4:CA:1360:G:C2	4:CA:1361:G:H1'	2.33	0.63
63:DP:202:PUT:H21	69:DP:311:HOH:O	1.97	0.63
2:BA:455:G:N2	2:BA:478:A:C2	2.66	0.63
2:BA:477:C:N4	69:BA:1722:HOH:O	2.21	0.63
2:BA:1098:C:H2'	2:BA:1099:G:O4'	1.98	0.63
3:DA:1008:A:OP1	69:DA:3477:HOH:O	2.15	0.63
3:DA:2247:A:C2'	3:DA:2248:C:H5'	2.28	0.63
13:AI:91:ASP:OD1	13:AI:94:LEU:N	2.26	0.63
18:AN:43:ASN:C	18:AN:45:VAL:H	2.04	0.63
7:BC:3:GLN:OE1	7:BC:3:GLN:N	2.31	0.63
40:CQ:92:ARG:O	40:CQ:93:LYS:O	2.17	0.63
57:D7:52:LYS:C	57:D7:54:HIS:H	2.05	0.63
3:DA:666:A:OP2	63:DM:201:PUT:H42	1.98	0.63
3:DA:1101:U:H2'	3:DA:1102:C:O4'	1.99	0.63
3:DA:2577:A:O3'	69:DA:3419:HOH:O	2.16	0.63
4:CA:579:G:O2'	4:CA:2019:A:OP1	2.16	0.63
11:AG:131:LYS:HG3	11:AG:131:LYS:O	1.96	0.63
12:AH:106:THR:HG22	12:AH:122:GLY:O	1.98	0.63
16:AL:122:PRO:O	16:AL:124:ALA:N	2.31	0.63
6:BB:99:GLY:C	6:BB:101:LEU:H	2.06	0.63
15:BK:16:VAL:CG1	15:BK:79:ILE:HG13	2.28	0.63
33:CJ:56:VAL:HG22	33:CJ:57:VAL:H	1.62	0.63
44:DU:41:ALA:C	69:DU:201:HOH:O	2.42	0.63
2:BA:319:G:O6	69:BA:1752:HOH:O	2.14	0.63
3:DA:2424:C:H2'	3:DA:2429[A]:G:O2'	1.98	0.63
3:DA:2885:G:OP1	68:DA:3078:GUN:N2	2.32	0.63
4:CA:187:G:C2	4:CA:210:C:O2	2.52	0.63
4:CA:1248:G:C2	41:CR:2:ARG:HD2	2.33	0.63
4:CA:1937:A:N3	69:CA:3464:HOH:O	2.30	0.63
53:D3:29:GLN:HG2	66:D3:102:PEG:O1	1.98	0.63
1:AA:865:A:H2'	1:AA:866:C:H6	1.64	0.63
2:BA:1199:U:OP1	69:BA:1753:HOH:O	2.15	0.63
3:DA:523:C:O2	3:DA:554:U:O2'	2.12	0.63
3:DA:693:A:C5	3:DA:694:U:C5	2.86	0.63
3:DA:876:C:H2'	3:DA:877:A:O4'	1.98	0.63
3:DA:2497:A:P	69:DA:3475:HOH:O	2.56	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2822:G:O6	38:DO:2:ARG:NH1	2.31	0.63
17:AM:3:ARG:O	17:AM:10:PRO:HD2	1.99	0.63
6:BB:64:LYS:HA	6:BB:64:LYS:HE2	1.81	0.63
31:CG:69:ALA:O	31:CG:73:SER:OG	2.14	0.63
33:CJ:37:PHE:O	33:CJ:41:PHE:HB3	1.98	0.63
54:C4:6:VAL:HB	54:C4:60:CYS:SG	2.38	0.63
3:DA:2104:C:H2'	3:DA:2105:U:O4'	1.98	0.63
3:DA:2327:A:H2'	3:DA:2328:A:C8	2.33	0.63
3:DA:2497:A:OP1	69:DA:3475:HOH:O	2.15	0.63
3:DA:2800:A:C2	3:DA:2895:G:H1'	2.34	0.63
4:CA:254:G:OP2	54:C4:4:LYS:NZ	2.31	0.63
4:CA:2529:G:O6	55:C5:35:ARG:NH2	2.32	0.63
8:AD:190:ASP:O	8:AD:191:LEU:HD12	1.99	0.63
9:BE:68:ARG:O	9:BE:71:MET:HE3	1.99	0.63
51:D1:7:PRO:O	69:D1:201:HOH:O	2.15	0.63
51:D1:37:HIS:HB2	69:D1:224:HOH:O	1.99	0.63
2:BA:369:G:OP2	2:BA:388:G:N2	2.32	0.63
4:CA:1779:U:H5'	69:CA:3293:HOH:O	1.99	0.63
14:AJ:57:VAL:CG2	14:AJ:58:ASN:H	2.11	0.63
9:BE:57:PRO:O	9:BE:60:ILE:HG13	1.99	0.63
12:BH:44:GLY:O	12:BH:64:LYS:NZ	2.31	0.63
8:BD:192:SER:HG	8:BD:193:ALA:H	1.47	0.63
9:BE:155:ALA:HB1	12:BH:66:PHE:CZ	2.33	0.63
18:BN:51:LEU:O	18:BN:53:ARG:N	2.28	0.63
28:CD:151:THR:HG22	28:CD:152:PRO:N	2.14	0.63
34:DK:23:LYS:HE3	34:DK:142:ILE:OXT	1.98	0.63
4:CA:2360:G:H1'	36:CM:60:ARG:HD3	1.80	0.62
6:AB:148:LEU:O	6:AB:151:ILE:HG22	1.99	0.62
3:DA:1546:G:C2	69:DA:3497:HOH:O	2.52	0.62
4:CA:636:G:O2'	4:CA:638:G:O2'	2.16	0.62
4:CA:1357:C:H2'	4:CA:1358:G:O4'	1.99	0.62
69:DB:322:HOH:O	63:DP:202:PUT:H41	1.98	0.62
14:AJ:29:ALA:O	14:AJ:31:ARG:N	2.28	0.62
51:D1:16:ARG:HA	51:D1:19:ASP:OD2	1.98	0.62
1:AA:967:5MC:HM51	1:AA:968:A:H2'	1.81	0.62
2:BA:499:A:C6	2:BA:547:A:C8	2.86	0.62
3:DA:62:U:O4'	60:DA:3067:MPD:H31	1.99	0.62
3:DA:572:A:H5"	3:DA:573:U:OP2	2.00	0.62
4:CA:950:G:H2'	4:CA:951:C:O4'	2.00	0.62
4:CA:1827:U:H2'	4:CA:1828:G:C8	2.33	0.62
4:CA:2892:G:OP1	4:CA:2894:G:N2	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AF:5:GLU:O	10:AF:6:ILE:HG13	1.98	0.62
6:BB:133:GLU:O	6:BB:137:ARG:HB3	1.99	0.62
30:CF:121:PHE:C	30:CF:123:GLY:H	2.07	0.62
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.23	0.62
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.30	0.62
1:AA:1533:C:H5'	1:AA:1534:A:OP1	1.99	0.62
3:DA:2334:U:O3'	39:DP:13:ARG:NH1	2.32	0.62
8:BD:158:ALA:HA	8:BD:161:LEU:HD21	1.81	0.62
13:BI:120:LYS:HG3	13:BI:123:ARG:HB3	1.79	0.62
43:CT:62:ASP:OD1	43:CT:63:GLY:N	2.31	0.62
27:DC:14:HIS:O	27:DC:203:VAL:CG2	2.47	0.62
29:DE:108:ILE:HD11	29:DE:180:LEU:HB3	1.80	0.62
57:D7:34:GLU:OE2	57:D7:35:ILE:CG2	2.45	0.62
1:AA:977:A:O2'	1:AA:979:C:OP2	2.16	0.62
3:DA:1217:U:OP2	41:DR:14:LYS:NZ	2.32	0.62
3:DA:2380:C:OP1	39:DP:17:LYS:NZ	2.32	0.62
4:CA:102:U:H3	49:CZ:3:ALA:HB3	1.63	0.62
4:CA:858:G:O2'	4:CA:2268:A:N3	2.28	0.62
4:CA:1981:A:OP2	69:CA:3379:HOH:O	2.16	0.62
4:CA:2079:U:O2'	4:CA:2080:A:O4'	2.13	0.62
4:CA:2882:A:H5'	38:CO:96:ARG:HG3	1.81	0.62
20:AP:19:VAL:HG22	20:AP:37:GLY:N	2.15	0.62
27:CC:61:TYR:CE2	27:CC:62:ARG:O	2.53	0.62
30:DF:107:VAL:HG13	30:DF:110:ILE:HD12	1.82	0.62
41:DR:15:LYS:HA	61:DR:202:PG4:H11	1.81	0.62
2:BA:755:G:C2	2:BA:756:C:C6	2.88	0.62
3:DA:64:A:H2'	3:DA:65:U:C6	2.33	0.62
4:CA:528:A:C2	4:CA:2043:C:H4'	2.35	0.62
4:CA:792:A:O2'	4:CA:2440:C:N3	2.32	0.62
4:CA:1385:A:O2'	4:CA:1396:U:O2	2.18	0.62
9:AE:80:THR:HG23	9:AE:81:LEU:N	2.14	0.62
16:AL:55:VAL:N	16:AL:63:VAL:O	2.32	0.62
27:CC:157:ALA:HB1	27:CC:196:ASN:HB3	1.80	0.62
27:DC:24:HIS:CE1	27:DC:25:LYS:O	2.52	0.62
57:D7:35:ILE:CG1	57:D7:36:GLU:HG2	2.29	0.62
1:AA:116:A:C2'	1:AA:117:G:H5'	2.30	0.62
2:BA:300:A:H2'	2:BA:301:G:O4'	2.00	0.62
2:BA:804:U:H5"	2:BA:805:C:OP2	1.99	0.62
3:DA:1704:C:OP1	69:DA:3479:HOH:O	2.16	0.62
3:DA:1905:C:O2	3:DA:1905:C:H2'	1.99	0.62
3:DA:2359:C:O2'	54:D4:53:ASP:OD2	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2461:A:C2	4:CA:2490:G:N2	2.68	0.62
4:CA:2500:U:H5"	4:CA:2501:C:OP2	2.00	0.62
11:AG:49:THR:O	11:AG:53:ARG:HG3	1.99	0.62
12:BH:106:THR:OG1	12:BH:109:GLY:O	2.15	0.62
21:BQ:69:LYS:O	21:BQ:70:THR:CB	2.47	0.62
53:C3:11:LYS:NZ	69:C3:201:HOH:O	2.33	0.62
2:BA:428:G:OP2	8:BD:10:LYS:NZ	2.24	0.62
3:DA:364:C:H2'	3:DA:365:U:C6	2.35	0.62
3:DA:1869:G:N2	3:DA:1872:A:N7	2.48	0.62
3:DA:2291:U:H2'	3:DA:2292:U:C6	2.33	0.62
4:CA:1826:G:C5	4:CA:1827:U:C5	2.88	0.62
5:CB:29:A:O2'	5:CB:58:A:N1	2.30	0.62
5:CB:47:C:O2'	39:CP:98:GLN:OE1	2.16	0.62
7:AC:40:ARG:NH1	7:AC:55:ILE:O	2.33	0.62
31:CG:59:ASP:OD1	31:CG:59:ASP:N	2.32	0.62
46:DW:30:ILE:O	46:DW:37:PRO:HA	2.00	0.62
1:AA:6:G:O6	9:AE:99:ALA:HB1	2.00	0.62
1:AA:118:U:O4	1:AA:288:A:H2'	1.98	0.62
1:AA:1370:G:O5'	13:AI:111:VAL:HG21	1.99	0.62
2:BA:427:U:OP1	8:BD:13:ARG:NH2	2.32	0.62
2:BA:1521:C:C4	2:BA:1522:U:C5	2.88	0.62
4:CA:746:U:HO2'	4:CA:2611:C:HO2'	1.45	0.62
19:AO:82:ILE:HG13	19:AO:83:GLU:OE1	1.99	0.62
6:BB:73:LYS:O	6:BB:75:ALA:N	2.24	0.62
28:CD:57:ALA:O	28:CD:60:VAL:HG12	2.00	0.62
43:CT:102:HIS:CE1	69:CT:201:HOH:O	2.50	0.62
42:DS:59:ILE:HG12	42:DS:101:ILE:HD13	1.81	0.62
43:DT:99:ARG:HA	69:DT:308:HOH:O	2.00	0.62
1:AA:1061:G:C6	1:AA:1197:A:C2	2.88	0.62
3:DA:1414:C:C4	3:DA:1415:U:C5	2.88	0.62
3:DA:2280:G:C2	3:DA:2281:A:C8	2.88	0.62
4:CA:1428:C:N4	4:CA:1570:A:OP2	2.23	0.62
5:CB:66:A:N6	5:CB:107:G:H2'	2.14	0.62
20:AP:50:THR:O	20:AP:50:THR:HG22	2.00	0.62
8:BD:99:ASP:OD1	8:BD:100:ASN:N	2.33	0.62
14:BJ:15:HIS:HB3	14:BJ:70:HIS:CD2	2.35	0.62
4:CA:449:A:OP2	69:CA:3377:HOH:O	2.16	0.61
4:CA:1689:A:OP2	4:CA:1698:A:N6	2.33	0.61
13:AI:94:LEU:O	13:AI:97:GLU:HG2	2.00	0.61
32:DH:27:ARG:NH2	48:DY:59:ASP:OD2	2.33	0.61
36:DM:55:MET:O	36:DM:60:ARG:HD3	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D7:32:ASP:O	57:D7:40:VAL:CG2	2.48	0.61
3:DA:2885:G:O5'	3:DA:2885:G:N3	2.33	0.61
3:DA:899:A:OP2	69:DA:3484:HOH:O	2.16	0.61
3:DA:1400:U:C2'	3:DA:1401:G:H5'	2.29	0.61
4:CA:1266:G:OP1	51:C1:15:ARG:NE	2.29	0.61
33:DJ:90:GLY:O	33:DJ:91:LYS:HD3	2.00	0.61
3:DA:2199:A:H4'	32:DH:28:ASN:OD1	2.00	0.61
3:DA:2517:C:C6	3:DA:2542:A:N7	2.69	0.61
3:DA:2548:U:H3'	69:DA:3392:HOH:O	1.99	0.61
4:CA:13:A:C2	4:CA:526:A:N7	2.69	0.61
4:CA:242:G:H8	54:C4:3:ILE:O	1.82	0.61
4:CA:1064:C:N3	4:CA:1074:G:N1	2.49	0.61
8:AD:150:LYS:O	8:AD:151:LYS:HB3	2.00	0.61
24:AT:71:LYS:HG3	24:AT:74:ARG:NH2	2.15	0.61
30:DF:106:ALA:H	30:DF:108:PRO:HD2	1.64	0.61
31:DG:169:ARG:NH1	55:D5:33:ASN:OD1	2.32	0.61
1:AA:73:C:O2'	1:AA:74:A:O4'	2.19	0.61
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.36	0.61
4:CA:135:U:H2'	4:CA:136:G:C8	2.35	0.61
4:CA:1351:C:O3'	69:CA:3382:HOH:O	2.16	0.61
4:CA:1628:G:N2	4:CA:2699:C:OP1	2.30	0.61
4:CA:2074:U:H2'	4:CA:2075:U:C6	2.35	0.61
4:CA:2349:G:OP1	54:C4:44:ARG:NH2	2.19	0.61
57:D7:45:VAL:HG23	57:D7:46:THR:N	2.15	0.61
1:AA:914:A:N3	1:AA:915:A:C8	2.69	0.61
2:BA:1211:U:O2'	2:BA:1212:U:OP2	2.17	0.61
2:BA:1387:G:H2'	2:BA:1388:C:H6	1.65	0.61
3:DA:1967:C:H2'	3:DA:1968:G:H5'	1.83	0.61
3:DA:2349:G:OP2	54:D4:41:ARG:HD3	2.00	0.61
66:DA:3063:PEG:O4	43:DT:11:ARG:NH2	2.33	0.61
9:AE:137:VAL:O	9:AE:138:ARG:HB2	1.98	0.61
10:BF:3:HIS:N	10:BF:92:THR:OG1	2.33	0.61
21:BQ:14:SER:HB3	21:BQ:22:VAL:HG13	1.81	0.61
25:BU:9:ASN:HB2	25:BU:12:PHE:CE2	2.35	0.61
25:BU:31:GLU:O	25:BU:35:ARG:HG3	2.00	0.61
31:CG:15:ASP:OD1	31:CG:16:VAL:N	2.33	0.61
42:CS:39:LEU:O	42:CS:49:ILE:HG23	2.00	0.61
29:DE:149:ILE:HA	29:DE:170:ARG:O	2.00	0.61
1:AA:407:U:OP1	8:AD:3:ARG:NH2	2.34	0.61
2:BA:10:A:OP2	9:BE:131:THR:HG21	2.00	0.61
3:DA:940:G:P	69:DA:3423:HOH:O	2.59	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:999:U:C2'	3:DA:1000:A:H5'	2.30	0.61
3:DA:1434:A:H4'	3:DA:1435:G:OP1	2.00	0.61
13:AI:57:MET:O	13:AI:59:GLU:N	2.33	0.61
13:BI:9:THR:OG1	13:BI:10:GLY:N	2.28	0.61
14:BJ:7:ARG:NH1	14:BJ:75:ASP:OD2	2.27	0.61
42:DS:25:LEU:H	42:DS:94:THR:HG21	1.65	0.61
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.36	0.61
3:DA:1645:G:H5"	3:DA:1646:C:H5'	1.82	0.61
3:DA:2141:G:O6	3:DA:2150:C:N4	2.34	0.61
3:DA:2297:A:N1	3:DA:2321:U:H5	1.98	0.61
4:CA:262:A:H4'	4:CA:611:C:OP1	2.00	0.61
4:CA:457:A:N1	4:CA:470:A:H5"	2.16	0.61
4:CA:991:C:H5'	4:CA:1186:G:H5'	1.82	0.61
4:CA:1050:A:O2'	4:CA:2752:C:O2	2.18	0.61
6:AB:33:GLY:HA2	6:AB:40:ILE:H	1.65	0.61
38:CO:104:ALA:O	38:CO:106:ASP:N	2.34	0.61
27:DC:92:LEU:HB3	69:DC:303:HOH:O	2.01	0.61
39:DP:10:ARG:NE	69:DP:303:HOH:O	2.33	0.61
1:AA:1322:C:O2	1:AA:1322:C:O4'	2.17	0.61
3:DA:1327:A:H2'	3:DA:1328:A:H5'	1.83	0.61
3:DA:1671:U:O3'	69:DA:3480:HOH:O	2.16	0.61
3:DA:2004:G:OP2	69:DA:3481:HOH:O	2.16	0.61
3:DA:2133:G:O2'	3:DA:2134:A:OP2	2.15	0.61
3:DA:2498:OMC:OP1	69:DA:3483:HOH:O	2.16	0.61
3:DA:2695:U:OP2	69:DA:3487:HOH:O	2.16	0.61
9:AE:151:GLU:O	9:AE:154:ALA:HB3	2.00	0.61
9:BE:15:LEU:C	9:BE:15:LEU:HD12	2.25	0.61
33:CJ:95:ASP:OD1	33:CJ:95:ASP:N	2.32	0.61
27:DC:27:LYS:CB	27:DC:28:PRO:HD2	2.31	0.61
33:DJ:123:ALA:HA	33:DJ:126:ARG:HG2	1.82	0.61
45:DV:70:ALA:HA	69:DV:209:HOH:O	2.00	0.61
1:AA:1152:A:OP1	14:AJ:70:HIS:ND1	2.33	0.61
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.35	0.61
3:DA:749:A:N7	3:DA:1618:6MZ:H9	2.15	0.61
3:DA:956:G:P	69:DA:3258:HOH:O	2.59	0.61
3:DA:1097:U:H3'	3:DA:1098:A:O4'	2.01	0.61
3:DA:1295:C:O3'	69:DA:3488:HOH:O	2.16	0.61
4:CA:777:G:C2	4:CA:778:G:C8	2.88	0.61
4:CA:1940:U:O4	69:CA:3370:HOH:O	2.15	0.61
4:CA:1973:G:C6	4:CA:1974:C:N4	2.69	0.61
8:AD:132:ILE:O	8:AD:132:ILE:HG13	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:872:A:C8	1:AA:874:G:C8	2.88	0.60
1:AA:914:A:C2	1:AA:915:A:C8	2.89	0.60
1:AA:956:U:C4	1:AA:957:U:C5	2.89	0.60
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.36	0.60
1:AA:1392:G:H2'	1:AA:1393:U:H5'	1.83	0.60
2:BA:1072:G:H2'	2:BA:1073:U:O4'	2.01	0.60
3:DA:532:A:OP1	3:DA:561:G:N2	2.33	0.60
4:CA:39:G:O6	4:CA:439:A:N6	2.34	0.60
4:CA:994:C:OP1	41:CR:52:ARG:NH1	2.34	0.60
25:AU:8:GLU:CD	25:AU:9:ASN:H	2.09	0.60
27:DC:181:ARG:NH2	27:DC:182:LYS:O	2.34	0.60
1:AA:1054:C:OP1	69:AA:1741:HOH:O	2.15	0.60
1:AA:1118:U:H5"	13:AI:106:ARG:HG3	1.82	0.60
1:AA:1264:U:O2	1:AA:1272:G:N2	2.35	0.60
1:AA:1374:A:C2	1:AA:1375:A:C8	2.88	0.60
2:BA:37:U:O5'	69:BA:1755:HOH:O	2.17	0.60
2:BA:1118:U:P	69:BA:1744:HOH:O	2.59	0.60
3:DA:1835:2MG:CM2	3:DA:1836:C:C2	2.84	0.60
3:DA:2544:G:OP2	69:DA:3482:HOH:O	2.16	0.60
4:CA:194:G:N2	4:CA:251:A:N3	2.49	0.60
4:CA:1362:C:H2'	4:CA:1363:C:H5'	1.83	0.60
5:DB:52:A:N7	39:DP:64:TYR:OH	2.26	0.60
9:AE:41:ASP:OD1	9:AE:44:GLY:O	2.19	0.60
13:AI:91:ASP:OD1	13:AI:93:SER:N	2.35	0.60
6:BB:117:LEU:HB3	6:BB:141:LEU:HD11	1.83	0.60
1:AA:1524:C:OP2	15:AK:125:LYS:NZ	2.33	0.60
2:BA:197:A:O2'	2:BA:220:G:N2	2.34	0.60
2:BA:842:U:H3'	2:BA:843:U:H5"	1.83	0.60
2:BA:1062:U:H2'	2:BA:1063:C:C6	2.36	0.60
4:CA:1808:A:N1	48:CY:27:ARG:HD2	2.16	0.60
5:DB:80:U:P	37:DN:18[A]:ARG:HH12	2.24	0.60
6:AB:86:SER:OG	6:AB:87:CYS:N	2.31	0.60
8:AD:150:LYS:NZ	8:AD:177:LYS:O	2.31	0.60
16:AL:42:PRO:HB2	16:AL:89:D2T:H5	1.82	0.60
6:BB:221:VAL:O	6:BB:223:GLU:N	2.34	0.60
9:BE:114:VAL:HG22	9:BE:115:LEU:HD13	1.83	0.60
43:CT:25:ARG:NH2	43:CT:74:ILE:O	2.33	0.60
43:DT:12:SER:O	43:DT:101:SER:OG	2.19	0.60
2:BA:501:C:OP1	26:BL:114:ARG:NH2	2.31	0.60
2:BA:706:A:C5	2:BA:707:U:C5	2.89	0.60
3:DA:190:A:N3	3:DA:679:C:O2'	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2502:G:H5'	3:DA:2503:2MA:H5"	1.84	0.60
4:CA:1195:G:O2'	4:CA:1226:A:N1	2.34	0.60
4:CA:1343:G:O6	4:CA:1403:A:N6	2.34	0.60
6:BB:99:GLY:HA2	6:BB:102:THR:HG22	1.83	0.60
9:BE:154:ALA:HA	9:BE:157:ARG:HB3	1.84	0.60
10:BF:92:THR:HG22	10:BF:93:LYS:H	1.66	0.60
18:BN:17:ASP:OD1	18:BN:18:LYS:N	2.35	0.60
27:CC:239:PHE:HD2	27:CC:240:GLY:H	1.50	0.60
39:DP:53:THR:HB	39:DP:65:THR:CG2	2.31	0.60
1:AA:1362:A:H5"	1:AA:1363:A:OP2	2.01	0.60
2:BA:579:A:H2'	2:BA:580:C:C6	2.36	0.60
3:DA:1236:G:O6	63:DA:3037:PUT:H41	2.01	0.60
3:DA:1427:A:H4'	3:DA:1428:C:O5'	2.00	0.60
3:DA:1433:A:O2'	3:DA:1434:A:H5'	2.01	0.60
3:DA:1782:U:H3'	69:DA:3596:HOH:O	2.00	0.60
3:DA:2324:U:H3'	3:DA:2325:G:C5'	2.31	0.60
4:CA:236:C:O2'	4:CA:431:U:O2'	2.15	0.60
4:CA:2461:A:N1	4:CA:2490:G:N2	2.49	0.60
8:AD:150:LYS:O	8:AD:151:LYS:CB	2.49	0.60
48:CY:10:ARG:HG2	48:CY:11:PRO:HD2	1.83	0.60
36:DM:1:MET:N	69:DM:305:HOH:O	2.34	0.60
1:AA:906:A:N1	69:AA:1765:HOH:O	2.32	0.60
1:AA:1343:G:H4'	13:AI:124:ARG:HB3	1.84	0.60
2:BA:345:C:O4'	2:BA:346:G:C2	2.54	0.60
2:BA:1483:A:O2'	4:CA:1947:C:O2'	2.17	0.60
3:DA:543:G:C5'	3:DA:543:G:H8	2.14	0.60
4:CA:574:A:H4'	4:CA:575:A:C5'	2.31	0.60
30:CF:81:GLY:O	69:CF:201:HOH:O	2.16	0.60
42:DS:37:GLU:HB3	42:DS:53:PHE:CE2	2.37	0.60
1:AA:259:G:O6	69:AA:1733:HOH:O	2.10	0.60
1:AA:827:U:C4	1:AA:870:U:C2	2.89	0.60
1:AA:1057:G:C2'	1:AA:1058:G:H5'	2.32	0.60
3:DA:193:U:P	69:DA:3554:HOH:O	2.60	0.60
3:DA:438:G:C2'	3:DA:439:A:H5'	2.31	0.60
3:DA:2749:A:OP1	31:DG:1:SER:N	2.34	0.60
4:CA:1316:U:O2	4:CA:1337:G:N2	2.34	0.60
4:CA:2591:C:OP2	69:CA:3381:HOH:O	2.16	0.60
4:CA:2876:G:H4'	40:CQ:2:ASN:OD1	2.00	0.60
6:AB:82:ASP:OD1	6:AB:83:ALA:N	2.34	0.60
24:AT:28:MET:O	24:AT:32:ILE:HG13	2.02	0.60
6:BB:33:GLY:O	6:BB:34:ALA:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BC:82:GLU:O	7:BC:85:GLU:CG	2.50	0.60
12:BH:105:SER:O	12:BH:123:GLY:HA3	2.01	0.60
33:DJ:18:ASN:ND2	33:DJ:34:ILE:O	2.33	0.60
1:AA:869:G:N7	69:AA:1767:HOH:O	2.32	0.60
2:BA:32:A:C2	2:BA:33:A:C5	2.90	0.60
3:DA:1177:G:H2'	3:DA:1178:C:O4'	2.02	0.60
3:DA:2305:U:C2	30:DF:150:GLY:HA3	2.37	0.60
4:CA:85:G:OP1	45:CV:6:ARG:N	2.34	0.60
4:CA:2314:A:O2'	69:CA:3378:HOH:O	2.16	0.60
4:CA:2607:G:H2'	4:CA:2608:G:O4'	2.02	0.60
30:CF:56:LEU:HD13	30:CF:88:VAL:HG23	1.82	0.60
35:CL:118:LEU:O	35:CL:119:ALA:O	2.20	0.60
35:DL:4:GLU:O	35:DL:5:GLN:HB2	2.02	0.60
3:DA:451:U:C2	3:DA:453:A:N7	2.70	0.60
3:DA:1429:G:C2'	3:DA:1430:G:H5'	2.31	0.60
3:DA:1509:A:O2'	3:DA:1510:G:P	2.59	0.60
3:DA:1835:2MG:H2'	3:DA:1836:C:H6	1.66	0.60
4:CA:79:C:O2'	4:CA:346:A:N3	2.33	0.60
4:CA:199:A:OP1	69:CA:3380:HOH:O	2.16	0.60
4:CA:1941:C:N4	69:CA:3252:HOH:O	2.34	0.60
14:AJ:54:SER:OG	14:AJ:55:PRO:HD2	2.01	0.60
13:BI:128:SER:O	13:BI:129:LYS:C	2.45	0.60
27:CC:15:VAL:HG22	27:CC:205:GLY:HA3	1.84	0.60
38:CO:55:ALA:HA	38:CO:80:PHE:CE2	2.37	0.60
2:BA:68:G:H5'	2:BA:171:A:O2'	2.02	0.60
2:BA:756:C:C2	2:BA:757:U:C6	2.90	0.60
2:BA:946:A:HO2'	2:BA:1333:A:HO2'	1.50	0.60
2:BA:1077:G:H5"	2:BA:1078:U:OP2	2.02	0.60
3:DA:1012:U:OP2	69:DA:3476:HOH:O	2.15	0.60
3:DA:2725:A:P	69:DA:3672:HOH:O	2.60	0.60
4:CA:217:A:H4'	69:CA:3569:HOH:O	2.02	0.60
6:AB:21:ARG:HB2	69:AB:308:HOH:O	2.00	0.60
7:AC:84:VAL:HG13	7:AC:101:ILE:HG21	1.83	0.60
13:AI:9:THR:HG22	13:AI:10:GLY:H	1.66	0.60
24:BT:36:TYR:C	24:BT:36:TYR:CD1	2.80	0.60
57:D7:62:ARG:HG2	57:D7:63:THR:N	2.15	0.60
3:DA:1590:A:H2'	3:DA:1591:A:C8	2.37	0.59
3:DA:2685:G:O2'	69:DA:3212:HOH:O	1.71	0.59
3:DA:2752:C:OP1	60:DA:3071:MPD:O4	2.20	0.59
4:CA:1351:C:H2'	4:CA:1352:U:O4'	2.02	0.59
4:CA:1475:G:O2'	4:CA:1514:G:O6	2.19	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BF:92:THR:CG2	10:BF:93:LYS:H	2.15	0.59
42:DS:24:LYS:HA	42:DS:94:THR:HG23	1.83	0.59
2:BA:263:A:P	24:BT:74:ARG:NH1	2.75	0.59
2:BA:770:C:C2'	2:BA:771:G:H5'	2.32	0.59
2:BA:1190:G:H5'	7:BC:176:HIS:HE1	1.67	0.59
3:DA:281:C:H2'	3:DA:282:A:C8	2.35	0.59
13:AI:90:TYR:O	13:AI:91:ASP:HB3	2.03	0.59
15:AK:24:HIS:O	15:AK:30:THR:HA	2.02	0.59
26:BL:87:VAL:O	26:BL:89:ASP:N	2.34	0.59
32:CH:2:GLN:O	32:CH:3:VAL:HG22	2.02	0.59
38:CO:20:MET:C	38:CO:22:ARG:H	2.11	0.59
2:BA:1151:A:C2	2:BA:1152:A:C4	2.91	0.59
2:BA:1216:A:OP1	18:BN:4:SER:OG	2.11	0.59
3:DA:244:A:C2	3:DA:255:A:C4	2.90	0.59
3:DA:1607:C:H6	3:DA:1607:C:H5'	1.67	0.59
3:DA:2886:A:C5	3:DA:2887:A:C8	2.90	0.59
7:BC:139:GLN:O	7:BC:141:ALA:N	2.35	0.59
1:AA:972:C:OP1	69:AA:1742:HOH:O	2.17	0.59
2:BA:775:G:C2'	2:BA:776:G:H5'	2.33	0.59
3:DA:1405:U:H2'	3:DA:1406:U:C6	2.37	0.59
3:DA:2728:U:O2'	3:DA:2729:G:P	2.61	0.59
4:CA:1416:G:O2'	4:CA:1417:C:OP2	2.16	0.59
8:AD:152:GLN:HB2	8:AD:155:VAL:HG13	1.83	0.59
45:DV:50:ALA:O	45:DV:51:LEU:O	2.20	0.59
1:AA:597:G:C2	1:AA:644:U:O2	2.55	0.59
1:AA:1408:A:H2'	1:AA:1409:C:C6	2.38	0.59
2:BA:9:G:H5'	9:BE:108:GLY:HA3	1.84	0.59
3:DA:163:C:H6	69:DA:3251:HOH:O	1.84	0.59
3:DA:596:U:C2'	3:DA:597:G:H5'	2.33	0.59
3:DA:854:C:C2'	3:DA:855:G:H5'	2.33	0.59
3:DA:1119:U:H5"	69:DA:3335:HOH:O	2.02	0.59
3:DA:1972:G:OP1	69:DA:3492:HOH:O	2.17	0.59
3:DA:2419:U:O2'	3:DA:2420:C:H5'	2.02	0.59
4:CA:1097:U:C2'	33:CJ:8:VAL:HG11	2.33	0.59
4:CA:2655:G:O2'	4:CA:2664:G:O6	2.17	0.59
7:BC:65:ARG:O	7:BC:66:VAL:O	2.19	0.59
13:BI:19:VAL:HA	13:BI:65:ILE:HG22	1.83	0.59
15:BK:88:GLY:H	15:BK:114:THR:HG22	1.66	0.59
18:BN:25:GLU:O	18:BN:27:LYS:N	2.34	0.59
29:CE:5:LEU:O	29:CE:7:ASP:N	2.35	0.59
46:CW:9:ARG:HD2	46:CW:40:ILE:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DJ:36:GLU:O	33:DJ:38:CYS:N	2.34	0.59
57:D7:29:ILE:HG22	57:D7:30:LYS:N	2.18	0.59
1:AA:1226:C:O2'	17:AM:110:LYS:NZ	2.33	0.59
1:AA:1518:MA6:H103	1:AA:1519:MA6:C10	2.32	0.59
3:DA:23:G:OP1	64:DA:3034:1PE:H251	2.03	0.59
3:DA:514:A:N3	3:DA:581:C:O2'	2.28	0.59
3:DA:745:1MG:O5'	69:DA:3490:HOH:O	2.17	0.59
3:DA:1254:A:O3'	69:DA:3486:HOH:O	2.16	0.59
3:DA:1356:G:C2	3:DA:1376:C:O2	2.55	0.59
3:DA:1439:A:C2	3:DA:1553:A:C4	2.90	0.59
3:DA:2351:G:OP2	69:DA:3485:HOH:O	2.16	0.59
4:CA:704:G:H1'	4:CA:726:G:N2	2.17	0.59
4:CA:893:C:H2'	4:CA:894:U:O4'	2.03	0.59
4:CA:2075:U:O2	4:CA:2077:A:OP2	2.21	0.59
4:CA:2822:G:H2'	4:CA:2823:A:H5"	1.84	0.59
8:AD:148:LYS:H	8:AD:148:LYS:HE2	1.67	0.59
14:AJ:29:ALA:C	14:AJ:31:ARG:H	2.09	0.59
17:AM:45:ILE:HD12	17:AM:45:ILE:N	2.18	0.59
24:AT:3:ASN:C	24:AT:3:ASN:OD1	2.45	0.59
10:BF:92:THR:CG2	10:BF:93:LYS:N	2.65	0.59
11:BG:130:ASN:HA	11:BG:135:VAL:HG11	1.84	0.59
13:BI:6:TYR:HB3	13:BI:89:GLU:HB3	1.84	0.59
1:AA:1073:U:O2'	6:AB:103:ASN:OD1	2.18	0.59
2:BA:71:A:C2	2:BA:72:A:C8	2.90	0.59
2:BA:978:A:OP1	2:BA:980:C:N4	2.35	0.59
3:DA:626:A:H2'	36:DM:78:ARG:NH1	2.18	0.59
4:CA:591:U:H1'	54:C4:1:PRO:H2	1.66	0.59
4:CA:1906:G:H5"	4:CA:1929:G:O2'	2.03	0.59
14:AJ:91:ASP:C	14:AJ:92:LEU:HG	2.28	0.59
20:BP:70:ARG:O	20:BP:74:LEU:HG	2.03	0.59
32:DH:12:LEU:O	32:DH:13:GLY:O	2.20	0.59
36:DM:89:VAL:O	36:DM:94:THR:HG21	2.03	0.59
42:DS:8:GLY:HA3	69:DS:301:HOH:O	2.03	0.59
2:BA:146:G:N2	2:BA:147:G:H1'	2.17	0.59
3:DA:2454:G:P	69:DA:3444:HOH:O	2.60	0.59
4:CA:2184:A:H2'	4:CA:2185:U:O4'	2.02	0.59
4:CA:2284:A:O2'	4:CA:2288:A:N1	2.23	0.59
23:BS:64:ASP:O	23:BS:67:VAL:HG23	2.02	0.59
29:CE:76:PRO:HA	29:CE:82:GLY:HA2	1.83	0.59
42:CS:2:TYR:HB2	42:CS:14:VAL:O	2.03	0.59
44:CU:69:ARG:NE	44:CU:69:ARG:O	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:964:A:N3	2:BA:969:A:O2'	2.26	0.59
3:DA:616:A:H2'	3:DA:617:G:H5'	1.83	0.59
3:DA:1936:A:C8	3:DA:1940:U:O2	2.56	0.59
3:DA:2030:6MZ:H5'1	69:DA:3744:HOH:O	2.01	0.59
4:CA:190:A:H1'	4:CA:679:C:O2'	2.02	0.59
4:CA:1330:C:O2'	4:CA:1331:G:H5'	2.02	0.59
4:CA:1723:G:O6	4:CA:1737:G:O2'	2.19	0.59
4:CA:1847:A:O2'	4:CA:1848:A:O5'	2.19	0.59
13:AI:22:LYS:O	13:AI:62:ASP:N	2.35	0.59
11:BG:83:SER:HB3	11:BG:85:TYR:CZ	2.38	0.59
51:C1:52:LYS:HE3	51:C1:55:ALA:HA	1.84	0.59
57:D7:39:GLY:O	57:D7:40:VAL:HG22	2.02	0.59
2:BA:706:A:H4'	15:BK:31:ILE:HD11	1.84	0.59
2:BA:734:G:C2	2:BA:735:C:C6	2.90	0.59
2:BA:1289:A:N1	2:BA:1371:G:O2'	2.31	0.59
4:CA:641:U:H5'	4:CA:642:U:OP2	2.02	0.59
4:CA:1857:G:O2'	4:CA:1884:G:N2	2.35	0.59
6:AB:186:ILE:HA	6:AB:200:ILE:O	2.03	0.59
31:DG:106:LEU:O	31:DG:151:ARG:NH2	2.36	0.59
39:DP:83:LEU:HD23	39:DP:87:ILE:O	2.03	0.59
46:DW:4:ILE:HG13	46:DW:50:MET:HE1	1.85	0.59
1:AA:254:G:H4'	21:AQ:20:SER:HB2	1.85	0.58
1:AA:1100:C:H5"	69:AA:1948:HOH:O	2.02	0.58
3:DA:142:A:O2'	3:DA:143:C:H5'	2.03	0.58
3:DA:770:G:P	69:DA:4272:HOH:O	2.61	0.58
4:CA:1389:G:N2	4:CA:1398:C:N3	2.51	0.58
4:CA:2067:G:O6	4:CA:2444:G:C6	2.56	0.58
4:CA:2540:C:O2'	4:CA:2740:A:N3	2.33	0.58
4:CA:2854:G:C2	4:CA:2864:G:C2	2.91	0.58
6:AB:71:GLY:HA2	6:AB:164:ILE:HG22	1.85	0.58
7:AC:205:GLY:O	7:AC:206:GLU:HG2	2.03	0.58
14:AJ:29:ALA:HA	14:AJ:32:THR:HG22	1.85	0.58
13:BI:33:ARG:HD2	13:BI:37:GLN:OE1	2.03	0.58
24:BT:51:PHE:HA	24:BT:54:MET:HG2	1.85	0.58
27:CC:186:ASP:OD1	27:CC:186:ASP:N	2.36	0.58
43:CT:58:ALA:O	43:CT:63:GLY:N	2.36	0.58
1:AA:409:U:H2'	1:AA:410:G:O4'	2.02	0.58
1:AA:953:G:C2	1:AA:1229:A:C2	2.91	0.58
1:AA:967:5MC:H6	1:AA:967:5MC:O5'	1.86	0.58
1:AA:1112:C:O2	7:AC:179:ARG:HG3	2.03	0.58
2:BA:405:U:C2'	2:BA:406:G:OP1	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:17:G:H2'	3:DA:18:U:C6	2.38	0.58
5:DB:22:U:H2'	5:DB:23:G:C8	2.39	0.58
9:BE:133:PRO:HA	9:BE:136:VAL:CG1	2.33	0.58
9:BE:151:GLU:O	9:BE:154:ALA:HB3	2.03	0.58
13:BI:95:ARG:O	13:BI:98:LEU:N	2.34	0.58
17:BM:66:GLU:C	17:BM:68:ASP:H	2.11	0.58
41:DR:19:GLN:CG	61:DR:202:PG4:H42	2.31	0.58
3:DA:160:A:N3	3:DA:2208:C:O2'	2.36	0.58
3:DA:2615:U:P	69:DA:3626:HOH:O	2.61	0.58
4:CA:335:C:H1'	45:CV:67:SER:O	2.03	0.58
5:CB:42:C:N3	30:CF:89:THR:OG1	2.27	0.58
6:BB:54:LEU:O	6:BB:58:ASN:N	2.24	0.58
6:BB:99:GLY:O	6:BB:101:LEU:N	2.32	0.58
2:BA:818:G:O2'	2:BA:819:A:H5'	2.03	0.58
3:DA:795:C:O5'	3:DA:795:C:H6	1.86	0.58
3:DA:1168:G:H2'	3:DA:1169:A:O4'	2.03	0.58
3:DA:2006:C:O5'	3:DA:2006:C:H6	1.85	0.58
3:DA:2171:A:O2'	3:DA:2172:U:H5'	2.02	0.58
3:DA:2247:A:P	69:DA:3622:HOH:O	2.61	0.58
3:DA:2470:G:C2'	3:DA:2471:A:H5'	2.33	0.58
3:DA:2550:G:P	69:DA:3320:HOH:O	2.60	0.58
4:CA:225:C:H2'	4:CA:226:A:O4'	2.03	0.58
4:CA:321:U:H5'	29:CE:129:PRO:O	2.04	0.58
4:CA:475:C:O2	4:CA:481:G:N1	2.37	0.58
4:CA:666:A:H4'	36:CM:48:ARG:HD2	1.85	0.58
4:CA:1867:G:O6	4:CA:1875:G:N2	2.36	0.58
11:AG:145:ALA:C	11:AG:147:ALA:H	2.07	0.58
43:CT:16:LYS:HA	43:CT:19:LEU:HD22	1.85	0.58
44:CU:28:ASN:N	44:CU:28:ASN:OD1	2.36	0.58
27:DC:61:TYR:HA	27:DC:85:ASN:HD21	1.68	0.58
47:DX:39[B]:ARG:NE	69:DX:102:HOH:O	2.34	0.58
55:D5:44:LYS:CB	55:D5:45:LYS:HE2	2.32	0.58
55:D5:44:LYS:HB2	55:D5:45:LYS:HE2	1.86	0.58
1:AA:182:A:N1	1:AA:223:A:O2'	2.36	0.58
1:AA:671:G:C5	1:AA:672:U:C5	2.92	0.58
1:AA:914:A:C4	1:AA:915:A:C8	2.90	0.58
2:BA:378:G:C2	2:BA:386:C:O2	2.57	0.58
69:BA:1744:HOH:O	13:BI:106:ARG:NE	2.26	0.58
3:DA:1450:G:C6	3:DA:1451:C:N4	2.72	0.58
3:DA:2000:C:C2'	3:DA:2001:C:H5'	2.34	0.58
4:CA:249:C:O5'	4:CA:2394:C:O2'	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1252:G:O2'	69:CA:3384:HOH:O	2.17	0.58
8:AD:148:LYS:N	8:AD:148:LYS:HD3	2.19	0.58
11:AG:92:ARG:HB3	11:AG:93:PRO:HD2	1.86	0.58
13:AI:63:LEU:HD23	13:AI:63:LEU:H	1.68	0.58
29:CE:145:ASP:HA	29:CE:166:LYS:HB3	1.85	0.58
27:DC:124:LYS:HB2	27:DC:125:PRO:HD2	1.86	0.58
56:DD:149:ASN:OD1	56:DD:150:MEQ:N	2.36	0.58
29:DE:100:MET:SD	69:DE:433:HOH:O	2.57	0.58
2:BA:330:C:O2	69:BA:1750:HOH:O	2.14	0.58
3:DA:1009:A:P	34:DK:39:LYS:NZ	2.77	0.58
3:DA:1296:G:OP1	69:DA:3488:HOH:O	2.17	0.58
3:DA:1765:U:O2'	3:DA:1766:G:H5'	2.03	0.58
3:DA:1821:A:O5'	3:DA:1821:A:H8	1.85	0.58
4:CA:734:A:N3	69:CA:3472:HOH:O	2.31	0.58
4:CA:848:C:H2'	4:CA:849:A:C8	2.38	0.58
4:CA:945:A:C8	4:CA:2448:A:C2	2.91	0.58
5:DB:79:G:P	69:DB:306:HOH:O	2.60	0.58
5:CB:24:G:N3	5:CB:27:C:N4	2.49	0.58
5:CB:38:C:O4'	39:CP:100:HIS:CE1	2.56	0.58
6:AB:106:THR:O	6:AB:107:VAL:HB	2.03	0.58
13:AI:23:PRO:HA	13:AI:61:LEU:HA	1.84	0.58
15:AK:81:ASN:OD1	15:AK:106:ARG:NH1	2.37	0.58
19:AO:74:ASP:OD2	19:AO:77:ARG:HG3	2.03	0.58
11:BG:91:VAL:O	11:BG:96:ARG:NH2	2.36	0.58
27:CC:124:LYS:HB2	27:CC:125:PRO:HD2	1.86	0.58
28:CD:13:ARG:HD3	28:CD:21:SER:OG	2.04	0.58
44:CU:49:LYS:HD3	44:CU:49:LYS:N	2.18	0.58
35:DL:76:VAL:HB	40:DQ:72:VAL:HG13	1.85	0.58
37:DN:47:GLU:OE2	37:DN:51:ARG:NE	2.36	0.58
39:DP:33:ARG:O	39:DP:65:THR:HB	2.04	0.58
1:AA:44:A:C2	1:AA:399:G:C2	2.91	0.58
1:AA:1057:G:N7	1:AA:1058:G:N7	2.52	0.58
1:AA:1518:MA6:H8	1:AA:1518:MA6:O5'	2.03	0.58
2:BA:496:A:C2	2:BA:497:G:C6	2.92	0.58
3:DA:730:A:P	69:DA:3306:HOH:O	2.61	0.58
3:DA:1778:U:H2'	3:DA:1784:A:N6	2.19	0.58
3:DA:1795:C:C4	3:DA:1796:U:C5	2.92	0.58
3:DA:2622:U:H5'	69:DA:4393:HOH:O	2.02	0.58
4:CA:592:A:O2'	54:C4:3:ILE:HG13	2.04	0.58
4:CA:1566:A:C2	27:CC:212:TRP:CE3	2.91	0.58
4:CA:1980:G:O2'	4:CA:1982:U:OP2	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2016:U:OP1	69:CA:3385:HOH:O	2.17	0.58
4:CA:2724:U:H2'	4:CA:2725:A:C8	2.39	0.58
69:CA:3233:HOH:O	43:CT:83:LYS:NZ	2.34	0.58
6:AB:146:ASN:C	6:AB:148:LEU:H	2.11	0.58
14:AJ:33:GLY:O	14:AJ:34:ALA:CB	2.51	0.58
18:AN:42:TRP:O	18:AN:42:TRP:CD1	2.57	0.58
10:BF:98:GLU:HG3	10:BF:99:ALA:H	1.69	0.58
15:BK:16:VAL:O	15:BK:17:SER:OG	2.22	0.58
27:CC:159:THR:HG23	27:CC:176:ARG:HG2	1.86	0.58
29:DE:176:ASP:OD2	29:DE:176:ASP:C	2.47	0.58
2:BA:680:C:C2	2:BA:711:G:N2	2.72	0.58
3:DA:1122:G:H2'	3:DA:1122:G:N3	2.18	0.58
4:CA:185:G:H2'	4:CA:186:G:O4'	2.03	0.58
4:CA:332:A:HO2'	4:CA:334:C:P	2.22	0.58
4:CA:1425:G:O6	69:CA:3376:HOH:O	2.15	0.58
4:CA:1965:C:P	69:CA:3252:HOH:O	2.57	0.58
4:CA:2853:C:H2'	4:CA:2854:G:C8	2.38	0.58
5:CB:14:U:H3'	5:CB:15:A:H5"	1.85	0.58
8:AD:192:SER:O	8:AD:193:ALA:HB3	2.03	0.58
19:AO:19:ALA:O	19:AO:21:ASP:N	2.34	0.58
23:AS:36:ARG:NE	23:AS:52:HIS:O	2.37	0.58
23:AS:39:THR:HG23	69:AS:101:HOH:O	2.03	0.58
34:CK:105:VAL:HG12	34:CK:109:LEU:CD1	2.34	0.58
39:CP:2:ASP:OD1	39:CP:5:SER:OG	2.21	0.58
49:CZ:53:VAL:O	49:CZ:57:LEU:HB2	2.04	0.58
32:DH:27:ARG:O	32:DH:29:PHE:N	2.36	0.58
39:DP:31:THR:HG23	39:DP:34:HIS:H	1.69	0.58
47:DX:39[B]:ARG:HH11	47:DX:39[B]:ARG:HA	1.69	0.58
57:D7:52:LYS:O	57:D7:54:HIS:N	2.37	0.58
1:AA:338:A:N1	1:AA:351:G:O6	2.37	0.58
1:AA:354:G:H2'	1:AA:355:C:H5'	1.84	0.58
1:AA:1008:U:P	18:AN:23:ARG:HH22	2.26	0.58
1:AA:1086:U:H4'	1:AA:1086:U:OP1	2.04	0.58
2:BA:160:A:N6	2:BA:346:G:O6	2.37	0.58
2:BA:941:G:H3'	69:BA:1874:HOH:O	2.04	0.58
2:BA:1151:A:HO2'	2:BA:1152:A:H8	1.52	0.58
2:BA:1279:G:O2'	2:BA:1281:C:OP2	2.22	0.58
2:BA:1409:C:H4'	4:CA:1915:U:O4	2.03	0.58
69:BA:1744:HOH:O	13:BI:106:ARG:NH2	2.26	0.58
3:DA:565:C:H5'	69:DA:4157:HOH:O	2.03	0.58
3:DA:644:A:H2'	3:DA:645:C:O4'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:990:A:H5"	3:DA:991:C:P	2.44	0.58
3:DA:1616:A:O3'	69:DA:3489:HOH:O	2.17	0.58
3:DA:1825:U:O5'	69:DA:3496:HOH:O	2.17	0.58
3:DA:2003:A:H3'	69:DA:3277:HOH:O	2.03	0.58
3:DA:2578:G:P	69:DA:3419:HOH:O	2.62	0.58
4:CA:1359:A:C2	4:CA:1360:G:H1'	2.38	0.58
4:CA:2064:C:H2'	4:CA:2065:C:C6	2.39	0.58
5:DB:89:U:H3'	5:DB:90:C:H5"	1.85	0.58
9:AE:82:GLN:NE2	9:AE:150:PRO:HD3	2.18	0.58
12:AH:64:LYS:C	12:AH:65:TYR:HD1	2.12	0.58
7:BC:55:ILE:C	7:BC:55:ILE:HD12	2.28	0.58
19:BO:72:ARG:O	19:BO:74:ASP:N	2.36	0.58
60:DE:301:MPD:H52	60:DE:301:MPD:HM2	1.86	0.58
1:AA:859:G:H5"	1:AA:860:A:OP2	2.03	0.58
1:AA:953:G:C4	1:AA:1229:A:C2	2.91	0.58
2:BA:505:G:H2'	2:BA:506:G:C8	2.38	0.58
3:DA:586:A:H2'	69:DA:4285:HOH:O	2.02	0.58
3:DA:1359:A:P	69:DA:3447:HOH:O	2.62	0.58
3:DA:2107:G:N2	3:DA:2182:U:O2	2.36	0.58
3:DA:2544:G:C2'	3:DA:2545:G:H5'	2.33	0.58
3:DA:2799:A:N7	69:DA:3717:HOH:O	2.32	0.58
4:CA:668:A:N6	4:CA:670:A:O2'	2.37	0.58
4:CA:1827:U:O4'	4:CA:1970:A:O2'	2.21	0.58
4:CA:2679:A:N3	4:CA:2729:G:N2	2.52	0.58
5:DB:8:C:O3'	39:DP:25:ARG:NH1	2.37	0.58
6:AB:104:TRP:O	6:AB:104:TRP:CD1	2.57	0.58
10:AF:66:ALA:HB1	10:AF:70:VAL:HG21	1.86	0.58
33:CJ:79:LEU:HD11	33:CJ:132:ALA:HB2	1.86	0.58
35:CL:113:MET:SD	35:CL:116:ILE:HD11	2.44	0.58
48:CY:33:HIS:O	48:CY:49:ARG:HG3	2.04	0.58
49:DZ:45:GLN:O	49:DZ:46:VAL:HB	2.04	0.58
57:D7:47:ILE:C	57:D7:53:SER:HB3	2.29	0.58
2:BA:1296:C:OP1	17:BM:14:HIS:NE2	2.37	0.57
3:DA:1188:U:O2'	69:DA:3300:HOH:O	1.96	0.57
3:DA:2223:G:H2'	3:DA:2224:G:H5'	1.86	0.57
3:DA:2259:U:H1'	3:DA:2427:C:C2	2.39	0.57
4:CA:2262:U:OP1	47:CX:39:ARG:NH2	2.37	0.57
6:AB:118:GLU:C	6:AB:120:GLN:H	2.11	0.57
13:BI:46:MET:O	13:BI:49:ARG:HB3	2.04	0.57
15:BK:88:GLY:H	15:BK:114:THR:CG2	2.17	0.57
24:BT:44:LYS:HD3	24:BT:87:ALA:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BU:24:GLU:O	25:BU:26:ALA:N	2.34	0.57
36:CM:139:GLY:O	36:CM:140:GLY:O	2.22	0.57
47:DX:39[B]:ARG:CZ	69:DX:102:HOH:O	2.44	0.57
66:D1:102:PEG:H32	69:D1:233:HOH:O	2.04	0.57
1:AA:919:A:C2'	1:AA:920:U:H5'	2.34	0.57
1:AA:1040:U:H1'	69:AA:1804:HOH:O	2.04	0.57
1:AA:1375:A:P	11:AG:28:ASN:HD22	2.27	0.57
2:BA:37:U:H6	69:BA:1755:HOH:O	1.87	0.57
3:DA:1515:A:H2'	3:DA:1516:G:O4'	2.04	0.57
3:DA:1662:U:OP2	69:DA:3494:HOH:O	2.17	0.57
3:DA:1937:A:N7	3:DA:1939:5MU:O2'	2.33	0.57
3:DA:2897:U:H2'	3:DA:2898:U:C6	2.39	0.57
64:DA:3034:1PE:H142	69:DA:5583:HOH:O	2.03	0.57
4:CA:591:U:C2	4:CA:592:A:C8	2.92	0.57
4:CA:1097:U:H2'	33:CJ:8:VAL:HG11	1.86	0.57
4:CA:1250:G:H5'	41:CR:5:ARG:HD2	1.87	0.57
9:AE:13:GLU:OE1	9:AE:68:ARG:NH1	2.35	0.57
9:AE:82:GLN:H	9:AE:147:MET:HE3	1.68	0.57
13:BI:25:ASN:O	13:BI:27:LYS:N	2.37	0.57
27:CC:107:LYS:N	27:CC:193:GLU:O	2.29	0.57
28:CD:104:VAL:CG2	28:CD:177:VAL:HG11	2.34	0.57
36:CM:95:LEU:HD22	36:CM:100:ILE:HD13	1.86	0.57
57:D7:33:ARG:O	57:D7:34:GLU:HG3	2.04	0.57
2:BA:213:G:OP2	2:BA:214:C:N4	2.37	0.57
2:BA:1486:G:H2'	2:BA:1487:G:O4'	2.04	0.57
3:DA:923:G:H1'	69:DA:4438:HOH:O	2.04	0.57
3:DA:1838:C:C2	3:DA:1898:U:C4	2.93	0.57
3:DA:2722:G:H2'	3:DA:2723:C:C6	2.39	0.57
6:BB:118:GLU:C	6:BB:120:GLN:H	2.12	0.57
36:CM:136:GLU:C	36:CM:138:ALA:H	2.11	0.57
35:DL:7:MET:HE1	35:DL:44:LYS:HG3	1.87	0.57
45:DV:96:LYS:O	45:DV:97:SER:OG	2.22	0.57
1:AA:74:A:C2	1:AA:97:G:C6	2.93	0.57
1:AA:355:C:O4'	1:AA:388:G:O2'	2.23	0.57
1:AA:692:U:O2'	1:AA:694:A:N7	2.25	0.57
1:AA:928:G:C2	1:AA:1390:U:O2	2.56	0.57
1:AA:1050:G:C2	1:AA:1209:C:O2	2.58	0.57
2:BA:312:C:H2'	2:BA:313:A:O4'	2.04	0.57
2:BA:765:G:C6	2:BA:812:G:C4	2.93	0.57
3:DA:665:U:O2'	3:DA:666:A:H5'	2.04	0.57
3:DA:1070:A:N7	3:DA:1096:A:O2'	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1348:C:H2'	3:DA:1349:C:H5'	1.86	0.57
3:DA:1494:A:O2'	3:DA:1495:A:OP1	2.22	0.57
6:AB:96:TRP:HZ3	6:AB:175:GLU:OE2	1.87	0.57
13:AI:24:GLY:H	13:AI:61:LEU:HA	1.69	0.57
29:CE:5:LEU:HA	29:CE:120:VAL:HB	1.86	0.57
36:CM:77:ILE:HD11	36:CM:108:ALA:HB1	1.86	0.57
66:D1:102:PEG:H41	66:D1:102:PEG:C1	2.35	0.57
57:D7:10:ARG:O	57:D7:26:GLY:O	2.21	0.57
57:D7:13:VAL:HG23	57:D7:38:ASP:HB3	1.86	0.57
57:D7:49:VAL:O	57:D7:53:SER:OG	2.22	0.57
2:BA:1080:A:OP1	9:BE:52:LYS:HD2	2.04	0.57
2:BA:1310:G:H2'	2:BA:1311:A:O4'	2.04	0.57
3:DA:284:U:O2	3:DA:356:G:N2	2.33	0.57
3:DA:1637:A:N7	69:DA:3723:HOH:O	2.32	0.57
3:DA:1669:A:H5"	3:DA:1670:C:OP2	2.04	0.57
3:DA:2077:A:P	69:DA:3359:HOH:O	2.63	0.57
3:DA:2359:C:O2'	3:DA:2360:G:H5'	2.05	0.57
3:DA:2422:C:H1'	69:DA:3966:HOH:O	2.04	0.57
3:DA:2470:G:O2'	3:DA:2471:A:H5'	2.05	0.57
4:CA:80:G:H4'	4:CA:346:A:C1'	2.35	0.57
4:CA:600:G:OP1	29:CE:24:ASN:ND2	2.37	0.57
4:CA:1027:A:N7	4:CA:1126:A:C2	2.73	0.57
4:CA:1362:C:C2'	4:CA:1363:C:H5'	2.34	0.57
6:BB:83:ALA:O	6:BB:86:SER:OG	2.16	0.57
41:DR:83:LYS:HD2	67:DR:204:EDO:H12	1.86	0.57
1:AA:558:G:C5	1:AA:559:A:C2	2.93	0.57
2:BA:1091:U:C2	2:BA:1093:A:OP2	2.57	0.57
2:BA:1316:G:N2	2:BA:1318:A:H3'	2.20	0.57
3:DA:576:U:H5	69:DA:3876:HOH:O	1.88	0.57
3:DA:726:G:O2'	3:DA:727:A:OP2	2.21	0.57
3:DA:1867:G:O2'	3:DA:1868:C:H5'	2.04	0.57
3:DA:2048:G:H2'	3:DA:2049:G:O5'	2.04	0.57
69:DA:3552:HOH:O	55:D5:13:ARG:NH1	2.37	0.57
4:CA:299:A:N3	4:CA:319:G:O2'	2.30	0.57
4:CA:1837:C:O2	4:CA:1927:A:H2	1.88	0.57
4:CA:2505:G:C6	4:CA:2576:G:N7	2.72	0.57
69:CA:3422:HOH:O	48:CY:31:ASN:HB2	2.04	0.57
17:BM:46:SER:O	17:BM:47:GLU:HB3	2.04	0.57
28:CD:115:GLY:O	38:CO:3:HIS:NE2	2.38	0.57
29:CE:58:LYS:NZ	29:CE:70:SER:O	2.38	0.57
35:CL:107:LEU:O	35:CL:109:SER:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:CO:16:HIS:O	38:CO:20:MET:HB3	2.04	0.57
56:DD:77:ARG:HD2	56:DD:200:ASP:OD1	2.04	0.57
30:DF:104:THR:HG22	30:DF:105:ILE:HG12	1.86	0.57
49:DZ:61:ALA:O	49:DZ:63:ALA:N	2.34	0.57
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.40	0.57
3:DA:196:A:H2'	3:DA:196:A:N3	2.20	0.57
3:DA:1271:G:O6	69:DA:3491:HOH:O	2.17	0.57
3:DA:1323:C:H3'	69:DA:3940:HOH:O	2.04	0.57
63:DA:3069:PUT:H32	69:DA:5978:HOH:O	2.04	0.57
4:CA:204:A:O4'	4:CA:206:U:C6	2.58	0.57
4:CA:587:C:OP2	36:CM:21:ARG:NH1	2.38	0.57
4:CA:684:G:C5'	53:C3:16:HIS:HE1	2.18	0.57
4:CA:1470:A:O2'	69:CA:3331:HOH:O	2.08	0.57
4:CA:1567:G:H2'	27:CC:84:PRO:HG3	1.87	0.57
14:AJ:41:PRO:O	14:AJ:42:LEU:CB	2.52	0.57
16:AL:21:VAL:O	16:AL:21:VAL:HG13	2.04	0.57
38:CO:90:ARG:NH2	38:CO:116:VAL:HG11	2.20	0.57
44:CU:48:GLN:O	44:CU:52:GLU:HA	2.05	0.57
1:AA:604:G:C2	1:AA:635:A:C2	2.93	0.57
1:AA:1058:G:C5	1:AA:1059:C:C5	2.93	0.57
1:AA:1130:A:H8	1:AA:1130:A:O5'	1.87	0.57
1:AA:1335:U:HO2'	1:AA:1336:C:P	2.24	0.57
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.05	0.57
2:BA:376:G:H5'	20:BP:5:ARG:HB2	1.86	0.57
2:BA:1408:A:C2	2:BA:1494:G:C4	2.92	0.57
69:DA:3247:HOH:O	56:DD:13:ARG:NH1	2.33	0.57
8:AD:107:PHE:CG	8:AD:145:ILE:HD11	2.39	0.57
6:BB:99:GLY:N	69:BB:301:HOH:O	2.37	0.57
10:BF:18:VAL:HA	10:BF:21:MET:HE2	1.86	0.57
10:BF:25:TYR:O	10:BF:29:ILE:HD13	2.05	0.57
10:BF:38:ARG:CZ	10:BF:99:ALA:HB2	2.34	0.57
33:CJ:53:PRO:O	33:CJ:74:PRO:HD3	2.04	0.57
36:CM:77:ILE:CD1	36:CM:108:ALA:HB1	2.35	0.57
56:DD:85:ALA:O	56:DD:86:GLU:C	2.48	0.57
43:DT:60:HIS:CG	43:DT:60:HIS:O	2.58	0.57
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.35	0.57
1:AA:1519:MA6:C9	1:AA:1520:C:O2'	2.53	0.57
2:BA:227:G:O2'	20:BP:63:GLN:CG	2.52	0.57
2:BA:667:G:N1	2:BA:740:U:O2	2.38	0.57
2:BA:811:C:N4	2:BA:812:G:C6	2.72	0.57
2:BA:1029:U:C4	2:BA:1031:C:O2	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1162:C:O2	2:BA:1175:G:N2	2.38	0.57
4:CA:668:A:C5	4:CA:670:A:C8	2.93	0.57
4:CA:742:A:O2'	69:CA:3388:HOH:O	2.18	0.57
4:CA:752:A:O3'	4:CA:753:A:H8	1.88	0.57
4:CA:1075:C:H2'	4:CA:1076:C:O4'	2.04	0.57
4:CA:1545:A:H2'	4:CA:1546:G:O4'	2.04	0.57
4:CA:2069:G:N2	4:CA:2443:C:C2	2.73	0.57
4:CA:2431:U:N3	4:CA:2434:A:OP2	2.31	0.57
4:CA:2454:G:N3	69:CA:3330:HOH:O	2.33	0.57
6:AB:187:VAL:HG23	6:AB:187:VAL:O	2.05	0.57
9:AE:141:ILE:HD13	9:AE:141:ILE:N	2.20	0.57
8:BD:161:LEU:HD22	8:BD:161:LEU:H	1.70	0.57
9:BE:101:GLU:OE1	9:BE:103:THR:N	2.26	0.57
10:BF:41:ASP:OD1	10:BF:58:HIS:NE2	2.36	0.57
27:CC:259:ASN:ND2	69:CC:303:HOH:O	2.37	0.57
29:CE:153:LEU:HB2	29:CE:171:ASP:HB2	1.85	0.57
32:CH:66:ASN:ND2	69:CH:202:HOH:O	2.38	0.57
36:CM:12:SER:OG	69:CM:301:HOH:O	2.17	0.57
42:CS:49:ILE:HG22	42:CS:53:PHE:C	2.30	0.57
1:AA:114:U:H2'	1:AA:115:G:C8	2.40	0.57
2:BA:299:G:C6	2:BA:300:A:C6	2.93	0.57
2:BA:676:A:H2'	2:BA:677:U:C6	2.39	0.57
3:DA:693:A:H2'	3:DA:694:U:H6	1.70	0.57
3:DA:826:U:OP1	69:DA:3221:HOH:O	2.18	0.57
3:DA:1042:G:C6	3:DA:1043:C:C4	2.93	0.57
3:DA:1268:A:C2	3:DA:2013:A:C4	2.93	0.57
69:DA:4692:HOH:O	41:DR:32:ARG:HD3	2.04	0.57
4:CA:1203:U:H5'	36:CM:3:LEU:HD23	1.87	0.57
4:CA:1231:U:H2'	4:CA:1232:G:C8	2.39	0.57
4:CA:1341:G:H5'	44:CU:61:LEU:HB3	1.87	0.57
5:DB:94:A:C2'	5:DB:95:U:H5'	2.35	0.57
15:BK:92:GLY:O	15:BK:94:GLU:N	2.38	0.57
28:CD:112:THR:O	28:CD:195:GLY:HA2	2.04	0.57
32:CH:79:THR:HA	32:CH:144:ASN:HB2	1.85	0.57
1:AA:71:A:O2'	1:AA:72:A:P	2.62	0.56
2:BA:246:A:H2'	69:BA:2020:HOH:O	2.03	0.56
2:BA:264:C:O2'	21:BQ:66:PRO:O	2.22	0.56
2:BA:645:G:O6	69:BA:1754:HOH:O	2.17	0.56
3:DA:1098:A:H3'	3:DA:1099:G:C8	2.39	0.56
3:DA:1492:G:N1	3:DA:1499:C:N3	2.53	0.56
3:DA:2189:U:C2	3:DA:2190:G:C8	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2334:U:H4'	69:DA:4094:HOH:O	2.04	0.56
3:DA:2887:A:N3	3:DA:2887:A:H2'	2.19	0.56
4:CA:2240:U:O5'	69:CA:3389:HOH:O	2.18	0.56
4:CA:2505:G:O6	4:CA:2576:G:C8	2.58	0.56
32:CH:11:ASN:OD1	32:CH:11:ASN:N	2.37	0.56
29:DE:44:ARG:NH2	69:DE:404:HOH:O	2.20	0.56
34:DK:7:LYS:O	34:DK:11:VAL:HG23	2.05	0.56
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.40	0.56
2:BA:9:G:OP2	9:BE:126:LYS:HE3	2.04	0.56
2:BA:1160:G:HO2'	2:BA:1161:C:P	2.28	0.56
3:DA:542:C:H2'	3:DA:543:G:H5"	1.87	0.56
3:DA:988:A:H5"	50:D0:11:SER:HB2	1.86	0.56
3:DA:1141:U:OP2	34:DK:65:THR:OG1	2.12	0.56
3:DA:1152:C:OP1	69:DA:3498:HOH:O	2.17	0.56
3:DA:1357:C:H2'	3:DA:1357:C:O2	2.04	0.56
3:DA:2326:C:H1'	3:DA:2327:A:OP1	2.05	0.56
4:CA:456:C:O2	44:CU:73:ARG:HD3	2.05	0.56
4:CA:1370:C:H2'	4:CA:1371:G:C8	2.41	0.56
4:CA:1973:G:C6	4:CA:1974:C:C4	2.94	0.56
16:AL:102:LEU:O	16:AL:104:CYS:N	2.39	0.56
12:BH:67:GLN:C	12:BH:69:LYS:H	2.11	0.56
18:BN:44:ALA:O	18:BN:46:LEU:N	2.36	0.56
36:DM:25:SER:N	69:DM:304:HOH:O	2.33	0.56
44:DU:61:LEU:C	44:DU:61:LEU:HD12	2.30	0.56
1:AA:721:G:H4'	1:AA:722:G:O5'	2.05	0.56
1:AA:923:A:O2'	1:AA:924:C:H5'	2.03	0.56
2:BA:572:A:OP1	69:BA:1758:HOH:O	2.18	0.56
2:BA:1124:G:C2	2:BA:1127:G:N2	2.73	0.56
2:BA:1126:U:O2	2:BA:1280:A:H5"	2.06	0.56
3:DA:787:C:OP1	69:DA:3500:HOH:O	2.18	0.56
3:DA:912:C:O2'	3:DA:913:U:H5'	2.05	0.56
3:DA:1287:A:N1	3:DA:1648:U:O2'	2.37	0.56
3:DA:2350:C:C2'	3:DA:2351:G:H5'	2.34	0.56
3:DA:2781:A:N6	63:DA:3054:PUT:H12	2.20	0.56
3:DA:2887:A:C5'	3:DA:2888:C:OP2	2.53	0.56
4:CA:370:G:O2'	4:CA:424:G:OP1	2.22	0.56
4:CA:536:G:N2	4:CA:558:U:O2	2.38	0.56
4:CA:666:A:H4'	36:CM:48:ARG:CD	2.35	0.56
4:CA:668:A:H3'	4:CA:669:G:H5"	1.86	0.56
4:CA:1392:A:N6	4:CA:1393:A:N1	2.52	0.56
4:CA:1606:C:H4'	4:CA:1607:C:H5'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:DB:53:A:C2	5:DB:54:G:C8	2.93	0.56
7:AC:55:ILE:C	7:AC:55:ILE:HD12	2.30	0.56
7:AC:63:SER:N	69:AC:301:HOH:O	2.24	0.56
10:AF:16:GLU:HB3	8:BD:189:SER:HA	1.88	0.56
6:BB:21:ARG:HA	6:BB:21:ARG:NH1	2.20	0.56
15:BK:16:VAL:HG11	15:BK:79:ILE:HG13	1.87	0.56
25:BU:11:PRO:O	25:BU:12:PHE:CD2	2.58	0.56
28:CD:60:VAL:HG13	28:CD:65:ALA:HB2	1.87	0.56
29:CE:52:VAL:HB	29:CE:74:LYS:HD3	1.87	0.56
42:CS:8:GLY:O	42:CS:10:LYS:HD3	2.06	0.56
56:DD:3:GLY:O	56:DD:4:LEU:HD13	2.04	0.56
32:DH:68:ARG:HG2	32:DH:108:VAL:CG1	2.36	0.56
41:DR:83:LYS:HE3	67:DR:204:EDO:H21	1.87	0.56
49:DZ:45:GLN:O	49:DZ:46:VAL:CB	2.52	0.56
1:AA:251:G:H4'	1:AA:252:U:O5'	2.05	0.56
1:AA:1164:G:N2	1:AA:1173:U:O2	2.38	0.56
2:BA:453:G:N2	2:BA:480:U:O2	2.38	0.56
2:BA:1279:G:H4'	2:BA:1280:A:OP1	2.06	0.56
3:DA:2744:G:H1'	69:DA:4060:HOH:O	2.05	0.56
4:CA:232:G:N1	4:CA:420:C:OP1	2.38	0.56
4:CA:813:U:OP2	36:CM:24:GLY:N	2.34	0.56
4:CA:942:G:H5"	36:CM:33:ARG:O	2.05	0.56
4:CA:1265:A:C8	4:CA:1267:U:C2	2.93	0.56
4:CA:1343:G:H1'	4:CA:1597:A:C4	2.41	0.56
4:CA:1812:U:O2	27:CC:43:ASN:HB2	2.05	0.56
4:CA:2624:G:H2'	4:CA:2625:G:O4'	2.05	0.56
4:CA:2637:U:H5"	28:CD:83:ARG:NH2	2.21	0.56
7:AC:150:LYS:HE3	7:AC:201:TRP:CD2	2.40	0.56
28:CD:129:THR:HG23	28:CD:140:HIS:O	2.06	0.56
57:D7:48:ASP:O	57:D7:53:SER:OG	2.22	0.56
1:AA:953:G:N3	1:AA:1229:A:C2	2.73	0.56
2:BA:16:A:H2'	2:BA:17:U:H5'	1.87	0.56
2:BA:718:A:C8	2:BA:719:C:C5	2.93	0.56
3:DA:2249:U:O4	69:DA:3420:HOH:O	2.17	0.56
3:DA:2498:OMC:O2	3:DA:2498:OMC:HM23	2.05	0.56
3:DA:2619:C:O2	56:DD:161:MET:HE1	2.06	0.56
4:CA:804:A:H2'	4:CA:806:C:C4	2.41	0.56
4:CA:1203:U:H3'	4:CA:1204:A:H5"	1.88	0.56
4:CA:1231:U:H2'	4:CA:1232:G:H8	1.70	0.56
6:AB:21:ARG:NH1	6:AB:21:ARG:HA	2.20	0.56
14:AJ:57:VAL:O	14:AJ:58:ASN:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AM:4:ILE:O	17:AM:6:GLY:O	2.23	0.56
6:BB:225:ARG:O	6:BB:226:SER:CB	2.54	0.56
11:BG:92:ARG:HB3	11:BG:93:PRO:HD2	1.86	0.56
27:DC:7:PRO:HB3	27:DC:13:ARG:HB2	1.87	0.56
36:DM:124:GLY:C	36:DM:125:LEU:HD12	2.30	0.56
1:AA:685:G:C2	1:AA:686:U:C4	2.93	0.56
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.23	0.56
2:BA:1210:C:H1'	2:BA:1214:C:N3	2.20	0.56
3:DA:657:U:O2'	3:DA:658:U:H5'	2.06	0.56
3:DA:677:A:OP1	66:DA:3050:PEG:O4	2.21	0.56
3:DA:694:U:O2	3:DA:695:G:C8	2.59	0.56
3:DA:1795:C:H2'	3:DA:1796:U:O4'	2.05	0.56
3:DA:1820:U:O2'	27:DC:157:ALA:O	2.15	0.56
3:DA:2655:G:O2'	3:DA:2664:G:O6	2.19	0.56
4:CA:64:A:H2'	4:CA:65:U:C6	2.40	0.56
4:CA:597:G:C2	4:CA:661:A:C2	2.94	0.56
4:CA:2019:A:N7	51:C1:5:ASN:ND2	2.47	0.56
4:CA:2209:G:C5	4:CA:2210:U:C4	2.94	0.56
13:AI:19:VAL:HA	13:AI:65:ILE:HG22	1.86	0.56
19:AO:63:ARG:HG2	19:AO:67:LEU:HD12	1.87	0.56
27:CC:204:LEU:HB3	27:CC:209:ALA:HB3	1.88	0.56
29:DE:12:LEU:HD23	29:DE:13:THR:N	2.20	0.56
38:DO:58:ASP:CG	38:DO:63:ARG:HH22	2.14	0.56
41:DR:40:LYS:HG3	41:DR:44:TYR:CE2	2.40	0.56
42:DS:80:ARG:N	69:DS:303:HOH:O	2.38	0.56
1:AA:89:U:O2'	1:AA:90:C:H5'	2.05	0.56
1:AA:232:G:C5	1:AA:233:C:C5	2.94	0.56
1:AA:1055:A:C2	1:AA:1206:G:C4	2.94	0.56
2:BA:577:G:C2	2:BA:578:C:C5	2.94	0.56
2:BA:1096:C:C2	2:BA:1097:C:C5	2.94	0.56
3:DA:226:A:H2'	3:DA:227:A:O5'	2.06	0.56
3:DA:578:G:OP2	69:DA:3502:HOH:O	2.18	0.56
3:DA:639:U:H2'	3:DA:640:C:C6	2.41	0.56
3:DA:1218:G:H22	67:DA:3060:EDO:H22	1.70	0.56
3:DA:1299:G:H3'	69:DA:3773:HOH:O	2.06	0.56
3:DA:2517:C:C2	3:DA:2542:A:N6	2.74	0.56
4:CA:380:G:N2	4:CA:395:U:O2	2.39	0.56
4:CA:443:A:OP1	29:CE:40:ARG:HB3	2.05	0.56
4:CA:1371:G:O2'	4:CA:1372:U:H5'	2.05	0.56
4:CA:1392:A:N6	44:CU:18:GLU:OE1	2.39	0.56
16:AL:21:VAL:O	16:AL:21:VAL:CG1	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AP:19:VAL:CG2	20:AP:36:VAL:HG12	2.36	0.56
9:BE:133:PRO:HA	9:BE:136:VAL:HG12	1.88	0.56
24:BT:7:ALA:HB1	24:BT:10:ARG:HB2	1.88	0.56
33:CJ:20:SER:CB	33:CJ:21:PRO:HD3	2.36	0.56
48:CY:53:LYS:O	48:CY:56:ARG:N	2.39	0.56
56:DD:101:PHE:HA	56:DD:104:VAL:HG13	1.88	0.56
46:DW:48:MET:O	46:DW:51:GLN:HG3	2.05	0.56
1:AA:255:G:H4'	21:AQ:19:LYS:HD2	1.87	0.56
2:BA:243:A:C8	69:BA:1782:HOH:O	2.58	0.56
2:BA:332:G:OP2	24:BT:5:LYS:HB3	2.06	0.56
2:BA:1090:U:O2'	2:BA:1091:U:H5'	2.05	0.56
2:BA:1162:C:C2	2:BA:1175:G:N2	2.73	0.56
2:BA:1279:G:OP1	14:BJ:9:ARG:NH2	2.39	0.56
2:BA:1512:U:P	69:BA:1726:HOH:O	2.64	0.56
3:DA:1167:C:OP2	69:DA:3495:HOH:O	2.17	0.56
3:DA:2511:U:O4	3:DA:2575:C:N3	2.39	0.56
4:CA:230:G:C2	4:CA:231:A:C8	2.93	0.56
4:CA:2131:U:H5'	4:CA:2132:U:H5"	1.88	0.56
11:AG:146:GLU:N	69:AG:204:HOH:O	2.39	0.56
20:AP:20:VAL:HG21	20:AP:32:PHE:CG	2.41	0.56
6:BB:96:TRP:O	6:BB:97:LEU:C	2.47	0.56
11:BG:99:LEU:HB3	11:BG:103:TRP:CH2	2.40	0.56
27:DC:116:GLN:N	27:DC:127:ASN:OD1	2.38	0.56
43:DT:1:MET:N	43:DT:109:ASP:OD1	2.39	0.56
1:AA:6:G:HO2'	1:AA:7:A:P	2.27	0.56
1:AA:104:G:O2'	1:AA:105:G:H5'	2.06	0.56
2:BA:109:A:C6	2:BA:327:A:C6	2.94	0.56
2:BA:637:C:H2'	2:BA:638:U:C6	2.41	0.56
2:BA:1465:A:O2'	69:BA:1757:HOH:O	2.17	0.56
3:DA:1766:G:O2'	3:DA:1767:G:H5'	2.06	0.56
4:CA:247:G:H4'	4:CA:386:G:C4	2.41	0.56
4:CA:519:U:H4'	43:CT:25:ARG:NH2	2.20	0.56
4:CA:1308:A:N6	4:CA:1309:G:C2	2.74	0.56
4:CA:2415:G:C6	4:CA:2416:C:C4	2.94	0.56
10:AF:73:GLU:O	10:AF:77:THR:OG1	2.23	0.56
18:AN:43:ASN:HA	18:AN:45:VAL:HG22	1.87	0.56
23:AS:29:LYS:HB3	23:AS:30:PRO:HD2	1.87	0.56
23:AS:37:ARG:O	23:AS:70:LYS:HD2	2.05	0.56
6:BB:19:GLN:HB3	6:BB:189:THR:OG1	2.06	0.56
21:BQ:14:SER:HB3	21:BQ:22:VAL:CG1	2.36	0.56
42:CS:78:ARG:HB3	42:CS:83:TYR:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DS:78:ARG:NH1	69:DS:304:HOH:O	2.39	0.56
2:BA:369:G:OP2	2:BA:388:G:N1	2.39	0.56
2:BA:496:A:C2	2:BA:497:G:C5	2.93	0.56
3:DA:588:U:H2'	3:DA:589:U:C6	2.41	0.56
3:DA:814:C:P	69:DA:3566:HOH:O	2.64	0.56
3:DA:1021:A:H3'	3:DA:1021:A:N3	2.22	0.56
3:DA:1105:U:H2'	3:DA:1106:G:C8	2.40	0.56
3:DA:1967:C:H2'	3:DA:1967:C:O2	2.05	0.56
4:CA:122:G:H2'	4:CA:123:G:O4'	2.06	0.56
4:CA:659:G:H4'	29:CE:95:LYS:HD3	1.88	0.56
4:CA:1011:G:C2	4:CA:1013:C:C2	2.94	0.56
4:CA:1341:G:OP2	4:CA:1394:U:O2'	2.15	0.56
7:AC:85:GLU:OE1	7:AC:88:ARG:NH1	2.39	0.56
17:AM:114:LYS:NZ	69:AM:201:HOH:O	2.39	0.56
20:AP:46:LYS:HD3	20:AP:47:GLU:H	1.71	0.56
6:BB:21:ARG:C	6:BB:23:TRP:N	2.64	0.56
9:BE:137:VAL:HG22	9:BE:137:VAL:O	2.05	0.56
29:CE:55:SER:OG	29:CE:56:GLY:N	2.36	0.56
39:CP:34:HIS:HA	39:CP:65:THR:O	2.05	0.56
52:C2:50:GLU:OE2	52:C2:52:LYS:HG3	2.06	0.56
37:DN:132:THR:HG22	37:DN:133:LYS:N	2.21	0.56
43:DT:47:VAL:HA	43:DT:50:VAL:HG23	1.87	0.56
55:D5:40:GLN:HB3	69:D5:208:HOH:O	2.05	0.56
1:AA:243:A:C5	1:AA:245:U:C4	2.94	0.55
1:AA:1239:A:OP1	11:AG:109:ARG:NH1	2.36	0.55
2:BA:495:A:C2	2:BA:496:A:C6	2.95	0.55
2:BA:706:A:C4'	15:BK:31:ILE:HD11	2.35	0.55
2:BA:858:G:O6	2:BA:869:G:H3'	2.06	0.55
3:DA:1246:A:H2'	3:DA:1247:A:O5'	2.06	0.55
3:DA:1360:G:H2'	3:DA:1361:G:H5'	1.88	0.55
3:DA:1424:G:H2'	3:DA:1425:G:O4'	2.07	0.55
3:DA:1711:A:O2'	3:DA:1712:U:H5'	2.06	0.55
4:CA:2550:G:N2	4:CA:2559:C:O2	2.38	0.55
6:BB:64:LYS:HA	6:BB:64:LYS:CE	2.36	0.55
9:BE:101:GLU:O	9:BE:102:GLY:C	2.49	0.55
21:BQ:7:THR:C	21:BQ:8:LEU:HD12	2.31	0.55
29:DE:108:ILE:HD11	29:DE:180:LEU:CB	2.35	0.55
30:DF:174:PHE:CD2	30:DF:176:PHE:CZ	2.92	0.55
33:DJ:98:GLY:C	33:DJ:99:LYS:HG2	2.30	0.55
35:DL:38:ILE:HD11	35:DL:112:PHE:HZ	1.69	0.55
57:D7:25:ILE:CG2	57:D7:26:GLY:N	2.68	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:35:G:H2'	1:AA:36:C:C6	2.40	0.55
1:AA:66:A:C6	1:AA:67:C:C5	2.94	0.55
1:AA:1497:G:H1'	1:AA:1518:MA6:H2	1.89	0.55
2:BA:475:C:H2'	2:BA:476:U:C6	2.41	0.55
2:BA:568:G:O6	26:BL:2:ALA:HB2	2.06	0.55
2:BA:716:A:N3	15:BK:120:GLY:HA2	2.21	0.55
2:BA:1034:G:H2'	2:BA:1035:A:C8	2.41	0.55
2:BA:1414:U:H4'	69:BA:1905:HOH:O	2.06	0.55
3:DA:820:A:H2'	3:DA:821:A:O4'	2.06	0.55
3:DA:2036:C:O2'	69:DA:3384:HOH:O	2.05	0.55
3:DA:2056:G:OP1	69:DA:3504:HOH:O	2.18	0.55
3:DA:2350:C:O2'	3:DA:2351:G:H5'	2.07	0.55
3:DA:2419:U:OP1	54:D4:40:LYS:NZ	2.36	0.55
4:CA:1627:G:C2	4:CA:1628:G:N7	2.74	0.55
4:CA:2509:G:N2	4:CA:2580:U:H1'	2.20	0.55
8:AD:60:LYS:NZ	8:AD:194:ASP:O	2.39	0.55
9:BE:81:LEU:CD1	9:BE:120:VAL:HG11	2.35	0.55
14:BJ:53:ILE:HD11	18:BN:85:ARG:CZ	2.36	0.55
19:BO:87:LEU:O	19:BO:88:ARG:CB	2.55	0.55
2:BA:299:G:C2'	2:BA:300:A:O5'	2.54	0.55
3:DA:20:C:O2'	3:DA:21:A:H5'	2.07	0.55
3:DA:1080:A:O2'	33:DJ:127:SER:HA	2.06	0.55
3:DA:1258:U:P	69:DA:3283:HOH:O	2.63	0.55
3:DA:1769:U:O2'	3:DA:1770:G:O5'	2.21	0.55
3:DA:2284:A:OP1	52:D2:3:GLY:O	2.23	0.55
4:CA:466:A:P	69:CA:3399:HOH:O	2.65	0.55
4:CA:1015:U:H2'	4:CA:1016:G:O4'	2.06	0.55
4:CA:1154:G:P	41:CR:57:ARG:HH11	2.29	0.55
4:CA:2053:G:N2	4:CA:2054:A:H1'	2.21	0.55
4:CA:2273:A:H2'	4:CA:2274:A:C8	2.41	0.55
4:CA:2852:G:H2'	4:CA:2853:C:O4'	2.07	0.55
28:CD:104:VAL:O	28:CD:105:LYS:HB3	2.05	0.55
29:CE:46:GLN:OE1	29:CE:87:ALA:N	2.39	0.55
45:CV:53:GLN:N	45:CV:54:PRO:HD3	2.22	0.55
54:C4:55:GLY:O	54:C4:56:LEU:HG	2.07	0.55
33:DJ:78:LEU:HD13	33:DJ:108:ILE:CG2	2.36	0.55
50:D0:1:ALA:O	50:D0:2:LYS:C	2.47	0.55
1:AA:1503:A:OP1	1:AA:1531:A:O2'	2.22	0.55
2:BA:230:G:H2'	2:BA:231:U:O4'	2.07	0.55
2:BA:609:A:O5'	2:BA:609:A:H8	1.89	0.55
2:BA:770:C:H2'	2:BA:771:G:H5'	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:946:A:H2'	2:BA:947:G:C8	2.41	0.55
3:DA:156:A:H2'	3:DA:157:C:O4'	2.07	0.55
3:DA:306:U:C2'	3:DA:307:G:H5'	2.37	0.55
3:DA:2334:U:H4'	3:DA:2335:A:OP2	2.06	0.55
4:CA:243:U:O5'	54:C4:7:ARG:NH2	2.39	0.55
4:CA:566:U:O2'	4:CA:809:G:OP2	2.21	0.55
4:CA:2060:A:O4'	4:CA:2502:G:H1'	2.07	0.55
4:CA:2134:A:N7	4:CA:2157:G:O2'	2.38	0.55
4:CA:2585:U:O2'	4:CA:2586:U:H5'	2.07	0.55
4:CA:2619:C:OP1	28:CD:157:LYS:NZ	2.38	0.55
4:CA:2675:A:H5"	4:CA:2676:C:OP2	2.06	0.55
4:CA:2823:A:H2'	4:CA:2824:C:H5'	1.88	0.55
69:CA:3897:HOH:O	34:CK:39:LYS:HE3	2.05	0.55
6:AB:130:THR:HG22	6:AB:132:LYS:H	1.71	0.55
7:AC:205:GLY:O	7:AC:206:GLU:CG	2.55	0.55
14:AJ:57:VAL:HG22	14:AJ:58:ASN:N	2.20	0.55
6:BB:141:LEU:O	6:BB:145:GLU:N	2.33	0.55
6:BB:143:LYS:O	6:BB:147:SER:OG	2.22	0.55
22:BR:34:THR:HG23	22:BR:36:SER:H	1.72	0.55
29:CE:151:GLY:HA3	29:CE:191:ASP:HB3	1.89	0.55
33:CJ:28:GLY:HA2	33:CJ:32:VAL:HB	1.88	0.55
33:CJ:53:PRO:O	33:CJ:74:PRO:CD	2.54	0.55
34:CK:77:HIS:HA	34:CK:83:GLY:O	2.07	0.55
30:DF:7:TYR:HA	30:DF:11:VAL:CG2	2.37	0.55
38:DO:63:ARG:NE	69:DO:203:HOH:O	2.20	0.55
51:D1:7:PRO:HA	69:D1:209:HOH:O	2.06	0.55
1:AA:1016:A:N6	1:AA:1017:U:HO2'	2.00	0.55
2:BA:218:U:H2'	2:BA:219:U:O4'	2.07	0.55
2:BA:935:A:C2	2:BA:936:C:C2	2.93	0.55
3:DA:818:G:O5'	3:DA:818:G:H8	1.89	0.55
3:DA:851:C:O2'	3:DA:852:U:H5'	2.07	0.55
3:DA:1063:G:N2	33:DJ:89:SER:HG	2.01	0.55
3:DA:1177:G:H2'	3:DA:1178:C:C6	2.41	0.55
3:DA:1510:G:H2'	3:DA:1511:G:O4'	2.06	0.55
3:DA:1680:U:O2'	3:DA:1763:G:N7	2.34	0.55
4:CA:187:G:O2'	4:CA:1365:A:N3	2.29	0.55
4:CA:660:C:H4'	29:CE:94:GLN:OE1	2.07	0.55
4:CA:1567:G:C5	27:CC:82:TYR:HD2	2.25	0.55
4:CA:2084:C:O2'	4:CA:2085:U:H5'	2.07	0.55
4:CA:2130:U:O2'	4:CA:2133:G:O2'	2.24	0.55
6:AB:16:PHE:O	6:AB:41:ILE:HD12	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AJ:65:TYR:HB3	18:AN:96:LEU:HD11	1.89	0.55
44:CU:8:LEU:O	49:CZ:29:ARG:NH1	2.40	0.55
48:CY:71:ARG:O	48:CY:73:ARG:N	2.40	0.55
56:DD:18:ASP:HA	61:DQ:202:PG4:H42	1.87	0.55
31:DG:72:ASN:O	31:DG:76:ILE:HG13	2.07	0.55
33:DJ:53:PRO:O	33:DJ:74:PRO:HD3	2.06	0.55
37:DN:2:LEU:HD13	69:DN:325:HOH:O	2.05	0.55
1:AA:1024:G:HO2'	1:AA:1025:U:P	2.28	0.55
2:BA:109:A:C4	2:BA:327:A:C2	2.94	0.55
3:DA:1825:U:P	69:DA:3496:HOH:O	2.65	0.55
3:DA:1844:C:O3'	27:DC:255:LYS:NZ	2.38	0.55
4:CA:2592:G:C5	4:CA:2593:U:C5	2.95	0.55
6:BB:20:THR:N	6:BB:38:VAL:HG23	2.22	0.55
13:BI:83:ILE:O	13:BI:87:LEU:N	2.39	0.55
25:BU:6:VAL:HG21	25:BU:19:PHE:HA	1.89	0.55
27:CC:12:ARG:HG3	27:CC:12:ARG:O	2.06	0.55
2:BA:577:G:N9	2:BA:816:A:C2	2.75	0.55
2:BA:880:C:OP2	26:BL:3:THR:HG21	2.06	0.55
3:DA:493:G:H2'	3:DA:494:G:O4'	2.07	0.55
3:DA:911:A:OP1	62:DA:3036:SPD:H51	2.07	0.55
3:DA:1106:G:C2	3:DA:1107:G:C8	2.94	0.55
3:DA:1327:A:C2'	3:DA:1328:A:H5'	2.36	0.55
3:DA:1551:A:OP2	69:DA:3511:HOH:O	2.18	0.55
3:DA:1644:C:H5"	3:DA:1644:C:H6	1.72	0.55
3:DA:2377:A:O2'	3:DA:2378:A:H5'	2.06	0.55
3:DA:2440:C:H1'	69:DA:3641:HOH:O	2.07	0.55
4:CA:377:G:C6	4:CA:378:C:C4	2.94	0.55
4:CA:2447:G:C8	4:CA:2500:U:H3'	2.42	0.55
8:AD:124:MET:O	8:AD:143:VAL:HA	2.07	0.55
9:BE:156:LYS:HD3	12:BH:71:VAL:HG13	1.89	0.55
33:CJ:20:SER:HB3	33:CJ:21:PRO:HD3	1.88	0.55
49:DZ:15:ASN:OD1	49:DZ:57:LEU:HD21	2.06	0.55
49:DZ:56:LEU:HA	49:DZ:59:GLU:HG2	1.89	0.55
54:D4:31:ILE:HG22	54:D4:34:LYS:HD2	1.88	0.55
1:AA:545:C:H5'	8:AD:69:GLU:HB2	1.88	0.55
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.07	0.55
2:BA:461:A:H2'	2:BA:462:G:O4'	2.07	0.55
2:BA:764:C:H2'	2:BA:765:G:H5'	1.89	0.55
3:DA:1693:U:H1'	27:DC:13:ARG:NH1	2.22	0.55
3:DA:1736:U:H2'	3:DA:1737:G:O4'	2.06	0.55
3:DA:2297:A:C2	3:DA:2298:A:C8	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1496:A:N3	4:CA:1577:C:O2'	2.40	0.55
4:CA:1792:G:O2'	4:CA:1793:C:H5'	2.07	0.55
4:CA:1843:C:H4'	27:CC:250:GLN:CD	2.32	0.55
4:CA:2201:G:O6	4:CA:2223:G:C6	2.60	0.55
10:AF:5:GLU:O	10:AF:6:ILE:CG1	2.55	0.55
14:AJ:41:PRO:O	14:AJ:71:LEU:O	2.24	0.55
17:AM:8:ASN:OD1	17:AM:9:ILE:N	2.40	0.55
17:AM:17:ILE:O	17:AM:20:THR:OG1	2.19	0.55
18:AN:25:GLU:HG3	18:AN:26:LEU:N	2.22	0.55
13:BI:16:ALA:O	13:BI:67:VAL:HA	2.06	0.55
18:BN:20:PHE:O	18:BN:21:ALA:HB3	2.06	0.55
50:C0:15:ARG:O	50:C0:20:LYS:NZ	2.24	0.55
1:AA:411:A:P	8:AD:26:ARG:NH2	2.78	0.55
1:AA:863:U:O2	1:AA:867:G:C2	2.60	0.55
1:AA:1125:U:H4'	14:AJ:7:ARG:NH2	2.21	0.55
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.42	0.55
1:AA:1464:U:P	40:DQ:108:ARG:HH12	2.29	0.55
2:BA:552:U:N3	2:BA:553:A:N7	2.55	0.55
2:BA:618:C:H3'	2:BA:619:U:H5"	1.89	0.55
3:DA:784:G:H5'	3:DA:785:G:OP1	2.07	0.55
3:DA:1014:A:C5	3:DA:1015:U:C5	2.95	0.55
3:DA:1478:G:C2'	3:DA:1479:G:H5'	2.37	0.55
3:DA:1851:U:C5	3:DA:1852:U:C5	2.95	0.55
3:DA:2015:A:H8	3:DA:2015:A:O5'	1.90	0.55
3:DA:2060:A:O2'	69:DA:3507:HOH:O	2.18	0.55
4:CA:335:C:O2	45:CV:67:SER:O	2.25	0.55
4:CA:1034:G:O4'	55:C5:21:LYS:NZ	2.37	0.55
4:CA:2353:G:H2'	4:CA:2354:C:O4'	2.06	0.55
7:AC:150:LYS:HE3	7:AC:201:TRP:CE2	2.42	0.55
11:AG:69:VAL:HG21	11:AG:104:ILE:HD11	1.89	0.55
6:BB:131:LYS:HE2	6:BB:131:LYS:HA	1.87	0.55
8:BD:203:LEU:HD12	8:BD:203:LEU:O	2.07	0.55
21:BQ:15:ASP:OD2	21:BQ:54:GLY:HA2	2.06	0.55
22:BR:43:ARG:HG3	22:BR:44:ILE:HD13	1.88	0.55
25:BU:9:ASN:HB2	25:BU:12:PHE:CD2	2.42	0.55
45:CV:60:LYS:HA	45:CV:60:LYS:HE3	1.89	0.55
31:DG:95:ALA:HA	31:DG:103:ASN:O	2.07	0.55
46:DW:10:LYS:NZ	46:DW:41:GLU:OE2	2.40	0.55
49:DZ:18:LEU:C	49:DZ:18:LEU:CD2	2.79	0.55
1:AA:760:G:N7	1:AA:761:G:N7	2.55	0.55
1:AA:872:A:OP1	1:AA:872:A:H3'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1028:C:N3	1:AA:1033:G:N1	2.54	0.55
2:BA:1113:C:H4'	7:BC:14:ILE:HD12	1.89	0.55
2:BA:1259:C:O2'	2:BA:1283:U:O2	2.22	0.55
2:BA:1521:C:H2'	2:BA:1522:U:O5'	2.07	0.55
3:DA:528:A:OP2	34:DK:116:ARG:NH2	2.39	0.55
3:DA:854:C:H2'	3:DA:855:G:H5'	1.89	0.55
3:DA:1009:A:OP2	34:DK:39:LYS:NZ	2.40	0.55
3:DA:1585:C:C2'	3:DA:1586:A:H5'	2.37	0.55
3:DA:1805:A:H1'	27:DC:49:THR:O	2.07	0.55
3:DA:2324:U:H3'	3:DA:2325:G:H5"	1.87	0.55
3:DA:2552:OMU:O3'	3:DA:2552:OMU:HM22	2.07	0.55
3:DA:2595:G:N2	3:DA:2597:G:H3'	2.21	0.55
4:CA:520:G:OP1	43:CT:25:ARG:HD3	2.07	0.55
4:CA:812:C:H2'	4:CA:813:U:H5'	1.89	0.55
4:CA:1029:A:H5"	37:CN:127:LYS:NZ	2.22	0.55
4:CA:1577:C:H2'	4:CA:1578:U:C1'	2.37	0.55
13:AI:30:ILE:HD11	13:AI:38:TYR:CD1	2.42	0.55
24:AT:3:ASN:O	24:AT:5:LYS:N	2.40	0.55
6:BB:15:HIS:C	6:BB:15:HIS:ND1	2.65	0.55
6:BB:68:LEU:HA	6:BB:90:PHE:O	2.06	0.55
25:BU:12:PHE:CD1	25:BU:15:ALA:N	2.75	0.55
27:CC:209:ALA:HA	27:CC:212:TRP:CE2	2.41	0.55
30:CF:37:MET:HG2	30:CF:151:LEU:HB3	1.88	0.55
33:CJ:5:GLN:NE2	33:CJ:60:VAL:O	2.39	0.55
1:AA:558:G:C4	1:AA:559:A:C2	2.94	0.54
1:AA:1197:A:OP1	69:AA:1741:HOH:O	2.18	0.54
2:BA:947:G:N2	2:BA:1235:U:O2	2.40	0.54
2:BA:1101:A:H4'	2:BA:1102:A:O5'	2.06	0.54
3:DA:372:G:H5"	48:DY:60:LYS:HD3	1.89	0.54
3:DA:980:A:N7	69:DA:3746:HOH:O	2.33	0.54
3:DA:2048:G:C2'	3:DA:2049:G:O5'	2.54	0.54
3:DA:2798:U:H6	3:DA:2798:U:H5'	1.72	0.54
3:DA:2886:A:N6	51:D1:26:SER:OG	2.32	0.54
4:CA:197:A:C8	4:CA:2430:A:C8	2.95	0.54
4:CA:414:C:H4'	4:CA:1879:C:O2	2.07	0.54
4:CA:1358:G:O2'	4:CA:1359:A:H5'	2.06	0.54
4:CA:1458:U:H5"	4:CA:1459:G:O4'	2.07	0.54
4:CA:2834:G:H2'	4:CA:2879:A:N6	2.22	0.54
9:BE:11:LEU:O	9:BE:40:GLY:O	2.25	0.54
11:BG:47:LEU:HB3	11:BG:58:GLU:OE2	2.07	0.54
15:BK:27:PHE:CZ	15:BK:89:PRO:HG2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BL:24:LEU:HD22	26:BL:59:ASN:ND2	2.23	0.54
27:CC:6:LYS:O	27:CC:12:ARG:O	2.25	0.54
44:DU:5:GLU:O	44:DU:9:LYS:HG3	2.08	0.54
57:D7:13:VAL:HG23	57:D7:38:ASP:CB	2.37	0.54
1:AA:1012:A:N6	1:AA:1013:G:C6	2.75	0.54
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.37	0.54
2:BA:1108:G:O6	69:BA:1707:HOH:O	2.18	0.54
2:BA:1144:G:C2	2:BA:1145:A:C2	2.95	0.54
3:DA:409:G:O2'	3:DA:410:G:H5'	2.07	0.54
3:DA:449:A:OP2	69:DA:3503:HOH:O	2.18	0.54
3:DA:728:G:H3'	3:DA:729:G:H5'	1.88	0.54
3:DA:1464:G:H2'	3:DA:1465:G:C8	2.42	0.54
3:DA:2503:2MA:O3'	69:DA:3512:HOH:O	2.18	0.54
4:CA:12:U:O2	4:CA:12:U:H2'	2.06	0.54
4:CA:180:G:N2	69:CA:3485:HOH:O	2.40	0.54
4:CA:1187:G:OP1	69:CA:3393:HOH:O	2.18	0.54
4:CA:1398:C:H5'	44:CU:59:ASN:ND2	2.22	0.54
4:CA:2199:A:N6	4:CA:2225:A:C5	2.75	0.54
11:AG:47:LEU:O	11:AG:51:ALA:N	2.32	0.54
14:AJ:32:THR:HG23	14:AJ:83:THR:OG1	2.07	0.54
6:BB:19:GLN:C	6:BB:38:VAL:HG23	2.32	0.54
6:BB:50:PHE:CD1	6:BB:50:PHE:C	2.85	0.54
7:BC:172:ARG:HG2	7:BC:174:PRO:HD3	1.89	0.54
34:CK:110:PRO:O	34:CK:115:GLY:HA3	2.07	0.54
45:CV:3:LYS:NZ	69:CV:203:HOH:O	2.39	0.54
33:DJ:79:LEU:HD13	33:DJ:135:MET:SD	2.47	0.54
42:DS:58:VAL:HG13	42:DS:102:SER:HB2	1.87	0.54
1:AA:354:G:C2'	1:AA:355:C:H5'	2.38	0.54
1:AA:1046:A:H2'	1:AA:1047:G:H5'	1.88	0.54
2:BA:2:A:H5"	2:BA:3:A:OP2	2.06	0.54
2:BA:132:C:H5'	2:BA:262:A:O2'	2.07	0.54
2:BA:600:A:C2	2:BA:639:G:C2	2.96	0.54
2:BA:764:C:N4	2:BA:765:G:C6	2.75	0.54
2:BA:1520:C:H6	2:BA:1520:C:H5"	1.73	0.54
3:DA:847:U:OP1	69:DA:3509:HOH:O	2.18	0.54
3:DA:965:C:P	69:DA:3459:HOH:O	2.65	0.54
3:DA:986:C:C2'	3:DA:987:C:H5'	2.38	0.54
3:DA:1812:U:H2'	3:DA:1813:G:C8	2.41	0.54
3:DA:1854:A:H2'	3:DA:1855:U:H5'	1.89	0.54
4:CA:388:G:N7	4:CA:390:U:H2'	2.23	0.54
4:CA:1125:G:C6	4:CA:1126:A:N6	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1367:A:H5”	69:CA:3238:HOH:O	2.06	0.54
4:CA:2495:G:O2’	37:CN:82:MET:HE3	2.08	0.54
7:BC:117:ALA:HB2	7:BC:200:VAL:CG1	2.37	0.54
9:BE:66:LYS:O	9:BE:70:ASN:ND2	2.40	0.54
9:BE:106:ILE:O	9:BE:106:ILE:HG13	2.07	0.54
32:CH:71:LYS:HB3	32:CH:108:VAL:HG21	1.90	0.54
27:DC:140:VAL:HG23	27:DC:190:THR:C	2.32	0.54
33:DJ:88:GLY:HA2	33:DJ:135:MET:HE3	1.89	0.54
36:DM:19:LEU:HD23	36:DM:27:LEU:HB3	1.90	0.54
43:DT:12:SER:HA	69:DT:314:HOH:O	2.06	0.54
1:AA:254:G:OP1	21:AQ:70:THR:HG22	2.07	0.54
1:AA:340:U:H2’	1:AA:341:C:H6	1.72	0.54
1:AA:469:C:H2’	1:AA:470:C:O4’	2.08	0.54
1:AA:622:A:H2’	1:AA:623:C:H5’	1.89	0.54
1:AA:760:G:N7	1:AA:761:G:C8	2.75	0.54
1:AA:820:U:H4’	1:AA:821:G:OP2	2.06	0.54
1:AA:1152:A:H5”	14:AJ:15:HIS:CD2	2.42	0.54
2:BA:49:U:O4	2:BA:365:U:H5	1.89	0.54
2:BA:642:A:C4	12:BH:106:THR:O	2.60	0.54
3:DA:136:G:H1	3:DA:143:C:N4	2.06	0.54
3:DA:576:U:H2’	3:DA:577:G:C8	2.43	0.54
3:DA:686:U:H2’	3:DA:788:A:C2	2.42	0.54
3:DA:1592:C:H2’	3:DA:1593:A:O4’	2.07	0.54
3:DA:2050:C:C2’	3:DA:2051:A:O5’	2.56	0.54
3:DA:2706:A:H3’	69:DA:3548:HOH:O	2.06	0.54
4:CA:246:C:H2’	4:CA:247:G:H5’	1.90	0.54
4:CA:514:A:C2	4:CA:582:A:O4’	2.61	0.54
4:CA:1250:G:H4’	41:CR:5:ARG:HD2	1.89	0.54
4:CA:2415:G:C2	4:CA:2416:C:C2	2.96	0.54
6:AB:186:ILE:HD11	6:AB:204:ASP:HB3	1.88	0.54
14:AJ:73:LEU:O	14:AJ:74:VAL:CB	2.55	0.54
7:BC:124:LEU:C	7:BC:126:ARG:H	2.15	0.54
8:BD:166:GLU:O	8:BD:167:LYS:HB2	2.07	0.54
15:BK:31:ILE:HG22	15:BK:46:THR:CG2	2.38	0.54
15:BK:112:ASP:OD1	15:BK:114:THR:HG23	2.07	0.54
33:CJ:13:ALA:HB2	33:CJ:53:PRO:HG3	1.88	0.54
38:CO:47:VAL:O	38:CO:47:VAL:HG12	2.07	0.54
38:CO:101:GLY:N	69:CO:202:HOH:O	2.40	0.54
44:CU:18:GLU:O	44:CU:22:THR:OG1	2.26	0.54
32:DH:131:PHE:CE1	32:DH:141:VAL:HG23	2.42	0.54
36:DM:7:SER:N	69:DM:308:HOH:O	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DS:79:ARG:HG2	69:DS:309:HOH:O	2.08	0.54
57:D7:46:THR:O	57:D7:48:ASP:N	2.40	0.54
1:AA:373:A:H2'	1:AA:374:A:H8	1.71	0.54
1:AA:555:U:H2'	1:AA:556:C:C6	2.43	0.54
1:AA:725:G:C2	1:AA:726:C:C6	2.94	0.54
3:DA:819:A:N3	3:DA:1189:A:C2	2.75	0.54
3:DA:1812:U:H2'	3:DA:1813:G:H8	1.72	0.54
4:CA:413:C:H4'	4:CA:1880:U:H4'	1.89	0.54
4:CA:450:G:H2'	4:CA:451:U:H5"	1.89	0.54
4:CA:1270:C:O2'	4:CA:1648:U:OP2	2.25	0.54
4:CA:1827:U:O2'	4:CA:1828:G:O4'	2.25	0.54
4:CA:1851:U:H2'	4:CA:1852:U:O4'	2.08	0.54
4:CA:1881:C:H2'	4:CA:1882:U:O4'	2.07	0.54
7:AC:77:ILE:HA	7:AC:84:VAL:CG2	2.37	0.54
6:BB:73:LYS:C	6:BB:75:ALA:H	2.14	0.54
42:CS:41:ILE:HD12	42:CS:54:VAL:HG11	1.89	0.54
1:AA:262:A:C6	1:AA:263:A:C6	2.94	0.54
1:AA:720:C:OP2	1:AA:721:G:O2'	2.22	0.54
1:AA:1016:A:C6	1:AA:1017:U:O2'	2.60	0.54
2:BA:436:C:C2	2:BA:437:U:C5	2.94	0.54
2:BA:577:G:C8	2:BA:816:A:N1	2.76	0.54
2:BA:1004:A:H2'	2:BA:1005:A:O4'	2.08	0.54
2:BA:1074:G:H4'	6:BB:102:THR:O	2.07	0.54
2:BA:1092:A:N7	2:BA:1093:A:N6	2.56	0.54
2:BA:1167:A:N7	2:BA:1169:A:C6	2.75	0.54
3:DA:1018:U:O3'	3:DA:1120:G:N2	2.40	0.54
3:DA:2732:G:H3'	3:DA:2733:A:O4'	2.08	0.54
69:DA:4478:HOH:O	36:DM:18:ARG:HA	2.07	0.54
4:CA:769:U:C4	4:CA:770:G:N7	2.76	0.54
10:AF:76:THR:O	10:AF:79:ARG:N	2.38	0.54
18:AN:61:ARG:NH1	69:AN:203:HOH:O	2.40	0.54
6:BB:86:SER:OG	6:BB:87:CYS:N	2.41	0.54
6:BB:95:ARG:H	6:BB:95:ARG:NE	2.06	0.54
9:BE:155:ALA:HB1	12:BH:66:PHE:CE2	2.43	0.54
1:AA:176:C:C2'	1:AA:177:G:O5'	2.56	0.54
1:AA:923:A:OP1	9:AE:26:LYS:HE2	2.08	0.54
2:BA:532:A:N3	2:BA:532:A:H2'	2.22	0.54
2:BA:692:U:H1'	2:BA:695:A:N7	2.23	0.54
2:BA:899:C:OP1	2:BA:899:C:H6	1.90	0.54
2:BA:1415:G:OP1	69:BA:1756:HOH:O	2.17	0.54
3:DA:215:G:O3'	3:DA:216:A:H4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:286:U:H2'	3:DA:287:G:O4'	2.07	0.54
3:DA:877:A:H8	3:DA:877:A:OP2	1.91	0.54
3:DA:1670:C:C5	3:DA:1671:U:C5	2.96	0.54
3:DA:2286:G:OP2	52:D2:5:ARG:NH2	2.41	0.54
3:DA:2364:C:H2'	3:DA:2365:G:H5'	1.90	0.54
3:DA:2394:C:C2'	3:DA:2395:C:H5'	2.38	0.54
3:DA:2885:G:H4'	3:DA:2886:A:O5'	2.08	0.54
4:CA:690:G:H2'	4:CA:691:C:O4'	2.07	0.54
4:CA:1248:G:N3	41:CR:2:ARG:HD2	2.23	0.54
4:CA:1494:A:H2'	4:CA:1495:A:C8	2.43	0.54
4:CA:2689:U:H4'	4:CA:2690:U:OP2	2.08	0.54
10:AF:44:ARG:NH2	69:AF:201:HOH:O	2.38	0.54
17:AM:3:ARG:O	17:AM:4:ILE:HB	2.07	0.54
10:BF:72:ASP:O	10:BF:76:THR:HG23	2.08	0.54
13:BI:12:ARG:HD3	13:BI:107:ASP:HB3	1.89	0.54
26:BL:84:GLY:HA2	26:BL:95:TYR:HA	1.88	0.54
34:CK:81:ILE:HG12	34:CK:82:GLY:N	2.21	0.54
36:CM:82:LEU:O	36:CM:85:VAL:HG13	2.08	0.54
29:DE:29:HIS:HB2	69:DM:308:HOH:O	2.08	0.54
31:DG:126:THR:HG22	31:DG:128:THR:H	1.72	0.54
32:DH:27:ARG:HG3	32:DH:28:ASN:N	2.22	0.54
1:AA:232:G:C2'	1:AA:233:C:H5'	2.38	0.54
1:AA:857:C:N4	1:AA:858:G:C6	2.76	0.54
1:AA:1033:G:H2'	1:AA:1034:G:C8	2.43	0.54
2:BA:94:G:H4'	2:BA:95:C:OP1	2.08	0.54
2:BA:207:C:HO2'	2:BA:213:G:N2	2.05	0.54
2:BA:764:C:C2'	2:BA:765:G:H5'	2.37	0.54
2:BA:1066:C:N4	2:BA:1067:A:N6	2.55	0.54
2:BA:1072:G:H2'	2:BA:1073:U:C6	2.43	0.54
3:DA:163:C:H2'	3:DA:164:C:C6	2.43	0.54
3:DA:250:G:OP2	54:D4:12:ARG:NH1	2.41	0.54
3:DA:745:1MG:P	69:DA:3490:HOH:O	2.65	0.54
3:DA:993:G:C2'	3:DA:994:C:H5'	2.38	0.54
3:DA:2135:A:C8	3:DA:2136:G:C8	2.96	0.54
3:DA:2251:OMG:H5'	69:DA:3369:HOH:O	2.07	0.54
3:DA:2327:A:C5'	69:DA:3715:HOH:O	2.54	0.54
3:DA:2794:C:H2'	3:DA:2795:C:H6	1.73	0.54
4:CA:832:U:OP1	36:CM:39:LYS:N	2.37	0.54
4:CA:2201:G:H2'	4:CA:2202:U:H6	1.73	0.54
4:CA:2230:G:O5'	69:CA:3397:HOH:O	2.19	0.54
4:CA:2235:G:H2'	4:CA:2236:U:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AJ:28:THR:O	14:AJ:28:THR:HG22	2.07	0.54
9:BE:24:THR:HA	9:BE:29:ARG:HA	1.90	0.54
11:BG:95:ARG:CZ	11:BG:99:LEU:HD21	2.38	0.54
13:BI:12:ARG:NH1	13:BI:107:ASP:OD1	2.41	0.54
17:BM:71:ARG:CZ	30:CF:112:ASP:OD1	2.55	0.54
29:CE:151:GLY:O	29:CE:195:GLN:NE2	2.41	0.54
41:CR:16:ILE:HG23	41:CR:38:VAL:HG21	1.90	0.54
53:C3:10:LEU:HD11	53:C3:14:ARG:NE	2.23	0.54
30:DF:100:GLU:O	30:DF:101:ARG:C	2.51	0.54
31:DG:93:TYR:O	31:DG:94:ARG:HD3	2.07	0.54
1:AA:1124:G:O2'	1:AA:1145:A:N6	2.41	0.54
2:BA:511:C:O2'	2:BA:512:U:OP2	2.18	0.54
2:BA:1263:C:H2'	2:BA:1264:U:N1	2.23	0.54
3:DA:12:U:O2	3:DA:12:U:H2'	2.08	0.54
3:DA:1061:U:O2'	3:DA:1062:G:H5"	2.07	0.54
3:DA:1066:U:H3'	3:DA:1067:A:C5'	2.38	0.54
3:DA:1385:A:H1'	3:DA:1386:C:C6	2.42	0.54
3:DA:1590:A:H2'	3:DA:1591:A:H8	1.72	0.54
3:DA:2114:A:OP2	3:DA:2115:G:N1	2.41	0.54
3:DA:2638:G:O2'	3:DA:2775:G:N2	2.41	0.54
4:CA:202:U:H2'	4:CA:203:A:C8	2.43	0.54
4:CA:1033:U:O2'	4:CA:2750:A:N6	2.40	0.54
4:CA:1366:A:C4	4:CA:1367:A:C8	2.96	0.54
4:CA:2846:G:OP2	40:CQ:51:ASN:HB2	2.08	0.54
13:AI:16:ALA:C	13:AI:67:VAL:HG23	2.32	0.54
21:AQ:12:VAL:O	21:AQ:13:VAL:HG12	2.08	0.54
23:AS:36:ARG:NH2	23:AS:75:ALA:O	2.40	0.54
24:AT:3:ASN:O	24:AT:4:ILE:C	2.51	0.54
6:BB:151:ILE:HD11	6:BB:154:MET:SD	2.48	0.54
26:BL:24:LEU:HD22	26:BL:59:ASN:HD22	1.72	0.54
25:BU:12:PHE:CE1	25:BU:14:VAL:HG12	2.42	0.54
33:CJ:105:LEU:HD22	33:CJ:129:GLU:HG3	1.90	0.54
34:CK:36:LEU:HG	34:CK:54:ILE:HD12	1.89	0.54
43:CT:48:LYS:C	43:CT:50:VAL:H	2.14	0.54
43:CT:77:ASP:HB2	43:CT:102:HIS:HB2	1.89	0.54
31:DG:21:GLN:NE2	31:DG:37:ASN:O	2.41	0.54
40:DQ:38:ARG:NE	69:DQ:306:HOH:O	2.41	0.54
44:DU:69:ARG:NH2	69:DU:204:HOH:O	2.40	0.54
55:D5:27:TYR:CD1	55:D5:39:VAL:CG1	2.91	0.54
1:AA:778:G:OP2	1:AA:778:G:H8	1.91	0.54
1:AA:880:C:C2'	1:AA:881:G:H5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.08	0.54
1:AA:1486:G:OP1	69:AA:1736:HOH:O	2.18	0.54
2:BA:16:A:C2'	2:BA:17:U:H5'	2.38	0.54
2:BA:528:C:O2	2:BA:528:C:H2'	2.08	0.54
2:BA:1429:A:H5'	69:BA:1995:HOH:O	2.07	0.54
3:DA:159:G:O2'	3:DA:167:A:N6	2.41	0.54
3:DA:1746:A:H2'	3:DA:1747:U:C6	2.43	0.54
3:DA:1851:U:C4	3:DA:1852:U:C4	2.95	0.54
3:DA:1868:C:H2'	3:DA:1869:G:O4'	2.08	0.54
3:DA:2430[B]:A:OP2	3:DA:2430[B]:A:H4'	2.07	0.54
4:CA:219:A:N6	69:CA:3361:HOH:O	2.12	0.54
4:CA:334:C:OP1	4:CA:335:C:N4	2.40	0.54
4:CA:684:G:OP1	53:C3:16:HIS:CE1	2.60	0.54
4:CA:781:A:H2'	4:CA:1777:U:O2'	2.08	0.54
4:CA:1652:A:C2	4:CA:2006:C:O2	2.61	0.54
4:CA:1873:G:C2	4:CA:1874:C:N3	2.76	0.54
4:CA:2332:C:H4'	4:CA:2336:A:N6	2.23	0.54
10:AF:46:GLN:HB2	10:AF:56:LYS:HE2	1.89	0.54
10:AF:53:LYS:O	10:AF:54:LEU:HB2	2.09	0.54
15:AK:83:GLU:OE2	15:AK:109:ASN:ND2	2.41	0.54
7:BC:6:HIS:ND1	18:BN:89:MET:HB3	2.23	0.54
10:BF:40:GLU:CD	10:BF:99:ALA:HB3	2.32	0.54
15:BK:51:GLY:O	15:BK:52:PHE:HB2	2.07	0.54
21:BQ:26:GLU:HA	21:BQ:40:ARG:O	2.08	0.54
29:CE:98:LYS:NZ	69:CE:301:HOH:O	2.41	0.54
45:CV:5:ARG:O	45:CV:6:ARG:O	2.26	0.54
53:C3:24:THR:HG1	53:C3:27:GLY:H	1.55	0.54
56:DD:33:ARG:NH1	56:DD:53:GLY:O	2.40	0.54
46:DW:30:ILE:HD11	46:DW:63:ILE:HD12	1.90	0.54
47:DX:39[B]:ARG:O	47:DX:55:HIS:ND1	2.41	0.54
54:D4:30:HIS:CG	69:D4:120:HOH:O	2.61	0.54
1:AA:1065:U:O4	1:AA:1190:G:H5'	2.08	0.53
2:BA:404:G:O6	8:BD:2:ALA:N	2.41	0.53
2:BA:1226:C:C4	17:BM:103:LYS:HB2	2.43	0.53
2:BA:1499:A:O2'	2:BA:1500:A:H5'	2.09	0.53
3:DA:976:G:C2	3:DA:977:G:C8	2.96	0.53
3:DA:1452:G:O2'	3:DA:1453:A:OP2	2.25	0.53
3:DA:2472:G:H2'	3:DA:2475:C:H42	1.73	0.53
4:CA:26:G:O2'	4:CA:27:G:H5'	2.07	0.53
4:CA:484:C:OP1	45:CV:47:PRO:HG3	2.08	0.53
4:CA:528:A:H2	4:CA:2043:C:H4'	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:971:G:H2'	4:CA:972:A:O4'	2.08	0.53
4:CA:1638:C:H5"	4:CA:2710:C:O2'	2.07	0.53
4:CA:2491:U:H5'	4:CA:2570:G:H5"	1.90	0.53
6:AB:146:ASN:O	6:AB:148:LEU:N	2.38	0.53
9:AE:106:ILE:HD12	9:AE:106:ILE:O	2.09	0.53
9:AE:107:ALA:HB2	9:AE:125:ALA:HB3	1.90	0.53
6:BB:163:VAL:HB	6:BB:185:ALA:HB2	1.90	0.53
6:BB:167:ASP:HB3	6:BB:191:SER:HB3	1.90	0.53
33:CJ:8:VAL:O	33:CJ:56:VAL:O	2.26	0.53
33:CJ:27:LEU:HD22	33:CJ:37:PHE:CE2	2.44	0.53
37:CN:66:ARG:HB2	37:CN:101:VAL:O	2.07	0.53
30:DF:108:PRO:HD3	57:D7:52:LYS:HE3	1.90	0.53
32:DH:3:VAL:HB	32:DH:37:VAL:O	2.08	0.53
34:DK:31:GLU:HG3	34:DK:142:ILE:HG13	1.89	0.53
34:DK:73:VAL:HG11	34:DK:75:TYR:CZ	2.43	0.53
54:D4:14:LYS:HD3	54:D4:22:LYS:HE2	1.90	0.53
1:AA:824:G:H1	1:AA:876:C:H42	1.54	0.53
1:AA:1250:A:H2'	1:AA:1251:A:O4'	2.07	0.53
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.42	0.53
1:AA:1347:G:N2	1:AA:1374:A:OP2	2.38	0.53
2:BA:18:C:H3'	69:BA:1781:HOH:O	2.08	0.53
2:BA:405:U:O4	8:BD:2:ALA:N	2.41	0.53
2:BA:1238:A:H2'	2:BA:1241:G:H1'	1.89	0.53
3:DA:481:G:C4	3:DA:507:A:C2	2.97	0.53
3:DA:523:C:O3'	3:DA:539:G:N2	2.42	0.53
3:DA:1231:U:O2	67:DA:3060:EDO:H22	2.09	0.53
3:DA:1235:G:OP2	63:DA:3037:PUT:H21	2.09	0.53
3:DA:1748:C:H2'	3:DA:1749:A:O4'	2.09	0.53
3:DA:2217:G:O2'	3:DA:2218:G:H5'	2.08	0.53
4:CA:120:U:O4	4:CA:177:G:C8	2.61	0.53
4:CA:206:U:H2'	4:CA:207:A:H8	1.72	0.53
4:CA:1723:G:H2'	4:CA:1724:G:O4'	2.08	0.53
4:CA:1799:G:N2	4:CA:1819:A:OP2	2.39	0.53
4:CA:2104:C:H2'	4:CA:2105:U:O4'	2.09	0.53
4:CA:2681:C:O4'	4:CA:2682:A:N7	2.42	0.53
5:CB:30:C:OP1	39:CP:3:LYS:NZ	2.39	0.53
5:CB:104:A:C6	5:CB:105:G:H1'	2.43	0.53
13:AI:56:ASP:O	13:AI:60:LYS:NZ	2.31	0.53
19:AO:70:LEU:HD21	19:AO:77:ARG:HB2	1.90	0.53
6:BB:58:ASN:HB2	6:BB:220:THR:HG23	1.89	0.53
10:BF:88:MET:HE3	22:BR:64:TYR:CD2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:CC:120:ASP:OD1	27:CC:120:ASP:N	2.41	0.53
30:DF:125:GLY:O	30:DF:157:THR:HG21	2.08	0.53
30:DF:134:GLN:HG2	30:DF:140:ILE:HG12	1.90	0.53
36:DM:61:LEU:O	54:D4:12:ARG:HD3	2.08	0.53
41:DR:19:GLN:HG2	61:DR:202:PG4:H51	1.90	0.53
57:D7:16:ASP:CG	57:D7:45:VAL:HG13	2.32	0.53
1:AA:833:G:O2'	1:AA:834:U:H5'	2.08	0.53
2:BA:1039:G:H2'	2:BA:1040:U:O4'	2.08	0.53
2:BA:1097:C:H2'	2:BA:1098:C:H6	1.72	0.53
3:DA:503:A:H1'	69:DA:3416:HOH:O	2.08	0.53
3:DA:819:A:C4	3:DA:1189:A:C2	2.97	0.53
3:DA:1206:G:C6	3:DA:1207:C:C4	2.97	0.53
3:DA:2259:U:P	69:DA:3245:HOH:O	2.62	0.53
4:CA:586:A:P	4:CA:586:A:H8	2.31	0.53
4:CA:2096:C:H2'	4:CA:2097:A:C8	2.43	0.53
4:CA:2345:G:H5'	4:CA:2347:C:O4'	2.08	0.53
8:AD:145:ILE:N	8:AD:145:ILE:HD12	2.24	0.53
9:BE:26:LYS:HD3	9:BE:26:LYS:C	2.33	0.53
12:BH:86:TYR:C	12:BH:87:LYS:HD2	2.33	0.53
13:BI:34:SER:HA	69:BI:202:HOH:O	2.07	0.53
15:BK:36:ASP:CG	15:BK:38:GLN:HG2	2.33	0.53
19:BO:45:GLU:O	19:BO:47:LYS:N	2.41	0.53
27:CC:51:ARG:HH12	27:CC:246:PRO:HG2	1.73	0.53
28:CD:85:ALA:O	28:CD:87:GLY:N	2.38	0.53
41:CR:75:TYR:CZ	41:CR:79:ILE:HG13	2.43	0.53
36:DM:132:ARG:HG3	36:DM:142:ILE:HD13	1.89	0.53
43:DT:43:ALA:O	43:DT:47:VAL:HG12	2.09	0.53
1:AA:475:C:C6	69:AA:1872:HOH:O	2.53	0.53
1:AA:475:C:H2'	1:AA:476:U:O4'	2.08	0.53
1:AA:1202:U:O2	1:AA:1202:U:H2'	2.08	0.53
2:BA:22:G:O2'	2:BA:913:A:N1	2.33	0.53
2:BA:112:G:H5'	2:BA:389:A:O2'	2.09	0.53
2:BA:252:U:O4	2:BA:253:A:N6	2.42	0.53
2:BA:283:U:C2	2:BA:284:C:C6	2.96	0.53
2:BA:354:G:C2	2:BA:355:C:C5	2.97	0.53
2:BA:552:U:C4	2:BA:553:A:N7	2.77	0.53
2:BA:728:A:C2	2:BA:729:A:C5	2.97	0.53
2:BA:1014:A:C2	23:BS:34:TRP:CZ2	2.96	0.53
3:DA:319:G:C4	3:DA:333:G:N2	2.77	0.53
3:DA:527:C:OP1	69:DA:3505:HOH:O	2.18	0.53
3:DA:947:A:H2'	3:DA:948:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1055:G:P	69:DA:3237:HOH:O	2.61	0.53
4:CA:60:G:O2'	4:CA:62:U:OP2	2.23	0.53
4:CA:814:C:OP1	42:CS:86:GLN:HG3	2.09	0.53
4:CA:2232:C:OP1	48:CY:26:ARG:NH1	2.39	0.53
5:DB:86:G:H1'	69:DB:366:HOH:O	2.09	0.53
6:AB:217:VAL:O	6:AB:220:THR:HG22	2.09	0.53
19:AO:45:GLU:O	19:AO:46:HIS:HB2	2.08	0.53
8:BD:23:SER:C	8:BD:25:VAL:H	2.17	0.53
29:CE:149:ILE:HG23	29:CE:187:VAL:O	2.09	0.53
39:CP:17:LYS:HE2	39:CP:17:LYS:HA	1.90	0.53
27:DC:104:LEU:O	27:DC:106:PRO:HD3	2.09	0.53
30:DF:114:ARG:NH1	57:D7:62:ARG:HH12	2.05	0.53
41:DR:49:ARG:NH2	42:DS:74:ILE:HG13	2.24	0.53
1:AA:452:A:H62	1:AA:480:U:H3	1.56	0.53
2:BA:58:C:O2	2:BA:388:G:N7	2.42	0.53
2:BA:411:A:P	8:BD:26:ARG:NH2	2.81	0.53
2:BA:577:G:C8	2:BA:816:A:C2	2.96	0.53
2:BA:1047:G:OP1	18:BN:3:GLN:NE2	2.42	0.53
2:BA:1108:G:C6	69:BA:1707:HOH:O	2.62	0.53
69:BA:1744:HOH:O	13:BI:11:ARG:HD2	2.08	0.53
3:DA:558:U:OP1	34:DK:113:PRO:HD2	2.08	0.53
3:DA:980:A:C6	3:DA:981:A:C2	2.97	0.53
3:DA:1097:U:H3'	3:DA:1098:A:C4'	2.39	0.53
3:DA:1430:G:C2'	3:DA:1431:A:H5'	2.38	0.53
3:DA:1601:G:H1'	60:DA:3072:MPD:H53	1.91	0.53
3:DA:1605:C:C2'	3:DA:1606:C:H5'	2.38	0.53
3:DA:1606:C:O2'	3:DA:1607:C:OP2	2.25	0.53
3:DA:2756:U:O5'	3:DA:2756:U:H6	1.91	0.53
4:CA:95:A:H4'	49:CZ:38:GLN:O	2.09	0.53
4:CA:1430:G:C4	4:CA:1431:A:C8	2.97	0.53
4:CA:1683:U:H3	4:CA:1705:A:H61	1.56	0.53
4:CA:2563:U:C1'	4:CA:2566:A:N6	2.71	0.53
9:AE:15:LEU:HB3	9:AE:37:THR:HG22	1.91	0.53
14:AJ:81:GLU:O	14:AJ:85:ASP:OD1	2.27	0.53
18:AN:18:LYS:O	18:AN:22:LYS:HD3	2.09	0.53
25:AU:41:PRO:HA	25:AU:44:GLU:HG3	1.90	0.53
6:BB:187:VAL:HG23	6:BB:187:VAL:O	2.09	0.53
9:BE:15:LEU:HD12	9:BE:15:LEU:O	2.09	0.53
37:CN:118:LYS:C	37:CN:120:ALA:H	2.15	0.53
2:BA:747:A:H2'	2:BA:748:G:O4'	2.09	0.53
2:BA:976:G:O5'	2:BA:1358:U:O2'	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1169:A:H2'	2:BA:1170:A:C8	2.43	0.53
3:DA:686:U:H4'	3:DA:687:C:OP2	2.08	0.53
3:DA:832:U:H2'	3:DA:833:A:C8	2.44	0.53
3:DA:969:G:H2'	3:DA:970:U:C6	2.44	0.53
3:DA:1428:C:O2'	3:DA:1569:A:OP2	2.21	0.53
3:DA:2080:A:O5'	48:DY:18:SER:HB2	2.08	0.53
3:DA:2267:A:H5"	3:DA:2268:A:H5'	1.90	0.53
4:CA:301:G:C2	4:CA:302:C:C2	2.96	0.53
4:CA:484:C:N4	4:CA:497:A:C2	2.77	0.53
4:CA:517:C:C2'	4:CA:518:G:O5'	2.57	0.53
4:CA:952:G:C2	4:CA:966:G:C2	2.96	0.53
4:CA:1920:C:H2'	4:CA:1921:G:O4'	2.09	0.53
4:CA:1953:A:C2	4:CA:2550:G:O4'	2.62	0.53
4:CA:2714:G:P	69:CA:3239:HOH:O	2.67	0.53
4:CA:2854:G:O2'	69:CA:3400:HOH:O	2.19	0.53
5:DB:19:C:H2'	5:DB:20:G:O4'	2.09	0.53
6:AB:96:TRP:CZ3	6:AB:175:GLU:OE2	2.62	0.53
7:AC:100:GLN:CG	7:AC:101:ILE:H	2.22	0.53
9:AE:100:SER:OG	9:AE:101:GLU:N	2.41	0.53
9:AE:105:ILE:HG23	9:AE:105:ILE:O	2.08	0.53
17:AM:45:ILE:N	17:AM:45:ILE:CD1	2.72	0.53
23:AS:64:ASP:O	23:AS:67:VAL:HG23	2.09	0.53
9:BE:99:ALA:O	9:BE:100:SER:C	2.51	0.53
20:BP:78:VAL:O	20:BP:79:ASN:HB2	2.09	0.53
27:CC:123:ILE:HG22	27:CC:123:ILE:O	2.09	0.53
30:CF:32:LYS:HA	30:CF:95:MET:SD	2.48	0.53
36:CM:56:PRO:O	36:CM:60:ARG:HB2	2.09	0.53
27:DC:19:VAL:CG2	27:DC:19:VAL:O	2.57	0.53
30:DF:170:ALA:O	30:DF:173:ASP:N	2.31	0.53
33:DJ:83:ALA:HB1	33:DJ:100:ILE:HG23	1.91	0.53
37:DN:47:GLU:OE1	37:DN:50:ARG:NE	2.32	0.53
1:AA:119:A:C5	1:AA:240:G:C5	2.97	0.53
1:AA:370:C:O2'	1:AA:371:A:H5'	2.09	0.53
1:AA:807:A:C5	1:AA:808:C:C5	2.97	0.53
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.08	0.53
2:BA:276:G:OP1	21:BQ:14:SER:OG	2.21	0.53
2:BA:659:U:O2'	2:BA:660:C:H5'	2.08	0.53
2:BA:1093:A:C2	2:BA:1095:U:O4'	2.62	0.53
2:BA:1304:G:O2'	2:BA:1333:A:N6	2.42	0.53
3:DA:45:G:H5"	3:DA:46:G:OP1	2.08	0.53
3:DA:733:G:O6	3:DA:761:A:C8	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:945:A:H4'	3:DA:946:C:OP2	2.09	0.53
3:DA:1825:U:H2'	3:DA:1826:G:C8	2.44	0.53
4:CA:504:A:C2	4:CA:1234:U:H4'	2.44	0.53
4:CA:852:U:H2'	4:CA:853:C:O4'	2.08	0.53
4:CA:1837:C:H3'	69:CA:3475:HOH:O	2.08	0.53
4:CA:2224:G:OP1	69:CA:3395:HOH:O	2.19	0.53
4:CA:2431:U:O2'	4:CA:2433:A:N7	2.36	0.53
4:CA:2573:C:OP2	69:CA:3398:HOH:O	2.19	0.53
4:CA:2772:C:C2	4:CA:2773:C:C5	2.97	0.53
5:CB:58:A:H2'	5:CB:59:A:O4'	2.08	0.53
6:AB:184:PHE:CE2	6:AB:198:PHE:CD2	2.97	0.53
11:AG:63:GLU:O	11:AG:67:GLU:N	2.36	0.53
19:AO:76:ALA:O	19:AO:80:ARG:HG2	2.07	0.53
25:AU:15:ALA:O	25:AU:18:ARG:HB2	2.08	0.53
17:BM:14:HIS:HB2	17:BM:17:ILE:HD12	1.90	0.53
42:CS:46:GLU:O	42:CS:46:GLU:CD	2.52	0.53
56:DD:30:GLU:O	56:DD:31:ALA:C	2.52	0.53
36:DM:2:ARG:HA	36:DM:5:THR:HG23	1.90	0.53
57:D7:31:THR:CG2	57:D7:41:THR:HG23	2.30	0.53
1:AA:545:C:H2'	1:AA:546:A:H5'	1.90	0.53
1:AA:760:G:C5	1:AA:761:G:C8	2.97	0.53
1:AA:1103:C:OP1	6:AB:95:ARG:NH2	2.41	0.53
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.92	0.53
2:BA:66:A:P	2:BA:66:A:H8	2.32	0.53
2:BA:128:G:N2	2:BA:234:C:C2	2.76	0.53
2:BA:1252:A:H2'	2:BA:1253:G:O4'	2.08	0.53
3:DA:457:A:O4'	3:DA:459:U:C6	2.61	0.53
3:DA:2885:G:OP1	68:DA:3078:GUN:C2	2.57	0.53
4:CA:783:A:H1'	4:CA:1779:U:H1'	1.91	0.53
4:CA:783:A:H2'	4:CA:785:G:OP1	2.09	0.53
4:CA:1010:A:OP2	69:CA:3396:HOH:O	2.19	0.53
4:CA:1417:C:HO2'	4:CA:1587:G:HO2'	1.53	0.53
4:CA:1719:G:H1	4:CA:1741:C:H42	1.57	0.53
4:CA:1973:G:C5	4:CA:1974:C:C4	2.97	0.53
4:CA:2699:C:O2	4:CA:2709:G:N2	2.42	0.53
6:AB:182:PRO:O	6:AB:197:ASP:OD1	2.26	0.53
11:AG:15:ASP:OD1	11:AG:44:TYR:OH	2.25	0.53
21:AQ:16:LYS:HE3	21:AQ:16:LYS:O	2.09	0.53
7:BC:126:ARG:O	7:BC:127:ARG:HB2	2.09	0.53
15:BK:16:VAL:HG13	15:BK:17:SER:H	1.73	0.53
33:CJ:37:PHE:O	33:CJ:41:PHE:CB	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DS:93:PHE:CD1	42:DS:93:PHE:C	2.86	0.53
57:D7:34:GLU:CD	57:D7:35:ILE:H	2.16	0.53
57:D7:64:VAL:O	57:D7:65:ALA:HB3	2.09	0.53
1:AA:81:A:H2'	1:AA:82:G:H5"	1.90	0.53
1:AA:407:U:P	8:AD:3:ARG:HH22	2.32	0.53
1:AA:597:G:C2	1:AA:644:U:C2	2.96	0.53
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.43	0.53
2:BA:437:U:N3	2:BA:438:U:C5	2.77	0.53
2:BA:511:C:C2	2:BA:512:U:C5	2.97	0.53
2:BA:1072:G:C5	2:BA:1073:U:C4	2.97	0.53
3:DA:1196:C:H2'	3:DA:1197:G:O4'	2.09	0.53
3:DA:1735:A:H2'	3:DA:1736:U:O4'	2.09	0.53
3:DA:2721:A:OP1	69:DA:3499:HOH:O	2.17	0.53
4:CA:570:G:O2'	4:CA:571:U:H5'	2.09	0.53
4:CA:630:G:H2'	4:CA:631:A:H5"	1.90	0.53
4:CA:1199:U:H3	4:CA:1246:A:H61	1.54	0.53
4:CA:1265:A:C8	4:CA:1267:U:N3	2.77	0.53
4:CA:1359:A:C2	4:CA:1360:G:C1'	2.92	0.53
4:CA:1838:C:C5	4:CA:1899:A:C5	2.96	0.53
4:CA:2116:G:N7	4:CA:2165:C:N4	2.57	0.53
4:CA:2229:U:H2'	4:CA:2230:G:H8	1.73	0.53
4:CA:2410:G:C2	4:CA:2411:A:H1'	2.44	0.53
7:AC:77:ILE:HA	7:AC:84:VAL:HG23	1.90	0.53
7:AC:97:VAL:HB	7:AC:98:PRO:HD2	1.90	0.53
25:AU:11:PRO:O	25:AU:12:PHE:HD1	1.92	0.53
7:BC:45:LYS:HG3	7:BC:46:GLU:N	2.23	0.53
13:BI:57:MET:CE	13:BI:58:VAL:H	2.22	0.53
1:AA:106:C:O2'	1:AA:107:G:H5'	2.08	0.53
1:AA:638:U:H2'	1:AA:639:G:O4'	2.08	0.53
1:AA:761:G:H2'	1:AA:762:U:H6	1.74	0.53
2:BA:161:A:H2'	2:BA:162:A:O4'	2.09	0.53
2:BA:357:G:N2	2:BA:358:U:C2	2.77	0.53
2:BA:491:G:O2'	2:BA:492:C:H5'	2.09	0.53
2:BA:672:U:O2'	2:BA:673:A:H5'	2.08	0.53
2:BA:774:G:C5	2:BA:775:G:C8	2.97	0.53
2:BA:1092:A:C8	2:BA:1093:A:N7	2.77	0.53
2:BA:1226:C:H4'	2:BA:1227:A:OP1	2.09	0.53
2:BA:1321:U:O2'	23:BS:78:ARG:NH2	2.42	0.53
3:DA:317:G:P	69:DA:3680:HOH:O	2.67	0.53
4:CA:60:G:HO2'	4:CA:62:U:P	2.31	0.53
4:CA:64:A:O2'	44:CU:75:GLY:HA3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:466:A:O5'	69:CA:3399:HOH:O	2.19	0.53
4:CA:804:A:H2'	4:CA:806:C:N4	2.23	0.53
4:CA:1215:G:H2'	4:CA:1216:G:H8	1.74	0.53
4:CA:1281:G:H2'	4:CA:1282:U:O4'	2.09	0.53
4:CA:2419:U:OP1	54:C4:40:LYS:NZ	2.41	0.53
4:CA:2780:G:OP2	34:CK:120:ARG:NE	2.41	0.53
5:CB:2:G:P	5:CB:2:G:O4'	2.67	0.53
9:AE:94:VAL:HG13	9:AE:111:MET:HE1	1.90	0.53
17:BM:103:LYS:HG2	17:BM:104:THR:HG23	1.90	0.53
48:CY:61:LYS:O	48:CY:65:THR:HB	2.09	0.53
33:DJ:100:ILE:HG22	33:DJ:101:SER:H	1.73	0.53
36:DM:92:LEU:H	36:DM:92:LEU:HD12	1.74	0.53
1:AA:1444:U:H2'	1:AA:1445:U:C6	2.44	0.52
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.44	0.52
2:BA:687:A:N3	2:BA:688:G:H1'	2.25	0.52
3:DA:581:C:H2'	3:DA:582:A:C8	2.44	0.52
3:DA:999:U:OP1	69:DA:3520:HOH:O	2.19	0.52
3:DA:1599:U:P	44:DU:40:LYS:HG3	2.49	0.52
3:DA:1964:G:C2	3:DA:1967:C:C5	2.97	0.52
3:DA:2049:G:C2'	3:DA:2050:C:H5'	2.39	0.52
3:DA:2056:G:OP1	69:DA:3517:HOH:O	2.19	0.52
3:DA:2267:A:H3'	69:DA:3282:HOH:O	2.09	0.52
3:DA:2414:G:O2'	3:DA:2415:G:H5'	2.09	0.52
4:CA:1245:G:H2'	4:CA:1246:A:O4'	2.08	0.52
4:CA:1362:C:H2'	4:CA:1363:C:C5'	2.39	0.52
4:CA:1374:G:H2'	4:CA:1375:U:O4'	2.09	0.52
4:CA:1629:U:O2	4:CA:2698:U:H5"	2.09	0.52
4:CA:2566:A:H4'	4:CA:2567:G:H5"	1.92	0.52
9:AE:148:ASN:ND2	12:AH:73:GLU:OE2	2.41	0.52
11:AG:22:LEU:HD21	11:AG:97:ASN:ND2	2.24	0.52
12:AH:75:ILE:HD12	12:AH:129:VAL:HG22	1.90	0.52
6:BB:164:ILE:O	6:BB:186:ILE:O	2.27	0.52
12:BH:67:GLN:O	12:BH:69:LYS:N	2.42	0.52
21:BQ:69:LYS:O	21:BQ:70:THR:OG1	2.25	0.52
22:BR:37:GLY:O	22:BR:63:ARG:NH2	2.41	0.52
28:CD:125:TRP:NE1	28:CD:161:MET:O	2.39	0.52
30:CF:102:LEU:O	30:CF:106:ALA:HB3	2.10	0.52
31:CG:97:VAL:HG11	31:CG:123:GLU:HA	1.91	0.52
32:CH:75:LEU:HD11	32:CH:106:ALA:O	2.08	0.52
29:DE:154:ASP:O	29:DE:157:LEU:N	2.41	0.52
33:DJ:68:PHE:HD1	33:DJ:69:VAL:H	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D7:33:ARG:C	57:D7:34:GLU:HG3	2.33	0.52
1:AA:695:A:C6	1:AA:696:A:C2	2.97	0.52
1:AA:1135:U:H3'	1:AA:1137:C:N4	2.23	0.52
2:BA:503:C:O2	2:BA:510:A:H2	1.92	0.52
3:DA:16:C:O2'	3:DA:17:G:H5'	2.08	0.52
3:DA:88:G:C2	3:DA:89:A:C8	2.98	0.52
3:DA:404:A:H1'	3:DA:405:U:OP2	2.09	0.52
3:DA:475:C:C4	3:DA:481:G:O6	2.62	0.52
3:DA:574:A:H2	56:DD:150:MEQ:HE2	1.74	0.52
4:CA:1120:G:C6	4:CA:1121:C:C4	2.97	0.52
4:CA:1398:C:OP1	44:CU:59:ASN:ND2	2.30	0.52
4:CA:2521:C:C2	4:CA:2545:G:N2	2.77	0.52
4:CA:2612:C:H5"	4:CA:2613:U:OP1	2.08	0.52
4:CA:2837:A:H2'	4:CA:2838:G:O4'	2.10	0.52
11:AG:145:ALA:C	11:AG:147:ALA:N	2.67	0.52
16:AL:85:GLY:O	16:AL:96:HIS:ND1	2.38	0.52
6:BB:225:ARG:O	6:BB:226:SER:OG	2.26	0.52
15:BK:119:ASN:HA	25:BU:35:ARG:HH12	1.74	0.52
41:CR:8:ILE:HG13	41:CR:9:ALA:N	2.24	0.52
1:AA:451:A:H61	1:AA:481:G:H5'	1.73	0.52
1:AA:592:G:O6	1:AA:648:A:N6	2.41	0.52
1:AA:1115:U:P	14:AJ:68:ARG:HH22	2.32	0.52
2:BA:62:U:H4'	2:BA:385:C:O2	2.10	0.52
3:DA:988:A:OP2	50:D0:11:SER:HB3	2.08	0.52
3:DA:1599:U:O5'	3:DA:1599:U:H6	1.92	0.52
3:DA:2577:A:H5"	3:DA:2578:G:H5'	1.91	0.52
4:CA:1340:U:H5	4:CA:1603:A:C8	2.28	0.52
4:CA:1779:U:C5	4:CA:1784:A:N7	2.77	0.52
4:CA:1826:G:C4	4:CA:1827:U:C5	2.98	0.52
4:CA:2508:G:H2'	4:CA:2509:G:H8	1.75	0.52
4:CA:2718:G:O2'	40:CQ:95:LYS:HG3	2.10	0.52
5:DB:78:A:H2'	5:DB:79:G:O4'	2.10	0.52
6:AB:106:THR:O	6:AB:107:VAL:CB	2.56	0.52
9:AE:111:MET:HE2	9:AE:125:ALA:HB1	1.92	0.52
12:AH:18:GLN:CD	12:AH:70:ALA:HB1	2.35	0.52
6:BB:16:PHE:O	6:BB:41:ILE:HG13	2.09	0.52
26:BL:82:ILE:HG12	26:BL:95:TYR:HB3	1.90	0.52
22:BR:32:TYR:CD2	22:BR:55:LEU:HD21	2.44	0.52
27:CC:67:LYS:HD3	27:CC:148:GLY:O	2.10	0.52
29:CE:41:GLN:O	29:CE:43:THR:N	2.31	0.52
41:CR:61:ILE:HD11	41:CR:91:ARG:HH11	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:CT:62:ASP:OD1	43:CT:62:ASP:C	2.53	0.52
33:DJ:104:GLN:O	33:DJ:105:LEU:HB2	2.09	0.52
38:DO:78:LYS:O	38:DO:79:LEU:C	2.52	0.52
1:AA:173:U:C2	1:AA:197:A:N1	2.78	0.52
1:AA:263:A:P	24:AT:74:ARG:HH11	2.32	0.52
1:AA:945:G:C2	1:AA:946:A:C8	2.97	0.52
2:BA:162:A:C5	2:BA:163:C:H1'	2.44	0.52
2:BA:209:U:H4'	2:BA:210:C:OP2	2.09	0.52
2:BA:356:A:H2'	2:BA:357:G:O4'	2.09	0.52
2:BA:821:G:H2'	2:BA:822:U:C6	2.44	0.52
2:BA:1459:G:H2'	2:BA:1460:C:O4'	2.10	0.52
60:DA:3077:MPD:H12	60:DA:3077:MPD:O4	2.08	0.52
4:CA:602:A:H2'	4:CA:655:A:N1	2.24	0.52
4:CA:1341:G:OP1	4:CA:1397:U:N3	2.39	0.52
4:CA:1469:A:C2	4:CA:1470:A:C5	2.97	0.52
4:CA:1896:G:P	69:CA:3201:HOH:O	2.58	0.52
4:CA:2699:C:H2'	4:CA:2700:A:O4'	2.09	0.52
4:CA:2817:U:O2	4:CA:2836:U:O2'	2.23	0.52
4:CA:2845:U:H5"	40:CQ:51:ASN:O	2.09	0.52
5:DB:8:C:O2'	39:DP:25:ARG:NH1	2.43	0.52
7:AC:113:ALA:HB1	7:AC:200:VAL:HG22	1.92	0.52
7:AC:126:ARG:O	7:AC:127:ARG:HB2	2.08	0.52
16:AL:44:LYS:O	16:AL:44:LYS:HD3	2.10	0.52
19:BO:17:ARG:N	19:BO:17:ARG:HD3	2.24	0.52
20:BP:12:LYS:HG3	20:BP:13:LYS:HG2	1.91	0.52
27:CC:166:ARG:HB2	27:CC:171:VAL:HG12	1.91	0.52
30:CF:82:TYR:CD1	30:CF:83:PRO:HD2	2.45	0.52
33:CJ:56:VAL:HG22	33:CJ:57:VAL:N	2.24	0.52
43:CT:60:HIS:N	69:CT:202:HOH:O	2.43	0.52
46:CW:25:LYS:HB3	46:CW:42:LEU:O	2.09	0.52
48:CY:71:ARG:C	48:CY:73:ARG:H	2.18	0.52
30:DF:66:ILE:O	30:DF:66:ILE:HG13	2.08	0.52
35:DL:107:LEU:C	35:DL:109:SER:N	2.59	0.52
43:DT:81:SER:HA	69:DT:308:HOH:O	2.09	0.52
1:AA:787:A:C5	1:AA:788:U:C5	2.98	0.52
2:BA:502:A:C2'	2:BA:503:C:H5'	2.38	0.52
2:BA:764:C:N4	2:BA:765:G:C5	2.78	0.52
2:BA:1135:U:O2'	2:BA:1136:C:O2	2.28	0.52
3:DA:108:G:C6	3:DA:109:C:C4	2.97	0.52
3:DA:598:U:O2'	3:DA:599:A:H5'	2.09	0.52
3:DA:770:G:O2'	3:DA:771:G:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1190:G:O2'	3:DA:1191:G:H5'	2.09	0.52
3:DA:1826:G:C4	3:DA:1827:U:C5	2.98	0.52
3:DA:2348:U:O2'	3:DA:2349:G:H5'	2.08	0.52
3:DA:2846:G:H1'	69:DA:4134:HOH:O	2.09	0.52
69:DA:6601:HOH:O	37:DN:55:ARG:HG3	2.09	0.52
4:CA:980:A:H5"	4:CA:981:A:OP2	2.10	0.52
4:CA:1489:C:O2'	4:CA:1490:A:H5'	2.09	0.52
12:AH:11:LEU:HD12	12:AH:77:ARG:HG2	1.92	0.52
13:AI:57:MET:SD	13:AI:58:VAL:N	2.83	0.52
6:BB:72:THR:HG22	6:BB:73:LYS:N	2.25	0.52
6:BB:120:GLN:HG2	6:BB:120:GLN:O	2.10	0.52
9:BE:76:LEU:N	9:BE:76:LEU:HD12	2.24	0.52
18:BN:45:VAL:HG23	18:BN:45:VAL:O	2.09	0.52
29:CE:145:ASP:HB3	29:CE:184:ASP:HB2	1.92	0.52
32:CH:41:LYS:HA	32:CH:44:ILE:HG12	1.92	0.52
48:CY:71:ARG:HB3	48:CY:71:ARG:HH11	1.74	0.52
27:DC:14:HIS:O	27:DC:203:VAL:HG21	2.09	0.52
32:DH:93:SER:OG	32:DH:120:GLY:O	2.24	0.52
38:DO:99:LYS:HG3	69:D1:227:HOH:O	2.08	0.52
43:DT:69:LEU:HG	43:DT:107:VAL:HB	1.91	0.52
1:AA:150:U:H2'	1:AA:151:A:H8	1.75	0.52
1:AA:956:U:H2'	1:AA:957:U:H5'	1.92	0.52
1:AA:1010:U:OP1	1:AA:1010:U:H4'	2.08	0.52
1:AA:1329:A:H5"	17:AM:26:GLY:H	1.74	0.52
1:AA:1417:G:C6	1:AA:1482:G:C6	2.98	0.52
2:BA:409:U:H2'	2:BA:410:G:O4'	2.10	0.52
2:BA:1000:A:N3	2:BA:1041:G:N2	2.57	0.52
3:DA:137:U:H3	3:DA:142:A:H61	1.56	0.52
3:DA:305:C:H2'	3:DA:306:U:O5'	2.10	0.52
3:DA:1148:U:H2'	3:DA:1149:G:O4'	2.10	0.52
3:DA:1768:C:N3	3:DA:1769:U:C5	2.77	0.52
3:DA:2059:A:O5'	69:DA:3519:HOH:O	2.19	0.52
3:DA:2427:C:H5"	3:DA:2428:G:OP1	2.09	0.52
3:DA:2617:U:H2'	3:DA:2618:G:H5'	1.92	0.52
3:DA:2886:A:C5	3:DA:2887:A:N7	2.78	0.52
4:CA:72:U:O2'	4:CA:73:A:O5'	2.24	0.52
4:CA:445:C:P	69:CA:3256:HOH:O	2.66	0.52
4:CA:558:U:OP2	34:CK:113:PRO:HG2	2.10	0.52
4:CA:851:C:O2'	50:C0:42:ALA:O	2.26	0.52
4:CA:1034:G:C6	4:CA:1035:U:C2	2.98	0.52
4:CA:1056:G:N1	4:CA:1102:C:OP2	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1711:A:H1'	69:CA:3978:HOH:O	2.10	0.52
4:CA:1840:G:H2'	4:CA:1841:U:O4'	2.09	0.52
4:CA:1931:U:OP2	4:CA:1968:G:N2	2.35	0.52
4:CA:1992:G:N2	4:CA:1996:C:O2'	2.43	0.52
4:CA:2472:G:N2	4:CA:2477:U:OP1	2.30	0.52
4:CA:2648:G:C5	4:CA:2673:G:C2	2.97	0.52
6:AB:160:ALA:O	6:AB:161:LEU:HB2	2.08	0.52
9:BE:106:ILE:HD11	9:BE:124:LEU:HD23	1.91	0.52
19:BO:45:GLU:HG2	19:BO:46:HIS:H	1.74	0.52
20:BP:19:VAL:HG12	20:BP:37:GLY:C	2.34	0.52
27:CC:169:ALA:O	27:CC:185:ALA:N	2.35	0.52
27:CC:224:MET:SD	27:CC:229:HIS:HB2	2.49	0.52
29:CE:146:VAL:O	29:CE:167:VAL:HA	2.09	0.52
38:CO:53:THR:HA	38:CO:56:LYS:HG3	1.90	0.52
39:DP:27:VAL:HG12	39:DP:38:GLN:O	2.10	0.52
45:DV:95:PHE:C	45:DV:96:LYS:O	2.48	0.52
49:DZ:10:SER:OG	49:DZ:13:GLU:HG3	2.10	0.52
1:AA:376:G:H2'	1:AA:377:G:H8	1.73	0.52
1:AA:901:A:N7	1:AA:902:G:C1'	2.73	0.52
1:AA:922:G:H1'	9:AE:24:THR:HG22	1.90	0.52
1:AA:1328:C:H5"	17:AM:28:THR:HG21	1.90	0.52
1:AA:1418:A:C2	1:AA:1483:A:C2	2.98	0.52
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.45	0.52
2:BA:219:U:H2'	2:BA:220:G:C8	2.44	0.52
2:BA:416:G:N7	69:BA:1795:HOH:O	2.34	0.52
2:BA:719:C:O2'	22:BR:39:ILE:O	2.21	0.52
2:BA:922:G:C6	2:BA:923:A:C6	2.97	0.52
2:BA:1161:C:O2	2:BA:1176:A:C2	2.62	0.52
3:DA:978:G:P	69:DA:3350:HOH:O	2.65	0.52
3:DA:2305:U:C2'	3:DA:2306:C:H5'	2.40	0.52
4:CA:613:A:H3'	4:CA:614:A:H5"	1.91	0.52
4:CA:771:G:C2	4:CA:772:C:C6	2.97	0.52
4:CA:1906:G:OP1	4:CA:1930:G:C8	2.63	0.52
4:CA:2636:C:C2	4:CA:2637:U:C5	2.98	0.52
7:AC:64:ILE:HG23	7:AC:99:ALA:HA	1.92	0.52
11:BG:106:GLU:O	11:BG:110:LYS:HG3	2.10	0.52
23:BS:29:LYS:HG2	23:BS:30:PRO:HD2	1.91	0.52
29:CE:117:ARG:HH12	36:CM:2:ARG:HD3	1.74	0.52
41:DR:93:ILE:HG21	42:DS:4:VAL:HG11	1.92	0.52
2:BA:33:A:N3	2:BA:34:C:C6	2.77	0.52
2:BA:609:A:N7	69:BA:1796:HOH:O	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:718:A:N7	2:BA:719:C:C5	2.78	0.52
2:BA:735:C:P	69:BA:1856:HOH:O	2.68	0.52
2:BA:799:G:C6	2:BA:800:G:C4	2.98	0.52
2:BA:1458:G:O2'	24:BT:23:SER:HB3	2.10	0.52
2:BA:1500:A:OP2	2:BA:1505:G:OP1	2.27	0.52
3:DA:1295:C:O2'	3:DA:1296:G:H5'	2.10	0.52
3:DA:1894:C:O5'	3:DA:1894:C:H6	1.93	0.52
3:DA:1915:3TD:H2'	3:DA:1916:A:C8	2.45	0.52
3:DA:1973:G:O2'	3:DA:1974:C:H5'	2.09	0.52
3:DA:2321:U:H5'	3:DA:2322:A:OP2	2.10	0.52
4:CA:1372:U:O4	4:CA:1373:A:N6	2.43	0.52
4:CA:2078:C:N4	4:CA:2079:U:O4	2.43	0.52
4:CA:2512:C:H4'	28:CD:127:PHE:CE2	2.45	0.52
5:CB:78:A:C6	5:CB:99:A:C8	2.98	0.52
6:AB:67:ILE:HG13	6:AB:89:GLN:HG2	1.91	0.52
8:AD:48:LEU:HD21	8:AD:53:VAL:HG12	1.91	0.52
8:AD:89:ASN:O	8:AD:93:LEU:HD22	2.10	0.52
9:AE:44:GLY:CA	9:AE:76:LEU:HD11	2.40	0.52
6:BB:71:GLY:HA2	6:BB:164:ILE:CG2	2.40	0.52
12:BH:78:VAL:HG23	12:BH:127:CYS:HA	1.92	0.52
27:CC:15:VAL:HG22	27:CC:204:LEU:O	2.10	0.52
29:CE:59:PRO:HD2	29:CE:70:SER:OG	2.09	0.52
31:DG:26:LYS:HG2	31:DG:31:GLU:HB2	1.92	0.52
33:DJ:68:PHE:HD1	33:DJ:69:VAL:N	2.07	0.52
1:AA:102:G:C2	1:AA:103:U:C5	2.98	0.52
1:AA:373:A:N3	1:AA:374:A:C8	2.77	0.52
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.40	0.52
2:BA:464:U:N3	2:BA:467:U:OP2	2.38	0.52
2:BA:1002:G:H2'	2:BA:1003:G:O4'	2.10	0.52
3:DA:206:U:C2'	3:DA:207:A:H5'	2.40	0.52
3:DA:2184:A:H2'	3:DA:2185:U:C6	2.45	0.52
3:DA:2233:U:P	69:DA:3316:HOH:O	2.65	0.52
4:CA:287:G:C2	4:CA:354:A:C6	2.98	0.52
4:CA:307:G:N1	4:CA:310:A:OP2	2.41	0.52
4:CA:493:G:H2'	4:CA:494:G:O4'	2.10	0.52
4:CA:1148:U:H2'	4:CA:1149:G:O4'	2.10	0.52
4:CA:2282:G:OP1	4:CA:2283:C:H1'	2.10	0.52
4:CA:2699:C:O2	4:CA:2709:G:C2	2.63	0.52
5:CB:46:A:OP1	39:CP:3:LYS:HE3	2.10	0.52
6:AB:151:ILE:O	6:AB:152:LYS:C	2.53	0.52
7:AC:206:GLU:O	7:AC:207:ILE:O	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AD:148:LYS:H	8:AD:148:LYS:CE	2.23	0.52
9:AE:105:ILE:H	9:AE:123:VAL:H	1.57	0.52
23:AS:15:LEU:HD13	23:AS:33:THR:HG21	1.91	0.52
6:BB:57:LEU:O	6:BB:60:ILE:HG13	2.10	0.52
6:BB:130:THR:HG22	6:BB:132:LYS:H	1.74	0.52
9:BE:36:LEU:HD21	9:BE:137:VAL:HG11	1.92	0.52
9:BE:57:PRO:HA	9:BE:60:ILE:CG1	2.39	0.52
11:BG:50:LEU:HG	11:BG:124:LEU:HB3	1.92	0.52
11:BG:142:HIS:C	11:BG:143:ARG:HD3	2.35	0.52
36:CM:82:LEU:HD23	36:CM:83:ALA:N	2.25	0.52
40:CQ:87:ARG:NH2	40:CQ:109:ILE:O	2.38	0.52
33:DJ:64:ARG:NH1	33:DJ:65:SER:OG	2.42	0.52
47:DX:39[A]:ARG:O	47:DX:55:HIS:ND1	2.42	0.52
49:DZ:39:GLN:HB3	49:DZ:41:HIS:CE1	2.45	0.52
49:DZ:45:GLN:O	49:DZ:46:VAL:HG23	2.09	0.52
1:AA:878:A:H1'	69:AA:1753:HOH:O	2.09	0.52
2:BA:340:U:C2	2:BA:350:G:N2	2.78	0.52
2:BA:429:U:H5'	8:BD:9:LEU:HD23	1.91	0.52
2:BA:495:A:O4'	2:BA:496:A:C8	2.63	0.52
2:BA:1089:G:C6	2:BA:1090:U:C4	2.97	0.52
3:DA:13:A:N3	3:DA:15:G:C6	2.78	0.52
3:DA:449:A:H5'	69:DA:4317:HOH:O	2.10	0.52
3:DA:1492:G:C2	3:DA:1499:C:C2	2.97	0.52
3:DA:1607:C:H5'	3:DA:1607:C:C6	2.45	0.52
3:DA:1935:G:C6	3:DA:1962:5MC:C6	2.98	0.52
3:DA:1958:C:C2'	3:DA:1959:G:H5'	2.40	0.52
4:CA:64:A:H5'	44:CU:77:ARG:HA	1.92	0.52
4:CA:181:A:N6	69:CA:3485:HOH:O	2.34	0.52
4:CA:196:A:C2'	4:CA:805:G:O6	2.57	0.52
4:CA:224:U:O4	4:CA:232:G:N2	2.43	0.52
4:CA:414:C:O2	4:CA:2410:G:N2	2.42	0.52
4:CA:1013:C:C2'	4:CA:1014:A:H5'	2.40	0.52
4:CA:1770:G:H4'	4:CA:1938:A:OP1	2.10	0.52
4:CA:2028:U:O4	69:CA:3368:HOH:O	2.13	0.52
4:CA:2055:C:OP1	51:C1:4:GLN:NE2	2.42	0.52
4:CA:2552:U:C4	4:CA:2554:U:P	3.03	0.52
4:CA:2789:C:O2	4:CA:2892:G:H5"	2.10	0.52
9:AE:77:ASN:O	9:AE:79:GLY:N	2.43	0.52
9:AE:82:GLN:CD	9:AE:150:PRO:HD3	2.35	0.52
9:AE:157:ARG:HB3	12:AH:44:GLY:O	2.10	0.52
11:AG:13:LEU:H	11:AG:13:LEU:HD22	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AG:68:ASN:O	11:AG:70:ARG:N	2.43	0.52
14:AJ:91:ASP:O	14:AJ:92:LEU:HG	2.10	0.52
9:BE:12:GLN:OE1	9:BE:12:GLN:HA	2.10	0.52
26:BL:7:LEU:HD22	26:BL:12:ARG:HD2	1.92	0.52
37:CN:53:MET:HE1	37:CN:103:TYR:CG	2.43	0.52
43:CT:59:GLU:HG2	43:CT:64:ALA:HA	1.90	0.52
48:CY:71:ARG:HB3	48:CY:71:ARG:NH1	2.25	0.52
49:CZ:48:ARG:O	49:CZ:51:ALA:HB3	2.09	0.52
37:DN:68:PHE:O	69:DN:306:HOH:O	2.18	0.52
37:DN:114:ARG:HG2	37:DN:130:PHE:CE2	2.45	0.52
49:DZ:18:LEU:HB2	49:DZ:53:VAL:HG11	1.91	0.52
1:AA:328:C:O2	1:AA:328:C:H2'	2.09	0.51
1:AA:1054:C:OP1	69:AA:1707:HOH:O	2.18	0.51
1:AA:1317:C:H2'	1:AA:1318:A:H5'	1.91	0.51
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.10	0.51
1:AA:1478:U:H2'	1:AA:1479:C:H6	1.75	0.51
2:BA:44:A:H2'	2:BA:45:G:H8	1.74	0.51
2:BA:679:C:N3	2:BA:712:A:C2	2.77	0.51
2:BA:756:C:N3	2:BA:757:U:C6	2.78	0.51
2:BA:1323:G:H2'	2:BA:1324:A:C8	2.45	0.51
2:BA:1350:A:N6	2:BA:1373:G:N2	2.57	0.51
2:BA:1378:C:H5"	2:BA:1379:G:OP2	2.10	0.51
3:DA:962:G:O2'	3:DA:963:U:H5'	2.09	0.51
3:DA:1129:A:N6	3:DA:2491:U:OP1	2.43	0.51
3:DA:1638:C:O3'	3:DA:2709:G:N2	2.43	0.51
4:CA:654:A:H3'	4:CA:654:A:N3	2.25	0.51
4:CA:1469:A:H2'	4:CA:1470:A:C8	2.45	0.51
4:CA:1483:G:C6	4:CA:1484:U:C4	2.99	0.51
4:CA:1773:A:N3	4:CA:1978:A:C2	2.79	0.51
4:CA:1789:A:H5"	27:CC:218:THR:O	2.10	0.51
4:CA:1969:A:O2'	4:CA:1972:G:N3	2.42	0.51
4:CA:2077:A:C2	4:CA:2078:C:C2	2.98	0.51
4:CA:2808:G:H4'	4:CA:2809:A:H8	1.74	0.51
4:CA:2886:A:C2	4:CA:2887:A:H1'	2.44	0.51
13:AI:44:ALA:HA	13:AI:46:MET:SD	2.50	0.51
11:BG:68:ASN:O	11:BG:138:ARG:NH1	2.43	0.51
26:BL:34:CYS:HB2	26:BL:76:GLU:O	2.10	0.51
27:CC:140:VAL:HG12	27:CC:190:THR:O	2.09	0.51
30:CF:56:LEU:HD13	30:CF:88:VAL:CG2	2.40	0.51
36:CM:61:LEU:O	54:C4:12:ARG:HD3	2.10	0.51
30:DF:50:ASP:OD1	30:DF:50:ASP:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DU:7:LEU:HD11	44:DU:45:ALA:HB1	1.92	0.51
1:AA:592:G:C6	1:AA:648:A:C6	2.98	0.51
1:AA:654:G:H2'	1:AA:655:A:O5'	2.10	0.51
1:AA:901:A:C5	1:AA:902:G:H1'	2.45	0.51
1:AA:979:C:C6	1:AA:1318:A:N1	2.78	0.51
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.10	0.51
2:BA:407:U:H2'	2:BA:408:A:H8	1.75	0.51
2:BA:764:C:C4	2:BA:765:G:C5	2.99	0.51
2:BA:878:A:C5	2:BA:879:C:C5	2.98	0.51
3:DA:775:G:H8	69:DA:4267:HOH:O	1.93	0.51
3:DA:831:G:C6	3:DA:832:U:C4	2.98	0.51
3:DA:1161:C:C2'	3:DA:1162:G:H5'	2.40	0.51
3:DA:1231:U:O2'	67:DA:3060:EDO:H21	2.11	0.51
3:DA:1853:A:N1	3:DA:2087:G:H1'	2.25	0.51
4:CA:616:A:H4'	29:CE:101:TYR:OH	2.10	0.51
4:CA:1297:C:O5'	4:CA:1297:C:H6	1.93	0.51
4:CA:1526:C:O2	4:CA:1546:G:N2	2.43	0.51
4:CA:2722:G:O2'	38:CO:3:HIS:O	2.21	0.51
6:AB:72:THR:OG1	6:AB:169:GLU:OE2	2.20	0.51
6:AB:118:GLU:C	6:AB:120:GLN:N	2.65	0.51
10:AF:45:ARG:O	10:AF:56:LYS:HA	2.10	0.51
12:AH:95:VAL:O	12:AH:98:GLY:N	2.41	0.51
6:BB:200:ILE:HD12	6:BB:200:ILE:N	2.25	0.51
13:BI:57:MET:HE2	13:BI:58:VAL:H	1.75	0.51
17:BM:12:HIS:O	17:BM:13:LYS:HG3	2.11	0.51
18:BN:27:LYS:O	18:BN:31:SER:CB	2.58	0.51
33:CJ:134:SER:C	33:CJ:136:GLY:H	2.18	0.51
36:CM:62:PRO:O	54:C4:12:ARG:HG2	2.10	0.51
1:AA:118:U:C5	1:AA:288:A:C6	2.98	0.51
1:AA:723:U:H2'	1:AA:855:U:H4'	1.90	0.51
1:AA:1152:A:H5"	14:AJ:15:HIS:HD2	1.75	0.51
1:AA:1190:G:OP2	7:AC:5:VAL:HB	2.11	0.51
1:AA:1319:A:C8	1:AA:1323:G:C5	2.98	0.51
2:BA:1066:C:H3'	2:BA:1067:A:C8	2.46	0.51
2:BA:1093:A:H2'	2:BA:1095:U:H6	1.75	0.51
2:BA:1110:A:N7	69:BA:1797:HOH:O	2.34	0.51
3:DA:644:A:H5"	3:DA:645:C:OP2	2.09	0.51
3:DA:1243:C:C2'	3:DA:1244:A:O5'	2.59	0.51
3:DA:1680:U:H2'	3:DA:1681:G:O4'	2.10	0.51
3:DA:2014:A:H2'	3:DA:2015:A:C8	2.45	0.51
4:CA:150:U:H2'	4:CA:151:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:454:A:H4'	4:CA:455:C:OP2	2.10	0.51
4:CA:669:G:N2	4:CA:670:A:C2	2.77	0.51
4:CA:681:G:H2'	4:CA:682:G:O4'	2.10	0.51
4:CA:788:A:OP1	4:CA:791:C:N4	2.43	0.51
4:CA:1654:A:P	38:CO:1:MET:H2	2.26	0.51
4:CA:1964:G:H4'	4:CA:1965:C:OP2	2.10	0.51
4:CA:2784:U:O2'	28:CD:43:ASP:OD1	2.18	0.51
6:AB:119:THR:HG22	6:AB:119:THR:O	2.10	0.51
7:AC:55:ILE:HD11	7:AC:57:ILE:HG13	1.92	0.51
8:AD:158:ALA:HA	8:AD:161:LEU:CD2	2.39	0.51
22:AR:27:ALA:O	22:AR:30:LYS:HE2	2.09	0.51
7:BC:121:THR:O	7:BC:125:GLU:HG3	2.10	0.51
10:BF:35:LYS:HE2	10:BF:65:GLU:OE1	2.10	0.51
13:BI:63:LEU:O	13:BI:63:LEU:HD23	2.09	0.51
15:BK:25:ALA:HA	15:BK:30:THR:HG22	1.92	0.51
34:CK:71:ASP:HA	69:CK:205:HOH:O	2.10	0.51
39:CP:80:GLU:O	39:CP:83:LEU:N	2.43	0.51
27:DC:244:VAL:HA	27:DC:249:VAL:O	2.11	0.51
47:DX:49:VAL:HG21	47:DX:78:ILE:O	2.10	0.51
57:D7:46:THR:C	57:D7:48:ASP:N	2.68	0.51
1:AA:222:C:H2'	1:AA:223:A:C8	2.46	0.51
1:AA:537:G:OP1	16:AL:110:ARG:NH2	2.43	0.51
2:BA:375:U:OP1	20:BP:70:ARG:HD2	2.10	0.51
2:BA:463:U:H5'	2:BA:464:U:OP2	2.11	0.51
2:BA:801:U:C2'	2:BA:802:A:O5'	2.59	0.51
3:DA:500:G:N1	3:DA:503:A:OP2	2.43	0.51
3:DA:569:U:C4	3:DA:570:G:C6	2.98	0.51
3:DA:1131:G:C5	34:DK:77:HIS:CD2	2.97	0.51
3:DA:1413:A:H2'	3:DA:1414:C:O4'	2.10	0.51
3:DA:1430:G:H2'	3:DA:1431:A:C8	2.45	0.51
3:DA:1889:A:H1'	3:DA:2086:U:O2'	2.11	0.51
3:DA:2105:U:O4	3:DA:2184:A:C2	2.64	0.51
3:DA:2332:C:H2'	3:DA:2335:A:C2	2.46	0.51
3:DA:2615:U:P	69:DA:3349:HOH:O	2.67	0.51
4:CA:397:U:OP1	48:CY:31:ASN:N	2.44	0.51
4:CA:691:C:OP1	69:CA:3392:HOH:O	2.18	0.51
4:CA:1291:C:C2	4:CA:1292:G:C8	2.99	0.51
4:CA:1754:A:N6	4:CA:1755:A:C6	2.78	0.51
4:CA:2073:C:O2'	4:CA:2074:U:H5'	2.10	0.51
4:CA:2339:C:H2'	4:CA:2340:A:O4'	2.10	0.51
5:CB:46:A:H5"	39:CP:3:LYS:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CB:80:U:H2'	5:CB:81:G:C8	2.45	0.51
6:AB:17:GLY:HA2	6:AB:41:ILE:HG23	1.92	0.51
8:AD:145:ILE:N	8:AD:145:ILE:CD1	2.73	0.51
9:AE:25:VAL:O	9:AE:26:LYS:C	2.53	0.51
11:AG:111:ARG:NH1	11:AG:123:GLU:OE2	2.44	0.51
12:AH:78:VAL:HG11	12:AH:125:ILE:HD11	1.91	0.51
17:AM:25:VAL:O	17:AM:25:VAL:CG2	2.58	0.51
17:AM:48:LEU:HD23	17:AM:48:LEU:C	2.36	0.51
18:AN:33:VAL:C	18:AN:34:ASN:OD1	2.53	0.51
10:BF:29:ILE:HG22	10:BF:34:GLY:O	2.11	0.51
11:BG:51:ALA:O	11:BG:55:GLY:N	2.35	0.51
32:CH:134:HIS:CG	32:CH:135:SER:H	2.28	0.51
27:DC:53:ILE:O	69:DC:305:HOH:O	2.19	0.51
56:DD:159:LYS:HD2	69:DD:430:HOH:O	2.10	0.51
29:DE:149:ILE:HD12	29:DE:150:THR:N	2.26	0.51
38:DO:33:ILE:HG23	38:DO:33:ILE:O	2.11	0.51
44:DU:19:LYS:HE2	44:DU:84:TYR:OH	2.09	0.51
1:AA:500:G:H2'	1:AA:501:C:C6	2.44	0.51
1:AA:587:G:C2	1:AA:755:G:C6	2.98	0.51
1:AA:606:G:N2	1:AA:633:G:N7	2.59	0.51
1:AA:684:U:O2'	15:AK:40:ASN:HB3	2.11	0.51
1:AA:1517:G:N3	3:DA:1919:A:O2'	2.36	0.51
2:BA:262:A:H5"	2:BA:263:A:OP2	2.10	0.51
2:BA:407:U:C2	2:BA:408:A:N7	2.79	0.51
2:BA:578:C:C2	2:BA:579:A:C8	2.98	0.51
3:DA:918:A:H4'	5:DB:97:C:O2	2.10	0.51
3:DA:1215:G:H2'	3:DA:1216:G:H5'	1.92	0.51
3:DA:1372:U:C2'	3:DA:1373:A:H5'	2.40	0.51
3:DA:1673:G:H5"	69:DA:3263:HOH:O	2.11	0.51
3:DA:2391:G:O2'	3:DA:2424:C:N4	2.42	0.51
3:DA:2567:G:N2	69:DA:3750:HOH:O	2.42	0.51
4:CA:15:G:OP1	51:C1:20:ALA:HB2	2.09	0.51
4:CA:120:U:C2	4:CA:149:A:C6	2.98	0.51
4:CA:303:G:C2	4:CA:315:G:C6	2.98	0.51
4:CA:1204:A:H61	4:CA:1240:U:H2'	1.75	0.51
4:CA:1224:U:H4'	42:CS:88:GLY:O	2.11	0.51
4:CA:1268:A:H2'	4:CA:1269:A:O4'	2.10	0.51
4:CA:2053:G:H2'	4:CA:2054:A:O4'	2.10	0.51
4:CA:2146:C:H5"	4:CA:2147:A:OP1	2.11	0.51
6:AB:106:THR:HG22	6:AB:107:VAL:N	2.26	0.51
8:AD:190:ASP:O	8:AD:191:LEU:O	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BB:50:PHE:HB2	6:BB:213:TYR:OH	2.11	0.51
13:BI:27:LYS:N	13:BI:62:ASP:OD1	2.44	0.51
15:BK:31:ILE:HG22	15:BK:46:THR:HB	1.92	0.51
19:BO:26:GLU:OE2	19:BO:77:ARG:HD2	2.10	0.51
27:CC:140:VAL:HG11	27:CC:189:ALA:HB1	1.93	0.51
33:CJ:116:MET:O	33:CJ:117:THR:C	2.54	0.51
51:C1:54:ILE:O	51:C1:55:ALA:CB	2.58	0.51
29:DE:77:ILE:O	29:DE:77:ILE:HG22	2.09	0.51
31:DG:154:GLU:HG2	31:DG:155:PRO:HD2	1.92	0.51
33:DJ:55:PRO:O	33:DJ:56:VAL:HB	2.11	0.51
1:AA:96:U:O2'	1:AA:97:G:P	2.68	0.51
1:AA:111:G:H5"	1:AA:112:G:OP2	2.09	0.51
1:AA:428:G:O4'	1:AA:430:A:C8	2.63	0.51
1:AA:737:C:C2	1:AA:738:C:C5	2.99	0.51
2:BA:377:G:H5"	20:BP:24:SER:HB2	1.93	0.51
2:BA:495:A:C2	2:BA:496:A:N6	2.79	0.51
2:BA:617:G:C2'	69:BA:1777:HOH:O	2.58	0.51
3:DA:581:C:H2'	3:DA:582:A:H8	1.75	0.51
3:DA:1835:2MG:H2'	3:DA:1836:C:C6	2.44	0.51
3:DA:2531:A:N3	3:DA:2531:A:H2'	2.26	0.51
60:DA:3067:MPD:H52	60:DA:3067:MPD:CM	2.38	0.51
4:CA:40:U:C4	4:CA:41:C:C4	2.99	0.51
4:CA:1683:U:O5'	4:CA:1683:U:H6	1.93	0.51
4:CA:2143:C:H2'	4:CA:2144:G:O4'	2.11	0.51
4:CA:2326:C:H3'	69:CA:4008:HOH:O	2.11	0.51
6:AB:51:ASN:O	6:AB:53:ALA:N	2.40	0.51
15:AK:16:VAL:HG23	15:AK:17:SER:N	2.25	0.51
17:AM:104:THR:O	17:AM:105:ASN:C	2.54	0.51
6:BB:123:ASP:O	6:BB:124:GLY:O	2.29	0.51
10:BF:52:ASN:O	10:BF:53:LYS:HB2	2.11	0.51
11:BG:65:ALA:HB3	11:BG:124:LEU:HD23	1.91	0.51
12:BH:51:VAL:HG22	12:BH:51:VAL:O	2.09	0.51
14:BJ:92:LEU:O	14:BJ:93:ALA:HB2	2.10	0.51
43:CT:45:VAL:O	43:CT:45:VAL:HG12	2.10	0.51
45:CV:43:LYS:NZ	69:CV:204:HOH:O	2.40	0.51
27:DC:209:ALA:HA	27:DC:212:TRP:CE3	2.45	0.51
30:DF:7:TYR:OH	30:DF:28:PRO:O	2.24	0.51
55:D5:3:VAL:O	55:D5:4:LEU:CB	2.59	0.51
57:D7:46:THR:HG23	57:D7:47:ILE:HG12	1.93	0.51
57:D7:52:LYS:C	57:D7:54:HIS:N	2.69	0.51
57:D7:57:TYR:C	57:D7:58:THR:HG1	2.17	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:624:C:C5	1:AA:625:U:C5	2.98	0.51
1:AA:1370:G:C2	1:AA:1371:G:C8	2.99	0.51
2:BA:604:G:H2'	2:BA:605:U:O4'	2.11	0.51
3:DA:580:U:H2'	3:DA:581:C:C6	2.45	0.51
3:DA:1997:C:H5	69:DA:6303:HOH:O	1.92	0.51
3:DA:2173:A:H2'	3:DA:2174:C:O4'	2.10	0.51
3:DA:2246:G:H2'	3:DA:2247:A:C8	2.46	0.51
3:DA:2518:A:OP2	63:D5:101:PUT:H22	2.11	0.51
3:DA:2602:A:H4'	69:DA:3870:HOH:O	2.10	0.51
3:DA:2719:G:H1'	69:DA:3914:HOH:O	2.10	0.51
4:CA:27:G:H1'	4:CA:512:G:N2	2.26	0.51
4:CA:601:C:O2'	4:CA:605:G:H5"	2.10	0.51
4:CA:720:U:H2'	4:CA:721:A:C8	2.46	0.51
4:CA:1339:G:OP1	44:CU:17:SER:OG	2.26	0.51
4:CA:1581:G:C6	4:CA:1582:C:N4	2.79	0.51
4:CA:1688:U:C4	4:CA:1698:A:C2	2.99	0.51
4:CA:2835:A:H61	4:CA:2880:C:H41	1.59	0.51
7:AC:7:PRO:HG2	7:AC:184:TYR:CG	2.45	0.51
7:AC:102:ASN:C	7:AC:103:ILE:HG13	2.34	0.51
22:AR:42:SER:O	22:AR:46:GLY:N	2.37	0.51
6:BB:135:LEU:C	6:BB:137:ARG:H	2.19	0.51
17:BM:66:GLU:O	17:BM:68:ASP:N	2.44	0.51
18:BN:35:ALA:HA	18:BN:42:TRP:CZ3	2.45	0.51
27:CC:110:LYS:HD2	27:CC:113:ASP:OD2	2.09	0.51
27:DC:195:GLY:O	27:DC:196:ASN:C	2.53	0.51
30:DF:157:THR:HG23	30:DF:159:ALA:H	1.76	0.51
38:DO:16:HIS:O	38:DO:17:ARG:C	2.49	0.51
44:DU:50:LEU:HD23	49:DZ:26:PHE:CZ	2.45	0.51
45:DV:48:VAL:O	45:DV:53:GLN:HB3	2.10	0.51
1:AA:254:G:C2'	1:AA:255:G:H5'	2.41	0.51
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.46	0.51
2:BA:527:G:N1	2:BA:528:C:C5	2.78	0.51
2:BA:558:G:H8	2:BA:558:G:O5'	1.94	0.51
2:BA:776:G:N2	2:BA:802:A:OP2	2.43	0.51
2:BA:953:G:H2'	2:BA:954:G:O4'	2.11	0.51
2:BA:1363:A:H2'	2:BA:1363:A:N3	2.26	0.51
3:DA:931:U:H4'	3:DA:932:U:OP2	2.11	0.51
3:DA:997:G:C2'	3:DA:998:C:O5'	2.59	0.51
3:DA:1251:C:C5'	69:DA:3618:HOH:O	2.59	0.51
3:DA:1505:A:C5	3:DA:1506:U:C5	2.98	0.51
3:DA:1605:C:H2'	3:DA:1606:C:H5'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1972:G:P	69:DA:3492:HOH:O	2.69	0.51
4:CA:198:C:H42	4:CA:248:G:H1	1.59	0.51
4:CA:1265:A:P	69:CA:3316:HOH:O	2.69	0.51
4:CA:1905:C:O4'	4:CA:1928:A:C2	2.64	0.51
4:CA:2600:A:H2'	4:CA:2601:C:C6	2.46	0.51
4:CA:2690:U:O2'	4:CA:2872:A:N3	2.40	0.51
4:CA:2821:A:OP2	28:CD:115:GLY:N	2.40	0.51
4:CA:2870:C:H5"	38:CO:65:LEU:HD21	1.92	0.51
7:AC:149:ILE:HA	7:AC:201:TRP:O	2.10	0.51
24:AT:14:SER:O	24:AT:18:ARG:N	2.42	0.51
8:BD:191:LEU:N	8:BD:191:LEU:HD12	2.26	0.51
12:BH:75:ILE:HD12	12:BH:76:GLN:N	2.26	0.51
20:BP:75:ILE:O	20:BP:78:VAL:HG12	2.11	0.51
31:CG:169:ARG:NH1	55:C5:33:ASN:OD1	2.44	0.51
27:DC:92:LEU:HD12	27:DC:101:ARG:O	2.11	0.51
56:DD:207:VAL:HG22	56:DD:207:VAL:O	2.09	0.51
31:DG:120:ILE:HD12	31:DG:140:ILE:HG22	1.91	0.51
1:AA:270:A:H2'	1:AA:271:C:C6	2.46	0.51
1:AA:624:C:H4'	20:AP:11:ALA:HB2	1.92	0.51
1:AA:658:C:O4'	19:AO:22:THR:OG1	2.26	0.51
1:AA:957:U:C2	1:AA:959:A:OP2	2.64	0.51
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.46	0.51
2:BA:121:U:H3'	2:BA:122:G:C5'	2.41	0.51
2:BA:160:A:H1'	2:BA:344:A:C5	2.46	0.51
2:BA:826:C:H2'	2:BA:827:U:C6	2.45	0.51
2:BA:1112:C:C4	7:BC:178:LEU:CD2	2.93	0.51
2:BA:1492:A:C2	4:CA:1913:A:N7	2.78	0.51
3:DA:184:C:O2'	3:DA:217:A:N3	2.39	0.51
3:DA:192:C:OP1	69:DA:3513:HOH:O	2.19	0.51
3:DA:305:C:C2'	3:DA:306:U:O5'	2.59	0.51
3:DA:332:A:C2	3:DA:335:C:C5	2.99	0.51
3:DA:1261:C:OP1	69:DA:3521:HOH:O	2.19	0.51
3:DA:1735:A:C2'	3:DA:1736:U:H5'	2.41	0.51
3:DA:2469:A:O3'	37:DN:55:ARG:NH1	2.44	0.51
3:DA:2582:G:C2	3:DA:2583:G:C8	2.99	0.51
4:CA:121:G:H4'	4:CA:149:A:H5'	1.92	0.51
4:CA:157:C:H2'	4:CA:158:U:O4'	2.11	0.51
4:CA:1209:U:O3'	4:CA:1212:G:H5'	2.10	0.51
4:CA:1310:G:C2'	4:CA:1311:G:H5'	2.41	0.51
4:CA:1380:G:H2'	4:CA:1381:G:C8	2.46	0.51
4:CA:2112:G:H5'	4:CA:2113:U:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2371:G:C2	4:CA:2372:U:C6	2.99	0.51
8:AD:23:SER:HB3	8:AD:161:LEU:HD11	1.93	0.51
8:AD:157:ALA:O	8:AD:161:LEU:HD22	2.11	0.51
11:AG:120:LEU:CD2	11:AG:124:LEU:HD21	2.41	0.51
13:AI:27:LYS:HD2	13:AI:62:ASP:OD1	2.11	0.51
16:AL:89:D2T:N	16:AL:89:D2T:OD1	2.42	0.51
7:BC:11:ARG:HH21	7:BC:182:ILE:HG13	1.76	0.51
10:BF:76:THR:O	10:BF:79:ARG:N	2.38	0.51
13:BI:119:ARG:HB2	13:BI:125:PRO:HG3	1.93	0.51
15:BK:16:VAL:HG13	15:BK:17:SER:N	2.26	0.51
32:CH:131:PHE:O	32:CH:138:PHE:HD2	1.94	0.51
38:CO:114:GLU:OE2	38:CO:118:ARG:NE	2.44	0.51
1:AA:15:G:C2	1:AA:16:A:C4	2.99	0.51
1:AA:427:U:H3'	1:AA:428:G:H2'	1.93	0.51
1:AA:977:A:H1'	1:AA:982:U:O4	2.11	0.51
1:AA:1154:G:H2'	1:AA:1155:A:H8	1.76	0.51
2:BA:44:A:H2'	2:BA:45:G:C8	2.46	0.51
2:BA:79:G:N2	2:BA:91:U:O2	2.44	0.51
2:BA:204:G:H2'	2:BA:205:A:O4'	2.11	0.51
2:BA:515:G:H2'	2:BA:516:U:O4'	2.10	0.51
2:BA:974:A:H4'	2:BA:975:A:O5'	2.11	0.51
3:DA:14:A:H1'	69:DA:3901:HOH:O	2.11	0.51
3:DA:136:G:H2'	3:DA:137:U:O4'	2.10	0.51
3:DA:578:G:OP1	3:DA:1255:U:O2'	2.21	0.51
3:DA:662:G:H2'	3:DA:663:G:O5'	2.11	0.51
3:DA:710:U:P	69:DA:3692:HOH:O	2.68	0.51
3:DA:1224:U:H4'	42:DS:88:GLY:O	2.11	0.51
3:DA:1269:A:H8	3:DA:1269:A:O5'	1.93	0.51
3:DA:1360:G:O6	3:DA:1372:U:C2	2.64	0.51
3:DA:1378:A:C4'	3:DA:1379:U:OP1	2.59	0.51
3:DA:1941:C:O2	3:DA:1941:C:H2'	2.11	0.51
3:DA:2129:C:N4	3:DA:2130:U:C4	2.78	0.51
3:DA:2322:A:H2'	3:DA:2323:G:O4'	2.11	0.51
4:CA:724:U:H2'	4:CA:725:G:O4'	2.10	0.51
4:CA:1182:G:H2'	4:CA:1183:U:O4'	2.10	0.51
4:CA:1274:A:N3	4:CA:1297:C:H1'	2.26	0.51
4:CA:1429:G:N3	4:CA:1568:G:C2	2.79	0.51
4:CA:2395:C:OP1	36:CM:63:LYS:NZ	2.34	0.51
4:CA:2773:C:C2'	4:CA:2774:C:O5'	2.59	0.51
6:AB:90:PHE:CE1	6:AB:153:ASP:O	2.64	0.51
9:AE:107:ALA:CB	9:AE:125:ALA:HB3	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AN:93:ILE:HG21	18:AN:96:LEU:HD22	1.92	0.51
19:AO:87:LEU:O	19:AO:88:ARG:CB	2.59	0.51
7:BC:36:ASP:OD1	7:BC:57:ILE:HD13	2.11	0.51
7:BC:82:GLU:O	7:BC:85:GLU:HG2	2.11	0.51
8:BD:104:ARG:NH1	8:BD:111:ARG:HH22	2.08	0.51
9:BE:99:ALA:HB2	9:BE:124:LEU:CD1	2.41	0.51
12:BH:67:GLN:C	12:BH:69:LYS:N	2.63	0.51
15:BK:59:THR:C	15:BK:91:PRO:HB2	2.36	0.51
33:CJ:111:THR:HG22	33:CJ:111:THR:O	2.10	0.51
40:CQ:74:GLN:HA	40:CQ:74:GLN:HE21	1.75	0.51
40:CQ:103:THR:O	40:CQ:105:LYS:N	2.32	0.51
55:C5:21:LYS:O	55:C5:22:ARG:HB2	2.11	0.51
30:DF:107:VAL:HA	30:DF:110:ILE:CD1	2.41	0.51
33:DJ:79:LEU:O	33:DJ:85:ILE:O	2.29	0.51
40:DQ:36:LYS:HD3	40:DQ:38:ARG:HH11	1.75	0.51
43:DT:47:VAL:O	43:DT:50:VAL:HG23	2.11	0.51
43:DT:57:ASN:HA	69:DT:309:HOH:O	2.10	0.51
44:DU:80:TRP:CD1	44:DU:80:TRP:N	2.79	0.51
46:DW:61:LEU:CD1	46:DW:61:LEU:N	2.74	0.51
54:D4:44:ARG:N	54:D4:45:PRO:HD2	2.25	0.51
1:AA:167:A:H2'	1:AA:168:G:O4'	2.11	0.50
1:AA:657:U:O2	19:AO:22:THR:HG23	2.11	0.50
1:AA:668:G:O2'	1:AA:669:G:H5'	2.11	0.50
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.12	0.50
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.45	0.50
1:AA:1392:G:C5	1:AA:1393:U:C5	2.98	0.50
2:BA:32:A:C3'	2:BA:33:A:H8	2.24	0.50
2:BA:374:A:H5"	2:BA:452:A:N1	2.26	0.50
2:BA:451:A:H1'	2:BA:452:A:N7	2.26	0.50
2:BA:708:C:C5	2:BA:709:U:C5	2.99	0.50
2:BA:719:C:H3'	2:BA:720:C:C6	2.47	0.50
2:BA:793:U:HO2'	2:BA:1516:G:HO2'	1.54	0.50
2:BA:938:A:N6	2:BA:939:G:C6	2.80	0.50
3:DA:1066:U:H2'	3:DA:1067:A:H5"	1.94	0.50
3:DA:1525:A:C5	3:DA:1526:C:C5	2.99	0.50
4:CA:18:U:H3	4:CA:522:A:H61	1.59	0.50
4:CA:193:U:O3'	4:CA:803:U:H4'	2.11	0.50
4:CA:364:C:H2'	4:CA:365:U:C6	2.46	0.50
4:CA:425:G:C2	4:CA:426:C:C4	2.99	0.50
4:CA:664:G:H2'	4:CA:665:U:O4'	2.11	0.50
4:CA:830:G:O6	4:CA:2448:A:H2'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1719:G:N2	4:CA:1742:U:C2	2.79	0.50
4:CA:2032:G:O6	4:CA:2453:A:O2'	2.28	0.50
4:CA:2061:G:C2	4:CA:2063:C:C4	2.99	0.50
4:CA:2261:C:C2	4:CA:2280:G:N2	2.79	0.50
4:CA:2420:C:OP1	54:C4:33:THR:HB	2.11	0.50
4:CA:2531:A:C4	4:CA:2532:G:C8	3.00	0.50
4:CA:2552:U:N3	4:CA:2554:U:O5'	2.44	0.50
9:AE:115:LEU:HG	9:AE:120:VAL:HG21	1.92	0.50
12:AH:113:ASP:OD1	12:AH:117:ARG:NH2	2.44	0.50
6:BB:84:ALA:O	6:BB:86:SER:N	2.44	0.50
7:BC:80:LYS:HA	7:BC:80:LYS:HE3	1.93	0.50
7:BC:116:VAL:CG1	7:BC:137:ALA:HB1	2.41	0.50
13:BI:57:MET:SD	13:BI:58:VAL:N	2.82	0.50
17:BM:57:ARG:O	17:BM:60:VAL:HG12	2.11	0.50
30:CF:73:VAL:HG22	30:CF:78:ILE:HD11	1.91	0.50
33:CJ:33:ASN:C	33:CJ:35:MET:H	2.19	0.50
38:CO:90:ARG:CZ	38:CO:116:VAL:HG11	2.41	0.50
30:DF:138:PRO:HB2	57:D7:29:ILE:HD11	1.93	0.50
33:DJ:86:LYS:C	33:DJ:88:GLY:N	2.68	0.50
33:DJ:89:SER:HB3	33:DJ:92:PRO:CG	2.40	0.50
57:D7:46:THR:HG23	57:D7:47:ILE:H	1.76	0.50
1:AA:68:G:C5	1:AA:69:G:H1'	2.47	0.50
1:AA:544:G:C5	1:AA:545:C:C5	2.99	0.50
2:BA:690:G:H2'	2:BA:691:G:O4'	2.11	0.50
2:BA:840:C:H3'	2:BA:841:C:C5'	2.40	0.50
2:BA:882:C:O2'	2:BA:883:C:H5'	2.10	0.50
2:BA:1087:G:H22	2:BA:1099:G:H1'	1.76	0.50
2:BA:1522:U:H2'	2:BA:1523:G:H8	1.76	0.50
3:DA:545:U:H3'	3:DA:546:U:H4'	1.91	0.50
3:DA:1499:C:P	69:DA:3882:HOH:O	2.68	0.50
3:DA:1587:G:H2'	3:DA:1588:G:H8	1.77	0.50
3:DA:1870:C:H2'	3:DA:1871:A:C4	2.47	0.50
3:DA:1985:C:N3	3:DA:1986:C:C5	2.79	0.50
3:DA:2127:G:H1'	3:DA:2173:A:C2	2.46	0.50
3:DA:2838:G:H2'	3:DA:2839:G:O4'	2.11	0.50
59:DA:3066:PGE:H52	56:DD:167:ASN:O	2.11	0.50
4:CA:106:C:O2'	4:CA:294:A:O2'	1.92	0.50
4:CA:517:C:H1'	43:CT:78:GLU:OE2	2.10	0.50
4:CA:808:G:OP2	36:CM:36:LYS:HE2	2.11	0.50
4:CA:1041:G:N2	4:CA:1114:C:O2	2.38	0.50
4:CA:2284:A:OP2	52:C2:5:ARG:HD2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:31:ILE:HD13	6:AB:39:HIS:CD2	2.46	0.50
16:AL:110:ARG:HB2	16:AL:119:VAL:HG21	1.94	0.50
7:BC:155:GLY:O	7:BC:157:LEU:HG	2.10	0.50
15:BK:79:ILE:H	15:BK:79:ILE:HD12	1.76	0.50
33:DJ:17:ALA:O	33:DJ:18:ASN:CB	2.59	0.50
33:DJ:57:VAL:O	33:DJ:68:PHE:CB	2.60	0.50
38:DO:90:ARG:CZ	38:DO:116:VAL:HG11	2.41	0.50
39:DP:1:MET:O	39:DP:2:ASP:HB3	2.12	0.50
47:DX:64:LYS:HG3	47:DX:83:GLU:HB3	1.94	0.50
1:AA:144:G:C4	1:AA:179:A:C2	2.99	0.50
1:AA:254:G:O2'	21:AQ:18:GLU:O	2.29	0.50
1:AA:568:G:O6	16:AL:2:ALA:N	2.44	0.50
1:AA:695:A:N1	1:AA:696:A:C2	2.79	0.50
1:AA:923:A:O4'	1:AA:1398:A:C2	2.64	0.50
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.11	0.50
1:AA:1238:A:H5"	1:AA:1239:A:OP2	2.12	0.50
2:BA:115:G:HO2'	2:BA:116:A:P	2.26	0.50
2:BA:176:C:OP1	24:BT:20:HIS:NE2	2.32	0.50
2:BA:769:G:H4'	2:BA:1513:A:H4'	1.93	0.50
3:DA:225:C:C2	3:DA:231:A:C2	2.99	0.50
3:DA:249:C:OP1	69:DA:3516:HOH:O	2.19	0.50
3:DA:520:G:H2'	3:DA:521:U:C6	2.46	0.50
3:DA:1070:A:N6	33:DJ:10:LEU:HB3	2.27	0.50
3:DA:1745:A:H2'	3:DA:1746:A:O5'	2.12	0.50
3:DA:1768:C:P	69:DA:3409:HOH:O	2.67	0.50
3:DA:2270:A:P	69:DA:3317:HOH:O	2.69	0.50
65:DA:3064:ACY:CH3	69:DA:4579:HOH:O	2.58	0.50
4:CA:411:G:OP1	4:CA:2407:A:OP2	2.29	0.50
4:CA:1225:G:O2'	42:CS:86:GLN:OE1	2.22	0.50
4:CA:1373:A:OP1	69:CA:3401:HOH:O	2.19	0.50
4:CA:1680:U:H2'	4:CA:1681:G:O4'	2.12	0.50
4:CA:1792:G:C5	4:CA:1793:C:C5	3.00	0.50
6:AB:17:GLY:CA	6:AB:41:ILE:HG23	2.41	0.50
9:AE:108:GLY:O	9:AE:109:GLY:C	2.54	0.50
11:AG:27:VAL:O	11:AG:31:MET:N	2.40	0.50
15:AK:110:ILE:N	25:AU:6:VAL:O	2.42	0.50
6:BB:21:ARG:O	6:BB:22:TYR:C	2.54	0.50
12:BH:116:ALA:HB1	12:BH:121:LEU:CD1	2.41	0.50
39:CP:67:ASN:OD1	39:CP:70:ALA:N	2.30	0.50
42:CS:83:TYR:CD2	42:CS:84:ARG:N	2.80	0.50
51:D1:54:ILE:HG22	51:D1:55:ALA:N	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:66:A:C2	1:AA:104:G:H1'	2.46	0.50
1:AA:232:G:O2'	1:AA:233:C:H5'	2.12	0.50
2:BA:268:U:C2	2:BA:269:C:C5	2.99	0.50
2:BA:268:U:H2'	2:BA:269:C:C6	2.47	0.50
2:BA:505:G:OP2	2:BA:534:U:O2'	2.18	0.50
2:BA:509:A:P	69:BA:1740:HOH:O	2.70	0.50
2:BA:561:U:HO2'	2:BA:562:U:P	2.34	0.50
2:BA:680:C:O2'	2:BA:681:A:H5'	2.11	0.50
2:BA:862:C:C2	2:BA:863:U:C6	3.00	0.50
2:BA:1318:A:O2'	23:BS:37:ARG:HD3	2.12	0.50
2:BA:1416:G:N2	2:BA:1485:U:H1'	2.27	0.50
3:DA:78:U:H2'	3:DA:79:C:C6	2.47	0.50
3:DA:255:A:OP1	69:DA:3508:HOH:O	2.18	0.50
3:DA:322:A:H5'	3:DA:340:A:H1'	1.92	0.50
3:DA:515:A:C2'	3:DA:516:C:H5'	2.41	0.50
3:DA:766:U:P	69:DA:3371:HOH:O	2.66	0.50
3:DA:920:A:C6	3:DA:921:C:C4	3.00	0.50
3:DA:1251:C:H5'	69:DA:3618:HOH:O	2.12	0.50
3:DA:1264:A:O5'	3:DA:1264:A:H8	1.94	0.50
3:DA:1588:G:C4	3:DA:1589:U:C5	3.00	0.50
3:DA:1670:C:H3'	3:DA:1671:U:C6	2.45	0.50
3:DA:2515:C:O2'	3:DA:2516:A:H5'	2.12	0.50
3:DA:2553:G:OP1	69:DA:3514:HOH:O	2.19	0.50
67:DA:3059:EDO:H12	59:DA:3066:PGE:H32	1.92	0.50
4:CA:186:G:C2	4:CA:211:C:O2	2.65	0.50
4:CA:187:G:N2	4:CA:210:C:C2	2.79	0.50
4:CA:189:G:O2'	4:CA:190:A:O5'	2.25	0.50
4:CA:332:A:O2'	4:CA:334:C:P	2.68	0.50
4:CA:1567:G:N7	27:CC:82:TYR:CD2	2.79	0.50
4:CA:1948:G:H3'	69:CA:3231:HOH:O	2.10	0.50
4:CA:2287:A:O2'	4:CA:2289:G:N7	2.36	0.50
4:CA:2741:A:H2'	4:CA:2742:G:O4'	2.11	0.50
22:AR:22:ASP:OD2	22:AR:24:LYS:HB2	2.11	0.50
24:AT:5:LYS:O	24:AT:6:SER:C	2.55	0.50
6:BB:164:ILE:O	6:BB:186:ILE:HG23	2.12	0.50
10:BF:2:ARG:HB3	10:BF:4:TYR:CE1	2.46	0.50
11:BG:50:LEU:CD1	11:BG:61:ALA:HB1	2.42	0.50
14:BJ:80:THR:HB	14:BJ:83:THR:HG22	1.94	0.50
17:BM:25:VAL:CG2	17:BM:25:VAL:O	2.60	0.50
18:BN:27:LYS:O	18:BN:31:SER:HB2	2.11	0.50
24:BT:6:SER:OG	24:BT:7:ALA:N	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:CV:50:ALA:O	45:CV:51:LEU:HB2	2.11	0.50
50:C0:39:ASP:OD1	50:C0:44:ARG:NH1	2.44	0.50
52:C2:9:LYS:O	52:C2:50:GLU:HG2	2.11	0.50
30:DF:41:GLU:HG3	30:DF:48:LEU:HD22	1.94	0.50
31:DG:39:ALA:HA	31:DG:57:TYR:CD2	2.47	0.50
32:DH:90:LEU:HD11	32:DH:145:VAL:HG11	1.93	0.50
1:AA:6:G:C6	9:AE:99:ALA:HB1	2.46	0.50
1:AA:373:A:C2	1:AA:374:A:C8	2.99	0.50
1:AA:453:G:O6	1:AA:479:U:C4	2.63	0.50
1:AA:568:G:N3	1:AA:569:C:C5	2.80	0.50
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.25	0.50
1:AA:1311:A:C2	1:AA:1327:C:N3	2.80	0.50
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.93	0.50
1:AA:1514:G:C2'	1:AA:1515:G:H5'	2.41	0.50
2:BA:51:A:H4'	2:BA:52:C:C5'	2.42	0.50
2:BA:309:A:O2'	2:BA:607:A:N1	2.37	0.50
2:BA:405:U:H2'	2:BA:406:G:OP1	2.11	0.50
3:DA:408:G:O2'	3:DA:409:G:H5'	2.12	0.50
3:DA:722:A:H2'	3:DA:723:C:O4'	2.10	0.50
3:DA:747:5MU:C4	3:DA:2613:U:C5	3.00	0.50
3:DA:915:C:H2'	3:DA:916:G:H5'	1.93	0.50
3:DA:1360:G:C6	3:DA:1372:U:C2	2.99	0.50
3:DA:1826:G:O2'	3:DA:1971:U:OP2	2.29	0.50
3:DA:2202:U:H5"	3:DA:2203:U:OP1	2.12	0.50
4:CA:490:C:C6	4:CA:490:C:OP1	2.64	0.50
4:CA:1130:U:HO2'	4:CA:1131:G:H8	1.58	0.50
4:CA:1131:G:O2'	4:CA:1133:A:N7	2.42	0.50
4:CA:2089:C:O2'	4:CA:2090:A:H5'	2.11	0.50
4:CA:2537:U:H2'	4:CA:2538:C:C6	2.47	0.50
69:CA:3823:HOH:O	53:C3:2:LYS:HE3	2.11	0.50
6:AB:24:ASN:OD1	6:AB:26:LYS:N	2.38	0.50
8:AD:152:GLN:O	8:AD:155:VAL:HG22	2.12	0.50
9:AE:157:ARG:HD2	12:AH:43:GLU:O	2.12	0.50
24:AT:54:MET:O	24:AT:57:ILE:HG22	2.12	0.50
7:BC:82:GLU:O	7:BC:85:GLU:HG3	2.11	0.50
9:BE:155:ALA:O	9:BE:156:LYS:HG2	2.11	0.50
31:CG:172:GLU:HB3	69:CG:203:HOH:O	2.11	0.50
32:CH:51:ARG:HG3	32:CH:52:ALA:N	2.25	0.50
40:CQ:30:TRP:CE3	40:CQ:37:LYS:HG2	2.46	0.50
33:DJ:74:PRO:HD2	33:DJ:77:VAL:HG21	1.93	0.50
53:D3:44:VAL:HB	69:D3:221:HOH:O	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:340:U:H2'	1:AA:341:C:C6	2.46	0.50
1:AA:1053:G:O5'	1:AA:1054:C:H5'	2.12	0.50
2:BA:157:U:O2	2:BA:165:G:C2	2.65	0.50
2:BA:254:G:H4'	21:BQ:20:SER:HB2	1.92	0.50
2:BA:562:U:O3'	26:BL:12:ARG:HG2	2.10	0.50
2:BA:562:U:H1'	26:BL:12:ARG:HG3	1.94	0.50
2:BA:687:A:C8	2:BA:701:U:C5	3.00	0.50
3:DA:747:5MU:H4'	69:DA:3689:HOH:O	2.10	0.50
3:DA:1066:U:OP1	3:DA:1066:U:O4'	2.29	0.50
3:DA:1413:A:C6	3:DA:1414:C:C4	2.99	0.50
3:DA:1805:A:N3	27:DC:49:THR:HB	2.27	0.50
3:DA:2192:U:H2'	3:DA:2193:G:O4'	2.11	0.50
3:DA:2619:C:O2'	3:DA:2620:C:H5'	2.12	0.50
4:CA:68:G:H2'	4:CA:69:C:C6	2.47	0.50
4:CA:972:A:C2	4:CA:973:A:N6	2.80	0.50
4:CA:1799:G:H5'	4:CA:1819:A:N6	2.25	0.50
4:CA:1820:U:OP1	27:CC:176:ARG:HG3	2.11	0.50
4:CA:2463:C:O5'	4:CA:2463:C:H6	1.94	0.50
6:AB:181:ILE:O	6:AB:183:VAL:N	2.44	0.50
9:AE:142:ASP:HA	9:AE:145:GLU:HB3	1.93	0.50
17:AM:73:ILE:O	17:AM:76:SER:OG	2.28	0.50
18:AN:68:GLY:O	18:AN:69:ARG:C	2.52	0.50
23:AS:29:LYS:CB	23:AS:30:PRO:HD2	2.41	0.50
13:BI:73:SER:O	13:BI:77:GLY:N	2.36	0.50
27:CC:32:LEU:O	27:CC:63:ILE:HD12	2.12	0.50
43:CT:65:ASP:HB3	43:CT:68:ASP:OD1	2.11	0.50
44:CU:17:SER:O	44:CU:19:LYS:N	2.41	0.50
53:C3:11:LYS:NZ	69:C3:203:HOH:O	2.45	0.50
32:DH:2:GLN:O	32:DH:3:VAL:HG13	2.12	0.50
1:AA:71:A:O4'	1:AA:100:G:N2	2.45	0.50
1:AA:675:A:OP1	22:AR:74:HIS:CE1	2.65	0.50
1:AA:1367:C:C4	1:AA:1368:A:N7	2.80	0.50
1:AA:1375:A:O2'	1:AA:1376:U:H5'	2.11	0.50
1:AA:1518:MA6:N7	1:AA:1518:MA6:C9	2.74	0.50
2:BA:1071:C:H2'	2:BA:1072:G:C8	2.46	0.50
3:DA:192:C:O2'	3:DA:802:A:N3	2.44	0.50
3:DA:814:C:H2'	3:DA:815:C:H6	1.76	0.50
3:DA:996:A:H4'	41:DR:90:ASP:OD2	2.12	0.50
3:DA:1026:G:H2'	3:DA:1027:A:C8	2.47	0.50
3:DA:1064:C:O5'	33:DJ:88:GLY:HA3	2.12	0.50
3:DA:2077:A:C2	3:DA:2078:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2243:U:O2'	3:DA:2244:U:H5'	2.12	0.50
3:DA:2305:U:O2	30:DF:150:GLY:HA3	2.12	0.50
3:DA:2364:C:C2'	3:DA:2365:G:H5'	2.41	0.50
3:DA:2492:U:C2	3:DA:2493:U:C5	2.99	0.50
3:DA:2498:OMC:O2	3:DA:2498:OMC:H2'	2.11	0.50
4:CA:532:A:H2'	4:CA:532:A:N3	2.27	0.50
4:CA:635:C:H2'	4:CA:636:G:O4'	2.11	0.50
4:CA:656:G:H2'	4:CA:657:U:O4'	2.11	0.50
4:CA:809:G:OP1	69:CA:3402:HOH:O	2.19	0.50
4:CA:821:A:H5'	4:CA:822:G:C8	2.47	0.50
4:CA:1509:A:O2'	4:CA:1510:G:P	2.69	0.50
4:CA:1661:G:C2	4:CA:1662:U:C6	2.99	0.50
4:CA:2803:G:H2'	4:CA:2804:U:C6	2.47	0.50
6:AB:140:GLU:O	6:AB:144:LEU:HD23	2.11	0.50
6:AB:203:ASN:OD1	6:AB:205:ASP:N	2.43	0.50
14:AJ:36:VAL:HG22	14:AJ:76:ILE:HG12	1.94	0.50
17:AM:14:HIS:HB2	17:AM:17:ILE:HD13	1.93	0.50
10:BF:3:HIS:O	10:BF:92:THR:OG1	2.26	0.50
20:BP:14:ARG:O	20:BP:15:PRO:O	2.30	0.50
25:BU:25:LYS:O	25:BU:26:ALA:HB2	2.12	0.50
41:CR:29:ARG:HA	69:CR:301:HOH:O	2.11	0.50
43:CT:96:ILE:H	43:CT:96:ILE:HD13	1.77	0.50
45:CV:11:ILE:HG21	45:CV:79:ALA:HB2	1.94	0.50
53:C3:44:VAL:HG22	53:C3:45:SER:H	1.76	0.50
56:DD:98:VAL:O	56:DD:98:VAL:HG22	2.12	0.50
30:DF:114:ARG:NH1	57:D7:62:ARG:NH1	2.59	0.50
31:DG:8:VAL:HG12	31:DG:68:ARG:CZ	2.42	0.50
1:AA:411:A:C5	1:AA:429:U:C5	3.00	0.50
1:AA:598:U:H4'	12:AH:86:TYR:CG	2.47	0.50
1:AA:747:A:C6	1:AA:748:G:C6	3.00	0.50
1:AA:872:A:N7	1:AA:874:G:C8	2.80	0.50
1:AA:956:U:C3'	69:AA:1722:HOH:O	2.58	0.50
2:BA:134:G:N2	69:BA:1825:HOH:O	2.45	0.50
2:BA:247:G:C6	2:BA:278:G:N1	2.80	0.50
2:BA:505:G:C6	2:BA:535:A:C2	3.00	0.50
2:BA:869:G:H4'	2:BA:872:A:C8	2.47	0.50
2:BA:1031:C:H5'	2:BA:1032:G:C2	2.47	0.50
2:BA:1491:G:H5"	26:BL:44:LYS:HD2	1.94	0.50
3:DA:438:G:H2'	3:DA:439:A:H5'	1.94	0.50
3:DA:681:G:C2'	3:DA:682:G:O5'	2.59	0.50
3:DA:754:U:H2'	3:DA:755:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:993:G:H2'	3:DA:994:C:H5'	1.94	0.50
3:DA:994:C:P	41:DR:53:LYS:HZ1	2.34	0.50
3:DA:1927:A:C6	3:DA:1928:A:C6	3.00	0.50
3:DA:1967:C:C2'	3:DA:1968:G:H5'	2.42	0.50
3:DA:2048:G:H1'	69:DA:3779:HOH:O	2.12	0.50
3:DA:2415:G:C5	3:DA:2416:C:C5	3.00	0.50
3:DA:2467:C:H5"	55:D5:8:ARG:NH2	2.27	0.50
3:DA:2526:G:C2'	55:D5:1:MET:H1	2.25	0.50
3:DA:2548:U:H2'	3:DA:2549:G:O5'	2.12	0.50
3:DA:2821:A:H4'	67:DA:3059:EDO:H11	1.94	0.50
4:CA:271:G:C2	4:CA:367:G:N1	2.80	0.50
4:CA:1525:A:H2'	4:CA:1526:C:O4'	2.12	0.50
4:CA:1530:G:C2	4:CA:1542:U:O2	2.65	0.50
4:CA:1709:U:H2'	4:CA:1710:G:C8	2.47	0.50
4:CA:1782:U:H2'	4:CA:1783:A:H5'	1.94	0.50
4:CA:1889:A:N3	4:CA:2086:U:O2'	2.34	0.50
4:CA:1917:U:H2'	4:CA:1918:A:H5'	1.93	0.50
4:CA:1984:G:C6	4:CA:1985:C:C4	3.00	0.50
4:CA:2284:A:H5'	69:CA:3940:HOH:O	2.11	0.50
4:CA:2599:G:N7	27:CC:235:GLU:HB2	2.27	0.50
4:CA:2623:G:O4'	4:CA:2825:G:H8	1.95	0.50
4:CA:2879:A:H4'	69:CA:3879:HOH:O	2.12	0.50
8:AD:206:LYS:HD2	8:AD:206:LYS:C	2.37	0.50
9:AE:90:THR:HG22	9:AE:91:GLY:N	2.26	0.50
7:BC:40:ARG:NH1	7:BC:55:ILE:O	2.44	0.50
11:BG:26:PHE:CD2	11:BG:62:PHE:HE2	2.30	0.50
13:BI:20:PHE:O	13:BI:63:LEU:HA	2.12	0.50
20:BP:79:ASN:O	20:BP:80:LYS:HG3	2.11	0.50
36:CM:21:ARG:O	36:CM:25:SER:OG	2.28	0.50
56:DD:13:ARG:HD2	56:DD:15:PHE:CZ	2.47	0.50
32:DH:15:LEU:HG	32:DH:16:GLY:N	2.27	0.50
33:DJ:86:LYS:C	33:DJ:88:GLY:H	2.18	0.50
47:DX:38:GLN:OE1	47:DX:42:LYS:N	2.45	0.50
1:AA:536:C:P	69:AA:1771:HOH:O	2.69	0.50
1:AA:594:U:H2'	1:AA:595:A:C8	2.47	0.50
1:AA:595:A:C6	1:AA:641:U:C6	2.99	0.50
1:AA:652:U:O2'	1:AA:752:G:N2	2.45	0.50
1:AA:905:U:H5"	1:AA:906:A:OP2	2.12	0.50
1:AA:1171:A:C2	1:AA:1172:C:C2	3.00	0.50
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.47	0.50
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1321:U:O3'	23:AS:78:ARG:NH2	2.44	0.50
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.47	0.50
2:BA:31:G:C5	2:BA:306:A:H1'	2.47	0.50
2:BA:227:G:H2'	2:BA:228:A:O4'	2.11	0.50
2:BA:728:A:H2'	2:BA:729:A:H8	1.76	0.50
3:DA:118:A:C8	3:DA:119:A:C8	3.00	0.50
3:DA:1182:G:H2'	3:DA:1183:U:O4'	2.12	0.50
3:DA:1274:A:N1	3:DA:1644:C:O2'	2.39	0.50
3:DA:1788:C:O5'	3:DA:1788:C:H6	1.95	0.50
3:DA:2821:A:H2'	3:DA:2822:G:C8	2.47	0.50
4:CA:36:G:N1	4:CA:445:C:C4	2.80	0.50
4:CA:686:U:H1'	53:C3:6:GLN:O	2.12	0.50
4:CA:983:A:C6	4:CA:984:A:C2	2.99	0.50
4:CA:1682:G:C2	4:CA:1757:A:H1'	2.46	0.50
4:CA:1850:G:H2'	4:CA:1851:U:C6	2.47	0.50
4:CA:2326:C:O2'	4:CA:2327:A:P	2.70	0.50
4:CA:2355:G:H4'	47:CX:22:LYS:HG3	1.94	0.50
7:AC:23:PHE:CD1	7:AC:24:ALA:N	2.80	0.50
9:AE:132:ASN:OD1	9:AE:134:ILE:HG22	2.12	0.50
13:AI:39:PHE:C	13:AI:41:ARG:H	2.20	0.50
14:AJ:56:HIS:CG	14:AJ:57:VAL:HG12	2.47	0.50
21:AQ:17:MET:HG2	21:AQ:20:SER:HB3	1.92	0.50
7:BC:40:ARG:HG2	7:BC:55:ILE:HG12	1.92	0.50
7:BC:53:SER:HB2	7:BC:115:LEU:HG	1.92	0.50
13:BI:112:GLU:OE2	13:BI:115:LYS:NZ	2.45	0.50
34:CK:73:VAL:HG11	34:CK:75:TYR:CZ	2.46	0.50
27:DC:77:VAL:HG21	27:DC:109:LEU:HD21	1.93	0.50
56:DD:68:PHE:CE2	56:DD:75:ALA:HA	2.47	0.50
34:DK:98:GLU:O	34:DK:102:GLU:HG3	2.12	0.50
38:DO:28:LEU:O	38:DO:32:GLU:N	2.38	0.50
40:DQ:24:THR:HB	40:DQ:87:ARG:HG2	1.93	0.50
44:DU:12:ARG:O	44:DU:13:ALA:HB2	2.11	0.50
48:DY:42:GLU:O	48:DY:43:LYS:C	2.55	0.50
49:DZ:42:LEU:O	49:DZ:45:GLN:O	2.30	0.50
57:D7:40:VAL:C	57:D7:41:THR:OG1	2.55	0.50
1:AA:237:G:OP1	21:AQ:42:THR:OG1	2.28	0.49
1:AA:542:G:C2	1:AA:543:U:C5	3.00	0.49
2:BA:130:A:HO2'	2:BA:131:A:P	2.34	0.49
2:BA:159:G:N2	2:BA:162:A:OP2	2.45	0.49
2:BA:227:G:O2'	20:BP:63:GLN:HG3	2.11	0.49
2:BA:347:G:H4'	69:BA:2052:HOH:O	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:708:C:O2'	2:BA:709:U:H5'	2.12	0.49
2:BA:790:A:C6	2:BA:791:G:C6	2.99	0.49
2:BA:1107:C:C4	2:BA:1108:G:N7	2.79	0.49
3:DA:356:G:H2'	3:DA:357:C:O4'	2.12	0.49
3:DA:852:U:H2'	3:DA:853:C:C6	2.47	0.49
3:DA:996:A:C2	3:DA:997:G:C8	3.00	0.49
3:DA:1501:G:O2'	3:DA:1502:A:H5'	2.12	0.49
3:DA:1585:C:H2'	3:DA:1586:A:H5'	1.94	0.49
3:DA:1753:G:N2	3:DA:1755:A:H3'	2.26	0.49
3:DA:2031:A:C8	3:DA:2498:OMC:HM21	2.47	0.49
3:DA:2636:C:H2'	3:DA:2637:U:C6	2.46	0.49
4:CA:108:G:H2'	4:CA:109:C:O4'	2.12	0.49
4:CA:370:G:O2'	4:CA:424:G:P	2.70	0.49
4:CA:397:U:OP1	48:CY:30:PRO:HA	2.12	0.49
4:CA:447:A:N1	4:CA:473:G:H1'	2.26	0.49
4:CA:1340:U:O2	4:CA:1340:U:H2'	2.10	0.49
4:CA:1431:A:C2	4:CA:1432:G:C4	3.00	0.49
4:CA:1686:C:H2'	4:CA:1687:G:O4'	2.12	0.49
4:CA:1775:U:H2'	4:CA:1776:G:O5'	2.11	0.49
4:CA:1992:G:C2	4:CA:1995:U:O4	2.64	0.49
4:CA:2550:G:C2	4:CA:2559:C:O2	2.65	0.49
4:CA:2637:U:OP1	28:CD:83:ARG:HD3	2.11	0.49
5:DB:49:C:O2'	5:DB:50:A:H5'	2.12	0.49
6:AB:152:LYS:HG3	6:AB:153:ASP:H	1.77	0.49
7:BC:117:ALA:HB2	7:BC:200:VAL:HG11	1.94	0.49
15:BK:14:LYS:O	15:BK:15:GLN:HB3	2.11	0.49
27:CC:232:GLY:H	27:CC:241:LYS:HE3	1.77	0.49
28:CD:65:ALA:O	28:CD:69:ALA:N	2.41	0.49
46:DW:21:ARG:NH1	69:DW:102:HOH:O	2.22	0.49
1:AA:22:G:C6	1:AA:23:C:C4	3.00	0.49
1:AA:1350:A:OP1	13:AI:123:ARG:NE	2.45	0.49
2:BA:577:G:C2	2:BA:578:C:C6	3.01	0.49
2:BA:657:U:O2	19:BO:22:THR:HG23	2.11	0.49
2:BA:1106:G:C4	2:BA:1107:C:C5	3.00	0.49
2:BA:1494:G:C6	2:BA:1495:U:C4	3.00	0.49
3:DA:65:U:H2'	3:DA:66:C:H6	1.76	0.49
3:DA:628:G:H4'	3:DA:651:G:O2'	2.12	0.49
3:DA:990:A:H2'	69:DA:4851:HOH:O	2.11	0.49
3:DA:1062:G:C8	3:DA:1070:A:H5'	2.48	0.49
3:DA:1364:G:OP2	48:DY:49:ARG:NH2	2.41	0.49
3:DA:1829:A:P	69:DA:3344:HOH:O	2.67	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2299:U:H2'	3:DA:2300:C:C6	2.47	0.49
3:DA:2480:C:O2	3:DA:2480:C:C2'	2.59	0.49
4:CA:311:A:N6	4:CA:329:G:H3'	2.27	0.49
4:CA:868:U:C4	4:CA:869:G:N7	2.80	0.49
4:CA:1208:C:C5	4:CA:1209:U:C5	3.01	0.49
4:CA:1355:G:C2	4:CA:1356:G:C8	3.00	0.49
4:CA:1784:A:H4'	4:CA:1785:A:O5'	2.12	0.49
4:CA:1805:A:N3	27:CC:49:THR:HB	2.27	0.49
4:CA:2344:U:H5'	4:CA:2373:G:H4'	1.95	0.49
4:CA:2393:U:H2'	4:CA:2394:C:O4'	2.11	0.49
4:CA:2885:G:N2	51:C1:31:LYS:HB3	2.27	0.49
6:AB:51:ASN:C	6:AB:53:ALA:H	2.19	0.49
9:AE:50:TYR:O	9:AE:51:GLY:O	2.30	0.49
17:AM:48:LEU:HD23	17:AM:52:GLN:HB2	1.94	0.49
24:AT:27:MET:HG3	24:AT:28:MET:N	2.27	0.49
13:BI:42:GLU:O	13:BI:45:ARG:NH1	2.44	0.49
30:CF:51:ASN:O	30:CF:149:ARG:NH2	2.45	0.49
33:CJ:7:TYR:HB2	33:CJ:57:VAL:HG13	1.93	0.49
33:CJ:10:LEU:HD21	33:CJ:27:LEU:HA	1.94	0.49
45:CV:73:ASN:C	45:CV:75:ALA:H	2.19	0.49
33:DJ:76:ALA:C	33:DJ:78:LEU:H	2.20	0.49
1:AA:11:G:C6	1:AA:12:U:C5	3.00	0.49
1:AA:116:A:H2'	1:AA:117:G:H5'	1.95	0.49
1:AA:367:U:C6	1:AA:394:G:N2	2.79	0.49
2:BA:130:A:O2'	2:BA:131:A:O5'	2.22	0.49
2:BA:259:G:C4	2:BA:260:G:C8	3.00	0.49
2:BA:686:U:O2	2:BA:687:A:C8	2.65	0.49
2:BA:1115:U:H2'	2:BA:1116:U:O4'	2.12	0.49
3:DA:309:A:N3	3:DA:329:G:O2'	2.40	0.49
3:DA:327:G:N2	3:DA:336:C:C2	2.80	0.49
3:DA:681:G:H2'	3:DA:682:G:O5'	2.12	0.49
3:DA:1009:A:O4'	41:DR:58:GLN:HG3	2.12	0.49
3:DA:1134:A:P	69:DA:3207:HOH:O	2.56	0.49
3:DA:1439:A:C2	3:DA:1553:A:C5	3.00	0.49
3:DA:2256:G:O2'	3:DA:2257:U:H5'	2.13	0.49
3:DA:2516:A:C2	3:DA:2569:G:C2	3.00	0.49
3:DA:2861:U:C2	3:DA:2862:G:C8	3.00	0.49
4:CA:211:C:H2'	4:CA:212:G:O4'	2.12	0.49
4:CA:1350:C:N3	4:CA:1382:G:C2	2.80	0.49
4:CA:2061:G:H2'	4:CA:2501:C:O2'	2.13	0.49
4:CA:2505:G:C6	4:CA:2576:G:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2730:C:H2'	4:CA:2731:G:O4'	2.11	0.49
4:CA:2761:A:H1'	31:CG:142:GLN:NE2	2.26	0.49
5:DB:47:C:H5"	5:DB:48:U:OP2	2.11	0.49
69:DB:313:HOH:O	50:D0:19:HIS:CE1	2.65	0.49
8:AD:158:ALA:HA	8:AD:161:LEU:HD21	1.94	0.49
10:AF:5:GLU:O	10:AF:6:ILE:CB	2.60	0.49
14:AJ:11:LYS:HA	14:AJ:70:HIS:O	2.12	0.49
14:AJ:27:GLU:O	14:AJ:29:ALA:N	2.45	0.49
18:AN:32:ASP:C	18:AN:34:ASN:OD1	2.54	0.49
23:AS:66:MET:HG3	23:AS:74:PHE:CZ	2.46	0.49
6:BB:28:LYS:N	6:BB:29:PRO:HD2	2.28	0.49
10:BF:10:VAL:HG21	10:BF:21:MET:HE1	1.94	0.49
13:BI:57:MET:O	13:BI:60:LYS:HB2	2.11	0.49
17:BM:64:VAL:HG13	17:BM:68:ASP:HB3	1.94	0.49
34:CK:102:GLU:O	34:CK:106:LYS:HB2	2.13	0.49
45:CV:34:ILE:HD13	45:CV:62:ALA:O	2.12	0.49
29:DE:46:GLN:NE2	69:DE:410:HOH:O	2.41	0.49
37:DN:74:THR:HG23	69:DN:323:HOH:O	2.12	0.49
1:AA:26:A:H2'	1:AA:27:G:H5'	1.93	0.49
1:AA:259:G:C4	1:AA:260:G:C8	3.01	0.49
1:AA:596:A:N1	1:AA:645:G:C4	2.80	0.49
1:AA:886:G:C2	1:AA:912:C:O2	2.65	0.49
1:AA:1057:G:H2'	1:AA:1058:G:H5'	1.94	0.49
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.11	0.49
2:BA:438:U:C2	2:BA:494:G:C6	3.01	0.49
2:BA:971:G:O2'	2:BA:1365:G:O2'	2.04	0.49
2:BA:1492:A:OP2	2:BA:1493:A:C6	2.65	0.49
3:DA:616:A:H4'	29:DE:101:TYR:CZ	2.47	0.49
3:DA:733:G:H8	3:DA:733:G:O5'	1.95	0.49
3:DA:1131:G:C6	34:DK:77:HIS:CD2	3.00	0.49
3:DA:1152:C:O2'	3:DA:1153:C:H5'	2.11	0.49
3:DA:1193:G:C2'	3:DA:1194:A:H5'	2.42	0.49
3:DA:1356:G:C4	3:DA:1357:C:C6	3.00	0.49
3:DA:1670:C:H5"	3:DA:1671:U:OP2	2.12	0.49
3:DA:1745:A:C2'	3:DA:1746:A:O5'	2.60	0.49
3:DA:1818:U:O2'	3:DA:1819:A:OP2	2.30	0.49
3:DA:2097:A:O2'	3:DA:2098:U:H5'	2.12	0.49
3:DA:2275:C:O2	37:DN:84:LYS:CD	2.61	0.49
3:DA:2302:U:O2'	3:DA:2303:G:H5'	2.12	0.49
3:DA:2538:C:H1'	69:D5:201:HOH:O	2.12	0.49
3:DA:2583:G:OP2	69:DA:3525:HOH:O	2.19	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2617:U:C2'	3:DA:2618:G:H5'	2.42	0.49
4:CA:82:U:H2'	4:CA:83:A:O4'	2.12	0.49
4:CA:792:A:H5"	4:CA:793:A:H5'	1.93	0.49
4:CA:1006:C:O5'	4:CA:1006:C:H6	1.96	0.49
4:CA:1791:A:N6	4:CA:1828:G:O2'	2.41	0.49
4:CA:1826:G:C5	4:CA:1827:U:C4	3.00	0.49
4:CA:2097:A:C2	4:CA:2193:G:C2	3.00	0.49
4:CA:2187:U:H2'	4:CA:2188:U:O4'	2.13	0.49
4:CA:2210:U:H4'	4:CA:2211:A:H5'	1.94	0.49
4:CA:2687:U:H2'	4:CA:2688:G:O4'	2.12	0.49
5:DB:30:C:H6	5:DB:30:C:O5'	1.96	0.49
6:AB:146:ASN:OD1	6:AB:146:ASN:N	2.42	0.49
8:AD:105:MET:HG2	8:AD:171:LEU:HD13	1.93	0.49
16:AL:21:VAL:HG22	16:AL:95:TYR:CE2	2.48	0.49
14:BJ:57:VAL:HG13	14:BJ:58:ASN:N	2.28	0.49
18:BN:41:ARG:NH1	18:BN:45:VAL:HG22	2.27	0.49
29:CE:7:ASP:C	29:CE:9:GLN:H	2.20	0.49
30:CF:116:LEU:O	30:CF:177:ARG:HB2	2.12	0.49
32:CH:40:THR:C	32:CH:42:LYS:H	2.20	0.49
37:CN:76:LYS:HE3	37:CN:80:VAL:HG11	1.94	0.49
42:CS:82:HIS:CA	69:CS:204:HOH:O	2.60	0.49
56:DD:33:ARG:NE	69:DD:410:HOH:O	2.45	0.49
30:DF:2:LYS:HE2	30:DF:100:GLU:OE2	2.12	0.49
1:AA:542:G:C2	1:AA:543:U:C6	3.00	0.49
1:AA:591:U:OP2	12:AH:31:LYS:HD2	2.11	0.49
1:AA:770:C:H1'	1:AA:900:A:C2	2.46	0.49
1:AA:1306:A:C2'	1:AA:1307:U:H5'	2.42	0.49
2:BA:502:A:OP1	26:BL:115:SER:CB	2.60	0.49
2:BA:802:A:C2'	2:BA:803:G:H5'	2.43	0.49
2:BA:805:C:H2'	2:BA:806:C:H6	1.77	0.49
2:BA:860:A:N6	2:BA:861:G:C2	2.81	0.49
2:BA:947:G:OP1	17:BM:107:ARG:HG3	2.12	0.49
2:BA:1226:C:H2'	17:BM:102:THR:OG1	2.11	0.49
3:DA:1098:A:N7	3:DA:1099:G:C6	2.80	0.49
3:DA:1243:C:H3'	69:DA:3365:HOH:O	2.12	0.49
3:DA:1261:C:O2'	3:DA:1262:A:O5'	2.29	0.49
3:DA:1647:U:OP2	69:DA:3527:HOH:O	2.20	0.49
3:DA:1696:G:C6	3:DA:1697:G:C4	3.01	0.49
3:DA:2019:A:H1'	69:DA:4705:HOH:O	2.12	0.49
3:DA:2547:A:H2'	3:DA:2548:U:C6	2.46	0.49
3:DA:2552:OMU:O3'	3:DA:2552:OMU:HM23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2656:U:C5	3:DA:2664:G:N2	2.81	0.49
3:DA:2820:A:P	38:DO:2:ARG:HH22	2.36	0.49
4:CA:80:G:O2'	4:CA:294:A:N1	2.44	0.49
4:CA:92:U:H3'	4:CA:93:G:H8	1.78	0.49
4:CA:356:G:H2'	4:CA:357:C:C6	2.47	0.49
4:CA:591:U:H2'	4:CA:592:A:O4'	2.13	0.49
4:CA:1768:C:C4	4:CA:1769:U:C5	3.00	0.49
4:CA:1855:U:C5	4:CA:1856:U:C5	3.00	0.49
4:CA:2637:U:C2	4:CA:2782:G:N2	2.80	0.49
4:CA:2684:U:O4'	35:CL:70:ARG:NH2	2.45	0.49
4:CA:2791:G:O6	4:CA:2805:C:N3	2.44	0.49
5:DB:46:A:C5	5:DB:47:C:C5	3.01	0.49
6:AB:33:GLY:O	6:AB:34:ALA:HB3	2.12	0.49
6:AB:82:ASP:CG	6:AB:83:ALA:N	2.68	0.49
14:AJ:27:GLU:C	14:AJ:29:ALA:H	2.20	0.49
17:AM:15:ALA:O	17:AM:19:LEU:HD23	2.11	0.49
6:BB:15:HIS:ND1	6:BB:16:PHE:N	2.61	0.49
6:BB:133:GLU:O	6:BB:137:ARG:CB	2.60	0.49
6:BB:161:LEU:HD22	6:BB:176:ALA:HB2	1.93	0.49
6:BB:203:ASN:OD1	6:BB:204:ASP:N	2.46	0.49
8:BD:50:ASP:O	8:BD:53:VAL:HG22	2.12	0.49
15:BK:23:ILE:O	15:BK:23:ILE:HG13	2.12	0.49
21:BQ:57:ASP:OD1	21:BQ:81:LYS:HA	2.12	0.49
30:CF:134:GLN:OE1	30:CF:134:GLN:N	2.43	0.49
30:CF:173:ASP:O	30:CF:174:PHE:O	2.31	0.49
43:CT:47:VAL:O	43:CT:50:VAL:HB	2.13	0.49
44:CU:51:PHE:C	44:CU:52:GLU:HG2	2.38	0.49
29:DE:125:SER:O	29:DE:137:LYS:HE3	2.12	0.49
57:D7:39:GLY:O	57:D7:40:VAL:HG13	2.12	0.49
1:AA:457:G:H5'	1:AA:458:U:OP2	2.13	0.49
1:AA:474:G:H2'	69:AA:1872:HOH:O	2.12	0.49
1:AA:574:A:P	69:AA:1802:HOH:O	2.71	0.49
1:AA:697:U:C5	1:AA:698:G:C8	3.01	0.49
1:AA:807:A:H2'	1:AA:808:C:H6	1.77	0.49
1:AA:1240:U:O2	11:AG:42:ILE:HD12	2.12	0.49
2:BA:9:G:P	9:BE:126:LYS:HE3	2.52	0.49
2:BA:476:U:O2'	2:BA:477:C:H5'	2.12	0.49
2:BA:577:G:C4	2:BA:816:A:C2	2.99	0.49
2:BA:577:G:O2'	2:BA:578:C:H5'	2.12	0.49
2:BA:775:G:H2'	2:BA:776:G:H5'	1.95	0.49
2:BA:1040:U:H2'	2:BA:1041:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:858:G:H3'	3:DA:859:G:C8	2.48	0.49
3:DA:864:G:C2'	3:DA:865:C:H5'	2.42	0.49
3:DA:1449:G:H1	3:DA:1462:C:H42	1.60	0.49
3:DA:1563:U:O2'	3:DA:1564:C:H5'	2.12	0.49
3:DA:1582:C:O2'	3:DA:1585:C:N3	2.39	0.49
3:DA:2183:A:O2'	3:DA:2184:A:O4'	2.27	0.49
4:CA:571:U:H1'	4:CA:573:U:C6	2.48	0.49
4:CA:1849:G:H1	4:CA:1893:C:H42	1.60	0.49
4:CA:2010:G:C5	4:CA:2011:U:C5	3.00	0.49
4:CA:2061:G:H5"	4:CA:2503:A:C2	2.48	0.49
4:CA:2293:G:H2'	4:CA:2294:G:O4'	2.12	0.49
4:CA:2899:A:H2'	4:CA:2900:A:C8	2.48	0.49
6:AB:49:MET:O	6:AB:53:ALA:CB	2.60	0.49
6:AB:71:GLY:HA2	6:AB:164:ILE:CG2	2.42	0.49
9:AE:97:GLN:HB2	9:AE:124:LEU:CD1	2.42	0.49
17:AM:114:LYS:CB	17:AM:115:PRO:HD3	2.42	0.49
33:CJ:108:ILE:HG22	33:CJ:108:ILE:O	2.11	0.49
38:CO:45:ARG:HG2	38:CO:95:THR:HG21	1.94	0.49
41:CR:94:LEU:O	41:CR:98:ALA:N	2.42	0.49
43:CT:57:ASN:O	43:CT:61:ASN:HB2	2.13	0.49
54:C4:30:HIS:ND1	54:C4:31:ILE:HG13	2.27	0.49
30:DF:41:GLU:HG3	30:DF:48:LEU:CD2	2.43	0.49
36:DM:85:VAL:HB	36:DM:94:THR:CG2	2.42	0.49
37:DN:53:MET:HE1	37:DN:103:TYR:CG	2.47	0.49
1:AA:207:C:H2'	1:AA:208:U:C2	2.48	0.49
1:AA:650:G:O2'	1:AA:651:C:H5'	2.13	0.49
1:AA:1461:G:O2'	1:AA:1462:C:H5'	2.12	0.49
2:BA:447:G:H5'	69:BA:1779:HOH:O	2.13	0.49
2:BA:1160:G:O2'	2:BA:1161:C:H6	1.96	0.49
2:BA:1255:G:C6	2:BA:1279:G:N7	2.80	0.49
2:BA:1361:G:C3'	2:BA:1362:A:H5"	2.43	0.49
3:DA:226:A:C2'	3:DA:227:A:O5'	2.61	0.49
3:DA:270:A:O3'	69:DA:3522:HOH:O	2.19	0.49
3:DA:276:U:O2	3:DA:276:U:H2'	2.12	0.49
3:DA:1295:C:C2'	3:DA:1296:G:H5'	2.42	0.49
3:DA:1327:A:P	69:DA:3544:HOH:O	2.71	0.49
3:DA:1738:G:HO2'	3:DA:1739:A:P	2.35	0.49
3:DA:1794:A:H2'	3:DA:1795:C:C6	2.48	0.49
3:DA:1833:C:O2	3:DA:1969:A:H2	1.95	0.49
4:CA:184:C:H4'	4:CA:217:A:C2	2.48	0.49
4:CA:203:A:H8	4:CA:203:A:O5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:517:C:O2'	43:CT:18:ARG:NH1	2.45	0.49
4:CA:744:U:H4'	4:CA:1658:C:H4'	1.94	0.49
4:CA:1213:A:O2'	4:CA:1239:G:O4'	2.27	0.49
4:CA:1286:A:N6	4:CA:1329:U:C2	2.81	0.49
4:CA:1411:U:H2'	4:CA:1412:U:O4'	2.12	0.49
4:CA:2080:A:H61	4:CA:2240:U:H3	1.60	0.49
4:CA:2437:G:HO2'	4:CA:2599:G:HO2'	1.58	0.49
4:CA:2714:G:OP2	69:CA:3239:HOH:O	2.19	0.49
4:CA:2773:C:O2'	4:CA:2774:C:O5'	2.31	0.49
6:AB:91:PHE:CD1	6:AB:150:GLY:HA3	2.48	0.49
6:BB:102:THR:O	6:BB:103:ASN:HB3	2.12	0.49
7:BC:97:VAL:HB	7:BC:98:PRO:HD2	1.93	0.49
7:BC:173:VAL:HG12	7:BC:175:LEU:HD11	1.95	0.49
11:BG:49:THR:O	11:BG:53:ARG:HD3	2.12	0.49
27:CC:259:ASN:C	27:CC:261:ARG:N	2.68	0.49
33:CJ:39:LYS:O	33:CJ:39:LYS:HD3	2.12	0.49
44:CU:69:ARG:O	44:CU:69:ARG:CD	2.61	0.49
50:C0:5:LYS:HB2	50:C0:57:GLU:HG2	1.94	0.49
56:DD:110:THR:HG22	56:DD:111:GLY:N	2.27	0.49
32:DH:49:ALA:O	32:DH:53:GLU:HB3	2.12	0.49
38:DO:73:ASN:HA	38:DO:76:VAL:HG22	1.94	0.49
38:DO:90:ARG:O	38:DO:94:TYR:HE1	1.95	0.49
47:DX:49:VAL:CG2	47:DX:79:SER:HA	2.43	0.49
48:DY:36:ARG:HG2	48:DY:47:THR:HG22	1.95	0.49
57:D7:35:ILE:CG1	57:D7:36:GLU:N	2.72	0.49
1:AA:174:A:C2'	1:AA:175:C:H5'	2.42	0.49
1:AA:195:A:H1'	1:AA:222:C:O2'	2.12	0.49
1:AA:271:C:H2'	1:AA:272:C:C6	2.48	0.49
2:BA:152:A:N6	2:BA:170:U:C2	2.81	0.49
2:BA:447:G:C5'	69:BA:1779:HOH:O	2.60	0.49
2:BA:649:A:H2'	2:BA:650:G:O4'	2.13	0.49
2:BA:952:U:O4	17:BM:103:LYS:HE2	2.13	0.49
2:BA:1090:U:H2'	2:BA:1091:U:H6	1.78	0.49
2:BA:1160:G:O2'	2:BA:1161:C:C6	2.66	0.49
2:BA:1399:C:C2	2:BA:1401:G:C4	3.01	0.49
3:DA:578:G:P	69:DA:3595:HOH:O	2.71	0.49
3:DA:1276:A:H5"	3:DA:1276:A:H8	1.77	0.49
3:DA:1717:A:H5"	3:DA:1718:G:OP2	2.13	0.49
3:DA:1857:G:H1'	3:DA:1884:G:N2	2.28	0.49
3:DA:2117:A:N6	3:DA:2171:A:H61	2.10	0.49
3:DA:2307:G:O4'	3:DA:2308:G:C5	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:DA:3348:HOH:O	40:DQ:94:ALA:HB3	2.11	0.49
4:CA:71:A:H5'	4:CA:71:A:N3	2.28	0.49
4:CA:149:A:C2'	4:CA:150:U:H5'	2.43	0.49
4:CA:471:A:H8	4:CA:471:A:O5'	1.96	0.49
4:CA:528:A:H2'	4:CA:529:A:H5"	1.95	0.49
4:CA:1328:A:C2	4:CA:1330:C:N3	2.80	0.49
4:CA:2201:G:H2'	4:CA:2202:U:C6	2.48	0.49
4:CA:2443:C:H2'	4:CA:2444:G:O4'	2.13	0.49
6:AB:94:HIS:O	6:AB:95:ARG:C	2.56	0.49
8:AD:192:SER:O	8:AD:193:ALA:CB	2.61	0.49
18:AN:63:ARG:HG2	18:AN:68:GLY:C	2.36	0.49
6:BB:41:ILE:C	6:BB:41:ILE:HD12	2.37	0.49
8:BD:65:TYR:CD1	8:BD:94:LEU:HB3	2.48	0.49
29:CE:146:VAL:HA	29:CE:185:LYS:O	2.12	0.49
30:CF:49:LEU:HD21	30:CF:66:ILE:CG2	2.42	0.49
57:D7:10:ARG:HG3	57:D7:12:VAL:HG23	1.94	0.49
1:AA:255:G:H2'	1:AA:256:U:C6	2.48	0.49
1:AA:647:C:O2'	1:AA:648:A:H5'	2.13	0.49
1:AA:814:A:N7	1:AA:816:A:C4	2.81	0.49
1:AA:1011:C:N4	1:AA:1019:A:N6	2.60	0.49
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.48	0.49
1:AA:1049:U:O4'	1:AA:1201:A:C8	2.66	0.49
2:BA:81:A:N6	2:BA:88:U:O4	2.46	0.49
2:BA:280:C:H4'	2:BA:281:G:OP2	2.13	0.49
2:BA:319:G:N2	2:BA:335:C:C2	2.81	0.49
2:BA:510:A:H5"	2:BA:511:C:P	2.52	0.49
2:BA:584:G:H2'	2:BA:585:G:C8	2.48	0.49
2:BA:793:U:O2'	2:BA:1516:G:O2'	2.25	0.49
2:BA:1160:G:O6	2:BA:1181:G:C6	2.66	0.49
3:DA:295:G:C2	3:DA:296:U:C6	3.01	0.49
3:DA:306:U:H2'	3:DA:307:G:H5'	1.94	0.49
3:DA:644:A:O3'	3:DA:645:C:H4'	2.12	0.49
3:DA:1360:G:C2'	3:DA:1361:G:H5'	2.43	0.49
3:DA:1441:G:H2'	3:DA:1442:U:C6	2.48	0.49
3:DA:1791:A:N6	3:DA:1828:G:H1'	2.27	0.49
3:DA:1968:G:O2'	3:DA:1969:A:O4'	2.28	0.49
3:DA:1979:U:H4'	69:DA:4262:HOH:O	2.12	0.49
4:CA:310:A:OP1	45:CV:14:THR:HA	2.13	0.49
4:CA:323:C:O2'	29:CE:163:ASN:O	2.27	0.49
4:CA:1021:A:H2'	4:CA:1022:G:O5'	2.13	0.49
4:CA:1516:G:H2'	4:CA:1517:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1519:G:C6	4:CA:1520:U:N3	2.81	0.49
4:CA:2043:C:OP1	4:CA:2777:G:O2'	2.23	0.49
4:CA:2509:G:C2	4:CA:2580:U:O2	2.66	0.49
5:DB:114:C:H1'	39:DP:47:VAL:HG11	1.94	0.49
7:AC:136:ARG:O	7:AC:140:ASN:OD1	2.30	0.49
9:AE:108:GLY:O	9:AE:110:ALA:N	2.46	0.49
9:AE:111:MET:CG	69:AE:203:HOH:O	2.61	0.49
11:AG:51:ALA:O	11:AG:52:GLN:C	2.56	0.49
14:AJ:5:ARG:HB2	14:AJ:77:VAL:O	2.12	0.49
14:AJ:8:ILE:HA	14:AJ:99:GLN:O	2.12	0.49
16:AL:102:LEU:C	16:AL:104:CYS:H	2.21	0.49
19:AO:19:ALA:O	19:AO:20:ASN:HB2	2.13	0.49
19:AO:87:LEU:O	19:AO:88:ARG:HB2	2.12	0.49
24:AT:51:PHE:HA	24:AT:54:MET:HG2	1.95	0.49
7:BC:26:THR:OG1	18:BN:76:LYS:HE3	2.12	0.49
11:BG:15:ASP:OD2	11:BG:23:LEU:HB3	2.12	0.49
11:BG:65:ALA:CB	11:BG:124:LEU:HD23	2.42	0.49
35:CL:108:ARG:HD3	35:CL:116:ILE:HD11	1.95	0.49
36:CM:77:ILE:O	36:CM:110:VAL:O	2.31	0.49
42:CS:82:HIS:N	69:CS:204:HOH:O	2.45	0.49
34:DK:17:VAL:HG13	34:DK:55:ILE:HB	1.95	0.49
41:DR:31:TYR:N	69:DR:301:HOH:O	2.45	0.49
1:AA:208:U:H5	1:AA:210:C:C4	2.30	0.49
2:BA:92:U:C4	2:BA:93:U:O4	2.66	0.49
2:BA:538:G:H8	2:BA:538:G:O5'	1.96	0.49
2:BA:1004:A:N6	2:BA:1005:A:N1	2.61	0.49
2:BA:1081:A:OP2	9:BE:52:LYS:NZ	2.45	0.49
2:BA:1288:A:C6	2:BA:1289:A:C5	3.00	0.49
3:DA:152:A:H2'	3:DA:153:U:C6	2.47	0.49
3:DA:194:G:N7	69:DA:3298:HOH:O	2.35	0.49
3:DA:616:A:C2'	3:DA:617:G:H5'	2.43	0.49
3:DA:918:A:C2	5:DB:80:U:H4'	2.48	0.49
3:DA:1339:G:OP1	69:DA:3532:HOH:O	2.20	0.49
3:DA:1991:U:O2'	3:DA:1992:G:H5"	2.13	0.49
3:DA:2667:C:H1'	31:DG:108:PHE:CD1	2.48	0.49
69:DA:5837:HOH:O	63:D5:101:PUT:H31	2.13	0.49
4:CA:28:A:C6	4:CA:29:U:C2	3.01	0.49
4:CA:271:G:H4'	4:CA:272:A:OP1	2.12	0.49
4:CA:531:C:H5"	4:CA:532:A:C5	2.48	0.49
4:CA:1422:G:N2	4:CA:1577:C:H1'	2.28	0.49
9:AE:23:LYS:HB3	9:AE:30:ILE:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AF:98:GLU:O	10:AF:99:ALA:HB2	2.12	0.49
14:AJ:48:ARG:NH1	14:AJ:66:GLU:OE1	2.45	0.49
19:AO:46:HIS:C	19:AO:48:LYS:H	2.21	0.49
6:BB:16:PHE:CE2	6:BB:18:HIS:CE1	3.01	0.49
6:BB:151:ILE:O	6:BB:152:LYS:C	2.56	0.49
10:BF:86:ARG:HH11	10:BF:86:ARG:CG	2.26	0.49
11:BG:95:ARG:NH2	11:BG:99:LEU:HD21	2.28	0.49
11:BG:139:GLU:O	11:BG:143:ARG:HG2	2.12	0.49
27:CC:61:TYR:CD2	27:CC:62:ARG:O	2.65	0.49
34:CK:35:ARG:NE	34:CK:140:LEU:HD21	2.28	0.49
39:CP:30:ARG:HD2	39:CP:102:ARG:NE	2.28	0.49
56:DD:8:LYS:HB2	56:DD:201:LEU:HD11	1.94	0.49
30:DF:13:LYS:O	30:DF:17:THR:HG22	2.12	0.49
30:DF:101:ARG:CG	57:D7:25:ILE:HG21	2.41	0.49
34:DK:43:GLU:N	34:DK:43:GLU:CD	2.71	0.49
38:DO:55:ALA:HB1	38:DO:80:PHE:HA	1.95	0.49
66:DQ:201:PEG:H42	69:DQ:318:HOH:O	2.12	0.49
42:DS:80:ARG:CA	69:DS:303:HOH:O	2.61	0.49
53:D3:1:MET:HB3	69:D3:217:HOH:O	2.12	0.49
1:AA:18:C:N3	1:AA:918:A:C2	2.80	0.48
1:AA:502:A:O2'	1:AA:503:C:H5'	2.13	0.48
1:AA:824:G:C2	1:AA:877:G:C2	3.01	0.48
1:AA:830:G:H2'	1:AA:831:A:H8	1.77	0.48
1:AA:1190:G:P	7:AC:5:VAL:HG12	2.53	0.48
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.48	0.48
1:AA:1329:A:OP1	17:AM:29:ARG:HG3	2.12	0.48
1:AA:1432:G:OP1	40:DQ:104:GLY:HA3	2.13	0.48
2:BA:552:U:H2'	2:BA:553:A:O5'	2.12	0.48
2:BA:616:G:H2'	2:BA:617:G:O4'	2.13	0.48
2:BA:739:C:O2'	2:BA:740:U:H5'	2.12	0.48
2:BA:834:U:H2'	2:BA:835:U:H6	1.78	0.48
3:DA:1007:C:OP2	3:DA:1008:A:O2'	2.20	0.48
3:DA:1068:G:N2	3:DA:1096:A:OP1	2.46	0.48
3:DA:1079:C:N4	3:DA:1088:A:O4'	2.45	0.48
3:DA:1492:G:C5	3:DA:1496:A:N6	2.81	0.48
3:DA:1722:A:O5'	3:DA:1722:A:H8	1.95	0.48
3:DA:1746:A:H2'	3:DA:1747:U:H6	1.77	0.48
3:DA:1904:G:C5	3:DA:1905:C:C5	3.01	0.48
3:DA:2003:A:OP2	69:DA:3529:HOH:O	2.20	0.48
3:DA:2796:U:C4	3:DA:2798:U:C4	3.01	0.48
4:CA:195:A:H1'	4:CA:250:G:H21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:303:G:C2	4:CA:304:U:C2	3.01	0.48
4:CA:468:G:C2'	4:CA:469:G:H5'	2.43	0.48
4:CA:1500:G:N2	27:CC:97:ASP:O	2.43	0.48
4:CA:1795:C:O2	27:CC:252:LYS:HE2	2.13	0.48
4:CA:2230:G:H2'	4:CA:2231:U:C6	2.48	0.48
4:CA:2499:C:O2'	69:CA:3405:HOH:O	2.20	0.48
4:CA:2659:G:C2	4:CA:2663:G:O6	2.66	0.48
5:DB:5:U:OP1	5:DB:61:G:O2'	2.28	0.48
6:AB:104:TRP:C	6:AB:106:THR:O	2.56	0.48
11:AG:109:ARG:HH21	11:AG:119:ARG:NH1	2.10	0.48
18:AN:49:GLN:OE1	18:AN:49:GLN:CA	2.61	0.48
9:BE:154:ALA:C	9:BE:156:LYS:N	2.65	0.48
24:BT:54:MET:O	24:BT:57:ILE:HG22	2.13	0.48
27:CC:175:LEU:HD12	27:CC:179:GLU:HB3	1.95	0.48
29:CE:75:SER:O	29:CE:78:TRP:HB2	2.13	0.48
35:CL:82:ASN:O	35:CL:83:ALA:HB2	2.13	0.48
44:CU:45:ALA:C	44:CU:47:VAL:H	2.21	0.48
35:DL:1:MET:HG2	69:DL:202:HOH:O	2.13	0.48
40:DQ:6:GLN:OE1	69:DQ:301:HOH:O	2.19	0.48
1:AA:201:G:C2	1:AA:217:C:O2	2.66	0.48
1:AA:237:G:H2'	1:AA:238:A:O4'	2.13	0.48
1:AA:580:C:H2'	1:AA:581:G:O5'	2.13	0.48
1:AA:927:G:C6	1:AA:1391:U:O2	2.66	0.48
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.78	0.48
2:BA:149:A:H2'	2:BA:150:U:C6	2.48	0.48
2:BA:532:A:H3'	2:BA:533:A:H5'	1.95	0.48
2:BA:570:G:C5	2:BA:873:A:C6	3.02	0.48
2:BA:1190:G:H5'	7:BC:176:HIS:CE1	2.48	0.48
3:DA:686:U:H2'	3:DA:788:A:N1	2.29	0.48
3:DA:1947:C:N3	3:DA:1960:A:C2	2.81	0.48
3:DA:2077:A:C5	3:DA:2435:A:C5	3.01	0.48
3:DA:2362:C:O5'	3:DA:2362:C:H6	1.97	0.48
3:DA:2498:OMC:OP1	69:DA:3528:HOH:O	2.20	0.48
3:DA:2707:U:P	69:DA:3548:HOH:O	2.70	0.48
4:CA:176:A:N7	4:CA:177:G:N1	2.60	0.48
4:CA:219:A:N6	4:CA:220:G:C6	2.81	0.48
4:CA:681:G:C4	4:CA:682:G:C8	3.00	0.48
4:CA:1079:C:O2	33:CJ:130:GLY:O	2.31	0.48
4:CA:1359:A:H2'	4:CA:1359:A:N3	2.28	0.48
4:CA:1440:U:H2'	4:CA:1441:G:O4'	2.14	0.48
4:CA:1526:C:N4	4:CA:1527:G:O6	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1613:G:H1	4:CA:1617:C:HO2'	1.60	0.48
4:CA:1691:C:C4	4:CA:1692:U:C5	3.01	0.48
4:CA:1863:G:H2'	4:CA:1864:U:O4'	2.13	0.48
4:CA:2392:A:C2'	69:CA:3322:HOH:O	2.61	0.48
4:CA:2628:C:O2'	4:CA:2782:G:OP1	2.30	0.48
6:AB:136:MET:O	6:AB:139:ARG:HG2	2.13	0.48
6:AB:181:ILE:O	6:AB:182:PRO:C	2.54	0.48
10:AF:7:VAL:HA	10:AF:60:VAL:O	2.13	0.48
10:AF:84:VAL:HG22	10:AF:84:VAL:O	2.13	0.48
13:AI:89:GLU:HG3	13:AI:90:TYR:N	2.28	0.48
24:AT:66:LEU:O	24:AT:67:ILE:HD12	2.13	0.48
6:BB:111:ILE:O	6:BB:114:LEU:HB3	2.13	0.48
11:BG:40:GLU:HB2	11:BG:44:TYR:CE2	2.48	0.48
24:BT:54:MET:HE3	24:BT:58:VAL:HB	1.95	0.48
36:CM:68:SER:O	36:CM:69:ARG:HB2	2.13	0.48
36:CM:110:VAL:O	36:CM:111:ILE:O	2.31	0.48
43:CT:58:ALA:O	43:CT:63:GLY:CA	2.61	0.48
27:DC:181:ARG:NH2	27:DC:265:PHE:HB3	2.28	0.48
33:DJ:126:ARG:O	33:DJ:129:GLU:HB2	2.12	0.48
34:DK:112:GLY:O	34:DK:116:ARG:HG3	2.12	0.48
39:DP:31:THR:HG22	39:DP:34:HIS:O	2.12	0.48
42:DS:4:VAL:HG23	42:DS:40:MET:HB3	1.94	0.48
54:D4:30:HIS:O	54:D4:31:ILE:HB	2.13	0.48
1:AA:154:U:C2	1:AA:168:G:N2	2.81	0.48
1:AA:184:G:C4	1:AA:185:U:C5	3.01	0.48
1:AA:900:A:C6	1:AA:901:A:C2	3.02	0.48
1:AA:1126:U:O4'	1:AA:1281:C:O2	2.32	0.48
1:AA:1167:A:N7	1:AA:1169:A:C6	2.81	0.48
1:AA:1375:A:C2	1:AA:1376:U:C2	3.02	0.48
2:BA:15:G:C1'	9:BE:29:ARG:HE	2.26	0.48
2:BA:32:A:H2'	2:BA:33:A:C8	2.48	0.48
2:BA:55:A:C8	2:BA:56:U:C5	3.02	0.48
2:BA:249:U:O2'	2:BA:252:U:O2'	2.30	0.48
2:BA:548:G:OP1	69:BA:1760:HOH:O	2.20	0.48
2:BA:579:A:H2'	2:BA:580:C:H6	1.76	0.48
2:BA:765:G:O6	2:BA:812:G:C8	2.66	0.48
2:BA:833:G:C6	2:BA:834:U:C4	3.01	0.48
2:BA:1513:A:H2'	2:BA:1514:G:C8	2.48	0.48
3:DA:601:C:O2	3:DA:605:G:H4'	2.13	0.48
3:DA:743:A:C2'	3:DA:744:U:H5'	2.42	0.48
3:DA:783:A:O2'	3:DA:1779:U:H6	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:860:U:C5	3:DA:2268:A:H1'	2.48	0.48
3:DA:1004:U:O5'	3:DA:1004:U:H6	1.96	0.48
3:DA:1197:G:O3'	69:DA:3530:HOH:O	2.20	0.48
3:DA:1808:A:C6	48:DY:27:ARG:HD2	2.48	0.48
3:DA:2345:G:H4'	3:DA:2346:A:O5'	2.12	0.48
3:DA:2498:OMC:O2	3:DA:2498:OMC:CM2	2.61	0.48
3:DA:2543:G:H2'	3:DA:2544:G:C8	2.48	0.48
3:DA:2855:C:H2'	3:DA:2856:A:H5'	1.94	0.48
4:CA:58:G:C2	4:CA:59:U:H1'	2.49	0.48
4:CA:447:A:O4'	4:CA:449:A:N6	2.47	0.48
4:CA:460:A:OP1	53:C3:41:ARG:NH1	2.46	0.48
4:CA:635:C:OP2	36:CM:126:ARG:NH2	2.46	0.48
4:CA:759:G:O5'	4:CA:759:G:H8	1.96	0.48
4:CA:2499:C:C4	4:CA:2500:U:O4	2.66	0.48
4:CA:2708:G:O2'	38:CO:71:ARG:HD3	2.13	0.48
5:DB:28:C:OP1	39:DP:31:THR:HG21	2.13	0.48
5:CB:81:G:C6	5:CB:82:U:C4	3.00	0.48
6:AB:96:TRP:CH2	6:AB:100:MET:HB3	2.48	0.48
14:AJ:51:VAL:O	14:AJ:62:ARG:HA	2.13	0.48
15:AK:36:ASP:CG	15:AK:38:GLN:HG2	2.38	0.48
18:AN:49:GLN:C	18:AN:51:LEU:H	2.20	0.48
24:AT:76:LYS:O	24:AT:80:THR:OG1	2.19	0.48
27:CC:29:PHE:CE2	27:CC:31:PRO:HG2	2.47	0.48
30:CF:59:ILE:O	30:CF:101:ARG:NH2	2.46	0.48
30:CF:121:PHE:C	30:CF:123:GLY:N	2.71	0.48
36:CM:23:ILE:HG13	42:CS:82:HIS:CD2	2.48	0.48
56:DD:124:ARG:NH1	56:DD:161:MET:O	2.47	0.48
30:DF:63:LYS:H	57:D7:6:HIS:CE1	2.31	0.48
42:DS:76:LYS:HA	69:DS:328:HOH:O	2.13	0.48
1:AA:204:G:H2'	1:AA:205:A:H5"	1.94	0.48
1:AA:414:A:H2'	1:AA:415:A:O4'	2.12	0.48
1:AA:1096:C:C2'	1:AA:1097:C:H5'	2.43	0.48
1:AA:1309:G:O6	1:AA:1329:A:C6	2.66	0.48
1:AA:1419:G:C6	1:AA:1420:U:C4	3.01	0.48
1:AA:1500:A:P	69:AA:1724:HOH:O	2.69	0.48
2:BA:203:G:N2	2:BA:215:C:N3	2.61	0.48
2:BA:424:G:H5'	69:BA:1894:HOH:O	2.13	0.48
2:BA:427:U:P	8:BD:13:ARG:HH22	2.36	0.48
2:BA:1187:G:H5'	13:BI:115:LYS:HE2	1.94	0.48
3:DA:579:G:O2'	3:DA:2019:A:OP1	2.30	0.48
3:DA:666:A:H4'	36:DM:48:ARG:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:747:5MU:P	43:DT:90:LYS:HE3	2.54	0.48
3:DA:974:G:C8	3:DA:1186:G:N2	2.82	0.48
3:DA:1339:G:H5'	69:DA:3818:HOH:O	2.13	0.48
3:DA:1847:A:OP2	3:DA:1847:A:C8	2.66	0.48
3:DA:2071:A:N3	69:DA:3767:HOH:O	2.34	0.48
3:DA:2493:U:C2'	3:DA:2494:G:O5'	2.61	0.48
3:DA:2593:U:O5'	3:DA:2593:U:H6	1.97	0.48
3:DA:2625:G:P	69:DA:3267:HOH:O	2.65	0.48
3:DA:2808:G:N2	3:DA:2891:U:C6	2.82	0.48
3:DA:2826:A:H2'	3:DA:2827:C:H5'	1.95	0.48
3:DA:2897:U:H2'	3:DA:2898:U:H6	1.78	0.48
4:CA:159:G:O2'	4:CA:167:A:N6	2.41	0.48
4:CA:185:G:C6	4:CA:212:G:N2	2.81	0.48
4:CA:572:A:H5"	4:CA:573:U:OP2	2.13	0.48
4:CA:601:C:N4	69:CA:3561:HOH:O	2.46	0.48
4:CA:684:G:P	69:CA:3221:HOH:O	2.60	0.48
4:CA:997:G:OP1	41:CR:91:ARG:NE	2.46	0.48
4:CA:1021:A:C2'	4:CA:1022:G:O5'	2.61	0.48
4:CA:1390:U:C2'	4:CA:1391:U:H5'	2.44	0.48
4:CA:1824:G:H21	27:CC:251:THR:HG22	1.78	0.48
4:CA:2085:U:H5"	69:CA:3449:HOH:O	2.12	0.48
4:CA:2086:U:H1'	4:CA:2234:G:N2	2.28	0.48
4:CA:2234:G:C6	4:CA:2235:G:N7	2.81	0.48
4:CA:2389:G:H5"	4:CA:2390:U:O4'	2.12	0.48
4:CA:2439:A:C8	4:CA:2439:A:O5'	2.66	0.48
4:CA:2564:A:OP1	4:CA:2648:G:O2'	2.29	0.48
8:AD:150:LYS:HE2	8:AD:178:MET:HB2	1.96	0.48
8:AD:170:TRP:O	8:AD:183:LYS:N	2.46	0.48
10:AF:15:SER:HB2	8:BD:193:ALA:HB1	1.94	0.48
17:AM:16:VAL:HG22	17:AM:41:GLU:O	2.12	0.48
6:BB:85:LEU:HG	6:BB:85:LEU:O	2.13	0.48
6:BB:99:GLY:HA2	6:BB:175:GLU:OE1	2.13	0.48
6:BB:187:VAL:O	6:BB:187:VAL:CG2	2.62	0.48
11:BG:74:GLU:O	11:BG:88:PRO:HA	2.13	0.48
13:BI:57:MET:C	13:BI:58:VAL:HG23	2.38	0.48
26:BL:14:ARG:HA	26:BL:14:ARG:HH11	1.78	0.48
17:BM:3:ARG:O	17:BM:8:ASN:O	2.30	0.48
18:BN:18:LYS:HB3	18:BN:18:LYS:HZ3	1.77	0.48
19:BO:67:LEU:CD2	19:BO:88:ARG:HH22	2.26	0.48
25:BU:8:GLU:CD	25:BU:9:ASN:H	2.21	0.48
33:CJ:10:LEU:C	33:CJ:11:GLN:HG3	2.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:CM:62:PRO:C	54:C4:12:ARG:HG2	2.38	0.48
51:C1:9:ARG:HB3	51:C1:9:ARG:CZ	2.42	0.48
33:DJ:132:ALA:O	33:DJ:137:LEU:HD12	2.13	0.48
38:DO:83:LEU:O	38:DO:84:GLY:C	2.56	0.48
55:D5:23:LYS:HG3	55:D5:24:GLY:H	1.79	0.48
1:AA:391:G:C6	1:AA:392:C:C4	3.01	0.48
1:AA:969:A:C5	1:AA:970:C:C5	3.01	0.48
1:AA:1131:G:H2'	1:AA:1132:C:O4'	2.12	0.48
1:AA:1180:A:P	13:AI:99:ARG:HH22	2.36	0.48
2:BA:140:U:H2'	2:BA:141:G:O4'	2.14	0.48
2:BA:454:G:O5'	2:BA:454:G:H8	1.96	0.48
2:BA:862:C:N3	2:BA:863:U:C5	2.82	0.48
2:BA:1097:C:O2'	2:BA:1098:C:H5'	2.12	0.48
3:DA:543:G:H8	3:DA:543:G:H5'	1.78	0.48
3:DA:851:C:H2'	3:DA:852:U:C6	2.48	0.48
3:DA:1246:A:C2'	3:DA:1247:A:O5'	2.62	0.48
3:DA:1378:A:O2'	69:DA:3518:HOH:O	2.19	0.48
3:DA:2314:A:O2'	3:DA:2315:G:H5'	2.13	0.48
3:DA:2683:C:H4'	56:DD:13:ARG:NH1	2.28	0.48
3:DA:2844:G:H2'	3:DA:2845:U:O4'	2.14	0.48
69:DA:4150:HOH:O	37:DN:123:LYS:HE2	2.13	0.48
4:CA:442:G:H4'	29:CE:41:GLN:HG2	1.95	0.48
4:CA:566:U:OP1	36:CM:29:LYS:HD2	2.14	0.48
4:CA:592:A:C6	4:CA:593:U:C4	3.01	0.48
4:CA:747:U:O2	4:CA:2014:A:H1'	2.14	0.48
4:CA:833:A:H2'	4:CA:834:G:C8	2.48	0.48
4:CA:1429:G:H2'	4:CA:1430:G:C8	2.48	0.48
4:CA:1469:A:C2	4:CA:1470:A:C6	3.02	0.48
4:CA:1560:G:H8	4:CA:1560:G:OP2	1.97	0.48
4:CA:2087:G:C2	4:CA:2233:U:O2	2.67	0.48
4:CA:2226:C:H2'	4:CA:2227:A:O4'	2.13	0.48
4:CA:2636:C:H2'	4:CA:2637:U:C6	2.48	0.48
4:CA:2651:C:H42	4:CA:2669:G:H1	1.61	0.48
4:CA:2714:G:P	69:CA:3303:HOH:O	2.69	0.48
5:CB:95:U:O4	69:CB:302:HOH:O	2.19	0.48
19:AO:2:SER:O	19:AO:3:LEU:HB2	2.12	0.48
19:AO:71:LYS:HD2	19:AO:78:TYR:CE2	2.48	0.48
20:AP:34:GLU:HG2	20:AP:36:VAL:HG23	1.93	0.48
6:BB:218:ALA:C	6:BB:220:THR:H	2.21	0.48
11:BG:32:VAL:HG22	11:BG:33:ASP:OD1	2.13	0.48
20:BP:20:VAL:HG13	20:BP:32:PHE:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CJ:49:GLU:HG2	33:CJ:50:LYS:N	2.29	0.48
45:CV:1:ALA:HA	45:CV:5:ARG:NH1	2.29	0.48
49:CZ:16:THR:N	69:CZ:102:HOH:O	2.46	0.48
51:C1:40:HIS:HA	51:C1:48:TYR:OH	2.14	0.48
53:C3:44:VAL:HG22	53:C3:45:SER:N	2.27	0.48
55:D5:14:HIS:CD2	55:D5:15:PRO:HD2	2.47	0.48
1:AA:39:G:O2'	1:AA:40:C:H5'	2.13	0.48
1:AA:144:G:N3	1:AA:179:A:C2	2.81	0.48
1:AA:184:G:C5	1:AA:185:U:C5	3.01	0.48
1:AA:208:U:H5	1:AA:210:C:N3	2.12	0.48
1:AA:1141:C:H2'	1:AA:1142:G:O4'	2.12	0.48
1:AA:1398:A:H5"	1:AA:1398:A:H8	1.79	0.48
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.48	0.48
2:BA:339:C:O2	2:BA:351:G:N2	2.42	0.48
2:BA:1484:C:H2'	2:BA:1485:U:O4'	2.13	0.48
3:DA:84:A:H5'	69:DA:3691:HOH:O	2.13	0.48
3:DA:197:A:N6	3:DA:2430[B]:A:O2'	2.46	0.48
3:DA:235:U:C4	3:DA:236:C:N4	2.82	0.48
3:DA:986:C:H1'	66:DA:3062:PEG:H31	1.95	0.48
3:DA:1358:G:H2'	3:DA:1359:A:OP2	2.14	0.48
3:DA:1631:G:N2	3:DA:1633:G:H3'	2.29	0.48
3:DA:1820:U:H4'	3:DA:1821:A:OP2	2.13	0.48
3:DA:2013:A:H4'	43:DT:96:ILE:HD13	1.95	0.48
3:DA:2260:C:O2'	3:DA:2261:C:H5'	2.13	0.48
4:CA:53:A:C2	4:CA:179:C:H4'	2.47	0.48
4:CA:140:C:O2	4:CA:140:C:O4'	2.32	0.48
4:CA:212:G:H2'	4:CA:213:A:O4'	2.13	0.48
4:CA:503:A:C2	4:CA:506:G:C4	3.01	0.48
4:CA:714:U:C5	19:BO:89:ARG:NH1	2.82	0.48
4:CA:1176:U:H2'	4:CA:1177:G:C1'	2.44	0.48
4:CA:1203:U:H3'	4:CA:1204:A:C5'	2.43	0.48
4:CA:1530:G:N1	4:CA:1542:U:O2	2.47	0.48
4:CA:1790:C:O2'	27:CC:207:ALA:HB2	2.13	0.48
4:CA:2051:A:H4'	28:CD:146:ILE:HG12	1.96	0.48
4:CA:2291:U:H2'	4:CA:2292:U:C6	2.48	0.48
4:CA:2461:A:H1'	4:CA:2492:U:H3	1.77	0.48
4:CA:2771:C:O2'	28:CD:173:GLN:NE2	2.40	0.48
4:CA:2800:A:C2	4:CA:2895:G:H1'	2.49	0.48
6:AB:123:ASP:N	6:AB:123:ASP:OD1	2.45	0.48
7:AC:22:TRP:CG	7:AC:59:ARG:HG2	2.48	0.48
14:AJ:74:VAL:HG12	14:AJ:75:ASP:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AN:20:PHE:HA	18:AN:24:ALA:HB3	1.96	0.48
21:AQ:18:GLU:O	21:AQ:19:LYS:HB2	2.12	0.48
23:AS:55:ARG:CZ	23:AS:56:GLN:HG3	2.43	0.48
8:BD:81:ARG:NH2	8:BD:82:LEU:HD23	2.28	0.48
9:BE:72:ILE:HG13	9:BE:73:ASN:H	1.77	0.48
15:BK:82:LEU:HD21	15:BK:105:PHE:HB3	1.94	0.48
15:BK:107:ILE:HD13	15:BK:107:ILE:C	2.38	0.48
25:BU:12:PHE:CE1	25:BU:15:ALA:N	2.81	0.48
27:CC:140:VAL:CG1	27:CC:190:THR:O	2.62	0.48
52:C2:9:LYS:O	52:C2:50:GLU:CG	2.61	0.48
29:DE:74:LYS:O	29:DE:75:SER:C	2.56	0.48
33:DJ:89:SER:HB3	33:DJ:92:PRO:HG3	1.96	0.48
1:AA:1072:G:C5	1:AA:1073:U:C4	3.02	0.48
1:AA:1406:U:C2'	1:AA:1407:5MC:H5'	2.43	0.48
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.77	0.48
1:AA:1486:G:C5'	69:AA:1736:HOH:O	2.61	0.48
2:BA:55:A:C2	32:DH:91:PHE:CD2	3.01	0.48
2:BA:552:U:C2	2:BA:553:A:C8	3.01	0.48
2:BA:600:A:OP1	12:BH:88:ARG:HB3	2.14	0.48
2:BA:931:C:O2	2:BA:931:C:H2'	2.13	0.48
2:BA:1053:G:H4'	2:BA:1054:C:H3'	1.95	0.48
2:BA:1060:U:O2'	2:BA:1061:G:H5'	2.14	0.48
3:DA:45:G:H5"	3:DA:46:G:H5'	1.95	0.48
3:DA:780:G:H21	3:DA:783:A:H62	1.61	0.48
3:DA:915:C:C2'	3:DA:916:G:H5'	2.44	0.48
3:DA:1384:A:H5"	3:DA:1385:A:OP2	2.14	0.48
3:DA:1536:C:O4'	3:DA:1537:G:C2	2.66	0.48
3:DA:2079:U:P	69:DA:3686:HOH:O	2.72	0.48
3:DA:2247:A:O2'	3:DA:2248:C:H5'	2.13	0.48
4:CA:514:A:N1	4:CA:515:A:C2	2.81	0.48
4:CA:609:A:H5"	4:CA:610:C:OP2	2.13	0.48
4:CA:980:A:C4	4:CA:1136:G:O4'	2.67	0.48
4:CA:1066:U:O2'	4:CA:1067:A:OP1	2.30	0.48
4:CA:1351:C:H2'	4:CA:1352:U:C1'	2.44	0.48
4:CA:1799:G:N1	4:CA:1819:A:OP2	2.43	0.48
4:CA:2235:G:C5	4:CA:2236:U:C5	3.02	0.48
4:CA:2519:U:C6	4:CA:2542:A:N6	2.82	0.48
4:CA:2547:A:O4'	4:CA:2566:A:C2	2.66	0.48
4:CA:2733:A:N6	69:CA:3446:HOH:O	2.41	0.48
4:CA:2840:C:H5"	38:CO:53:THR:OG1	2.14	0.48
5:DB:58:A:H2'	5:DB:59:A:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:11:LYS:HE2	69:AB:306:HOH:O	2.13	0.48
11:AG:57:SER:HB2	11:AG:60:GLU:CG	2.44	0.48
13:AI:116:VAL:CG2	14:AJ:62:ARG:HD3	2.43	0.48
17:AM:45:ILE:CD1	17:AM:45:ILE:H	2.26	0.48
19:AO:82:ILE:HA	19:AO:87:LEU:CD2	2.44	0.48
10:BF:18:VAL:O	10:BF:22:ILE:HG13	2.14	0.48
15:BK:42:LEU:HD22	15:BK:77:TYR:CE2	2.49	0.48
27:CC:42:ARG:CZ	27:CC:48:ILE:HD11	2.43	0.48
38:CO:51:LEU:N	38:CO:51:LEU:CD2	2.77	0.48
42:CS:3:ALA:HA	42:CS:40:MET:O	2.13	0.48
46:CW:63:ILE:HG22	46:CW:65:VAL:HG12	1.95	0.48
52:C2:47:ILE:H	52:C2:47:ILE:HD12	1.78	0.48
52:C2:49:LYS:O	52:C2:50:GLU:HB3	2.12	0.48
55:C5:39:VAL:HG12	55:C5:40:GLN:N	2.29	0.48
40:DQ:22:GLY:O	40:DQ:109:ILE:CD1	2.61	0.48
52:D2:3:GLY:C	52:D2:4:ILE:HG13	2.37	0.48
1:AA:39:G:N7	1:AA:547:A:H8	2.10	0.48
1:AA:146:G:C2	1:AA:177:G:N7	2.81	0.48
1:AA:897:C:C2'	1:AA:898:G:H5'	2.43	0.48
1:AA:1004:A:H3'	1:AA:1024:G:H22	1.79	0.48
1:AA:1221:G:OP1	1:AA:1321:U:N3	2.43	0.48
1:AA:1356:G:C2	1:AA:1367:C:O2	2.66	0.48
1:AA:1371:G:C6	1:AA:1372:U:C4	3.01	0.48
2:BA:384:G:H2'	2:BA:385:C:C6	2.49	0.48
2:BA:483:C:C2'	69:BA:1770:HOH:O	2.61	0.48
2:BA:756:C:N3	2:BA:757:U:C5	2.82	0.48
2:BA:1068:G:H2'	2:BA:1069:C:H5'	1.96	0.48
2:BA:1093:A:N3	2:BA:1095:U:O4'	2.47	0.48
2:BA:1511:G:O3'	69:BA:1726:HOH:O	2.20	0.48
3:DA:545:U:O2	3:DA:545:U:O5'	2.30	0.48
3:DA:560:C:O5'	3:DA:560:C:H6	1.96	0.48
3:DA:851:C:H2'	3:DA:852:U:O5'	2.13	0.48
3:DA:999:U:H2'	3:DA:1000:A:H5'	1.94	0.48
3:DA:1169:A:C2	3:DA:1181:U:O2	2.67	0.48
3:DA:1827:U:O2'	3:DA:1828:G:H5'	2.14	0.48
3:DA:1904:G:C6	3:DA:1905:C:C5	3.01	0.48
3:DA:1958:C:H2'	3:DA:1959:G:H5'	1.95	0.48
3:DA:2082:A:H2'	3:DA:2083:G:O4'	2.14	0.48
3:DA:2250:G:O4'	3:DA:2250:G:N3	2.46	0.48
3:DA:2480:C:O2	3:DA:2480:C:H2'	2.13	0.48
3:DA:2756:U:OP2	55:D5:22:ARG:HD2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:223:A:C4	4:CA:408:G:H1'	2.49	0.48
4:CA:412:A:N6	4:CA:2412:A:O4'	2.46	0.48
4:CA:451:U:N3	69:CA:3347:HOH:O	2.10	0.48
4:CA:881:G:N2	4:CA:895:U:O2	2.46	0.48
4:CA:1833:C:N3	4:CA:1834:U:C5	2.81	0.48
4:CA:2243:U:OP1	69:CA:3208:HOH:O	2.20	0.48
4:CA:2436:G:C2'	4:CA:2437:G:H5'	2.44	0.48
6:AB:148:LEU:O	6:AB:148:LEU:HD13	2.13	0.48
15:AK:88:GLY:N	15:AK:114:THR:HG22	2.26	0.48
19:AO:61:SER:O	19:AO:65:LYS:HG3	2.12	0.48
21:AQ:81:LYS:O	21:AQ:83:VAL:N	2.47	0.48
10:BF:39:LEU:HD12	10:BF:61:LEU:O	2.14	0.48
34:CK:80:HIS:O	34:CK:81:ILE:C	2.56	0.48
44:CU:69:ARG:NH1	44:CU:69:ARG:HB3	2.29	0.48
32:DH:43:ASN:O	32:DH:46:PHE:HB3	2.14	0.48
46:DW:10:LYS:CD	46:DW:10:LYS:H	2.27	0.48
51:D1:9:ARG:O	51:D1:12:ARG:HB3	2.14	0.48
55:D5:23:LYS:NZ	69:D5:203:HOH:O	2.42	0.48
57:D7:41:THR:O	57:D7:43:PRO:CD	2.62	0.48
1:AA:891:U:P	69:AA:1763:HOH:O	2.72	0.48
1:AA:938:A:C5'	69:AA:1860:HOH:O	2.62	0.48
1:AA:1264:U:O2	1:AA:1272:G:C2	2.66	0.48
2:BA:71:A:O2'	2:BA:72:A:H5'	2.14	0.48
2:BA:123:U:O2'	2:BA:290:C:O2'	2.11	0.48
2:BA:260:G:OP1	24:BT:75:HIS:HE1	1.96	0.48
2:BA:502:A:OP1	26:BL:115:SER:HB3	2.14	0.48
2:BA:653:U:H5'	12:BH:56:LYS:NZ	2.29	0.48
2:BA:679:C:C2	2:BA:712:A:H2	2.32	0.48
2:BA:1141:C:C2	2:BA:1142:G:C8	3.01	0.48
3:DA:28:A:C5	3:DA:29:U:C5	3.01	0.48
3:DA:31:C:O2'	3:DA:1238:G:H5'	2.14	0.48
3:DA:1261:C:OP2	43:DT:83:LYS:HE2	2.14	0.48
3:DA:1343:G:C6	3:DA:1344:U:O4	2.66	0.48
3:DA:1566:A:O2'	3:DA:1567:G:H5'	2.14	0.48
3:DA:2241:A:H1'	69:DA:3325:HOH:O	2.13	0.48
3:DA:2493:U:H2'	3:DA:2494:G:O5'	2.14	0.48
3:DA:2498:OMC:O2	3:DA:2498:OMC:C2'	2.56	0.48
3:DA:2705:A:OP2	69:DA:3534:HOH:O	2.20	0.48
3:DA:2862:G:C2	3:DA:2863:C:C2	3.02	0.48
4:CA:250:G:H4'	36:CM:59:ARG:HD3	1.96	0.48
4:CA:301:G:O2'	4:CA:302:C:H5"	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:426:C:H2'	4:CA:427:U:O4'	2.13	0.48
4:CA:468:G:H2'	4:CA:469:G:H5'	1.96	0.48
4:CA:612:G:H2'	4:CA:614:A:C8	2.49	0.48
4:CA:634:C:O2'	4:CA:635:C:H5'	2.14	0.48
4:CA:998:C:OP2	41:CR:57:ARG:NH2	2.47	0.48
4:CA:1230:A:H2'	4:CA:1231:U:C6	2.48	0.48
4:CA:1243:C:H2'	4:CA:1244:A:O4'	2.14	0.48
4:CA:1447:C:H2'	4:CA:1448:G:C8	2.48	0.48
4:CA:1682:G:H2'	4:CA:1683:U:C6	2.49	0.48
4:CA:1731:G:C2	4:CA:1733:G:C5	3.02	0.48
4:CA:1791:A:O2'	27:CC:205:GLY:CA	2.61	0.48
4:CA:1975:G:N2	4:CA:1976:U:H1'	2.29	0.48
4:CA:2057:G:OP1	69:CA:3394:HOH:O	2.18	0.48
4:CA:2079:U:H2'	4:CA:2080:A:C8	2.49	0.48
4:CA:2250:G:OP1	4:CA:2275:C:O2'	2.22	0.48
4:CA:2376:A:H2'	4:CA:2377:A:O4'	2.14	0.48
4:CA:2552:U:C2	4:CA:2554:U:C5'	2.97	0.48
4:CA:2586:U:H2'	4:CA:2587:A:O4'	2.14	0.48
5:DB:94:A:H2'	5:DB:95:U:H5'	1.95	0.48
5:CB:66:A:H4'	5:CB:67:G:OP1	2.14	0.48
6:AB:106:THR:C	6:AB:108:ARG:H	2.21	0.48
13:AI:9:THR:HG22	13:AI:10:GLY:N	2.29	0.48
6:BB:19:GLN:H	6:BB:38:VAL:CG2	2.26	0.48
9:BE:57:PRO:HA	9:BE:60:ILE:HG12	1.95	0.48
35:CL:25:LEU:HB2	69:CL:201:HOH:O	2.14	0.48
41:CR:82:LEU:O	41:CR:87:VAL:N	2.45	0.48
49:CZ:42:LEU:O	49:CZ:45:GLN:HG3	2.14	0.48
33:DJ:15:GLY:HA2	33:DJ:50:LYS:HG3	1.95	0.48
1:AA:107:G:OP1	1:AA:325:A:N6	2.47	0.48
1:AA:177:G:N3	1:AA:177:G:O4'	2.47	0.48
1:AA:724:G:C2	1:AA:725:G:C8	3.01	0.48
1:AA:857:C:C4	1:AA:858:G:C5	3.02	0.48
2:BA:219:U:H2'	2:BA:220:G:H8	1.77	0.48
2:BA:572:A:H5'	2:BA:573:A:OP2	2.13	0.48
2:BA:587:G:O2'	2:BA:588:G:O5'	2.26	0.48
2:BA:881:G:C6	2:BA:882:C:C4	3.02	0.48
2:BA:1053:G:C5'	2:BA:1054:C:H3'	2.44	0.48
2:BA:1140:C:O2'	2:BA:1141:C:P	2.71	0.48
2:BA:1422:G:C6	2:BA:1423:G:N7	2.81	0.48
3:DA:860:U:C6	3:DA:2268:A:O4'	2.67	0.48
3:DA:980:A:C6	3:DA:981:A:N1	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1022:G:O6	34:DK:68:LYS:HE2	2.14	0.48
3:DA:1243:C:H2'	3:DA:1244:A:O4'	2.14	0.48
3:DA:1276:A:H5"	3:DA:1276:A:C8	2.49	0.48
3:DA:1366:A:P	69:DA:3624:HOH:O	2.72	0.48
3:DA:1827:U:H5'	3:DA:1971:U:H5'	1.95	0.48
3:DA:2029:G:H2'	3:DA:2031:A:OP1	2.14	0.48
3:DA:2052:A:H4'	56:DD:148:GLN:O	2.14	0.48
3:DA:2333:A:P	47:DX:75:ARG:HH22	2.36	0.48
3:DA:2584:U:H2'	3:DA:2585:U:H5'	1.96	0.48
3:DA:2825:G:H2'	3:DA:2826:A:H5'	1.95	0.48
4:CA:892:A:O5'	4:CA:893:C:OP2	2.32	0.48
4:CA:1181:U:H2'	4:CA:1182:G:C8	2.48	0.48
4:CA:1757:A:N1	4:CA:1762:A:C2	2.82	0.48
4:CA:1993:U:H4'	28:CD:133:THR:CG2	2.44	0.48
4:CA:2359:C:O2	36:CM:60:ARG:NH2	2.47	0.48
4:CA:2591:C:O5'	4:CA:2591:C:H6	1.96	0.48
9:AE:63:ALA:HB3	69:AE:201:HOH:O	2.14	0.48
15:BK:107:ILE:HG23	15:BK:107:ILE:O	2.14	0.48
22:BR:20:GLU:O	22:BR:21:ILE:C	2.56	0.48
22:BR:22:ASP:OD2	22:BR:24:LYS:HB2	2.13	0.48
27:CC:42:ARG:NH2	27:CC:48:ILE:HD11	2.29	0.48
28:CD:55:LYS:HD2	28:CD:76:GLY:O	2.12	0.48
34:CK:71:ASP:O	34:CK:73:VAL:HG23	2.14	0.48
38:CO:32:GLU:HB3	38:CO:115:LEU:HD12	1.95	0.48
40:CQ:87:ARG:HG3	40:CQ:111:GLU:OE2	2.13	0.48
45:CV:81:ARG:HB2	45:CV:96:LYS:HB2	1.96	0.48
54:C4:26:ALA:O	54:C4:27:ASN:HB2	2.13	0.48
27:DC:110:LYS:HD2	27:DC:113:ASP:OD1	2.14	0.48
30:DF:106:ALA:N	30:DF:108:PRO:HD2	2.29	0.48
42:DS:74:ILE:HA	69:DS:307:HOH:O	2.13	0.48
46:DW:65:VAL:HG22	46:DW:65:VAL:O	2.14	0.48
1:AA:58:C:O2'	1:AA:59:A:H5'	2.13	0.47
1:AA:127:G:O2'	21:AQ:6:ARG:NH2	2.47	0.47
1:AA:408:A:H2'	1:AA:409:U:C6	2.49	0.47
1:AA:818:G:O2'	1:AA:819:A:H5'	2.13	0.47
1:AA:1275:A:C2'	69:AA:1717:HOH:O	2.61	0.47
1:AA:1402:4OC:HM22	1:AA:1403:C:H5'	1.96	0.47
1:AA:1492:A:H2'	1:AA:1493:A:O4'	2.14	0.47
2:BA:806:C:O2'	2:BA:807:A:H5'	2.14	0.47
2:BA:1349:A:OP1	13:BI:120:LYS:HE2	2.14	0.47
3:DA:538:A:O2'	34:DK:8:PRO:HD2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1176:U:O2'	3:DA:1177:G:C8	2.67	0.47
3:DA:1442:U:H2'	3:DA:1443:U:C6	2.49	0.47
3:DA:1606:C:C2'	3:DA:1607:C:OP2	2.61	0.47
3:DA:2752:C:OP2	69:DA:3524:HOH:O	2.19	0.47
3:DA:2753:A:C2'	3:DA:2754:U:H5'	2.44	0.47
3:DA:2799:A:O2'	3:DA:2800:A:OP2	2.28	0.47
4:CA:131:A:H4'	4:CA:131:A:OP1	2.14	0.47
4:CA:264:C:O2'	4:CA:265:A:H2'	2.14	0.47
4:CA:517:C:H2'	4:CA:518:G:O5'	2.14	0.47
4:CA:681:G:N3	4:CA:682:G:C8	2.81	0.47
4:CA:748:G:O6	4:CA:751:A:H5'	2.14	0.47
4:CA:1299:G:H5"	4:CA:1300:G:H5"	1.96	0.47
4:CA:1360:G:O6	4:CA:1372:U:C2	2.67	0.47
4:CA:1379:U:H4'	4:CA:1380:G:OP1	2.13	0.47
4:CA:2024:G:N2	4:CA:2040:G:H1'	2.29	0.47
6:AB:203:ASN:OD1	6:AB:204:ASP:N	2.47	0.47
7:AC:150:LYS:HG3	7:AC:201:TRP:CE3	2.48	0.47
8:AD:91:LEU:CD1	8:AD:195:ILE:HD11	2.44	0.47
9:AE:64:MET:N	69:AE:201:HOH:O	2.19	0.47
17:AM:3:ARG:O	17:AM:4:ILE:CB	2.61	0.47
17:AM:19:LEU:O	17:AM:25:VAL:CG2	2.62	0.47
19:AO:56:LEU:O	19:AO:60:VAL:HG23	2.14	0.47
6:BB:21:ARG:C	6:BB:23:TRP:H	2.21	0.47
6:BB:151:ILE:O	6:BB:154:MET:N	2.43	0.47
7:BC:168:TYR:HH	9:BE:55:GLU:CD	2.19	0.47
20:BP:38:PHE:CE2	20:BP:51:ARG:HB3	2.50	0.47
27:CC:231:HIS:NE2	27:CC:243:PRO:HA	2.29	0.47
29:CE:52:VAL:HB	29:CE:74:LYS:HB3	1.96	0.47
45:CV:21:ARG:CZ	45:CV:72:PHE:CZ	2.97	0.47
50:C0:6:ILE:O	50:C0:34:THR:HA	2.13	0.47
32:DH:12:LEU:O	32:DH:13:GLY:C	2.54	0.47
54:D4:30:HIS:HB3	69:D4:120:HOH:O	2.14	0.47
1:AA:338:A:C6	1:AA:339:C:C5	3.02	0.47
1:AA:363:A:C2	1:AA:364:A:C4	3.02	0.47
1:AA:809:G:OP2	19:AO:48:LYS:NZ	2.33	0.47
1:AA:1202:U:C5	18:AN:82:ILE:HD13	2.49	0.47
1:AA:1324:A:C6	1:AA:1325:C:C4	3.02	0.47
1:AA:1402:4OC:H2'	1:AA:1403:C:O4'	2.14	0.47
1:AA:1443:C:H3'	69:AA:1710:HOH:O	2.13	0.47
2:BA:31:G:O4'	2:BA:306:A:C2	2.67	0.47
2:BA:55:A:C2	32:DH:91:PHE:CG	3.01	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:435:A:C2'	2:BA:436:C:O5'	2.62	0.47
2:BA:571:U:H5"	2:BA:572:A:OP2	2.14	0.47
2:BA:951:G:N2	2:BA:1231:G:C4	2.82	0.47
2:BA:1028:C:O2'	2:BA:1029:U:O4'	2.26	0.47
2:BA:1270:G:C6	2:BA:1271:A:C2	3.02	0.47
2:BA:1345:U:H4'	2:BA:1346:A:H5'	1.96	0.47
2:BA:1458:G:OP1	24:BT:30:THR:HG21	2.15	0.47
2:BA:1507:A:C2	2:BA:1508:A:C4	3.03	0.47
3:DA:909:A:OP2	69:DA:3539:HOH:O	2.20	0.47
3:DA:1001:A:C2'	3:DA:1002:G:H5'	2.44	0.47
3:DA:1060:U:P	33:DJ:75:ALA:HB3	2.54	0.47
3:DA:1255:U:P	69:DA:3486:HOH:O	2.71	0.47
3:DA:1614:A:C6	43:DT:87:PRO:HB3	2.49	0.47
3:DA:2339:C:O3'	5:DB:41:G:N2	2.47	0.47
3:DA:2527:C:H4'	55:D5:35:ARG:HA	1.96	0.47
3:DA:2593:U:H2'	3:DA:2594:C:H6	1.80	0.47
3:DA:2670:A:H2'	3:DA:2671:G:O4'	2.14	0.47
3:DA:2727:A:C2'	3:DA:2728:U:H5'	2.44	0.47
64:DA:3034:1PE:H222	69:DA:5084:HOH:O	2.12	0.47
4:CA:741:U:O2'	4:CA:1676:A:OP1	2.13	0.47
4:CA:1196:C:H1'	4:CA:1226:A:C4	2.49	0.47
4:CA:1373:A:C2	4:CA:1374:G:H1'	2.49	0.47
4:CA:1565:C:C5	4:CA:1567:G:C6	3.02	0.47
4:CA:1843:C:O5'	4:CA:1843:C:H6	1.97	0.47
4:CA:2095:A:C4	4:CA:2096:C:C5	3.02	0.47
4:CA:2176:A:H2'	4:CA:2177:C:O4'	2.14	0.47
4:CA:2254:C:H2'	4:CA:2255:G:H5'	1.94	0.47
4:CA:2457:U:C4	4:CA:2458:G:C6	3.03	0.47
4:CA:2467:C:N4	4:CA:2468:A:C6	2.82	0.47
4:CA:2768:U:OP1	34:CK:85:LYS:HE3	2.14	0.47
8:AD:130:VAL:HG12	8:AD:131:ASN:N	2.29	0.47
9:AE:47:GLY:HA2	69:AE:202:HOH:O	2.13	0.47
9:AE:136:VAL:O	9:AE:139:ALA:N	2.47	0.47
13:AI:24:GLY:N	13:AI:61:LEU:HA	2.28	0.47
16:AL:50:ARG:HB3	16:AL:66:TYR:HE1	1.79	0.47
24:AT:43:ASP:OD1	24:AT:45:ALA:N	2.48	0.47
7:BC:40:ARG:HG2	7:BC:55:ILE:CG1	2.45	0.47
11:BG:131:LYS:O	11:BG:131:LYS:HG3	2.14	0.47
12:BH:29:SER:HB2	12:BH:59:LEU:HB2	1.97	0.47
14:BJ:15:HIS:HB3	14:BJ:70:HIS:NE2	2.29	0.47
23:BS:80:TYR:O	23:BS:81:ARG:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CJ:7:TYR:HB3	33:CJ:58:ILE:O	2.13	0.47
37:CN:47:GLU:OE1	37:CN:50:ARG:NE	2.33	0.47
37:CN:69:PRO:O	37:CN:70:ASP:HB3	2.13	0.47
51:C1:37:HIS:C	51:C1:37:HIS:HD1	2.22	0.47
27:DC:195:GLY:O	27:DC:197:ALA:N	2.47	0.47
33:DJ:88:GLY:HA2	33:DJ:135:MET:CE	2.44	0.47
1:AA:363:A:O2'	1:AA:364:A:H5'	2.14	0.47
1:AA:545:C:C2'	1:AA:546:A:H5'	2.44	0.47
1:AA:582:C:N3	1:AA:583:A:C8	2.83	0.47
1:AA:990:C:N3	1:AA:991:U:C4	2.82	0.47
2:BA:243:A:C2	2:BA:245:U:C2	3.02	0.47
2:BA:734:G:N3	2:BA:735:C:C6	2.82	0.47
2:BA:1000:A:H2'	2:BA:1001:C:O4'	2.13	0.47
2:BA:1095:U:O2	2:BA:1095:U:H2'	2.14	0.47
2:BA:1133:G:C6	2:BA:1134:G:N7	2.82	0.47
3:DA:543:G:C5'	3:DA:543:G:C8	2.96	0.47
3:DA:747:5MU:N3	3:DA:2613:U:C4	2.82	0.47
3:DA:928:A:H2	50:D0:46:MET:HE1	1.79	0.47
3:DA:1165:A:C2	3:DA:1185:G:C2	3.02	0.47
3:DA:1379:U:OP1	3:DA:1379:U:C6	2.67	0.47
3:DA:1508:A:O2'	3:DA:1509:A:H5'	2.15	0.47
3:DA:2517:C:C4	3:DA:2542:A:C6	3.01	0.47
4:CA:9:G:C6	4:CA:2629:U:C6	3.02	0.47
4:CA:155:A:C2	4:CA:172:A:C2	3.01	0.47
4:CA:412:A:H2'	4:CA:413:C:O4'	2.15	0.47
4:CA:1373:A:P	69:CA:3401:HOH:O	2.71	0.47
4:CA:1779:U:H2'	4:CA:1783:A:H62	1.78	0.47
8:AD:148:LYS:N	8:AD:148:LYS:CD	2.76	0.47
9:AE:149:SER:O	9:AE:153:VAL:HG13	2.14	0.47
11:AG:120:LEU:O	11:AG:124:LEU:CD2	2.62	0.47
13:AI:57:MET:O	13:AI:58:VAL:C	2.58	0.47
14:AJ:27:GLU:C	14:AJ:29:ALA:N	2.72	0.47
19:AO:46:HIS:O	19:AO:48:LYS:N	2.41	0.47
10:BF:51:ILE:O	10:BF:51:ILE:HG12	2.14	0.47
11:BG:75:VAL:HG23	11:BG:86:GLN:HE21	1.79	0.47
13:BI:51:PRO:HD3	13:BI:80:ARG:HG2	1.96	0.47
14:BJ:5:ARG:C	14:BJ:6:ILE:HG13	2.39	0.47
26:BL:35:THR:HB	26:BL:54:ARG:HG2	1.95	0.47
27:CC:128:THR:C	27:CC:129:LEU:HD23	2.39	0.47
32:CH:43:ASN:O	32:CH:47:PHE:HD1	1.97	0.47
42:CS:21:ARG:HG3	42:CS:95:ASP:OD1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:CU:69:ARG:O	44:CU:69:ARG:CG	2.62	0.47
30:DF:34:THR:HG23	30:DF:89:THR:HG23	1.96	0.47
36:DM:91:ASP:H	36:DM:94:THR:HB	1.80	0.47
51:D1:12:ARG:O	51:D1:16:ARG:HG3	2.15	0.47
1:AA:767:A:H2'	1:AA:768:A:O4'	2.14	0.47
1:AA:781:A:C5	1:AA:802:A:C2	3.03	0.47
1:AA:1332:A:H2'	1:AA:1333:A:O4'	2.14	0.47
1:AA:1530:G:H2'	1:AA:1531:A:C8	2.50	0.47
2:BA:64:G:C2	2:BA:67:C:N4	2.82	0.47
2:BA:477:C:H2'	2:BA:478:A:C8	2.50	0.47
2:BA:756:C:C2'	2:BA:757:U:H5'	2.43	0.47
2:BA:1083:U:O2'	2:BA:1102:A:OP2	2.31	0.47
2:BA:1149:C:N4	2:BA:1150:A:N6	2.62	0.47
2:BA:1230:C:O2'	13:BI:129:LYS:NZ	2.47	0.47
2:BA:1288:A:N1	2:BA:1371:G:H1'	2.29	0.47
2:BA:1399:C:O2	2:BA:1401:G:C5	2.67	0.47
2:BA:1499:A:H3'	2:BA:1499:A:OP2	2.13	0.47
3:DA:747:5MU:C2	3:DA:2613:U:O4	2.67	0.47
3:DA:960:A:H2'	3:DA:962:G:H5'	1.96	0.47
3:DA:1343:G:H2'	3:DA:1344:U:H5'	1.97	0.47
3:DA:1358:G:C2'	3:DA:1359:A:OP2	2.62	0.47
3:DA:1536:C:O4'	3:DA:1537:G:N2	2.47	0.47
3:DA:1577:C:H2'	3:DA:1578:U:C1'	2.44	0.47
3:DA:1785:A:H5"	69:DA:4239:HOH:O	2.13	0.47
3:DA:1826:G:C5	3:DA:1827:U:C5	3.02	0.47
3:DA:1985:C:C4	3:DA:1986:C:C5	3.03	0.47
3:DA:2097:A:H61	3:DA:2192:U:H3	1.61	0.47
3:DA:2223:G:O3'	27:DC:264:LYS:NZ	2.48	0.47
3:DA:2860:A:N7	69:DA:3760:HOH:O	2.34	0.47
64:DA:3065:1PE:H252	69:DA:5947:HOH:O	2.14	0.47
4:CA:33:C:N3	4:CA:447:A:N7	2.62	0.47
4:CA:84:A:N1	4:CA:98:G:O2'	2.27	0.47
4:CA:374:A:H5"	69:CA:3927:HOH:O	2.13	0.47
4:CA:511:U:O4	4:CA:512:G:N1	2.48	0.47
4:CA:1265:A:N1	4:CA:2013:A:H5"	2.29	0.47
4:CA:1342:A:C6	4:CA:1397:U:C5	3.02	0.47
4:CA:1842:G:C6	4:CA:1843:C:N3	2.83	0.47
4:CA:2016:U:O5'	4:CA:2016:U:H6	1.98	0.47
4:CA:2032:G:H1'	28:CD:150:GLN:OE1	2.14	0.47
4:CA:2439:A:H4'	4:CA:2440:C:H5"	1.96	0.47
5:CB:28:C:C4	5:CB:29:A:N7	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AF:5:GLU:O	10:AF:6:ILE:HB	2.15	0.47
18:AN:41:ARG:HH11	18:AN:45:VAL:HG11	1.79	0.47
20:AP:56:ARG:HH21	20:AP:59:HIS:CE1	2.33	0.47
23:AS:29:LYS:HB3	23:AS:30:PRO:CD	2.45	0.47
23:AS:67:VAL:O	69:AS:101:HOH:O	2.20	0.47
14:BJ:11:LYS:HG2	14:BJ:71:LEU:HD13	1.96	0.47
20:BP:19:VAL:HG13	20:BP:37:GLY:N	2.29	0.47
23:BS:29:LYS:CB	23:BS:30:PRO:HD2	2.44	0.47
33:CJ:34:ILE:HG22	33:CJ:34:ILE:O	2.14	0.47
35:CL:92:GLU:O	35:CL:93:GLN:HB2	2.14	0.47
27:DC:200:MET:HG3	27:DC:201:LEU:CD1	2.43	0.47
30:DF:108:PRO:HG3	57:D7:52:LYS:HE3	1.95	0.47
37:DN:41:LEU:CD2	37:DN:125:PRO:HD2	2.44	0.47
41:DR:74:SER:O	41:DR:75:TYR:C	2.54	0.47
43:DT:34:ASP:HA	69:DT:312:HOH:O	2.14	0.47
57:D7:23:PHE:CE2	57:D7:45:VAL:HG11	2.50	0.47
1:AA:125:U:H2'	1:AA:126:G:O4'	2.14	0.47
1:AA:276:G:OP1	21:AQ:17:MET:HE2	2.15	0.47
1:AA:574:A:H1'	1:AA:883:C:O4'	2.14	0.47
1:AA:890:G:N2	1:AA:907:A:OP2	2.28	0.47
1:AA:986:U:H2'	1:AA:987:G:C8	2.49	0.47
1:AA:1005:A:H3'	1:AA:1006:G:C8	2.49	0.47
1:AA:1053:G:C6	1:AA:1199:U:C2	3.02	0.47
1:AA:1223:C:P	1:AA:1224:U:H2'	2.54	0.47
2:BA:17:U:C2	2:BA:18:C:C5	3.03	0.47
2:BA:505:G:H2'	2:BA:506:G:H8	1.79	0.47
2:BA:708:C:C5	2:BA:709:U:H5	2.32	0.47
2:BA:754:C:OP1	19:BO:72:ARG:NH2	2.47	0.47
2:BA:880:C:N3	2:BA:881:G:N7	2.63	0.47
2:BA:1142:G:N3	2:BA:1142:G:H2'	2.30	0.47
2:BA:1178:G:O2'	2:BA:1180:A:N7	2.38	0.47
2:BA:1343:G:H2'	2:BA:1344:C:C6	2.49	0.47
2:BA:1458:G:O3'	24:BT:23:SER:HA	2.14	0.47
3:DA:811:U:P	69:DA:3937:HOH:O	2.71	0.47
3:DA:975:A:H2'	3:DA:976:G:H5'	1.96	0.47
3:DA:1294:U:H5"	3:DA:1294:U:H6	1.79	0.47
3:DA:1422:G:C4	3:DA:1423:G:C8	3.03	0.47
3:DA:1436:G:N2	3:DA:1557:C:C2	2.82	0.47
3:DA:1644:C:H5"	3:DA:1644:C:C6	2.50	0.47
3:DA:1799:G:O2'	27:DC:179:GLU:OE2	2.30	0.47
3:DA:1842:G:O4'	27:DC:242:HIS:CE1	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2028:U:H2'	3:DA:2029:G:O4'	2.14	0.47
65:DA:3064:ACY:OXT	69:DA:3523:HOH:O	2.19	0.47
4:CA:153:U:H3	4:CA:173:A:H61	1.62	0.47
4:CA:293:U:C3'	4:CA:294:A:H5"	2.44	0.47
4:CA:370:G:C6	4:CA:424:G:C5	3.02	0.47
4:CA:1137:G:O2'	4:CA:1138:G:H5'	2.15	0.47
4:CA:1254:A:OP2	4:CA:1256:G:C8	2.67	0.47
4:CA:1330:C:H2'	4:CA:1331:G:O4'	2.14	0.47
4:CA:1922:G:H2'	4:CA:1923:U:O4'	2.15	0.47
6:AB:16:PHE:HD1	6:AB:17:GLY:H	1.62	0.47
10:AF:55:HIS:O	10:AF:56:LYS:HB2	2.14	0.47
14:AJ:6:ILE:HD12	14:AJ:76:ILE:HB	1.95	0.47
23:AS:53:ASN:O	23:AS:77:THR:HG22	2.14	0.47
6:BB:49:MET:HE2	69:BB:303:HOH:O	2.14	0.47
7:BC:173:VAL:O	7:BC:175:LEU:CD1	2.63	0.47
12:BH:52:GLU:O	12:BH:58:GLU:HB3	2.14	0.47
14:BJ:19:ASP:C	14:BJ:21:ALA:H	2.21	0.47
22:BR:33:ILE:HD12	22:BR:37:GLY:HA2	1.95	0.47
28:CD:148:GLN:N	28:CD:148:GLN:OE1	2.48	0.47
32:CH:75:LEU:CD1	32:CH:106:ALA:O	2.62	0.47
34:CK:24:THR:HB	34:CK:27:ARG:HB3	1.95	0.47
38:CO:1:MET:N	38:CO:1:MET:HE2	2.29	0.47
39:CP:33:ARG:O	39:CP:34:HIS:CB	2.62	0.47
41:CR:57:ARG:C	41:CR:59:LEU:H	2.21	0.47
44:CU:11:LEU:HD11	44:CU:46:ALA:O	2.14	0.47
45:CV:1:ALA:HA	45:CV:5:ARG:HH11	1.79	0.47
46:CW:61:LEU:O	69:CW:101:HOH:O	2.20	0.47
47:CX:35:ILE:HG22	47:CX:36:VAL:HG22	1.97	0.47
54:C4:33:THR:HG23	54:C4:34:LYS:N	2.29	0.47
54:C4:56:LEU:O	54:C4:59:ALA:HB3	2.15	0.47
32:DH:8:LYS:HA	32:DH:14:SER:HA	1.96	0.47
33:DJ:79:LEU:HD11	33:DJ:132:ALA:HA	1.97	0.47
34:DK:49:ASP:C	34:DK:49:ASP:OD1	2.57	0.47
35:DL:86:LEU:N	35:DL:86:LEU:HD23	2.30	0.47
37:DN:47:GLU:O	37:DN:48:ALA:C	2.57	0.47
38:DO:86:ARG:HD3	38:DO:117:ASP:HB2	1.95	0.47
49:DZ:2:LYS:NZ	49:DZ:2:LYS:CB	2.77	0.47
54:D4:31:ILE:CG2	54:D4:34:LYS:HD2	2.45	0.47
57:D7:48:ASP:C	57:D7:53:SER:OG	2.57	0.47
57:D7:61:LEU:HD23	57:D7:62:ARG:HH22	1.79	0.47
1:AA:199:A:C2	1:AA:200:G:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:510:A:N3	1:AA:543:U:H1'	2.29	0.47
1:AA:665:A:C2	1:AA:732:C:C2	3.03	0.47
1:AA:702:A:H4'	1:AA:703:G:OP2	2.15	0.47
1:AA:992:U:C2	1:AA:1043:G:N7	2.83	0.47
1:AA:1039:G:N2	69:AA:1804:HOH:O	2.45	0.47
1:AA:1058:G:C6	1:AA:1059:C:C4	3.03	0.47
1:AA:1061:G:C5	1:AA:1197:A:C2	3.02	0.47
1:AA:1180:A:OP2	13:AI:99:ARG:NH2	2.47	0.47
1:AA:1333:A:H3'	1:AA:1334:G:H8	1.79	0.47
1:AA:1406:U:C6	1:AA:1407:5MC:HM53	2.49	0.47
2:BA:55:A:N7	2:BA:56:U:C5	2.82	0.47
2:BA:269:C:H2'	2:BA:270:A:C8	2.49	0.47
2:BA:398:U:H2'	2:BA:399:G:H8	1.79	0.47
2:BA:858:G:N7	2:BA:869:G:N7	2.63	0.47
2:BA:1071:C:H2'	2:BA:1072:G:H8	1.80	0.47
2:BA:1073:U:OP2	9:BE:62:LYS:HE2	2.15	0.47
2:BA:1521:C:N3	2:BA:1522:U:C5	2.83	0.47
3:DA:370:G:O2'	3:DA:424:G:OP1	2.22	0.47
3:DA:391:A:H1'	3:DA:411:G:O4'	2.15	0.47
3:DA:1073:A:C2	69:DA:3473:HOH:O	2.67	0.47
3:DA:1170:C:H2'	3:DA:1171:G:O4'	2.14	0.47
3:DA:1210:G:H4'	3:DA:1211:C:H5"	1.96	0.47
3:DA:1235:G:P	63:DA:3037:PUT:H12	2.55	0.47
3:DA:1429:G:N2	3:DA:1430:G:C4	2.82	0.47
3:DA:1489:C:O2'	3:DA:1490:A:C5'	2.63	0.47
3:DA:1889:A:C2	3:DA:1890:A:C4	3.03	0.47
3:DA:1937:A:C8	3:DA:1939:5MU:H2'	2.49	0.47
3:DA:2024:G:C4	3:DA:2040:G:N2	2.82	0.47
3:DA:2049:G:H5"	69:DA:5243:HOH:O	2.14	0.47
3:DA:2196:C:C2'	3:DA:2197:U:H5'	2.44	0.47
3:DA:2415:G:C4	3:DA:2416:C:C6	3.03	0.47
3:DA:2661:G:O2'	3:DA:2662:A:H5'	2.14	0.47
3:DA:2827:C:H1'	67:DA:3059:EDO:H21	1.95	0.47
4:CA:455:C:N3	4:CA:472:A:H2'	2.30	0.47
4:CA:972:A:N1	4:CA:973:A:N6	2.62	0.47
4:CA:1313:U:O2	4:CA:1313:U:H2'	2.13	0.47
4:CA:1509:A:O2'	4:CA:1510:G:OP2	2.32	0.47
4:CA:1628:G:C2'	4:CA:1629:U:O5'	2.62	0.47
4:CA:1999:C:N3	4:CA:2000:C:C5	2.82	0.47
4:CA:2264:C:O5'	4:CA:2264:C:H6	1.98	0.47
4:CA:2395:C:H42	4:CA:2421:G:H1	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2436:G:O2'	4:CA:2437:G:H5'	2.15	0.47
5:DB:85:G:O2'	5:DB:86:G:H5'	2.13	0.47
5:CB:71:C:H2'	5:CB:72:G:H5'	1.97	0.47
9:AE:111:MET:HG2	69:AE:203:HOH:O	2.13	0.47
12:AH:46:ILE:HD13	12:AH:61:LEU:HD22	1.97	0.47
8:BD:95:GLU:HG3	8:BD:95:GLU:O	2.15	0.47
8:BD:161:LEU:HD22	8:BD:161:LEU:N	2.29	0.47
10:BF:44:ARG:HB3	10:BF:56:LYS:HD3	1.95	0.47
12:BH:75:ILE:HD12	12:BH:75:ILE:C	2.40	0.47
20:BP:14:ARG:N	20:BP:15:PRO:HD3	2.28	0.47
22:BR:20:GLU:N	22:BR:55:LEU:HD12	2.30	0.47
27:CC:265:PHE:CD1	27:CC:265:PHE:N	2.82	0.47
30:CF:82:TYR:HD1	30:CF:83:PRO:HD2	1.79	0.47
33:CJ:71:LYS:HD2	33:CJ:115:ASP:CG	2.39	0.47
35:CL:1:MET:HE3	35:CL:32:TYR:CZ	2.49	0.47
37:CN:58:LYS:HD3	37:CN:58:LYS:N	2.30	0.47
29:DE:28:VAL:O	29:DE:32:VAL:HG13	2.13	0.47
29:DE:154:ASP:O	29:DE:155:GLU:C	2.58	0.47
30:DF:120:SER:HB2	30:DF:127:TYR:CE1	2.50	0.47
34:DK:17:VAL:CG2	34:DK:137:PRO:HB2	2.41	0.47
34:DK:77:HIS:CD2	34:DK:79:GLY:H	2.31	0.47
38:DO:95:THR:HG22	69:DO:202:HOH:O	2.14	0.47
43:DT:60:HIS:O	43:DT:60:HIS:ND1	2.48	0.47
55:D5:2:LYS:NZ	55:D5:35:ARG:O	2.48	0.47
1:AA:2:A:C6	1:AA:3:A:N1	2.83	0.47
1:AA:245:U:H4'	69:AA:1867:HOH:O	2.13	0.47
1:AA:376:G:H5"	20:AP:5:ARG:HB2	1.97	0.47
1:AA:397:A:C5	1:AA:548:G:N7	2.83	0.47
1:AA:397:A:C5	1:AA:548:G:C8	3.03	0.47
1:AA:648:A:H2'	1:AA:649:A:O4'	2.14	0.47
1:AA:674:G:H2'	1:AA:675:A:H8	1.79	0.47
1:AA:783:C:OP1	1:AA:1515:G:O2'	2.26	0.47
1:AA:837:U:OP2	69:AA:1745:HOH:O	2.20	0.47
1:AA:922:G:H1'	9:AE:24:THR:CG2	2.44	0.47
1:AA:1102:A:O3'	6:AB:95:ARG:NH2	2.47	0.47
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.14	0.47
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.50	0.47
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.14	0.47
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.48	0.47
2:BA:10:A:C2	2:BA:11:G:C5	3.03	0.47
2:BA:72:A:C5	2:BA:73:C:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:214:C:H2'	2:BA:215:C:C6	2.49	0.47
2:BA:247:G:C6	2:BA:278:G:C2	3.02	0.47
2:BA:403:C:O2'	2:BA:404:G:H5'	2.15	0.47
2:BA:421:U:H5'	2:BA:422:C:C5	2.50	0.47
2:BA:642:A:N3	12:BH:106:THR:O	2.48	0.47
2:BA:834:U:H2'	2:BA:835:U:C6	2.49	0.47
2:BA:880:C:O2	2:BA:880:C:H2'	2.15	0.47
2:BA:1053:G:O6	2:BA:1199:U:H2'	2.15	0.47
2:BA:1173:U:OP1	11:BG:5:ARG:NH2	2.47	0.47
3:DA:29:U:H2'	3:DA:30:G:C8	2.50	0.47
3:DA:50:U:H3'	3:DA:51:G:H5'	1.97	0.47
3:DA:225:C:C2'	3:DA:226:A:H5'	2.45	0.47
3:DA:448:U:H1'	69:DA:4457:HOH:O	2.13	0.47
3:DA:484:C:C2'	3:DA:485:C:H5'	2.45	0.47
3:DA:520:G:H2'	3:DA:521:U:H6	1.79	0.47
3:DA:666:A:H2'	3:DA:667:U:H6	1.80	0.47
3:DA:695:G:C2	3:DA:696:G:C8	3.03	0.47
3:DA:793:A:H5"	69:DA:6271:HOH:O	2.14	0.47
3:DA:820:A:O2'	3:DA:821:A:H5'	2.14	0.47
3:DA:831:G:P	69:DA:3906:HOH:O	2.72	0.47
3:DA:986:C:H2'	3:DA:987:C:H5'	1.95	0.47
3:DA:999:U:O2	3:DA:1157:G:C2	2.67	0.47
3:DA:1247:A:C2	3:DA:1249:U:C6	3.03	0.47
3:DA:1312:U:H5'	69:DA:4855:HOH:O	2.14	0.47
3:DA:1794:A:O2'	3:DA:1795:C:H5'	2.15	0.47
3:DA:2026:U:H2'	3:DA:2027:G:O4'	2.14	0.47
3:DA:2033:A:O2'	3:DA:2035:G:OP2	2.26	0.47
3:DA:2326:C:C1'	3:DA:2327:A:OP1	2.62	0.47
3:DA:2377:A:N6	69:DA:4019:HOH:O	2.47	0.47
3:DA:2560:A:H2'	3:DA:2561:U:O4'	2.14	0.47
3:DA:2563:U:H2'	3:DA:2565:A:OP2	2.15	0.47
3:DA:2607:G:H2'	3:DA:2608:G:O4'	2.15	0.47
3:DA:2611:C:H2'	3:DA:2612:C:H6	1.80	0.47
3:DA:2852:G:H2'	3:DA:2853:C:O4'	2.14	0.47
4:CA:56:A:C2	4:CA:115:C:C2	3.02	0.47
4:CA:175:G:N1	4:CA:176:A:C2	2.82	0.47
4:CA:349:U:H2'	4:CA:350:G:H8	1.79	0.47
4:CA:526:A:N6	4:CA:2626:C:H4'	2.29	0.47
4:CA:566:U:O2	4:CA:576:U:C2	2.67	0.47
4:CA:608:A:H2'	4:CA:609:A:C8	2.50	0.47
4:CA:633:A:OP1	36:CM:70:LYS:HD3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:647:G:H2'	4:CA:648:G:O5'	2.14	0.47
4:CA:931:U:H4'	4:CA:932:U:OP2	2.15	0.47
4:CA:1269:A:H8	4:CA:1269:A:O5'	1.98	0.47
4:CA:1304:A:C6	4:CA:1305:C:C4	3.02	0.47
4:CA:1378:A:N3	4:CA:1379:U:H2'	2.29	0.47
4:CA:1495:A:H2'	4:CA:1496:A:C8	2.50	0.47
4:CA:1695:G:H3'	4:CA:1695:G:N3	2.29	0.47
4:CA:1842:G:N2	4:CA:1901:A:C4	2.83	0.47
4:CA:1910:G:C6	4:CA:1911:U:C4	3.02	0.47
4:CA:2156:G:H2'	4:CA:2157:G:O4'	2.13	0.47
4:CA:2188:U:C4	4:CA:2189:U:C4	3.03	0.47
4:CA:2264:C:H1'	4:CA:2277:G:N2	2.29	0.47
4:CA:2552:U:C2	4:CA:2554:U:H5'	2.49	0.47
4:CA:2836:U:H2'	4:CA:2837:A:C8	2.49	0.47
5:CB:66:A:H61	5:CB:107:G:H2'	1.79	0.47
13:AI:80:ARG:O	13:AI:84:THR:HG23	2.15	0.47
14:AJ:6:ILE:CD1	14:AJ:76:ILE:HB	2.44	0.47
19:AO:82:ILE:HA	19:AO:87:LEU:HD21	1.96	0.47
6:BB:84:ALA:O	6:BB:89:GLN:HB2	2.15	0.47
6:BB:207:ILE:HA	6:BB:210:VAL:CG1	2.45	0.47
7:BC:130:PHE:CE1	7:BC:131:ARG:HG3	2.49	0.47
8:BD:11:LEU:HD13	8:BD:63:ARG:HG2	1.97	0.47
18:BN:49:GLN:OE1	18:BN:49:GLN:HA	2.15	0.47
18:BN:61:ARG:NH2	18:BN:70:PRO:O	2.42	0.47
23:BS:49:ILE:HD11	23:BS:62:VAL:HG22	1.97	0.47
28:CD:149:ASN:C	28:CD:151:THR:N	2.72	0.47
33:CJ:32:VAL:HG13	33:CJ:66:PHE:CE1	2.49	0.47
44:CU:73:ARG:HA	44:CU:73:ARG:NE	2.30	0.47
45:CV:53:GLN:N	45:CV:54:PRO:CD	2.77	0.47
45:CV:95:PHE:CE1	45:CV:102:ILE:HG13	2.50	0.47
49:CZ:50:VAL:O	49:CZ:53:VAL:HB	2.15	0.47
27:DC:106:PRO:HB3	27:DC:141:HIS:CE1	2.34	0.47
27:DC:141:HIS:C	27:DC:141:HIS:CD2	2.92	0.47
56:DD:158:GLY:O	56:DD:159:LYS:C	2.57	0.47
38:DO:114:GLU:OE2	38:DO:118:ARG:NH2	2.48	0.47
57:D7:33:ARG:HB3	57:D7:33:ARG:CZ	2.44	0.47
1:AA:106:C:C2'	1:AA:107:G:H5'	2.45	0.47
1:AA:316:C:C2	1:AA:317:U:C5	3.02	0.47
1:AA:592:G:H2'	1:AA:593:U:O4'	2.14	0.47
1:AA:863:U:O2	1:AA:867:G:N2	2.48	0.47
1:AA:984:C:N3	1:AA:1222:G:C2	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.30	0.47
2:BA:121:U:H3'	2:BA:122:G:H5'	1.97	0.47
2:BA:321:A:C8	2:BA:328:C:C2	3.03	0.47
2:BA:337:G:H2'	2:BA:338:A:C8	2.50	0.47
2:BA:404:G:C2'	2:BA:405:U:H5'	2.45	0.47
2:BA:632:U:H5"	2:BA:633:G:C8	2.49	0.47
2:BA:931:C:O2	2:BA:932:C:C6	2.67	0.47
2:BA:1338:G:H2'	2:BA:1339:A:C8	2.49	0.47
3:DA:301:G:H4'	3:DA:301:G:OP1	2.15	0.47
3:DA:691:C:O2'	27:DC:40:GLY:HA3	2.15	0.47
3:DA:1812:U:H1'	27:DC:44:ASN:OD1	2.15	0.47
3:DA:2030:6MZ:OP2	69:DA:3540:HOH:O	2.20	0.47
3:DA:2247:A:H2'	3:DA:2248:C:H5'	1.96	0.47
3:DA:2461:A:H1'	3:DA:2492:U:C2	2.50	0.47
3:DA:2515:C:H1'	3:DA:2570:G:N2	2.30	0.47
3:DA:2648:G:H2'	3:DA:2649:C:C6	2.50	0.47
3:DA:2820:A:C6	56:DD:197:THR:HB	2.50	0.47
4:CA:277:G:H2'	4:CA:361:G:O6	2.15	0.47
4:CA:290:U:H2'	4:CA:291:G:O4'	2.15	0.47
4:CA:327:G:N2	45:CV:67:SER:CB	2.78	0.47
4:CA:613:A:H3'	4:CA:614:A:C5'	2.44	0.47
4:CA:1314:C:OP1	4:CA:1332:G:OP1	2.33	0.47
4:CA:1993:U:H2'	4:CA:1994:C:O4'	2.14	0.47
4:CA:2226:C:H2'	4:CA:2227:A:C8	2.49	0.47
4:CA:2241:A:N7	69:CA:3490:HOH:O	2.35	0.47
5:CB:49:C:OP1	39:CP:101:GLY:HA3	2.14	0.47
6:AB:86:SER:O	6:AB:87:CYS:C	2.57	0.47
6:AB:205:ASP:OD1	6:AB:205:ASP:C	2.57	0.47
11:AG:71:PRO:O	11:AG:96:ARG:HG3	2.15	0.47
14:AJ:70:HIS:O	14:AJ:71:LEU:HD22	2.14	0.47
15:AK:26:SER:N	15:AK:29:ASN:O	2.48	0.47
6:BB:18:HIS:O	6:BB:19:GLN:HB2	2.15	0.47
6:BB:47:VAL:HA	6:BB:50:PHE:HD2	1.79	0.47
10:BF:88:MET:HE3	22:BR:64:TYR:HD2	1.78	0.47
11:BG:30:LEU:CD1	11:BG:120:LEU:HD12	2.45	0.47
22:BR:20:GLU:HG3	22:BR:55:LEU:CD1	2.44	0.47
25:BU:11:PRO:O	25:BU:12:PHE:CB	2.62	0.47
36:CM:23:ILE:HG21	42:CS:84:ARG:HG2	1.97	0.47
45:CV:46:LYS:HG3	45:CV:47:PRO:HD2	1.96	0.47
51:C1:50:GLY:O	51:C1:51:ARG:C	2.57	0.47
33:DJ:33:ASN:OD1	33:DJ:64:ARG:NH1	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DO:100:CYS:O	51:D1:41:HIS:HD2	1.98	0.47
48:DY:36:ARG:NH2	48:DY:45:PHE:CD2	2.82	0.47
51:D1:8:THR:HB	69:D1:212:HOH:O	2.14	0.47
57:D7:61:LEU:CB	57:D7:62:ARG:HH21	2.23	0.47
1:AA:21:G:N2	1:AA:22:G:C6	2.83	0.47
1:AA:123:U:O2'	1:AA:290:C:O2	2.25	0.47
1:AA:914:A:C6	1:AA:915:A:N7	2.82	0.47
1:AA:914:A:C5	1:AA:915:A:N7	2.83	0.47
1:AA:1024:G:O2'	1:AA:1025:U:OP1	2.28	0.47
2:BA:45:G:H5'	2:BA:307:C:O2	2.15	0.47
2:BA:110:C:O2'	20:BP:25:ARG:O	2.29	0.47
2:BA:237:G:C6	2:BA:238:A:C5	3.02	0.47
2:BA:355:C:H1'	2:BA:388:G:H1'	1.97	0.47
2:BA:517:G:C5'	2:BA:519:C:C2	2.98	0.47
2:BA:553:A:O2'	26:BL:26:ALA:HB1	2.14	0.47
2:BA:597:G:H2'	2:BA:598:U:H5'	1.96	0.47
2:BA:662:U:H2'	2:BA:663:A:C8	2.50	0.47
2:BA:1262:C:C4	2:BA:1263:C:C4	3.03	0.47
3:DA:136:G:H1	3:DA:143:C:H42	1.62	0.47
3:DA:170:U:C2	3:DA:171:U:C6	3.02	0.47
3:DA:397:U:O5'	3:DA:397:U:H6	1.97	0.47
3:DA:561:G:P	69:DA:3412:HOH:O	2.71	0.47
3:DA:980:A:C4	3:DA:1136:G:O4'	2.68	0.47
3:DA:1215:G:C2'	3:DA:1216:G:H5'	2.45	0.47
3:DA:1421:G:C2	3:DA:1422:G:C8	3.03	0.47
3:DA:1462:C:H4'	3:DA:2703:C:O4'	2.15	0.47
3:DA:1907:G:P	69:DA:3443:HOH:O	2.73	0.47
3:DA:2706:A:N1	3:DA:2707:U:C2	2.83	0.47
4:CA:190:A:H2'	4:CA:191:A:O4'	2.14	0.47
4:CA:265:A:H4'	4:CA:266:G:OP1	2.15	0.47
4:CA:819:A:N7	4:CA:1188:U:O4	2.48	0.47
4:CA:1436:G:N2	4:CA:1557:C:C2	2.83	0.47
4:CA:1903:G:OP2	69:CA:3406:HOH:O	2.20	0.47
4:CA:1973:G:C4	4:CA:1974:C:C5	3.03	0.47
4:CA:2043:C:C2	4:CA:2044:C:C5	3.03	0.47
4:CA:2232:C:P	48:CY:26:ARG:HH22	2.34	0.47
4:CA:2472:G:O2'	4:CA:2478:A:N6	2.47	0.47
4:CA:2627:G:N2	4:CA:2777:G:OP2	2.48	0.47
20:AP:5:ARG:HA	20:AP:68:SER:OG	2.15	0.47
20:AP:42:ILE:O	20:AP:44:SER:N	2.48	0.47
6:BB:16:PHE:O	6:BB:41:ILE:CG1	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BB:19:GLN:H	6:BB:38:VAL:HG22	1.80	0.47
6:BB:31:ILE:HG22	6:BB:33:GLY:H	1.79	0.47
6:BB:87:CYS:O	6:BB:88:ASP:OD1	2.32	0.47
18:BN:90:ARG:HH11	18:BN:92:GLU:CD	2.23	0.47
24:BT:36:TYR:CD1	24:BT:37:ALA:N	2.83	0.47
24:BT:43:ASP:HB2	24:BT:46:ALA:HB3	1.97	0.47
29:CE:149:ILE:CG2	29:CE:188:MET:HG2	2.45	0.47
29:CE:150:THR:HG22	29:CE:151:GLY:H	1.80	0.47
36:CM:115:GLU:HB2	69:CM:302:HOH:O	2.15	0.47
32:DH:131:PHE:O	32:DH:138:PHE:CD2	2.68	0.47
38:DO:117:ASP:O	38:DO:118:ARG:HB3	2.15	0.47
41:DR:57:ARG:HG2	41:DR:61:ILE:CD1	2.44	0.47
45:DV:51:LEU:N	45:DV:53:GLN:OE1	2.48	0.47
1:AA:19:A:C5	1:AA:20:U:C5	3.03	0.47
1:AA:196:A:OP1	24:AT:64:LYS:CE	2.63	0.47
1:AA:396:C:H3'	1:AA:397:A:H5"	1.97	0.47
1:AA:880:C:OP2	16:AL:5:ASN:HB3	2.14	0.47
1:AA:1052:U:C2	1:AA:1207:2MG:N2	2.83	0.47
1:AA:1220:G:H2'	1:AA:1221:G:O4'	2.15	0.47
1:AA:1309:G:C6	1:AA:1329:A:N1	2.83	0.47
1:AA:1447:A:P	69:AA:1737:HOH:O	2.73	0.47
2:BA:183:C:O2	2:BA:183:C:H2'	2.15	0.47
2:BA:246:A:C2	2:BA:279:A:N6	2.83	0.47
2:BA:273:U:H2'	2:BA:274:A:H5'	1.97	0.47
2:BA:644:U:P	69:BA:1713:HOH:O	2.69	0.47
2:BA:1293:C:N4	2:BA:1294:G:O6	2.48	0.47
2:BA:1484:C:O2'	4:CA:1961:C:H5'	2.15	0.47
3:DA:1047:G:N2	3:DA:1110:G:C4	2.83	0.47
3:DA:1267:U:O5'	3:DA:1267:U:H6	1.98	0.47
3:DA:1842:G:H2'	3:DA:1843:C:C6	2.50	0.47
3:DA:2887:A:H5"	3:DA:2888:C:OP2	2.15	0.47
69:DA:3264:HOH:O	56:DD:135:GLY:HA3	2.15	0.47
4:CA:1593:A:O2'	4:CA:1594:U:H5'	2.15	0.47
4:CA:1708:C:H2'	4:CA:1709:U:C6	2.50	0.47
4:CA:1833:C:C4	4:CA:1834:U:C5	3.03	0.47
4:CA:2035:G:H5'	4:CA:2036:C:H5	1.79	0.47
4:CA:2064:C:H2'	4:CA:2065:C:H6	1.79	0.47
4:CA:2199:A:C6	4:CA:2225:A:C5	3.03	0.47
4:CA:2360:G:N7	4:CA:2361:G:H1'	2.30	0.47
7:AC:22:TRP:CB	7:AC:59:ARG:HG2	2.44	0.47
7:AC:23:PHE:CG	7:AC:24:ALA:N	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AJ:101:SER:HB2	14:AJ:102:LEU:HD12	1.96	0.47
16:AL:73:ASN:O	16:AL:74:LEU:HD22	2.14	0.47
9:BE:38:VAL:HG11	9:BE:114:VAL:HA	1.96	0.47
10:BF:3:HIS:H	10:BF:92:THR:HG1	1.62	0.47
13:BI:58:VAL:O	13:BI:59:GLU:HG3	2.15	0.47
17:BM:67:GLY:O	17:BM:71:ARG:NE	2.48	0.47
32:CH:31:VAL:HB	32:CH:32:PRO:HD3	1.97	0.47
33:CJ:23:VAL:HB	33:CJ:27:LEU:HD23	1.96	0.47
33:CJ:25:PRO:O	33:CJ:28:GLY:N	2.43	0.47
35:CL:108:ARG:HD3	35:CL:113:MET:HE1	1.96	0.47
36:CM:136:GLU:HA	36:CM:139:GLY:O	2.15	0.47
27:DC:143:VAL:HG12	27:DC:144:GLU:O	2.15	0.47
30:DF:79:ARG:HB3	30:DF:82:TYR:CD2	2.50	0.47
32:DH:115:VAL:HG12	32:DH:117:LEU:HD22	1.97	0.47
33:DJ:89:SER:O	33:DJ:91:LYS:N	2.49	0.47
40:DQ:37:LYS:HD3	61:DQ:202:PG4:O5	2.15	0.47
57:D7:17:THR:HG23	57:D7:43:PRO:O	2.15	0.47
1:AA:222:C:H2'	1:AA:223:A:H8	1.80	0.46
1:AA:789:U:O2	1:AA:791:G:C8	2.68	0.46
1:AA:844:G:O6	1:AA:846:G:O2'	2.31	0.46
1:AA:880:C:OP2	16:AL:3:THR:HG21	2.15	0.46
1:AA:955:U:C1'	1:AA:1227:A:N6	2.77	0.46
1:AA:1426:G:C2'	1:AA:1427:C:H5'	2.45	0.46
2:BA:60:A:O2'	24:BT:5:LYS:HE3	2.15	0.46
2:BA:197:A:C6	2:BA:221:C:H4'	2.50	0.46
2:BA:256:U:OP1	21:BQ:19:LYS:NZ	2.49	0.46
2:BA:378:G:N2	69:BA:1808:HOH:O	2.40	0.46
2:BA:558:G:H2'	2:BA:559:A:H2	1.80	0.46
2:BA:779:C:C2'	2:BA:780:A:H5'	2.45	0.46
2:BA:1169:A:C2	2:BA:1170:A:C4	3.03	0.46
3:DA:11:C:C3'	3:DA:12:U:H5'	2.45	0.46
3:DA:65:U:H2'	3:DA:66:C:C6	2.50	0.46
3:DA:164:C:OP2	69:DA:3543:HOH:O	2.21	0.46
3:DA:335:C:C2'	3:DA:336:C:H5'	2.44	0.46
3:DA:527:C:H4'	3:DA:528:A:O5'	2.15	0.46
3:DA:550:C:H2'	3:DA:551:G:H5"	1.97	0.46
3:DA:580:U:O3'	41:DR:30:VAL:HG13	2.15	0.46
3:DA:586:A:C2	3:DA:1254:A:C2	3.03	0.46
3:DA:596:U:H2'	3:DA:597:G:H5'	1.97	0.46
3:DA:1296:G:P	69:DA:3488:HOH:O	2.72	0.46
3:DA:1647:U:OP2	69:DA:3536:HOH:O	2.20	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1654:A:H2'	3:DA:1655:A:O5'	2.14	0.46
3:DA:1668:A:H4'	3:DA:1669:A:O5'	2.16	0.46
3:DA:1935:G:O2'	3:DA:1936:A:C5'	2.63	0.46
3:DA:2392:A:C2	3:DA:2393:U:N1	2.83	0.46
3:DA:2489:U:O2	3:DA:2491:U:C4	2.68	0.46
69:DA:3218:HOH:O	27:DC:60:ALA:HB3	2.15	0.46
4:CA:615:U:H5"	4:CA:616:A:C8	2.50	0.46
4:CA:882:G:O6	4:CA:894:U:O2	2.32	0.46
4:CA:1388:G:O3'	4:CA:1526:C:H5"	2.15	0.46
4:CA:1436:G:N2	4:CA:1557:C:O2	2.47	0.46
4:CA:1585:C:H2'	4:CA:1586:A:H5'	1.98	0.46
4:CA:2056:G:N3	4:CA:2056:G:H2'	2.30	0.46
4:CA:2443:C:C2'	4:CA:2444:G:H5'	2.44	0.46
5:CB:50:A:OP1	39:CP:68:LYS:N	2.42	0.46
8:AD:55:LEU:C	8:AD:55:LEU:CD2	2.88	0.46
12:AH:29:SER:OG	12:AH:30:SER:N	2.47	0.46
14:AJ:100:ILE:HG13	14:AJ:101:SER:H	1.80	0.46
18:AN:41:ARG:O	18:AN:43:ASN:N	2.48	0.46
21:AQ:8:LEU:O	21:AQ:60:GLU:HA	2.16	0.46
7:BC:178:LEU:H	7:BC:178:LEU:HD22	1.80	0.46
8:BD:80:ALA:HA	8:BD:86:THR:OG1	2.15	0.46
14:BJ:57:VAL:HG22	14:BJ:58:ASN:H	1.80	0.46
17:BM:8:ASN:O	17:BM:10:PRO:HD2	2.14	0.46
19:BO:45:GLU:HG2	19:BO:46:HIS:N	2.31	0.46
22:BR:45:THR:OG1	22:BR:47:THR:HG22	2.15	0.46
27:CC:221:GLY:HA2	27:CC:224:MET:HE3	1.95	0.46
36:CM:94:THR:HG23	36:CM:95:LEU:N	2.30	0.46
52:C2:50:GLU:OE2	52:C2:52:LYS:CG	2.63	0.46
30:DF:107:VAL:HG12	30:DF:113:PHE:CE2	2.50	0.46
33:DJ:33:ASN:HB3	33:DJ:36:GLU:HB2	1.97	0.46
42:DS:66:HIS:ND1	42:DS:94:THR:HG22	2.29	0.46
45:DV:85:ARG:HG2	45:DV:94:PHE:CD2	2.51	0.46
50:D0:30:ARG:HG3	50:D0:31:ILE:O	2.13	0.46
1:AA:8:A:C6	8:AD:206:LYS:HB3	2.51	0.46
1:AA:26:A:C3'	1:AA:27:G:C5'	2.93	0.46
1:AA:104:G:C2	1:AA:105:G:N7	2.82	0.46
1:AA:205:A:H2'	1:AA:206:C:H5'	1.97	0.46
1:AA:255:G:H2'	1:AA:256:U:H6	1.81	0.46
1:AA:601:G:H2'	1:AA:602:A:C8	2.50	0.46
1:AA:872:A:C4	1:AA:874:G:N7	2.83	0.46
1:AA:978:A:C4	1:AA:1319:A:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1232:U:H6	1:AA:1232:U:O5'	1.98	0.46
2:BA:401:C:C2	2:BA:402:G:C8	3.03	0.46
2:BA:881:G:H2'	2:BA:882:C:O4'	2.14	0.46
2:BA:922:G:H4'	9:BE:25:VAL:HA	1.97	0.46
2:BA:1055:A:H8	2:BA:1055:A:OP2	1.97	0.46
2:BA:1298:U:H4'	2:BA:1299:A:C4	2.50	0.46
2:BA:1411:C:H2'	2:BA:1412:C:H6	1.80	0.46
3:DA:322:A:H5'	3:DA:340:A:C1'	2.45	0.46
3:DA:566:U:OP1	36:DM:29:LYS:NZ	2.44	0.46
3:DA:802:A:H2'	3:DA:803:U:C6	2.50	0.46
3:DA:839:U:O2'	3:DA:1191:G:N3	2.47	0.46
3:DA:1096:A:H3'	3:DA:1097:U:H5"	1.95	0.46
3:DA:1376:C:H2'	3:DA:1377:G:O4'	2.15	0.46
3:DA:1400:U:O2'	3:DA:1401:G:H5'	2.15	0.46
3:DA:1606:C:O2'	3:DA:1607:C:H5"	2.15	0.46
3:DA:1791:A:H2'	3:DA:1792:G:O4'	2.15	0.46
3:DA:1831:G:C5	3:DA:1832:C:C5	3.03	0.46
3:DA:1832:C:H2'	3:DA:1833:C:O5'	2.15	0.46
3:DA:1993:U:C2'	3:DA:1994:C:H5'	2.45	0.46
3:DA:1998:A:HO2'	3:DA:2724:U:HO2'	1.62	0.46
3:DA:2217:G:C2'	3:DA:2218:G:H5'	2.44	0.46
3:DA:2299:U:H2'	3:DA:2300:C:H6	1.79	0.46
3:DA:2548:U:C2'	3:DA:2549:G:O5'	2.63	0.46
3:DA:2714:G:C2'	3:DA:2715:C:H5'	2.45	0.46
4:CA:7:G:H4'	34:CK:15:TRP:CZ2	2.51	0.46
4:CA:223:A:OP2	4:CA:422:A:OP1	2.33	0.46
4:CA:576:U:O4	69:CA:3404:HOH:O	2.20	0.46
4:CA:621:A:H2'	4:CA:622:G:O4'	2.14	0.46
4:CA:1676:A:C8	69:CA:3541:HOH:O	2.68	0.46
4:CA:1795:C:C4	4:CA:1796:U:C4	3.03	0.46
4:CA:1825:U:H3'	4:CA:1825:U:C6	2.50	0.46
69:CA:3855:HOH:O	37:CN:11:LYS:HE2	2.15	0.46
7:AC:15:VAL:HG23	7:AC:15:VAL:O	2.15	0.46
8:AD:2:ALA:HA	8:AD:68:LEU:HD21	1.98	0.46
9:AE:133:PRO:HA	9:AE:136:VAL:HG13	1.98	0.46
18:AN:35:ALA:HB2	18:AN:41:ARG:HE	1.81	0.46
21:AQ:57:ASP:OD1	21:AQ:81:LYS:HA	2.15	0.46
21:AQ:61:ILE:CG2	21:AQ:73:TRP:HE3	2.27	0.46
25:AU:5:LYS:O	25:AU:6:VAL:HG23	2.15	0.46
6:BB:157:LEU:O	6:BB:157:LEU:HD23	2.15	0.46
8:BD:57:GLU:OE1	8:BD:57:GLU:HA	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BE:68:ARG:O	9:BE:71:MET:CE	2.63	0.46
11:BG:11:LYS:O	11:BG:12:ILE:C	2.58	0.46
17:BM:31:LYS:HA	17:BM:31:LYS:HE3	1.96	0.46
19:BO:53:ARG:O	19:BO:56:LEU:N	2.49	0.46
23:BS:29:LYS:HB3	23:BS:30:PRO:HD2	1.96	0.46
28:CD:101:PHE:HD1	28:CD:104:VAL:HG11	1.80	0.46
31:CG:79:THR:CG2	31:CG:80:GLU:N	2.77	0.46
32:CH:116:ARG:HG3	32:CH:132:GLN:OE1	2.15	0.46
36:CM:100:ILE:HG12	36:CM:101:ILE:HG23	1.97	0.46
43:CT:48:LYS:C	43:CT:50:VAL:N	2.73	0.46
34:DK:117:ALA:O	34:DK:118:MET:C	2.56	0.46
35:DL:46:ALA:HB3	69:DL:201:HOH:O	2.15	0.46
43:DT:51:LEU:O	43:DT:55:ILE:HD12	2.15	0.46
49:DZ:18:LEU:HD21	49:DZ:22:LEU:HD11	1.98	0.46
54:D4:32:LEU:O	54:D4:33:THR:C	2.58	0.46
1:AA:187:G:H5"	1:AA:188:C:OP2	2.15	0.46
1:AA:501:C:H2'	1:AA:502:A:H8	1.80	0.46
1:AA:516:PSU:C2	1:AA:517:G:C6	3.03	0.46
1:AA:751:U:H4'	19:AO:24:SER:HA	1.96	0.46
1:AA:900:A:N1	1:AA:901:A:C2	2.84	0.46
1:AA:932:C:OP2	11:AG:3:ARG:HG2	2.16	0.46
1:AA:956:U:C2'	1:AA:957:U:H5'	2.44	0.46
1:AA:984:C:C2	1:AA:1222:G:N2	2.83	0.46
1:AA:1353:G:C2	1:AA:1354:U:C6	3.04	0.46
2:BA:532:A:C6	7:BC:193:TYR:HB3	2.50	0.46
2:BA:728:A:H2'	2:BA:729:A:C8	2.50	0.46
2:BA:932:C:OP2	11:BG:3:ARG:HD2	2.15	0.46
2:BA:1348:U:C2	2:BA:1349:A:C8	3.04	0.46
2:BA:1387:G:C2	2:BA:1388:C:C5	3.03	0.46
3:DA:139:U:H3'	3:DA:140:C:O2	2.15	0.46
3:DA:301:G:C4	3:DA:302:C:C5	3.03	0.46
3:DA:600:G:H1'	29:DE:100:MET:SD	2.55	0.46
3:DA:618:G:C6	3:DA:619:G:C4	3.03	0.46
3:DA:780:G:N2	69:DA:4068:HOH:O	2.48	0.46
3:DA:783:A:C2'	3:DA:784:G:H5'	2.42	0.46
3:DA:971:G:C2'	3:DA:972:A:H5'	2.45	0.46
3:DA:1456:G:C5	3:DA:1457:U:C5	3.03	0.46
3:DA:1826:G:N3	3:DA:1827:U:C6	2.83	0.46
3:DA:1954:G:H5"	69:DA:5487:HOH:O	2.15	0.46
3:DA:2413:G:C2'	3:DA:2414:G:H5'	2.45	0.46
4:CA:593:U:C2	4:CA:594:U:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1054:A:C2	4:CA:1106:G:N1	2.83	0.46
4:CA:1288:G:C4	4:CA:1327:A:C2	3.03	0.46
4:CA:1605:C:O2	4:CA:1610:A:O2'	2.29	0.46
4:CA:1638:C:H4'	4:CA:2710:C:O2	2.14	0.46
4:CA:1999:C:H1'	4:CA:2687:U:H1'	1.97	0.46
4:CA:2239:G:H2'	4:CA:2240:U:O4'	2.15	0.46
4:CA:2460:U:H2'	4:CA:2461:A:O4'	2.16	0.46
4:CA:2524:G:H2'	4:CA:2525:G:O4'	2.15	0.46
4:CA:2563:U:C2	4:CA:2566:A:N7	2.83	0.46
8:AD:58:LYS:NZ	8:AD:59:GLN:OE1	2.47	0.46
8:AD:145:ILE:O	8:AD:150:LYS:HE3	2.16	0.46
9:AE:44:GLY:HA2	9:AE:76:LEU:HD11	1.96	0.46
9:AE:157:ARG:CD	12:AH:43:GLU:O	2.62	0.46
14:AJ:10:LEU:HD21	14:AJ:98:VAL:HG12	1.97	0.46
6:BB:10:LEU:C	6:BB:12:ALA:N	2.73	0.46
6:BB:31:ILE:HG22	6:BB:32:PHE:N	2.30	0.46
7:BC:207:ILE:OXT	7:BC:207:ILE:HG12	2.15	0.46
9:BE:142:ASP:O	9:BE:146:ASN:ND2	2.48	0.46
12:BH:116:ALA:HA	12:BH:121:LEU:HD11	1.98	0.46
15:BK:88:GLY:N	15:BK:114:THR:HG22	2.28	0.46
17:BM:14:HIS:HB2	17:BM:17:ILE:CD1	2.46	0.46
33:CJ:72:THR:CG2	33:CJ:112:LYS:HG2	2.45	0.46
34:CK:80:HIS:HB3	34:CK:81:ILE:HG22	1.98	0.46
36:CM:55:MET:SD	36:CM:59:ARG:CZ	3.03	0.46
51:C1:54:ILE:HG22	51:C1:56:LYS:H	1.80	0.46
33:DJ:20:SER:HB3	33:DJ:21:PRO:HD3	1.97	0.46
35:DL:5:GLN:HA	35:DL:20:MET:SD	2.56	0.46
41:DR:57:ARG:HG2	41:DR:61:ILE:HD12	1.97	0.46
51:D1:54:ILE:CG2	51:D1:55:ALA:H	2.17	0.46
1:AA:935:A:H2'	1:AA:936:C:O5'	2.16	0.46
1:AA:1028:C:C2	1:AA:1033:G:N2	2.82	0.46
2:BA:325:A:N6	2:BA:326:G:N1	2.63	0.46
2:BA:337:G:C6	2:BA:338:A:N6	2.83	0.46
2:BA:337:G:O6	2:BA:338:A:N6	2.48	0.46
2:BA:394:G:H5"	69:BA:1702:HOH:O	2.14	0.46
2:BA:669:G:C2	2:BA:738:C:O2	2.68	0.46
2:BA:676:A:C2	2:BA:677:U:C4	3.03	0.46
2:BA:786:G:C2	2:BA:797:C:O2	2.69	0.46
2:BA:1077:G:O2'	2:BA:1079:G:N7	2.41	0.46
3:DA:186:G:O2'	3:DA:187:G:H5'	2.15	0.46
3:DA:239:C:N4	3:DA:240:C:N3	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:697:G:H2'	3:DA:698:C:C6	2.50	0.46
3:DA:825:A:O2'	3:DA:826:U:H5'	2.15	0.46
3:DA:1142:A:H4'	3:DA:1143:A:OP1	2.15	0.46
3:DA:1588:G:N3	3:DA:1589:U:C6	2.84	0.46
3:DA:1635:A:C6	3:DA:1636:U:C2	3.03	0.46
3:DA:1889:A:C2'	3:DA:1890:A:O5'	2.63	0.46
3:DA:1957:C:P	69:DA:3600:HOH:O	2.73	0.46
3:DA:2259:U:C6	3:DA:2427:C:C4	3.03	0.46
3:DA:2299:U:O5'	3:DA:2299:U:H6	1.99	0.46
3:DA:2589:A:C2	3:DA:2606:C:C4	3.04	0.46
3:DA:2706:A:C2	3:DA:2707:U:C2	3.03	0.46
4:CA:41:C:H2'	4:CA:42:A:O4'	2.15	0.46
4:CA:270:A:OP2	4:CA:271:G:C8	2.68	0.46
4:CA:271:G:C2	4:CA:367:G:C2	3.04	0.46
4:CA:381:G:C2'	69:CA:3587:HOH:O	2.63	0.46
4:CA:443:A:OP1	29:CE:40:ARG:CB	2.63	0.46
4:CA:560:C:O5'	4:CA:560:C:H6	1.98	0.46
4:CA:830:G:N3	4:CA:2448:A:C6	2.84	0.46
4:CA:980:A:N3	4:CA:2037:A:O2'	2.48	0.46
4:CA:1312:U:C5	4:CA:1603:A:N6	2.84	0.46
4:CA:1838:C:C5	4:CA:1899:A:C6	3.04	0.46
4:CA:2017:U:H4'	51:C1:4:GLN:O	2.16	0.46
4:CA:2075:U:OP1	27:CC:241:LYS:NZ	2.44	0.46
4:CA:2214:C:C2'	4:CA:2215:C:H5'	2.45	0.46
6:AB:24:ASN:OD1	6:AB:24:ASN:C	2.58	0.46
13:AI:57:MET:SD	13:AI:57:MET:N	2.78	0.46
14:AJ:80:THR:HG22	14:AJ:82:LYS:HG2	1.97	0.46
15:AK:110:ILE:O	25:AU:6:VAL:N	2.48	0.46
18:AN:67:THR:N	69:AN:202:HOH:O	2.49	0.46
22:AR:32:TYR:CD2	22:AR:55:LEU:HD11	2.50	0.46
24:AT:67:ILE:HG13	24:AT:71:LYS:HD3	1.97	0.46
6:BB:141:LEU:HB3	6:BB:145:GLU:HG3	1.97	0.46
7:BC:87:LEU:O	7:BC:90:VAL:HG22	2.16	0.46
15:BK:35:THR:OG1	15:BK:41:ALA:N	2.47	0.46
15:BK:63:ALA:CB	15:BK:92:GLY:HA2	2.45	0.46
27:CC:171:VAL:O	27:CC:182:LYS:HA	2.15	0.46
33:CJ:56:VAL:HG23	33:CJ:69:VAL:C	2.40	0.46
42:CS:34:GLU:HA	42:CS:59:ILE:O	2.16	0.46
44:CU:22:THR:HA	44:CU:25:GLU:OE2	2.15	0.46
29:DE:181:ILE:HG23	36:DM:2:ARG:HG3	1.96	0.46
46:DW:30:ILE:CD1	46:DW:63:ILE:HD12	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D7:18:SER:O	57:D7:19:VAL:HG13	2.14	0.46
1:AA:258:G:C6	1:AA:259:G:C5	3.03	0.46
1:AA:346:G:O5'	35:DL:105:ARG:NH1	2.48	0.46
1:AA:418:C:O5'	1:AA:418:C:H6	1.98	0.46
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.16	0.46
1:AA:1164:G:N2	1:AA:1173:U:C2	2.83	0.46
1:AA:1253:G:H2'	1:AA:1254:A:O4'	2.15	0.46
2:BA:29:U:H5'	2:BA:296:U:OP1	2.16	0.46
2:BA:31:G:N7	2:BA:306:A:H1'	2.30	0.46
2:BA:505:G:C2	2:BA:506:G:C5	3.03	0.46
2:BA:577:G:N3	2:BA:578:C:C6	2.84	0.46
2:BA:858:G:C8	2:BA:869:G:C6	3.04	0.46
2:BA:949:A:C5	2:BA:950:U:C4	3.04	0.46
2:BA:966:G:H2'	2:BA:967:C:C6	2.50	0.46
2:BA:1439:G:N2	2:BA:1463:U:C2	2.83	0.46
2:BA:1467:C:H2'	2:BA:1468:A:C8	2.50	0.46
2:BA:1525:G:OP1	15:BK:122:ARG:NH2	2.48	0.46
3:DA:191:A:H2'	3:DA:192:C:C6	2.51	0.46
3:DA:400:G:O2'	3:DA:401:A:O5'	2.30	0.46
3:DA:751:A:C2	60:DA:3046:MPD:H51	2.50	0.46
3:DA:805:G:H5'	69:DA:5236:HOH:O	2.16	0.46
3:DA:1646:C:OP2	69:DA:3538:HOH:O	2.20	0.46
3:DA:1691:C:H2'	3:DA:1692:U:O5'	2.15	0.46
3:DA:1746:A:C2	3:DA:1747:U:C4	3.03	0.46
3:DA:2004:G:P	69:DA:3277:HOH:O	2.69	0.46
3:DA:2258:C:H4'	3:DA:2259:U:OP2	2.15	0.46
3:DA:2282:G:H4'	3:DA:2389:G:O2'	2.15	0.46
3:DA:2731:G:O2'	3:DA:2732:G:H5'	2.15	0.46
3:DA:2811:G:O2'	3:DA:2812:G:H5'	2.16	0.46
4:CA:319:G:C6	4:CA:333:G:C6	3.04	0.46
4:CA:341:C:H2'	4:CA:342:A:C8	2.50	0.46
4:CA:370:G:N1	4:CA:424:G:C4	2.84	0.46
4:CA:833:A:OP1	36:CM:39:LYS:HE3	2.16	0.46
4:CA:931:U:O4	4:CA:1184:U:O4'	2.34	0.46
4:CA:1454:C:H5'	38:CO:63:ARG:HD3	1.97	0.46
4:CA:1568:G:O4'	27:CC:57:HIS:HE1	1.97	0.46
4:CA:1936:A:C8	4:CA:1945:G:C6	3.04	0.46
4:CA:2103:C:O2	4:CA:2104:C:C5	2.68	0.46
4:CA:2489:U:HO2'	4:CA:2491:U:H5	1.62	0.46
4:CA:2884:U:O2	4:CA:2884:U:O4'	2.34	0.46
4:CA:2888:C:H2'	4:CA:2889:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CB:14:U:H5'	5:CB:71:C:O4'	2.15	0.46
5:CB:28:C:P	39:CP:36:TYR:HH	2.39	0.46
6:AB:67:ILE:O	6:AB:68:LEU:CB	2.63	0.46
6:AB:86:SER:O	6:AB:87:CYS:O	2.33	0.46
7:AC:64:ILE:HG22	7:AC:98:PRO:O	2.16	0.46
8:AD:13:ARG:NH1	8:AD:36:GLN:O	2.43	0.46
12:AH:64:LYS:C	12:AH:65:TYR:CD1	2.93	0.46
14:AJ:18:ILE:HD13	14:AJ:72:ARG:HG2	1.98	0.46
15:AK:29:ASN:OD1	15:AK:30:THR:N	2.40	0.46
17:AM:11:ASP:CG	17:AM:45:ILE:HG12	2.40	0.46
6:BB:126:PHE:CE1	6:BB:127:ASP:OD2	2.68	0.46
7:BC:155:GLY:HA2	7:BC:163:ALA:HB1	1.98	0.46
15:BK:49:GLY:C	15:BK:51:GLY:N	2.70	0.46
17:BM:33:ILE:CG2	17:BM:56:LEU:HD23	2.45	0.46
22:BR:34:THR:HG22	22:BR:38:LYS:H	1.81	0.46
25:BU:41:PRO:HA	25:BU:44:GLU:HG2	1.96	0.46
29:CE:5:LEU:HD11	29:CE:12:LEU:HB2	1.98	0.46
31:CG:162:ARG:CZ	31:CG:168:VAL:HG21	2.46	0.46
32:CH:9:VAL:HB	32:CH:13:GLY:HA3	1.97	0.46
35:CL:108:ARG:HE	35:CL:116:ILE:CD1	2.29	0.46
44:CU:67:VAL:HG13	44:CU:75:GLY:O	2.16	0.46
48:CY:13:THR:OG1	48:CY:25:LYS:NZ	2.44	0.46
56:DD:35:THR:HG22	56:DD:73:VAL:HG21	1.98	0.46
32:DH:71:LYS:O	32:DH:108:VAL:HG11	2.15	0.46
33:DJ:18:ASN:N	33:DJ:19:PRO:CD	2.78	0.46
33:DJ:33:ASN:CB	33:DJ:36:GLU:HB2	2.46	0.46
43:DT:55:ILE:HG23	43:DT:66:ILE:HG12	1.97	0.46
44:DU:2:ILE:O	44:DU:3:ARG:O	2.33	0.46
50:D0:16:LEU:O	50:D0:17:PRO:C	2.56	0.46
51:D1:53:VAL:O	51:D1:54:ILE:C	2.57	0.46
52:D2:9:LYS:HG2	52:D2:52:LYS:O	2.16	0.46
1:AA:965:U:O2	1:AA:969:A:C2	2.69	0.46
1:AA:974:A:OP2	18:AN:81:ARG:NH1	2.49	0.46
1:AA:1016:A:N3	1:AA:1016:A:H2'	2.31	0.46
2:BA:39:G:C6	2:BA:40:C:C4	3.04	0.46
2:BA:45:G:O2'	2:BA:46:G:H5'	2.16	0.46
2:BA:154:U:O4	2:BA:155:A:N6	2.49	0.46
2:BA:502:A:C2	2:BA:544:G:C2	3.03	0.46
2:BA:502:A:O2'	2:BA:503:C:H5'	2.16	0.46
2:BA:897:C:C4	2:BA:898:G:N7	2.83	0.46
2:BA:935:A:C6	11:BG:3:ARG:NH2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:265:A:H4'	3:DA:266:G:OP1	2.16	0.46
3:DA:323:C:OP1	3:DA:338:G:N2	2.49	0.46
3:DA:658:U:C2'	3:DA:659:G:O5'	2.63	0.46
3:DA:818:G:N7	3:DA:1187:G:C6	2.84	0.46
3:DA:834:G:H4'	69:DA:3653:HOH:O	2.15	0.46
3:DA:956:G:H5"	37:DN:76:LYS:HD2	1.96	0.46
3:DA:1768:C:C2	3:DA:1769:U:C5	3.03	0.46
3:DA:2262:U:C2'	3:DA:2263:C:H5'	2.45	0.46
3:DA:2276:G:P	69:DA:3673:HOH:O	2.74	0.46
3:DA:2894:G:H1'	69:DA:4736:HOH:O	2.15	0.46
4:CA:25:U:H2'	4:CA:26:G:O4'	2.14	0.46
4:CA:228:C:N3	4:CA:418:C:O4'	2.49	0.46
4:CA:572:A:H3'	4:CA:573:U:O4'	2.16	0.46
4:CA:672:C:C2	4:CA:809:G:N2	2.84	0.46
4:CA:709:U:OP2	69:CA:3407:HOH:O	2.20	0.46
4:CA:1170:C:H42	4:CA:1178:C:N4	2.14	0.46
4:CA:1258:U:O4'	29:CE:79:ARG:HD2	2.15	0.46
4:CA:1752:C:H3'	4:CA:1752:C:C6	2.51	0.46
4:CA:2250:G:C8	4:CA:2250:G:O5'	2.69	0.46
4:CA:2332:C:H4'	4:CA:2336:A:C6	2.51	0.46
4:CA:2359:C:O2'	36:CM:60:ARG:NH2	2.49	0.46
4:CA:2467:C:H3'	69:CA:3227:HOH:O	2.14	0.46
4:CA:2483:C:H2'	4:CA:2484:G:O4'	2.16	0.46
5:DB:90:C:O3'	37:DN:18[A]:ARG:HG2	2.16	0.46
5:CB:17:C:H2'	5:CB:18:G:H5'	1.98	0.46
7:AC:154:SER:O	7:AC:196:ILE:HG23	2.15	0.46
11:AG:116:MET:HE3	11:AG:116:MET:O	2.16	0.46
11:AG:130:ASN:ND2	11:AG:130:ASN:O	2.48	0.46
12:AH:54:ASP:OD1	12:AH:55:THR:N	2.48	0.46
14:AJ:56:HIS:C	14:AJ:57:VAL:HG12	2.41	0.46
18:AN:41:ARG:NH1	18:AN:45:VAL:HG21	2.31	0.46
24:AT:5:LYS:O	24:AT:7:ALA:N	2.48	0.46
6:BB:44:GLU:O	6:BB:48:PRO:HD2	2.15	0.46
6:BB:125:THR:O	6:BB:126:PHE:HB3	2.15	0.46
6:BB:188:ASP:HB2	6:BB:204:ASP:CG	2.40	0.46
9:BE:46:VAL:C	9:BE:71:MET:HG3	2.40	0.46
10:BF:53:LYS:HA	10:BF:53:LYS:HZ2	1.81	0.46
12:BH:64:LYS:HB3	12:BH:71:VAL:HG21	1.97	0.46
13:BI:27:LYS:O	13:BI:63:LEU:HD23	2.15	0.46
13:BI:89:GLU:CD	13:BI:90:TYR:H	2.23	0.46
28:CD:1:MET:HA	28:CD:88:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CD:1:MET:HE3	28:CD:205:PRO:HG3	1.98	0.46
29:CE:149:ILE:HD11	29:CE:192:ALA:HB1	1.98	0.46
32:CH:94:ILE:O	32:CH:121:VAL:HG23	2.16	0.46
36:CM:28:GLY:O	36:CM:29:LYS:O	2.32	0.46
37:CN:76:LYS:HE3	37:CN:80:VAL:CG1	2.46	0.46
55:C5:1:MET:HE2	55:C5:39:VAL:HG23	1.97	0.46
29:DE:21:ARG:HD2	69:DE:409:HOH:O	2.15	0.46
30:DF:107:VAL:HA	30:DF:110:ILE:HD12	1.96	0.46
30:DF:107:VAL:N	30:DF:108:PRO:CD	2.78	0.46
33:DJ:110:GLN:O	33:DJ:110:GLN:NE2	2.49	0.46
1:AA:268:U:H2'	1:AA:269:C:C6	2.50	0.46
1:AA:825:A:O2'	12:AH:9:ASP:OD1	2.20	0.46
1:AA:862:C:C2'	1:AA:863:U:H5'	2.46	0.46
1:AA:1415:G:C2	1:AA:1486:G:C4	3.03	0.46
1:AA:1461:G:C5	1:AA:1462:C:C5	3.04	0.46
2:BA:3:A:C2	2:BA:629:A:O4'	2.69	0.46
2:BA:112:G:C2'	2:BA:113:G:H5'	2.46	0.46
2:BA:140:U:O2	2:BA:183:C:N4	2.48	0.46
2:BA:146:G:C2	2:BA:147:G:C8	3.04	0.46
2:BA:547:A:P	69:BA:1813:HOH:O	2.73	0.46
2:BA:661:G:C2	2:BA:662:U:C5	3.03	0.46
2:BA:773:G:N3	2:BA:807:A:C2	2.84	0.46
2:BA:844:G:OP2	2:BA:844:G:C8	2.68	0.46
2:BA:880:C:C2	2:BA:881:G:C8	3.03	0.46
2:BA:993:G:O2'	2:BA:994:A:N7	2.48	0.46
2:BA:1124:G:N2	2:BA:1127:G:N2	2.63	0.46
3:DA:483:A:H2'	3:DA:484:C:H6	1.81	0.46
3:DA:503:A:H4'	3:DA:504:A:O5'	2.16	0.46
3:DA:662:G:C2'	3:DA:663:G:O5'	2.64	0.46
3:DA:1236:G:OP2	63:DA:3037:PUT:H11	2.15	0.46
3:DA:1489:C:O2'	3:DA:1490:A:H5"	2.15	0.46
3:DA:2097:A:C2'	3:DA:2098:U:H5'	2.45	0.46
3:DA:2720:U:C1'	69:DA:3493:HOH:O	2.64	0.46
4:CA:1389:G:H1	4:CA:1398:C:H42	1.64	0.46
4:CA:1566:A:C2	27:CC:212:TRP:CD2	3.04	0.46
4:CA:1585:C:C2'	4:CA:1586:A:H5'	2.45	0.46
4:CA:1670:C:H2'	4:CA:1671:U:O4'	2.15	0.46
5:DB:58:A:O2'	5:DB:59:A:H5'	2.15	0.46
8:AD:9:LEU:O	8:AD:13:ARG:HG3	2.16	0.46
9:AE:56:VAL:N	9:AE:57:PRO:HD2	2.31	0.46
14:AJ:33:GLY:O	14:AJ:34:ALA:HB3	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AK:106:ARG:N	69:AK:201:HOH:O	2.48	0.46
6:BB:154:MET:HG2	6:BB:156:GLY:H	1.80	0.46
7:BC:55:ILE:HD12	7:BC:55:ILE:O	2.14	0.46
9:BE:35:ALA:O	9:BE:50:TYR:O	2.33	0.46
12:BH:14:ILE:HD11	12:BH:61:LEU:HD13	1.97	0.46
21:BQ:48:ASP:O	21:BQ:49:GLU:C	2.56	0.46
30:CF:49:LEU:HD21	30:CF:66:ILE:HG23	1.97	0.46
34:CK:46:PRO:HD3	41:CR:59:LEU:CD1	2.46	0.46
40:CQ:105:LYS:HA	40:CQ:108:ARG:CD	2.45	0.46
40:CQ:105:LYS:HA	40:CQ:108:ARG:HD3	1.96	0.46
46:CW:30:ILE:HD11	46:CW:63:ILE:HD12	1.97	0.46
56:DD:46:ARG:NH1	56:DD:86:GLU:HA	2.31	0.46
33:DJ:18:ASN:O	33:DJ:18:ASN:OD1	2.33	0.46
33:DJ:66:PHE:N	33:DJ:66:PHE:CD1	2.84	0.46
38:DO:3:HIS:O	38:DO:4:ARG:HB2	2.15	0.46
42:DS:22:LEU:HA	69:DS:311:HOH:O	2.16	0.46
55:D5:27:TYR:CE1	55:D5:39:VAL:CG1	2.98	0.46
1:AA:316:C:O2	1:AA:316:C:H2'	2.15	0.46
1:AA:515:G:N3	1:AA:537:G:C2	2.83	0.46
1:AA:545:C:H5'	8:AD:69:GLU:CB	2.45	0.46
1:AA:569:C:H5"	1:AA:570:G:OP1	2.16	0.46
1:AA:622:A:C8	1:AA:623:C:C6	3.03	0.46
1:AA:939:G:H2'	1:AA:940:C:C6	2.51	0.46
1:AA:1154:G:H2'	1:AA:1155:A:C8	2.51	0.46
1:AA:1291:U:H2'	1:AA:1292:G:C8	2.51	0.46
1:AA:1476:A:H2'	1:AA:1477:U:O5'	2.15	0.46
1:AA:1492:A:C3'	1:AA:1493:A:H5"	2.46	0.46
1:AA:1496:C:H5"	1:AA:1497:G:OP2	2.15	0.46
2:BA:1088:G:C6	2:BA:1089:G:N7	2.84	0.46
2:BA:1125:U:O2'	2:BA:1126:U:H2'	2.16	0.46
2:BA:1263:C:H2'	2:BA:1264:U:C1'	2.45	0.46
2:BA:1480:A:H2'	2:BA:1481:U:O4'	2.16	0.46
3:DA:93:G:O2'	3:DA:94:A:H5'	2.16	0.46
3:DA:237:C:H42	3:DA:260:G:H1	1.64	0.46
3:DA:971:G:C6	3:DA:972:A:C4	3.04	0.46
3:DA:1143:A:OP1	34:DK:27:ARG:NH2	2.47	0.46
3:DA:1153:C:OP2	69:DA:3542:HOH:O	2.21	0.46
3:DA:1594:U:H2'	3:DA:1595:C:C6	2.50	0.46
3:DA:1760:C:H2'	3:DA:1761:C:H5'	1.98	0.46
3:DA:1825:U:H2'	3:DA:1826:G:H8	1.81	0.46
3:DA:1835:2MG:C4	3:DA:1836:C:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1955:U:OP2	69:DA:3535:HOH:O	2.20	0.46
3:DA:2170:A:C2	3:DA:2171:A:C2	3.04	0.46
3:DA:2575:C:O2'	56:DD:145:SER:HB2	2.15	0.46
3:DA:2698:U:H2'	3:DA:2699:C:C6	2.51	0.46
4:CA:7:G:H4'	34:CK:15:TRP:CH2	2.50	0.46
4:CA:65:U:C3'	4:CA:66:C:H6	2.29	0.46
4:CA:297:G:OP1	45:CV:1:ALA:HB2	2.15	0.46
4:CA:375:G:O6	4:CA:400:G:N3	2.49	0.46
4:CA:449:A:OP2	4:CA:449:A:C8	2.69	0.46
4:CA:523:C:H2'	4:CA:524:G:H8	1.80	0.46
4:CA:644:A:N1	4:CA:2369:A:H1'	2.31	0.46
4:CA:770:G:C4	4:CA:771:G:C8	3.04	0.46
4:CA:822:G:O6	4:CA:943:A:H2	1.99	0.46
4:CA:995:C:OP2	41:CR:52:ARG:HD2	2.16	0.46
4:CA:1250:G:H3'	4:CA:1251:C:H5'	1.98	0.46
4:CA:1444:G:C2	4:CA:1548:A:C2	3.04	0.46
4:CA:1635:A:H2'	4:CA:1636:U:O4'	2.16	0.46
4:CA:1797:G:H2'	4:CA:1798:U:O5'	2.16	0.46
4:CA:1956:U:O2	4:CA:1985:C:H4'	2.16	0.46
4:CA:2020:A:C2	4:CA:2022:U:O4'	2.69	0.46
4:CA:2059:A:OP1	29:CE:66:GLY:HA3	2.16	0.46
4:CA:2086:U:H2'	4:CA:2087:G:O4'	2.16	0.46
4:CA:2648:G:H2'	4:CA:2649:C:C6	2.51	0.46
5:DB:62:C:H2'	5:DB:63:C:H6	1.81	0.46
5:CB:29:A:H2'	5:CB:30:C:C6	2.51	0.46
6:AB:81:LYS:HG3	6:AB:91:PHE:CE2	2.51	0.46
6:AB:186:ILE:O	6:AB:186:ILE:HG13	2.15	0.46
6:AB:188:ASP:OD2	6:AB:204:ASP:OD1	2.33	0.46
8:AD:157:ALA:O	8:AD:161:LEU:CD2	2.64	0.46
12:AH:125:ILE:O	12:AH:125:ILE:CG1	2.64	0.46
15:AK:91:PRO:C	15:AK:93:ARG:H	2.24	0.46
18:AN:63:ARG:O	18:AN:73:PHE:HE1	1.99	0.46
6:BB:33:GLY:CA	6:BB:40:ILE:H	2.28	0.46
6:BB:50:PHE:O	6:BB:54:LEU:HD23	2.15	0.46
7:BC:45:LYS:CG	7:BC:46:GLU:N	2.78	0.46
8:BD:62:ARG:CG	8:BD:72:PHE:CD1	2.99	0.46
14:BJ:35:GLN:HG2	14:BJ:77:VAL:H	1.81	0.46
18:BN:1:ALA:O	18:BN:2:LYS:CB	2.64	0.46
35:CL:63:VAL:HB	35:CL:103:VAL:HG12	1.97	0.46
40:CQ:98:TYR:CE2	40:CQ:99:LEU:CD2	2.99	0.46
35:DL:79:PHE:HB3	40:DQ:67:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DQ:15:ASP:CG	40:DQ:15:ASP:O	2.59	0.46
54:D4:51:LYS:HE3	54:D4:51:LYS:HB3	1.83	0.46
1:AA:16:A:O2'	1:AA:17:U:H5'	2.15	0.46
1:AA:507:C:C4	1:AA:508:U:C4	3.04	0.46
1:AA:880:C:H2'	1:AA:881:G:H5'	1.97	0.46
1:AA:913:A:H2'	69:AA:1755:HOH:O	2.15	0.46
1:AA:1133:G:C2	1:AA:1142:G:C4	3.04	0.46
1:AA:1231:G:C6	1:AA:1232:U:C4	3.04	0.46
1:AA:1333:A:H3'	1:AA:1334:G:C8	2.50	0.46
1:AA:1335:U:O2'	1:AA:1336:C:P	2.73	0.46
1:AA:1368:A:OP2	13:AI:114:LYS:HD2	2.15	0.46
1:AA:1392:G:H8	1:AA:1392:G:O5'	1.98	0.46
2:BA:81:A:N1	2:BA:88:U:O4	2.49	0.46
2:BA:321:A:O2'	2:BA:1436:U:H5'	2.16	0.46
2:BA:623:C:C4	2:BA:624:C:C5	3.04	0.46
2:BA:1130:A:C5	2:BA:1146:A:C6	3.04	0.46
2:BA:1375:A:OP1	11:BG:12:ILE:HD11	2.15	0.46
2:BA:1439:G:H2'	2:BA:1440:U:C6	2.51	0.46
3:DA:268:C:H6	3:DA:268:C:O5'	1.99	0.46
3:DA:1068:G:H21	3:DA:1096:A:P	2.39	0.46
3:DA:1327:A:OP1	69:DA:3544:HOH:O	2.21	0.46
3:DA:1849:G:H2'	3:DA:1850:G:C8	2.51	0.46
3:DA:2112:G:O5'	3:DA:2113:U:OP2	2.34	0.46
69:DA:4580:HOH:O	56:DD:129:THR:HG22	2.16	0.46
4:CA:58:G:N3	4:CA:70:G:N2	2.64	0.46
4:CA:223:A:H2'	4:CA:408:G:N3	2.30	0.46
4:CA:593:U:H2'	4:CA:594:U:C6	2.51	0.46
4:CA:605:G:H1'	4:CA:657:U:O2'	2.16	0.46
4:CA:663:G:C6	4:CA:664:G:C5	3.04	0.46
4:CA:858:G:C4	4:CA:2268:A:C2	3.03	0.46
4:CA:1128:G:C4	4:CA:1129:A:C2	3.04	0.46
4:CA:1681:G:O2'	4:CA:1762:A:N3	2.34	0.46
4:CA:1754:A:N1	4:CA:2716:C:O2'	2.48	0.46
4:CA:1797:G:H1	4:CA:1822:C:H42	1.64	0.46
4:CA:1845:G:H2'	4:CA:1846:G:O4'	2.15	0.46
4:CA:1852:U:H4'	69:CA:3951:HOH:O	2.15	0.46
4:CA:1905:C:C4	4:CA:1930:G:C2	3.04	0.46
4:CA:1959:G:C6	4:CA:1960:A:C5	3.04	0.46
4:CA:1965:C:H3'	4:CA:1966:A:H8	1.80	0.46
4:CA:2045:C:O3'	51:C1:14:MET:HB3	2.15	0.46
4:CA:2122:U:H2'	4:CA:2123:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2243:U:H1'	69:CA:3878:HOH:O	2.16	0.46
4:CA:2621:G:H2'	4:CA:2622:U:O4'	2.16	0.46
5:CB:83:G:H2'	5:CB:84:G:O4'	2.15	0.46
6:AB:106:THR:C	6:AB:107:VAL:HG23	2.41	0.46
11:AG:130:ASN:HA	11:AG:135:VAL:HG11	1.97	0.46
18:AN:43:ASN:C	18:AN:45:VAL:N	2.65	0.46
21:AQ:17:MET:CG	21:AQ:20:SER:HB3	2.46	0.46
11:BG:35:LYS:HB3	11:BG:38:THR:CG2	2.46	0.46
27:CC:16:VAL:HB	27:CC:203:VAL:H	1.81	0.46
28:CD:73:VAL:HG23	28:CD:74:GLU:O	2.15	0.46
28:CD:108:ASP:OD2	28:CD:207:VAL:HG12	2.16	0.46
28:CD:173:GLN:O	28:CD:175:LEU:N	2.49	0.46
31:CG:97:VAL:CG2	31:CG:124:CYS:HB2	2.46	0.46
37:CN:53:MET:SD	37:CN:63:ILE:HD13	2.56	0.46
37:CN:73:ILE:HG21	37:CN:91:TYR:OH	2.16	0.46
29:DE:200:LEU:N	29:DE:200:LEU:HD13	2.31	0.46
32:DH:42:LYS:HG2	32:DH:43:ASN:N	2.31	0.46
33:DJ:12:VAL:O	33:DJ:53:PRO:HG3	2.15	0.46
33:DJ:78:LEU:HB3	33:DJ:105:LEU:CD2	2.46	0.46
33:DJ:85:ILE:C	33:DJ:85:ILE:CD1	2.88	0.46
35:DL:1:MET:N	69:DL:207:HOH:O	2.48	0.46
36:DM:82:LEU:HD22	36:DM:90:VAL:HG21	1.97	0.46
40:DQ:22:GLY:O	40:DQ:109:ILE:HD11	2.16	0.46
41:DR:102:LYS:N	69:DR:303:HOH:O	2.38	0.46
1:AA:600:A:H2'	1:AA:601:G:C8	2.51	0.46
1:AA:1011:C:C4	1:AA:1018:G:O6	2.69	0.46
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.16	0.46
1:AA:1123:U:OP2	69:AA:1746:HOH:O	2.20	0.46
1:AA:1317:C:OP1	18:AN:20:PHE:HE2	1.99	0.46
1:AA:1404:C:O2'	1:AA:1519:MA6:O2'	2.25	0.46
2:BA:66:A:N6	2:BA:67:C:C4	2.84	0.46
2:BA:146:G:N2	2:BA:177:G:C8	2.84	0.46
2:BA:562:U:H1'	26:BL:12:ARG:CG	2.45	0.46
2:BA:1005:A:H4'	2:BA:1037:C:O2	2.15	0.46
2:BA:1089:G:C5	2:BA:1090:U:C5	3.04	0.46
2:BA:1289:A:H5'	2:BA:1290:G:OP2	2.16	0.46
2:BA:1433:A:OP1	40:CQ:105:LYS:NZ	2.48	0.46
3:DA:1337:G:H2'	3:DA:1338:G:O4'	2.16	0.46
3:DA:1587:G:C5	3:DA:1588:G:N7	2.83	0.46
3:DA:1831:G:C2'	3:DA:1832:C:H5'	2.46	0.46
3:DA:2002:G:OP1	38:DO:17:ARG:NH1	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2056:G:H2'	3:DA:2056:G:N3	2.31	0.46
4:CA:53:A:C8	4:CA:54:G:C8	3.04	0.46
4:CA:323:C:O2	4:CA:323:C:O4'	2.32	0.46
4:CA:619:G:O6	29:CE:98:LYS:CE	2.64	0.46
4:CA:982:C:H4'	4:CA:983:A:OP1	2.14	0.46
4:CA:1096:A:H2'	4:CA:1097:U:O4'	2.15	0.46
4:CA:1130:U:O2'	4:CA:1131:G:C8	2.68	0.46
4:CA:1344:U:O2'	4:CA:1345:C:OP2	2.32	0.46
4:CA:1438:U:C5	4:CA:1552:A:C2	3.04	0.46
4:CA:1902:C:H6	4:CA:1902:C:H5'	1.80	0.46
4:CA:2091:C:O2	48:CY:33:HIS:CE1	2.69	0.46
4:CA:2345:G:H4'	4:CA:2346:A:H5"	1.96	0.46
4:CA:2408:U:H2'	4:CA:2409:G:C8	2.51	0.46
5:CB:48:U:H2'	5:CB:49:C:C6	2.51	0.46
6:AB:104:TRP:HH2	6:AB:155:GLY:C	2.24	0.46
6:AB:146:ASN:C	6:AB:147:SER:HG	2.17	0.46
6:AB:160:ALA:HA	6:AB:182:PRO:HG2	1.98	0.46
8:AD:50:ASP:O	8:AD:53:VAL:HG22	2.16	0.46
10:AF:2:ARG:O	10:AF:65:GLU:HA	2.16	0.46
23:AS:68:GLY:HA2	69:AS:101:HOH:O	2.16	0.46
24:AT:68:HIS:HB3	24:AT:69:LYS:NZ	2.29	0.46
6:BB:31:ILE:CG2	6:BB:32:PHE:N	2.79	0.46
8:BD:58:LYS:HB2	8:BD:200:ILE:HD12	1.97	0.46
8:BD:62:ARG:HG3	8:BD:72:PHE:CD1	2.51	0.46
9:BE:12:GLN:HB3	9:BE:40:GLY:O	2.15	0.46
9:BE:77:ASN:HB2	9:BE:82:GLN:HG3	1.97	0.46
9:BE:149:SER:OG	9:BE:152:MET:HG2	2.16	0.46
10:BF:53:LYS:HA	10:BF:53:LYS:NZ	2.31	0.46
13:BI:33:ARG:HD3	13:BI:34:SER:H	1.80	0.46
15:BK:19:GLY:O	15:BK:82:LEU:HA	2.16	0.46
26:BL:121:ARG:HG2	26:BL:121:ARG:HH11	1.81	0.46
21:BQ:14:SER:C	21:BQ:17:MET:HE1	2.40	0.46
33:CJ:45:THR:O	33:CJ:45:THR:HG22	2.16	0.46
38:CO:78:LYS:O	38:CO:78:LYS:HG2	2.15	0.46
45:CV:12:VAL:HG21	45:CV:38:ILE:HG23	1.98	0.46
45:CV:102:ILE:HG22	45:CV:102:ILE:OXT	2.15	0.46
48:CY:57:VAL:HG13	48:CY:61:LYS:HD2	1.98	0.46
27:DC:195:GLY:HA2	69:DC:328:HOH:O	2.16	0.46
33:DJ:58:ILE:O	33:DJ:59:THR:CB	2.64	0.46
33:DJ:79:LEU:CD1	33:DJ:132:ALA:HA	2.46	0.46
39:DP:19:GLN:HA	63:DP:202:PUT:N1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DP:34:HIS:CE1	39:DP:65:THR:HG21	2.50	0.46
40:DQ:54:LEU:HG	40:DQ:54:LEU:O	2.16	0.46
57:D7:13:VAL:O	57:D7:40:VAL:HA	2.16	0.46
1:AA:200:G:N2	1:AA:218:U:C2	2.83	0.45
1:AA:291:U:O2'	1:AA:292:G:H5'	2.15	0.45
1:AA:568:G:C4	1:AA:569:C:C5	3.04	0.45
1:AA:582:C:C4	1:AA:583:A:N7	2.84	0.45
1:AA:601:G:H2'	1:AA:602:A:H8	1.81	0.45
1:AA:648:A:C2	1:AA:649:A:C4	3.04	0.45
1:AA:651:C:C4	1:AA:652:U:C4	3.04	0.45
1:AA:746:A:H4'	1:AA:837:U:O2'	2.16	0.45
1:AA:903:G:C5	1:AA:904:U:C5	3.04	0.45
1:AA:1253:G:C4	1:AA:1254:A:C8	3.03	0.45
1:AA:1317:C:C2'	1:AA:1318:A:H5'	2.45	0.45
2:BA:283:U:C4	2:BA:284:C:C4	3.04	0.45
2:BA:378:G:N2	2:BA:386:C:O2	2.49	0.45
2:BA:604:G:C4	2:BA:605:U:C6	3.04	0.45
2:BA:849:G:C6	2:BA:850:U:C4	3.04	0.45
2:BA:937:A:C2	2:BA:1379:G:C6	3.04	0.45
2:BA:1053:G:H5"	2:BA:1055:A:OP1	2.15	0.45
2:BA:1129:C:N3	2:BA:1144:G:N2	2.63	0.45
3:DA:644:A:O3'	3:DA:645:C:C4'	2.65	0.45
3:DA:851:C:C2'	3:DA:852:U:O5'	2.64	0.45
3:DA:1180:U:H2'	3:DA:1181:U:H5'	1.97	0.45
3:DA:1587:G:C4	3:DA:1588:G:C8	3.05	0.45
3:DA:1741:C:H2'	3:DA:1742:U:O4'	2.16	0.45
3:DA:1769:U:C2	69:DA:3434:HOH:O	2.59	0.45
3:DA:1784:A:OP2	69:DA:3307:HOH:O	2.21	0.45
3:DA:1889:A:H2'	3:DA:1890:A:O5'	2.16	0.45
3:DA:2080:A:O5'	48:DY:18:SER:CB	2.63	0.45
4:CA:9:G:N1	4:CA:2629:U:C6	2.84	0.45
4:CA:223:A:O2'	4:CA:420:C:O2	2.34	0.45
4:CA:224:U:P	4:CA:408:G:H21	2.38	0.45
4:CA:306:U:O4	4:CA:307:G:C6	2.69	0.45
4:CA:310:A:C2	4:CA:312:G:H1'	2.51	0.45
4:CA:450:G:OP1	4:CA:1248:G:N1	2.47	0.45
4:CA:480:A:O3'	45:CV:43:LYS:HG3	2.16	0.45
4:CA:771:G:C2	4:CA:772:C:C5	3.04	0.45
4:CA:1142:A:H4'	4:CA:1143:A:OP1	2.17	0.45
4:CA:1313:U:H5"	69:CA:3685:HOH:O	2.16	0.45
4:CA:1384:A:O2'	4:CA:1404:C:O2	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1950:G:O5'	4:CA:1950:G:H8	1.99	0.45
4:CA:2165:C:H2'	4:CA:2166:U:O4'	2.17	0.45
4:CA:2199:A:C6	4:CA:2225:A:C4	3.03	0.45
4:CA:2214:C:C2	4:CA:2215:C:C6	3.04	0.45
4:CA:2234:G:C6	4:CA:2235:G:C5	3.04	0.45
4:CA:2236:U:H5"	4:CA:2237:G:OP2	2.16	0.45
4:CA:2598:A:H2'	4:CA:2599:G:O4'	2.16	0.45
4:CA:2785:C:O4'	28:CD:36:GLN:NE2	2.50	0.45
4:CA:2810:A:H3'	4:CA:2811:G:C8	2.51	0.45
6:AB:148:LEU:HD22	6:AB:151:ILE:HG21	1.98	0.45
6:AB:182:PRO:O	6:AB:183:VAL:CB	2.64	0.45
6:AB:206:ALA:O	6:AB:210:VAL:HG23	2.16	0.45
7:AC:23:PHE:CD1	7:AC:23:PHE:C	2.93	0.45
7:AC:90:VAL:O	7:AC:94:ILE:HG13	2.16	0.45
10:AF:92:THR:HG22	10:AF:93:LYS:HE2	1.97	0.45
11:AG:22:LEU:HD21	11:AG:97:ASN:HD22	1.81	0.45
14:AJ:89:ARG:NH1	14:AJ:89:ARG:HB2	2.31	0.45
17:AM:19:LEU:O	17:AM:25:VAL:HG21	2.16	0.45
18:AN:13:VAL:HA	18:AN:60:GLN:OE1	2.17	0.45
18:AN:50:THR:O	18:AN:50:THR:OG1	2.29	0.45
20:AP:78:VAL:O	20:AP:79:ASN:HB2	2.16	0.45
6:BB:73:LYS:HE3	6:BB:165:ASP:HB2	1.99	0.45
11:BG:69:VAL:HG13	11:BG:135:VAL:HG12	1.97	0.45
12:BH:59:LEU:HD13	12:BH:60:GLU:N	2.32	0.45
13:BI:8:GLY:HA3	13:BI:86:ALA:HB2	1.98	0.45
15:BK:49:GLY:O	15:BK:51:GLY:N	2.46	0.45
28:CD:33:ARG:NH2	28:CD:73:VAL:HG23	2.31	0.45
32:CH:2:GLN:C	32:CH:3:VAL:HG13	2.41	0.45
33:CJ:18:ASN:N	33:CJ:19:PRO:HD3	2.31	0.45
39:CP:7:ARG:CZ	39:CP:97:PHE:CZ	2.99	0.45
53:C3:30:VAL:O	53:C3:34:ARG:HG3	2.17	0.45
33:DJ:116:MET:SD	33:DJ:128:ILE:HD11	2.57	0.45
34:DK:19:ASP:O	34:DK:23:LYS:HE2	2.16	0.45
35:DL:73:ASP:C	35:DL:73:ASP:OD1	2.57	0.45
42:DS:1:MET:HE3	42:DS:101:ILE:HB	1.99	0.45
47:DX:34:ILE:HG23	47:DX:56:THR:HG23	1.98	0.45
1:AA:397:A:N7	1:AA:548:G:C8	2.85	0.45
1:AA:476:U:C5	1:AA:477:C:C5	3.03	0.45
1:AA:478:A:H2'	1:AA:479:U:C5'	2.46	0.45
1:AA:1361:G:H2'	1:AA:1362:A:O4'	2.17	0.45
1:AA:1492:A:H2'	1:AA:1493:A:H5"	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1494:G:C4	1:AA:1495:U:C5	3.04	0.45
2:BA:118:U:O4	69:BA:1761:HOH:O	2.21	0.45
2:BA:187:G:N2	2:BA:190:A:OP2	2.49	0.45
2:BA:234:C:H4'	21:BQ:66:PRO:HG3	1.98	0.45
2:BA:373:A:C2	2:BA:374:A:C8	3.05	0.45
2:BA:483:C:H2'	2:BA:484:G:C8	2.51	0.45
2:BA:599:C:H4'	12:BH:122:GLY:C	2.40	0.45
2:BA:861:G:H2'	2:BA:862:C:O5'	2.17	0.45
2:BA:869:G:H8	2:BA:869:G:O5'	2.00	0.45
2:BA:1001:C:H2'	2:BA:1002:G:C8	2.51	0.45
2:BA:1095:U:P	69:BA:1788:HOH:O	2.74	0.45
2:BA:1258:G:H2'	2:BA:1259:C:C6	2.51	0.45
3:DA:121:G:H2'	3:DA:122:G:C8	2.52	0.45
3:DA:1147:A:C2'	3:DA:1148:U:H5'	2.46	0.45
3:DA:1187:G:H5"	42:DS:83:TYR:CE1	2.52	0.45
3:DA:1224:U:C4	3:DA:1225:G:C6	3.04	0.45
3:DA:1346:G:H2'	3:DA:1347:A:H8	1.80	0.45
3:DA:1483:G:C6	3:DA:1484:U:C4	3.04	0.45
3:DA:1613:G:H1'	69:DA:3471:HOH:O	2.14	0.45
3:DA:1716:U:H2'	3:DA:1717:A:H8	1.81	0.45
3:DA:1787:A:H5'	3:DA:1787:A:H8	1.81	0.45
3:DA:1930:G:N2	3:DA:1968:G:H2'	2.31	0.45
3:DA:1964:G:H5'	69:DA:4311:HOH:O	2.15	0.45
3:DA:1979:U:C4'	69:DA:4262:HOH:O	2.64	0.45
3:DA:2059:A:P	69:DA:3519:HOH:O	2.74	0.45
3:DA:2077:A:C8	3:DA:2435:A:C4	3.04	0.45
3:DA:2183:A:H2'	3:DA:2184:A:N9	2.31	0.45
3:DA:2200:C:O2	3:DA:2226:C:N4	2.50	0.45
3:DA:2684:U:P	69:DA:3694:HOH:O	2.74	0.45
3:DA:2715:C:H2'	3:DA:2716:C:O5'	2.16	0.45
3:DA:2799:A:C5	3:DA:2801:G:C8	3.04	0.45
3:DA:2834:G:O6	3:DA:2879:A:H2'	2.16	0.45
4:CA:37:C:O2'	4:CA:38:A:H5'	2.17	0.45
4:CA:682:G:C2	4:CA:796:C:O2	2.69	0.45
4:CA:733:G:O6	4:CA:761:A:H3'	2.17	0.45
4:CA:749:A:C5	4:CA:750:A:N7	2.84	0.45
4:CA:1031:G:HO2'	55:C5:7:LEU:H	1.60	0.45
4:CA:1924:C:H2'	4:CA:1925:C:C6	2.51	0.45
4:CA:2020:A:H5'	51:C1:8:THR:HG22	1.97	0.45
4:CA:2191:A:C6	4:CA:2192:U:C4	3.04	0.45
6:AB:111:ILE:HD12	6:AB:111:ILE:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AD:135:TYR:C	8:AD:135:TYR:CD2	2.95	0.45
11:AG:13:LEU:HD13	11:AG:13:LEU:N	2.30	0.45
21:AQ:74:THR:HG22	21:AQ:75:LEU:N	2.32	0.45
6:BB:139:ARG:NH1	6:BB:140:GLU:HG3	2.31	0.45
8:BD:4:TYR:CZ	8:BD:6:GLY:HA3	2.52	0.45
10:BF:30:THR:C	10:BF:32:ALA:N	2.74	0.45
27:CC:52:HIS:O	27:CC:216:ARG:N	2.40	0.45
28:CD:4:LEU:HB3	28:CD:32:ASN:OD1	2.16	0.45
29:CE:121:VAL:O	29:CE:190:ALA:HB2	2.16	0.45
30:CF:162:ASP:OD1	30:CF:162:ASP:N	2.49	0.45
33:CJ:110:GLN:C	33:CJ:112:LYS:H	2.24	0.45
46:CW:29:ILE:HG12	46:CW:30:ILE:N	2.31	0.45
54:C4:15:LYS:HE2	54:C4:19:GLY:HA2	1.98	0.45
56:DD:12:THR:HG23	69:DQ:303:HOH:O	2.16	0.45
29:DE:77:ILE:O	29:DE:77:ILE:CG2	2.64	0.45
30:DF:21:TYR:OH	30:DF:164:GLU:OE1	2.25	0.45
30:DF:79:ARG:H	30:DF:82:TYR:HD2	1.64	0.45
33:DJ:54:ILE:CG2	33:DJ:70:THR:OG1	2.64	0.45
38:DO:82:GLU:O	38:DO:85:PRO:HD2	2.16	0.45
41:DR:10:ARG:HA	41:DR:10:ARG:NH1	2.31	0.45
49:DZ:26:PHE:O	49:DZ:30:MET:HG2	2.15	0.45
51:D1:8:THR:C	69:D1:201:HOH:O	2.56	0.45
1:AA:283:U:C4	1:AA:284:C:C4	3.04	0.45
1:AA:524:G:H5"	1:AA:525:C:OP2	2.16	0.45
1:AA:606:G:N3	1:AA:633:G:C6	2.84	0.45
1:AA:844:G:H3'	1:AA:844:G:OP1	2.16	0.45
1:AA:958:A:C6	1:AA:959:A:N1	2.84	0.45
1:AA:993:G:O2'	1:AA:994:A:N7	2.50	0.45
1:AA:1015:G:H2'	1:AA:1218:C:O2'	2.16	0.45
2:BA:106:C:O2	2:BA:379:C:H5'	2.15	0.45
2:BA:552:U:O4	2:BA:553:A:N6	2.49	0.45
2:BA:680:C:N3	2:BA:711:G:C2	2.85	0.45
2:BA:931:C:N3	2:BA:932:C:C5	2.85	0.45
2:BA:939:G:C6	2:BA:940:C:C4	3.05	0.45
2:BA:943:U:H1'	13:BI:126:GLN:HE22	1.82	0.45
2:BA:1288:A:C2'	2:BA:1352:C:HO2'	2.28	0.45
2:BA:1431:A:C6	2:BA:1432:G:N1	2.84	0.45
3:DA:136:G:N2	3:DA:144:A:C4	2.84	0.45
3:DA:246:C:C2'	3:DA:247:G:H5'	2.47	0.45
3:DA:304:U:C2'	3:DA:305:C:H5'	2.46	0.45
3:DA:465:G:H2'	3:DA:466:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:585:G:O5'	3:DA:585:G:H8	2.00	0.45
3:DA:747:5MU:C2	3:DA:2613:U:C4	3.05	0.45
3:DA:1076:C:O2	33:DJ:92:PRO:HG2	2.16	0.45
3:DA:1166:G:C2'	3:DA:1167:C:H5'	2.47	0.45
3:DA:1178:C:H2'	3:DA:1179:G:C8	2.51	0.45
3:DA:1949:G:N2	3:DA:1958:C:C2	2.84	0.45
3:DA:2351:G:P	69:DA:3485:HOH:O	2.74	0.45
69:DA:5764:HOH:O	36:DM:14:LYS:HE2	2.16	0.45
4:CA:297:G:N1	4:CA:342:A:N6	2.64	0.45
4:CA:673:C:O2'	29:CE:77:ILE:HD11	2.16	0.45
4:CA:740:C:H5'	4:CA:1784:A:H5"	1.98	0.45
4:CA:1584:U:O2	4:CA:1584:U:H3'	2.17	0.45
4:CA:1613:G:H3'	4:CA:1614:A:C5'	2.47	0.45
4:CA:1687:G:N1	4:CA:1700:A:OP1	2.42	0.45
4:CA:1799:G:H8	27:CC:179:GLU:OE1	1.99	0.45
4:CA:1832:C:H2'	4:CA:1833:C:O4'	2.16	0.45
4:CA:1951:U:H2'	4:CA:1953:A:OP2	2.17	0.45
4:CA:2212:A:C2	4:CA:2214:C:C4	3.05	0.45
4:CA:2619:C:OP1	28:CD:157:LYS:CE	2.65	0.45
4:CA:2799:A:C5	4:CA:2801:G:H1'	2.52	0.45
4:CA:2867:G:N7	40:CQ:20:ARG:HD3	2.32	0.45
7:AC:11:ARG:NH2	7:AC:177:THR:O	2.38	0.45
8:AD:158:ALA:O	8:AD:162:ALA:HB2	2.16	0.45
9:AE:91:GLY:HA3	9:AE:130:SER:HB3	1.98	0.45
13:AI:65:ILE:HD12	13:AI:79:ILE:HD13	1.97	0.45
17:AM:16:VAL:HG23	17:AM:17:ILE:HD12	1.99	0.45
18:AN:46:LEU:O	18:AN:47:LYS:C	2.59	0.45
20:AP:49:GLY:O	20:AP:50:THR:OG1	2.33	0.45
23:AS:5:LEU:HD23	23:AS:9:PRO:HA	1.97	0.45
25:AU:7:ARG:O	25:AU:8:GLU:CB	2.63	0.45
8:BD:158:ALA:O	8:BD:161:LEU:CD2	2.64	0.45
12:BH:88:ARG:O	12:BH:92:LEU:CD2	2.65	0.45
26:BL:80:ILE:HD12	26:BL:97:THR:CG2	2.46	0.45
17:BM:8:ASN:OD1	17:BM:9:ILE:N	2.50	0.45
18:BN:35:ALA:HA	18:BN:42:TRP:CH2	2.52	0.45
19:BO:55:GLY:O	19:BO:59:MET:HG3	2.17	0.45
28:CD:46:ARG:NH1	28:CD:86:GLU:O	2.49	0.45
33:CJ:129:GLU:O	33:CJ:132:ALA:O	2.33	0.45
36:CM:76:GLU:HB2	36:CM:111:ILE:HD11	1.97	0.45
37:CN:68:PHE:O	37:CN:69:PRO:C	2.59	0.45
43:CT:80:PRO:HD2	43:CT:100:THR:OG1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DC:38:LYS:NZ	27:DC:55:GLY:O	2.39	0.45
56:DD:18:ASP:HB2	61:DQ:202:PG4:H72	1.97	0.45
32:DH:4:ILE:HD11	32:DH:44:ILE:HG22	1.97	0.45
33:DJ:13:ALA:HA	33:DJ:53:PRO:HG3	1.98	0.45
38:DO:90:ARG:NH1	69:DO:206:HOH:O	2.49	0.45
50:D0:2:LYS:H	50:D0:2:LYS:HE2	1.80	0.45
55:D5:3:VAL:O	55:D5:4:LEU:HB2	2.16	0.45
1:AA:45:G:O2'	1:AA:46:G:H5'	2.16	0.45
1:AA:82:G:H5'	1:AA:83:C:O5'	2.16	0.45
1:AA:102:G:C2	1:AA:103:U:C4	3.05	0.45
1:AA:270:A:C2	1:AA:271:C:C2	3.04	0.45
1:AA:588:G:C6	1:AA:589:U:N3	2.84	0.45
1:AA:723:U:H5'	1:AA:724:G:OP1	2.17	0.45
2:BA:405:U:OP1	2:BA:406:G:O2'	2.17	0.45
2:BA:544:G:P	8:BD:56:ARG:HH22	2.38	0.45
2:BA:570:G:C4	2:BA:571:U:C5	3.04	0.45
2:BA:608:A:N6	2:BA:609:A:C2	2.85	0.45
2:BA:644:U:H2'	2:BA:645:G:O4'	2.15	0.45
2:BA:739:C:C2'	2:BA:740:U:H5'	2.47	0.45
2:BA:892:A:O2'	2:BA:1415:G:H4'	2.16	0.45
2:BA:1263:C:C4	2:BA:1264:U:C4	3.05	0.45
2:BA:1422:G:O3'	35:CL:49:ARG:NH2	2.49	0.45
3:DA:561:G:C8	69:DA:3627:HOH:O	2.69	0.45
3:DA:954:G:OP2	37:DN:16:ARG:NH1	2.47	0.45
3:DA:997:G:H2'	3:DA:998:C:O5'	2.17	0.45
3:DA:1065:U:O2	3:DA:1065:U:H2'	2.16	0.45
3:DA:2441:U:OP2	3:DA:2586:U:O2'	2.34	0.45
3:DA:2454:G:H5"	69:DA:3444:HOH:O	2.15	0.45
3:DA:2678:C:H2'	3:DA:2679:A:O4'	2.17	0.45
3:DA:2792:A:C2	3:DA:2793:C:C6	3.04	0.45
4:CA:622:G:H2'	4:CA:623:C:C6	2.51	0.45
4:CA:681:G:C2	4:CA:682:G:C8	3.05	0.45
4:CA:815:C:O2	4:CA:1193:G:N2	2.49	0.45
4:CA:861:A:H3'	4:CA:862:G:H8	1.82	0.45
4:CA:1619:G:C2'	4:CA:1620:G:H5'	2.46	0.45
4:CA:1806:C:O2'	27:CC:47:ARG:HG3	2.17	0.45
4:CA:2199:A:N1	4:CA:2225:A:C4	2.85	0.45
4:CA:2548:U:H2'	4:CA:2549:G:O4'	2.16	0.45
4:CA:2684:U:O4'	35:CL:70:ARG:NH1	2.49	0.45
4:CA:2847:U:C5	4:CA:2848:G:C5	3.04	0.45
4:CA:2848:G:OP2	40:CQ:94:ALA:N	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:DB:119:A:H3'	69:DB:318:HOH:O	2.16	0.45
9:AE:80:THR:HG23	9:AE:81:LEU:H	1.81	0.45
11:AG:50:LEU:O	11:AG:50:LEU:HD13	2.17	0.45
17:AM:90:ARG:HD3	17:AM:96:PRO:O	2.16	0.45
18:AN:90:ARG:HB2	18:AN:92:GLU:HG3	1.97	0.45
8:BD:168:PRO:HB2	8:BD:171:LEU:HD12	1.97	0.45
15:BK:31:ILE:HG22	15:BK:46:THR:HG22	1.96	0.45
27:CC:171:VAL:HG23	27:CC:173:LEU:HD13	1.98	0.45
30:CF:73:VAL:CG2	30:CF:78:ILE:HD11	2.47	0.45
33:CJ:13:ALA:CA	33:CJ:53:PRO:HG3	2.46	0.45
43:CT:29:VAL:CG1	43:CT:55:ILE:HD11	2.47	0.45
44:CU:37:ASP:CG	44:CU:38:ALA:H	2.25	0.45
48:CY:71:ARG:C	48:CY:73:ARG:N	2.74	0.45
56:DD:24:VAL:O	56:DD:24:VAL:HG23	2.16	0.45
56:DD:199:SER:HB3	69:DD:448:HOH:O	2.16	0.45
30:DF:4:HIS:O	30:DF:7:TYR:HB3	2.17	0.45
30:DF:58:ALA:O	30:DF:139:GLU:HG2	2.17	0.45
30:DF:135:ILE:HA	30:DF:140:ILE:HG21	1.98	0.45
1:AA:110:C:H2'	1:AA:111:G:C8	2.51	0.45
1:AA:242:G:C2	1:AA:245:U:C4	3.05	0.45
1:AA:269:C:H2'	1:AA:270:A:C8	2.51	0.45
1:AA:295:C:H2'	1:AA:296:U:O4'	2.17	0.45
1:AA:575:G:N2	1:AA:881:G:H1'	2.31	0.45
1:AA:582:C:C2	1:AA:583:A:C8	3.05	0.45
1:AA:859:G:H2'	1:AA:860:A:C8	2.52	0.45
1:AA:1014:A:C2	23:AS:34:TRP:CZ2	3.05	0.45
1:AA:1057:G:H4'	7:AC:197:GLY:H	1.82	0.45
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.65	0.45
1:AA:1248:A:C5	1:AA:1249:C:C5	3.04	0.45
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.50	0.45
1:AA:1431:A:C6	1:AA:1432:G:C6	3.04	0.45
2:BA:109:A:OP1	69:BA:1764:HOH:O	2.21	0.45
2:BA:133:U:C4	2:BA:228:A:N6	2.85	0.45
2:BA:209:U:H2'	2:BA:209:U:O2	2.15	0.45
2:BA:542:G:C2	2:BA:543:U:C5	3.05	0.45
2:BA:604:G:C5	2:BA:605:U:C5	3.05	0.45
2:BA:801:U:C2	2:BA:802:A:C8	3.04	0.45
2:BA:842:U:H3'	2:BA:843:U:C5'	2.47	0.45
2:BA:1151:A:C2	2:BA:1152:A:C5	3.04	0.45
2:BA:1212:U:H6	2:BA:1212:U:OP1	1.99	0.45
2:BA:1305:G:H21	2:BA:1332:A:H2	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1348:U:O2	2:BA:1348:U:H2'	2.16	0.45
2:BA:1356:G:H2'	2:BA:1357:A:C8	2.52	0.45
2:BA:1416:G:H8	2:BA:1416:G:O5'	1.99	0.45
3:DA:16:C:C2'	3:DA:17:G:H5'	2.46	0.45
3:DA:214:G:N2	3:DA:216:A:N3	2.64	0.45
3:DA:541:A:H2'	3:DA:542:C:O4'	2.17	0.45
3:DA:858:G:O2'	3:DA:2268:A:C2'	2.65	0.45
3:DA:860:U:C5	3:DA:2268:A:C1'	2.99	0.45
3:DA:924:G:H8	3:DA:924:G:O5'	2.00	0.45
3:DA:941:A:H2'	3:DA:942:G:O4'	2.17	0.45
3:DA:969:G:H2'	3:DA:970:U:H6	1.80	0.45
3:DA:1077:A:C8	3:DA:1078:U:O2	2.70	0.45
3:DA:1300:G:C4	3:DA:1626:A:C2	3.04	0.45
3:DA:1318:U:O2'	3:DA:1319:C:H5'	2.17	0.45
3:DA:1343:G:C2'	3:DA:1344:U:H5'	2.47	0.45
3:DA:1761:C:H6	3:DA:1761:C:O5'	1.99	0.45
3:DA:1767:G:C6	3:DA:1768:C:C5	3.05	0.45
3:DA:2409:G:C2'	3:DA:2410:G:O5'	2.65	0.45
3:DA:2454:G:C5'	69:DA:3444:HOH:O	2.65	0.45
3:DA:2593:U:N3	3:DA:2594:C:C5	2.85	0.45
3:DA:2838:G:C6	3:DA:2839:G:C5	3.04	0.45
4:CA:33:C:O2'	4:CA:446:G:N2	2.49	0.45
4:CA:85:G:P	45:CV:6:ARG:HG2	2.57	0.45
4:CA:189:G:C2'	4:CA:190:A:O5'	2.64	0.45
4:CA:194:G:O2'	4:CA:195:A:H5'	2.16	0.45
4:CA:200:U:C4	4:CA:248:G:N2	2.85	0.45
4:CA:919:U:H2'	4:CA:920:A:O4'	2.16	0.45
4:CA:1130:U:O2'	4:CA:1131:G:H8	2.00	0.45
4:CA:1250:G:H5'	41:CR:5:ARG:CD	2.46	0.45
4:CA:1250:G:H3'	4:CA:1251:C:C5'	2.47	0.45
4:CA:1279:G:O6	4:CA:1291:C:N3	2.49	0.45
4:CA:1331:G:C2	4:CA:1333:G:C8	3.05	0.45
4:CA:1623:G:C6	4:CA:1624:U:C4	3.05	0.45
4:CA:1668:A:N6	4:CA:1676:A:H61	2.15	0.45
4:CA:1965:C:H3'	4:CA:1966:A:C8	2.51	0.45
4:CA:2024:G:C4	4:CA:2040:G:N2	2.84	0.45
7:AC:55:ILE:O	7:AC:55:ILE:HG13	2.16	0.45
7:AC:130:PHE:CZ	7:AC:131:ARG:HD3	2.52	0.45
15:AK:38:GLN:CG	15:AK:40:ASN:OD1	2.65	0.45
20:AP:13:LYS:C	20:AP:15:PRO:HD3	2.41	0.45
20:AP:46:LYS:CD	20:AP:47:GLU:H	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AQ:14:SER:OG	21:AQ:17:MET:HE1	2.16	0.45
24:AT:54:MET:HE1	24:AT:58:VAL:HG21	1.99	0.45
6:BB:100:MET:O	6:BB:101:LEU:HD23	2.17	0.45
6:BB:164:ILE:HG23	6:BB:165:ASP:N	2.31	0.45
9:BE:101:GLU:HA	9:BE:122:ASN:ND2	2.31	0.45
9:BE:104:GLY:O	9:BE:105:ILE:CG2	2.60	0.45
10:BF:51:ILE:C	10:BF:53:LYS:N	2.69	0.45
12:BH:66:PHE:CE2	12:BH:67:GLN:NE2	2.85	0.45
31:CG:169:ARG:NH1	55:C5:32:SER:O	2.50	0.45
33:CJ:57:VAL:HG12	33:CJ:58:ILE:N	2.32	0.45
38:CO:2:ARG:O	38:CO:2:ARG:HD3	2.16	0.45
38:CO:99:LYS:O	51:C1:42:ILE:HG12	2.16	0.45
44:CU:13:ALA:O	44:CU:33:LYS:N	2.44	0.45
50:C0:48:ASN:OD1	50:C0:48:ASN:C	2.59	0.45
51:C1:42:ILE:HG22	51:C1:48:TYR:HB2	1.98	0.45
27:DC:224:MET:O	27:DC:232:GLY:O	2.34	0.45
30:DF:106:ALA:O	30:DF:109:ARG:N	2.47	0.45
33:DJ:5:GLN:O	33:DJ:6:ALA:O	2.34	0.45
36:DM:106:GLU:HB2	36:DM:107:PHE:CE2	2.52	0.45
39:DP:44:GLY:HA3	63:DP:202:PUT:H32	1.99	0.45
43:DT:17:VAL:HG12	43:DT:76:VAL:HG21	1.97	0.45
53:D3:44:VAL:CG2	69:D3:221:HOH:O	2.65	0.45
57:D7:31:THR:HG21	57:D7:40:VAL:O	2.17	0.45
57:D7:46:THR:HG23	57:D7:47:ILE:N	2.32	0.45
1:AA:115:G:N1	1:AA:313:A:C2	2.85	0.45
1:AA:451:A:H4'	1:AA:452:A:O4'	2.16	0.45
1:AA:738:C:N3	1:AA:739:C:C5	2.85	0.45
1:AA:757:U:O2'	1:AA:879:C:H1'	2.16	0.45
1:AA:819:A:H4'	1:AA:820:U:OP2	2.16	0.45
1:AA:949:A:C4	1:AA:950:U:C6	3.05	0.45
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.69	0.45
1:AA:1319:A:C4	1:AA:1323:G:C8	3.04	0.45
1:AA:1368:A:C2	1:AA:1369:C:C6	3.05	0.45
2:BA:3:A:N7	69:BA:1801:HOH:O	2.36	0.45
2:BA:18:C:H2'	2:BA:19:A:O4'	2.17	0.45
2:BA:407:U:H2'	2:BA:408:A:C8	2.52	0.45
2:BA:407:U:O2	2:BA:408:A:C8	2.69	0.45
2:BA:585:G:H3'	69:BA:1741:HOH:O	2.16	0.45
2:BA:642:A:C5	2:BA:643:C:C5	3.04	0.45
2:BA:821:G:H2'	2:BA:822:U:H6	1.80	0.45
2:BA:896:C:H2'	2:BA:897:C:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1190:G:C5'	7:BC:176:HIS:CE1	2.99	0.45
2:BA:1467:C:H2'	2:BA:1468:A:H8	1.82	0.45
3:DA:249:C:H1'	69:DA:3813:HOH:O	2.16	0.45
3:DA:511:U:C5	3:DA:512:G:C5	3.04	0.45
3:DA:517:C:OP2	51:D1:9:ARG:NH2	2.47	0.45
3:DA:543:G:N2	3:DA:551:G:C4	2.84	0.45
3:DA:558:U:O5'	3:DA:558:U:H6	2.00	0.45
3:DA:776:G:O6	69:DA:3269:HOH:O	2.18	0.45
3:DA:907:G:OP1	37:DN:23:GLY:HA2	2.17	0.45
3:DA:1082:U:H5'	33:DJ:118:GLY:HA2	1.99	0.45
3:DA:1252:G:O3'	41:DR:32:ARG:NH1	2.49	0.45
3:DA:1406:U:C2	3:DA:1407:G:C8	3.04	0.45
3:DA:1768:C:C2	3:DA:1769:U:C6	3.04	0.45
3:DA:1904:G:C4	3:DA:1905:C:C6	3.04	0.45
3:DA:2008:C:C2'	3:DA:2009:A:O5'	2.64	0.45
3:DA:2488:G:O2'	3:DA:2489:U:H5'	2.17	0.45
3:DA:2504:PSU:H6	3:DA:2504:PSU:O5'	1.99	0.45
3:DA:2586:U:H2'	3:DA:2587:A:O4'	2.16	0.45
3:DA:2754:U:C1'	69:DA:3333:HOH:O	2.60	0.45
3:DA:2823:A:H4'	69:DA:4364:HOH:O	2.17	0.45
4:CA:25:U:C4	4:CA:26:G:C2	3.04	0.45
4:CA:177:G:H3'	4:CA:178:G:C8	2.52	0.45
4:CA:280:U:H2'	4:CA:281:C:C6	2.52	0.45
4:CA:634:C:OP2	36:CM:70:LYS:HE2	2.16	0.45
4:CA:812:C:C2'	4:CA:813:U:H5'	2.46	0.45
4:CA:833:A:C6	4:CA:834:G:C6	3.04	0.45
4:CA:1004:U:O5'	4:CA:1004:U:H6	1.99	0.45
4:CA:1480:C:H2'	4:CA:1481:U:O4'	2.16	0.45
4:CA:1838:C:C4	4:CA:1899:A:C4	3.05	0.45
4:CA:1855:U:C4	4:CA:1856:U:C4	3.04	0.45
4:CA:2050:C:C2'	4:CA:2051:A:O5'	2.64	0.45
4:CA:2215:C:C2	4:CA:2216:G:C8	3.05	0.45
4:CA:2235:G:C4	4:CA:2236:U:C6	3.04	0.45
4:CA:2519:U:O4'	4:CA:2542:A:N6	2.45	0.45
4:CA:2553:G:H3'	4:CA:2554:U:H5"	1.98	0.45
4:CA:2679:A:C2	4:CA:2729:G:C2	3.04	0.45
69:CA:3422:HOH:O	48:CY:31:ASN:CB	2.63	0.45
5:DB:83:G:H1	5:DB:93:C:H42	1.63	0.45
5:CB:63:C:H2'	5:CB:64:G:C8	2.52	0.45
6:AB:15:HIS:O	6:AB:16:PHE:C	2.58	0.45
6:AB:16:PHE:O	6:AB:41:ILE:CD1	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:87:CYS:CB	6:AB:89:GLN:OE1	2.65	0.45
6:AB:123:ASP:O	6:AB:124:GLY:C	2.60	0.45
6:AB:167:ASP:OD1	6:AB:167:ASP:C	2.58	0.45
13:AI:50:GLN:N	13:AI:51:PRO:HD2	2.31	0.45
13:AI:120:LYS:HG3	13:AI:123:ARG:HB3	1.97	0.45
14:AJ:81:GLU:HA	14:AJ:84:VAL:HG12	1.98	0.45
6:BB:126:PHE:CE2	6:BB:127:ASP:OD1	2.69	0.45
8:BD:72:PHE:CZ	8:BD:200:ILE:HD11	2.51	0.45
9:BE:44:GLY:O	9:BE:45:ARG:O	2.33	0.45
26:BL:18:LYS:O	26:BL:18:LYS:HG3	2.16	0.45
17:BM:27:LYS:C	17:BM:27:LYS:HD3	2.42	0.45
19:BO:35:GLN:OE1	19:BO:39:LEU:HD22	2.17	0.45
22:BR:20:GLU:O	22:BR:22:ASP:N	2.50	0.45
22:BR:45:THR:OG1	22:BR:47:THR:CG2	2.64	0.45
29:CE:12:LEU:HD23	29:CE:13:THR:H	1.82	0.45
29:CE:150:THR:HG22	29:CE:151:GLY:N	2.31	0.45
31:CG:43:LYS:O	31:CG:49:LEU:HD23	2.17	0.45
33:CJ:70:THR:O	33:CJ:71:LYS:HB3	2.16	0.45
37:CN:52:ALA:HB1	37:CN:119:LEU:O	2.15	0.45
49:CZ:17:GLU:O	49:CZ:20:ASN:HB2	2.17	0.45
49:CZ:57:LEU:HD12	49:CZ:61:ALA:HB3	1.99	0.45
33:DJ:32:VAL:HG13	33:DJ:66:PHE:CE1	2.51	0.45
38:DO:67:PHE:O	38:DO:71:ARG:N	2.45	0.45
1:AA:464:U:N3	1:AA:467:U:OP2	2.42	0.45
1:AA:557:G:C6	1:AA:558:G:C6	3.04	0.45
1:AA:675:A:O2'	15:AK:116:ILE:O	2.21	0.45
1:AA:812:G:OP1	1:AA:903:G:H1'	2.16	0.45
1:AA:1152:A:C5	1:AA:1153:G:N7	2.84	0.45
1:AA:1299:A:C6	1:AA:1301:U:O2	2.69	0.45
2:BA:4:U:H5'	2:BA:5:U:C5	2.52	0.45
2:BA:62:U:H6	2:BA:62:U:O5'	2.00	0.45
2:BA:453:G:C8	69:BA:1767:HOH:O	2.67	0.45
2:BA:761:G:O2'	2:BA:762:U:H5'	2.16	0.45
2:BA:1213:A:C2	2:BA:1215:G:H1'	2.51	0.45
2:BA:1265:C:N3	2:BA:1271:A:C2	2.84	0.45
2:BA:1365:G:N2	2:BA:1366:C:H1'	2.32	0.45
2:BA:1421:G:H1	2:BA:1479:C:H42	1.64	0.45
2:BA:1494:G:N1	2:BA:1495:U:C4	2.85	0.45
3:DA:122:G:H8	3:DA:122:G:O5'	1.99	0.45
3:DA:225:C:H2'	3:DA:226:A:H5'	1.98	0.45
3:DA:684:G:OP1	53:D3:21:ARG:NH1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1443:U:H2'	3:DA:1444:G:C8	2.52	0.45
3:DA:1533:C:H3'	3:DA:1534:U:H5"	1.98	0.45
3:DA:1588:G:C2	3:DA:1589:U:C6	3.04	0.45
3:DA:2297:A:N3	3:DA:2297:A:H2'	2.32	0.45
3:DA:2418:A:H2'	3:DA:2419:U:O4'	2.17	0.45
3:DA:2771:C:H2'	3:DA:2772:C:C6	2.52	0.45
69:DA:4524:HOH:O	48:DY:21:LEU:HD12	2.16	0.45
4:CA:65:U:H3'	4:CA:66:C:H6	1.82	0.45
4:CA:82:U:C2	4:CA:83:A:C8	3.05	0.45
4:CA:187:G:N2	4:CA:210:C:H1'	2.31	0.45
4:CA:824:U:O2	4:CA:833:A:N1	2.50	0.45
4:CA:833:A:H1'	36:CM:51:GLU:O	2.17	0.45
4:CA:1079:C:C2	4:CA:1088:A:N6	2.85	0.45
4:CA:1079:C:H5'	4:CA:1080:A:OP2	2.16	0.45
4:CA:1132:U:O2'	4:CA:1133:A:H5'	2.16	0.45
4:CA:1528:A:C8	4:CA:1544:A:N6	2.85	0.45
4:CA:1623:G:C2	4:CA:1624:U:C6	3.05	0.45
4:CA:1713:A:H8	4:CA:1713:A:OP1	1.99	0.45
4:CA:1860:G:N2	4:CA:1883:U:H1'	2.31	0.45
4:CA:2133:G:H2'	4:CA:2157:G:N2	2.31	0.45
4:CA:2642:G:C1'	69:CA:3247:HOH:O	2.59	0.45
4:CA:2721:A:N3	4:CA:2873:A:C8	2.85	0.45
5:DB:91:C:OP2	37:DN:18[A]:ARG:HG2	2.17	0.45
6:AB:76:ALA:O	6:AB:80:VAL:HG23	2.16	0.45
8:AD:191:LEU:O	8:AD:192:SER:CB	2.64	0.45
9:AE:137:VAL:O	9:AE:137:VAL:HG23	2.15	0.45
13:AI:30:ILE:HA	13:AI:65:ILE:HG13	1.99	0.45
14:AJ:91:ASP:O	14:AJ:92:LEU:CB	2.64	0.45
18:AN:25:GLU:O	18:AN:27:LYS:N	2.50	0.45
19:AO:3:LEU:HD13	19:AO:35:GLN:OE1	2.17	0.45
6:BB:221:VAL:O	6:BB:222:ARG:C	2.59	0.45
9:BE:111:MET:HG3	9:BE:140:THR:HG21	1.99	0.45
12:BH:96:MET:HB3	12:BH:99:LEU:HB2	1.98	0.45
13:BI:45:ARG:HE	13:BI:45:ARG:H	1.63	0.45
19:BO:4:SER:O	19:BO:8:THR:HG23	2.17	0.45
21:BQ:16:LYS:O	21:BQ:17:MET:SD	2.75	0.45
22:BR:46:GLY:C	22:BR:47:THR:CG2	2.90	0.45
31:CG:10:VAL:HG22	31:CG:10:VAL:O	2.17	0.45
32:CH:110:VAL:HG21	32:CH:131:PHE:CE2	2.52	0.45
34:CK:41:LYS:NZ	34:CK:52:ASP:OD1	2.33	0.45
36:CM:96:LYS:NZ	36:CM:103:ILE:O	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:CM:101:ILE:CG1	36:CM:102:GLY:H	2.28	0.45
39:CP:94:ARG:HG3	39:CP:97:PHE:O	2.17	0.45
40:CQ:112:ARG:HG2	40:CQ:114:ASN:OD1	2.16	0.45
44:CU:45:ALA:O	44:CU:47:VAL:N	2.49	0.45
50:C0:11:SER:OG	50:C0:13:ILE:HG13	2.17	0.45
50:C0:13:ILE:C	50:C0:15:ARG:H	2.24	0.45
27:DC:12:ARG:O	27:DC:13:ARG:C	2.60	0.45
30:DF:139:GLU:HG3	57:D7:29:ILE:HG13	1.98	0.45
37:DN:24:THR:HG23	37:DN:24:THR:O	2.17	0.45
42:DS:62:GLU:O	42:DS:96:VAL:HA	2.17	0.45
43:DT:37:THR:HG22	43:DT:38:TYR:CD2	2.51	0.45
46:DW:48:MET:HE2	46:DW:84:PRO:O	2.16	0.45
1:AA:203:G:N2	1:AA:215:C:C2	2.85	0.45
1:AA:1160:G:O2'	1:AA:1161:C:H5'	2.17	0.45
1:AA:1261:A:N7	1:AA:1274:A:H2	2.14	0.45
1:AA:1457:G:H21	60:AA:1615:MPD:HO4	1.65	0.45
2:BA:109:A:C8	2:BA:327:A:O4'	2.70	0.45
2:BA:173:U:H1'	2:BA:197:A:C6	2.50	0.45
2:BA:312:C:C5	2:BA:313:A:N7	2.85	0.45
2:BA:316:C:OP2	2:BA:351:G:O2'	2.35	0.45
2:BA:346:G:H2'	2:BA:347:G:O4'	2.17	0.45
2:BA:352:C:OP1	2:BA:352:C:H6	1.99	0.45
2:BA:392:C:OP1	20:BP:8:ARG:NH2	2.50	0.45
2:BA:567:G:O6	26:BL:12:ARG:NH2	2.49	0.45
2:BA:1388:C:N3	2:BA:1389:C:C5	2.85	0.45
2:BA:1412:C:H2'	2:BA:1413:A:C8	2.51	0.45
3:DA:57:C:H2'	3:DA:58:G:O4'	2.16	0.45
3:DA:328:U:O5'	3:DA:328:U:H6	2.00	0.45
3:DA:374:A:C2	3:DA:401:A:C4	3.04	0.45
3:DA:409:G:C2'	3:DA:410:G:H5'	2.47	0.45
3:DA:1171:G:C6	3:DA:1172:C:N4	2.85	0.45
3:DA:1234:U:H2'	3:DA:1235:G:O4'	2.16	0.45
3:DA:1665:A:C2'	3:DA:1666:G:H5'	2.47	0.45
3:DA:1727:C:O2	3:DA:1734:G:C2	2.69	0.45
3:DA:2262:U:H4'	3:DA:2328:A:C2	2.51	0.45
3:DA:2298:A:H61	3:DA:2318:G:H1'	1.80	0.45
3:DA:2309:A:C6	3:DA:2310:C:C4	3.05	0.45
65:DA:3064:ACY:CH3	69:DA:3523:HOH:O	2.56	0.45
4:CA:46:G:P	69:CA:3305:HOH:O	2.71	0.45
4:CA:284:U:H5'	4:CA:285:G:OP1	2.17	0.45
4:CA:463:G:C2	4:CA:467:G:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:696:G:C2	4:CA:767:U:O2	2.70	0.45
4:CA:915:C:O2	5:CB:100:G:H4'	2.16	0.45
4:CA:969:G:H2'	4:CA:970:U:C6	2.52	0.45
4:CA:1343:G:N2	4:CA:1405:U:C2	2.85	0.45
4:CA:2057:G:H2'	4:CA:2058:A:O4'	2.17	0.45
4:CA:2093:G:C2'	4:CA:2094:A:H5'	2.46	0.45
4:CA:2214:C:H2'	4:CA:2215:C:H5'	1.99	0.45
4:CA:2239:G:OP2	27:CC:230:PRO:HG3	2.17	0.45
4:CA:2292:U:OP1	4:CA:2379:G:N2	2.48	0.45
4:CA:2489:U:O2'	4:CA:2491:U:H5	2.00	0.45
4:CA:2553:G:H5"	4:CA:2554:U:OP2	2.17	0.45
4:CA:2854:G:C2'	69:CA:3400:HOH:O	2.65	0.45
5:DB:73:A:H2'	5:DB:73:A:N3	2.31	0.45
8:AD:145:ILE:CG2	8:AD:149:ALA:HB3	2.46	0.45
10:AF:97:THR:O	10:AF:98:GLU:HG2	2.15	0.45
20:AP:17:TYR:CD2	20:AP:17:TYR:N	2.84	0.45
22:AR:51:TYR:O	22:AR:55:LEU:HB2	2.17	0.45
24:AT:81:ALA:O	24:AT:85:LYS:HG2	2.16	0.45
9:BE:101:GLU:C	9:BE:101:GLU:CD	2.84	0.45
10:BF:35:LYS:HG3	10:BF:37:HIS:CE1	2.51	0.45
11:BG:57:SER:OG	11:BG:58:GLU:N	2.50	0.45
13:BI:12:ARG:CZ	13:BI:107:ASP:CG	2.89	0.45
24:BT:54:MET:CE	24:BT:58:VAL:HB	2.47	0.45
28:CD:30:GLU:HG2	28:CD:185:ASN:ND2	2.32	0.45
30:CF:175:PRO:O	30:CF:176:PHE:HB2	2.16	0.45
37:CN:23:GLY:O	37:CN:101:VAL:HG23	2.17	0.45
41:CR:65:ASN:OD1	41:CR:69:ARG:NE	2.47	0.45
42:CS:4:VAL:O	42:CS:39:LEU:N	2.43	0.45
27:DC:140:VAL:CG2	27:DC:189:ALA:HB1	2.47	0.45
27:DC:203:VAL:CG2	27:DC:203:VAL:O	2.64	0.45
27:DC:238:ASN:ND2	69:DC:306:HOH:O	2.23	0.45
30:DF:128:SER:HA	30:DF:153:ILE:O	2.17	0.45
32:DH:116:ARG:HD2	32:DH:132:GLN:OE1	2.16	0.45
41:DR:18:LYS:CD	61:DR:202:PG4:H22	2.43	0.45
45:DV:71:ILE:CD1	45:DV:82:VAL:HG23	2.47	0.45
1:AA:75:G:H5'	1:AA:76:G:OP2	2.17	0.45
1:AA:299:G:C6	1:AA:300:A:C6	3.04	0.45
1:AA:345:C:O2'	35:DL:116:ILE:CD1	2.65	0.45
1:AA:574:A:N3	1:AA:883:C:H1'	2.31	0.45
1:AA:945:G:C6	1:AA:1337:G:C5	3.05	0.45
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1138:G:C2	1:AA:1140:C:C5	3.04	0.45
1:AA:1317:C:OP1	18:AN:20:PHE:CE2	2.70	0.45
1:AA:1360:A:P	69:AA:1786:HOH:O	2.74	0.45
1:AA:1426:G:C5	1:AA:1427:C:C5	3.05	0.45
1:AA:1450:U:O4	69:AA:1747:HOH:O	2.21	0.45
2:BA:177:G:C6	2:BA:178:C:N4	2.85	0.45
2:BA:200:G:N1	2:BA:201:G:N7	2.65	0.45
2:BA:1072:G:C5	2:BA:1073:U:C5	3.05	0.45
2:BA:1079:G:H2'	2:BA:1080:A:C8	2.50	0.45
3:DA:507:A:O4'	3:DA:509:C:C2	2.69	0.45
3:DA:872:U:H2'	3:DA:873:C:H6	1.81	0.45
3:DA:974:G:C5	3:DA:1186:G:C2	3.05	0.45
3:DA:1639:C:O2'	69:DA:3526:HOH:O	2.19	0.45
3:DA:2168:G:H2'	3:DA:2168:G:N3	2.31	0.45
3:DA:2526:G:N3	55:D5:1:MET:N	2.65	0.45
3:DA:2621:G:H2'	3:DA:2622:U:H5'	1.98	0.45
3:DA:2689:U:OP1	3:DA:2719:G:N1	2.28	0.45
4:CA:26:G:C2'	4:CA:27:G:H5'	2.47	0.45
4:CA:228:C:H4'	4:CA:229:C:H5"	1.98	0.45
4:CA:609:A:H3'	4:CA:610:C:C6	2.52	0.45
4:CA:677:A:O2'	4:CA:2071:A:H5'	2.16	0.45
4:CA:793:A:OP1	4:CA:2071:A:O2'	2.34	0.45
4:CA:846:U:O2'	4:CA:847:U:H6	1.99	0.45
4:CA:973:A:OP2	42:CS:81:LYS:HD2	2.16	0.45
4:CA:1680:U:O2	4:CA:1763:G:H3'	2.17	0.45
4:CA:2056:G:C2	4:CA:2057:G:C8	3.05	0.45
4:CA:2186:G:C6	4:CA:2187:U:C4	3.05	0.45
4:CA:2271:G:OP1	47:CX:16:ALA:HB1	2.17	0.45
4:CA:2563:U:O2	4:CA:2565:A:C8	2.70	0.45
4:CA:2650:U:H2'	4:CA:2651:C:C6	2.51	0.45
5:DB:47:C:OP2	39:DP:3:LYS:HE3	2.17	0.45
5:CB:9:G:P	39:CP:25:ARG:NH1	2.89	0.45
15:AK:31:ILE:C	15:AK:31:ILE:HD12	2.42	0.45
22:AR:47:THR:HG21	22:AR:52:GLN:OE1	2.17	0.45
6:BB:186:ILE:HA	6:BB:200:ILE:O	2.16	0.45
7:BC:7:PRO:O	7:BC:11:ARG:HG3	2.17	0.45
7:BC:150:LYS:HG2	7:BC:201:TRP:CE3	2.52	0.45
12:BH:121:LEU:HD12	12:BH:121:LEU:O	2.17	0.45
26:BL:80:ILE:HD12	26:BL:97:THR:HG22	1.99	0.45
19:BO:27:VAL:O	19:BO:31:LEU:HD12	2.16	0.45
29:CE:131:THR:HB	29:CE:164:LEU:CD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:CF:13:LYS:HD2	30:CF:13:LYS:C	2.41	0.45
37:CN:24:THR:HG22	37:CN:24:THR:O	2.17	0.45
42:CS:21:ARG:HD3	42:CS:93:PHE:CD2	2.52	0.45
50:C0:2:LYS:O	50:C0:3:THR:O	2.34	0.45
29:DE:4:VAL:HG22	29:DE:6:LYS:H	1.82	0.45
29:DE:104:ALA:O	29:DE:108:ILE:HG23	2.16	0.45
31:DG:136:ASP:HB3	31:DG:139:VAL:HB	1.99	0.45
33:DJ:68:PHE:O	33:DJ:69:VAL:O	2.34	0.45
33:DJ:89:SER:OG	33:DJ:135:MET:HA	2.16	0.45
34:DK:65:THR:OG1	34:DK:68:LYS:NZ	2.43	0.45
39:DP:39:VAL:CG2	39:DP:49:VAL:HG12	2.46	0.45
1:AA:2:A:H2'	1:AA:613:C:O2'	2.16	0.45
1:AA:270:A:C5	1:AA:271:C:C4	3.04	0.45
1:AA:555:U:H2'	1:AA:556:C:H6	1.81	0.45
1:AA:925:G:C2	1:AA:927:G:C8	3.04	0.45
1:AA:995:C:H5'	18:AN:7:ALA:CB	2.47	0.45
1:AA:1198:G:P	69:AA:1762:HOH:O	2.75	0.45
2:BA:106:C:O2	2:BA:379:C:C5'	2.65	0.45
2:BA:340:U:O2	2:BA:350:G:N2	2.49	0.45
2:BA:391:G:H2'	2:BA:392:C:O4'	2.17	0.45
2:BA:399:G:C4	2:BA:400:C:C5	3.04	0.45
2:BA:511:C:C2	2:BA:512:U:C6	3.04	0.45
2:BA:954:G:C2	2:BA:1228:C:N3	2.84	0.45
3:DA:323:C:OP2	3:DA:339:U:O2'	2.33	0.45
3:DA:1083:U:O2	3:DA:1086:A:N1	2.49	0.45
3:DA:1506:U:H3	3:DA:1507:C:N4	2.16	0.45
3:DA:1665:A:H2'	3:DA:1666:G:H5'	1.98	0.45
3:DA:1758:U:O2	3:DA:1758:U:H2'	2.16	0.45
3:DA:1783:A:H5'	3:DA:2608:G:H4'	1.97	0.45
3:DA:1797:G:H2'	3:DA:1798:U:O5'	2.17	0.45
3:DA:2262:U:O2'	3:DA:2263:C:H5'	2.16	0.45
3:DA:2570:G:H2'	3:DA:2571:U:O4'	2.17	0.45
4:CA:50:U:H5"	4:CA:51:G:N7	2.31	0.45
4:CA:176:A:H8	4:CA:176:A:O5'	2.00	0.45
4:CA:277:G:H3'	4:CA:277:G:N3	2.31	0.45
4:CA:522:A:H2'	4:CA:523:C:O4'	2.16	0.45
4:CA:631:A:H8	4:CA:631:A:OP1	1.98	0.45
4:CA:661:A:P	29:CE:94:GLN:HE22	2.39	0.45
4:CA:992:C:H4'	42:CS:74:ILE:HD13	1.99	0.45
4:CA:1009:A:H1'	4:CA:1153:C:O2'	2.17	0.45
4:CA:1237:A:N3	4:CA:1238:G:H1'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1338:G:H4'	44:CU:18:GLU:OE2	2.17	0.45
4:CA:1720:U:O4	4:CA:1721:G:N1	2.50	0.45
4:CA:1779:U:H5	4:CA:1784:A:N7	2.15	0.45
4:CA:2221:G:C5	4:CA:2222:C:C5	3.05	0.45
6:AB:129:LEU:HD13	6:AB:130:THR:H	1.82	0.45
13:AI:25:ASN:HB2	13:AI:27:LYS:HG3	1.98	0.45
16:AL:72:HIS:ND1	16:AL:72:HIS:C	2.75	0.45
19:AO:74:ASP:O	19:AO:77:ARG:N	2.49	0.45
6:BB:73:LYS:C	6:BB:75:ALA:N	2.74	0.45
6:BB:207:ILE:HD13	6:BB:207:ILE:N	2.32	0.45
7:BC:7:PRO:HG2	7:BC:184:TYR:CG	2.52	0.45
7:BC:65:ARG:O	7:BC:100:GLN:O	2.34	0.45
10:BF:51:ILE:O	10:BF:53:LYS:N	2.42	0.45
13:BI:130:ARG:HD2	13:BI:130:ARG:HA	1.85	0.45
20:BP:38:PHE:CZ	20:BP:51:ARG:HB3	2.52	0.45
22:BR:35:GLU:HG2	25:BU:4:ILE:HG21	1.99	0.45
23:BS:45:ILE:HD13	23:BS:64:ASP:HA	1.98	0.45
28:CD:9:VAL:O	28:CD:197:THR:HG23	2.16	0.45
28:CD:71:ALA:HB3	28:CD:73:VAL:HG13	1.99	0.45
30:CF:59:ILE:CG2	30:CF:98:PHE:HE1	2.29	0.45
33:CJ:90:GLY:O	33:CJ:91:LYS:HD3	2.17	0.45
42:CS:76:LYS:O	42:CS:85:LYS:N	2.50	0.45
27:DC:70:LYS:CB	27:DC:95:TYR:CE2	3.00	0.45
30:DF:111:ARG:NH1	30:DF:133:GLU:OE2	2.45	0.45
33:DJ:33:ASN:CG	33:DJ:36:GLU:HG3	2.42	0.45
34:DK:89:PHE:CE1	34:DK:93:ILE:HG13	2.51	0.45
39:DP:53:THR:CB	39:DP:65:THR:HG22	2.45	0.45
45:DV:6:ARG:O	45:DV:7:ASP:HB2	2.17	0.45
55:D5:27:TYR:CD1	55:D5:39:VAL:HG13	2.52	0.45
1:AA:130:A:N7	21:AQ:65:ARG:HB2	2.32	0.44
1:AA:566:G:H4'	1:AA:567:G:OP1	2.17	0.44
1:AA:606:G:H5"	1:AA:607:A:H5'	1.98	0.44
1:AA:919:A:O5'	1:AA:919:A:H8	2.00	0.44
1:AA:1151:A:C4	1:AA:1152:A:N7	2.84	0.44
2:BA:86:G:H1'	2:BA:87:C:C1'	2.47	0.44
2:BA:160:A:C6	2:BA:346:G:O6	2.69	0.44
2:BA:267:C:C4	2:BA:268:U:C5	3.05	0.44
2:BA:436:C:N3	2:BA:437:U:C5	2.85	0.44
2:BA:719:C:OP2	2:BA:720:C:H5	2.00	0.44
2:BA:920:U:H2'	2:BA:921:U:C6	2.52	0.44
2:BA:938:A:C2	2:BA:1345:U:O4	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1085:U:C6	2:BA:1094:G:N1	2.85	0.44
2:BA:1106:G:H2'	2:BA:1107:C:H6	1.82	0.44
2:BA:1147:C:H1'	13:BI:18:ARG:NH1	2.32	0.44
2:BA:1419:G:H1	2:BA:1481:U:H3	1.63	0.44
3:DA:163:C:C5'	69:DA:3251:HOH:O	2.58	0.44
3:DA:198:C:H4'	3:DA:2243:U:O2'	2.17	0.44
3:DA:1324:G:C4	3:DA:1328:A:N6	2.85	0.44
3:DA:1385:A:C4	3:DA:1386:C:C5	3.05	0.44
3:DA:1673:G:C2'	3:DA:1674:G:H5'	2.47	0.44
3:DA:1830:C:O5'	3:DA:1830:C:H6	2.00	0.44
3:DA:1889:A:C2	3:DA:1890:A:C5	3.05	0.44
3:DA:1952:A:C6	3:DA:1953:A:N1	2.85	0.44
3:DA:2275:C:O2	37:DN:84:LYS:HD2	2.18	0.44
3:DA:2553:G:N1	3:DA:2554:U:O2	2.50	0.44
3:DA:2592:G:C5	3:DA:2593:U:C4	3.05	0.44
3:DA:2599:G:C2'	3:DA:2600:A:H5'	2.46	0.44
3:DA:2712:C:O2'	3:DA:2715:C:OP1	2.33	0.44
4:CA:79:C:N4	4:CA:80:G:C6	2.85	0.44
4:CA:86:G:H2'	4:CA:87:U:H5"	1.99	0.44
4:CA:246:C:C2'	4:CA:247:G:H5'	2.47	0.44
4:CA:323:C:H2'	29:CE:163:ASN:CG	2.42	0.44
4:CA:933:A:H5'	4:CA:934:U:OP2	2.18	0.44
4:CA:1992:G:O6	69:CA:3411:HOH:O	2.21	0.44
4:CA:2050:C:H2'	4:CA:2051:A:O5'	2.17	0.44
4:CA:2093:G:C2	4:CA:2094:A:N7	2.85	0.44
4:CA:2483:C:N3	37:CN:123:LYS:NZ	2.54	0.44
4:CA:2623:G:O4'	4:CA:2825:G:C8	2.70	0.44
4:CA:2881:U:H5"	38:CO:96:ARG:HH11	1.82	0.44
5:DB:49:C:H2'	5:DB:50:A:C8	2.51	0.44
12:AH:59:LEU:HD13	12:AH:60:GLU:N	2.32	0.44
19:AO:75:VAL:O	19:AO:79:THR:HG23	2.17	0.44
20:AP:70:ARG:O	20:AP:74:LEU:HG	2.17	0.44
9:BE:40:GLY:HA3	9:BE:117:VAL:O	2.17	0.44
22:BR:20:GLU:HG3	22:BR:55:LEU:HD13	1.99	0.44
31:DG:93:TYR:HA	31:DG:105:SER:O	2.17	0.44
31:DG:93:TYR:C	31:DG:94:ARG:HG2	2.42	0.44
38:DO:12:ARG:HA	69:DO:228:HOH:O	2.16	0.44
38:DO:45:ARG:HD2	69:DO:214:HOH:O	2.17	0.44
48:DY:65:THR:O	48:DY:68:ALA:HB3	2.18	0.44
50:D0:56:VAL:O	50:D0:56:VAL:HG13	2.17	0.44
54:D4:24:LYS:HG3	69:D4:106:HOH:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:66:A:O4'	1:AA:173:U:C4	2.70	0.44
1:AA:198:G:O2'	1:AA:199:A:H5'	2.17	0.44
1:AA:207:C:C5	1:AA:208:U:C4	3.05	0.44
1:AA:497:G:N2	1:AA:498:A:C6	2.85	0.44
1:AA:581:G:O2'	1:AA:582:C:H5'	2.16	0.44
1:AA:654:G:C2'	1:AA:655:A:O5'	2.65	0.44
1:AA:674:G:H2'	1:AA:675:A:C8	2.53	0.44
1:AA:790:A:C6	1:AA:791:G:C6	3.05	0.44
1:AA:937:A:C2	1:AA:1379:G:C6	3.06	0.44
1:AA:957:U:O2	1:AA:959:A:OP2	2.35	0.44
1:AA:1142:G:C4	1:AA:1143:G:H1'	2.52	0.44
2:BA:43:C:O2'	2:BA:623:C:H4'	2.17	0.44
2:BA:171:A:C6	2:BA:172:A:C6	3.05	0.44
2:BA:374:A:O3'	20:BP:70:ARG:NH1	2.50	0.44
2:BA:431:A:H2'	2:BA:432:A:O4'	2.17	0.44
2:BA:587:G:HO2'	2:BA:588:G:P	2.40	0.44
2:BA:766:A:H2'	2:BA:767:A:O4'	2.17	0.44
2:BA:1157:A:C4	2:BA:1180:A:C2	3.05	0.44
2:BA:1317:C:N3	2:BA:1318:A:H1'	2.32	0.44
3:DA:86:G:H8	3:DA:86:G:H5"	1.82	0.44
3:DA:163:C:H2'	3:DA:164:C:H6	1.82	0.44
3:DA:402:A:N7	3:DA:403:U:C4	2.85	0.44
3:DA:866:A:C2	3:DA:914:G:H5"	2.52	0.44
3:DA:1138:G:O2'	34:DK:107:GLY:HA3	2.17	0.44
3:DA:1265:A:C8	3:DA:1267:U:C2	3.05	0.44
3:DA:1444:G:H2'	3:DA:1445:G:C8	2.52	0.44
3:DA:1491:G:C6	3:DA:1500:G:C2	3.05	0.44
3:DA:1588:G:C2	3:DA:1589:U:C5	3.06	0.44
3:DA:1623:G:C2'	3:DA:1624:U:H5'	2.47	0.44
3:DA:1648:U:H2'	3:DA:1649:G:O4'	2.18	0.44
3:DA:1945:G:P	69:DA:3352:HOH:O	2.75	0.44
3:DA:1972:G:C2	3:DA:1973:G:N7	2.85	0.44
3:DA:2394:C:OP2	54:D4:29:ARG:HD3	2.18	0.44
3:DA:2725:A:C4	3:DA:2727:A:C8	3.05	0.44
3:DA:2785:C:H2'	3:DA:2786:U:O4'	2.17	0.44
4:CA:55:G:C2	4:CA:56:A:C8	3.05	0.44
4:CA:492:A:H2'	4:CA:493:G:O4'	2.17	0.44
4:CA:536:G:C6	4:CA:537:G:C4	3.05	0.44
4:CA:1140:C:H4'	4:CA:1143:A:C6	2.52	0.44
4:CA:1719:G:N2	4:CA:1741:C:N3	2.55	0.44
4:CA:1794:A:H2'	4:CA:1795:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1895:C:C4	4:CA:1896:G:N7	2.86	0.44
4:CA:2196:C:C2	4:CA:2197:U:C5	3.06	0.44
4:CA:2238:G:C4'	4:CA:2239:G:OP1	2.64	0.44
4:CA:2459:A:C2	4:CA:2460:U:C1'	2.99	0.44
4:CA:2729:G:H5'	28:CD:190:LYS:CE	2.47	0.44
4:CA:2773:C:O3'	28:CD:169:ARG:HD3	2.17	0.44
4:CA:2878:U:H6	4:CA:2878:U:O5'	1.99	0.44
5:CB:94:A:OP1	46:CW:19:ARG:HD3	2.17	0.44
6:AB:47:VAL:HB	6:AB:48:PRO:HD3	1.99	0.44
16:AL:107:VAL:CG2	16:AL:117:TYR:HB3	2.47	0.44
18:AN:63:ARG:O	18:AN:73:PHE:CE1	2.71	0.44
6:BB:137:ARG:O	6:BB:140:GLU:HB2	2.16	0.44
7:BC:124:LEU:O	7:BC:126:ARG:N	2.47	0.44
8:BD:49:SER:HG	8:BD:52:GLY:H	1.63	0.44
11:BG:71:PRO:HG3	11:BG:103:TRP:CH2	2.52	0.44
14:BJ:82:LYS:O	14:BJ:86:ALA:HB3	2.17	0.44
17:BM:66:GLU:C	17:BM:68:ASP:N	2.75	0.44
17:BM:114:LYS:CB	17:BM:115:PRO:HD3	2.47	0.44
18:BN:42:TRP:HE1	18:BN:45:VAL:CG1	2.30	0.44
21:BQ:12:VAL:HG11	21:BQ:21:ILE:HD11	1.98	0.44
28:CD:49:GLN:HG3	28:CD:80:TRP:O	2.16	0.44
34:CK:105:VAL:HG12	34:CK:109:LEU:HD11	1.99	0.44
38:CO:51:LEU:N	38:CO:51:LEU:HD23	2.32	0.44
40:CQ:59:THR:OG1	40:CQ:72:VAL:HG13	2.16	0.44
43:CT:21:ALA:HB1	43:CT:74:ILE:HG12	1.99	0.44
48:CY:40:GLU:O	48:CY:43:LYS:HD2	2.16	0.44
53:C3:34:ARG:NH2	53:C3:39:ARG:HD2	2.32	0.44
31:DG:169:ARG:NH1	55:D5:32:SER:HB2	2.31	0.44
32:DH:1:MET:HE3	32:DH:26:ALA:HB3	1.99	0.44
59:DT:202:PGE:H5	51:D1:23:ALA:HB3	1.99	0.44
46:DW:61:LEU:N	46:DW:61:LEU:HD12	2.33	0.44
1:AA:548:G:O2'	1:AA:549:C:H5'	2.16	0.44
1:AA:953:G:H1'	69:AA:1991:HOH:O	2.18	0.44
1:AA:1006:G:N7	1:AA:1007:U:C5	2.86	0.44
1:AA:1344:C:O5'	1:AA:1344:C:H6	2.00	0.44
1:AA:1375:A:C2'	1:AA:1376:U:H5'	2.47	0.44
1:AA:1384:C:N3	1:AA:1385:G:N7	2.65	0.44
1:AA:1501:C:C4	1:AA:1504:G:C5	3.06	0.44
2:BA:282:A:N7	2:BA:283:U:C5	2.85	0.44
2:BA:447:G:P	69:BA:1779:HOH:O	2.74	0.44
2:BA:563:A:HO2'	2:BA:566:G:HO2'	1.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:773:G:C2	2:BA:807:A:C2	3.06	0.44
2:BA:909:A:H2	2:BA:1413:A:N3	2.15	0.44
2:BA:1087:G:N2	2:BA:1099:G:H1'	2.32	0.44
2:BA:1105:A:O2'	2:BA:1106:G:H5'	2.17	0.44
2:BA:1466:C:C5	2:BA:1467:C:C5	3.05	0.44
3:DA:19:A:OP2	69:DA:3546:HOH:O	2.21	0.44
3:DA:73:A:H2'	3:DA:74:A:OP2	2.16	0.44
3:DA:117:G:H8	3:DA:117:G:O5'	2.00	0.44
3:DA:564:C:H1'	41:DR:36:GLN:OE1	2.17	0.44
3:DA:826:U:P	69:DA:3810:HOH:O	2.75	0.44
3:DA:860:U:C6	3:DA:2268:A:C1'	3.00	0.44
3:DA:950:G:C6	3:DA:951:C:C4	3.06	0.44
3:DA:1078:U:O2'	3:DA:1088:A:H2	1.99	0.44
3:DA:1257:C:H3'	69:DA:3353:HOH:O	2.15	0.44
3:DA:1305:C:O2	3:DA:1305:C:C2'	2.63	0.44
3:DA:1678:A:C2'	3:DA:1679:A:H5'	2.47	0.44
3:DA:2256:G:C2'	3:DA:2257:U:H5'	2.47	0.44
3:DA:2679:A:H1'	69:DA:3950:HOH:O	2.16	0.44
3:DA:2715:C:C2'	3:DA:2716:C:O5'	2.65	0.44
3:DA:2888:C:O2	3:DA:2888:C:C2'	2.61	0.44
4:CA:53:A:H2'	4:CA:54:G:H5'	2.00	0.44
4:CA:222:A:H3'	4:CA:421:C:C5'	2.47	0.44
4:CA:265:A:H2	4:CA:266:G:N3	2.15	0.44
4:CA:527:C:C5	4:CA:2779:U:C5	3.04	0.44
4:CA:835:C:C5	4:CA:836:G:N7	2.85	0.44
4:CA:1154:G:P	41:CR:57:ARG:NH1	2.87	0.44
4:CA:1262:A:C2	4:CA:1263:U:C2	3.05	0.44
4:CA:1307:A:C2	4:CA:1308:A:C4	3.06	0.44
4:CA:1323:C:H2'	4:CA:1324:G:H5'	1.99	0.44
4:CA:1399:C:O5'	4:CA:1399:C:H6	2.00	0.44
4:CA:1422:G:C6	4:CA:1423:G:C5	3.05	0.44
4:CA:1949:G:P	69:CA:3231:HOH:O	2.66	0.44
4:CA:2020:A:H5'	51:C1:8:THR:CG2	2.47	0.44
4:CA:2250:G:O5'	4:CA:2250:G:H8	1.99	0.44
4:CA:2571:U:C4	4:CA:2574:G:C8	3.05	0.44
4:CA:2657:A:N6	4:CA:2664:G:O2'	2.50	0.44
6:AB:44:GLU:O	6:AB:48:PRO:CD	2.66	0.44
6:AB:181:ILE:HA	6:AB:182:PRO:HD2	1.70	0.44
7:AC:155:GLY:O	7:AC:196:ILE:HG12	2.17	0.44
15:AK:31:ILE:O	15:AK:31:ILE:HG13	2.16	0.44
18:AN:63:ARG:O	18:AN:64:CYS:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BB:96:TRP:O	6:BB:96:TRP:CE3	2.70	0.44
13:BI:16:ALA:C	13:BI:67:VAL:HG23	2.43	0.44
13:BI:61:LEU:HD23	13:BI:61:LEU:N	2.33	0.44
15:BK:13:ARG:O	15:BK:14:LYS:HB3	2.16	0.44
27:CC:173:LEU:O	27:CC:180:MET:HA	2.17	0.44
45:CV:73:ASN:ND2	69:CV:201:HOH:O	2.46	0.44
46:CW:63:ILE:HD11	46:CW:72:VAL:HG21	2.00	0.44
48:CY:11:PRO:HB3	48:CY:27:ARG:NH2	2.32	0.44
48:CY:26:ARG:HG3	48:CY:27:ARG:N	2.31	0.44
49:CZ:49:ASP:O	49:CZ:53:VAL:HG23	2.17	0.44
52:C2:43:ARG:C	52:C2:44:GLN:HG2	2.43	0.44
27:DC:75:ALA:HB2	27:DC:95:TYR:CD2	2.52	0.44
56:DD:129:THR:HG23	56:DD:130:GLN:O	2.17	0.44
29:DE:200:LEU:N	29:DE:200:LEU:CD1	2.80	0.44
30:DF:125:GLY:O	30:DF:157:THR:CG2	2.66	0.44
37:DN:106:ASP:OD1	37:DN:106:ASP:C	2.60	0.44
40:DQ:113:LEU:HD12	40:DQ:113:LEU:O	2.17	0.44
43:DT:15:GLN:OE1	69:DT:303:HOH:O	2.21	0.44
53:D3:33:ARG:HD3	66:D3:102:PEG:O4	2.17	0.44
1:AA:172:A:C5	1:AA:174:A:N7	2.86	0.44
1:AA:183:C:O2	1:AA:183:C:H2'	2.17	0.44
1:AA:405:U:O4	8:AD:2:ALA:N	2.50	0.44
1:AA:587:G:C2	1:AA:755:G:C5	3.04	0.44
1:AA:1033:G:N2	1:AA:1034:G:C4	2.85	0.44
1:AA:1109:C:P	7:AC:176:HIS:ND1	2.91	0.44
1:AA:1123:U:H4'	14:AJ:39:PRO:HD2	1.99	0.44
1:AA:1241:G:C2	1:AA:1242:G:C5	3.06	0.44
1:AA:1362:A:C5'	1:AA:1363:A:OP2	2.63	0.44
1:AA:1405:G:O4'	1:AA:1519:MA6:H4'	2.17	0.44
1:AA:1516:2MG:H2'	1:AA:1518:MA6:OP2	2.18	0.44
1:AA:1519:MA6:H93	1:AA:1519:MA6:N7	2.32	0.44
2:BA:28:A:O2'	2:BA:296:U:OP1	2.28	0.44
2:BA:315:A:N6	69:BA:1790:HOH:O	2.32	0.44
2:BA:435:A:C6	2:BA:436:C:C5	3.05	0.44
2:BA:562:U:H2'	26:BL:14:ARG:NH1	2.32	0.44
2:BA:603:U:H2'	2:BA:604:G:H8	1.82	0.44
2:BA:750:C:H1'	19:BO:22:THR:HG22	1.97	0.44
2:BA:974:A:OP1	18:BN:71:HIS:HB3	2.17	0.44
2:BA:1107:C:N3	2:BA:1108:G:C8	2.85	0.44
2:BA:1434:A:N6	2:BA:1435:G:N1	2.65	0.44
3:DA:340:A:H2'	3:DA:341:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:597:G:C2	3:DA:661:A:C2	3.05	0.44
3:DA:668:A:H2'	3:DA:670:A:H62	1.82	0.44
3:DA:1153:C:H2'	3:DA:1154:G:O4'	2.17	0.44
3:DA:1240:U:P	69:DA:3319:HOH:O	2.72	0.44
3:DA:1315:C:C2	3:DA:1338:G:N2	2.86	0.44
3:DA:1336:A:OP2	44:DU:68:LYS:HE2	2.17	0.44
3:DA:1355:G:C2	3:DA:1356:G:C8	3.05	0.44
3:DA:1720:U:H2'	3:DA:1721:G:O4'	2.17	0.44
3:DA:1757:A:C2	69:DA:3655:HOH:O	2.67	0.44
3:DA:1769:U:C2'	3:DA:1770:G:O5'	2.66	0.44
3:DA:2213:U:O2	3:DA:2213:U:C2'	2.66	0.44
3:DA:2278:A:OP1	37:DN:10:ARG:NH2	2.51	0.44
3:DA:2326:C:O2'	3:DA:2327:A:H5"	2.16	0.44
3:DA:2382:G:H1'	69:DA:3253:HOH:O	2.17	0.44
4:CA:121:G:N2	4:CA:131:A:C4	2.86	0.44
4:CA:152:A:C4	4:CA:175:G:N2	2.85	0.44
4:CA:397:U:H5"	69:CA:3422:HOH:O	2.17	0.44
4:CA:465:G:H2'	4:CA:466:A:C8	2.52	0.44
4:CA:522:A:C2	4:CA:523:C:O2	2.71	0.44
4:CA:584:C:C4	4:CA:585:G:C5	3.06	0.44
4:CA:701:G:N2	69:CA:3489:HOH:O	2.35	0.44
4:CA:733:G:OP2	69:CA:3414:HOH:O	2.21	0.44
4:CA:753:A:C8	4:CA:753:A:OP2	2.70	0.44
4:CA:1309:G:H2'	4:CA:1310:G:O4'	2.18	0.44
4:CA:1426:G:C8	4:CA:1427:A:H2'	2.52	0.44
4:CA:1526:C:H2'	4:CA:1527:G:C8	2.52	0.44
4:CA:1567:G:N7	27:CC:82:TYR:HD2	2.14	0.44
4:CA:1688:U:O2	4:CA:1700:A:H8	2.01	0.44
4:CA:1775:U:C2'	4:CA:1776:G:O5'	2.65	0.44
4:CA:1805:A:C2	4:CA:1813:G:N1	2.85	0.44
4:CA:1907:G:C2	4:CA:1924:C:C2	3.05	0.44
4:CA:2085:U:C3'	69:CA:3449:HOH:O	2.64	0.44
4:CA:2732:G:O2'	4:CA:2733:A:H5'	2.17	0.44
4:CA:2889:C:H2'	4:CA:2890:G:O4'	2.17	0.44
5:DB:62:C:H2'	5:DB:63:C:C6	2.53	0.44
6:AB:111:ILE:HD12	6:AB:111:ILE:H	1.81	0.44
6:AB:134:ALA:O	6:AB:138:THR:HG23	2.17	0.44
7:AC:138:VAL:O	7:AC:139:GLN:O	2.34	0.44
8:AD:19:LEU:HD22	8:AD:64:ILE:HG13	1.99	0.44
8:AD:134:SER:O	8:AD:135:TYR:C	2.61	0.44
8:AD:150:LYS:O	8:AD:151:LYS:HG2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AE:63:ALA:CA	69:AE:201:HOH:O	2.64	0.44
9:AE:104:GLY:O	9:AE:105:ILE:HG22	2.17	0.44
9:AE:159:LYS:HD3	9:AE:159:LYS:N	2.31	0.44
14:AJ:67:ILE:HG13	18:AN:96:LEU:HD13	1.99	0.44
19:AO:4:SER:O	19:AO:8:THR:HG23	2.18	0.44
23:AS:4:SER:HB2	23:AS:5:LEU:HD12	2.00	0.44
9:BE:12:GLN:HG2	69:BE:203:HOH:O	2.17	0.44
9:BE:136:VAL:O	9:BE:140:THR:HG23	2.18	0.44
15:BK:112:ASP:CG	15:BK:114:THR:HG23	2.43	0.44
20:BP:19:VAL:CG1	20:BP:37:GLY:CA	2.95	0.44
29:CE:46:GLN:HB3	29:CE:83:VAL:HG11	1.99	0.44
29:CE:97:ASN:O	29:CE:98:LYS:C	2.60	0.44
30:CF:7:TYR:OH	30:CF:29:ARG:HA	2.17	0.44
34:CK:99:ARG:NH1	34:CK:102:GLU:OE1	2.50	0.44
39:CP:7:ARG:HG3	39:CP:96:GLY:HA3	2.00	0.44
43:CT:69:LEU:HB3	43:CT:107:VAL:HG22	1.98	0.44
44:CU:4:GLU:O	44:CU:7:LEU:HB2	2.17	0.44
54:C4:2:LYS:HG2	54:C4:63:TYR:OH	2.17	0.44
32:DH:80:ILE:HD11	32:DH:143:VAL:HG13	1.99	0.44
33:DJ:41:PHE:CD1	33:DJ:41:PHE:C	2.95	0.44
37:DN:28:PHE:N	37:DN:104:GLU:OE2	2.44	0.44
42:DS:41:ILE:HD12	42:DS:54:VAL:HG11	1.99	0.44
42:DS:55:ASP:C	42:DS:57:GLY:H	2.25	0.44
1:AA:86:G:HO2'	1:AA:87:C:P	2.37	0.44
1:AA:404:G:N7	8:AD:2:ALA:HB3	2.32	0.44
1:AA:443:C:H2'	1:AA:444:G:C8	2.52	0.44
1:AA:501:C:OP1	16:AL:114:ARG:NH2	2.51	0.44
1:AA:646:G:C2	1:AA:647:C:O2	2.70	0.44
1:AA:711:G:O2'	1:AA:712:A:H5'	2.18	0.44
2:BA:64:G:H4'	2:BA:65:A:O5'	2.17	0.44
2:BA:371:A:H1'	2:BA:482:A:H1'	1.99	0.44
2:BA:684:U:O2	15:BK:41:ALA:HB3	2.17	0.44
2:BA:891:U:C5	2:BA:906:A:C2	3.05	0.44
2:BA:1186:G:H4'	13:BI:112:GLU:CD	2.42	0.44
2:BA:1190:G:C5'	7:BC:176:HIS:HE1	2.31	0.44
2:BA:1428:A:N1	2:BA:1473:G:C6	2.85	0.44
2:BA:1522:U:O2	2:BA:1523:G:C8	2.70	0.44
3:DA:101:A:O2'	3:DA:102:U:OP2	2.29	0.44
3:DA:262:A:H2'	3:DA:263:G:H5'	1.99	0.44
3:DA:404:A:H5'	3:DA:404:A:N3	2.33	0.44
3:DA:813:U:H2'	3:DA:814:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1005:C:N3	3:DA:1143:A:C2	2.86	0.44
3:DA:1061:U:H3'	3:DA:1062:G:H5'	1.98	0.44
3:DA:1442:U:H2'	3:DA:1443:U:H6	1.82	0.44
3:DA:1475:G:O2'	3:DA:1476:U:OP2	2.32	0.44
3:DA:1539:U:H2'	3:DA:1540:G:C8	2.52	0.44
3:DA:1762:A:H8	3:DA:1762:A:O5'	2.00	0.44
3:DA:1833:C:N3	3:DA:1834:U:C5	2.86	0.44
3:DA:2063:C:O2	3:DA:2451:A:C2	2.70	0.44
3:DA:2104:C:H3'	3:DA:2105:U:H5"	2.00	0.44
3:DA:2128:G:C6	3:DA:2129:C:N3	2.85	0.44
3:DA:2153:C:H2'	3:DA:2154:A:O4'	2.17	0.44
3:DA:2799:A:O2'	3:DA:2800:A:P	2.75	0.44
4:CA:144:A:H2'	4:CA:145:C:O4'	2.17	0.44
4:CA:299:A:P	4:CA:299:A:H8	2.41	0.44
4:CA:697:G:C6	4:CA:698:C:N4	2.86	0.44
4:CA:995:C:O2	41:CR:60:TRP:HZ2	2.00	0.44
4:CA:1799:G:H22	4:CA:1819:A:P	2.40	0.44
4:CA:1858:A:H3'	4:CA:1858:A:OP2	2.17	0.44
4:CA:2030:A:N6	69:CA:3359:HOH:O	2.12	0.44
4:CA:2553:G:C2	4:CA:2554:U:H1'	2.52	0.44
4:CA:2624:G:H1'	51:C1:18:HIS:CE1	2.53	0.44
4:CA:2677:G:H2'	4:CA:2678:C:C6	2.53	0.44
4:CA:2810:A:H2'	4:CA:2811:G:O4'	2.18	0.44
4:CA:2841:C:H2'	4:CA:2842:G:H8	1.83	0.44
5:CB:5:U:H2'	5:CB:6:G:H8	1.82	0.44
6:AB:178:ASN:OD1	6:AB:178:ASN:C	2.59	0.44
8:AD:190:ASP:O	8:AD:191:LEU:CD1	2.65	0.44
9:AE:15:LEU:C	9:AE:15:LEU:CD1	2.90	0.44
12:AH:67:GLN:C	12:AH:69:LYS:N	2.75	0.44
13:AI:97:GLU:OE2	13:AI:97:GLU:N	2.45	0.44
15:AK:31:ILE:HB	15:AK:46:THR:HG22	1.99	0.44
11:BG:59:LEU:O	11:BG:62:PHE:HB3	2.18	0.44
26:BL:44:LYS:HB2	26:BL:45:PRO:HD3	2.00	0.44
17:BM:4:ILE:O	17:BM:6:GLY:O	2.35	0.44
29:CE:108:ILE:HD11	29:CE:180:LEU:HD13	2.00	0.44
30:CF:135:ILE:HG22	30:CF:135:ILE:O	2.17	0.44
38:CO:17:ARG:O	38:CO:21:PHE:HD1	1.99	0.44
41:CR:13:HIS:O	41:CR:17:LEU:HD22	2.18	0.44
42:CS:14:VAL:HG21	42:CS:98:ILE:HG13	1.99	0.44
38:DO:72:ASP:OD1	38:DO:72:ASP:C	2.59	0.44
41:DR:24:TYR:CD1	41:DR:25:GLY:N	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DV:87:GLU:O	45:DV:88:ASP:HB3	2.17	0.44
1:AA:75:G:C8	1:AA:76:G:C8	3.05	0.44
1:AA:222:C:O2	1:AA:223:A:C8	2.70	0.44
1:AA:340:U:C2	1:AA:341:C:C5	3.06	0.44
1:AA:502:A:H2'	1:AA:503:C:H6	1.82	0.44
1:AA:597:G:N2	1:AA:644:U:C2	2.85	0.44
1:AA:685:G:N2	1:AA:686:U:C4	2.85	0.44
1:AA:855:U:C2'	1:AA:856:C:H5'	2.47	0.44
1:AA:947:G:H2'	1:AA:948:C:O4'	2.18	0.44
1:AA:1201:A:H4'	1:AA:1202:U:H5'	2.00	0.44
1:AA:1346:A:C8	1:AA:1348:U:C2	3.06	0.44
1:AA:1371:G:P	13:AI:13:LYS:HD3	2.57	0.44
2:BA:32:A:OP1	2:BA:398:U:H1'	2.18	0.44
2:BA:165:G:N2	2:BA:166:U:O2	2.51	0.44
2:BA:302:G:O2'	2:BA:556:C:H5"	2.18	0.44
2:BA:378:G:N1	2:BA:386:C:O2	2.51	0.44
2:BA:404:G:O2'	2:BA:405:U:H5'	2.17	0.44
2:BA:552:U:H2'	2:BA:553:A:H8	1.82	0.44
2:BA:1422:G:C2	2:BA:1423:G:C8	3.06	0.44
2:BA:1526:G:OP1	25:BU:45:ARG:NH2	2.50	0.44
3:DA:664:G:P	69:DA:3466:HOH:O	2.76	0.44
3:DA:974:G:H5'	69:DA:4404:HOH:O	2.17	0.44
3:DA:990:A:H5"	3:DA:991:C:OP2	2.17	0.44
3:DA:1429:G:O2'	3:DA:1430:G:H5'	2.18	0.44
3:DA:1495:A:H2'	3:DA:1496:A:C8	2.53	0.44
3:DA:1826:G:C2	3:DA:1827:U:C6	3.05	0.44
3:DA:1874:C:H2'	3:DA:1875:G:O4'	2.18	0.44
3:DA:2159:G:OP2	3:DA:2159:G:O4'	2.36	0.44
3:DA:2441:U:H6	69:DA:4217:HOH:O	2.00	0.44
3:DA:2590:A:H2'	3:DA:2591:C:C6	2.53	0.44
3:DA:2685:G:O2'	3:DA:2686:G:H5'	2.17	0.44
3:DA:2885:G:H5"	3:DA:2886:A:P	2.58	0.44
69:DA:5225:HOH:O	38:DO:23:ASN:HB3	2.17	0.44
4:CA:66:C:C4	4:CA:67:U:C5	3.05	0.44
4:CA:116:C:O2'	4:CA:126:A:H1'	2.17	0.44
4:CA:1385:A:OP1	4:CA:1385:A:H4'	2.18	0.44
4:CA:1570:A:H8	4:CA:1570:A:O5'	2.00	0.44
4:CA:1682:G:H1	4:CA:1706:C:H42	1.66	0.44
4:CA:2013:A:N6	4:CA:2014:A:C6	2.86	0.44
4:CA:2213:U:O2	4:CA:2213:U:O2'	2.28	0.44
4:CA:2229:U:H2'	69:CA:3397:HOH:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2387:U:O2'	47:CX:17:LYS:NZ	2.51	0.44
4:CA:2529:G:OP2	31:CG:171:LYS:NZ	2.46	0.44
4:CA:2546:U:O4'	4:CA:2565:A:C2	2.71	0.44
4:CA:2832:U:O4	51:C1:49:ARG:NH1	2.40	0.44
5:CB:94:A:H2'	5:CB:95:U:O4'	2.17	0.44
6:AB:47:VAL:O	6:AB:50:PHE:N	2.48	0.44
6:AB:151:ILE:CD1	6:AB:154:MET:SD	3.06	0.44
9:AE:81:LEU:HD21	9:AE:123:VAL:HG11	2.00	0.44
12:AH:113:ASP:HB2	12:AH:117:ARG:NH2	2.32	0.44
24:AT:71:LYS:HG3	24:AT:74:ARG:HH21	1.81	0.44
6:BB:71:GLY:HA2	6:BB:164:ILE:HG22	1.99	0.44
6:BB:138:THR:C	6:BB:140:GLU:N	2.75	0.44
11:BG:60:GLU:O	11:BG:61:ALA:C	2.59	0.44
12:BH:3:MET:SD	12:BH:3:MET:N	2.91	0.44
14:BJ:49:PHE:CZ	18:BN:76:LYS:HG2	2.52	0.44
24:BT:54:MET:HE1	24:BT:58:VAL:HG21	1.98	0.44
33:CJ:100:ILE:HG12	33:CJ:137:LEU:HD22	1.99	0.44
34:CK:81:ILE:HG23	34:CK:82:GLY:H	1.82	0.44
50:D0:7:THR:O	50:D0:54:VAL:HA	2.18	0.44
1:AA:286:C:H2'	1:AA:287:U:O4'	2.18	0.44
1:AA:298:A:H2'	1:AA:299:G:O4'	2.17	0.44
1:AA:403:C:H2'	1:AA:404:G:O4'	2.18	0.44
1:AA:501:C:O2'	1:AA:502:A:H5'	2.17	0.44
1:AA:643:C:O2'	1:AA:644:U:H5'	2.18	0.44
1:AA:823:C:H2'	1:AA:824:G:C8	2.52	0.44
1:AA:880:C:O2'	1:AA:881:G:H5'	2.18	0.44
1:AA:1055:A:C6	1:AA:1206:G:C5	3.06	0.44
1:AA:1140:C:O2'	1:AA:1141:C:P	2.76	0.44
1:AA:1198:G:H2'	1:AA:1199:U:H6	1.81	0.44
1:AA:1215:G:C2'	1:AA:1216:A:H5'	2.47	0.44
1:AA:1219:A:C6	1:AA:1220:G:C6	3.05	0.44
1:AA:1336:C:O4'	1:AA:1337:G:C2	2.70	0.44
2:BA:59:A:H5"	2:BA:387:U:H5"	1.99	0.44
2:BA:600:A:OP2	12:BH:88:ARG:HD2	2.17	0.44
2:BA:658:C:C2'	2:BA:659:U:H5'	2.48	0.44
2:BA:743:A:C2	2:BA:744:C:C6	3.06	0.44
2:BA:841:C:H2'	2:BA:843:U:H5'	1.99	0.44
2:BA:849:G:C6	2:BA:850:U:N3	2.86	0.44
2:BA:972:C:OP1	14:BJ:59:LYS:CE	2.66	0.44
2:BA:1096:C:H2'	2:BA:1097:C:C6	2.53	0.44
2:BA:1342:C:O2'	13:BI:126:GLN:HA	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1394:A:C6	2:BA:1501:C:H4'	2.53	0.44
3:DA:262:A:C2'	3:DA:263:G:H5'	2.47	0.44
3:DA:449:A:C5'	69:DA:4317:HOH:O	2.64	0.44
3:DA:1009:A:C4'	41:DR:58:GLN:HG3	2.47	0.44
3:DA:1136:G:N2	3:DA:1137:G:C4	2.86	0.44
3:DA:1188:U:C2'	3:DA:1189:A:H5'	2.48	0.44
3:DA:1356:G:C2	3:DA:1357:C:C2	3.05	0.44
3:DA:1512:C:H2'	3:DA:1513:U:C5'	2.48	0.44
3:DA:1588:G:H2'	3:DA:1589:U:H6	1.82	0.44
3:DA:1677:A:H5'	69:DA:6214:HOH:O	2.17	0.44
3:DA:1862:G:O2'	3:DA:1863:G:H5'	2.18	0.44
3:DA:2163:A:H2'	3:DA:2165:C:OP2	2.18	0.44
3:DA:2364:C:H2'	3:DA:2365:G:C5'	2.48	0.44
3:DA:2485:G:OP1	37:DN:45:GLN:NE2	2.49	0.44
3:DA:2825:G:C2'	3:DA:2826:A:H5'	2.48	0.44
4:CA:109:C:H5'	4:CA:348:A:C1'	2.48	0.44
4:CA:158:U:O2	4:CA:169:G:C2	2.71	0.44
4:CA:192:C:C5	4:CA:193:U:C2	3.06	0.44
4:CA:223:A:C6	4:CA:408:G:O4'	2.70	0.44
4:CA:444:C:H3'	69:CA:3256:HOH:O	2.18	0.44
4:CA:563:A:H2	41:CR:36:GLN:OE1	2.01	0.44
4:CA:563:A:C2	41:CR:36:GLN:OE1	2.70	0.44
4:CA:579:G:N2	4:CA:1262:A:C4	2.86	0.44
4:CA:687:C:H1'	53:C3:4:THR:HG23	1.98	0.44
4:CA:716:A:OP1	19:BO:89:ARG:NH1	2.50	0.44
4:CA:1021:A:H1'	4:CA:1123:C:H5"	1.99	0.44
4:CA:1371:G:H5"	69:CA:3583:HOH:O	2.18	0.44
4:CA:1744:A:H2'	4:CA:1745:A:O4'	2.17	0.44
4:CA:1827:U:O5'	4:CA:1827:U:H6	2.01	0.44
4:CA:2217:G:C6	4:CA:2218:G:C5	3.06	0.44
4:CA:2712:C:OP1	4:CA:2714:G:H4'	2.18	0.44
4:CA:2768:U:H2'	4:CA:2769:U:O4'	2.16	0.44
11:AG:135:VAL:HG13	69:AG:203:HOH:O	2.18	0.44
12:AH:114:ARG:NH2	69:AH:201:HOH:O	2.29	0.44
14:AJ:63:ASP:OD2	18:AN:85:ARG:HD2	2.16	0.44
17:AM:64:VAL:HG12	17:AM:69:LEU:HB2	1.98	0.44
21:AQ:45:HIS:ND1	21:AQ:70:THR:HG21	2.33	0.44
24:AT:68:HIS:C	24:AT:69:LYS:HZ1	2.25	0.44
25:AU:31:GLU:OE2	25:AU:34:ARG:NH1	2.51	0.44
6:BB:30:PHE:CE1	6:BB:49:MET:HE1	2.53	0.44
9:BE:81:LEU:HB3	9:BE:147:MET:SD	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BH:121:LEU:HD12	12:BH:121:LEU:C	2.43	0.44
14:BJ:78:GLU:O	14:BJ:78:GLU:CG	2.66	0.44
26:BL:33:VAL:HG22	26:BL:79:VAL:HG22	1.98	0.44
17:BM:67:GLY:O	17:BM:71:ARG:CZ	2.66	0.44
21:BQ:31:HIS:HD2	21:BQ:34:TYR:H	1.66	0.44
25:BU:12:PHE:HD1	25:BU:14:VAL:H	1.66	0.44
30:CF:103:ILE:O	30:CF:107:VAL:HB	2.18	0.44
36:CM:95:LEU:O	36:CM:100:ILE:HG23	2.17	0.44
43:CT:9:HIS:HB3	43:CT:11:ARG:NH1	2.33	0.44
45:CV:3:LYS:HG3	45:CV:84:PHE:HZ	1.82	0.44
27:DC:79:ARG:HG2	69:DC:303:HOH:O	2.17	0.44
56:DD:14:ILE:HD12	56:DD:179:ARG:NH2	2.33	0.44
32:DH:75:LEU:C	32:DH:77:THR:H	2.24	0.44
33:DJ:56:VAL:N	69:DJ:203:HOH:O	2.42	0.44
39:DP:24:THR:HG22	39:DP:42:PRO:HD3	2.00	0.44
39:DP:78:VAL:O	39:DP:79:ALA:C	2.60	0.44
57:D7:46:THR:O	57:D7:52:LYS:HB2	2.18	0.44
1:AA:525:C:O2	69:AA:1749:HOH:O	2.21	0.44
1:AA:903:G:H2'	1:AA:904:U:H6	1.83	0.44
1:AA:935:A:C2'	1:AA:936:C:O5'	2.66	0.44
1:AA:995:C:H5'	18:AN:7:ALA:HB1	1.99	0.44
1:AA:1225:A:OP1	17:AM:101:ARG:HA	2.17	0.44
1:AA:1313:U:N3	1:AA:1314:C:C5	2.86	0.44
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.52	0.44
1:AA:1419:G:C5	1:AA:1420:U:C5	3.06	0.44
2:BA:257:G:C2	2:BA:270:A:C6	3.05	0.44
2:BA:412:A:HO2'	2:BA:413:G:P	2.41	0.44
2:BA:483:C:H2'	2:BA:484:G:N7	2.33	0.44
2:BA:770:C:O2'	2:BA:771:G:H5'	2.17	0.44
3:DA:933:A:C2'	3:DA:933:A:N3	2.81	0.44
3:DA:958:U:H5'	37:DN:14:LYS:HE2	1.99	0.44
3:DA:995:C:C6	3:DA:995:C:H5'	2.53	0.44
3:DA:1023:U:P	69:DA:3322:HOH:O	2.72	0.44
3:DA:1385:A:C2	3:DA:1386:C:C4	3.06	0.44
3:DA:1428:C:C5	3:DA:1569:A:H5"	2.52	0.44
3:DA:1452:G:O2'	3:DA:1453:A:P	2.75	0.44
3:DA:1490:A:H2'	27:DC:97:ASP:CB	2.47	0.44
3:DA:1689:A:C6	3:DA:1700:A:C2	3.05	0.44
3:DA:1712:U:H2'	3:DA:1713:A:C8	2.53	0.44
3:DA:1767:G:C2	3:DA:1768:C:C5	3.05	0.44
3:DA:1911:PSU:C4	3:DA:1918:A:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1911:PSU:C2	3:DA:1918:A:C4	3.05	0.44
3:DA:1913:A:OP1	3:DA:1913:A:H4'	2.17	0.44
3:DA:2019:A:C2'	3:DA:2020:A:O5'	2.66	0.44
3:DA:2030:6MZ:C5'	69:DA:3744:HOH:O	2.62	0.44
3:DA:2071:A:H8	3:DA:2071:A:O5'	2.01	0.44
3:DA:2140:G:C2	3:DA:2152:G:C5	3.06	0.44
3:DA:2172:U:H4'	3:DA:2173:A:H5'	2.00	0.44
3:DA:2394:C:H2'	3:DA:2395:C:H5'	1.99	0.44
3:DA:2428:G:H4'	3:DA:2429[B]:G:C8	2.52	0.44
3:DA:2511:U:C5	3:DA:2512:C:C5	3.06	0.44
3:DA:2727:A:H2'	3:DA:2728:U:H5'	1.99	0.44
4:CA:6:A:H8	4:CA:6:A:O5'	2.00	0.44
4:CA:16:C:H2'	4:CA:17:G:O4'	2.18	0.44
4:CA:188:G:HO2'	4:CA:1365:A:N6	2.16	0.44
4:CA:298:G:P	45:CV:84:PHE:HD1	2.40	0.44
4:CA:584:C:C2	4:CA:585:G:C8	3.06	0.44
4:CA:592:A:C5	4:CA:593:U:C4	3.05	0.44
4:CA:911:A:H8	4:CA:911:A:O5'	2.01	0.44
4:CA:954:G:H4'	37:CN:13:HIS:CD2	2.53	0.44
4:CA:1139:G:C2'	4:CA:1140:C:H5'	2.48	0.44
4:CA:1340:U:O2	44:CU:63:VAL:HG22	2.17	0.44
4:CA:1605:C:H2'	4:CA:1606:C:H5'	2.00	0.44
4:CA:2131:U:H5'	4:CA:2132:U:OP1	2.17	0.44
4:CA:2394:C:OP2	54:C4:29:ARG:HD3	2.17	0.44
4:CA:2428:G:H5"	4:CA:2429:G:O5'	2.17	0.44
4:CA:2531:A:H5'	31:CG:156:TYR:CZ	2.51	0.44
4:CA:2540:C:O2'	4:CA:2541:A:H5'	2.17	0.44
4:CA:2806:C:H1'	69:CA:3212:HOH:O	2.18	0.44
4:CA:2831:G:N2	4:CA:2884:U:OP2	2.50	0.44
5:DB:100:G:N2	69:DB:328:HOH:O	2.50	0.44
6:AB:23:TRP:CH2	6:AB:25:PRO:HA	2.53	0.44
10:AF:92:THR:CG2	10:AF:93:LYS:HE2	2.47	0.44
10:AF:93:LYS:CD	10:AF:93:LYS:H	2.31	0.44
12:AH:111:MET:HE2	12:AH:115:ALA:HB1	1.99	0.44
18:AN:46:LEU:C	18:AN:46:LEU:HD12	2.42	0.44
18:AN:47:LYS:O	23:AS:13:LEU:HD11	2.18	0.44
18:AN:79:LEU:HB2	18:AN:84:VAL:HG23	1.98	0.44
24:AT:83:ILE:O	24:AT:87:ALA:HB3	2.18	0.44
6:BB:17:GLY:HA3	6:BB:40:ILE:HA	1.99	0.44
10:BF:90:MET:HB2	10:BF:91:ARG:HB2	2.00	0.44
13:BI:17:ALA:HA	13:BI:66:THR:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:BO:32:LEU:O	19:BO:36:ILE:HG13	2.18	0.44
31:CG:93:TYR:CD1	31:CG:106:LEU:HA	2.53	0.44
36:CM:23:ILE:H	36:CM:23:ILE:HD12	1.82	0.44
39:CP:80:GLU:O	39:CP:83:LEU:HB2	2.17	0.44
42:CS:78:ARG:HB2	42:CS:83:TYR:CD1	2.53	0.44
27:DC:104:LEU:N	27:DC:104:LEU:HD12	2.33	0.44
29:DE:32:VAL:HG23	29:DE:33:VAL:N	2.33	0.44
31:DG:155:PRO:O	31:DG:171:LYS:N	2.48	0.44
33:DJ:27:LEU:HG	33:DJ:34:ILE:HD12	1.99	0.44
43:DT:37:THR:OG1	43:DT:48:LYS:HE3	2.17	0.44
45:DV:40:LEU:HD23	45:DV:61:GLU:HA	2.00	0.44
46:DW:21:ARG:HD2	69:DW:102:HOH:O	2.17	0.44
51:D1:55:ALA:O	51:D1:56:LYS:HG3	2.18	0.44
54:D4:30:HIS:CD2	54:D4:31:ILE:HG13	2.52	0.44
1:AA:233:C:O2'	1:AA:234:C:H5'	2.17	0.44
1:AA:302:G:N3	1:AA:556:C:H4'	2.32	0.44
1:AA:360:G:C6	1:AA:361:G:C6	3.06	0.44
1:AA:596:A:C6	1:AA:645:G:C2	3.06	0.44
1:AA:719:C:O2'	22:AR:39:ILE:O	2.27	0.44
1:AA:724:G:C2'	1:AA:725:G:H5'	2.48	0.44
1:AA:883:C:N3	1:AA:884:U:C4	2.86	0.44
1:AA:923:A:C6	1:AA:924:C:C4	3.06	0.44
1:AA:943:U:C2'	1:AA:944:G:H5'	2.48	0.44
1:AA:1458:G:OP1	24:AT:30:THR:OG1	2.35	0.44
2:BA:420:U:C2'	2:BA:421:U:H5"	2.48	0.44
2:BA:487:A:N3	2:BA:487:A:H2'	2.33	0.44
2:BA:675:A:C4	2:BA:676:A:C8	3.06	0.44
2:BA:1289:A:H2	2:BA:1372:U:O4'	2.01	0.44
2:BA:1387:G:C4	2:BA:1388:C:C5	3.06	0.44
2:BA:1480:A:H2'	2:BA:1481:U:H6	1.83	0.44
2:BA:1493:A:OP2	2:BA:1493:A:C8	2.71	0.44
2:BA:1508:A:P	69:BA:1765:HOH:O	2.76	0.44
3:DA:465:G:C6	3:DA:466:A:N6	2.86	0.44
3:DA:855:G:OP1	62:DA:3031:SPD:C9	2.61	0.44
3:DA:910:A:N3	3:DA:2264:C:O2'	2.40	0.44
3:DA:962:G:C2'	3:DA:963:U:H5'	2.48	0.44
3:DA:1022:G:C5	3:DA:1140:C:C4	3.05	0.44
3:DA:1155:A:C4	3:DA:1157:G:C8	3.06	0.44
3:DA:1584:U:O2	3:DA:1584:U:H2'	2.16	0.44
3:DA:1801:A:OP2	27:DC:152:GLN:NE2	2.50	0.44
3:DA:1941:C:O2	3:DA:1941:C:C2'	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1987:A:H2'	3:DA:1988:G:H8	1.82	0.44
3:DA:2223:G:C2'	3:DA:2224:G:H5'	2.47	0.44
3:DA:2293:G:H2'	3:DA:2294:G:O4'	2.18	0.44
3:DA:2420:C:OP1	54:D4:33:THR:OG1	2.31	0.44
3:DA:2469:A:N1	3:DA:2482:A:C8	2.86	0.44
3:DA:2518:A:P	69:DA:4234:HOH:O	2.76	0.44
4:CA:36:G:O6	69:CA:3287:HOH:O	2.21	0.44
4:CA:89:A:C6	4:CA:90:U:C4	3.06	0.44
4:CA:125:A:H5"	53:C3:19:ARG:HD3	1.99	0.44
4:CA:245:G:N7	54:C4:7:ARG:NH1	2.66	0.44
4:CA:473:G:H2'	4:CA:474:G:H5'	1.99	0.44
4:CA:777:G:N7	4:CA:793:A:C2	2.77	0.44
4:CA:856:G:H1	4:CA:921:C:H42	1.65	0.44
4:CA:1206:G:N1	4:CA:1207:C:C2	2.86	0.44
4:CA:1669:A:O4'	35:CL:5:GLN:HG3	2.18	0.44
4:CA:1746:A:H2'	4:CA:1747:U:C6	2.53	0.44
4:CA:1816:C:H5"	27:CC:61:TYR:CE1	2.53	0.44
4:CA:2360:G:C1'	36:CM:60:ARG:HH21	2.31	0.44
4:CA:2512:C:H5'	69:CA:3242:HOH:O	2.18	0.44
4:CA:2685:G:C4	4:CA:2686:G:C8	3.05	0.44
4:CA:2720:U:C2	4:CA:2872:A:N6	2.86	0.44
4:CA:2873:A:H1'	38:CO:4:ARG:O	2.18	0.44
8:AD:135:TYR:C	8:AD:135:TYR:HD2	2.26	0.44
15:AK:85:MET:CE	15:AK:111:THR:HB	2.48	0.44
21:AQ:49:GLU:O	21:AQ:50:ASN:HB2	2.18	0.44
7:BC:143:ARG:HB3	7:BC:144:LEU:HD22	2.00	0.44
9:BE:78:ASN:OD1	9:BE:79:GLY:N	2.51	0.44
11:BG:4:ARG:HG3	11:BG:5:ARG:N	2.33	0.44
12:BH:76:GLN:O	12:BH:127:CYS:HB2	2.18	0.44
26:BL:43:LYS:O	26:BL:45:PRO:CD	2.66	0.44
26:BL:65:SER:HB2	26:BL:82:ILE:HD11	1.99	0.44
17:BM:4:ILE:O	17:BM:5:ALA:C	2.61	0.44
27:CC:179:GLU:OE2	27:CC:266:ILE:HG13	2.18	0.44
28:CD:135:GLY:HA2	69:CD:305:HOH:O	2.17	0.44
31:CG:5:LYS:O	31:CG:7:PRO:HD3	2.18	0.44
36:CM:29:LYS:C	36:CM:30:THR:HG1	2.06	0.44
48:CY:3:VAL:HG22	48:CY:10:ARG:HG3	2.00	0.44
27:DC:144:GLU:CD	27:DC:148:GLY:H	2.26	0.44
27:DC:152:GLN:C	27:DC:153:LEU:HD23	2.43	0.44
30:DF:105:ILE:HD12	57:D7:14:PHE:CE2	2.53	0.44
32:DH:40:THR:O	32:DH:41:LYS:C	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DJ:14:ALA:C	33:DJ:16:MET:H	2.26	0.44
34:DK:98:GLU:OE2	34:DK:126:ALA:HB2	2.18	0.44
36:DM:10:GLU:OE1	36:DM:10:GLU:HA	2.18	0.44
37:DN:114:ARG:HG2	37:DN:130:PHE:CZ	2.52	0.44
49:DZ:2:LYS:HG2	49:DZ:6:LEU:CD2	2.47	0.44
57:D7:25:ILE:CG2	57:D7:26:GLY:H	2.31	0.44
1:AA:36:C:H2'	1:AA:37:U:O4'	2.18	0.43
1:AA:355:C:H2'	1:AA:356:A:O4'	2.17	0.43
1:AA:411:A:C4	1:AA:413:G:O4'	2.71	0.43
1:AA:615:G:O2'	1:AA:616:G:H5'	2.18	0.43
1:AA:1048:G:N3	1:AA:1050:G:C8	2.86	0.43
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.99	0.43
2:BA:160:A:N6	2:BA:346:G:C6	2.86	0.43
2:BA:288:A:H2'	2:BA:289:G:H4'	2.00	0.43
2:BA:570:G:C2	2:BA:571:U:C4	3.06	0.43
2:BA:974:A:OP1	18:BN:69:ARG:NH1	2.48	0.43
2:BA:1176:A:H2'	2:BA:1177:G:O4'	2.18	0.43
2:BA:1183:U:H2'	69:BA:1802:HOH:O	2.16	0.43
2:BA:1321:U:C4	2:BA:1322:C:C5	3.05	0.43
2:BA:1508:A:OP1	69:BA:1765:HOH:O	2.21	0.43
2:BA:1522:U:C2	2:BA:1523:G:C8	3.05	0.43
3:DA:241:A:O2'	54:D4:2:LYS:NZ	2.51	0.43
3:DA:416:U:H2'	3:DA:417:C:O4'	2.18	0.43
3:DA:653:U:H3'	3:DA:653:U:H6	1.83	0.43
3:DA:1319:C:O2'	3:DA:1320:C:H5'	2.18	0.43
3:DA:1357:C:O2	3:DA:1357:C:C2'	2.53	0.43
3:DA:1492:G:N2	3:DA:1499:C:C2	2.86	0.43
3:DA:1578:U:O2	3:DA:1578:U:H2'	2.18	0.43
3:DA:1652:A:C2'	3:DA:1653:G:H5'	2.48	0.43
3:DA:1661:G:H4'	69:DA:4819:HOH:O	2.17	0.43
3:DA:1794:A:H2'	3:DA:1795:C:H6	1.83	0.43
3:DA:1864:U:OP1	3:DA:2410:G:O2'	2.34	0.43
3:DA:1964:G:H4'	3:DA:1965:C:OP2	2.18	0.43
3:DA:2647:U:O2'	3:DA:2648:G:H5'	2.18	0.43
3:DA:2805:C:O2	3:DA:2805:C:C2'	2.62	0.43
3:DA:2886:A:N3	3:DA:2886:A:H2'	2.32	0.43
4:CA:205:G:H8	69:CA:3776:HOH:O	2.01	0.43
4:CA:219:A:H8	4:CA:219:A:O5'	2.01	0.43
4:CA:425:G:N1	4:CA:426:C:N4	2.66	0.43
4:CA:727:A:H5'	69:CA:3430:HOH:O	2.18	0.43
4:CA:1250:G:H4'	41:CR:5:ARG:HH21	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1355:G:O2'	4:CA:1356:G:H5'	2.17	0.43
4:CA:1824:G:OP1	27:CC:52:HIS:CE1	2.71	0.43
4:CA:2070:A:C2	4:CA:2442:C:C2	3.06	0.43
4:CA:2193:G:H2'	4:CA:2194:U:C6	2.53	0.43
5:DB:91:C:P	37:DN:18[A]:ARG:HG2	2.58	0.43
6:AB:138:THR:O	6:AB:142:GLU:N	2.42	0.43
9:AE:50:TYR:O	9:AE:63:ALA:HB2	2.17	0.43
17:AM:48:LEU:C	17:AM:48:LEU:CD2	2.91	0.43
18:AN:64:CYS:SG	18:AN:80:SER:N	2.81	0.43
19:AO:64:ARG:HH12	19:AO:88:ARG:NH2	2.16	0.43
21:AQ:81:LYS:H	21:AQ:81:LYS:HD3	1.83	0.43
6:BB:68:LEU:HB2	6:BB:154:MET:HE1	2.00	0.43
6:BB:151:ILE:C	6:BB:153:ASP:N	2.76	0.43
7:BC:192:THR:HG23	7:BC:193:TYR:CD2	2.53	0.43
8:BD:34:ILE:HG23	8:BD:35:GLU:HG3	2.01	0.43
9:BE:42:GLY:CA	69:BE:203:HOH:O	2.65	0.43
15:BK:61:PHE:O	15:BK:65:VAL:HG13	2.18	0.43
17:BM:8:ASN:C	17:BM:10:PRO:HD2	2.43	0.43
30:CF:19:PHE:O	30:CF:20:ASN:CG	2.61	0.43
30:CF:125:GLY:O	30:CF:157:THR:HG21	2.18	0.43
33:CJ:19:PRO:CB	33:CJ:22:PRO:HG2	2.48	0.43
35:CL:76:VAL:HG22	40:CQ:72:VAL:HG23	1.99	0.43
45:CV:98:ASN:OD1	45:CV:99:SER:N	2.50	0.43
33:DJ:123:ALA:O	33:DJ:126:ARG:HG2	2.18	0.43
37:DN:24:THR:O	37:DN:24:THR:CG2	2.66	0.43
45:DV:52:ASN:C	45:DV:54:PRO:HD3	2.43	0.43
1:AA:47:C:OP2	1:AA:366:A:N6	2.46	0.43
1:AA:602:A:H2'	1:AA:603:U:C6	2.53	0.43
1:AA:671:G:C4	1:AA:672:U:C6	3.06	0.43
1:AA:744:C:O2'	1:AA:745:G:H5'	2.18	0.43
1:AA:749:A:C5	1:AA:750:C:C5	3.06	0.43
1:AA:946:A:O2'	1:AA:1333:A:N3	2.49	0.43
1:AA:955:U:C4	1:AA:956:U:C5	3.06	0.43
1:AA:956:U:H2'	1:AA:957:U:C5'	2.48	0.43
1:AA:1031:C:H1'	1:AA:1032:G:OP2	2.18	0.43
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.33	0.43
1:AA:1406:U:C5	1:AA:1407:5MC:C5	3.06	0.43
2:BA:321:A:H8	2:BA:328:C:C2	2.36	0.43
2:BA:374:A:C2	2:BA:375:U:C6	3.05	0.43
2:BA:375:U:O3'	20:BP:6:LEU:HD22	2.18	0.43
2:BA:558:G:P	69:BA:1703:HOH:O	2.63	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1061:G:C2	2:BA:1197:A:C2	3.05	0.43
2:BA:1077:G:C2	2:BA:1081:A:C2	3.06	0.43
2:BA:1191:A:H5"	7:BC:4:LYS:HE3	2.00	0.43
2:BA:1244:G:C6	2:BA:1245:C:C4	3.06	0.43
3:DA:96:C:H4'	49:DZ:41:HIS:CD2	2.53	0.43
3:DA:269:C:C2	3:DA:424:G:C2	3.06	0.43
3:DA:536:G:OP2	69:DA:3551:HOH:O	2.21	0.43
3:DA:587:C:N3	36:DM:33:ARG:HD2	2.33	0.43
3:DA:735:A:H5"	3:DA:736:C:OP2	2.18	0.43
3:DA:740:C:P	69:DA:3568:HOH:O	2.76	0.43
3:DA:845:A:N6	3:DA:847:U:C2	2.86	0.43
3:DA:1009:A:P	34:DK:39:LYS:HZ3	2.41	0.43
3:DA:1113:U:H2'	3:DA:1114:C:H6	1.83	0.43
3:DA:1680:U:O2	3:DA:1763:G:H3'	2.18	0.43
3:DA:1731:G:H2'	3:DA:1732:C:H5"	1.99	0.43
3:DA:1831:G:H2'	3:DA:1832:C:H5'	2.00	0.43
3:DA:1841:U:C2'	3:DA:1842:G:H5'	2.48	0.43
3:DA:1953:A:O2'	3:DA:2559:C:O2	2.34	0.43
3:DA:1973:G:C2'	3:DA:1974:C:H5'	2.47	0.43
3:DA:2242:G:H2'	3:DA:2243:U:O5'	2.18	0.43
3:DA:2447:G:C5	3:DA:2500:U:C5	3.06	0.43
3:DA:2512:C:H1'	56:DD:145:SER:O	2.18	0.43
3:DA:2536:G:C6	3:DA:2537:U:C4	3.06	0.43
3:DA:2545:G:H2'	3:DA:2546:U:C5'	2.49	0.43
3:DA:2600:A:C6	3:DA:2601:C:N4	2.86	0.43
3:DA:2621:G:C2'	3:DA:2622:U:H5'	2.48	0.43
3:DA:2698:U:H2'	3:DA:2699:C:H6	1.83	0.43
4:CA:89:A:H2'	4:CA:90:U:O4'	2.18	0.43
4:CA:126:A:H3'	69:CA:3888:HOH:O	2.17	0.43
4:CA:160:A:N6	4:CA:161:A:C6	2.86	0.43
4:CA:485:C:C4	4:CA:486:C:C5	3.06	0.43
4:CA:686:U:H2'	4:CA:788:A:N1	2.33	0.43
4:CA:812:C:H2'	4:CA:813:U:C5'	2.47	0.43
4:CA:1010:A:OP1	41:CR:62:ALA:HA	2.18	0.43
4:CA:1379:U:H2'	4:CA:1379:U:O2	2.16	0.43
4:CA:1402:U:O4'	69:CA:3409:HOH:O	2.20	0.43
4:CA:2084:C:H2'	4:CA:2085:U:O5'	2.18	0.43
4:CA:2086:U:P	69:CA:3449:HOH:O	2.77	0.43
4:CA:2720:U:H5"	40:CQ:52:ARG:HH22	1.83	0.43
4:CA:2755:C:O2'	4:CA:2756:U:H2'	2.18	0.43
4:CA:2812:G:N2	4:CA:2889:C:C2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AG:56:LYS:O	11:AG:57:SER:O	2.37	0.43
12:AH:18:GLN:NE2	12:AH:65:TYR:CE1	2.86	0.43
6:BB:64:LYS:HZ1	6:BB:88:ASP:CG	2.24	0.43
7:BC:40:ARG:NH2	7:BC:57:ILE:HD12	2.34	0.43
10:BF:39:LEU:CD1	10:BF:61:LEU:O	2.66	0.43
11:BG:22:LEU:HA	11:BG:25:LYS:HE2	2.00	0.43
11:BG:108:ALA:C	11:BG:110:LYS:H	2.26	0.43
13:BI:50:GLN:N	13:BI:51:PRO:HD2	2.33	0.43
13:BI:95:ARG:O	13:BI:98:LEU:CB	2.65	0.43
13:BI:101:ALA:HB1	13:BI:103:PHE:CZ	2.53	0.43
14:BJ:92:LEU:O	14:BJ:93:ALA:CB	2.66	0.43
26:BL:107:VAL:HG23	26:BL:117:TYR:HB3	1.98	0.43
22:BR:34:THR:CG2	22:BR:38:LYS:HB2	2.48	0.43
23:BS:29:LYS:CG	23:BS:30:PRO:HD2	2.48	0.43
28:CD:34:VAL:CG2	28:CD:96:ILE:HD11	2.48	0.43
40:CQ:3:ILE:HD12	40:CQ:3:ILE:H	1.83	0.43
40:CQ:30:TRP:CD1	40:CQ:81:ASP:HB2	2.53	0.43
40:CQ:80:VAL:HG23	40:CQ:80:VAL:O	2.17	0.43
45:CV:51:LEU:HD23	45:CV:51:LEU:HA	1.87	0.43
50:C0:46:MET:O	50:C0:50:VAL:HG22	2.18	0.43
56:DD:149:ASN:O	56:DD:150:MEQ:C	2.64	0.43
35:DL:109:SER:O	35:DL:110:GLU:C	2.53	0.43
37:DN:132:THR:CG2	37:DN:133:LYS:N	2.81	0.43
57:D7:39:GLY:C	57:D7:40:VAL:HG22	2.43	0.43
57:D7:63:THR:OG1	57:D7:64:VAL:N	2.49	0.43
1:AA:13:U:C4	1:AA:916:U:O4	2.71	0.43
1:AA:19:A:N3	1:AA:917:G:C2	2.86	0.43
1:AA:45:G:C2'	1:AA:46:G:H5'	2.49	0.43
1:AA:62:U:O2'	1:AA:63:C:H5'	2.18	0.43
1:AA:108:G:P	1:AA:326:G:H22	2.42	0.43
1:AA:300:A:H2'	1:AA:301:G:O4'	2.18	0.43
1:AA:444:G:C6	1:AA:445:G:N7	2.86	0.43
1:AA:738:C:C4	1:AA:739:C:C5	3.06	0.43
1:AA:968:A:H4'	1:AA:969:A:OP2	2.18	0.43
1:AA:1016:A:HO2'	1:AA:1217:C:HO2'	1.66	0.43
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.19	0.43
1:AA:1352:C:H2'	1:AA:1353:G:O4'	2.18	0.43
1:AA:1360:A:C4	1:AA:1361:G:C8	3.06	0.43
2:BA:32:A:H2'	2:BA:32:A:N3	2.33	0.43
2:BA:374:A:C5	2:BA:375:U:C5	3.05	0.43
2:BA:541:G:H2'	2:BA:542:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:586:C:H1'	2:BA:878:A:O2'	2.18	0.43
2:BA:787:A:C2	2:BA:796:C:N3	2.86	0.43
2:BA:861:G:C5	2:BA:862:C:C5	3.06	0.43
2:BA:942:G:C2	2:BA:943:U:C5	3.06	0.43
2:BA:1068:G:C2'	2:BA:1069:C:H5'	2.48	0.43
2:BA:1220:G:OP1	23:BS:37:ARG:NH2	2.52	0.43
2:BA:1340:A:C2	2:BA:1341:U:H1'	2.53	0.43
2:BA:1352:C:H2'	2:BA:1353:G:O4'	2.18	0.43
2:BA:1505:G:H4'	2:BA:1506:U:H5"	2.00	0.43
3:DA:102:U:O2	3:DA:102:U:H2'	2.18	0.43
3:DA:137:U:H2'	3:DA:140:C:C6	2.53	0.43
3:DA:444:C:O2'	3:DA:445:C:H5'	2.19	0.43
3:DA:1101:U:H2'	3:DA:1102:C:C6	2.53	0.43
3:DA:1257:C:P	69:DA:3353:HOH:O	2.70	0.43
3:DA:1309:G:H4'	53:D3:7:PRO:HB2	2.00	0.43
3:DA:1330:C:O2	3:DA:1330:C:H2'	2.19	0.43
3:DA:1700:A:C3'	3:DA:1701:A:H5'	2.47	0.43
3:DA:1715:G:N2	3:DA:1743:G:H2'	2.33	0.43
3:DA:1863:G:H2'	3:DA:1864:U:O4'	2.18	0.43
3:DA:2095:A:O2'	3:DA:2096:C:H5'	2.18	0.43
3:DA:2111:U:OP1	3:DA:2111:U:H4'	2.17	0.43
3:DA:2520:C:H2'	3:DA:2521:C:H6	1.83	0.43
4:CA:170:U:H2'	4:CA:171:U:C6	2.53	0.43
4:CA:210:C:OP1	53:C3:29:GLN:NE2	2.51	0.43
4:CA:372:G:H1'	4:CA:400:G:O6	2.18	0.43
4:CA:579:G:C8	4:CA:2017:U:C4	3.06	0.43
4:CA:1100:C:H2'	4:CA:1101:U:C6	2.53	0.43
4:CA:1139:G:O2'	4:CA:1140:C:H5'	2.18	0.43
4:CA:1335:C:H2'	4:CA:1336:A:C8	2.52	0.43
4:CA:1441:G:H2'	4:CA:1442:U:C6	2.53	0.43
4:CA:1482:G:N1	4:CA:1508:A:C2	2.86	0.43
4:CA:1544:A:C6	4:CA:1545:A:N1	2.85	0.43
4:CA:1716:U:H3	4:CA:1744:A:H62	1.65	0.43
4:CA:2133:G:H21	4:CA:2158:A:N6	2.17	0.43
4:CA:2239:G:C2	4:CA:2240:U:C2	3.06	0.43
4:CA:2527:C:H5"	55:C5:34:PRO:HB2	2.00	0.43
4:CA:2599:G:OP2	4:CA:2599:G:H8	2.01	0.43
4:CA:2696:U:O4	4:CA:2697:G:O6	2.36	0.43
4:CA:2880:C:O2	38:CO:93:GLY:HA3	2.17	0.43
4:CA:2886:A:C6	51:C1:39:ARG:NE	2.86	0.43
7:AC:6:HIS:HD2	7:AC:8:ASN:H	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AE:137:VAL:O	9:AE:137:VAL:CG2	2.66	0.43
14:AJ:41:PRO:O	14:AJ:42:LEU:HB2	2.18	0.43
15:AK:44:TRP:CE3	15:AK:44:TRP:C	2.97	0.43
17:AM:15:ALA:O	17:AM:19:LEU:CD2	2.66	0.43
19:AO:44:ALA:O	19:AO:47:LYS:HE3	2.18	0.43
23:AS:48:THR:HG22	23:AS:61:PHE:HD1	1.83	0.43
23:AS:58:VAL:HG11	23:AS:75:ALA:HB2	2.00	0.43
6:BB:207:ILE:HD13	6:BB:208:ARG:H	1.81	0.43
9:BE:67:ALA:O	9:BE:69:ARG:O	2.36	0.43
18:BN:57:PRO:O	18:BN:59:ARG:N	2.49	0.43
21:BQ:57:ASP:OD1	21:BQ:81:LYS:HB3	2.18	0.43
33:CJ:13:ALA:N	33:CJ:53:PRO:HG3	2.34	0.43
40:CQ:28:LYS:HB3	40:CQ:39:LEU:HD23	2.00	0.43
48:CY:68:ALA:HA	48:CY:71:ARG:HG2	2.00	0.43
54:C4:44:ARG:N	54:C4:45:PRO:HD2	2.33	0.43
27:DC:216:ARG:HD3	69:DC:318:HOH:O	2.18	0.43
33:DJ:10:LEU:HD12	33:DJ:23:VAL:HG12	2.00	0.43
33:DJ:15:GLY:HA3	33:DJ:50:LYS:HB3	2.00	0.43
36:DM:7:SER:C	69:DM:308:HOH:O	2.61	0.43
39:DP:19:GLN:HG3	63:DP:202:PUT:H42	2.00	0.43
39:DP:51:ALA:HB3	39:DP:78:VAL:HG13	1.99	0.43
55:D5:40:GLN:HA	69:D5:202:HOH:O	2.18	0.43
57:D7:18:SER:C	57:D7:19:VAL:HG22	2.42	0.43
57:D7:46:THR:CB	57:D7:52:LYS:HD3	2.47	0.43
1:AA:47:C:H2'	69:AA:1914:HOH:O	2.17	0.43
1:AA:118:U:C5	1:AA:288:A:C5	3.07	0.43
1:AA:270:A:C6	1:AA:271:C:N3	2.86	0.43
1:AA:279:A:H4'	1:AA:280:C:H5"	1.99	0.43
1:AA:290:C:C2'	1:AA:291:U:H5'	2.47	0.43
1:AA:325:A:H2'	1:AA:326:G:O4'	2.19	0.43
1:AA:692:U:O2	1:AA:694:A:H3'	2.17	0.43
1:AA:949:A:C5	1:AA:1233:G:C2	3.06	0.43
1:AA:1015:G:N7	1:AA:1016:A:C8	2.86	0.43
1:AA:1057:G:C2	1:AA:1204:A:C2	3.06	0.43
1:AA:1079:G:C5'	9:AE:134:ILE:CD1	2.96	0.43
2:BA:49:U:C2	2:BA:364:A:N6	2.87	0.43
2:BA:75:G:C2	2:BA:96:U:C2	3.07	0.43
2:BA:79:G:N2	2:BA:91:U:C2	2.87	0.43
2:BA:179:A:H2'	2:BA:180:U:C6	2.53	0.43
2:BA:406:G:C2	2:BA:407:U:C5	3.06	0.43
2:BA:451:A:H5'	69:BP:104:HOH:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:528:C:O2	2:BA:528:C:C2'	2.67	0.43
2:BA:1072:G:C4	2:BA:1104:G:N2	2.86	0.43
2:BA:1210:C:H1'	2:BA:1214:C:C4	2.53	0.43
2:BA:1245:C:C4	2:BA:1246:A:N7	2.86	0.43
3:DA:39:G:H2'	3:DA:40:U:C6	2.53	0.43
3:DA:460:A:P	69:DA:3233:HOH:O	2.77	0.43
3:DA:803:U:C2'	3:DA:804:A:H5'	2.48	0.43
3:DA:845:A:C6	3:DA:847:U:C6	3.06	0.43
3:DA:868:U:C4	3:DA:869:G:N7	2.86	0.43
3:DA:960:A:H5"	3:DA:961:C:P	2.58	0.43
3:DA:1054:A:H5'	3:DA:1055:G:P	2.58	0.43
3:DA:1235:G:OP2	63:DA:3037:PUT:C2	2.67	0.43
3:DA:1691:C:C2'	3:DA:1692:U:O5'	2.66	0.43
3:DA:1784:A:H1'	69:DA:4239:HOH:O	2.18	0.43
3:DA:1961:C:C2'	3:DA:1962:5MC:H5'	2.48	0.43
3:DA:1999:C:H2'	3:DA:2000:C:O4'	2.18	0.43
3:DA:2025:C:H6	3:DA:2025:C:O5'	2.00	0.43
3:DA:2307:G:H4'	3:DA:2308:G:O5'	2.18	0.43
3:DA:2602:A:H4'	3:DA:2603:G:OP2	2.19	0.43
3:DA:2706:A:H2'	3:DA:2707:U:O5'	2.18	0.43
3:DA:2855:C:C2'	3:DA:2856:A:H5'	2.48	0.43
3:DA:2861:U:O2	3:DA:2861:U:H2'	2.19	0.43
65:DA:3064:ACY:H2	69:DA:4579:HOH:O	2.16	0.43
69:DA:4232:HOH:O	36:DM:4:ASN:HA	2.19	0.43
4:CA:104:A:N7	4:CA:105:C:C4	2.86	0.43
4:CA:105:C:H2'	4:CA:106:C:C6	2.53	0.43
4:CA:240:C:OP2	4:CA:241:A:O2'	2.34	0.43
4:CA:421:C:O2'	69:CA:3373:HOH:O	2.18	0.43
4:CA:666:A:C5'	36:CM:48:ARG:HD2	2.48	0.43
4:CA:701:G:H5'	69:CA:3456:HOH:O	2.17	0.43
4:CA:737:C:H42	4:CA:759:G:H1	1.66	0.43
4:CA:855:G:C4	4:CA:923:G:N2	2.86	0.43
4:CA:1210:G:O6	4:CA:1237:A:O2'	2.33	0.43
4:CA:1358:G:H2'	4:CA:1359:A:OP2	2.18	0.43
4:CA:1395:A:O2'	4:CA:1397:U:C6	2.70	0.43
4:CA:1783:A:C6	4:CA:2587:A:C2	3.06	0.43
4:CA:1865:U:O4	4:CA:1875:G:C4	2.71	0.43
4:CA:1906:G:C8	4:CA:1929:G:H2'	2.53	0.43
4:CA:1947:C:H2'	4:CA:1948:G:C8	2.54	0.43
4:CA:2365:G:H4'	47:CX:58:PHE:CE2	2.53	0.43
4:CA:2684:U:C4'	35:CL:70:ARG:HH12	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2815:C:H2'	4:CA:2816:G:C8	2.54	0.43
5:DB:63:C:C2	5:DB:64:G:C8	3.06	0.43
6:AB:207:ILE:HD13	6:AB:207:ILE:N	2.33	0.43
7:AC:22:TRP:HB3	7:AC:59:ARG:HG2	2.00	0.43
8:AD:174:ASP:OD1	8:AD:174:ASP:C	2.61	0.43
10:AF:38:ARG:HB3	10:AF:63:ASN:HB2	2.01	0.43
14:AJ:28:THR:O	14:AJ:28:THR:CG2	2.66	0.43
14:AJ:53:ILE:HG13	18:AN:85:ARG:NE	2.34	0.43
15:AK:107:ILE:C	15:AK:107:ILE:HD13	2.43	0.43
22:AR:21:ILE:O	22:AR:22:ASP:HB2	2.17	0.43
6:BB:57:LEU:HD21	6:BB:67:ILE:HD12	2.00	0.43
7:BC:173:VAL:O	7:BC:175:LEU:HD12	2.19	0.43
8:BD:48:LEU:HD12	8:BD:48:LEU:HA	1.90	0.43
11:BG:78:ARG:O	11:BG:79:ARG:HB2	2.18	0.43
20:BP:8:ARG:NH2	20:BP:15:PRO:HG3	2.33	0.43
24:BT:67:ILE:O	24:BT:68:HIS:O	2.37	0.43
24:BT:79:LEU:O	24:BT:83:ILE:HG23	2.18	0.43
28:CD:133:THR:HG23	28:CD:134:HIS:N	2.34	0.43
30:CF:59:ILE:HG13	30:CF:140:ILE:HD11	2.00	0.43
46:CW:31:TYR:CE1	46:CW:92:VAL:HG22	2.54	0.43
54:C4:55:GLY:C	54:C4:56:LEU:HG	2.43	0.43
55:C5:14:HIS:CD2	55:C5:15:PRO:HD2	2.54	0.43
42:DS:7:SER:O	69:DS:301:HOH:O	2.21	0.43
43:DT:29:VAL:HG13	43:DT:55:ILE:HD11	1.99	0.43
51:D1:8:THR:HA	69:D1:201:HOH:O	2.18	0.43
1:AA:66:A:H2'	1:AA:67:C:H5'	2.00	0.43
1:AA:142:G:C6	1:AA:143:A:C5	3.07	0.43
1:AA:499:A:H4'	1:AA:500:G:OP1	2.19	0.43
1:AA:501:C:H2'	1:AA:502:A:C8	2.53	0.43
1:AA:509:A:C6	1:AA:510:A:N1	2.87	0.43
1:AA:580:C:C2'	1:AA:581:G:O5'	2.67	0.43
1:AA:741:G:H2'	1:AA:742:G:O4'	2.18	0.43
2:BA:154:U:O2	2:BA:168:G:N2	2.51	0.43
2:BA:609:A:N7	2:BA:610:U:C5	2.86	0.43
2:BA:664:G:H22	2:BA:741:G:H1	1.66	0.43
2:BA:921:U:H2'	2:BA:922:G:O4'	2.18	0.43
2:BA:982:U:OP2	18:BN:63:ARG:NH2	2.45	0.43
2:BA:1406:U:H2'	2:BA:1407:C:H5'	1.99	0.43
3:DA:63:A:C2	3:DA:64:A:C5	3.07	0.43
3:DA:488:G:O2'	3:DA:491:G:N7	2.43	0.43
3:DA:590:A:C1'	69:DA:3790:HOH:O	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:846:U:HO2'	3:DA:847:U:P	2.36	0.43
3:DA:1199:U:H2'	3:DA:1200:C:C6	2.53	0.43
3:DA:1261:C:C2'	3:DA:1262:A:O5'	2.66	0.43
3:DA:1317:G:H1	3:DA:1335:C:H42	1.65	0.43
3:DA:1379:U:O2	3:DA:1379:U:H2'	2.17	0.43
3:DA:2250:G:H4'	69:DA:4907:HOH:O	2.18	0.43
3:DA:2309:A:C5	3:DA:2310:C:C4	3.06	0.43
3:DA:2581:G:C2	3:DA:2610:C:C5	3.07	0.43
3:DA:2714:G:O2'	3:DA:2715:C:H5'	2.19	0.43
3:DA:2793:C:H42	3:DA:2803:G:H1	1.66	0.43
3:DA:2826:A:C2'	3:DA:2827:C:H5'	2.47	0.43
3:DA:2867:G:O2'	3:DA:2868:A:P	2.77	0.43
4:CA:310:A:C5	4:CA:330:A:C6	3.07	0.43
4:CA:487:C:H2'	4:CA:488:G:H5'	2.00	0.43
4:CA:579:G:C2	4:CA:1262:A:C2	3.06	0.43
4:CA:585:G:C2	4:CA:1256:G:C6	3.07	0.43
4:CA:874:G:N3	4:CA:904:G:N2	2.66	0.43
4:CA:902:C:N4	69:CA:3601:HOH:O	2.52	0.43
4:CA:1203:U:C5'	36:CM:3:LEU:HD23	2.48	0.43
4:CA:1215:G:H2'	4:CA:1216:G:O4'	2.16	0.43
4:CA:1218:G:C2'	4:CA:1219:U:H5'	2.49	0.43
4:CA:1218:G:C5	4:CA:1232:G:C6	3.07	0.43
4:CA:1262:A:H2'	4:CA:1262:A:N3	2.33	0.43
4:CA:1286:A:N1	4:CA:1329:U:C5	2.87	0.43
4:CA:1439:A:C2	4:CA:1553:A:C4	3.07	0.43
4:CA:1439:A:C8	4:CA:1440:U:C6	3.07	0.43
4:CA:1563:U:O2'	4:CA:1564:C:H5'	2.19	0.43
4:CA:1847:A:O2'	4:CA:1848:A:P	2.76	0.43
4:CA:2054:A:OP1	4:CA:2055:C:O2'	2.32	0.43
4:CA:2061:G:C4	4:CA:2063:C:N4	2.86	0.43
4:CA:2301:C:H42	4:CA:2315:G:H1	1.65	0.43
4:CA:2351:G:O6	54:C4:42:HIS:HE1	2.02	0.43
4:CA:2364:C:OP1	47:CX:53:ARG:HD3	2.19	0.43
4:CA:2365:G:O2'	4:CA:2366:A:C8	2.69	0.43
4:CA:2478:A:OP1	55:C5:13:ARG:NH1	2.50	0.43
4:CA:2591:C:H42	4:CA:2603:G:H1	1.65	0.43
4:CA:2847:U:O4	4:CA:2848:G:C6	2.71	0.43
8:AD:150:LYS:O	8:AD:151:LYS:CG	2.65	0.43
14:AJ:42:LEU:HG	14:AJ:43:PRO:HD2	2.00	0.43
14:AJ:63:ASP:HB3	14:AJ:65:TYR:CE1	2.53	0.43
17:AM:3:ARG:HA	17:AM:9:ILE:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AN:72:GLY:O	18:AN:80:SER:HA	2.19	0.43
6:BB:66:LYS:HD2	6:BB:159:ASP:OD2	2.18	0.43
6:BB:130:THR:HG22	6:BB:131:LYS:N	2.33	0.43
8:BD:50:ASP:O	8:BD:54:GLN:HG3	2.19	0.43
9:BE:141:ILE:O	9:BE:143:GLY:N	2.51	0.43
14:BJ:6:ILE:HB	14:BJ:76:ILE:O	2.18	0.43
21:BQ:58:VAL:HB	21:BQ:79:VAL:O	2.18	0.43
29:CE:181:ILE:HG22	36:CM:3:LEU:HD13	2.01	0.43
30:CF:39:VAL:HG13	30:CF:40:GLY:N	2.34	0.43
30:CF:72:SER:O	30:CF:73:VAL:CG1	2.67	0.43
33:CJ:18:ASN:ND2	33:CJ:34:ILE:O	2.51	0.43
33:CJ:64:ARG:NH1	33:CJ:65:SER:OG	2.52	0.43
36:CM:91:ASP:H	36:CM:94:THR:HG22	1.83	0.43
39:CP:59:ALA:HA	39:CP:62:LEU:HD12	2.00	0.43
41:CR:82:LEU:HD22	41:CR:87:VAL:HG11	1.99	0.43
56:DD:46:ARG:NH2	56:DD:88:GLU:O	2.52	0.43
30:DF:39:VAL:HG21	30:DF:49:LEU:HD12	2.01	0.43
30:DF:145:VAL:O	30:DF:145:VAL:HG23	2.18	0.43
34:DK:93:ILE:HA	34:DK:97:PRO:HB3	2.01	0.43
44:DU:33:LYS:HG3	44:DU:80:TRP:CE3	2.53	0.43
44:DU:49:LYS:HD3	44:DU:49:LYS:N	2.34	0.43
1:AA:66:A:C2'	1:AA:67:C:H5'	2.47	0.43
1:AA:450:G:H2'	1:AA:451:A:OP1	2.19	0.43
1:AA:616:G:C2	1:AA:617:G:C8	3.07	0.43
1:AA:696:A:H3'	1:AA:696:A:C8	2.54	0.43
1:AA:751:U:H1'	19:AO:23:GLY:O	2.19	0.43
1:AA:1057:G:C8	1:AA:1058:G:C8	3.07	0.43
1:AA:1075:U:O2'	1:AA:1076:U:H5'	2.18	0.43
1:AA:1157:A:N7	1:AA:1180:A:N6	2.66	0.43
1:AA:1266:G:N2	1:AA:1270:G:C4	2.87	0.43
1:AA:1342:C:H4'	13:AI:127:PHE:O	2.18	0.43
1:AA:1370:G:C2	1:AA:1371:G:N7	2.86	0.43
1:AA:1404:C:C2'	1:AA:1519:MA6:O2'	2.67	0.43
2:BA:246:A:C4	2:BA:279:A:C6	3.07	0.43
2:BA:255:G:C2	2:BA:272:C:N3	2.87	0.43
2:BA:299:G:H2'	2:BA:300:A:O5'	2.18	0.43
2:BA:437:U:H4'	8:BD:152:GLN:NE2	2.34	0.43
2:BA:474:G:C2	2:BA:475:C:C2	3.06	0.43
2:BA:694:A:H2'	2:BA:695:A:O5'	2.18	0.43
2:BA:739:C:H2'	2:BA:740:U:C5'	2.48	0.43
2:BA:1077:G:N2	2:BA:1080:A:OP2	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:167:A:H2'	3:DA:168:G:O4'	2.18	0.43
3:DA:301:G:OP2	45:DV:81:ARG:NH1	2.51	0.43
3:DA:441:U:OP1	69:DA:3550:HOH:O	2.21	0.43
3:DA:572:A:N1	3:DA:2033:A:C2	2.85	0.43
3:DA:693:A:C8	3:DA:694:U:C5	3.07	0.43
3:DA:1091:G:O2'	3:DA:1092:C:H5'	2.18	0.43
3:DA:1314:C:O2	3:DA:1314:C:H2'	2.19	0.43
3:DA:2131:U:H5'	3:DA:2132:U:O5'	2.17	0.43
3:DA:2141:G:H2'	3:DA:2142:A:C8	2.54	0.43
3:DA:2232:C:C4	3:DA:2233:U:C5	3.06	0.43
3:DA:2478:A:OP2	69:DA:3552:HOH:O	2.21	0.43
4:CA:45:G:H5"	4:CA:46:G:H5'	2.00	0.43
4:CA:53:A:N3	4:CA:179:C:H4'	2.34	0.43
4:CA:185:G:H22	4:CA:212:G:H1'	1.83	0.43
4:CA:214:G:C2'	4:CA:216:A:O2'	2.66	0.43
4:CA:323:C:N3	4:CA:333:G:C8	2.86	0.43
4:CA:673:C:H4'	29:CE:75:SER:OG	2.18	0.43
4:CA:927:A:H2'	4:CA:928:A:C8	2.53	0.43
4:CA:1059:G:N2	4:CA:1080:A:H1'	2.34	0.43
4:CA:1127:A:C2'	4:CA:1128:G:H5"	2.48	0.43
4:CA:1527:G:N3	4:CA:1546:G:N2	2.66	0.43
4:CA:1597:A:O3'	4:CA:1598:A:H8	2.02	0.43
4:CA:1608:A:C5	4:CA:1611:C:C4	3.07	0.43
4:CA:2091:C:H3'	4:CA:2092:U:H5"	2.01	0.43
4:CA:2632:A:H61	4:CA:2786:U:H3	1.66	0.43
4:CA:2673:G:N1	4:CA:2674:G:C5	2.86	0.43
4:CA:2764:A:C2	4:CA:2766:A:C8	3.07	0.43
10:AF:3:HIS:CD2	10:AF:94:HIS:HA	2.54	0.43
11:AG:90:GLU:N	11:AG:90:GLU:OE2	2.52	0.43
13:AI:83:ILE:O	13:AI:87:LEU:HD13	2.19	0.43
14:AJ:100:ILE:O	14:AJ:101:SER:C	2.60	0.43
17:AM:29:ARG:O	17:AM:33:ILE:HG12	2.19	0.43
23:AS:66:MET:HG2	23:AS:66:MET:O	2.17	0.43
24:AT:78:ASN:ND2	69:AT:103:HOH:O	2.43	0.43
11:BG:69:VAL:HG21	11:BG:104:ILE:HD11	2.01	0.43
11:BG:79:ARG:HD3	11:BG:84:THR:OG1	2.19	0.43
11:BG:136:LYS:HD2	11:BG:136:LYS:O	2.17	0.43
13:BI:129:LYS:N	13:BI:129:LYS:HD2	2.33	0.43
14:BJ:67:ILE:HD11	18:BN:96:LEU:HD12	2.01	0.43
26:BL:71:GLY:O	26:BL:99:ARG:NH1	2.48	0.43
18:BN:33:VAL:O	18:BN:34:ASN:OD1	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BP:78:VAL:O	20:BP:79:ASN:CB	2.66	0.43
23:BS:13:LEU:HD22	23:BS:16:LEU:HD23	2.00	0.43
27:CC:129:LEU:HD23	27:CC:129:LEU:N	2.33	0.43
30:CF:56:LEU:HD23	30:CF:56:LEU:HA	1.90	0.43
32:CH:25:TYR:CE2	32:CH:30:LEU:HD11	2.54	0.43
53:C3:17:GLY:O	53:C3:20:ALA:HB3	2.18	0.43
36:DM:109:LYS:HG2	36:DM:126:ARG:CB	2.49	0.43
37:DN:46:ILE:HA	37:DN:103:TYR:OH	2.19	0.43
38:DO:106:ASP:N	38:DO:106:ASP:OD1	2.50	0.43
42:DS:82:HIS:CG	42:DS:82:HIS:O	2.71	0.43
46:DW:10:LYS:H	46:DW:10:LYS:CE	2.31	0.43
48:DY:2:ARG:CD	48:DY:29:LEU:HD13	2.49	0.43
48:DY:16:ASN:O	48:DY:23:ALA:HA	2.18	0.43
50:D0:9:THR:HG22	50:D0:53:MET:O	2.18	0.43
55:D5:18:GLN:O	55:D5:19:ILE:HB	2.19	0.43
1:AA:71:A:H3'	1:AA:71:A:OP2	2.18	0.43
1:AA:109:A:C8	1:AA:326:G:H2'	2.54	0.43
1:AA:109:A:H3'	1:AA:110:C:H5'	2.01	0.43
1:AA:148:G:N2	1:AA:175:C:O2	2.51	0.43
1:AA:502:A:H2'	1:AA:503:C:C6	2.53	0.43
1:AA:735:C:C2'	1:AA:736:C:H5'	2.48	0.43
1:AA:787:A:C4	1:AA:788:U:C6	3.06	0.43
1:AA:899:C:O5'	1:AA:899:C:H6	2.02	0.43
1:AA:938:A:H5"	69:AA:1860:HOH:O	2.19	0.43
1:AA:1055:A:C4	1:AA:1206:G:C2	3.06	0.43
1:AA:1114:C:O2	18:AN:100:SER:OG	2.34	0.43
1:AA:1486:G:H5'	69:AA:1736:HOH:O	2.18	0.43
2:BA:223:A:C6	2:BA:224:U:C4	3.06	0.43
2:BA:252:U:H5'	2:BA:253:A:OP2	2.19	0.43
2:BA:268:U:H2'	2:BA:269:C:H6	1.82	0.43
2:BA:328:C:O2	2:BA:328:C:C2'	2.66	0.43
2:BA:466:A:C2	2:BA:468:A:N7	2.86	0.43
2:BA:549:C:O5'	2:BA:549:C:H6	2.02	0.43
2:BA:632:U:H3'	2:BA:633:G:H5'	2.00	0.43
2:BA:793:U:O2	2:BA:1516:G:H4'	2.19	0.43
2:BA:932:C:C2'	2:BA:933:G:O5'	2.66	0.43
2:BA:1054:C:H4'	2:BA:1055:A:C5'	2.49	0.43
2:BA:1151:A:H4'	2:BA:1151:A:OP1	2.18	0.43
2:BA:1298:U:H3	11:BG:114:LYS:HA	1.84	0.43
2:BA:1467:C:H1'	69:BA:1803:HOH:O	2.17	0.43
3:DA:15:G:C6	3:DA:16:C:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:64:A:H2'	3:DA:65:U:H6	1.83	0.43
3:DA:199:A:C6	3:DA:2434:A:C6	3.07	0.43
3:DA:573:U:O3'	3:DA:574:A:H3'	2.18	0.43
3:DA:920:A:C2	3:DA:921:C:C2	3.06	0.43
3:DA:1001:A:H2'	3:DA:1002:G:H5'	1.99	0.43
3:DA:1244:A:OP1	36:DM:7:SER:CB	2.67	0.43
3:DA:1299:G:O2'	3:DA:1301:A:C5	2.71	0.43
3:DA:1372:U:O2'	3:DA:1373:A:H5'	2.17	0.43
3:DA:1494:A:HO2'	3:DA:1495:A:P	2.42	0.43
3:DA:1541:C:H2'	3:DA:1542:U:O4'	2.19	0.43
3:DA:1564:C:C2	3:DA:1565:C:C5	3.06	0.43
3:DA:1835:2MG:HM22	3:DA:1836:C:C2	2.50	0.43
3:DA:2392:A:H1'	3:DA:2429[A]:G:O6	2.17	0.43
4:CA:85:G:OP1	45:CV:6:ARG:HB2	2.18	0.43
4:CA:271:G:C2	4:CA:272:A:C5	3.07	0.43
4:CA:321:U:P	29:CE:130:LYS:HD3	2.59	0.43
4:CA:410:G:H2'	4:CA:2407:A:N7	2.34	0.43
4:CA:449:A:H2'	4:CA:450:G:H5'	2.01	0.43
4:CA:607:U:O2'	69:CA:3413:HOH:O	2.21	0.43
4:CA:1392:A:C6	4:CA:1393:A:N1	2.87	0.43
4:CA:1865:U:C5	4:CA:1875:G:C2	3.06	0.43
4:CA:2067:G:C6	4:CA:2444:G:C6	3.07	0.43
4:CA:2120:G:O6	4:CA:2178:C:N3	2.51	0.43
4:CA:2628:C:H3'	4:CA:2629:U:C5'	2.49	0.43
4:CA:2684:U:P	40:CQ:50:ARG:NH2	2.92	0.43
4:CA:2716:C:H2'	4:CA:2717:C:C6	2.54	0.43
4:CA:2752:C:C5	4:CA:2753:A:N7	2.86	0.43
6:AB:186:ILE:HD11	6:AB:204:ASP:CA	2.48	0.43
7:AC:75:ILE:CG2	7:AC:76:VAL:N	2.82	0.43
8:AD:107:PHE:CD1	8:AD:145:ILE:HD11	2.54	0.43
8:AD:174:ASP:OD2	8:AD:177:LYS:HG2	2.18	0.43
9:AE:85:VAL:HG22	9:AE:86:LYS:N	2.33	0.43
11:AG:76:LYS:HE2	11:AG:76:LYS:HB2	1.93	0.43
23:AS:29:LYS:CB	23:AS:30:PRO:CD	2.97	0.43
25:AU:12:PHE:HB3	25:AU:13:ASP:H	1.56	0.43
6:BB:96:TRP:CH2	6:BB:175:GLU:CD	2.97	0.43
6:BB:193:PRO:HG2	6:BB:194:ASP:H	1.83	0.43
7:BC:141:ALA:O	7:BC:146:ALA:CB	2.67	0.43
9:BE:102:GLY:C	9:BE:104:GLY:N	2.75	0.43
12:BH:29:SER:OG	12:BH:30:SER:N	2.52	0.43
12:BH:86:TYR:CE1	12:BH:124:GLU:HB2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BI:87:LEU:C	13:BI:89:GLU:H	2.26	0.43
14:BJ:19:ASP:C	14:BJ:21:ALA:N	2.76	0.43
26:BL:34:CYS:O	26:BL:76:GLU:O	2.36	0.43
17:BM:81:MET:C	17:BM:83:LEU:H	2.27	0.43
29:CE:28:VAL:O	29:CE:32:VAL:HG23	2.19	0.43
32:CH:72:ILE:HG23	32:CH:141:VAL:HG22	2.00	0.43
38:CO:10:LEU:HD13	38:CO:40:LYS:HG2	2.00	0.43
45:CV:38:ILE:HG22	45:CV:38:ILE:O	2.18	0.43
49:CZ:7:ARG:HG2	49:CZ:56:LEU:HD13	2.01	0.43
29:DE:111:GLU:O	29:DE:112:LEU:C	2.62	0.43
35:DL:65:THR:HA	35:DL:82:ASN:OD1	2.19	0.43
39:DP:19:GLN:CG	63:DP:202:PUT:H22	2.41	0.43
40:DQ:52:ARG:O	40:DQ:53:GLY:C	2.59	0.43
1:AA:156:C:H1'	69:AA:1735:HOH:O	2.18	0.43
1:AA:190:A:N7	1:AA:191:G:C4	2.86	0.43
1:AA:268:U:H2'	1:AA:269:C:H6	1.84	0.43
1:AA:350:G:O2'	1:AA:351:G:H5'	2.19	0.43
1:AA:452:A:N6	1:AA:480:U:H3	2.17	0.43
1:AA:651:C:O2'	1:AA:652:U:H5'	2.19	0.43
1:AA:1007:U:N3	1:AA:1022:A:H2	2.17	0.43
1:AA:1059:C:N3	1:AA:1060:U:C5	2.87	0.43
1:AA:1091:U:O2	1:AA:1095:U:C2	2.71	0.43
1:AA:1199:U:H4'	14:AJ:56:HIS:ND1	2.33	0.43
1:AA:1261:A:N7	1:AA:1274:A:C2	2.87	0.43
1:AA:1405:G:H21	1:AA:1518:MA6:H1'	1.84	0.43
2:BA:211:G:H2'	2:BA:211:G:N3	2.33	0.43
2:BA:311:C:O2	2:BA:311:C:H2'	2.19	0.43
2:BA:449:G:H2'	2:BA:450:G:C8	2.54	0.43
2:BA:531:U:O3'	2:BA:532:A:C4'	2.67	0.43
2:BA:675:A:C6	2:BA:676:A:C5	3.07	0.43
2:BA:708:C:C4	2:BA:709:U:C5	3.07	0.43
2:BA:757:U:H2'	2:BA:758:C:O5'	2.19	0.43
2:BA:862:C:H2'	2:BA:863:U:O4'	2.18	0.43
2:BA:1061:G:C4	2:BA:1197:A:C2	3.07	0.43
2:BA:1081:A:H5'	9:BE:23:LYS:HG3	2.01	0.43
2:BA:1093:A:C2	2:BA:1095:U:C4'	3.01	0.43
2:BA:1115:U:O4'	18:BN:101:TRP:HA	2.19	0.43
2:BA:1119:C:P	13:BI:11:ARG:HH12	2.41	0.43
2:BA:1392:G:C2'	2:BA:1393:U:H5'	2.49	0.43
3:DA:137:U:H2'	3:DA:140:C:C2	2.53	0.43
3:DA:204:A:P	69:DA:3238:HOH:O	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:278:A:C2	3:DA:362:A:C8	3.07	0.43
3:DA:289:G:C2	3:DA:352:A:C2	3.07	0.43
3:DA:380:G:H2'	3:DA:381:G:O4'	2.18	0.43
3:DA:544:C:N4	3:DA:548:G:OP1	2.44	0.43
3:DA:614:A:H8	3:DA:614:A:OP2	2.01	0.43
3:DA:1208:C:C4	3:DA:1209:U:C5	3.07	0.43
3:DA:1565:C:C2	3:DA:1567:G:C8	3.06	0.43
3:DA:1586:A:C6	3:DA:1587:G:C4	3.06	0.43
3:DA:1849:G:H2'	3:DA:1850:G:H8	1.83	0.43
3:DA:1897:G:C2	3:DA:1898:U:C2	3.06	0.43
3:DA:2172:U:OP2	3:DA:2174:C:C5	2.72	0.43
3:DA:2516:A:C2	3:DA:2569:G:N3	2.87	0.43
3:DA:2517:C:C6	3:DA:2542:A:C5	3.06	0.43
3:DA:2781:A:H62	63:DA:3054:PUT:H12	1.84	0.43
4:CA:24:G:O2'	43:CT:102:HIS:HD2	2.02	0.43
4:CA:39:G:C6	4:CA:40:U:C4	3.07	0.43
4:CA:50:U:H3'	4:CA:51:G:C8	2.54	0.43
4:CA:215:G:H4'	4:CA:216:A:OP1	2.19	0.43
4:CA:238:C:C2	4:CA:239:C:C6	3.06	0.43
4:CA:647:G:C2'	4:CA:648:G:O5'	2.67	0.43
4:CA:668:A:H3'	4:CA:669:G:C5'	2.47	0.43
4:CA:847:U:O2	4:CA:934:U:O2	2.37	0.43
4:CA:1207:C:N3	4:CA:1208:C:C5	2.87	0.43
4:CA:1408:G:O2'	4:CA:1409:U:H5'	2.19	0.43
4:CA:1523:U:H3'	4:CA:1524:G:H8	1.83	0.43
4:CA:1657:U:OP2	28:CD:141:ARG:HD2	2.19	0.43
4:CA:1838:C:C6	4:CA:1899:A:C6	3.07	0.43
4:CA:1935:G:H1'	4:CA:1964:G:N2	2.34	0.43
4:CA:2355:G:O3'	47:CX:22:LYS:NZ	2.50	0.43
4:CA:2523:G:C4	4:CA:2765:A:N6	2.87	0.43
4:CA:2785:C:C5	4:CA:2786:U:C5	3.06	0.43
4:CA:2833:U:O2'	4:CA:2834:G:H5'	2.19	0.43
6:AB:67:ILE:O	6:AB:68:LEU:HB3	2.18	0.43
6:AB:111:ILE:HG21	6:AB:152:LYS:O	2.18	0.43
6:AB:151:ILE:HD11	6:AB:154:MET:SD	2.59	0.43
7:AC:129:MET:HE2	7:AC:129:MET:HB2	1.98	0.43
8:AD:130:VAL:CG1	8:AD:131:ASN:N	2.81	0.43
10:AF:88:MET:SD	10:AF:90:MET:HE2	2.59	0.43
15:AK:38:GLN:CD	15:AK:38:GLN:H	2.26	0.43
20:AP:20:VAL:HG23	20:AP:35:ARG:HA	1.99	0.43
20:AP:30:GLY:O	20:AP:31:ARG:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AP:44:SER:OG	20:AP:46:LYS:HD2	2.18	0.43
25:AU:4:ILE:HG22	25:AU:5:LYS:HG2	2.00	0.43
25:AU:12:PHE:CD2	25:AU:15:ALA:HB2	2.54	0.43
6:BB:15:HIS:O	6:BB:16:PHE:C	2.61	0.43
6:BB:101:LEU:C	6:BB:103:ASN:H	2.27	0.43
7:BC:7:PRO:HG2	7:BC:184:TYR:CB	2.49	0.43
9:BE:90:THR:HG22	9:BE:91:GLY:N	2.34	0.43
14:BJ:81:GLU:HA	14:BJ:84:VAL:HG12	2.00	0.43
17:BM:45:ILE:O	17:BM:48:LEU:HB2	2.18	0.43
21:BQ:60:GLU:O	21:BQ:76:VAL:HG22	2.19	0.43
28:CD:114:LYS:HD3	28:CD:196:ALA:HB2	2.00	0.43
30:CF:72:SER:O	30:CF:73:VAL:HG13	2.18	0.43
32:CH:71:LYS:HB3	32:CH:108:VAL:CG2	2.49	0.43
33:CJ:7:TYR:CD1	33:CJ:7:TYR:O	2.72	0.43
33:CJ:49:GLU:OE1	33:CJ:52:LEU:HD22	2.19	0.43
34:CK:59:ALA:O	34:CK:62:VAL:HG12	2.18	0.43
42:CS:61:ALA:HB2	42:CS:98:ILE:HD13	2.01	0.43
44:CU:8:LEU:HD13	49:CZ:22:LEU:O	2.18	0.43
48:CY:26:ARG:C	48:CY:27:ARG:HG3	2.44	0.43
29:DE:90:GLN:HG3	29:DE:92:HIS:NE2	2.33	0.43
32:DH:85:GLY:HA2	32:DH:91:PHE:CE2	2.54	0.43
36:DM:85:VAL:HB	36:DM:94:THR:HG23	2.00	0.43
39:DP:35:ILE:HG21	39:DP:71:ALA:HA	2.00	0.43
41:DR:5:ARG:HG2	69:DR:329:HOH:O	2.19	0.43
51:D1:1:ALA:HA	69:D1:207:HOH:O	2.18	0.43
52:D2:13:SER:HB3	52:D2:47:ILE:HG23	2.01	0.43
1:AA:127:G:N2	1:AA:235:C:C2	2.87	0.43
1:AA:168:G:H8	1:AA:168:G:H5"	1.82	0.43
1:AA:207:C:H3'	1:AA:207:C:H6	1.82	0.43
1:AA:322:C:H5	1:AA:328:C:C5	2.37	0.43
1:AA:408:A:H2'	1:AA:409:U:H6	1.84	0.43
1:AA:712:A:H2'	1:AA:713:G:O4'	2.18	0.43
1:AA:1065:U:H5	1:AA:1190:G:C8	2.36	0.43
1:AA:1180:A:H8	1:AA:1180:A:O5'	2.02	0.43
1:AA:1181:G:H1'	1:AA:1182:G:C5	2.54	0.43
1:AA:1421:G:H3'	69:AA:1770:HOH:O	2.19	0.43
69:AA:1923:HOH:O	25:AU:40:LYS:HE2	2.19	0.43
2:BA:15:G:O4'	9:BE:29:ARG:NE	2.45	0.43
2:BA:333:U:C2'	2:BA:334:C:H5'	2.49	0.43
2:BA:403:C:H2'	2:BA:404:G:O5'	2.19	0.43
2:BA:518:C:H2'	2:BA:530:G:N7	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:751:U:H4'	19:BO:24:SER:HA	2.01	0.43
2:BA:759:A:N7	2:BA:760:G:C8	2.87	0.43
2:BA:780:A:C2	2:BA:803:G:C6	3.07	0.43
2:BA:1090:U:C2	2:BA:1091:U:C5	3.06	0.43
2:BA:1095:U:C2	2:BA:1096:C:C6	3.07	0.43
2:BA:1483:A:H1'	4:CA:1948:G:H1'	1.99	0.43
3:DA:84:A:H62	3:DA:101:A:H2	1.67	0.43
3:DA:560:C:O2	41:DR:47:ARG:NH1	2.45	0.43
3:DA:1904:G:C4	3:DA:1905:C:H6	2.37	0.43
3:DA:2674:G:H4'	35:DL:30:ARG:HD2	2.01	0.43
4:CA:2:G:H2'	4:CA:3:U:O4'	2.18	0.43
4:CA:26:G:C6	4:CA:27:G:N1	2.86	0.43
4:CA:42:A:C6	4:CA:438:G:N1	2.86	0.43
4:CA:179:C:N3	4:CA:180:G:C5	2.87	0.43
4:CA:241:A:H4'	4:CA:242:G:OP1	2.19	0.43
4:CA:405:U:H4'	4:CA:406:G:OP2	2.19	0.43
4:CA:498:G:C2	4:CA:499:U:C6	3.07	0.43
4:CA:526:A:C6	4:CA:2626:C:H4'	2.54	0.43
4:CA:631:A:C2	36:CM:66:PHE:HE2	2.36	0.43
4:CA:632:A:H4'	36:CM:68:SER:HB2	2.01	0.43
4:CA:786:C:H4'	4:CA:1780:A:N7	2.34	0.43
4:CA:851:C:H2'	4:CA:852:U:C6	2.54	0.43
4:CA:1138:G:O2'	34:CK:104:ALA:O	2.35	0.43
4:CA:1199:U:C6	4:CA:1199:U:OP2	2.72	0.43
4:CA:1272:A:OP1	4:CA:1647:U:OP1	2.37	0.43
4:CA:1824:G:OP2	27:CC:52:HIS:CE1	2.72	0.43
4:CA:1865:U:C4	4:CA:1875:G:C4	3.07	0.43
4:CA:1932:A:C2	4:CA:1933:G:H1'	2.54	0.43
4:CA:2018:G:H2'	4:CA:2019:A:O4'	2.19	0.43
4:CA:2477:U:O4	55:C5:9:THR:HG22	2.18	0.43
4:CA:2579:C:H2'	4:CA:2580:U:O4'	2.18	0.43
4:CA:2635:A:H8	4:CA:2635:A:O5'	2.02	0.43
4:CA:2772:C:H2'	4:CA:2773:C:H6	1.84	0.43
4:CA:2841:C:P	38:CO:53:THR:HG21	2.59	0.43
4:CA:2867:G:HO2'	4:CA:2868:A:P	2.38	0.43
5:DB:33:G:O2'	5:DB:34:A:H5'	2.18	0.43
14:AJ:56:HIS:C	14:AJ:57:VAL:CG1	2.91	0.43
17:AM:6:GLY:C	17:AM:8:ASN:N	2.73	0.43
8:BD:12:SER:HB3	8:BD:17:THR:O	2.19	0.43
8:BD:148:LYS:HD3	8:BD:148:LYS:N	2.32	0.43
9:BE:133:PRO:O	9:BE:137:VAL:HG12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:CC:63:ILE:O	27:CC:102:TYR:HB2	2.19	0.43
28:CD:81:GLU:C	28:CD:82:PHE:CD2	2.96	0.43
28:CD:137:SER:CB	69:CD:302:HOH:O	2.67	0.43
33:CJ:14:ALA:HB3	33:CJ:50:LYS:C	2.44	0.43
45:CV:17:ASP:HB2	45:CV:20:LYS:HG3	1.99	0.43
48:CY:71:ARG:HG3	48:CY:72:ALA:N	2.33	0.43
54:C4:31:ILE:O	54:C4:31:ILE:HG22	2.19	0.43
30:DF:135:ILE:CD1	30:DF:142:TYR:CD1	3.02	0.43
33:DJ:33:ASN:CB	33:DJ:36:GLU:HG3	2.49	0.43
38:DO:55:ALA:HA	38:DO:80:PHE:CE2	2.53	0.43
41:DR:30:VAL:HA	69:DR:301:HOH:O	2.19	0.43
42:DS:51:VAL:N	42:DS:52:PRO:C	2.76	0.43
44:DU:3:ARG:HE	44:DU:3:ARG:HB3	1.70	0.43
46:DW:51:GLN:HB2	46:DW:57:TYR:OH	2.18	0.43
47:DX:49:VAL:HG21	47:DX:79:SER:HA	2.01	0.43
48:DY:17:ARG:CZ	48:DY:23:ALA:HB2	2.49	0.43
49:DZ:46:VAL:O	49:DZ:47:ARG:C	2.61	0.43
1:AA:131:A:C2	1:AA:132:C:C5	3.07	0.43
1:AA:345:C:O2'	35:DL:116:ILE:HD13	2.19	0.43
1:AA:369:G:C2	1:AA:370:C:C5	3.07	0.43
1:AA:684:U:C5	1:AA:685:G:C5	3.06	0.43
1:AA:696:A:H1'	1:AA:786:G:O2'	2.18	0.43
1:AA:736:C:H2'	1:AA:737:C:H6	1.84	0.43
1:AA:764:C:H2'	1:AA:765:G:O4'	2.18	0.43
1:AA:1059:C:C4	1:AA:1060:U:C5	3.07	0.43
1:AA:1118:U:C2	1:AA:1179:A:C2	3.07	0.43
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.53	0.43
1:AA:1403:C:H6	1:AA:1403:C:O5'	2.02	0.43
2:BA:64:G:C2	2:BA:67:C:C4	3.07	0.43
2:BA:74:A:H2'	2:BA:75:G:O4'	2.19	0.43
2:BA:583:A:C2	2:BA:759:A:C5	3.07	0.43
2:BA:726:C:H42	2:BA:731:G:H1	1.64	0.43
2:BA:745:G:H2'	2:BA:746:A:C8	2.54	0.43
2:BA:833:G:H2'	2:BA:834:U:O5'	2.19	0.43
2:BA:881:G:C5	2:BA:882:C:C5	3.06	0.43
2:BA:937:A:C2	2:BA:1379:G:O6	2.71	0.43
2:BA:1229:A:C2	2:BA:1230:C:C4	3.07	0.43
3:DA:571:U:OP1	42:DS:80:ARG:NH2	2.51	0.43
3:DA:1084:A:H2'	3:DA:1085:A:C8	2.54	0.43
3:DA:1101:U:H2'	3:DA:1102:C:H6	1.84	0.43
3:DA:1430:G:H2'	3:DA:1431:A:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1576:U:C2	3:DA:1577:C:C5	3.07	0.43
3:DA:1854:A:C2'	3:DA:1855:U:H5'	2.49	0.43
3:DA:2006:C:O5'	3:DA:2006:C:C6	2.69	0.43
3:DA:2375:G:H1'	69:DA:4019:HOH:O	2.19	0.43
3:DA:2414:G:H2'	3:DA:2415:G:H5'	1.99	0.43
3:DA:2491:U:H2'	3:DA:2491:U:O5'	2.19	0.43
4:CA:76:C:O2'	49:CZ:52:ARG:HA	2.19	0.43
4:CA:277:G:C2	4:CA:360:U:O4	2.72	0.43
4:CA:336:C:C4	4:CA:337:C:C5	3.07	0.43
4:CA:638:G:H2'	4:CA:639:U:O4'	2.19	0.43
4:CA:694:U:H2'	4:CA:695:G:O4'	2.19	0.43
4:CA:749:A:C6	4:CA:750:A:N7	2.87	0.43
4:CA:827:U:H5'	4:CA:828:U:O5'	2.19	0.43
4:CA:1187:G:H5"	42:CS:83:TYR:CZ	2.54	0.43
4:CA:1352:U:C5	4:CA:1377:G:C6	3.06	0.43
4:CA:1366:A:H2'	4:CA:1367:A:H8	1.84	0.43
4:CA:1673:G:C2'	4:CA:1674:G:H5'	2.49	0.43
4:CA:1789:A:OP1	27:CC:219:VAL:HA	2.18	0.43
4:CA:1885:A:O5'	4:CA:1885:A:H8	2.02	0.43
4:CA:2016:U:C4	4:CA:2017:U:C4	3.07	0.43
4:CA:2050:C:N4	4:CA:2051:A:C6	2.87	0.43
4:CA:2084:C:C2'	4:CA:2085:U:O5'	2.66	0.43
4:CA:2204:G:C5	4:CA:2221:G:C2	3.07	0.43
4:CA:2321:U:H3'	4:CA:2322:A:H5'	2.01	0.43
4:CA:2523:G:O2'	4:CA:2524:G:H5'	2.19	0.43
6:AB:100:MET:O	6:AB:104:TRP:HB2	2.19	0.43
14:AJ:65:TYR:CB	18:AN:96:LEU:HD11	2.49	0.43
14:AJ:91:ASP:OD1	14:AJ:91:ASP:N	2.43	0.43
8:BD:149:ALA:O	8:BD:150:LYS:C	2.62	0.43
13:BI:21:ILE:HA	13:BI:62:ASP:O	2.19	0.43
15:BK:60:PRO:N	15:BK:91:PRO:HB2	2.34	0.43
20:BP:11:ALA:O	20:BP:12:LYS:C	2.62	0.43
28:CD:150:GLN:C	28:CD:151:THR:O	2.62	0.43
29:CE:191:ASP:O	29:CE:195:GLN:HG3	2.19	0.43
30:CF:60:SER:C	30:CF:62:GLN:N	2.76	0.43
33:CJ:46:ASP:OD1	33:CJ:50:LYS:HD2	2.18	0.43
44:CU:3:ARG:HG2	44:CU:5:GLU:CD	2.44	0.43
50:C0:4:ILE:HG22	50:C0:39:ASP:HB2	2.00	0.43
55:C5:3:VAL:HG23	55:C5:4:LEU:H	1.84	0.43
27:DC:30:ALA:HB3	27:DC:31:PRO:HD3	2.00	0.43
31:DG:152:ARG:HD2	69:DG:204:HOH:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DL:87:LEU:HD23	35:DL:94:PRO:HA	2.01	0.43
36:DM:57:LEU:HD11	36:DM:61:LEU:HD11	2.01	0.43
45:DV:40:LEU:CD2	45:DV:61:GLU:HG3	2.49	0.43
1:AA:75:G:C5	1:AA:76:G:C8	3.07	0.42
1:AA:119:A:N7	1:AA:240:G:C6	2.86	0.42
1:AA:259:G:OP1	24:AT:36:TYR:OH	2.31	0.42
1:AA:685:G:O4'	15:AK:41:ALA:HB3	2.19	0.42
1:AA:697:U:O4'	1:AA:786:G:H4'	2.19	0.42
1:AA:832:G:C2	1:AA:855:U:C2	3.07	0.42
1:AA:1309:G:C6	1:AA:1329:A:C6	3.07	0.42
1:AA:1381:U:C5	1:AA:1382:C:C5	3.06	0.42
2:BA:37:U:P	69:BA:1755:HOH:O	2.76	0.42
2:BA:629:A:H8	2:BA:629:A:O5'	2.02	0.42
2:BA:678:U:N3	2:BA:713:G:N2	2.67	0.42
2:BA:822:U:H2'	2:BA:823:C:H6	1.84	0.42
2:BA:897:C:H2'	2:BA:898:G:H8	1.84	0.42
2:BA:996:A:H2'	2:BA:997:U:C6	2.54	0.42
2:BA:1003:G:H1	2:BA:1037:C:H42	1.66	0.42
2:BA:1163:A:H1'	69:BA:1711:HOH:O	2.19	0.42
2:BA:1219:A:C5	2:BA:1220:G:N7	2.87	0.42
2:BA:1377:A:H2'	2:BA:1378:C:OP2	2.19	0.42
3:DA:103:A:H2'	3:DA:104:A:O4'	2.19	0.42
3:DA:987:C:H2'	3:DA:988:A:O4'	2.19	0.42
3:DA:1319:C:H3'	69:DA:6294:HOH:O	2.18	0.42
3:DA:1735:A:C5	3:DA:1736:U:C6	3.07	0.42
3:DA:1754:A:C6	3:DA:1755:A:C6	3.06	0.42
3:DA:2045:C:O2	51:D1:18:HIS:NE2	2.45	0.42
3:DA:2142:A:H2	3:DA:2150:C:O2	2.02	0.42
3:DA:2221:G:H2'	3:DA:2222:C:H5'	2.00	0.42
3:DA:2502:G:H5'	3:DA:2503:2MA:C5'	2.49	0.42
3:DA:2636:C:H4'	56:DD:81:GLU:CD	2.44	0.42
4:CA:124:G:N7	53:C3:19:ARG:NH1	2.67	0.42
4:CA:243:U:P	54:C4:7:ARG:NH2	2.92	0.42
4:CA:299:A:H2'	4:CA:319:G:O2'	2.19	0.42
4:CA:442:G:N2	4:CA:444:C:C2	2.86	0.42
4:CA:517:C:O2'	43:CT:18:ARG:NH2	2.51	0.42
4:CA:907:G:O2'	4:CA:908:C:H5'	2.18	0.42
4:CA:942:G:H2'	4:CA:943:A:H5'	2.01	0.42
4:CA:1071:G:O2'	4:CA:1072:C:C5'	2.67	0.42
4:CA:1142:A:C2	4:CA:1144:A:C6	3.07	0.42
4:CA:1340:U:C5	4:CA:1603:A:C8	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1723:G:C2'	4:CA:1724:G:H5'	2.49	0.42
4:CA:1973:G:H2'	4:CA:1974:C:C6	2.54	0.42
4:CA:2009:A:H2'	4:CA:2010:G:H8	1.84	0.42
4:CA:2091:C:H5"	4:CA:2092:U:H5"	2.01	0.42
4:CA:2098:U:H2'	4:CA:2099:U:C6	2.53	0.42
4:CA:2111:U:C2	4:CA:2145:C:O2	2.72	0.42
4:CA:2278:A:N7	47:CX:10:ASN:ND2	2.62	0.42
4:CA:2635:A:C6	4:CA:2636:C:C5	3.07	0.42
4:CA:2820:A:C8	28:CD:196:ALA:HB1	2.54	0.42
4:CA:2840:C:OP1	38:CO:50:PRO:HA	2.19	0.42
5:DB:101:A:H2'	5:DB:102:G:O4'	2.19	0.42
6:AB:80:VAL:O	6:AB:82:ASP:OD2	2.36	0.42
6:AB:82:ASP:CG	6:AB:84:ALA:H	2.27	0.42
8:AD:58:LYS:HG3	8:AD:59:GLN:N	2.34	0.42
9:AE:14:LYS:HG3	9:AE:113:ALA:HB1	2.01	0.42
12:AH:113:ASP:O	12:AH:117:ARG:HB2	2.19	0.42
24:AT:6:SER:C	24:AT:8:LYS:H	2.26	0.42
7:BC:39:VAL:O	7:BC:43:LEU:HB2	2.19	0.42
8:BD:206:LYS:O	8:BD:206:LYS:CG	2.67	0.42
9:BE:81:LEU:O	9:BE:98:PRO:HB3	2.18	0.42
9:BE:98:PRO:O	9:BE:99:ALA:HB3	2.19	0.42
11:BG:131:LYS:HA	69:BG:201:HOH:O	2.18	0.42
13:BI:90:TYR:O	13:BI:91:ASP:HB3	2.19	0.42
17:BM:89:LEU:O	17:BM:93:ARG:HG3	2.18	0.42
27:CC:209:ALA:HA	27:CC:212:TRP:NE1	2.34	0.42
28:CD:60:VAL:O	28:CD:60:VAL:CG1	2.66	0.42
30:CF:59:ILE:HG12	30:CF:137:PHE:CG	2.54	0.42
33:CJ:18:ASN:OD1	33:CJ:34:ILE:HG22	2.19	0.42
36:CM:64:PHE:CD1	36:CM:64:PHE:C	2.97	0.42
39:CP:49:VAL:HG21	39:CP:82:ALA:HA	2.00	0.42
43:CT:1:MET:HB3	43:CT:109:ASP:OD1	2.19	0.42
43:CT:43:ALA:O	43:CT:47:VAL:HG12	2.18	0.42
50:C0:5:LYS:HE2	50:C0:57:GLU:OE2	2.18	0.42
50:C0:10:ARG:NE	69:C0:101:HOH:O	2.44	0.42
52:C2:12:SER:HB2	52:C2:48:TYR:CZ	2.54	0.42
56:DD:56:LYS:O	56:DD:60:VAL:HG23	2.19	0.42
56:DD:207:VAL:O	56:DD:207:VAL:CG2	2.67	0.42
29:DE:104:ALA:O	29:DE:105:LEU:C	2.60	0.42
31:DG:154:GLU:CD	31:DG:157:LYS:H	2.27	0.42
32:DH:6:LEU:O	32:DH:15:LEU:HD13	2.19	0.42
32:DH:90:LEU:HD11	32:DH:145:VAL:CG1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DM:117:THR:HG22	36:DM:117:THR:O	2.18	0.42
38:DO:92:GLY:HA2	38:DO:94:TYR:CZ	2.54	0.42
49:DZ:14:LEU:HB3	49:DZ:57:LEU:CD1	2.49	0.42
57:D7:4:ASN:C	57:D7:5:ILE:HG23	2.44	0.42
1:AA:189:A:H8	1:AA:189:A:O5'	2.02	0.42
1:AA:397:A:C6	1:AA:548:G:C5	3.07	0.42
1:AA:515:G:C2	1:AA:537:G:C2	3.07	0.42
1:AA:563:A:H2'	1:AA:567:G:C8	2.54	0.42
1:AA:685:G:H5'	15:AK:41:ALA:O	2.19	0.42
1:AA:723:U:H4'	1:AA:724:G:O5'	2.18	0.42
1:AA:874:G:C5	1:AA:875:U:C5	3.07	0.42
1:AA:919:A:H2'	1:AA:920:U:H5'	2.00	0.42
1:AA:927:G:C6	1:AA:1391:U:C2	3.07	0.42
1:AA:1053:G:C6	1:AA:1199:U:O2	2.72	0.42
1:AA:1423:G:P	35:DL:49:ARG:NH2	2.92	0.42
1:AA:1452:C:H4'	1:AA:1453:G:H5"	2.01	0.42
2:BA:6:G:H2'	9:BE:124:LEU:CD2	2.50	0.42
2:BA:76:G:N2	2:BA:95:C:C4	2.87	0.42
2:BA:186:C:N4	2:BA:187:G:O6	2.52	0.42
2:BA:418:C:H5'	69:BA:1914:HOH:O	2.17	0.42
2:BA:687:A:N1	2:BA:704:A:C5	2.87	0.42
2:BA:689:C:H2'	2:BA:690:G:O4'	2.18	0.42
2:BA:1012:A:N1	2:BA:1017:U:O4	2.52	0.42
2:BA:1074:G:O2'	6:BB:102:THR:HG23	2.18	0.42
2:BA:1152:A:C6	2:BA:1153:G:C5	3.08	0.42
2:BA:1169:A:C6	2:BA:1170:A:C6	3.07	0.42
2:BA:1323:G:O2'	2:BA:1324:A:O4'	2.27	0.42
3:DA:302:C:C2'	3:DA:303:G:O5'	2.68	0.42
3:DA:329:G:O4'	3:DA:477:A:H1'	2.19	0.42
3:DA:532:A:C5	69:DA:5198:HOH:O	2.72	0.42
3:DA:615:U:O2	29:DE:35:TYR:HA	2.19	0.42
3:DA:672:C:C2	3:DA:809:G:N2	2.87	0.42
3:DA:847:U:C2'	3:DA:848:C:H5'	2.48	0.42
3:DA:1025:G:N2	3:DA:1139:G:O6	2.49	0.42
3:DA:1059:G:H5"	3:DA:1060:U:H2'	2.02	0.42
3:DA:1068:G:N2	3:DA:1096:A:P	2.92	0.42
3:DA:1163:G:N3	69:DA:3803:HOH:O	2.36	0.42
3:DA:1228:G:C2'	3:DA:1229:C:H5'	2.49	0.42
3:DA:1385:A:C6	3:DA:1403:A:C5	3.07	0.42
3:DA:1672:A:P	69:DA:3480:HOH:O	2.76	0.42
3:DA:1678:A:H2'	3:DA:1679:A:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1832:C:N4	3:DA:1833:C:C5	2.87	0.42
3:DA:2130:U:H5'	3:DA:2131:U:OP1	2.19	0.42
3:DA:2134:A:C2	3:DA:2158:A:N3	2.87	0.42
3:DA:2140:G:C6	3:DA:2151:U:O2	2.72	0.42
3:DA:2159:G:H2'	3:DA:2160:C:C5	2.54	0.42
3:DA:2181:U:C5	3:DA:2182:U:C5	3.07	0.42
3:DA:2359:C:C2'	3:DA:2360:G:H5'	2.48	0.42
3:DA:2611:C:C2'	3:DA:2612:C:O5'	2.67	0.42
3:DA:2678:C:H1'	69:DA:4896:HOH:O	2.19	0.42
4:CA:122:G:OP1	4:CA:149:A:O2'	2.21	0.42
4:CA:523:C:O2'	4:CA:524:G:H5'	2.20	0.42
4:CA:535:G:H2'	4:CA:536:G:O4'	2.18	0.42
4:CA:570:G:C8	4:CA:2030:A:N7	2.88	0.42
4:CA:752:A:O2'	4:CA:753:A:P	2.77	0.42
4:CA:1365:A:C5	4:CA:1366:A:C5	3.06	0.42
4:CA:1478:G:N7	69:CA:3507:HOH:O	2.37	0.42
4:CA:1525:A:N6	4:CA:1546:G:N1	2.66	0.42
4:CA:1632:A:N1	4:CA:1633:G:N1	2.66	0.42
4:CA:1670:C:O2	28:CD:134:HIS:NE2	2.43	0.42
4:CA:1772:A:H2'	4:CA:1773:A:O3'	2.18	0.42
4:CA:1853:A:H1'	4:CA:2234:G:O4'	2.18	0.42
4:CA:1998:A:OP2	28:CD:141:ARG:NH2	2.51	0.42
4:CA:2322:A:H2'	4:CA:2323:G:O4'	2.19	0.42
4:CA:2345:G:H4'	4:CA:2346:A:C5'	2.49	0.42
4:CA:2636:C:H2'	4:CA:2637:U:H6	1.85	0.42
4:CA:2801:G:H2'	4:CA:2802:G:C8	2.55	0.42
5:DB:63:C:H2'	5:DB:64:G:O4'	2.19	0.42
6:AB:27:MET:HA	6:AB:27:MET:HE3	2.02	0.42
7:AC:84:VAL:CG1	7:AC:101:ILE:HG21	2.49	0.42
12:AH:83:LEU:C	12:AH:83:LEU:HD22	2.44	0.42
14:AJ:53:ILE:HD11	18:AN:85:ARG:NH2	2.34	0.42
17:AM:12:HIS:HA	17:AM:44:LYS:HE3	2.01	0.42
17:AM:12:HIS:H	17:AM:45:ILE:HD13	1.84	0.42
6:BB:154:MET:SD	6:BB:158:PRO:HG3	2.59	0.42
7:BC:66:VAL:HG12	7:BC:68:ILE:HG13	2.01	0.42
11:BG:69:VAL:HG12	11:BG:135:VAL:HA	1.99	0.42
13:BI:49:ARG:HG2	13:BI:52:LEU:HD11	2.01	0.42
13:BI:63:LEU:H	13:BI:63:LEU:CD2	2.32	0.42
13:BI:92:GLU:OE1	13:BI:92:GLU:HA	2.19	0.42
17:BM:8:ASN:CG	17:BM:10:PRO:HD3	2.44	0.42
19:BO:61:SER:O	19:BO:65:LYS:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BP:8:ARG:CZ	20:BP:15:PRO:HG3	2.49	0.42
24:BT:27:MET:HG3	24:BT:28:MET:N	2.33	0.42
27:CC:159:THR:HG22	27:CC:160:TYR:H	1.85	0.42
28:CD:30:GLU:OE1	28:CD:53:GLY:HA2	2.20	0.42
29:CE:175:ILE:CD1	29:CE:199:MET:HE1	2.49	0.42
33:CJ:27:LEU:C	33:CJ:27:LEU:HD12	2.43	0.42
35:CL:79:PHE:CD1	40:CQ:69:VAL:HG22	2.54	0.42
45:CV:97:SER:O	45:CV:98:ASN:CG	2.62	0.42
54:C4:51:LYS:HA	54:C4:54:LEU:HD12	2.01	0.42
27:DC:123:ILE:O	27:DC:123:ILE:HG22	2.19	0.42
29:DE:48:THR:C	29:DE:50:ALA:N	2.76	0.42
29:DE:48:THR:OG1	29:DE:50:ALA:HB3	2.19	0.42
30:DF:51:ASN:HB3	30:DF:146:ASP:OD1	2.19	0.42
31:DG:5:LYS:O	31:DG:7:PRO:HD3	2.19	0.42
32:DH:40:THR:C	32:DH:42:LYS:N	2.72	0.42
33:DJ:115:ASP:O	33:DJ:116:MET:CG	2.67	0.42
34:DK:114:LEU:HG	34:DK:118:MET:HE3	2.00	0.42
35:DL:113:MET:O	35:DL:116:ILE:HG13	2.19	0.42
41:DR:17:LEU:O	41:DR:20:ALA:N	2.43	0.42
46:DW:51:GLN:OE1	46:DW:57:TYR:OH	2.37	0.42
49:DZ:26:PHE:HD1	49:DZ:29:ARG:NH1	2.17	0.42
57:D7:61:LEU:HB3	57:D7:62:ARG:NH2	2.24	0.42
1:AA:22:G:C5	1:AA:23:C:C5	3.06	0.42
1:AA:51:A:C2	1:AA:353:A:N1	2.87	0.42
1:AA:105:G:H2'	1:AA:106:C:C6	2.54	0.42
1:AA:263:A:H2'	1:AA:264:C:C5	2.54	0.42
1:AA:510:A:H5"	1:AA:511:C:P	2.60	0.42
1:AA:654:G:O2'	1:AA:655:A:H5'	2.18	0.42
1:AA:980:C:N4	69:AA:1744:HOH:O	2.50	0.42
1:AA:1028:C:H3'	1:AA:1029:U:H5"	2.02	0.42
2:BA:72:A:C6	2:BA:73:C:N3	2.86	0.42
2:BA:136:C:O5'	2:BA:136:C:H6	2.02	0.42
2:BA:416:G:H2'	2:BA:417:G:O4'	2.20	0.42
2:BA:446:G:H2'	2:BA:447:G:H5'	2.01	0.42
2:BA:532:A:N1	7:BC:193:TYR:HD2	2.17	0.42
2:BA:672:U:H2'	2:BA:673:A:H8	1.84	0.42
2:BA:990:C:C4	2:BA:991:U:O4	2.73	0.42
2:BA:1092:A:H2'	2:BA:1093:A:C8	2.54	0.42
2:BA:1158:C:C2'	2:BA:1159:U:O5'	2.67	0.42
2:BA:1278:G:N3	2:BA:1278:G:H2'	2.34	0.42
2:BA:1321:U:C4	2:BA:1322:C:H5	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1513:A:H2'	2:BA:1514:G:H8	1.83	0.42
3:DA:178:G:C2'	3:DA:179:C:H5'	2.48	0.42
3:DA:520:G:C4	3:DA:521:U:C5	3.07	0.42
3:DA:532:A:H2'	3:DA:532:A:N3	2.33	0.42
3:DA:599:A:H2'	3:DA:600:G:O5'	2.19	0.42
3:DA:698:C:O2'	3:DA:734:A:N6	2.51	0.42
3:DA:956:G:OP1	69:DA:3258:HOH:O	2.21	0.42
3:DA:974:G:C6	3:DA:1186:G:C6	3.06	0.42
3:DA:1090:A:C2	3:DA:1091:G:C6	3.07	0.42
3:DA:1664:A:C2	3:DA:2726:A:C8	3.07	0.42
3:DA:1671:U:OP2	69:DA:3549:HOH:O	2.21	0.42
3:DA:1853:A:C6	3:DA:1854:A:N1	2.87	0.42
3:DA:1977:A:N3	69:DA:3801:HOH:O	2.36	0.42
3:DA:2071:A:H1'	69:DA:3767:HOH:O	2.19	0.42
3:DA:2107:G:C2	3:DA:2182:U:O2	2.72	0.42
3:DA:2140:G:H1'	3:DA:2152:G:N2	2.34	0.42
3:DA:2804:U:C2	3:DA:2805:C:C6	3.07	0.42
4:CA:77:G:P	49:CZ:52:ARG:HH21	2.42	0.42
4:CA:208:C:H2'	4:CA:209:C:H6	1.83	0.42
4:CA:219:A:N3	4:CA:234:U:O2'	2.52	0.42
4:CA:571:U:C4	4:CA:2030:A:C6	3.07	0.42
4:CA:728:G:O2'	4:CA:730:A:H5"	2.20	0.42
4:CA:769:U:C2	4:CA:770:G:C8	3.07	0.42
4:CA:1068:G:H2'	4:CA:1068:G:N3	2.34	0.42
4:CA:1275:A:H3'	4:CA:1645:G:O2'	2.18	0.42
4:CA:1606:C:H3'	4:CA:1606:C:H6	1.84	0.42
4:CA:1939:U:H5'	69:CA:3506:HOH:O	2.18	0.42
4:CA:2067:G:C5	4:CA:2444:G:C2	3.07	0.42
4:CA:2447:G:O6	4:CA:2504:U:O4	2.37	0.42
4:CA:2648:G:C2	4:CA:2649:C:C2	3.07	0.42
4:CA:2744:G:O2'	31:CG:145:ALA:HB2	2.20	0.42
5:DB:100:G:P	69:DB:317:HOH:O	2.77	0.42
6:AB:117:LEU:O	6:AB:120:GLN:HB3	2.19	0.42
6:AB:128:LYS:HG3	6:AB:129:LEU:H	1.83	0.42
11:AG:139:GLU:OE1	11:AG:139:GLU:HA	2.18	0.42
12:AH:105:SER:O	12:AH:123:GLY:HA3	2.19	0.42
16:AL:114:ARG:HB3	16:AL:119:VAL:HB	2.01	0.42
19:AO:17:ARG:HD3	19:AO:17:ARG:N	2.34	0.42
24:AT:54:MET:SD	24:AT:79:LEU:CD1	3.08	0.42
6:BB:56:GLU:HG3	6:BB:198:PHE:CZ	2.53	0.42
6:BB:66:LYS:NZ	6:BB:154:MET:O	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BB:138:THR:C	6:BB:140:GLU:H	2.27	0.42
9:BE:81:LEU:CD1	9:BE:81:LEU:N	2.82	0.42
10:BF:93:LYS:C	10:BF:94:HIS:CG	2.94	0.42
11:BG:144:MET:HA	11:BG:144:MET:HE3	2.01	0.42
17:BM:3:ARG:O	17:BM:4:ILE:HG13	2.19	0.42
18:BN:100:SER:O	18:BN:101:TRP:HB3	2.18	0.42
19:BO:88:ARG:C	19:BO:89:ARG:HG3	2.43	0.42
29:CE:75:SER:OG	29:CE:77:ILE:HG12	2.20	0.42
30:CF:15:LEU:HB2	30:CF:27:VAL:HG21	2.02	0.42
30:CF:82:TYR:HA	30:CF:83:PRO:HD3	1.95	0.42
31:CG:148:ARG:NH2	31:CG:166:GLU:OE2	2.52	0.42
32:CH:79:THR:CB	32:CH:144:ASN:HB2	2.49	0.42
32:CH:94:ILE:HB	32:CH:121:VAL:HG23	2.01	0.42
33:CJ:93:ASN:OD1	33:CJ:136:GLY:HA2	2.19	0.42
35:CL:119:ALA:HB1	35:CL:120:PRO:CD	2.50	0.42
51:C1:54:ILE:O	51:C1:55:ALA:HB2	2.20	0.42
29:DE:134:LEU:O	29:DE:135:ALA:C	2.62	0.42
33:DJ:54:ILE:HG21	33:DJ:70:THR:OG1	2.19	0.42
33:DJ:86:LYS:HD2	33:DJ:87:SER:N	2.33	0.42
34:DK:70:THR:OG1	34:DK:71:ASP:OD1	2.36	0.42
42:DS:40:MET:HG2	42:DS:41:ILE:N	2.35	0.42
42:DS:66:HIS:CE1	42:DS:94:THR:CG2	3.02	0.42
57:D7:31:THR:OG1	57:D7:32:ASP:N	2.51	0.42
1:AA:19:A:C4	1:AA:917:G:C2	3.07	0.42
1:AA:186:C:H2'	1:AA:187:G:O4'	2.19	0.42
1:AA:221:C:H2'	1:AA:222:C:H6	1.84	0.42
1:AA:376:G:OP1	20:AP:5:ARG:HB2	2.19	0.42
1:AA:844:G:C6	1:AA:846:G:H1'	2.55	0.42
1:AA:1033:G:C2	1:AA:1034:G:C5	3.08	0.42
1:AA:1392:G:C6	1:AA:1393:U:C4	3.07	0.42
1:AA:1405:G:H1'	1:AA:1519:MA6:C4'	2.50	0.42
1:AA:1451:U:H5'	1:AA:1452:C:H5	1.84	0.42
2:BA:11:G:O5'	2:BA:11:G:H8	2.03	0.42
2:BA:204:G:H2'	2:BA:205:A:C8	2.54	0.42
2:BA:282:A:C8	2:BA:283:U:C5	3.08	0.42
2:BA:391:G:C6	2:BA:392:C:C4	3.08	0.42
2:BA:640:A:H5"	69:BA:1875:HOH:O	2.20	0.42
2:BA:659:U:C2'	2:BA:660:C:H5'	2.50	0.42
2:BA:932:C:O2'	2:BA:933:G:O5'	2.37	0.42
2:BA:1026:G:O6	2:BA:1035:A:N6	2.50	0.42
2:BA:1055:A:C6	2:BA:1206:G:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1072:G:C6	2:BA:1073:U:C4	3.06	0.42
2:BA:1084:G:H2'	2:BA:1085:U:OP1	2.19	0.42
2:BA:1184:G:C2	2:BA:1185:G:C8	3.08	0.42
2:BA:1387:G:H2'	2:BA:1388:C:C6	2.50	0.42
2:BA:1530:G:H2'	2:BA:1531:A:C8	2.55	0.42
3:DA:118:A:N3	3:DA:178:G:H1'	2.34	0.42
3:DA:394:C:O2'	3:DA:395:U:H5'	2.20	0.42
3:DA:481:G:O2'	3:DA:507:A:N1	2.44	0.42
3:DA:691:C:O2'	3:DA:692:C:H5'	2.19	0.42
3:DA:858:G:O2'	3:DA:2268:A:O2'	2.29	0.42
3:DA:974:G:C4	3:DA:1186:G:C2	3.07	0.42
3:DA:1173:U:C2'	3:DA:1174:U:O5'	2.66	0.42
3:DA:1429:G:C2	3:DA:1430:G:C5	3.07	0.42
3:DA:1997:C:H1'	69:DA:3662:HOH:O	2.19	0.42
3:DA:2020:A:H5'	51:D1:8:THR:HG22	2.02	0.42
3:DA:2162:G:H5'	3:DA:2173:A:C8	2.54	0.42
3:DA:2212:A:H4'	3:DA:2213:U:OP1	2.19	0.42
3:DA:2287:A:OP1	52:D2:29:LYS:HE2	2.18	0.42
3:DA:2484:G:OP1	37:DN:44:ARG:HD3	2.19	0.42
3:DA:2574:G:C2'	3:DA:2575:C:H5'	2.50	0.42
3:DA:2819:G:H2'	3:DA:2821:A:N7	2.34	0.42
4:CA:125:A:H5"	53:C3:19:ARG:CD	2.49	0.42
4:CA:199:A:N6	4:CA:2433:A:H2'	2.34	0.42
4:CA:220:G:N3	4:CA:233:A:H2	2.17	0.42
4:CA:243:U:OP2	54:C4:7:ARG:CZ	2.67	0.42
4:CA:302:C:H2'	4:CA:303:G:O4'	2.19	0.42
4:CA:327:G:N2	4:CA:336:C:C2	2.87	0.42
4:CA:514:A:N3	4:CA:581:C:O2'	2.39	0.42
4:CA:627:A:O3'	4:CA:628:G:O4'	2.36	0.42
4:CA:635:C:C4	4:CA:636:G:N7	2.88	0.42
4:CA:694:U:H2'	4:CA:695:G:H5"	2.01	0.42
4:CA:769:U:N3	4:CA:770:G:N7	2.68	0.42
4:CA:1202:G:N1	4:CA:1244:A:C2	2.87	0.42
4:CA:1378:A:N3	4:CA:1380:G:C8	2.87	0.42
4:CA:1527:G:H21	4:CA:1545:A:H62	1.65	0.42
4:CA:1905:C:N4	4:CA:1930:G:C2	2.87	0.42
4:CA:1998:A:H2	4:CA:2686:G:HO2'	1.63	0.42
4:CA:2199:A:H1'	32:CH:28:ASN:ND2	2.34	0.42
4:CA:2232:C:OP2	48:CY:26:ARG:NH2	2.29	0.42
4:CA:2552:U:H6	4:CA:2552:U:O5'	2.03	0.42
4:CA:2684:U:C4'	35:CL:70:ARG:NH1	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2701:U:H3'	4:CA:2702:G:C5'	2.49	0.42
4:CA:2796:U:C4	4:CA:2798:U:C4	3.07	0.42
4:CA:2811:G:H2'	4:CA:2812:G:C8	2.54	0.42
6:AB:81:LYS:HA	6:AB:91:PHE:CE2	2.55	0.42
6:AB:128:LYS:HG3	6:AB:129:LEU:N	2.34	0.42
6:AB:149:GLY:C	6:AB:151:ILE:N	2.77	0.42
8:AD:145:ILE:HG23	8:AD:149:ALA:HB3	2.01	0.42
9:AE:52:LYS:HB2	9:AE:52:LYS:NZ	2.35	0.42
9:AE:81:LEU:HB3	9:AE:147:MET:CE	2.49	0.42
10:AF:3:HIS:HB2	10:AF:92:THR:O	2.20	0.42
12:AH:22:LYS:HE2	12:AH:22:LYS:HA	2.01	0.42
15:AK:86:VAL:HG11	15:AK:93:ARG:HG2	2.00	0.42
16:AL:90:LEU:HD23	16:AL:93:VAL:HG21	2.00	0.42
19:AO:32:LEU:O	19:AO:33:THR:C	2.62	0.42
20:AP:44:SER:C	20:AP:46:LYS:HD2	2.44	0.42
23:AS:20:GLU:HA	23:AS:20:GLU:OE2	2.18	0.42
6:BB:132:LYS:HG3	6:BB:136:MET:HB3	2.01	0.42
8:BD:4:TYR:O	8:BD:5:LEU:HB2	2.18	0.42
8:BD:37:ALA:O	8:BD:42:GLY:HA3	2.19	0.42
27:CC:32:LEU:C	27:CC:63:ILE:HD12	2.43	0.42
32:CH:4:ILE:HG22	32:CH:5:LEU:N	2.35	0.42
32:CH:27:ARG:HH22	32:CH:38:PRO:HG3	1.84	0.42
32:CH:31:VAL:C	32:CH:33:GLN:H	2.28	0.42
38:CO:43:GLU:OE1	38:CO:43:GLU:HA	2.18	0.42
45:CV:33:VAL:CG2	45:CV:64:ILE:O	2.68	0.42
31:DG:104:LEU:HB2	31:DG:112:VAL:HB	2.01	0.42
32:DH:2:GLN:HA	32:DH:20:ASN:HA	2.01	0.42
32:DH:86:ASP:C	32:DH:88:GLY:H	2.28	0.42
34:DK:69:ARG:CB	69:DK:313:HOH:O	2.66	0.42
38:DO:115:LEU:O	38:DO:118:ARG:HB2	2.19	0.42
40:DQ:109:ILE:HG13	40:DQ:109:ILE:O	2.19	0.42
42:DS:68:ARG:HD3	42:DS:92:TRP:CE2	2.55	0.42
1:AA:342:C:C2'	1:AA:343:U:H5'	2.49	0.42
1:AA:457:G:H3'	1:AA:458:U:H5"	2.01	0.42
1:AA:482:A:H2'	1:AA:483:C:O4'	2.19	0.42
1:AA:1015:G:N2	1:AA:1218:C:O2	2.53	0.42
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.20	0.42
1:AA:1304:G:N1	1:AA:1305:G:N2	2.67	0.42
1:AA:1476:A:C2'	1:AA:1477:U:O5'	2.67	0.42
2:BA:87:C:H2'	2:BA:88:U:C2	2.55	0.42
2:BA:213:G:C6	2:BA:214:C:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:449:G:H8	2:BA:449:G:O5'	2.02	0.42
2:BA:477:C:H2'	2:BA:478:A:C1'	2.50	0.42
2:BA:802:A:H2'	2:BA:803:G:O4'	2.19	0.42
2:BA:1048:G:C2	2:BA:1050:G:N7	2.87	0.42
2:BA:1073:U:C4	2:BA:1074:G:N7	2.88	0.42
2:BA:1082:A:C2'	2:BA:1083:U:H5'	2.49	0.42
2:BA:1309:G:O6	2:BA:1329:A:C6	2.72	0.42
3:DA:412:A:H2'	3:DA:413:C:H5'	2.01	0.42
3:DA:560:C:P	69:DA:3464:HOH:O	2.77	0.42
3:DA:668:A:H8	69:DA:6349:HOH:O	2.02	0.42
3:DA:872:U:H2'	3:DA:873:C:C6	2.55	0.42
3:DA:945:A:C5	3:DA:2448:A:C2	3.07	0.42
3:DA:1014:A:C6	3:DA:1015:U:C4	3.08	0.42
3:DA:1837:C:O2'	3:DA:1927:A:C2'	2.66	0.42
3:DA:1837:C:O2'	3:DA:1927:A:O2'	2.24	0.42
3:DA:1991:U:H2'	3:DA:1992:G:C5'	2.49	0.42
3:DA:2133:G:H2'	3:DA:2157:G:H1	1.83	0.42
3:DA:2142:A:C2	3:DA:2150:C:N3	2.87	0.42
3:DA:2185:U:C5	3:DA:2186:G:N7	2.88	0.42
3:DA:2825:G:C3'	3:DA:2826:A:H5'	2.49	0.42
4:CA:48:G:O4'	4:CA:52:A:O4'	2.38	0.42
4:CA:370:G:N7	69:CA:3503:HOH:O	2.36	0.42
4:CA:404:A:N3	4:CA:404:A:OP2	2.53	0.42
4:CA:438:G:C6	4:CA:439:A:C6	3.08	0.42
4:CA:453:A:N3	4:CA:457:A:O2'	2.53	0.42
4:CA:684:G:H4'	53:C3:16:HIS:CE1	2.54	0.42
4:CA:776:G:O2'	4:CA:2241:A:OP1	2.25	0.42
4:CA:974:G:O2'	4:CA:975:A:OP2	2.37	0.42
4:CA:1084:A:H2	4:CA:1106:G:H1'	1.84	0.42
4:CA:1140:C:H2'	4:CA:1141:U:H5'	2.00	0.42
4:CA:1259:G:H2'	4:CA:1260:A:O4'	2.19	0.42
4:CA:1338:G:O2'	4:CA:1393:A:N1	2.48	0.42
4:CA:1351:C:O2'	4:CA:1571:A:N3	2.41	0.42
4:CA:1553:A:N7	4:CA:1555:G:C6	2.88	0.42
4:CA:1627:G:C2	4:CA:1628:G:C8	3.07	0.42
4:CA:1829:A:O2'	27:CC:14:HIS:CD2	2.72	0.42
4:CA:2064:C:O3'	4:CA:2251:G:N2	2.52	0.42
4:CA:2240:U:H6	69:CA:3389:HOH:O	2.03	0.42
4:CA:2318:G:C6	4:CA:2319:G:C6	3.08	0.42
4:CA:2342:C:O2'	4:CA:2374:C:H5"	2.19	0.42
4:CA:2611:C:P	69:CA:3314:HOH:O	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2835:A:O4'	4:CA:2836:U:H5	2.01	0.42
4:CA:2880:C:O2	4:CA:2880:C:H2'	2.20	0.42
5:DB:90:C:H5"	5:DB:90:C:C6	2.39	0.42
5:CB:40:U:C2	5:CB:43:C:OP2	2.73	0.42
5:CB:75:G:H22	5:CB:102:G:H22	1.67	0.42
6:AB:120:GLN:O	6:AB:125:THR:O	2.38	0.42
6:AB:181:ILE:O	6:AB:183:VAL:HG23	2.19	0.42
13:AI:30:ILE:HB	13:AI:65:ILE:CD1	2.49	0.42
14:AJ:18:ILE:CG2	14:AJ:19:ASP:N	2.82	0.42
15:AK:25:ALA:HA	15:AK:30:THR:HG22	2.00	0.42
17:AM:85:CYS:O	17:AM:89:LEU:HG	2.19	0.42
19:AO:3:LEU:HD12	19:AO:3:LEU:HA	1.96	0.42
21:AQ:17:MET:CG	21:AQ:20:SER:O	2.67	0.42
7:BC:57:ILE:HA	7:BC:66:VAL:HA	2.01	0.42
7:BC:77:ILE:HD11	7:BC:103:ILE:CD1	2.50	0.42
8:BD:97:ARG:O	8:BD:101:VAL:HG23	2.19	0.42
9:BE:16:ILE:HD11	9:BE:38:VAL:HB	2.02	0.42
26:BL:28:PRO:HG2	26:BL:29:GLN:OE1	2.19	0.42
25:BU:16:LEU:O	25:BU:17:ARG:C	2.61	0.42
30:CF:100:GLU:C	30:CF:102:LEU:H	2.26	0.42
33:CJ:105:LEU:HD21	33:CJ:128:ILE:HB	2.01	0.42
35:CL:30:ARG:HG3	35:CL:30:ARG:HH11	1.85	0.42
40:CQ:88:ARG:O	40:CQ:111:GLU:HA	2.19	0.42
41:CR:97:ILE:C	41:CR:99:VAL:H	2.26	0.42
44:CU:61:LEU:O	44:CU:62:VAL:HG23	2.19	0.42
47:CX:29:VAL:HG21	47:CX:80:ILE:HD11	2.01	0.42
49:CZ:57:LEU:O	49:CZ:61:ALA:N	2.53	0.42
32:DH:71:LYS:O	32:DH:108:VAL:CG2	2.66	0.42
35:DL:88:ASN:ND2	35:DL:90:ASN:H	2.18	0.42
39:DP:99:TYR:N	69:DP:304:HOH:O	2.49	0.42
59:DT:202:PGE:H62	51:D1:23:ALA:H	1.83	0.42
44:DU:18:GLU:O	44:DU:22:THR:HG23	2.20	0.42
55:D5:18:GLN:O	55:D5:19:ILE:CB	2.66	0.42
1:AA:349:A:O2'	1:AA:350:G:H5'	2.19	0.42
1:AA:599:C:H4'	12:AH:122:GLY:C	2.45	0.42
1:AA:872:A:C5	1:AA:874:G:C8	3.07	0.42
1:AA:949:A:C5	1:AA:950:U:C5	3.08	0.42
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.42
1:AA:1402:4OC:HM22	1:AA:1403:C:C4'	2.48	0.42
2:BA:77:A:C6	2:BA:78:A:C6	3.08	0.42
2:BA:151:A:H2'	2:BA:152:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:173:U:OP1	2:BA:198:G:H4'	2.20	0.42
2:BA:191:G:OP2	2:BA:191:G:H8	2.01	0.42
2:BA:230:G:O5'	2:BA:230:G:H8	2.02	0.42
2:BA:406:G:C2	2:BA:407:U:C6	3.07	0.42
2:BA:679:C:C2	2:BA:712:A:C2	3.07	0.42
2:BA:716:A:C2'	2:BA:717:U:O5'	2.68	0.42
2:BA:980:C:O2	18:BN:59:ARG:O	2.38	0.42
2:BA:987:G:C5	2:BA:988:G:C5	3.08	0.42
69:BA:1833:HOH:O	20:BP:25:ARG:HA	2.19	0.42
3:DA:84:A:H4'	3:DA:85:G:O5'	2.19	0.42
3:DA:940:G:H3'	3:DA:941:A:H5"	2.01	0.42
3:DA:1054:A:C2	3:DA:1106:G:C6	3.08	0.42
3:DA:1206:G:C5	3:DA:1207:C:C5	3.07	0.42
3:DA:1222:U:O2	3:DA:1228:G:C2	2.73	0.42
3:DA:1283:G:N2	3:DA:1286:A:OP2	2.51	0.42
3:DA:1283:G:H22	3:DA:1286:A:P	2.42	0.42
3:DA:1288:G:C5	3:DA:1327:A:C2	3.08	0.42
3:DA:1583:A:N3	3:DA:1583:A:O4'	2.53	0.42
3:DA:1591:A:H2'	3:DA:1592:C:H6	1.84	0.42
3:DA:1728:C:H5"	3:DA:1729:U:OP2	2.19	0.42
3:DA:1797:G:C2'	3:DA:1798:U:O5'	2.67	0.42
3:DA:1857:G:N3	3:DA:1884:G:C2	2.87	0.42
3:DA:2021:C:H3'	3:DA:2022:U:C5'	2.49	0.42
3:DA:2223:G:OP1	27:DC:170:TYR:OH	2.24	0.42
3:DA:2371:G:O2'	52:D2:45:HIS:HD2	2.03	0.42
3:DA:2545:G:H2'	3:DA:2546:U:H5'	2.02	0.42
3:DA:2592:G:N2	69:DA:4056:HOH:O	2.48	0.42
3:DA:2897:U:O2'	3:DA:2898:U:H5'	2.19	0.42
4:CA:45:G:H1	4:CA:433:C:H42	1.67	0.42
4:CA:96:C:H2'	4:CA:97:C:C6	2.55	0.42
4:CA:122:G:C8	69:CA:3459:HOH:O	2.70	0.42
4:CA:123:G:C2	4:CA:129:C:N3	2.88	0.42
4:CA:187:G:O2'	4:CA:1365:A:C2	2.68	0.42
4:CA:513:A:N1	4:CA:514:A:C6	2.88	0.42
4:CA:856:G:N2	4:CA:922:C:C2	2.88	0.42
4:CA:1242:U:O2	36:CM:4:ASN:ND2	2.46	0.42
4:CA:1499:C:C2'	4:CA:1500:G:H5'	2.49	0.42
4:CA:1587:G:H2'	4:CA:1588:G:O4'	2.19	0.42
4:CA:1678:A:N7	4:CA:1679:A:N7	2.68	0.42
4:CA:1702:G:C6	4:CA:1703:G:N7	2.88	0.42
4:CA:1783:A:C2	4:CA:2588:G:O4'	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1877:A:H2'	4:CA:1878:G:C8	2.55	0.42
4:CA:1901:A:H2'	4:CA:1902:C:H5"	2.01	0.42
4:CA:1992:G:N1	4:CA:1995:U:O4	2.52	0.42
4:CA:2563:U:O2	4:CA:2565:A:H8	2.02	0.42
4:CA:2870:C:H5"	38:CO:65:LEU:CD2	2.49	0.42
5:CB:18:G:C6	5:CB:19:C:N4	2.88	0.42
6:AB:107:VAL:O	6:AB:111:ILE:CD1	2.68	0.42
6:AB:111:ILE:O	6:AB:114:LEU:N	2.52	0.42
8:AD:130:VAL:HG21	8:AD:135:TYR:CE1	2.54	0.42
9:AE:45:ARG:HA	9:AE:72:ILE:O	2.19	0.42
11:AG:4:ARG:HG3	11:AG:5:ARG:N	2.35	0.42
15:AK:16:VAL:HG23	15:AK:17:SER:H	1.84	0.42
21:AQ:47:HIS:CG	21:AQ:67:LEU:HD23	2.55	0.42
21:AQ:61:ILE:CG2	21:AQ:73:TRP:CE3	3.03	0.42
6:BB:132:LYS:HA	6:BB:136:MET:HB2	2.02	0.42
6:BB:134:ALA:O	6:BB:138:THR:HG23	2.20	0.42
8:BD:9:LEU:HD11	8:BD:28:ILE:HD11	2.01	0.42
8:BD:72:PHE:CE2	8:BD:200:ILE:HD11	2.54	0.42
12:BH:108:LYS:CB	69:BH:1402:HOH:O	2.67	0.42
14:BJ:15:HIS:HA	14:BJ:18:ILE:HG22	2.01	0.42
20:BP:76:LYS:HA	20:BP:76:LYS:HE2	2.01	0.42
22:BR:36:SER:HB3	25:BU:4:ILE:CD1	2.50	0.42
23:BS:31:LEU:O	23:BS:50:ALA:HB3	2.20	0.42
23:BS:45:ILE:CD1	23:BS:64:ASP:HA	2.50	0.42
24:BT:3:ASN:OD1	24:BT:4:ILE:N	2.53	0.42
27:CC:120:ASP:O	27:CC:121:ALA:C	2.62	0.42
27:CC:204:LEU:H	27:CC:204:LEU:HD22	1.84	0.42
34:CK:114:LEU:O	34:CK:118:MET:HG3	2.19	0.42
41:CR:60:TRP:HE3	41:CR:91:ARG:HG3	1.84	0.42
43:CT:75:PHE:CZ	43:CT:104:THR:HG21	2.55	0.42
45:CV:5:ARG:O	45:CV:6:ARG:C	2.62	0.42
51:C1:34:GLY:C	51:C1:35:GLU:HG3	2.44	0.42
29:DE:48:THR:HB	69:DE:402:HOH:O	2.20	0.42
36:DM:91:ASP:OD1	36:DM:91:ASP:N	2.53	0.42
42:DS:4:VAL:HA	42:DS:12:HIS:O	2.20	0.42
46:DW:2:PHE:HB3	46:DW:50:MET:CE	2.49	0.42
47:DX:12:ARG:HD3	69:DX:112:HOH:O	2.19	0.42
49:DZ:11:VAL:O	49:DZ:12:GLU:C	2.61	0.42
1:AA:409:U:P	8:AD:23:SER:HG	2.42	0.42
1:AA:749:A:H2	19:AO:22:THR:CG2	2.32	0.42
1:AA:1046:A:C2'	1:AA:1047:G:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1357:A:H5”	1:AA:1358:U:OP2	2.19	0.42
1:AA:1494:G:H2’	1:AA:1495:U:O5’	2.20	0.42
2:BA:40:C:H2’	2:BA:41:G:O4’	2.19	0.42
2:BA:154:U:C2	2:BA:168:G:N2	2.87	0.42
2:BA:366:A:H2	2:BA:394:G:O6	2.03	0.42
2:BA:421:U:H5’	2:BA:422:C:C6	2.55	0.42
2:BA:695:A:H2’	2:BA:696:A:C8	2.54	0.42
2:BA:820:U:H4’	2:BA:821:G:OP2	2.19	0.42
2:BA:951:G:H1	2:BA:1230:C:N4	2.18	0.42
2:BA:1095:U:O2	2:BA:1096:C:C6	2.73	0.42
2:BA:1095:U:N3	2:BA:1096:C:C5	2.88	0.42
2:BA:1112:C:C4	7:BC:178:LEU:HD23	2.55	0.42
2:BA:1271:A:H2’	69:BA:1901:HOH:O	2.19	0.42
2:BA:1352:C:O2	2:BA:1371:G:C2	2.73	0.42
2:BA:1408:A:N1	2:BA:1494:G:C5	2.88	0.42
3:DA:136:G:C2	3:DA:144:A:C2	3.08	0.42
3:DA:178:G:O3’	69:DA:3556:HOH:O	2.22	0.42
3:DA:613:A:H2’	3:DA:614:A:H5’	2.01	0.42
3:DA:693:A:N7	3:DA:694:U:C5	2.87	0.42
3:DA:744:U:H2’	3:DA:745:1MG:O4’	2.20	0.42
3:DA:878:A:H5’	3:DA:879:G:OP2	2.19	0.42
3:DA:929:U:H1’	50:D0:25:GLY:O	2.20	0.42
3:DA:1050:A:C2	3:DA:2751:G:C4	3.08	0.42
3:DA:1457:U:H5”	3:DA:1458:U:OP1	2.19	0.42
3:DA:1688:U:N3	3:DA:1698:A:C2	2.88	0.42
3:DA:1829:A:H2’	3:DA:1830:C:H5’	2.02	0.42
3:DA:1984:G:O2’	3:DA:1985:C:H5’	2.19	0.42
3:DA:2008:C:P	69:DA:3331:HOH:O	2.76	0.42
3:DA:2213:U:H4’	3:DA:2214:C:OP2	2.19	0.42
3:DA:2243:U:H2’	3:DA:2244:U:C6	2.55	0.42
3:DA:2446:G:N3	69:DA:3812:HOH:O	2.36	0.42
3:DA:2520:C:C6	3:DA:2567:G:H1’	2.55	0.42
3:DA:2590:A:C2	3:DA:2605:PSU:C4	3.08	0.42
3:DA:2686:G:C6	3:DA:2687:U:C4	3.08	0.42
3:DA:2707:U:OP2	69:DA:3548:HOH:O	2.21	0.42
3:DA:2747:G:H1	3:DA:2754:U:H2’	1.85	0.42
4:CA:85:G:OP2	45:CV:6:ARG:HG2	2.20	0.42
4:CA:118:A:C8	4:CA:119:A:C8	3.08	0.42
4:CA:307:G:N2	4:CA:310:A:C8	2.88	0.42
4:CA:380:G:H4’	48:CY:15:ASN:O	2.18	0.42
4:CA:415:A:O2’	4:CA:1865:U:H5”	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1324:G:O4'	4:CA:1616:A:N6	2.53	0.42
4:CA:1367:A:H2'	4:CA:1367:A:N3	2.34	0.42
4:CA:1383:A:C2'	4:CA:1384:A:O5'	2.68	0.42
4:CA:1562:U:H2'	4:CA:1563:U:O4'	2.20	0.42
4:CA:1783:A:C2	4:CA:2587:A:C4	3.07	0.42
4:CA:1838:C:H4'	4:CA:1839:G:C8	2.55	0.42
4:CA:1893:C:P	69:CA:3432:HOH:O	2.77	0.42
4:CA:2145:C:H4'	4:CA:2146:C:OP2	2.20	0.42
4:CA:2271:G:H2'	4:CA:2272:U:O4'	2.19	0.42
4:CA:2286:G:H4'	4:CA:2287:A:O4'	2.19	0.42
4:CA:2508:G:H2'	4:CA:2509:G:C8	2.54	0.42
4:CA:2571:U:N3	4:CA:2574:G:C8	2.88	0.42
4:CA:2574:G:H2'	4:CA:2574:G:N3	2.35	0.42
9:AE:23:LYS:O	9:AE:23:LYS:HG2	2.19	0.42
9:AE:150:PRO:O	9:AE:151:GLU:C	2.63	0.42
13:AI:39:PHE:C	13:AI:39:PHE:CD1	2.97	0.42
14:AJ:36:VAL:HA	14:AJ:75:ASP:O	2.19	0.42
17:AM:63:PHE:HA	69:AM:206:HOH:O	2.19	0.42
18:AN:42:TRP:O	18:AN:44:ALA:N	2.52	0.42
18:AN:52:PRO:O	18:AN:54:ASP:N	2.52	0.42
24:AT:29:ARG:O	24:AT:33:LYS:HG3	2.20	0.42
6:BB:85:LEU:O	6:BB:85:LEU:CG	2.67	0.42
6:BB:104:TRP:O	6:BB:108:ARG:N	2.45	0.42
7:BC:78:GLY:O	7:BC:79:LYS:C	2.63	0.42
9:BE:26:LYS:C	9:BE:26:LYS:CD	2.93	0.42
24:BT:67:ILE:O	24:BT:67:ILE:HG23	2.19	0.42
33:CJ:11:GLN:NE2	33:CJ:54:ILE:O	2.39	0.42
37:CN:74:THR:HG22	37:CN:88:ASN:C	2.45	0.42
40:CQ:28:LYS:HD3	40:CQ:39:LEU:HD23	2.01	0.42
44:CU:38:ALA:O	44:CU:39:THR:HB	2.20	0.42
48:CY:26:ARG:O	48:CY:27:ARG:HG3	2.19	0.42
51:C1:43:THR:HG23	51:C1:47:TYR:O	2.20	0.42
29:DE:149:ILE:HG23	29:DE:188:MET:HG2	2.01	0.42
30:DF:39:VAL:HG12	30:DF:40:GLY:N	2.35	0.42
31:DG:28:LYS:H	31:DG:28:LYS:HG3	1.62	0.42
37:DN:135:VAL:O	37:DN:136:MET:HB3	2.19	0.42
38:DO:37:THR:HG22	38:DO:110:MET:SD	2.59	0.42
41:DR:56:PHE:O	41:DR:59:LEU:N	2.52	0.42
43:DT:29:VAL:CG1	43:DT:55:ILE:HD11	2.49	0.42
1:AA:39:G:C2	1:AA:40:C:C6	3.08	0.42
1:AA:155:A:C2	1:AA:167:A:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:354:G:N2	1:AA:355:C:C2	2.88	0.42
1:AA:459:A:H2'	1:AA:460:A:C8	2.55	0.42
1:AA:547:A:P	69:AA:1816:HOH:O	2.78	0.42
1:AA:555:U:C4	1:AA:556:C:N4	2.88	0.42
1:AA:1389:C:H1'	69:AA:1877:HOH:O	2.19	0.42
2:BA:19:A:C2	2:BA:20:U:H1'	2.55	0.42
2:BA:68:G:H21	2:BA:152:A:H1'	1.85	0.42
2:BA:150:U:H2'	2:BA:151:A:H8	1.85	0.42
2:BA:200:G:N2	2:BA:218:U:C2	2.87	0.42
2:BA:610:U:C4	2:BA:611:C:C5	3.08	0.42
2:BA:690:G:C6	2:BA:691:G:C2	3.07	0.42
2:BA:1060:U:OP1	18:BN:85:ARG:NH2	2.52	0.42
2:BA:1089:G:C2	2:BA:1090:U:C2	3.08	0.42
2:BA:1097:C:H1'	2:BA:1170:A:H1'	2.01	0.42
2:BA:1107:C:C2	2:BA:1108:G:C8	3.07	0.42
2:BA:1118:U:OP1	69:BA:1744:HOH:O	2.21	0.42
2:BA:1315:U:C5	2:BA:1316:G:C6	3.08	0.42
2:BA:1480:A:C4	2:BA:1481:U:C6	3.07	0.42
3:DA:15:G:P	69:DA:3326:HOH:O	2.74	0.42
3:DA:74:A:N1	65:DA:3044:ACY:OXT	2.53	0.42
3:DA:247:G:H4'	3:DA:386:G:C5	2.55	0.42
3:DA:356:G:C2'	3:DA:357:C:H5'	2.50	0.42
3:DA:547:A:H3'	3:DA:548:G:C5'	2.50	0.42
3:DA:581:C:H6	3:DA:581:C:O5'	2.02	0.42
3:DA:855:G:H2'	3:DA:856:G:O5'	2.19	0.42
3:DA:1231:U:H1'	67:DA:3060:EDO:C2	2.48	0.42
3:DA:1255:U:OP2	3:DA:1255:U:O4'	2.38	0.42
3:DA:1400:U:H2'	3:DA:1401:G:H5'	1.99	0.42
3:DA:1444:G:H2'	3:DA:1445:G:H8	1.84	0.42
3:DA:1485:U:C5	3:DA:1486:U:C4	3.08	0.42
3:DA:1885:A:H2'	3:DA:1886:U:O4'	2.19	0.42
3:DA:1897:G:H2'	3:DA:1897:G:N3	2.34	0.42
3:DA:2079:U:C4	3:DA:2080:A:N7	2.88	0.42
3:DA:2102:G:C2'	3:DA:2103:C:H5'	2.49	0.42
3:DA:2159:G:H2'	3:DA:2160:C:C6	2.55	0.42
3:DA:2339:C:C2	3:DA:2340:A:C8	3.08	0.42
3:DA:2438:U:H3'	69:DA:3774:HOH:O	2.19	0.42
3:DA:2886:A:C6	51:D1:39:ARG:HD2	2.55	0.42
4:CA:572:A:H3'	4:CA:573:U:C4'	2.50	0.42
4:CA:600:G:C5'	29:CE:27:LEU:HD22	2.50	0.42
4:CA:811:U:O2	4:CA:1251:C:C6	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1336:A:H2'	4:CA:1337:G:C8	2.54	0.42
4:CA:1353:A:O2'	4:CA:1354:A:H5'	2.20	0.42
4:CA:1665:A:H2	35:CL:3:GLN:OE1	2.03	0.42
4:CA:1745:A:C4	4:CA:1746:A:C8	3.08	0.42
4:CA:1800:C:OP2	27:CC:262:THR:HG21	2.20	0.42
4:CA:2121:G:C6	4:CA:2122:U:C4	3.08	0.42
4:CA:2217:G:C4	4:CA:2218:G:C8	3.08	0.42
4:CA:2733:A:C6	69:CA:3446:HOH:O	2.71	0.42
4:CA:2854:G:N2	4:CA:2864:G:N3	2.68	0.42
9:AE:98:PRO:O	9:AE:99:ALA:O	2.37	0.42
10:AF:86:ARG:HH11	10:AF:86:ARG:CG	2.33	0.42
11:AG:50:LEU:HD11	11:AG:61:ALA:HB1	2.01	0.42
11:AG:134:ALA:O	11:AG:137:LYS:HB3	2.19	0.42
16:AL:43:LYS:O	16:AL:44:LYS:C	2.63	0.42
17:AM:33:ILE:HD11	17:AM:63:PHE:HE1	1.83	0.42
18:AN:65:ARG:CG	18:AN:65:ARG:HH11	2.32	0.42
6:BB:70:VAL:O	6:BB:164:ILE:HG22	2.19	0.42
6:BB:86:SER:O	6:BB:87:CYS:C	2.63	0.42
7:BC:173:VAL:HG12	7:BC:175:LEU:CD1	2.49	0.42
11:BG:25:LYS:O	11:BG:29:ILE:CD1	2.67	0.42
11:BG:138:ARG:NH2	11:BG:139:GLU:OE2	2.42	0.42
12:BH:78:VAL:O	12:BH:80:ARG:HG2	2.19	0.42
13:BI:49:ARG:HG2	13:BI:52:LEU:CD1	2.50	0.42
20:BP:30:GLY:O	20:BP:31:ARG:C	2.62	0.42
21:BQ:43:LYS:HE2	21:BQ:43:LYS:HB3	1.83	0.42
31:CG:95:ALA:O	31:CG:127:GLN:HA	2.20	0.42
32:CH:27:ARG:O	32:CH:28:ASN:OD1	2.37	0.42
33:CJ:74:PRO:HD2	33:CJ:77:VAL:HG21	2.02	0.42
38:CO:20:MET:HG3	38:CO:21:PHE:N	2.34	0.42
42:CS:12:HIS:CE1	42:CS:22:LEU:CD2	3.03	0.42
52:C2:3:GLY:C	52:C2:5:ARG:N	2.76	0.42
56:DD:193:VAL:N	69:DD:402:HOH:O	2.42	0.42
32:DH:132:GLN:HB3	32:DH:138:PHE:CE2	2.55	0.42
41:DR:46:TYR:C	41:DR:46:TYR:CD2	2.97	0.42
47:DX:73:LYS:HB2	47:DX:75:ARG:HG3	2.01	0.42
49:DZ:45:GLN:O	49:DZ:46:VAL:CG2	2.67	0.42
57:D7:58:THR:OG1	57:D7:59:GLY:N	2.52	0.42
1:AA:241:G:O2'	1:AA:242:G:H5'	2.20	0.42
1:AA:262:A:H2'	1:AA:263:A:C8	2.55	0.42
1:AA:538:G:OP2	16:AL:112:GLN:HB2	2.20	0.42
1:AA:715:A:H2'	1:AA:716:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:781:A:O2'	1:AA:1522:U:O2	2.36	0.42
1:AA:881:G:H2'	1:AA:882:C:O4'	2.19	0.42
1:AA:958:A:N6	1:AA:959:A:N1	2.68	0.42
1:AA:1126:U:O4'	1:AA:1281:C:C2	2.73	0.42
1:AA:1260:G:OP1	1:AA:1284:C:O2'	2.37	0.42
1:AA:1269:A:H2	1:AA:1312:G:N3	2.17	0.42
1:AA:1270:G:H5'	69:AA:1875:HOH:O	2.19	0.42
1:AA:1283:U:O2'	1:AA:1284:C:H5'	2.20	0.42
1:AA:1377:A:O2'	11:AG:2:PRO:HG2	2.20	0.42
1:AA:1381:U:O2'	11:AG:79:ARG:O	2.36	0.42
1:AA:1410:A:H2'	1:AA:1411:C:O4'	2.19	0.42
2:BA:146:G:C2	2:BA:177:G:C8	3.08	0.42
2:BA:234:C:O2'	2:BA:235:C:H5'	2.20	0.42
2:BA:437:U:C4	2:BA:438:U:C5	3.08	0.42
2:BA:684:U:O2'	2:BA:685:G:H5'	2.20	0.42
2:BA:688:G:C5	2:BA:700:G:C2	3.08	0.42
2:BA:1005:A:H2'	2:BA:1006:G:O4'	2.19	0.42
2:BA:1228:C:H4'	17:BM:115:PRO:OXT	2.20	0.42
2:BA:1346:A:O4'	2:BA:1348:U:C6	2.73	0.42
2:BA:1360:A:H2'	2:BA:1361:G:O4'	2.20	0.42
3:DA:200:U:H5"	69:DA:3687:HOH:O	2.19	0.42
3:DA:587:C:N4	69:DA:4154:HOH:O	2.52	0.42
3:DA:861:A:C2	3:DA:917:A:C4	3.08	0.42
3:DA:972:A:C6	3:DA:973:A:C6	3.08	0.42
3:DA:1161:C:O2'	42:DS:8:GLY:HA2	2.20	0.42
3:DA:1171:G:N2	3:DA:1179:G:C4	2.87	0.42
3:DA:1238:G:O2'	3:DA:1239:G:H5'	2.20	0.42
3:DA:1312:U:C5'	69:DA:4855:HOH:O	2.68	0.42
3:DA:1486:U:O2'	3:DA:1487:U:H5'	2.19	0.42
3:DA:1817:G:C2'	3:DA:1818:U:H5'	2.47	0.42
3:DA:1903:G:O2'	3:DA:1904:G:H5'	2.19	0.42
3:DA:2131:U:C2	3:DA:2158:A:N6	2.87	0.42
3:DA:2141:G:C2	3:DA:2151:U:H1'	2.55	0.42
3:DA:2392:A:C8	3:DA:2429[A]:G:C6	3.08	0.42
3:DA:2775:G:O6	69:DA:3501:HOH:O	2.18	0.42
4:CA:36:G:H4'	4:CA:451:U:C2	2.55	0.42
4:CA:109:C:H5'	4:CA:348:A:O4'	2.20	0.42
4:CA:244:A:H61	4:CA:254:G:H1'	1.84	0.42
4:CA:310:A:O2'	4:CA:311:A:P	2.78	0.42
4:CA:381:G:H2'	69:CA:3587:HOH:O	2.19	0.42
4:CA:822:G:O6	4:CA:943:A:C2	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1028:A:C2	4:CA:1029:A:C5	3.08	0.42
4:CA:1097:U:H2'	4:CA:1098:A:H5'	2.01	0.42
4:CA:1307:A:C2	4:CA:1308:A:C5	3.08	0.42
4:CA:1435:G:O2'	4:CA:1436:G:H5'	2.20	0.42
4:CA:1847:A:HO2'	4:CA:1848:A:P	2.43	0.42
4:CA:1984:G:C6	4:CA:1985:C:N4	2.87	0.42
4:CA:2111:U:O2	4:CA:2118:U:O2	2.38	0.42
4:CA:2267:A:H5"	4:CA:2268:A:H5'	2.02	0.42
4:CA:2447:G:H8	4:CA:2500:U:H3'	1.82	0.42
4:CA:2463:C:O2'	4:CA:2464:G:H5'	2.20	0.42
4:CA:2546:U:H4'	4:CA:2565:A:C6	2.55	0.42
4:CA:2787:C:H1'	28:CD:63:PRO:HG3	2.02	0.42
6:AB:15:HIS:CD2	6:AB:16:PHE:N	2.88	0.42
6:AB:200:ILE:O	6:AB:201:PRO:O	2.37	0.42
6:AB:213:TYR:HB2	69:AB:311:HOH:O	2.20	0.42
8:AD:9:LEU:CD1	8:AD:9:LEU:N	2.83	0.42
21:AQ:12:VAL:O	21:AQ:22:VAL:O	2.37	0.42
7:BC:53:SER:O	7:BC:54:ARG:HB2	2.20	0.42
8:BD:98:LEU:O	8:BD:99:ASP:C	2.63	0.42
8:BD:118:VAL:O	8:BD:131:ASN:ND2	2.51	0.42
9:BE:134:ILE:HD12	9:BE:134:ILE:H	1.84	0.42
10:BF:25:TYR:N	10:BF:25:TYR:CD1	2.86	0.42
10:BF:88:MET:SD	10:BF:90:MET:SD	3.18	0.42
13:BI:30:ILE:HA	13:BI:65:ILE:HG13	2.01	0.42
14:BJ:65:TYR:CG	18:BN:96:LEU:HD21	2.54	0.42
18:BN:14:ALA:C	18:BN:16:ALA:H	2.27	0.42
18:BN:35:ALA:HB2	18:BN:41:ARG:HG3	2.00	0.42
29:CE:79:ARG:O	29:CE:80:SER:HB2	2.19	0.42
29:CE:83:VAL:O	29:CE:83:VAL:HG12	2.20	0.42
31:CG:100:ASN:OD1	31:CG:115:GLN:NE2	2.51	0.42
32:CH:71:LYS:O	32:CH:108:VAL:HG21	2.19	0.42
38:CO:37:THR:HA	38:CO:110:MET:HA	2.02	0.42
42:CS:13:ARG:NH2	69:CS:205:HOH:O	2.51	0.42
42:CS:18:GLN:O	42:CS:19:THR:OG1	2.27	0.42
44:CU:2:ILE:O	44:CU:2:ILE:CG2	2.68	0.42
55:C5:19:ILE:HG12	55:C5:28:VAL:HG22	2.02	0.42
56:DD:77:ARG:NH2	56:DD:200:ASP:OD1	2.32	0.42
30:DF:24:VAL:O	30:DF:27:VAL:HG12	2.20	0.42
31:DG:34:ARG:HD3	31:DG:70:LEU:HD13	2.02	0.42
31:DG:120:ILE:HD11	31:DG:139:VAL:HG12	2.02	0.42
33:DJ:17:ALA:O	33:DJ:18:ASN:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DK:34:ARG:NE	69:DK:302:HOH:O	2.18	0.42
35:DL:4:GLU:O	35:DL:5:GLN:CB	2.63	0.42
35:DL:113:MET:O	35:DL:114:LYS:C	2.61	0.42
39:DP:1:MET:O	39:DP:1:MET:HG2	2.20	0.42
41:DR:25:GLY:O	41:DR:29:ARG:NH1	2.53	0.42
48:DY:73:ARG:CG	48:DY:75:GLU:HB2	2.50	0.42
54:D4:6:VAL:HB	54:D4:60:CYS:HB3	2.02	0.42
54:D4:28:LEU:HD12	54:D4:28:LEU:HA	1.90	0.42
1:AA:600:A:H2'	1:AA:601:G:H8	1.84	0.42
1:AA:659:U:H2'	1:AA:660:C:H6	1.85	0.42
1:AA:970:C:P	69:AA:1715:HOH:O	2.69	0.42
1:AA:1048:G:N3	1:AA:1050:G:N7	2.68	0.42
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.35	0.42
1:AA:1130:A:C4	1:AA:1146:A:C2	3.08	0.42
1:AA:1170:A:C8	1:AA:1171:A:C8	3.08	0.42
1:AA:1311:A:C2	1:AA:1327:C:C4	3.08	0.42
2:BA:32:A:C4	2:BA:33:A:N7	2.88	0.42
2:BA:38:G:C2'	69:BA:1724:HOH:O	2.63	0.42
2:BA:619:U:H3	8:BD:131:ASN:HB3	1.85	0.42
2:BA:667:G:N1	2:BA:740:U:C2	2.88	0.42
2:BA:861:G:O2'	2:BA:862:C:H5'	2.20	0.42
2:BA:931:C:C2	2:BA:932:C:C5	3.08	0.42
2:BA:959:A:C3'	2:BA:960:U:H4'	2.50	0.42
2:BA:1070:U:C2	2:BA:1071:C:C5	3.08	0.42
2:BA:1278:G:H4'	2:BA:1279:G:C4	2.55	0.42
2:BA:1409:C:H2'	2:BA:1410:A:C8	2.55	0.42
3:DA:391:A:H2'	3:DA:392:U:H5'	2.01	0.42
3:DA:527:C:P	69:DA:3884:HOH:O	2.78	0.42
3:DA:533:G:H2'	3:DA:534:U:C6	2.55	0.42
3:DA:570:G:H8	3:DA:570:G:O5'	2.03	0.42
3:DA:598:U:H2'	3:DA:599:A:C8	2.54	0.42
3:DA:864:G:O2'	3:DA:865:C:H5'	2.19	0.42
3:DA:1070:A:C6	33:DJ:9:LYS:O	2.73	0.42
3:DA:1085:A:N7	3:DA:1086:A:C6	2.88	0.42
3:DA:1105:U:H2'	3:DA:1106:G:H8	1.80	0.42
3:DA:1194:A:C2'	3:DA:1195:G:O5'	2.67	0.42
3:DA:1245:G:O2'	3:DA:1246:A:H5'	2.20	0.42
3:DA:1251:C:OP2	41:DR:5:ARG:HD2	2.20	0.42
3:DA:1270:C:H5"	3:DA:1271:G:O5'	2.20	0.42
3:DA:1305:C:O2	3:DA:1305:C:H2'	2.19	0.42
3:DA:1462:C:H2'	3:DA:1463:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1467:U:C4	3:DA:1468:U:C5	3.08	0.42
3:DA:1833:C:C2	3:DA:1834:U:C6	3.07	0.42
3:DA:1935:G:C6	3:DA:1962:5MC:C5	3.07	0.42
3:DA:1952:A:N3	3:DA:2560:A:O2'	2.50	0.42
3:DA:2191:A:C2	3:DA:2192:U:C2	3.08	0.42
3:DA:2247:A:H8	3:DA:2247:A:O5'	2.02	0.42
3:DA:2275:C:O2	37:DN:84:LYS:HD3	2.19	0.42
3:DA:2328:A:H2'	3:DA:2329:U:C6	2.55	0.42
3:DA:2388:A:C2'	3:DA:2389:G:H5'	2.50	0.42
3:DA:2504:PSU:P	69:DA:3512:HOH:O	2.77	0.42
3:DA:2614:A:H4'	69:DA:3349:HOH:O	2.19	0.42
3:DA:2663:G:C2'	3:DA:2664:G:H5'	2.49	0.42
3:DA:2684:U:C4	3:DA:2685:G:N7	2.88	0.42
67:DA:3059:EDO:C1	56:DD:167:ASN:OD1	2.68	0.42
4:CA:13:A:N1	4:CA:525:U:H2'	2.34	0.42
4:CA:90:U:C2	4:CA:91:A:N7	2.88	0.42
4:CA:236:C:HO2'	4:CA:431:U:HO2'	1.55	0.42
4:CA:511:U:H4'	4:CA:1235:G:H4'	2.01	0.42
4:CA:757:G:H2'	4:CA:758:C:H5'	2.01	0.42
4:CA:829:A:O2'	4:CA:2248:C:OP1	2.29	0.42
4:CA:836:G:O6	4:CA:943:A:C2	2.73	0.42
4:CA:846:U:O2'	4:CA:847:U:O5'	2.36	0.42
4:CA:1363:C:C2	4:CA:1369:G:N1	2.88	0.42
4:CA:1667:G:H8	4:CA:1667:G:O5'	2.02	0.42
4:CA:1709:U:C2	4:CA:1750:G:N2	2.88	0.42
4:CA:1885:A:O5'	4:CA:1885:A:C8	2.72	0.42
4:CA:2292:U:H2'	4:CA:2293:G:C8	2.55	0.42
4:CA:2755:C:O2'	4:CA:2756:U:H6	2.02	0.42
5:DB:11:C:O5'	5:DB:11:C:H6	2.03	0.42
5:DB:75:G:O4'	46:DW:29:ILE:HG13	2.20	0.42
6:AB:91:PHE:CE1	6:AB:150:GLY:CA	3.03	0.42
9:AE:52:LYS:HB2	9:AE:52:LYS:HZ2	1.85	0.42
11:AG:109:ARG:NH2	11:AG:119:ARG:NH1	2.68	0.42
12:AH:29:SER:HB2	12:AH:59:LEU:HB2	2.01	0.42
13:AI:23:PRO:HA	13:AI:61:LEU:CB	2.49	0.42
17:AM:62:LYS:HD2	17:AM:62:LYS:O	2.19	0.42
21:AQ:12:VAL:O	21:AQ:13:VAL:CB	2.68	0.42
6:BB:30:PHE:HE1	6:BB:49:MET:HE1	1.85	0.42
6:BB:54:LEU:HD22	6:BB:54:LEU:N	2.35	0.42
8:BD:65:TYR:CD2	8:BD:65:TYR:N	2.88	0.42
9:BE:23:LYS:O	9:BE:24:THR:O	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BK:23:ILE:HG21	15:BK:96:THR:HG21	2.01	0.42
19:BO:39:LEU:HG	19:BO:43:PHE:CE2	2.54	0.42
20:BP:61:VAL:HG22	20:BP:65:ALA:O	2.20	0.42
21:BQ:5:ILE:HB	21:BQ:6:ARG:H	1.65	0.42
27:CC:170:TYR:CD1	27:CC:184:GLU:HA	2.53	0.42
28:CD:108:ASP:OD2	28:CD:207:VAL:CG1	2.68	0.42
29:CE:67:ARG:CZ	69:CE:304:HOH:O	2.66	0.42
29:CE:132:LYS:C	29:CE:134:LEU:H	2.28	0.42
32:CH:65:ALA:HB1	32:CH:133:VAL:CG1	2.49	0.42
33:CJ:10:LEU:HD12	33:CJ:10:LEU:H	1.85	0.42
33:CJ:27:LEU:O	33:CJ:32:VAL:HB	2.20	0.42
34:CK:84:ILE:O	34:CK:84:ILE:HG23	2.19	0.42
35:CL:1:MET:N	35:CL:65:THR:HG21	2.35	0.42
38:CO:30:ARG:HD2	38:CO:31:HIS:CE1	2.54	0.42
38:CO:36:THR:HG23	38:CO:41:ALA:HB2	2.02	0.42
42:CS:71:LYS:HE3	42:CS:73:LYS:HE3	2.02	0.42
50:C0:6:ILE:HD11	50:C0:47:ILE:HD11	2.02	0.42
53:C3:46:LYS:OXT	53:C3:46:LYS:HG2	2.20	0.42
32:DH:2:GLN:C	32:DH:3:VAL:HG13	2.45	0.42
32:DH:5:LEU:CD1	32:DH:12:LEU:O	2.68	0.42
33:DJ:7:TYR:O	33:DJ:7:TYR:CD1	2.73	0.42
34:DK:16:TYR:HA	34:DK:138:GLN:O	2.20	0.42
37:DN:54:THR:O	37:DN:55:ARG:C	2.59	0.42
38:DO:35:LYS:HG3	69:DO:201:HOH:O	2.19	0.42
39:DP:115:LEU:HD12	39:DP:115:LEU:HA	1.86	0.42
41:DR:75:TYR:C	41:DR:75:TYR:CD2	2.97	0.42
43:DT:50:VAL:HB	43:DT:105:VAL:CG2	2.50	0.42
55:D5:1:MET:HE2	55:D5:39:VAL:HG22	2.02	0.42
55:D5:44:LYS:HB2	55:D5:45:LYS:CE	2.49	0.42
1:AA:134:G:H1'	1:AA:325:A:C5	2.55	0.41
1:AA:142:G:C6	1:AA:143:A:C4	3.08	0.41
1:AA:220:G:C2'	1:AA:221:C:H5'	2.50	0.41
1:AA:232:G:C6	1:AA:233:C:C5	3.08	0.41
1:AA:266:G:OP2	1:AA:267:C:N4	2.41	0.41
1:AA:417:G:C2'	1:AA:418:C:H5'	2.50	0.41
1:AA:536:C:H5'	69:AA:1783:HOH:O	2.19	0.41
1:AA:557:G:H5"	1:AA:558:G:OP2	2.20	0.41
1:AA:1064:G:OP1	1:AA:1386:G:H4'	2.20	0.41
1:AA:1166:G:C2	1:AA:1169:A:OP2	2.73	0.41
1:AA:1317:C:O2'	18:AN:49:GLN:CG	2.68	0.41
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1415:G:N3	1:AA:1486:G:C2	2.88	0.41
1:AA:1489:G:H2'	1:AA:1490:U:H5'	2.02	0.41
2:BA:53:A:C2	2:BA:359:G:C6	3.08	0.41
2:BA:209:U:H5"	2:BA:210:C:H5'	2.01	0.41
2:BA:358:U:H2'	2:BA:359:G:O4'	2.20	0.41
2:BA:383:A:H5"	2:BA:384:G:OP2	2.20	0.41
2:BA:414:A:C6	2:BA:431:A:C2	3.07	0.41
2:BA:945:G:C4	2:BA:1337:G:H1'	2.55	0.41
2:BA:994:A:N1	2:BA:1047:G:H4'	2.35	0.41
2:BA:1066:C:H41	2:BA:1067:A:N6	2.18	0.41
2:BA:1151:A:H2'	2:BA:1152:A:H8	1.85	0.41
2:BA:1287:A:C6	2:BA:1288:A:C6	3.08	0.41
2:BA:1388:C:O2	2:BA:1388:C:H2'	2.18	0.41
2:BA:1499:A:H2'	2:BA:1500:A:O5'	2.20	0.41
3:DA:300:A:H2'	3:DA:334:C:H1'	2.01	0.41
3:DA:483:A:C8	3:DA:484:C:C5	3.07	0.41
3:DA:790:U:H3'	69:DA:6667:HOH:O	2.18	0.41
3:DA:962:G:P	69:DA:3713:HOH:O	2.78	0.41
3:DA:1084:A:O2'	3:DA:1085:A:O4'	2.29	0.41
3:DA:1087:G:C8	3:DA:1087:G:O5'	2.73	0.41
3:DA:1682:G:C8	3:DA:1757:A:C2	3.08	0.41
3:DA:1910:G:O2'	3:DA:1911:PSU:H5"	2.20	0.41
3:DA:2182:U:H2'	3:DA:2183:A:C8	2.55	0.41
3:DA:2513:A:P	69:DA:4165:HOH:O	2.77	0.41
3:DA:2686:G:C5	3:DA:2687:U:C5	3.07	0.41
3:DA:2812:G:N2	3:DA:2889:C:C2	2.88	0.41
3:DA:2849:U:N3	3:DA:2867:G:O4'	2.53	0.41
4:CA:56:A:C2	4:CA:57:C:C2	3.07	0.41
4:CA:249:C:C5'	4:CA:2394:C:O2'	2.68	0.41
4:CA:251:A:H2'	4:CA:252:G:O5'	2.20	0.41
4:CA:310:A:H5"	45:CV:14:THR:HG22	2.01	0.41
4:CA:443:A:N7	29:CE:40:ARG:CG	2.82	0.41
4:CA:513:A:C2	4:CA:514:A:C5	3.08	0.41
4:CA:533:G:H5'	41:CR:23:TYR:CE1	2.55	0.41
4:CA:1082:U:H5'	33:CJ:118:GLY:HA2	2.03	0.41
4:CA:1427:A:OP2	4:CA:1559:U:O4	2.38	0.41
4:CA:1715:G:N2	4:CA:1743:G:H2'	2.35	0.41
4:CA:1757:A:N1	4:CA:1762:A:H2	2.18	0.41
4:CA:1797:G:H8	4:CA:1797:G:O5'	2.03	0.41
4:CA:1856:U:O4	4:CA:1857:G:C2	2.72	0.41
4:CA:2185:U:H6	4:CA:2185:U:O5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2538:C:H2'	4:CA:2539:C:H6	1.85	0.41
4:CA:2694:G:C2'	4:CA:2695:U:O5'	2.68	0.41
4:CA:2839:G:O5'	4:CA:2839:G:H8	2.03	0.41
4:CA:2887:A:H5'	4:CA:2888:C:OP2	2.20	0.41
5:CB:83:G:H5'	50:C0:52:PHE:CE2	2.55	0.41
6:AB:222:ARG:NH1	6:AB:222:ARG:HB2	2.35	0.41
7:AC:40:ARG:HG2	7:AC:55:ILE:HG12	2.01	0.41
7:AC:145:GLY:O	7:AC:146:ALA:O	2.38	0.41
8:AD:148:LYS:H	8:AD:148:LYS:CD	2.33	0.41
8:AD:195:ILE:O	8:AD:195:ILE:CG1	2.67	0.41
11:AG:144:MET:C	11:AG:145:ALA:O	2.59	0.41
14:AJ:29:ALA:C	14:AJ:31:ARG:N	2.71	0.41
19:AO:3:LEU:HD13	19:AO:35:GLN:HG2	2.02	0.41
23:AS:15:LEU:HB2	23:AS:33:THR:HG21	2.01	0.41
6:BB:50:PHE:CZ	6:BB:51:ASN:OD1	2.73	0.41
8:BD:202:GLU:O	8:BD:203:LEU:C	2.59	0.41
9:BE:99:ALA:O	9:BE:122:ASN:ND2	2.50	0.41
20:BP:10:GLY:HA3	20:BP:15:PRO:HA	2.01	0.41
24:BT:54:MET:HG3	24:BT:55:GLN:N	2.34	0.41
28:CD:47:ALA:HA	28:CD:84:LEU:HG	2.01	0.41
29:CE:26:ALA:HB1	36:CM:9:ALA:HB2	2.01	0.41
31:CG:12:ALA:C	31:CG:14:VAL:H	2.28	0.41
32:CH:62:LEU:C	32:CH:62:LEU:HD13	2.45	0.41
32:CH:132:GLN:CD	69:CH:201:HOH:O	2.53	0.41
33:CJ:4:VAL:HG12	33:CJ:6:ALA:H	1.85	0.41
38:CO:37:THR:HG22	38:CO:110:MET:SD	2.60	0.41
45:CV:71:ILE:H	45:CV:71:ILE:HD12	1.83	0.41
50:C0:1:ALA:CB	50:C0:38:GLU:HB3	2.49	0.41
56:DD:181:ASP:OD1	56:DD:183:GLU:HB2	2.20	0.41
29:DE:149:ILE:HD13	29:DE:171:ASP:C	2.45	0.41
30:DF:105:ILE:CD1	57:D7:14:PHE:CD2	3.03	0.41
32:DH:27:ARG:C	32:DH:29:PHE:H	2.28	0.41
43:DT:18:ARG:HG3	43:DT:76:VAL:HB	2.02	0.41
1:AA:119:A:C4	1:AA:240:G:N7	2.88	0.41
1:AA:203:G:H1'	1:AA:465:A:H61	1.84	0.41
1:AA:406:G:H4'	8:AD:5:LEU:HD11	2.00	0.41
1:AA:408:A:P	8:AD:8:LYS:NZ	2.92	0.41
1:AA:957:U:H1'	1:AA:960:U:C4	2.55	0.41
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.35	0.41
1:AA:1130:A:C1'	1:AA:1146:A:C2	3.04	0.41
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1157:A:C5	1:AA:1180:A:C6	3.07	0.41
1:AA:1241:G:N2	1:AA:1242:G:C4	2.88	0.41
1:AA:1519:MA6:C9	1:AA:1519:MA6:N7	2.83	0.41
2:BA:9:G:H5'	9:BE:108:GLY:CA	2.51	0.41
2:BA:603:U:O2'	2:BA:604:G:H5'	2.19	0.41
2:BA:629:A:H2'	2:BA:630:A:O4'	2.20	0.41
2:BA:682:G:H1	2:BA:708:C:N4	2.18	0.41
2:BA:1177:G:H2'	2:BA:1178:G:H5'	2.02	0.41
3:DA:26:G:C6	3:DA:27:G:N1	2.88	0.41
3:DA:340:A:H2'	3:DA:341:C:H5'	2.00	0.41
3:DA:491:G:H2'	3:DA:492:A:C8	2.55	0.41
3:DA:659:G:C6	3:DA:660:C:C4	3.09	0.41
3:DA:662:G:O3'	36:DM:16:GLY:HA2	2.20	0.41
3:DA:760:G:H2'	3:DA:761:A:O4'	2.20	0.41
3:DA:880:G:N2	3:DA:898:C:C2	2.88	0.41
3:DA:995:C:OP2	41:DR:52:ARG:HD2	2.20	0.41
3:DA:1057:A:H8	3:DA:1057:A:O5'	2.03	0.41
3:DA:1258:U:H5'	69:DA:3283:HOH:O	2.19	0.41
3:DA:1576:U:N3	3:DA:1577:C:C5	2.88	0.41
3:DA:2251:OMG:HM23	3:DA:2251:OMG:H1'	1.67	0.41
3:DA:2386:A:H2'	3:DA:2387:U:O4'	2.20	0.41
3:DA:2821:A:H2'	3:DA:2822:G:H8	1.85	0.41
3:DA:2846:G:OP2	40:DQ:51:ASN:HB2	2.19	0.41
3:DA:2898:U:H2'	3:DA:2899:A:C8	2.54	0.41
4:CA:64:A:H8	4:CA:64:A:O5'	2.02	0.41
4:CA:177:G:C4	69:CA:3317:HOH:O	2.63	0.41
4:CA:237:C:H42	4:CA:260:G:H1	1.67	0.41
4:CA:323:C:H3'	29:CE:163:ASN:OD1	2.21	0.41
4:CA:410:G:H2'	4:CA:2407:A:C8	2.54	0.41
4:CA:416:U:H2'	4:CA:417:C:O4'	2.20	0.41
4:CA:583:G:C5	4:CA:584:C:C5	3.08	0.41
4:CA:830:G:C2	4:CA:2448:A:C5	3.08	0.41
4:CA:1076:C:H2'	4:CA:1077:A:O4'	2.20	0.41
4:CA:1084:A:N7	4:CA:1085:A:C8	2.89	0.41
4:CA:1280:G:C2	4:CA:1281:G:C8	3.07	0.41
4:CA:1429:G:H2'	4:CA:1430:G:H8	1.85	0.41
4:CA:1682:G:C5'	69:CA:3902:HOH:O	2.67	0.41
4:CA:1682:G:H5'	69:CA:3902:HOH:O	2.20	0.41
4:CA:1726:C:H2'	4:CA:1727:C:C6	2.55	0.41
4:CA:2252:G:H1'	69:CA:3328:HOH:O	2.19	0.41
4:CA:2255:G:H2'	4:CA:2256:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2403:C:O2	4:CA:2403:C:H2'	2.21	0.41
4:CA:2468:A:C5'	69:CA:3227:HOH:O	2.59	0.41
4:CA:2520:C:O2'	4:CA:2521:C:H5'	2.20	0.41
4:CA:2624:G:O2'	4:CA:2625:G:H5'	2.20	0.41
6:AB:135:LEU:O	6:AB:139:ARG:N	2.39	0.41
6:AB:138:THR:O	6:AB:141:LEU:N	2.53	0.41
7:AC:47:LEU:HB3	7:AC:50:ALA:HB3	2.01	0.41
9:AE:136:VAL:HG22	9:AE:137:VAL:N	2.35	0.41
10:AF:38:ARG:HH21	10:AF:96:VAL:HG21	1.85	0.41
12:AH:67:GLN:C	12:AH:69:LYS:H	2.27	0.41
14:AJ:79:PRO:O	14:AJ:80:THR:C	2.63	0.41
21:AQ:45:HIS:ND1	21:AQ:70:THR:CG2	2.83	0.41
21:AQ:79:VAL:O	21:AQ:80:GLU:O	2.38	0.41
24:AT:55:GLN:N	24:AT:56:PRO:HD2	2.35	0.41
6:BB:139:ARG:O	6:BB:142:GLU:HG2	2.20	0.41
7:BC:14:ILE:N	7:BC:14:ILE:HD13	2.35	0.41
7:BC:59:ARG:CB	7:BC:63:SER:O	2.68	0.41
8:BD:64:ILE:HG22	8:BD:65:TYR:CD2	2.55	0.41
18:BN:96:LEU:HD23	18:BN:96:LEU:C	2.46	0.41
20:BP:14:ARG:N	20:BP:15:PRO:CD	2.83	0.41
25:BU:51:SER:O	25:BU:55:ARG:HG3	2.20	0.41
27:CC:66:PHE:CZ	27:CC:155:ARG:NH2	2.89	0.41
31:CG:59:ASP:O	31:CG:61:TRP:N	2.50	0.41
33:CJ:97:VAL:HG12	33:CJ:97:VAL:O	2.19	0.41
35:CL:108:ARG:HH12	40:CQ:34:GLY:N	2.17	0.41
38:CO:98:LEU:CD2	51:C1:48:TYR:CD2	3.03	0.41
44:CU:11:LEU:O	44:CU:12:ARG:C	2.63	0.41
45:CV:33:VAL:HG22	45:CV:64:ILE:O	2.20	0.41
54:C4:3:ILE:HG21	54:C4:62:PRO:HG3	2.02	0.41
27:DC:251:THR:O	27:DC:252:LYS:C	2.62	0.41
32:DH:117:LEU:CD1	32:DH:129:VAL:HG22	2.50	0.41
37:DN:81:ARG:NH2	69:DN:309:HOH:O	2.53	0.41
41:DR:81:GLY:O	41:DR:85:ALA:N	2.53	0.41
57:D7:26:GLY:O	57:D7:27:SER:O	2.38	0.41
1:AA:10:A:C2	1:AA:25:C:C2	3.09	0.41
1:AA:464:U:N3	1:AA:466:A:H5"	2.35	0.41
1:AA:502:A:C2'	1:AA:503:C:O5'	2.68	0.41
1:AA:542:G:N3	1:AA:543:U:C6	2.88	0.41
1:AA:762:U:O2	1:AA:762:U:H2'	2.19	0.41
1:AA:880:C:C3'	1:AA:880:C:C6	3.03	0.41
1:AA:956:U:C2	1:AA:957:U:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1060:U:H5”	14:AJ:53:ILE:CD1	2.50	0.41
1:AA:1103:C:H2’	1:AA:1104:G:O4’	2.20	0.41
1:AA:1234:C:C2	1:AA:1235:U:C5	3.08	0.41
1:AA:1474:U:H5’	69:AA:1714:HOH:O	2.20	0.41
2:BA:85:U:O2	2:BA:85:U:O4’	2.38	0.41
2:BA:156:C:H42	2:BA:165:G:H1	1.68	0.41
2:BA:675:A:C2	2:BA:676:A:N9	2.88	0.41
2:BA:782:A:N6	2:BA:801:U:C5	2.88	0.41
2:BA:815:A:O2’	2:BA:816:A:OP1	2.24	0.41
2:BA:951:G:N3	2:BA:970:C:O2’	2.37	0.41
2:BA:1399:C:C2	2:BA:1401:G:C5	3.08	0.41
3:DA:63:A:C2	3:DA:64:A:C8	3.09	0.41
3:DA:117:G:C6	3:DA:119:A:C6	3.08	0.41
3:DA:300:A:C2	3:DA:333:G:N3	2.88	0.41
3:DA:659:G:C5	3:DA:660:C:C5	3.09	0.41
3:DA:786:C:O2’	3:DA:787:C:H5’	2.19	0.41
3:DA:833:A:H2’	3:DA:834:G:H8	1.85	0.41
3:DA:1070:A:C2	3:DA:1097:U:O2’	2.67	0.41
3:DA:1127:A:H2’	69:DA:5046:HOH:O	2.21	0.41
3:DA:1319:C:C2’	3:DA:1320:C:O5’	2.68	0.41
3:DA:1422:G:C6	3:DA:1423:G:C5	3.08	0.41
3:DA:1738:G:O2’	3:DA:1739:A:P	2.78	0.41
3:DA:1768:C:C4	3:DA:1769:U:C5	3.08	0.41
3:DA:1808:A:N1	48:DY:27:ARG:HD2	2.36	0.41
3:DA:1840:G:C2’	3:DA:1841:U:O5’	2.68	0.41
3:DA:2241:A:C2’	69:DA:3325:HOH:O	2.55	0.41
3:DA:2298:A:C6	3:DA:2321:U:O4	2.74	0.41
3:DA:2612:C:H5”	3:DA:2613:U:OP1	2.21	0.41
4:CA:304:U:C2	4:CA:313:G:O6	2.73	0.41
4:CA:324:A:C2	4:CA:325:G:H1’	2.54	0.41
4:CA:328:U:O3’	45:CV:65:GLN:HG3	2.20	0.41
4:CA:482:A:C8	4:CA:506:G:C2	3.08	0.41
4:CA:510:C:P	69:CA:3324:HOH:O	2.75	0.41
4:CA:574:A:H5”	69:CA:3665:HOH:O	2.19	0.41
4:CA:929:U:H4’	50:C0:37:ARG:NH2	2.36	0.41
4:CA:1111:A:H4’	4:CA:1112:G:OP1	2.21	0.41
4:CA:1166:G:H2’	4:CA:1167:C:O4’	2.20	0.41
4:CA:1248:G:C4	41:CR:2:ARG:HD2	2.55	0.41
4:CA:1310:G:N2	4:CA:1605:C:C2	2.88	0.41
4:CA:1565:C:C4	4:CA:1567:G:C5	3.09	0.41
4:CA:1608:A:C4	4:CA:1611:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1943:U:H6	4:CA:1943:U:O5'	2.04	0.41
4:CA:1973:G:C5	4:CA:1974:C:N4	2.88	0.41
4:CA:2036:C:H2'	4:CA:2037:A:C8	2.54	0.41
4:CA:2168:G:O6	4:CA:2169:A:N6	2.53	0.41
4:CA:2359:C:C2'	36:CM:60:ARG:HH22	2.33	0.41
4:CA:2480:C:N4	4:CA:2481:G:C6	2.88	0.41
4:CA:2514:U:H2'	4:CA:2515:C:C6	2.56	0.41
4:CA:2628:C:O2'	4:CA:2781:A:H2'	2.20	0.41
4:CA:2628:C:H3'	4:CA:2629:U:H5'	2.01	0.41
4:CA:2648:G:N2	4:CA:2649:C:H1'	2.34	0.41
4:CA:2728:U:O2'	4:CA:2729:G:P	2.78	0.41
4:CA:2817:U:O2	4:CA:2836:U:H1'	2.20	0.41
4:CA:2822:G:OP1	28:CD:164:GLN:NE2	2.41	0.41
5:CB:104:A:H1'	46:CW:31:TYR:CD1	2.55	0.41
6:AB:23:TRP:CZ3	6:AB:25:PRO:HA	2.55	0.41
7:AC:14:ILE:HG22	7:AC:15:VAL:CG1	2.51	0.41
10:AF:16:GLU:HG2	8:BD:193:ALA:HA	2.02	0.41
15:AK:107:ILE:HD13	15:AK:108:THR:N	2.35	0.41
24:AT:80:THR:O	24:AT:83:ILE:HG13	2.19	0.41
6:BB:87:CYS:HB2	6:BB:89:GLN:OE1	2.20	0.41
7:BC:3:GLN:N	7:BC:3:GLN:CD	2.78	0.41
7:BC:8:ASN:C	7:BC:10:ILE:H	2.28	0.41
7:BC:68:ILE:HD12	7:BC:101:ILE:HD11	2.02	0.41
10:BF:14:GLN:OE1	10:BF:14:GLN:N	2.54	0.41
11:BG:13:LEU:O	11:BG:24:ALA:CB	2.69	0.41
15:BK:115:PRO:O	15:BK:116:ILE:HD13	2.20	0.41
30:CF:30:VAL:HG13	30:CF:96:TRP:CH2	2.55	0.41
31:CG:15:ASP:OD1	31:CG:15:ASP:C	2.63	0.41
38:CO:69:ARG:O	38:CO:70:THR:HG23	2.19	0.41
48:CY:70:LEU:HD13	48:CY:75:GLU:HB2	2.02	0.41
51:C1:37:HIS:HD2	51:C1:43:THR:HG22	1.85	0.41
27:DC:173:LEU:CD2	27:DC:183:VAL:CG2	2.98	0.41
56:DD:196:ALA:O	56:DD:199:SER:OG	2.37	0.41
32:DH:3:VAL:HG12	32:DH:38:PRO:HA	2.02	0.41
32:DH:29:PHE:C	32:DH:32:PRO:HD2	2.45	0.41
33:DJ:47:SER:O	33:DJ:48:ILE:HG23	2.20	0.41
34:DK:109:LEU:HD23	34:DK:109:LEU:HA	1.94	0.41
35:DL:6:THR:HG22	35:DL:7:MET:N	2.34	0.41
45:DV:48:VAL:O	45:DV:53:GLN:CB	2.68	0.41
45:DV:88:ASP:CG	45:DV:89:GLY:H	2.27	0.41
51:D1:8:THR:CA	69:D1:201:HOH:O	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:22:G:N3	1:AA:914:A:N7	2.67	0.41
1:AA:47:C:O2	1:AA:49:U:C5	2.73	0.41
1:AA:131:A:C2	1:AA:132:C:C4	3.08	0.41
1:AA:417:G:O2'	1:AA:418:C:H5'	2.20	0.41
1:AA:727:G:N2	1:AA:730:G:OP2	2.52	0.41
1:AA:731:G:C2	1:AA:732:C:C5	3.09	0.41
1:AA:973:G:OP1	69:AA:1750:HOH:O	2.22	0.41
1:AA:1097:C:C2'	1:AA:1098:C:O5'	2.68	0.41
1:AA:1283:U:H2'	1:AA:1284:C:O4'	2.20	0.41
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.19	0.41
2:BA:11:G:H2'	2:BA:12:U:O5'	2.21	0.41
2:BA:35:G:O2'	26:BL:118:GLY:HA2	2.20	0.41
2:BA:204:G:C6	2:BA:205:A:C2	3.07	0.41
2:BA:434:U:C2'	2:BA:435:A:H5'	2.50	0.41
2:BA:496:A:H2'	2:BA:496:A:N3	2.35	0.41
2:BA:716:A:C6	2:BA:717:U:N3	2.88	0.41
2:BA:878:A:C6	2:BA:879:C:C5	3.07	0.41
3:DA:510:C:OP1	3:DA:511:U:OP2	2.39	0.41
3:DA:570:G:H2'	3:DA:2030:6MZ:N7	2.35	0.41
3:DA:580:U:H2'	3:DA:581:C:H6	1.85	0.41
3:DA:748:G:H4'	69:DA:3739:HOH:O	2.19	0.41
3:DA:1404:C:O2'	3:DA:1405:U:H5'	2.20	0.41
3:DA:1688:U:O4'	3:DA:1701:A:N6	2.53	0.41
3:DA:2269:G:H1'	69:DA:4667:HOH:O	2.21	0.41
3:DA:2564:A:H5"	3:DA:2565:A:OP2	2.20	0.41
3:DA:2625:G:C6	3:DA:2626:C:C4	3.09	0.41
3:DA:2852:G:H1	3:DA:2865:U:H3	1.69	0.41
64:DA:3034:1PE:H161	64:DA:3034:1PE:H152	1.77	0.41
4:CA:547:A:H5"	4:CA:548:G:P	2.60	0.41
4:CA:615:U:H3'	4:CA:616:A:C5'	2.51	0.41
4:CA:738:G:N1	4:CA:739:A:C2	2.89	0.41
4:CA:921:C:O2'	4:CA:922:C:H5'	2.20	0.41
4:CA:954:G:H5"	37:CN:13:HIS:HB3	2.01	0.41
4:CA:1137:G:H22	34:CK:108:MET:HA	1.84	0.41
4:CA:1179:G:C5	4:CA:1180:U:H1'	2.55	0.41
4:CA:1203:U:H4'	36:CM:3:LEU:HB3	2.03	0.41
4:CA:1366:A:N3	4:CA:1367:A:C8	2.89	0.41
4:CA:1394:U:H5"	4:CA:1603:A:O3'	2.21	0.41
4:CA:1737:G:N7	4:CA:1738:G:C6	2.88	0.41
4:CA:1800:C:OP1	27:CC:257:ARG:NH2	2.53	0.41
4:CA:1840:G:C2'	4:CA:1841:U:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1890:A:N3	4:CA:2234:G:N2	2.65	0.41
4:CA:1978:A:H2'	4:CA:1979:U:O4'	2.20	0.41
4:CA:2093:G:C5	4:CA:2225:A:C5	3.08	0.41
4:CA:2201:G:C6	4:CA:2223:G:C2	3.08	0.41
4:CA:2416:C:H2'	4:CA:2417:C:C6	2.54	0.41
4:CA:2502:G:H5'	4:CA:2503:A:O5'	2.20	0.41
4:CA:2741:A:OP2	69:CA:3412:HOH:O	2.21	0.41
4:CA:2796:U:O2'	4:CA:2797:U:H5'	2.20	0.41
4:CA:2822:G:O6	38:CO:2:ARG:HG3	2.21	0.41
4:CA:2823:A:C6	4:CA:2824:C:C5	3.08	0.41
4:CA:2839:G:O2'	4:CA:2840:C:H5'	2.20	0.41
5:DB:97:C:H2'	5:DB:98:G:C5'	2.50	0.41
7:AC:22:TRP:CD1	7:AC:59:ARG:CD	3.03	0.41
7:AC:61:ALA:O	7:AC:63:SER:OG	2.31	0.41
7:AC:100:GLN:CG	7:AC:101:ILE:N	2.83	0.41
8:AD:160:GLU:O	8:AD:163:GLU:OE2	2.37	0.41
16:AL:43:LYS:HE2	16:AL:89:D2T:CB1	2.46	0.41
16:AL:66:TYR:O	16:AL:97:THR:OG1	2.34	0.41
20:AP:68:SER:HB2	20:AP:71:VAL:H	1.85	0.41
21:AQ:77:ARG:NH2	21:AQ:79:VAL:HG13	2.35	0.41
10:BF:38:ARG:HG2	10:BF:63:ASN:OD1	2.20	0.41
13:BI:84:THR:HG22	13:BI:98:LEU:HD21	2.01	0.41
26:BL:117:TYR:O	26:BL:119:VAL:HG23	2.20	0.41
18:BN:16:ALA:O	18:BN:17:ASP:HB3	2.20	0.41
23:BS:50:ALA:HB1	23:BS:57:HIS:HB3	2.02	0.41
24:BT:7:ALA:CB	24:BT:10:ARG:HB2	2.51	0.41
28:CD:4:LEU:CB	28:CD:32:ASN:OD1	2.68	0.41
28:CD:151:THR:HG22	28:CD:152:PRO:CD	2.50	0.41
34:CK:69:ARG:NH1	34:CK:89:PHE:HE1	2.19	0.41
37:CN:24:THR:O	37:CN:24:THR:CG2	2.68	0.41
37:CN:114:ARG:O	37:CN:118:LYS:HB2	2.20	0.41
38:CO:69:ARG:C	38:CO:70:THR:CG2	2.93	0.41
39:CP:100:HIS:CG	39:CP:101:GLY:N	2.85	0.41
44:CU:8:LEU:HD13	49:CZ:22:LEU:C	2.46	0.41
27:DC:259:ASN:OD1	27:DC:261:ARG:HB3	2.21	0.41
33:DJ:96:LYS:O	33:DJ:97:VAL:C	2.63	0.41
38:DO:84:GLY:N	38:DO:85:PRO:CD	2.83	0.41
41:DR:10:ARG:HA	41:DR:10:ARG:HH11	1.84	0.41
42:DS:38:VAL:O	42:DS:54:VAL:HG23	2.21	0.41
45:DV:44:HIS:CD2	45:DV:57:ILE:HD13	2.55	0.41
57:D7:33:ARG:CG	57:D7:34:GLU:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:13:U:N3	1:AA:916:U:O4	2.54	0.41
1:AA:35:G:N1	1:AA:550:G:C2	2.89	0.41
1:AA:102:G:N1	1:AA:103:U:C4	2.89	0.41
1:AA:138:G:C2'	1:AA:139:A:H5'	2.51	0.41
1:AA:141:G:N2	1:AA:142:G:H1'	2.36	0.41
1:AA:373:A:O2'	1:AA:374:A:H5'	2.20	0.41
1:AA:411:A:P	8:AD:26:ARG:HH22	2.40	0.41
1:AA:588:G:N1	1:AA:589:U:C2	2.88	0.41
1:AA:895:G:H2'	1:AA:896:C:C6	2.54	0.41
1:AA:923:A:H5"	9:AE:26:LYS:HD3	2.03	0.41
1:AA:957:U:O2	1:AA:957:U:H2'	2.20	0.41
1:AA:1017:U:O2'	1:AA:1018:G:H8	2.03	0.41
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.21	0.41
1:AA:1306:A:C4	1:AA:1307:U:C6	3.09	0.41
2:BA:683:G:H2'	2:BA:684:U:H6	1.85	0.41
2:BA:687:A:C2	2:BA:704:A:C5	3.08	0.41
2:BA:731:G:O2'	2:BA:732:C:H5'	2.19	0.41
2:BA:977:A:O2'	2:BA:1223:C:N4	2.52	0.41
2:BA:1041:G:C6	2:BA:1042:A:N6	2.89	0.41
2:BA:1097:C:H2'	2:BA:1098:C:C6	2.53	0.41
2:BA:1141:C:OP2	2:BA:1141:C:H2'	2.20	0.41
2:BA:1157:A:H4'	2:BA:1158:C:O5'	2.20	0.41
2:BA:1374:A:H2'	2:BA:1375:A:O4'	2.21	0.41
2:BA:1478:U:C2	2:BA:1479:C:C5	3.09	0.41
2:BA:1504:G:OP2	2:BA:1507:A:O2'	2.38	0.41
3:DA:222:A:C5	3:DA:224:U:C2	3.08	0.41
3:DA:296:U:H2'	3:DA:297:G:C8	2.56	0.41
3:DA:547:A:N6	3:DA:549:G:H1	2.19	0.41
3:DA:869:G:C5	3:DA:870:U:C5	3.09	0.41
3:DA:920:A:H2'	3:DA:921:C:O4'	2.19	0.41
3:DA:928:A:H2'	3:DA:929:U:O4'	2.21	0.41
3:DA:1243:C:H2'	3:DA:1244:A:O5'	2.21	0.41
3:DA:1353:A:O2'	3:DA:1354:A:H5'	2.20	0.41
3:DA:1376:C:C5	3:DA:1377:G:C5	3.09	0.41
3:DA:1409:U:C2'	3:DA:1410:G:H5'	2.51	0.41
3:DA:1678:A:O2'	3:DA:1679:A:H5'	2.21	0.41
3:DA:2159:G:N3	3:DA:2160:C:C5	2.89	0.41
3:DA:2322:A:P	69:DA:3380:HOH:O	2.79	0.41
3:DA:2630:G:H1'	3:DA:2894:G:N3	2.35	0.41
69:DA:3885:HOH:O	51:D1:5:ASN:HB2	2.21	0.41
4:CA:58:G:C2	4:CA:70:G:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:68:G:H2'	4:CA:69:C:O4'	2.20	0.41
4:CA:184:C:O3'	4:CA:217:A:H2	2.04	0.41
4:CA:397:U:H2'	4:CA:398:C:H6	1.86	0.41
4:CA:422:A:C6	4:CA:423:A:C5	3.09	0.41
4:CA:439:A:H2'	4:CA:440:C:O4'	2.20	0.41
4:CA:449:A:OP2	4:CA:449:A:H8	2.04	0.41
4:CA:680:C:N3	4:CA:681:G:C5	2.89	0.41
4:CA:807:U:H4'	4:CA:2445:G:O3'	2.20	0.41
4:CA:861:A:N3	5:CB:79:G:O2'	2.48	0.41
4:CA:1004:U:O2	4:CA:1152:C:O2	2.39	0.41
4:CA:1127:A:H2'	4:CA:1128:G:H5"	2.01	0.41
4:CA:1141:U:H4'	4:CA:1142:A:O4'	2.20	0.41
4:CA:1214:A:H4'	4:CA:1239:G:H4'	2.03	0.41
4:CA:1330:C:C2'	4:CA:1331:G:H5'	2.50	0.41
4:CA:1343:G:C4	4:CA:1597:A:C6	3.08	0.41
4:CA:1601:G:H2'	4:CA:1602:U:O4'	2.21	0.41
4:CA:1974:C:H2'	4:CA:1975:G:O4'	2.20	0.41
4:CA:2022:U:P	69:CA:3335:HOH:O	2.75	0.41
4:CA:2201:G:C4	4:CA:2202:U:C5	3.08	0.41
4:CA:2207:C:C2	4:CA:2218:G:N2	2.88	0.41
4:CA:2547:A:C2	4:CA:2562:U:C2	3.08	0.41
4:CA:2701:U:H3'	4:CA:2702:G:H5"	2.02	0.41
4:CA:2843:G:N2	4:CA:2875:C:N3	2.67	0.41
5:DB:14:U:O2	5:DB:107:G:H4'	2.20	0.41
5:CB:30:C:H2'	5:CB:31:C:H5'	2.02	0.41
9:AE:157:ARG:CB	12:AH:44:GLY:O	2.69	0.41
14:AJ:14:ASP:HB3	14:AJ:17:LEU:HB3	2.02	0.41
15:AK:71:ALA:HA	15:AK:74:VAL:HG22	2.01	0.41
6:BB:200:ILE:HD12	6:BB:200:ILE:H	1.85	0.41
8:BD:102:VAL:HG13	8:BD:107:PHE:HB2	2.02	0.41
9:BE:25:VAL:O	9:BE:26:LYS:C	2.63	0.41
18:BN:6:LYS:NZ	69:BN:202:HOH:O	2.53	0.41
18:BN:26:LEU:HA	18:BN:30:ILE:HD13	2.02	0.41
28:CD:33:ARG:HA	28:CD:94:GLN:O	2.21	0.41
35:CL:4:GLU:O	35:CL:5:GLN:CB	2.69	0.41
39:CP:15:ARG:HA	39:CP:18:LEU:HD22	2.03	0.41
43:CT:17:VAL:HG11	43:CT:103:ILE:HG12	2.03	0.41
43:CT:82:MET:HE3	43:CT:98:LYS:HB2	2.03	0.41
44:CU:25:GLU:HG2	44:CU:26:LYS:N	2.36	0.41
44:CU:30:ILE:HD13	44:CU:31:VAL:N	2.35	0.41
45:CV:88:ASP:CG	45:CV:89:GLY:H	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DD:184:ARG:NE	69:DQ:301:HOH:O	2.52	0.41
31:DG:82:PHE:CE1	31:DG:137:LYS:HD2	2.55	0.41
33:DJ:16:MET:O	33:DJ:41:PHE:CE1	2.73	0.41
33:DJ:80:LYS:HG2	33:DJ:86:LYS:HA	2.02	0.41
33:DJ:85:ILE:C	33:DJ:85:ILE:HD13	2.45	0.41
55:D5:42:ARG:O	55:D5:43:LYS:CB	2.67	0.41
57:D7:4:ASN:O	57:D7:5:ILE:CG2	2.68	0.41
1:AA:101:A:C5	1:AA:102:G:C8	3.08	0.41
1:AA:322:C:H5	1:AA:328:C:H5	1.68	0.41
1:AA:396:C:C3'	1:AA:397:A:H5"	2.50	0.41
1:AA:509:A:C2	1:AA:510:A:C2	3.08	0.41
1:AA:679:C:O2'	1:AA:680:C:H5'	2.21	0.41
1:AA:781:A:C3'	1:AA:782:A:H5'	2.50	0.41
1:AA:901:A:C8	1:AA:902:G:C1'	3.04	0.41
1:AA:954:G:C2	1:AA:955:U:C2	3.09	0.41
1:AA:1028:C:N4	1:AA:1029:U:C4	2.89	0.41
1:AA:1060:U:OP1	18:AN:85:ARG:NH2	2.54	0.41
1:AA:1289:A:H5"	1:AA:1290:G:OP2	2.21	0.41
1:AA:1406:U:O2	1:AA:1517:G:N2	2.46	0.41
1:AA:1418:A:C8	1:AA:1419:G:O4'	2.74	0.41
2:BA:274:A:H1'	2:BA:275:G:C8	2.56	0.41
2:BA:291:U:O2	2:BA:291:U:H2'	2.21	0.41
2:BA:415:A:O3'	3:DA:2152:G:N2	2.54	0.41
2:BA:421:U:O5'	2:BA:422:C:H5	2.03	0.41
2:BA:568:G:O6	26:BL:2:ALA:CB	2.69	0.41
2:BA:576:C:H3'	2:BA:577:G:H5"	2.01	0.41
2:BA:668:G:N2	2:BA:739:C:C2	2.89	0.41
2:BA:1050:G:C2	2:BA:1051:C:C5	3.09	0.41
2:BA:1153:G:C6	2:BA:1154:G:C5	3.08	0.41
2:BA:1238:A:C2'	2:BA:1241:G:O2'	2.68	0.41
2:BA:1253:G:O2'	2:BA:1254:A:H5'	2.21	0.41
2:BA:1317:C:H2'	2:BA:1318:A:O4'	2.20	0.41
2:BA:1386:G:C2	2:BA:1387:G:C8	3.08	0.41
2:BA:1483:A:H5"	2:BA:1484:C:OP2	2.21	0.41
3:DA:324:A:C2	3:DA:325:G:H1'	2.55	0.41
3:DA:340:A:H2'	3:DA:341:C:C5'	2.51	0.41
3:DA:445:C:O2'	3:DA:449:A:H2'	2.21	0.41
3:DA:544:C:H5'	3:DA:545:U:OP2	2.21	0.41
3:DA:546:U:OP1	3:DA:547:A:OP1	2.38	0.41
3:DA:641:U:C5	3:DA:642:U:C4	3.08	0.41
3:DA:666:A:C4	3:DA:667:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:780:G:H2'	3:DA:782:A:N7	2.34	0.41
3:DA:1045:C:C3'	3:DA:1046:A:H5'	2.51	0.41
3:DA:1133:A:H3'	69:DA:3207:HOH:O	2.21	0.41
3:DA:1591:A:C6	3:DA:1592:C:N4	2.88	0.41
3:DA:1736:U:O4	3:DA:1737:G:N1	2.54	0.41
3:DA:1847:A:C8	3:DA:1847:A:P	3.13	0.41
3:DA:1905:C:O2	3:DA:1905:C:C2'	2.68	0.41
3:DA:2008:C:H2'	3:DA:2009:A:O5'	2.21	0.41
3:DA:2106:U:O2	3:DA:2183:A:N1	2.54	0.41
3:DA:2197:U:C6	3:DA:2224:G:N1	2.88	0.41
4:CA:83:A:OP1	4:CA:83:A:H4'	2.20	0.41
4:CA:241:A:N1	4:CA:255:A:H5"	2.35	0.41
4:CA:290:U:N3	4:CA:291:G:N7	2.69	0.41
4:CA:308:G:C6	4:CA:309:A:C6	3.09	0.41
4:CA:832:U:OP1	36:CM:38:GLN:HB3	2.21	0.41
4:CA:927:A:H2'	4:CA:928:A:O4'	2.20	0.41
4:CA:1470:A:H2'	4:CA:1471:G:H5'	2.03	0.41
4:CA:1807:G:H2'	4:CA:1808:A:O5'	2.21	0.41
4:CA:1845:G:C6	4:CA:1846:G:N7	2.88	0.41
4:CA:1967:C:H2'	4:CA:1968:G:H5'	2.03	0.41
4:CA:2013:A:N1	4:CA:2014:A:C4	2.89	0.41
4:CA:2061:G:N3	4:CA:2063:C:C4	2.88	0.41
4:CA:2067:G:C6	4:CA:2444:G:C2	3.09	0.41
4:CA:2221:G:C4	4:CA:2222:C:C6	3.09	0.41
4:CA:2740:A:N6	4:CA:2764:A:C8	2.89	0.41
4:CA:2742:G:C6	4:CA:2763:G:N2	2.89	0.41
4:CA:2772:C:N3	4:CA:2773:C:C5	2.88	0.41
4:CA:2882:A:C5'	38:CO:96:ARG:HG3	2.49	0.41
6:AB:20:THR:C	6:AB:22:TYR:H	2.28	0.41
6:AB:186:ILE:HD11	6:AB:204:ASP:CB	2.50	0.41
10:AF:42:TRP:HZ2	10:AF:61:LEU:HD22	1.86	0.41
13:AI:17:ALA:CB	13:AI:79:ILE:HG13	2.50	0.41
15:AK:67:ALA:HB1	15:AK:100:LEU:HD13	2.03	0.41
19:AO:17:ARG:HD3	19:AO:17:ARG:H	1.85	0.41
19:AO:17:ARG:O	19:AO:18:ASP:HB3	2.20	0.41
21:AQ:59:VAL:HG22	21:AQ:61:ILE:HD12	2.02	0.41
6:BB:10:LEU:C	6:BB:12:ALA:H	2.27	0.41
6:BB:58:ASN:HB2	6:BB:220:THR:CG2	2.50	0.41
6:BB:79:ALA:O	6:BB:82:ASP:OD2	2.39	0.41
6:BB:96:TRP:HH2	6:BB:175:GLU:CD	2.29	0.41
6:BB:154:MET:HE1	6:BB:158:PRO:HG3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BD:139:PRO:O	8:BD:140:ASN:HB2	2.20	0.41
9:BE:105:ILE:H	9:BE:122:ASN:C	2.29	0.41
11:BG:120:LEU:O	11:BG:120:LEU:HD23	2.19	0.41
15:BK:31:ILE:CG2	15:BK:46:THR:HG22	2.51	0.41
26:BL:29:GLN:CD	26:BL:29:GLN:N	2.78	0.41
17:BM:23:TYR:CD1	17:BM:23:TYR:C	2.98	0.41
18:BN:57:PRO:C	18:BN:59:ARG:H	2.29	0.41
21:BQ:31:HIS:CD2	21:BQ:33:ILE:H	2.38	0.41
28:CD:115:GLY:O	38:CO:3:HIS:CE1	2.73	0.41
30:CF:69:ALA:O	30:CF:70:ARG:C	2.62	0.41
31:CG:122:ALA:CB	31:CG:132:LEU:HA	2.51	0.41
33:CJ:83:ALA:HB1	33:CJ:100:ILE:HD12	2.02	0.41
33:CJ:85:ILE:C	33:CJ:85:ILE:HD13	2.46	0.41
46:CW:50:MET:HB3	46:CW:56:PHE:CD2	2.56	0.41
48:CY:58:ILE:HG12	48:CY:66:VAL:HG21	2.02	0.41
48:CY:74:GLY:O	48:CY:75:GLU:C	2.60	0.41
36:DM:92:LEU:HD12	36:DM:92:LEU:N	2.35	0.41
39:DP:111:ARG:O	39:DP:112:GLU:C	2.61	0.41
40:DQ:37:LYS:HZ1	61:DQ:202:PG4:H12	1.84	0.41
40:DQ:95:LYS:NZ	69:DQ:304:HOH:O	2.37	0.41
41:DR:20:ALA:O	41:DR:21:LYS:C	2.62	0.41
41:DR:75:TYR:CZ	41:DR:79:ILE:HG13	2.55	0.41
61:DR:202:PG4:H51	61:DR:202:PG4:H71	1.89	0.41
43:DT:54:ALA:O	43:DT:55:ILE:C	2.61	0.41
49:DZ:19:LEU:CD2	49:DZ:23:ARG:NE	2.83	0.41
53:D3:34:ARG:HB3	53:D3:42:LEU:HD12	2.03	0.41
1:AA:184:G:C6	1:AA:185:U:C4	3.09	0.41
1:AA:254:G:C4'	21:AQ:20:SER:HB2	2.49	0.41
1:AA:275:G:C2	1:AA:276:G:C8	3.09	0.41
1:AA:335:C:O2	1:AA:1433:A:H2	2.03	0.41
1:AA:371:A:H2'	1:AA:372:C:O4'	2.20	0.41
1:AA:400:C:H6	1:AA:400:C:O5'	2.03	0.41
1:AA:591:U:OP2	12:AH:31:LYS:NZ	2.40	0.41
1:AA:628:G:O2'	1:AA:629:A:H5'	2.20	0.41
1:AA:652:U:C4	1:AA:752:G:N3	2.88	0.41
1:AA:675:A:H2'	1:AA:676:A:O4'	2.20	0.41
1:AA:900:A:H2'	1:AA:901:A:O4'	2.20	0.41
1:AA:910:C:O5'	1:AA:910:C:H6	2.04	0.41
1:AA:953:G:C6	1:AA:1229:A:N1	2.89	0.41
1:AA:964:A:N3	1:AA:969:A:O2'	2.41	0.41
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1053:G:N2	1:AA:1056:U:C5	2.88	0.41
1:AA:1168:U:O2'	1:AA:1169:A:H5'	2.21	0.41
1:AA:1187:G:OP1	13:AI:115:LYS:HE2	2.20	0.41
2:BA:54:C:H2'	2:BA:352:C:N4	2.35	0.41
2:BA:386:C:C5	2:BA:387:U:C5	3.09	0.41
2:BA:662:U:C2	2:BA:663:A:N7	2.88	0.41
2:BA:693:G:P	15:BK:127:ARG:HH12	2.44	0.41
2:BA:754:C:O2	2:BA:754:C:H3'	2.20	0.41
2:BA:767:A:H2'	2:BA:768:A:O4'	2.21	0.41
2:BA:782:A:H2'	2:BA:783:C:O4'	2.21	0.41
2:BA:977:A:H4'	2:BA:981:U:O2	2.20	0.41
2:BA:1089:G:C4	2:BA:1090:U:C6	3.09	0.41
2:BA:1090:U:C2	2:BA:1091:U:C6	3.09	0.41
2:BA:1245:C:C2	2:BA:1246:A:C8	3.09	0.41
2:BA:1309:G:H2'	2:BA:1310:G:C8	2.56	0.41
3:DA:211:C:OP1	53:D3:25:LYS:NZ	2.53	0.41
3:DA:307:G:H1'	3:DA:330:A:N6	2.36	0.41
3:DA:561:G:O5'	3:DA:561:G:H8	2.04	0.41
3:DA:566:U:H4'	3:DA:809:G:OP2	2.20	0.41
3:DA:637:A:N1	3:DA:651:G:O2'	2.53	0.41
3:DA:768:G:O2'	3:DA:769:U:H5'	2.21	0.41
3:DA:786:C:C2'	3:DA:787:C:H5'	2.50	0.41
3:DA:811:U:O2	3:DA:1250:G:H2'	2.20	0.41
3:DA:833:A:H2'	3:DA:834:G:C8	2.56	0.41
3:DA:898:C:C4	3:DA:899:A:N7	2.89	0.41
3:DA:996:A:N7	3:DA:1160:G:N2	2.69	0.41
3:DA:1236:G:OP2	63:DA:3037:PUT:C1	2.69	0.41
3:DA:1550:C:C2'	3:DA:1551:A:H5'	2.50	0.41
3:DA:1634:A:H5"	69:DA:4139:HOH:O	2.20	0.41
3:DA:1638:C:H4'	3:DA:2710:C:O2	2.21	0.41
3:DA:1833:C:C4	3:DA:1834:U:C5	3.09	0.41
3:DA:2256:G:O2'	61:DA:3048:PG4:H31	2.20	0.41
3:DA:2384:U:H4'	3:DA:2385:C:OP2	2.21	0.41
3:DA:2590:A:O2'	3:DA:2591:C:H5'	2.21	0.41
4:CA:372:G:C2	4:CA:400:G:C8	3.09	0.41
4:CA:450:G:P	4:CA:1248:G:H22	2.43	0.41
4:CA:599:A:H1'	4:CA:659:G:N2	2.36	0.41
4:CA:601:C:H2'	4:CA:602:A:O4'	2.21	0.41
4:CA:686:U:H2'	4:CA:788:A:C2	2.56	0.41
4:CA:768:G:C2'	4:CA:769:U:H5'	2.50	0.41
4:CA:867:C:C5	4:CA:868:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:947:A:C5'	69:CA:3424:HOH:O	2.68	0.41
4:CA:1173:U:OP2	4:CA:1173:U:O4'	2.38	0.41
4:CA:1336:A:H2'	4:CA:1337:G:O4'	2.21	0.41
4:CA:1891:G:C5'	69:CA:3353:HOH:O	2.68	0.41
4:CA:1981:A:H5"	4:CA:1982:U:OP2	2.20	0.41
4:CA:1984:G:O6	4:CA:1985:C:N4	2.53	0.41
4:CA:2112:G:H1'	69:CA:3774:HOH:O	2.19	0.41
4:CA:2136:G:N1	4:CA:2156:G:H1'	2.35	0.41
4:CA:2142:A:N1	4:CA:2150:C:N3	2.69	0.41
4:CA:2334:U:N3	39:CP:16:ARG:HG3	2.36	0.41
4:CA:2360:G:C5	4:CA:2361:G:H1'	2.55	0.41
4:CA:2556:C:H3'	4:CA:2557:G:H8	1.85	0.41
4:CA:2671:G:C2	4:CA:2672:U:O2	2.74	0.41
4:CA:2719:G:H8	4:CA:2719:G:O5'	2.04	0.41
5:CB:6:G:H4'	5:CB:28:C:C4'	2.50	0.41
10:AF:79:ARG:O	10:AF:80:PHE:C	2.63	0.41
11:AG:12:ILE:O	11:AG:21:GLU:HG2	2.21	0.41
11:AG:129:GLU:O	11:AG:130:ASN:C	2.63	0.41
12:AH:22:LYS:HA	12:AH:22:LYS:CE	2.50	0.41
14:AJ:48:ARG:C	14:AJ:49:PHE:CD1	2.98	0.41
15:AK:74:VAL:C	15:AK:76:GLU:N	2.79	0.41
17:AM:12:HIS:C	17:AM:44:LYS:HE3	2.45	0.41
18:AN:91:GLY:C	18:AN:93:ILE:H	2.25	0.41
6:BB:145:GLU:O	6:BB:149:GLY:HA3	2.20	0.41
7:BC:23:PHE:HD2	14:BJ:97:ASP:HB2	1.86	0.41
8:BD:192:SER:O	8:BD:193:ALA:CB	2.68	0.41
10:BF:3:HIS:HB2	10:BF:92:THR:OG1	2.20	0.41
10:BF:47:LEU:HD22	22:BR:66:SER:HB3	2.03	0.41
15:BK:31:ILE:HG22	15:BK:46:THR:CB	2.50	0.41
21:BQ:69:LYS:O	21:BQ:70:THR:HB	2.20	0.41
21:BQ:75:LEU:O	21:BQ:76:VAL:HG13	2.20	0.41
25:BU:12:PHE:HD1	25:BU:15:ALA:N	2.19	0.41
33:CJ:19:PRO:HB2	33:CJ:22:PRO:HD2	2.01	0.41
42:CS:71:LYS:HE3	42:CS:73:LYS:CE	2.50	0.41
45:CV:3:LYS:HG3	45:CV:84:PHE:CZ	2.56	0.41
49:CZ:3:ALA:O	49:CZ:7:ARG:HG3	2.21	0.41
27:DC:104:LEU:N	27:DC:104:LEU:CD1	2.83	0.41
32:DH:118:PRO:O	32:DH:119:ASN:HB2	2.21	0.41
33:DJ:93:ASN:C	33:DJ:94:LYS:HZ3	2.27	0.41
37:DN:96:ILE:HG21	37:DN:126:ILE:CD1	2.51	0.41
50:D0:50:VAL:HG23	50:D0:54:VAL:CG1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D2:45:HIS:O	52:D2:46:VAL:HG23	2.21	0.41
57:D7:12:VAL:HG12	57:D7:13:VAL:N	2.36	0.41
1:AA:749:A:H2	19:AO:22:THR:HG21	1.86	0.41
1:AA:865:A:H5'	1:AA:1078:U:O4	2.21	0.41
1:AA:982:U:H5"	18:AN:5:MET:CE	2.51	0.41
1:AA:1016:A:C2	1:AA:1017:U:O3'	2.74	0.41
1:AA:1115:U:OP1	14:AJ:68:ARG:NH2	2.49	0.41
1:AA:1130:A:OP1	13:AI:18:ARG:NH1	2.54	0.41
1:AA:1167:A:N7	1:AA:1169:A:C5	2.89	0.41
1:AA:1239:A:H62	1:AA:1299:A:N6	2.19	0.41
1:AA:1345:U:C5	1:AA:1377:A:C2	3.09	0.41
1:AA:1449:C:C2	1:AA:1455:G:C2	3.09	0.41
2:BA:115:G:C2	2:BA:289:G:N7	2.89	0.41
2:BA:132:C:OP1	24:BT:70:ASN:ND2	2.53	0.41
2:BA:828:U:H2'	2:BA:829:G:O5'	2.20	0.41
2:BA:1262:C:C5	2:BA:1263:C:C5	3.09	0.41
2:BA:1296:C:OP1	17:BM:14:HIS:CE1	2.73	0.41
2:BA:1521:C:C2'	2:BA:1522:U:O5'	2.69	0.41
3:DA:300:A:H2	3:DA:333:G:N3	2.18	0.41
3:DA:415:A:N6	3:DA:2407:A:H61	2.19	0.41
3:DA:475:C:C5	3:DA:481:G:O6	2.73	0.41
3:DA:996:A:C6	3:DA:1160:G:C2	3.08	0.41
3:DA:1056:G:H1'	3:DA:1103:A:H61	1.85	0.41
3:DA:1166:G:O2'	3:DA:1167:C:H5'	2.21	0.41
3:DA:1238:G:C2'	3:DA:1239:G:H5'	2.50	0.41
3:DA:1242:U:C4	3:DA:1243:C:N4	2.88	0.41
3:DA:1251:C:P	69:DA:3618:HOH:O	2.79	0.41
3:DA:1403:A:H2'	3:DA:1404:C:C6	2.56	0.41
3:DA:1517:G:H2'	3:DA:1518:C:C6	2.56	0.41
3:DA:1568:G:P	69:DA:3218:HOH:O	2.61	0.41
3:DA:1654:A:C2'	3:DA:1655:A:O5'	2.68	0.41
3:DA:1735:A:C4	3:DA:1736:U:C6	3.08	0.41
3:DA:2026:U:P	69:DA:3925:HOH:O	2.79	0.41
3:DA:2138:G:C2	3:DA:2154:A:C2	3.09	0.41
3:DA:2181:U:C5	3:DA:2182:U:C4	3.09	0.41
3:DA:2224:G:O2'	3:DA:2225:A:O4'	2.34	0.41
3:DA:2811:G:C2'	3:DA:2812:G:H5'	2.51	0.41
60:DA:3045:MPD:O4	60:DA:3045:MPD:O2	2.30	0.41
4:CA:118:A:H1'	4:CA:178:G:O4'	2.21	0.41
4:CA:192:C:H2'	4:CA:193:U:H5'	2.03	0.41
4:CA:322:A:OP1	29:CE:162:ARG:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:354:A:H2'	4:CA:355:U:O4'	2.21	0.41
4:CA:514:A:C2	4:CA:515:A:C2	3.08	0.41
4:CA:542:C:H5"	4:CA:543:G:OP2	2.21	0.41
4:CA:731:C:H5	69:CA:3946:HOH:O	2.04	0.41
4:CA:819:A:C8	4:CA:1188:U:O4	2.74	0.41
4:CA:827:U:H6	4:CA:827:U:OP1	2.03	0.41
4:CA:1156:A:H3'	69:CA:3282:HOH:O	2.21	0.41
4:CA:1248:G:O2'	41:CR:2:ARG:HA	2.21	0.41
4:CA:1260:A:C2	4:CA:1261:C:C2	3.09	0.41
4:CA:1363:C:C2'	4:CA:1364:G:O5'	2.69	0.41
4:CA:1745:A:H2'	4:CA:1746:A:O4'	2.21	0.41
4:CA:1965:C:OP1	4:CA:1966:A:H2'	2.20	0.41
4:CA:1972:G:C2	4:CA:1973:G:N7	2.89	0.41
4:CA:2237:G:H5'	69:CA:3419:HOH:O	2.20	0.41
4:CA:2302:U:N3	4:CA:2303:G:N7	2.69	0.41
4:CA:2365:G:OP1	47:CX:53:ARG:N	2.51	0.41
4:CA:2372:U:H4'	52:C2:45:HIS:CD2	2.55	0.41
4:CA:2499:C:C2'	69:CA:3405:HOH:O	2.69	0.41
4:CA:2811:G:H2'	4:CA:2812:G:O4'	2.21	0.41
5:DB:43:C:O2'	30:DF:91:ARG:HG3	2.20	0.41
5:CB:43:C:H1'	30:CF:89:THR:O	2.21	0.41
6:AB:35:ARG:HB2	6:AB:40:ILE:HG13	2.02	0.41
6:AB:91:PHE:H	6:AB:91:PHE:HD1	1.69	0.41
6:AB:222:ARG:HB2	6:AB:222:ARG:HH11	1.85	0.41
7:AC:6:HIS:CD2	7:AC:8:ASN:HB3	2.55	0.41
7:AC:123:GLN:O	7:AC:128:VAL:HG13	2.21	0.41
10:AF:49:TYR:CE2	10:AF:51:ILE:CG2	3.04	0.41
10:AF:86:ARG:HG3	10:AF:86:ARG:NH1	2.35	0.41
14:AJ:15:HIS:O	14:AJ:19:ASP:OD1	2.39	0.41
15:AK:29:ASN:OD1	15:AK:47:ALA:HB3	2.21	0.41
17:AM:114:LYS:HB3	17:AM:115:PRO:HD3	2.01	0.41
18:AN:91:GLY:C	18:AN:93:ILE:N	2.78	0.41
6:BB:98:GLY:HA2	69:BB:301:HOH:O	2.19	0.41
7:BC:77:ILE:HD11	7:BC:103:ILE:HD13	2.02	0.41
7:BC:130:PHE:CE2	7:BC:157:LEU:HB3	2.56	0.41
9:BE:50:TYR:O	9:BE:51:GLY:O	2.39	0.41
9:BE:115:LEU:HB3	9:BE:120:VAL:HG23	2.03	0.41
11:BG:33:ASP:HB2	11:BG:35:LYS:HG3	2.02	0.41
11:BG:122:ASN:O	11:BG:126:ASP:HB2	2.21	0.41
17:BM:3:ARG:C	17:BM:4:ILE:CG1	2.93	0.41
17:BM:19:LEU:O	17:BM:22:ILE:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BN:1:ALA:O	18:BN:2:LYS:HB2	2.20	0.41
18:BN:98:LYS:HB3	18:BN:98:LYS:HE3	1.91	0.41
34:CK:26:GLY:O	34:CK:108:MET:HE1	2.20	0.41
35:CL:17:ARG:HA	35:CL:17:ARG:HD3	1.92	0.41
38:CO:117:ASP:O	38:CO:118:ARG:HB2	2.20	0.41
41:CR:46:TYR:CZ	41:CR:50:ARG:CZ	3.04	0.41
43:CT:36:LEU:HD13	43:CT:48:LYS:HG3	2.03	0.41
52:C2:16:THR:HG22	52:C2:17:GLY:N	2.35	0.41
27:DC:200:MET:HG3	27:DC:201:LEU:HD12	2.03	0.41
56:DD:177:VAL:O	56:DD:177:VAL:CG2	2.68	0.41
29:DE:189:THR:HG22	29:DE:191:ASP:H	1.86	0.41
41:DR:89:ILE:HG22	41:DR:94:LEU:HG	2.02	0.41
44:DU:51:PHE:O	44:DU:53:VAL:HG13	2.20	0.41
1:AA:102:G:O2'	1:AA:151:A:N3	2.48	0.41
1:AA:142:G:N2	1:AA:222:C:C6	2.89	0.41
1:AA:184:G:H2'	1:AA:185:U:H6	1.86	0.41
1:AA:219:U:H2'	1:AA:220:G:H8	1.84	0.41
1:AA:316:C:N3	1:AA:317:U:C5	2.89	0.41
1:AA:417:G:C5	1:AA:418:C:C4	3.08	0.41
1:AA:445:G:H2'	1:AA:446:G:O4'	2.20	0.41
1:AA:552:U:H2'	1:AA:553:A:C8	2.56	0.41
1:AA:588:G:C2	1:AA:589:U:C2	3.08	0.41
1:AA:663:A:C2	1:AA:743:A:C2	3.09	0.41
1:AA:716:A:C2'	1:AA:717:U:O5'	2.69	0.41
1:AA:858:G:O6	1:AA:869:G:C8	2.74	0.41
1:AA:954:G:C6	1:AA:955:U:N3	2.89	0.41
1:AA:1137:C:H1'	1:AA:1138:G:N2	2.36	0.41
1:AA:1152:A:H5'	14:AJ:15:HIS:HB2	2.02	0.41
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.55	0.41
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.21	0.41
1:AA:1371:G:C5	1:AA:1372:U:C4	3.09	0.41
1:AA:1404:C:H1'	1:AA:1499:A:C2	2.56	0.41
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.56	0.41
2:BA:21:G:P	69:BA:1805:HOH:O	2.78	0.41
2:BA:228:A:H2'	2:BA:229:U:C1'	2.51	0.41
2:BA:297:G:C4	2:BA:299:G:OP2	2.73	0.41
2:BA:345:C:O4'	2:BA:346:G:N2	2.53	0.41
2:BA:375:U:C2	2:BA:376:G:C8	3.09	0.41
2:BA:385:C:O5'	2:BA:385:C:H6	2.04	0.41
2:BA:436:C:O2	2:BA:436:C:H2'	2.20	0.41
2:BA:451:A:C8	2:BA:452:A:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:514:C:H42	2:BA:537:G:H1	1.67	0.41
2:BA:636:U:H2'	2:BA:637:C:C6	2.56	0.41
2:BA:756:C:C4	2:BA:757:U:C5	3.09	0.41
2:BA:851:G:C2	2:BA:852:G:C8	3.08	0.41
2:BA:1041:G:O2'	2:BA:1042:A:H5'	2.21	0.41
2:BA:1092:A:C5	2:BA:1093:A:N6	2.89	0.41
2:BA:1098:C:C2	2:BA:1099:G:C8	3.09	0.41
2:BA:1302:C:H4'	2:BA:1303:C:OP2	2.20	0.41
2:BA:1320:C:H2'	2:BA:1321:U:C6	2.56	0.41
3:DA:63:A:H2'	3:DA:64:A:O5'	2.21	0.41
3:DA:352:A:H5'	3:DA:353:C:P	2.61	0.41
3:DA:379:G:C2'	3:DA:380:G:O5'	2.68	0.41
3:DA:500:G:N2	3:DA:502:A:H3'	2.36	0.41
3:DA:588:U:H1'	29:DE:85:PHE:CD1	2.56	0.41
3:DA:814:C:H2'	3:DA:815:C:C6	2.55	0.41
3:DA:901:C:C5	3:DA:902:C:C5	3.09	0.41
3:DA:914:G:C8	3:DA:914:G:H3'	2.56	0.41
3:DA:960:A:N7	3:DA:962:G:C8	2.89	0.41
3:DA:972:A:N1	3:DA:973:A:N6	2.68	0.41
3:DA:999:U:C5	3:DA:1154:G:C5	3.09	0.41
3:DA:1072:C:HO2'	3:DA:1094:U:H3	1.67	0.41
3:DA:1171:G:C2	3:DA:1172:C:N4	2.89	0.41
3:DA:1206:G:C5	3:DA:1207:C:C4	3.09	0.41
3:DA:1260:A:H2'	3:DA:1261:C:C6	2.56	0.41
3:DA:1294:U:O2	38:DO:23:ASN:ND2	2.53	0.41
3:DA:1299:G:O5'	3:DA:1299:G:H8	2.04	0.41
3:DA:1362:C:C2'	3:DA:1363:C:H5'	2.51	0.41
3:DA:1362:C:H2'	3:DA:1363:C:H5'	2.03	0.41
3:DA:1419:A:N7	3:DA:1421:G:C6	2.89	0.41
3:DA:1490:A:H2'	27:DC:97:ASP:HB2	2.03	0.41
3:DA:1512:C:C4	3:DA:1513:U:C5	3.09	0.41
3:DA:1644:C:C2'	3:DA:1645:G:H5'	2.51	0.41
3:DA:1684:G:C2	3:DA:1705:A:C2	3.08	0.41
3:DA:1733:G:C5	69:DA:3470:HOH:O	2.73	0.41
3:DA:1789:A:OP1	27:DC:220:ARG:HD3	2.21	0.41
3:DA:1796:U:H2'	3:DA:1797:G:H8	1.86	0.41
3:DA:1820:U:OP1	27:DC:176:ARG:HG2	2.21	0.41
3:DA:1936:A:H3'	3:DA:1937:A:H5'	2.03	0.41
3:DA:1954:G:C5'	69:DA:5487:HOH:O	2.68	0.41
3:DA:2046:G:C2'	69:DA:3696:HOH:O	2.69	0.41
3:DA:2074:U:H4'	3:DA:2598:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2247:A:H5'	69:DA:3622:HOH:O	2.19	0.41
3:DA:2302:U:C2	3:DA:2303:G:C8	3.09	0.41
3:DA:2346:A:H4'	3:DA:2347:C:OP2	2.21	0.41
3:DA:2348:U:H2'	3:DA:2349:G:O5'	2.21	0.41
3:DA:2409:G:H2'	3:DA:2410:G:O5'	2.21	0.41
3:DA:2439:A:C5'	69:DA:4217:HOH:O	2.69	0.41
3:DA:2461:A:H1'	3:DA:2492:U:N3	2.36	0.41
3:DA:2467:C:C2'	3:DA:2468:A:H5'	2.51	0.41
3:DA:2519:U:H5"	69:DA:4275:HOH:O	2.20	0.41
3:DA:2628:C:OP1	63:DA:3054:PUT:N1	2.54	0.41
3:DA:2656:U:C4	3:DA:2664:G:N2	2.89	0.41
4:CA:58:G:C4	4:CA:70:G:N2	2.89	0.41
4:CA:60:G:H5'	4:CA:74:A:H2	1.86	0.41
4:CA:64:A:C2	4:CA:65:U:C2	3.09	0.41
4:CA:193:U:C5	4:CA:194:G:N7	2.89	0.41
4:CA:323:C:H2'	29:CE:163:ASN:OD1	2.21	0.41
4:CA:372:G:OP2	48:CY:61:LYS:HE3	2.21	0.41
4:CA:376:G:H2'	4:CA:377:G:H8	1.86	0.41
4:CA:417:C:H2'	4:CA:418:C:H6	1.86	0.41
4:CA:465:G:C6	4:CA:466:A:N6	2.88	0.41
4:CA:560:C:H2'	4:CA:561:G:O4'	2.21	0.41
4:CA:571:U:H4'	4:CA:573:U:H5	1.86	0.41
4:CA:792:A:H2'	4:CA:2440:C:O2	2.21	0.41
4:CA:874:G:C2	4:CA:904:G:C2	3.09	0.41
4:CA:992:C:O2'	42:CS:89:HIS:CG	2.74	0.41
4:CA:1048:A:C6	4:CA:1111:A:C2	3.08	0.41
4:CA:1093:G:H1'	4:CA:1098:A:H61	1.85	0.41
4:CA:1094:U:OP1	31:CG:172:GLU:HG3	2.21	0.41
4:CA:1317:G:C6	4:CA:1318:U:C4	3.09	0.41
4:CA:1356:G:C2	4:CA:1357:C:C1'	3.04	0.41
4:CA:1409:U:H2'	4:CA:1410:G:O4'	2.21	0.41
4:CA:1427:A:H4'	4:CA:1428:C:O4'	2.21	0.41
4:CA:1431:A:H2'	4:CA:1431:A:N3	2.35	0.41
4:CA:1445:G:O6	4:CA:1465:G:O6	2.39	0.41
4:CA:1461:C:O5'	4:CA:1461:C:H6	2.04	0.41
4:CA:1530:G:H2'	4:CA:1531:C:O4'	2.21	0.41
4:CA:1531:C:N4	4:CA:1532:A:H62	2.18	0.41
4:CA:1587:G:H2'	4:CA:1588:G:H8	1.86	0.41
4:CA:1773:A:N3	4:CA:1978:A:H2	2.18	0.41
4:CA:1845:G:C4	4:CA:1846:G:C8	3.09	0.41
4:CA:1905:C:O2'	4:CA:1929:G:H1'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2123:G:N2	4:CA:2176:A:C2	2.89	0.41
4:CA:2124:G:N2	4:CA:2175:C:C2	2.89	0.41
4:CA:2127:G:O2'	4:CA:2173:A:N3	2.54	0.41
4:CA:2162:G:C4'	4:CA:2163:A:OP1	2.68	0.41
4:CA:2250:G:C2	37:CN:82:MET:CB	3.04	0.41
4:CA:2416:C:H2'	4:CA:2417:C:H6	1.86	0.41
4:CA:2544:G:H2'	4:CA:2545:G:C8	2.56	0.41
4:CA:2586:U:C5	4:CA:2608:G:N2	2.89	0.41
4:CA:2651:C:C2'	4:CA:2652:C:H5'	2.50	0.41
4:CA:2734:A:H61	4:CA:2770:G:C2'	2.33	0.41
4:CA:2739:U:C5	4:CA:2763:G:C5	3.09	0.41
4:CA:2785:C:H1'	28:CD:36:GLN:OE1	2.21	0.41
6:AB:73:LYS:NZ	6:AB:205:ASP:HA	2.36	0.41
6:AB:116:ASP:O	6:AB:120:GLN:CB	2.68	0.41
6:AB:117:LEU:HB3	6:AB:141:LEU:HD13	2.03	0.41
6:AB:186:ILE:HA	6:AB:200:ILE:HB	2.03	0.41
7:AC:5:VAL:HG22	7:AC:6:HIS:N	2.35	0.41
7:AC:155:GLY:HA2	7:AC:163:ALA:HB1	2.03	0.41
7:AC:173:VAL:O	7:AC:173:VAL:HG12	2.21	0.41
8:AD:88:GLU:HG2	8:AD:188:ARG:HD3	2.03	0.41
19:AO:57:LEU:O	19:AO:57:LEU:HD22	2.21	0.41
20:AP:11:ALA:O	20:AP:12:LYS:C	2.62	0.41
24:AT:44:LYS:CB	24:AT:87:ALA:HB1	2.51	0.41
6:BB:17:GLY:O	6:BB:18:HIS:HB2	2.21	0.41
6:BB:213:TYR:O	6:BB:216:ALA:HB3	2.21	0.41
7:BC:59:ARG:HB3	7:BC:63:SER:O	2.21	0.41
9:BE:15:LEU:C	9:BE:15:LEU:CD1	2.91	0.41
9:BE:56:VAL:N	9:BE:57:PRO:HD2	2.35	0.41
9:BE:83:HIS:CD2	12:BH:96:MET:HE3	2.55	0.41
9:BE:141:ILE:C	9:BE:143:GLY:N	2.74	0.41
11:BG:60:GLU:O	11:BG:63:GLU:N	2.54	0.41
13:BI:10:GLY:HA2	13:BI:81:HIS:ND1	2.36	0.41
13:BI:128:SER:O	13:BI:129:LYS:O	2.38	0.41
19:BO:24:SER:OG	19:BO:27:VAL:HG23	2.20	0.41
21:BQ:5:ILE:H	21:BQ:5:ILE:HG13	1.72	0.41
21:BQ:44:LEU:HD13	21:BQ:61:ILE:HD11	2.02	0.41
22:BR:51:TYR:O	22:BR:52:GLN:C	2.62	0.41
24:BT:55:GLN:N	24:BT:56:PRO:HD2	2.36	0.41
27:CC:110:LYS:HD2	27:CC:113:ASP:CG	2.46	0.41
27:CC:157:ALA:O	27:CC:196:ASN:N	2.50	0.41
29:CE:12:LEU:CD2	29:CE:13:THR:N	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CE:121:VAL:O	29:CE:190:ALA:N	2.53	0.41
29:CE:122:GLU:O	29:CE:190:ALA:HB3	2.21	0.41
32:CH:42:LYS:HD3	32:CH:43:ASN:OD1	2.21	0.41
33:CJ:14:ALA:HB3	33:CJ:51:GLY:CA	2.51	0.41
34:CK:37:ARG:HA	34:CK:118:MET:SD	2.61	0.41
34:CK:99:ARG:HB3	34:CK:103:ILE:HD12	2.02	0.41
35:CL:1:MET:HB2	35:CL:67:LYS:HG3	2.02	0.41
35:CL:47:ILE:HD12	35:CL:49:ARG:H	1.86	0.41
36:CM:55:MET:SD	36:CM:59:ARG:NH2	2.94	0.41
36:CM:101:ILE:CG1	36:CM:102:GLY:N	2.82	0.41
37:CN:118:LYS:HD3	37:CN:118:LYS:HA	1.89	0.41
40:CQ:26:GLU:HB2	40:CQ:86:LYS:HE2	2.02	0.41
44:CU:1:MET:HG3	44:CU:2:ILE:HD12	2.02	0.41
44:CU:9:LYS:HA	49:CZ:29:ARG:HH12	1.86	0.41
45:CV:73:ASN:HB2	45:CV:80:ASP:OD1	2.20	0.41
46:CW:38:LEU:HG	46:CW:40:ILE:HD13	2.02	0.41
49:CZ:45:GLN:O	49:CZ:47:ARG:N	2.52	0.41
52:C2:43:ARG:O	52:C2:44:GLN:HG2	2.20	0.41
27:DC:160:TYR:CD1	27:DC:160:TYR:C	2.99	0.41
56:DD:84:LEU:HD22	56:DD:88:GLU:HB3	2.02	0.41
29:DE:131:THR:CG2	29:DE:164:LEU:HD13	2.50	0.41
32:DH:68:ARG:HG2	32:DH:108:VAL:HG13	2.01	0.41
33:DJ:110:GLN:O	33:DJ:110:GLN:CG	2.69	0.41
34:DK:24:THR:O	34:DK:25:LEU:C	2.64	0.41
37:DN:3:GLN:HB2	69:DN:308:HOH:O	2.20	0.41
43:DT:9:HIS:HB3	69:DT:324:HOH:O	2.20	0.41
43:DT:69:LEU:HD12	43:DT:108:SER:C	2.46	0.41
57:D7:55:PRO:HB2	57:D7:56:PHE:H	1.69	0.41
1:AA:339:C:OP2	35:DL:98:ARG:HD3	2.21	0.41
1:AA:353:A:C2'	1:AA:354:G:OP2	2.68	0.41
1:AA:471:U:H2'	1:AA:472:U:H6	1.86	0.41
1:AA:597:G:H5"	1:AA:598:U:OP2	2.21	0.41
1:AA:659:U:H2'	1:AA:660:C:C6	2.56	0.41
1:AA:694:A:H2'	1:AA:695:A:O5'	2.21	0.41
1:AA:737:C:H2'	1:AA:738:C:H6	1.86	0.41
1:AA:771:G:H2'	1:AA:772:U:C6	2.55	0.41
1:AA:859:G:N3	1:AA:860:A:C8	2.89	0.41
1:AA:880:C:C6	1:AA:880:C:H3'	2.56	0.41
1:AA:1166:G:O6	1:AA:1168:U:H5"	2.21	0.41
1:AA:1344:C:OP1	13:AI:124:ARG:NE	2.54	0.41
1:AA:1406:U:H2'	1:AA:1407:5MC:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1480:A:C6	1:AA:1481:U:C4	3.09	0.41
2:BA:72:A:O2'	2:BA:73:C:H5'	2.20	0.41
2:BA:128:G:N1	2:BA:129:A:C6	2.89	0.41
2:BA:273:U:C2'	2:BA:274:A:H5'	2.51	0.41
2:BA:542:G:N3	2:BA:543:U:C6	2.88	0.41
2:BA:551:U:C4	2:BA:552:U:C4	3.09	0.41
2:BA:570:G:N3	2:BA:570:G:H2'	2.35	0.41
2:BA:627:G:OP1	20:BP:35:ARG:NH2	2.54	0.41
2:BA:932:C:O2	2:BA:933:G:C8	2.74	0.41
2:BA:1077:G:N2	2:BA:1081:A:C4	2.88	0.41
2:BA:1346:A:C1'	2:BA:1348:U:C6	3.04	0.41
2:BA:1518:A:C2	2:BA:1519:A:C2	3.09	0.41
69:BA:1902:HOH:O	20:BP:1:MET:HE3	2.20	0.41
3:DA:11:C:H2'	3:DA:12:U:H5'	2.03	0.41
3:DA:666:A:O2'	3:DA:667:U:H5'	2.21	0.41
3:DA:669:G:N3	3:DA:669:G:C2'	2.83	0.41
3:DA:882:G:N2	3:DA:895:U:H1'	2.36	0.41
3:DA:939:G:C6	3:DA:940:G:C5	3.09	0.41
3:DA:1085:A:N7	3:DA:1086:A:N6	2.69	0.41
3:DA:1140:C:O2'	3:DA:1141:U:H5'	2.20	0.41
3:DA:1376:C:H3'	69:DA:4583:HOH:O	2.21	0.41
3:DA:1485:U:H2'	3:DA:1486:U:O4'	2.20	0.41
3:DA:1618:6MZ:N7	69:DA:3829:HOH:O	2.37	0.41
3:DA:1760:C:C2'	3:DA:1761:C:H5'	2.51	0.41
3:DA:1866:A:C2	3:DA:1876:A:C5	3.09	0.41
3:DA:2162:G:OP2	3:DA:2162:G:H2'	2.21	0.41
3:DA:2378:A:H2'	3:DA:2379:G:O5'	2.21	0.41
4:CA:7:G:C6	4:CA:8:C:C4	3.09	0.41
4:CA:391:A:H5'	4:CA:412:A:H4'	2.03	0.41
4:CA:415:A:H1'	4:CA:1865:U:OP1	2.21	0.41
4:CA:445:C:H2'	4:CA:446:G:C8	2.56	0.41
4:CA:544:C:C4	4:CA:545:U:H6	2.39	0.41
4:CA:545:U:O2	4:CA:546:U:H4'	2.21	0.41
4:CA:570:G:C2'	4:CA:571:U:H5'	2.50	0.41
4:CA:712:G:OP1	19:BO:89:ARG:OXT	2.39	0.41
4:CA:734:A:C4	4:CA:735:A:C8	3.09	0.41
4:CA:776:G:N1	4:CA:2072:C:OP1	2.41	0.41
4:CA:1027:A:C6	4:CA:1126:A:N3	2.89	0.41
4:CA:1167:C:H2'	4:CA:1168:G:C5'	2.50	0.41
4:CA:1292:G:H2'	4:CA:1293:C:C6	2.55	0.41
4:CA:1327:A:P	69:CA:3457:HOH:O	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1345:C:H5'	4:CA:1396:U:O4	2.20	0.41
4:CA:1468:U:H5'	4:CA:1469:A:OP1	2.21	0.41
4:CA:1753:G:H5"	40:CQ:92:ARG:HD3	2.03	0.41
4:CA:1831:G:C6	4:CA:1832:C:C4	3.09	0.41
4:CA:1914:C:O2	4:CA:1914:C:O4'	2.39	0.41
4:CA:2079:U:H2'	4:CA:2080:A:H8	1.86	0.41
4:CA:2223:G:N3	4:CA:2223:G:H2'	2.35	0.41
4:CA:2706:A:C2'	4:CA:2707:U:O5'	2.69	0.41
4:CA:2740:A:H4'	55:C5:43:LYS:HE3	2.01	0.41
4:CA:2823:A:C2'	4:CA:2824:C:H5'	2.50	0.41
4:CA:2884:U:O4	51:C1:37:HIS:CE1	2.74	0.41
4:CA:2899:A:C2	4:CA:2900:A:C5	3.09	0.41
5:DB:85:G:H1'	67:DB:203:EDO:H11	2.03	0.41
5:CB:30:C:N4	5:CB:31:C:O2	2.54	0.41
6:AB:104:TRP:CH2	6:AB:155:GLY:C	2.99	0.41
6:AB:149:GLY:C	6:AB:151:ILE:H	2.29	0.41
8:AD:98:LEU:HD21	8:AD:123:ILE:HG13	2.02	0.41
17:AM:25:VAL:O	17:AM:25:VAL:HG23	2.20	0.41
17:AM:48:LEU:CD2	17:AM:53:ILE:HG12	2.50	0.41
18:AN:49:GLN:OE1	18:AN:49:GLN:HA	2.21	0.41
18:AN:100:SER:O	18:AN:101:TRP:HB3	2.20	0.41
6:BB:103:ASN:O	6:BB:104:TRP:C	2.64	0.41
13:BI:9:THR:HG1	13:BI:10:GLY:H	1.64	0.41
13:BI:43:THR:HG22	13:BI:44:ALA:N	2.36	0.41
15:BK:36:ASP:OD1	15:BK:40:ASN:N	2.43	0.41
25:BU:24:GLU:C	25:BU:26:ALA:N	2.78	0.41
28:CD:149:ASN:O	28:CD:151:THR:O	2.39	0.41
29:CE:105:LEU:O	29:CE:109:LEU:HB2	2.21	0.41
32:CH:68:ARG:HD2	32:CH:133:VAL:HG22	2.03	0.41
33:CJ:77:VAL:O	33:CJ:80:LYS:HE3	2.21	0.41
35:CL:108:ARG:NE	35:CL:116:ILE:CD1	2.84	0.41
38:CO:55:ALA:HA	38:CO:80:PHE:CZ	2.56	0.41
44:CU:45:ALA:O	44:CU:49:LYS:HG2	2.21	0.41
49:CZ:18:LEU:HG	49:CZ:53:VAL:HG11	2.02	0.41
54:C4:61:LEU:HB3	54:C4:64:ALA:HB2	2.02	0.41
29:DE:117:ARG:NH2	36:DM:1:MET:HB3	2.35	0.41
30:DF:72:SER:O	30:DF:73:VAL:HG13	2.21	0.41
32:DH:2:GLN:C	32:DH:19:VAL:O	2.63	0.41
33:DJ:68:PHE:C	33:DJ:69:VAL:O	2.62	0.41
33:DJ:102:ARG:HB2	33:DJ:141:ASP:HA	2.03	0.41
43:DT:11:ARG:C	69:DT:314:HOH:O	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DU:40:LYS:C	69:DU:201:HOH:O	2.57	0.41
57:D7:43:PRO:HB2	57:D7:44:TYR:H	1.64	0.41
1:AA:279:A:H5"	1:AA:281:G:O4'	2.21	0.40
1:AA:301:G:C2'	1:AA:302:G:H5'	2.51	0.40
1:AA:617:G:C2	1:AA:618:C:C5	3.09	0.40
1:AA:617:G:N1	1:AA:618:C:C5	2.89	0.40
1:AA:687:A:C2	1:AA:700:G:N3	2.89	0.40
1:AA:880:C:P	16:AL:5:ASN:HD22	2.43	0.40
1:AA:909:A:H2'	1:AA:910:C:O4'	2.21	0.40
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.86	0.40
1:AA:1160:G:C6	1:AA:1161:C:C5	3.10	0.40
1:AA:1160:G:C5	1:AA:1161:C:C5	3.09	0.40
1:AA:1215:G:O2'	1:AA:1216:A:H5'	2.21	0.40
1:AA:1259:C:O2'	1:AA:1284:C:H1'	2.21	0.40
1:AA:1305:G:H21	1:AA:1332:A:H2	1.69	0.40
1:AA:1320:C:N3	23:AS:36:ARG:NH1	2.70	0.40
1:AA:1500:A:OP2	1:AA:1505:G:OP1	2.39	0.40
2:BA:3:A:C6	2:BA:629:A:H4'	2.57	0.40
2:BA:29:U:H4'	2:BA:295:C:O3'	2.21	0.40
2:BA:181:A:N1	2:BA:195:A:C5	2.88	0.40
2:BA:186:C:N4	2:BA:187:G:C6	2.89	0.40
2:BA:256:U:H2'	2:BA:257:G:O4'	2.21	0.40
2:BA:519:C:H2'	2:BA:520:A:O4'	2.21	0.40
2:BA:570:G:H5"	2:BA:571:U:OP2	2.22	0.40
2:BA:666:G:H5'	2:BA:726:C:H1'	2.02	0.40
2:BA:670:G:O2'	2:BA:671:G:H5'	2.21	0.40
2:BA:771:G:O2'	2:BA:772:U:H5'	2.21	0.40
2:BA:1028:C:H1'	2:BA:1034:G:N2	2.36	0.40
2:BA:1181:G:O2'	2:BA:1182:G:C8	2.65	0.40
2:BA:1272:G:H2'	2:BA:1273:C:C5'	2.51	0.40
2:BA:1480:A:C5	2:BA:1481:U:C5	3.10	0.40
2:BA:1521:C:C2	2:BA:1522:U:C6	3.10	0.40
3:DA:273:G:N2	3:DA:365:U:C2	2.88	0.40
3:DA:341:C:H2'	3:DA:342:A:O4'	2.21	0.40
3:DA:483:A:C4	45:DV:57:ILE:HD11	2.55	0.40
3:DA:520:G:C6	3:DA:521:U:C4	3.09	0.40
3:DA:713:G:C6	3:DA:714:U:C4	3.10	0.40
3:DA:749:A:H5"	3:DA:750:A:OP2	2.21	0.40
3:DA:837:C:H3'	69:DA:4238:HOH:O	2.20	0.40
3:DA:955:PSU:P	69:DA:3323:HOH:O	2.75	0.40
3:DA:1012:U:O4	34:DK:30:THR:HG21	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1059:G:H5”	3:DA:1060:U:C2’	2.51	0.40
3:DA:1157:G:N2	3:DA:1158:C:C2	2.89	0.40
3:DA:1485:U:O2	3:DA:1505:A:C2	2.74	0.40
3:DA:1717:A:C2	3:DA:1718:G:H1’	2.56	0.40
3:DA:1732:C:H4’	3:DA:1733:G:OP2	2.22	0.40
3:DA:1936:A:C5	3:DA:1945:G:C5	3.09	0.40
3:DA:2020:A:H5’	51:D1:8:THR:CG2	2.51	0.40
3:DA:2162:G:OP1	3:DA:2171:A:H2’	2.20	0.40
3:DA:2380:C:N4	3:DA:2381:A:N6	2.70	0.40
3:DA:2477:U:O4	55:D5:9:THR:CG2	2.69	0.40
3:DA:2552:OMU:C2	3:DA:2554:U:H5’	2.51	0.40
3:DA:2581:G:C4	3:DA:2610:C:C5	3.10	0.40
3:DA:2622:U:C5’	69:DA:4393:HOH:O	2.66	0.40
4:CA:28:A:C6	4:CA:513:A:C8	3.09	0.40
4:CA:42:A:C2	4:CA:438:G:C2	3.10	0.40
4:CA:329:G:H4’	4:CA:330:A:OP2	2.21	0.40
4:CA:392:U:H2’	4:CA:393:C:C6	2.56	0.40
4:CA:396:G:O4’	48:CY:28:PHE:HB3	2.21	0.40
4:CA:469:G:O2’	4:CA:470:A:O4’	2.35	0.40
4:CA:669:G:C2	4:CA:801:G:C6	3.09	0.40
4:CA:709:U:H2’	4:CA:710:U:O4’	2.21	0.40
4:CA:849:A:H61	4:CA:928:A:H61	1.68	0.40
4:CA:977:G:C6	4:CA:978:G:N7	2.89	0.40
4:CA:1178:C:N4	4:CA:1180:U:C2	2.89	0.40
4:CA:1223:G:N2	4:CA:1226:A:OP2	2.39	0.40
4:CA:1288:G:C5	4:CA:1327:A:C2	3.09	0.40
4:CA:1331:G:O2’	4:CA:1332:G:H5”	2.21	0.40
4:CA:1579:A:H2’	4:CA:1580:A:O4’	2.22	0.40
4:CA:1856:U:O4	4:CA:1857:G:N1	2.54	0.40
4:CA:2199:A:C6	4:CA:2200:C:C2	3.09	0.40
4:CA:2395:C:H2’	4:CA:2396:G:O4’	2.20	0.40
4:CA:2796:U:C2	4:CA:2799:A:N6	2.86	0.40
5:CB:28:C:OP1	39:CP:36:TYR:OH	2.31	0.40
6:AB:111:ILE:O	6:AB:112:LYS:C	2.63	0.40
8:AD:11:LEU:O	8:AD:15:GLU:HG2	2.21	0.40
8:AD:23:SER:HB3	8:AD:161:LEU:CD1	2.51	0.40
8:AD:195:ILE:O	8:AD:195:ILE:HG13	2.21	0.40
10:AF:46:GLN:HA	10:AF:56:LYS:HG2	2.02	0.40
17:AM:45:ILE:O	17:AM:48:LEU:HB3	2.21	0.40
24:AT:80:THR:O	24:AT:84:ASN:OD1	2.39	0.40
7:BC:87:LEU:HA	7:BC:90:VAL:HG22	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BC:150:LYS:HG2	7:BC:201:TRP:CZ3	2.55	0.40
8:BD:187:GLU:O	8:BD:191:LEU:CD1	2.69	0.40
12:BH:95:VAL:O	12:BH:96:MET:C	2.62	0.40
13:BI:61:LEU:HD23	13:BI:61:LEU:H	1.86	0.40
15:BK:106:ARG:HH11	15:BK:106:ARG:HG2	1.86	0.40
17:BM:107:ARG:HH21	17:BM:110:LYS:HB3	1.86	0.40
19:BO:20:ASN:O	19:BO:22:THR:N	2.52	0.40
22:BR:23:TYR:CB	22:BR:58:ALA:HB1	2.52	0.40
22:BR:46:GLY:O	22:BR:47:THR:HG23	2.21	0.40
27:CC:159:THR:O	27:CC:194:VAL:HG13	2.21	0.40
28:CD:32:ASN:O	28:CD:96:ILE:HG13	2.21	0.40
29:CE:152:GLU:O	29:CE:154:ASP:N	2.53	0.40
32:CH:132:GLN:NE2	69:CH:201:HOH:O	2.54	0.40
33:CJ:21:PRO:HB2	33:CJ:22:PRO:HD3	2.03	0.40
45:CV:76:THR:CG2	45:CV:98:ASN:HD22	2.35	0.40
48:CY:71:ARG:HG3	48:CY:72:ALA:H	1.86	0.40
50:C0:4:ILE:HG13	50:C0:5:LYS:N	2.36	0.40
27:DC:259:ASN:OD1	27:DC:259:ASN:C	2.63	0.40
30:DF:3:LEU:HA	30:DF:3:LEU:HD23	1.90	0.40
32:DH:54:LEU:O	32:DH:54:LEU:HD23	2.21	0.40
36:DM:62:PRO:O	54:D4:12:ARG:HG2	2.21	0.40
38:DO:118:ARG:O	38:DO:120:GLU:N	2.43	0.40
43:DT:79:GLY:N	43:DT:100:THR:O	2.44	0.40
44:DU:30:ILE:HG12	44:DU:85:VAL:HB	2.03	0.40
44:DU:46:ALA:O	44:DU:47:VAL:C	2.64	0.40
47:DX:24:PHE:O	47:DX:25:GLY:C	2.62	0.40
57:D7:6:HIS:HB3	57:D7:7:PRO:CD	2.51	0.40
1:AA:38:G:C2	1:AA:397:A:C2	3.09	0.40
1:AA:131:A:C2	1:AA:132:C:C6	3.09	0.40
1:AA:131:A:N3	1:AA:132:C:C6	2.89	0.40
1:AA:163:C:H2'	1:AA:164:G:O4'	2.21	0.40
1:AA:261:U:H3'	1:AA:262:A:H5"	2.02	0.40
1:AA:338:A:N6	1:AA:339:C:C4	2.89	0.40
1:AA:526:C:P	69:AA:1755:HOH:O	2.78	0.40
1:AA:625:U:H2'	1:AA:626:G:H8	1.86	0.40
1:AA:658:C:N3	1:AA:659:U:C5	2.89	0.40
1:AA:746:A:N6	1:AA:747:A:N6	2.69	0.40
1:AA:953:G:C5	1:AA:1229:A:N1	2.89	0.40
1:AA:1113:C:O2'	7:AC:14:ILE:HD11	2.21	0.40
1:AA:1191:A:OP1	7:AC:4:LYS:HD3	2.21	0.40
1:AA:1202:U:N3	1:AA:1203:C:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1422:G:O3'	35:DL:49:ARG:NH2	2.54	0.40
1:AA:1494:G:C5	1:AA:1495:U:C5	3.08	0.40
2:BA:326:G:N2	69:BA:1736:HOH:O	2.54	0.40
2:BA:328:C:O2	2:BA:328:C:O2'	2.39	0.40
2:BA:577:G:N1	2:BA:578:C:C4	2.89	0.40
2:BA:671:G:N1	2:BA:672:U:C2	2.89	0.40
2:BA:1014:A:C8	2:BA:1015:G:N7	2.89	0.40
2:BA:1211:U:O2'	2:BA:1212:U:P	2.79	0.40
2:BA:1265:C:N3	2:BA:1271:A:H2	2.20	0.40
2:BA:1386:G:C2	2:BA:1387:G:N7	2.90	0.40
3:DA:37:C:H4'	3:DA:451:U:OP1	2.20	0.40
3:DA:303:G:H2'	3:DA:304:U:O4'	2.20	0.40
3:DA:484:C:C3'	3:DA:485:C:H5'	2.50	0.40
3:DA:757:G:H2'	3:DA:758:C:H5'	2.02	0.40
3:DA:830:G:H4'	3:DA:831:G:OP2	2.20	0.40
3:DA:880:G:N2	3:DA:898:C:O2	2.55	0.40
3:DA:1009:A:H3'	69:DA:4385:HOH:O	2.21	0.40
3:DA:1746:A:N3	3:DA:1747:U:C6	2.89	0.40
3:DA:1876:A:C2	3:DA:1877:A:C4	3.09	0.40
3:DA:2509:G:C2'	3:DA:2510:C:H5'	2.51	0.40
3:DA:2729:G:H5'	56:DD:190:LYS:HE2	2.02	0.40
3:DA:2826:A:C5	3:DA:2827:C:C5	3.10	0.40
4:CA:125:A:H5"	53:C3:19:ARG:HB2	2.02	0.40
4:CA:379:G:C4	4:CA:396:G:C2	3.10	0.40
4:CA:457:A:H4'	4:CA:458:G:OP1	2.21	0.40
4:CA:475:C:O2	4:CA:479:A:N6	2.49	0.40
4:CA:519:U:H2'	4:CA:520:G:O4'	2.20	0.40
4:CA:775:G:O6	4:CA:787:C:H2'	2.20	0.40
4:CA:974:G:H1'	4:CA:975:A:C8	2.56	0.40
4:CA:1004:U:H3	4:CA:1151:A:H61	1.69	0.40
4:CA:1033:U:H5"	4:CA:1033:U:H6	1.85	0.40
4:CA:1060:U:H4'	4:CA:1061:U:H5'	2.03	0.40
4:CA:1080:A:O2'	4:CA:1081:U:O5'	2.37	0.40
4:CA:1097:U:O2	33:CJ:8:VAL:HG11	2.20	0.40
4:CA:1139:G:OP1	34:CK:74:TYR:HE2	2.04	0.40
4:CA:1179:G:N7	4:CA:1180:U:H1'	2.36	0.40
4:CA:1333:G:C2	4:CA:1334:G:C8	3.09	0.40
4:CA:1338:G:O2'	4:CA:1392:A:N6	2.52	0.40
4:CA:1539:U:H2'	4:CA:1540:G:C8	2.56	0.40
4:CA:1565:C:H1'	4:CA:1566:A:H8	1.86	0.40
4:CA:1607:C:C4'	4:CA:1608:A:O5'	2.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1651:G:C2	4:CA:2007:U:C2	3.09	0.40
4:CA:1695:G:N3	4:CA:1695:G:H5"	2.36	0.40
4:CA:1697:G:H5"	4:CA:1979:U:OP1	2.22	0.40
4:CA:1838:C:N4	4:CA:1899:A:C4	2.89	0.40
4:CA:2080:A:C5'	48:CY:18:SER:HB2	2.51	0.40
4:CA:2476:A:N6	55:C5:9:THR:HG21	2.37	0.40
4:CA:2581:G:C2	4:CA:2610:C:C6	3.09	0.40
4:CA:2631:G:C6	4:CA:2632:A:N7	2.89	0.40
4:CA:2753:A:H2'	4:CA:2754:U:O4'	2.21	0.40
5:CB:38:C:H2'	5:CB:39:A:O4'	2.21	0.40
6:AB:87:CYS:C	6:AB:89:GLN:N	2.79	0.40
7:AC:6:HIS:HB3	18:AN:89:MET:HE3	2.03	0.40
8:AD:190:ASP:O	8:AD:191:LEU:HG	2.22	0.40
9:AE:82:GLN:OE1	9:AE:148:ASN:O	2.40	0.40
9:AE:90:THR:HG22	9:AE:91:GLY:H	1.86	0.40
9:AE:141:ILE:N	9:AE:141:ILE:CD1	2.84	0.40
13:AI:25:ASN:O	13:AI:61:LEU:O	2.38	0.40
14:AJ:53:ILE:HG13	18:AN:85:ARG:CZ	2.51	0.40
15:AK:52:PHE:CE2	15:AK:62:ALA:HA	2.56	0.40
21:AQ:81:LYS:C	21:AQ:81:LYS:HE2	2.47	0.40
25:AU:8:GLU:CD	25:AU:9:ASN:N	2.78	0.40
6:BB:222:ARG:NH2	69:BB:302:HOH:O	2.53	0.40
14:BJ:7:ARG:HD2	14:BJ:73:LEU:HD21	2.03	0.40
14:BJ:78:GLU:CG	14:BJ:83:THR:HG21	2.52	0.40
18:BN:18:LYS:HG2	18:BN:19:TYR:CD1	2.56	0.40
23:BS:17:LYS:O	23:BS:21:LYS:HB2	2.20	0.40
28:CD:2:ILE:HD12	28:CD:48:ILE:HD11	2.03	0.40
28:CD:32:ASN:O	28:CD:96:ILE:N	2.43	0.40
30:CF:107:VAL:HG22	30:CF:110:ILE:HD11	2.03	0.40
30:CF:123:GLY:C	30:CF:124:ARG:HG2	2.47	0.40
31:CG:39:ALA:HB2	31:CG:57:TYR:CG	2.57	0.40
31:CG:44:HIS:HD2	31:CG:49:LEU:HD21	1.85	0.40
32:CH:41:LYS:HA	32:CH:44:ILE:CD1	2.51	0.40
33:CJ:56:VAL:HG23	33:CJ:69:VAL:O	2.20	0.40
35:CL:63:VAL:HG23	35:CL:64:ARG:HG3	2.04	0.40
36:CM:76:GLU:HB2	36:CM:111:ILE:CD1	2.51	0.40
36:CM:85:VAL:O	36:CM:86:GLU:C	2.63	0.40
48:CY:36:ARG:HG2	48:CY:47:THR:HG22	2.02	0.40
51:C1:9:ARG:O	51:C1:12:ARG:HB3	2.21	0.40
52:C2:5:ARG:NH1	52:C2:23:THR:OG1	2.50	0.40
56:DD:149:ASN:CG	56:DD:150:MEQ:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DK:97:PRO:O	34:DK:98:GLU:C	2.65	0.40
36:DM:109:LYS:HE3	36:DM:126:ARG:HB3	2.03	0.40
43:DT:1:MET:HG2	43:DT:2:GLU:N	2.36	0.40
55:D5:13:ARG:O	55:D5:14:HIS:HB2	2.20	0.40
57:D7:29:ILE:CG2	57:D7:30:LYS:N	2.83	0.40
1:AA:205:A:C2'	1:AA:206:C:H5'	2.51	0.40
1:AA:342:C:H2'	1:AA:343:U:H5'	2.03	0.40
1:AA:408:A:H2'	1:AA:409:U:O5'	2.22	0.40
1:AA:423:G:H2'	1:AA:424:G:O4'	2.20	0.40
1:AA:621:A:H2'	1:AA:622:A:O4'	2.21	0.40
1:AA:637:C:C2'	1:AA:638:U:H5'	2.51	0.40
1:AA:792:A:H1'	1:AA:794:A:N7	2.36	0.40
1:AA:798:U:H2'	1:AA:799:G:O4'	2.20	0.40
1:AA:855:U:O2'	1:AA:856:C:H5'	2.22	0.40
1:AA:926:G:C6	1:AA:1505:G:C6	3.10	0.40
1:AA:1285:A:H4'	1:AA:1286:U:C5	2.56	0.40
1:AA:1314:C:C2	1:AA:1315:U:C6	3.10	0.40
1:AA:1368:A:C2	1:AA:1369:C:C5	3.09	0.40
1:AA:1427:C:C2'	1:AA:1428:A:H5'	2.51	0.40
2:BA:36:C:H2'	2:BA:37:U:O4'	2.21	0.40
2:BA:54:C:H2'	2:BA:352:C:H41	1.87	0.40
2:BA:70:U:C2	2:BA:94:G:N7	2.89	0.40
2:BA:121:U:C3'	2:BA:122:G:H5'	2.52	0.40
2:BA:244:U:C6	2:BA:894:G:N2	2.89	0.40
2:BA:441:A:C2	2:BA:497:G:C6	3.10	0.40
2:BA:702:A:H3'	2:BA:703:G:C5'	2.51	0.40
2:BA:728:A:N1	2:BA:729:A:C6	2.89	0.40
2:BA:751:U:H1'	19:BO:23:GLY:O	2.21	0.40
2:BA:862:C:C4	2:BA:863:U:C5	3.10	0.40
2:BA:939:G:C6	2:BA:940:C:N4	2.90	0.40
2:BA:1169:A:H2'	2:BA:1170:A:O4'	2.21	0.40
2:BA:1346:A:C8	2:BA:1348:U:C2	3.10	0.40
2:BA:1363:A:O2'	2:BA:1365:G:N7	2.50	0.40
2:BA:1367:C:C2'	2:BA:1368:A:O5'	2.69	0.40
2:BA:1420:U:C2'	2:BA:1421:G:H5'	2.52	0.40
2:BA:1424:U:P	69:BA:1772:HOH:O	2.79	0.40
2:BA:1474:U:H2'	2:BA:1475:G:O4'	2.21	0.40
3:DA:45:G:C5'	3:DA:46:G:H5'	2.51	0.40
3:DA:88:G:C6	3:DA:89:A:N7	2.90	0.40
3:DA:379:G:H5"	69:DA:3316:HOH:O	2.22	0.40
3:DA:459:U:O5'	69:DA:3559:HOH:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:526:A:H2'	69:DA:4839:HOH:O	2.21	0.40
3:DA:531:C:C5	3:DA:2035:G:C2	3.09	0.40
3:DA:603:A:C8	3:DA:655:A:C6	3.09	0.40
3:DA:696:G:N3	3:DA:696:G:H2'	2.37	0.40
3:DA:998:C:C2'	3:DA:999:U:O5'	2.69	0.40
3:DA:1041:G:O2'	3:DA:1042:G:H5'	2.21	0.40
3:DA:1080:A:H2'	3:DA:1081:U:C6	2.56	0.40
3:DA:1098:A:H5"	3:DA:1099:G:OP2	2.21	0.40
3:DA:1274:A:H2	3:DA:1644:C:O2	2.05	0.40
3:DA:1378:A:H4'	3:DA:1379:U:OP1	2.21	0.40
3:DA:1385:A:C2	3:DA:1386:C:N3	2.89	0.40
3:DA:1513:U:H2'	3:DA:1514:G:O4'	2.21	0.40
3:DA:1563:U:H2'	3:DA:1564:C:H6	1.86	0.40
3:DA:1826:G:H2'	3:DA:1827:U:H6	1.86	0.40
3:DA:2172:U:O5'	3:DA:2174:C:OP2	2.39	0.40
3:DA:2261:C:C2'	3:DA:2262:U:O5'	2.70	0.40
3:DA:2287:A:C8	3:DA:2289:G:C8	3.09	0.40
3:DA:2402:U:H2'	3:DA:2403:C:H5'	2.03	0.40
3:DA:2508:G:C2	3:DA:2582:G:C6	3.09	0.40
3:DA:2601:C:C2	3:DA:2603:G:N7	2.89	0.40
3:DA:2693:G:O2'	3:DA:2694:G:H5'	2.21	0.40
69:DA:3674:HOH:O	56:DD:190:LYS:HG2	2.20	0.40
4:CA:67:U:C2	4:CA:68:G:C8	3.09	0.40
4:CA:190:A:O2'	4:CA:679:C:H4'	2.20	0.40
4:CA:196:A:C2	36:CM:50:PHE:CZ	3.10	0.40
4:CA:585:G:O6	69:CA:3408:HOH:O	2.20	0.40
4:CA:784:G:H5'	4:CA:785:G:OP1	2.22	0.40
4:CA:977:G:C2	4:CA:978:G:C8	3.09	0.40
4:CA:988:A:H8	4:CA:988:A:O5'	2.03	0.40
4:CA:1131:G:N2	4:CA:2024:G:H21	2.20	0.40
4:CA:1345:C:C2	4:CA:1346:G:C8	3.10	0.40
4:CA:1358:G:H1'	4:CA:1374:G:N2	2.37	0.40
4:CA:1540:G:C6	4:CA:1541:C:C4	3.09	0.40
4:CA:1674:G:N1	4:CA:1989:G:O6	2.54	0.40
4:CA:1974:C:H3'	69:CA:3285:HOH:O	2.21	0.40
4:CA:2230:G:H8	69:CA:3397:HOH:O	2.03	0.40
4:CA:2343:U:H2'	4:CA:2344:U:C6	2.57	0.40
4:CA:2516:A:O2'	4:CA:2517:C:H5'	2.21	0.40
5:DB:25:U:O2	5:DB:25:U:H2'	2.20	0.40
5:DB:94:A:C6	5:DB:95:U:C4	3.09	0.40
5:CB:3:C:H6	5:CB:3:C:O5'	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AC:40:ARG:HH11	7:AC:55:ILE:HG13	1.85	0.40
7:AC:60:PRO:C	69:AC:301:HOH:O	2.65	0.40
11:AG:46:ALA:O	11:AG:50:LEU:N	2.46	0.40
14:AJ:19:ASP:N	14:AJ:19:ASP:OD1	2.53	0.40
17:AM:11:ASP:O	17:AM:12:HIS:HB2	2.20	0.40
20:AP:42:ILE:HD13	20:AP:42:ILE:HA	1.96	0.40
23:AS:68:GLY:CA	69:AS:101:HOH:O	2.70	0.40
23:AS:68:GLY:C	69:AS:101:HOH:O	2.64	0.40
24:AT:6:SER:O	24:AT:8:LYS:N	2.55	0.40
24:AT:59:ASP:O	24:AT:62:ALA:HB3	2.20	0.40
8:BD:62:ARG:HG2	8:BD:72:PHE:CD1	2.56	0.40
12:BH:10:MET:HE1	12:BH:36:ILE:HB	2.04	0.40
18:BN:3:GLN:HA	18:BN:6:LYS:HD3	2.03	0.40
23:BS:52:HIS:ND1	23:BS:57:HIS:CE1	2.89	0.40
28:CD:3:GLY:O	28:CD:4:LEU:HD13	2.21	0.40
29:CE:117:ARG:NH1	36:CM:2:ARG:HD3	2.36	0.40
30:CF:63:LYS:O	30:CF:63:LYS:HG2	2.21	0.40
34:CK:13:ARG:HB2	34:CK:53:TYR:CE2	2.57	0.40
41:CR:85:ALA:O	42:CS:50:GLY:O	2.40	0.40
42:CS:68:ARG:NH2	42:CS:90:ARG:HB2	2.36	0.40
56:DD:38:LYS:NZ	56:DD:81:GLU:OE1	2.52	0.40
31:DG:24:THR:C	31:DG:25:ILE:HG12	2.47	0.40
31:DG:154:GLU:HG2	31:DG:155:PRO:CD	2.50	0.40
32:DH:141:VAL:HG12	32:DH:142:ILE:N	2.36	0.40
33:DJ:6:ALA:O	33:DJ:58:ILE:HB	2.21	0.40
33:DJ:9:LYS:O	33:DJ:10:LEU:HB3	2.21	0.40
33:DJ:112:LYS:HD3	33:DJ:116:MET:HG3	2.03	0.40
35:DL:71:ARG:HH22	35:DL:123:LEU:C	2.30	0.40
39:DP:13:ARG:O	39:DP:14:ALA:C	2.63	0.40
1:AA:11:G:C4	1:AA:12:U:C6	3.10	0.40
1:AA:287:U:C2'	1:AA:288:A:H5'	2.52	0.40
1:AA:322:C:H41	1:AA:328:C:H6	1.70	0.40
1:AA:504:C:H3'	1:AA:504:C:H6	1.87	0.40
1:AA:702:A:N6	69:AA:1824:HOH:O	2.55	0.40
1:AA:973:G:H1'	14:AJ:56:HIS:HD2	1.86	0.40
1:AA:995:C:N3	1:AA:1046:A:O2'	2.51	0.40
1:AA:1018:G:C2	1:AA:1019:A:C8	3.09	0.40
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.51	0.40
1:AA:1055:A:N1	1:AA:1206:G:C4	2.89	0.40
1:AA:1063:C:H42	1:AA:1193:G:H1	1.69	0.40
1:AA:1089:G:H2'	1:AA:1090:U:H5'	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.51	0.40
2:BA:32:A:N1	2:BA:33:A:C6	2.89	0.40
2:BA:373:A:N3	2:BA:374:A:C8	2.89	0.40
2:BA:782:A:C2'	2:BA:783:C:H5'	2.51	0.40
2:BA:1138:G:C2	2:BA:1140:C:C5	3.09	0.40
2:BA:1151:A:N3	2:BA:1152:A:C8	2.90	0.40
2:BA:1508:A:H2'	2:BA:1509:C:O4'	2.22	0.40
3:DA:248:G:O5'	3:DA:249:C:H5"	2.21	0.40
3:DA:359:G:H2'	3:DA:360:U:H5'	2.02	0.40
3:DA:375:G:C2'	3:DA:376:G:H5'	2.51	0.40
3:DA:508:A:H4'	3:DA:509:C:OP2	2.21	0.40
3:DA:613:A:C8	3:DA:616:A:N1	2.90	0.40
3:DA:769:U:C2	3:DA:770:G:C8	3.09	0.40
3:DA:826:U:O2'	36:DM:53:GLY:HA3	2.22	0.40
3:DA:984:A:N3	3:DA:984:A:H2'	2.36	0.40
3:DA:1080:A:H5"	3:DA:1081:U:OP1	2.21	0.40
3:DA:1738:G:O2'	3:DA:1739:A:O5'	2.39	0.40
3:DA:1796:U:O2	3:DA:1796:U:C2'	2.66	0.40
3:DA:1803:A:P	69:DA:3225:HOH:O	2.67	0.40
3:DA:1816:C:H3'	27:DC:61:TYR:CE1	2.57	0.40
3:DA:2155:U:O4	3:DA:2156:G:C6	2.75	0.40
3:DA:2340:A:C2	3:DA:2341:G:C5	3.09	0.40
3:DA:2704:C:H2'	3:DA:2705:A:O4'	2.22	0.40
3:DA:2886:A:C2	3:DA:2887:A:C1'	3.03	0.40
4:CA:52:A:H2	4:CA:179:C:O4'	2.04	0.40
4:CA:163:C:O2'	4:CA:164:C:H5'	2.21	0.40
4:CA:220:G:H2'	4:CA:221:A:N7	2.36	0.40
4:CA:246:C:O2'	4:CA:385:C:H4'	2.22	0.40
4:CA:307:G:N2	4:CA:309:A:H3'	2.35	0.40
4:CA:397:U:H2'	4:CA:398:C:C6	2.57	0.40
4:CA:578:G:H3'	4:CA:579:G:H5"	2.03	0.40
4:CA:626:A:H3'	4:CA:627:A:H5"	2.03	0.40
4:CA:659:G:H2'	4:CA:660:C:C6	2.56	0.40
4:CA:674:G:H1'	29:CE:69:ARG:HD3	2.03	0.40
4:CA:1199:U:H2'	4:CA:1200:C:C6	2.57	0.40
4:CA:1220:G:C2	4:CA:1230:A:C2	3.10	0.40
4:CA:1317:G:C2	4:CA:1336:A:N1	2.89	0.40
4:CA:1565:C:O2	4:CA:1566:A:H8	2.04	0.40
4:CA:1572:A:H2'	4:CA:1573:G:H8	1.86	0.40
4:CA:1931:U:H2'	4:CA:1932:A:H8	1.86	0.40
4:CA:1946:U:H2'	4:CA:1947:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2053:G:H21	4:CA:2054:A:H1'	1.85	0.40
4:CA:2235:G:C6	4:CA:2236:U:C4	3.10	0.40
4:CA:2571:U:C4	4:CA:2574:G:H8	2.38	0.40
4:CA:2577:A:H5"	4:CA:2578:G:H5'	2.02	0.40
4:CA:2646:C:N4	4:CA:2675:A:N1	2.70	0.40
4:CA:2706:A:C2	4:CA:2707:U:H1'	2.56	0.40
5:DB:3:C:C2'	5:DB:4:C:H5'	2.52	0.40
5:CB:97:C:C5	5:CB:98:G:C8	3.10	0.40
6:AB:91:PHE:CD1	6:AB:91:PHE:N	2.88	0.40
6:AB:129:LEU:HD22	6:AB:129:LEU:HA	2.00	0.40
7:AC:7:PRO:HG2	7:AC:184:TYR:CB	2.51	0.40
8:AD:105:MET:CG	8:AD:171:LEU:HD13	2.51	0.40
9:AE:101:GLU:HB3	9:AE:122:ASN:OD1	2.22	0.40
12:AH:26:THR:HG22	12:AH:60:GLU:HB2	2.02	0.40
16:AL:36:ARG:O	16:AL:53:CYS:HA	2.22	0.40
6:BB:132:LYS:O	6:BB:136:MET:HB3	2.21	0.40
6:BB:136:MET:C	6:BB:139:ARG:HD2	2.46	0.40
10:BF:41:ASP:CG	10:BF:58:HIS:HE2	2.27	0.40
13:BI:87:LEU:HD23	13:BI:87:LEU:HA	1.95	0.40
26:BL:3:THR:HB	26:BL:6:GLN:HB2	2.04	0.40
26:BL:27:CYS:HB3	26:BL:29:GLN:O	2.22	0.40
26:BL:43:LYS:O	26:BL:45:PRO:HD2	2.21	0.40
19:BO:60:VAL:O	19:BO:63:ARG:N	2.55	0.40
20:BP:7:ALA:HA	20:BP:28:ARG:HG2	2.04	0.40
22:BR:20:GLU:N	22:BR:55:LEU:CD1	2.85	0.40
22:BR:63:ARG:HB3	22:BR:70:TYR:CE1	2.57	0.40
27:CC:120:ASP:O	27:CC:121:ALA:O	2.40	0.40
28:CD:97:SER:OG	28:CD:98:VAL:N	2.55	0.40
28:CD:101:PHE:HA	28:CD:104:VAL:CG1	2.52	0.40
32:CH:96:THR:HG22	32:CH:115:VAL:CG1	2.52	0.40
39:CP:31:THR:O	39:CP:102:ARG:NH1	2.51	0.40
43:CT:8:ARG:HB3	69:CT:201:HOH:O	2.21	0.40
44:CU:14:PRO:HD2	49:CZ:33:ALA:CB	2.52	0.40
44:CU:18:GLU:HB3	69:CU:106:HOH:O	2.21	0.40
45:CV:97:SER:O	45:CV:98:ASN:CB	2.68	0.40
48:CY:5:GLN:O	48:CY:70:LEU:HD21	2.22	0.40
53:C3:24:THR:OG1	53:C3:27:GLY:N	2.40	0.40
56:DD:62:LYS:N	56:DD:63:PRO:CD	2.85	0.40
35:DL:108:ARG:O	35:DL:108:ARG:CG	2.70	0.40
41:DR:56:PHE:O	41:DR:57:ARG:C	2.63	0.40
42:DS:51:VAL:N	42:DS:52:PRO:CA	2.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DW:50:MET:C	46:DW:52:ALA:H	2.30	0.40
46:DW:89:ILE:HG21	46:DW:91:PHE:CZ	2.57	0.40
51:D1:33:SER:OG	51:D1:35:GLU:HG3	2.21	0.40
57:D7:40:VAL:O	57:D7:41:THR:OG1	2.38	0.40
1:AA:173:U:C2	1:AA:197:A:C6	3.09	0.40
1:AA:428:G:OP2	8:AD:10:LYS:HD2	2.22	0.40
1:AA:587:G:N2	1:AA:755:G:C4	2.90	0.40
1:AA:778:G:OP2	1:AA:778:G:C8	2.73	0.40
1:AA:831:A:H2'	1:AA:832:G:O4'	2.22	0.40
1:AA:1057:G:O2'	1:AA:1058:G:H5'	2.22	0.40
1:AA:1201:A:H4'	1:AA:1202:U:C5'	2.52	0.40
1:AA:1316:G:H22	1:AA:1319:A:H5"	1.87	0.40
1:AA:1470:U:O2'	1:AA:1471:U:H5'	2.21	0.40
2:BA:51:A:C2	2:BA:116:A:H1'	2.57	0.40
2:BA:86:G:H1'	2:BA:87:C:O4'	2.21	0.40
2:BA:93:U:H2'	2:BA:95:C:H41	1.87	0.40
2:BA:240:G:OP1	2:BA:240:G:H4'	2.22	0.40
2:BA:253:A:H2'	2:BA:254:G:H8	1.87	0.40
2:BA:265:G:O2'	21:BQ:69:LYS:N	2.54	0.40
2:BA:374:A:C6	2:BA:375:U:C5	3.09	0.40
2:BA:415:A:O2'	3:DA:2152:G:N2	2.53	0.40
2:BA:529:G:O6	26:BL:46:ASN:HA	2.21	0.40
2:BA:575:G:C6	2:BA:821:G:C5	3.09	0.40
2:BA:577:G:H1'	2:BA:816:A:N3	2.36	0.40
2:BA:632:U:H2'	2:BA:633:G:OP1	2.22	0.40
2:BA:990:C:H2'	2:BA:991:U:C6	2.56	0.40
2:BA:1104:G:H4'	69:BA:1880:HOH:O	2.21	0.40
2:BA:1240:U:H5	11:BG:109:ARG:CZ	2.35	0.40
2:BA:1410:A:H2'	2:BA:1411:C:C6	2.55	0.40
2:BA:1441:A:H2'	2:BA:1441:A:N3	2.36	0.40
2:BA:1445:U:O2	2:BA:1457:G:C6	2.74	0.40
3:DA:11:C:C2'	3:DA:12:U:H5'	2.52	0.40
3:DA:388:G:N7	3:DA:390:U:H2'	2.37	0.40
3:DA:543:G:H8	3:DA:543:G:H5"	1.86	0.40
3:DA:696:G:C2'	3:DA:697:G:H5'	2.52	0.40
3:DA:739:A:H5"	69:DA:5762:HOH:O	2.21	0.40
3:DA:882:G:N2	3:DA:895:U:C2	2.90	0.40
3:DA:971:G:H2'	3:DA:972:A:H5'	2.03	0.40
3:DA:1499:C:O2'	3:DA:1500:G:H5'	2.21	0.40
3:DA:2018:G:O2'	3:DA:2019:A:H5'	2.21	0.40
3:DA:2172:U:OP2	3:DA:2174:C:OP2	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2369:A:N7	69:DA:3805:HOH:O	2.36	0.40
3:DA:2713:U:P	69:DA:3712:HOH:O	2.79	0.40
4:CA:3:U:H3	4:CA:2900:A:H61	1.69	0.40
4:CA:65:U:H3'	4:CA:66:C:C6	2.57	0.40
4:CA:372:G:C2	4:CA:400:G:N7	2.90	0.40
4:CA:387:U:O4'	4:CA:387:U:OP2	2.39	0.40
4:CA:396:G:O2'	4:CA:397:U:H5'	2.22	0.40
4:CA:432:A:H2'	4:CA:433:C:C6	2.55	0.40
4:CA:667:U:O4	4:CA:668:A:C5	2.74	0.40
4:CA:791:C:N3	4:CA:794:A:O4'	2.54	0.40
4:CA:928:A:H1'	50:C0:43:ILE:HD11	2.03	0.40
4:CA:1084:A:C2'	4:CA:1105:U:O2'	2.70	0.40
4:CA:1482:G:C2	4:CA:1483:G:C8	3.10	0.40
4:CA:1608:A:O3'	4:CA:1609:A:H3'	2.22	0.40
4:CA:1775:U:O4	4:CA:1789:A:H2	2.05	0.40
4:CA:1835:G:C2	4:CA:1836:C:C6	3.09	0.40
4:CA:2040:G:C6	4:CA:2041:U:C4	3.10	0.40
4:CA:2132:U:H5'	4:CA:2133:G:O5'	2.22	0.40
4:CA:2173:A:C6	4:CA:2174:C:N4	2.89	0.40
4:CA:2206:C:O2'	4:CA:2207:C:H5'	2.21	0.40
4:CA:2209:G:C2	4:CA:2216:G:C2	3.09	0.40
4:CA:2226:C:H2'	4:CA:2227:A:H8	1.87	0.40
4:CA:2323:G:H2'	4:CA:2324:U:O4'	2.22	0.40
4:CA:2419:U:H5"	52:C2:21:THR:HG21	2.04	0.40
4:CA:2604:U:O2	4:CA:2604:U:H2'	2.20	0.40
4:CA:2718:G:OP1	40:CQ:97:TYR:HD2	2.04	0.40
4:CA:2823:A:C8	4:CA:2823:A:O5'	2.75	0.40
6:AB:91:PHE:HD1	6:AB:91:PHE:N	2.19	0.40
11:AG:68:ASN:C	11:AG:70:ARG:H	2.29	0.40
11:AG:135:VAL:CG1	69:AG:203:HOH:O	2.70	0.40
18:AN:26:LEU:O	18:AN:27:LYS:HB3	2.21	0.40
6:BB:63:ARG:O	6:BB:64:LYS:O	2.40	0.40
6:BB:94:HIS:O	6:BB:95:ARG:C	2.64	0.40
8:BD:95:GLU:CD	8:BD:100:ASN:HD21	2.29	0.40
11:BG:23:LEU:HD23	11:BG:26:PHE:HB3	2.02	0.40
11:BG:25:LYS:O	11:BG:29:ILE:CG1	2.65	0.40
11:BG:139:GLU:HA	11:BG:139:GLU:OE1	2.21	0.40
14:BJ:18:ILE:HG23	14:BJ:19:ASP:OD2	2.21	0.40
15:BK:13:ARG:O	15:BK:14:LYS:CB	2.69	0.40
25:BU:15:ALA:O	25:BU:19:PHE:N	2.46	0.40
27:CC:234:GLY:HA3	27:CC:238:ASN:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CE:147:LEU:HB2	29:CE:183:PHE:CD1	2.57	0.40
46:CW:50:MET:HB3	46:CW:56:PHE:HD2	1.86	0.40
51:C1:37:HIS:C	51:C1:37:HIS:ND1	2.80	0.40
27:DC:85:ASN:O	27:DC:86:ARG:HB3	2.22	0.40
29:DE:59:PRO:HB2	29:DE:70:SER:OG	2.22	0.40
29:DE:149:ILE:HD12	29:DE:149:ILE:C	2.47	0.40
31:DG:88:LEU:N	31:DG:88:LEU:CD1	2.83	0.40
34:DK:31:GLU:OE1	69:DK:302:HOH:O	2.22	0.40
35:DL:121:GLU:OE2	40:DQ:64:SER:OG	2.21	0.40
38:DO:25:ALA:HB1	38:DO:48:VAL:HG22	2.03	0.40
38:DO:28:LEU:HD23	38:DO:48:VAL:HG21	2.03	0.40
45:DV:71:ILE:HD11	45:DV:82:VAL:HG23	2.04	0.40

All (2) 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:OP1	32:CH:93:SER:OG[4_455]	2.15	0.05
3:DA:2887:A:OP1	50:D0:1:ALA:N[4_545]	2.17	0.03

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
6	AB	216/218 (99%)	165 (76%)	20 (9%)	31 (14%)	0 0
6	BB	216/218 (99%)	162 (75%)	22 (10%)	32 (15%)	0 0
7	AC	204/206 (99%)	177 (87%)	19 (9%)	8 (4%)	2 10
7	BC	204/206 (99%)	180 (88%)	14 (7%)	10 (5%)	1 6
8	AD	203/205 (99%)	184 (91%)	9 (4%)	10 (5%)	1 6
8	BD	203/205 (99%)	188 (93%)	8 (4%)	7 (3%)	3 12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	AE	148/150 (99%)	123 (83%)	12 (8%)	13 (9%)	0 1
9	BE	148/150 (99%)	117 (79%)	18 (12%)	13 (9%)	0 1
10	AF	98/100 (98%)	85 (87%)	8 (8%)	5 (5%)	1 6
10	BF	98/100 (98%)	84 (86%)	9 (9%)	5 (5%)	1 6
11	AG	149/151 (99%)	131 (88%)	13 (9%)	5 (3%)	3 12
11	BG	149/151 (99%)	128 (86%)	18 (12%)	3 (2%)	6 22
12	AH	127/129 (98%)	116 (91%)	11 (9%)	0	100 100
12	BH	127/129 (98%)	115 (91%)	11 (9%)	1 (1%)	16 44
13	AI	125/127 (98%)	104 (83%)	17 (14%)	4 (3%)	3 13
13	BI	125/127 (98%)	96 (77%)	18 (14%)	11 (9%)	0 1
14	AJ	96/98 (98%)	68 (71%)	10 (10%)	18 (19%)	0 0
14	BJ	96/98 (98%)	65 (68%)	19 (20%)	12 (12%)	0 0
15	AK	115/117 (98%)	99 (86%)	12 (10%)	4 (4%)	3 12
15	BK	115/117 (98%)	98 (85%)	10 (9%)	7 (6%)	1 4
16	AL	120/123 (98%)	109 (91%)	8 (7%)	3 (2%)	4 17
17	AM	112/114 (98%)	93 (83%)	10 (9%)	9 (8%)	1 2
17	BM	112/114 (98%)	94 (84%)	10 (9%)	8 (7%)	1 2
18	AN	92/100 (92%)	66 (72%)	13 (14%)	13 (14%)	0 0
18	BN	92/100 (92%)	64 (70%)	13 (14%)	15 (16%)	0 0
19	AO	86/88 (98%)	77 (90%)	3 (4%)	6 (7%)	1 2
19	BO	86/88 (98%)	78 (91%)	1 (1%)	7 (8%)	1 1
20	AP	80/82 (98%)	64 (80%)	8 (10%)	8 (10%)	0 1
20	BP	80/82 (98%)	60 (75%)	15 (19%)	5 (6%)	1 3
21	AQ	78/80 (98%)	66 (85%)	7 (9%)	5 (6%)	1 3
21	BQ	78/80 (98%)	60 (77%)	12 (15%)	6 (8%)	1 2
22	AR	53/55 (96%)	49 (92%)	2 (4%)	2 (4%)	2 10
22	BR	53/55 (96%)	46 (87%)	4 (8%)	3 (6%)	1 4
23	AS	77/79 (98%)	61 (79%)	11 (14%)	5 (6%)	1 3
23	BS	77/79 (98%)	59 (77%)	13 (17%)	5 (6%)	1 3
24	AT	83/85 (98%)	75 (90%)	1 (1%)	7 (8%)	0 1
24	BT	83/85 (98%)	75 (90%)	4 (5%)	4 (5%)	2 7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
25	AU	52/54 (96%)	44 (85%)	5 (10%)	3 (6%)	1 4
25	BU	52/54 (96%)	43 (83%)	3 (6%)	6 (12%)	0 1
26	BL	121/123 (98%)	103 (85%)	9 (7%)	9 (7%)	1 2
27	CC	269/271 (99%)	247 (92%)	16 (6%)	6 (2%)	5 20
27	DC	269/271 (99%)	251 (93%)	15 (6%)	3 (1%)	11 36
28	CD	207/209 (99%)	189 (91%)	12 (6%)	6 (3%)	3 15
29	CE	199/201 (99%)	175 (88%)	17 (8%)	7 (4%)	3 12
29	DE	199/201 (99%)	187 (94%)	9 (4%)	3 (2%)	8 28
30	CF	175/177 (99%)	151 (86%)	15 (9%)	9 (5%)	1 6
30	DF	175/177 (99%)	161 (92%)	14 (8%)	0	100 100
31	CG	174/176 (99%)	138 (79%)	31 (18%)	5 (3%)	3 15
31	DG	174/176 (99%)	167 (96%)	7 (4%)	0	100 100
32	CH	146/148 (99%)	114 (78%)	24 (16%)	8 (6%)	1 4
32	DH	146/148 (99%)	117 (80%)	20 (14%)	9 (6%)	1 3
33	CJ	139/141 (99%)	89 (64%)	32 (23%)	18 (13%)	0 0
33	DJ	139/141 (99%)	87 (63%)	26 (19%)	26 (19%)	0 0
34	CK	140/142 (99%)	125 (89%)	12 (9%)	3 (2%)	5 21
34	DK	140/142 (99%)	137 (98%)	3 (2%)	0	100 100
35	CL	120/123 (98%)	104 (87%)	13 (11%)	3 (2%)	4 17
35	DL	121/123 (98%)	113 (93%)	5 (4%)	3 (2%)	4 17
36	CM	141/144 (98%)	113 (80%)	16 (11%)	12 (8%)	0 1
36	DM	142/144 (99%)	139 (98%)	2 (1%)	1 (1%)	18 48
37	CN	134/136 (98%)	120 (90%)	11 (8%)	3 (2%)	5 20
37	DN	135/136 (99%)	127 (94%)	8 (6%)	0	100 100
38	CO	118/120 (98%)	103 (87%)	11 (9%)	4 (3%)	3 12
38	DO	118/120 (98%)	108 (92%)	8 (7%)	2 (2%)	7 26
39	CP	114/117 (97%)	104 (91%)	5 (4%)	5 (4%)	2 8
39	DP	115/117 (98%)	110 (96%)	3 (3%)	2 (2%)	7 26
40	CQ	112/114 (98%)	101 (90%)	8 (7%)	3 (3%)	4 16
40	DQ	112/114 (98%)	106 (95%)	5 (4%)	1 (1%)	14 41
41	CR	115/117 (98%)	111 (96%)	3 (3%)	1 (1%)	14 41

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
41	DR	115/117 (98%)	114 (99%)	1 (1%)	0	100 100
42	CS	101/103 (98%)	89 (88%)	7 (7%)	5 (5%)	1 6
42	DS	101/103 (98%)	95 (94%)	6 (6%)	0	100 100
43	CT	108/110 (98%)	97 (90%)	9 (8%)	2 (2%)	6 23
43	DT	108/110 (98%)	104 (96%)	4 (4%)	0	100 100
44	CU	91/93 (98%)	74 (81%)	13 (14%)	4 (4%)	2 8
44	DU	90/93 (97%)	82 (91%)	6 (7%)	2 (2%)	5 20
45	CV	100/102 (98%)	79 (79%)	15 (15%)	6 (6%)	1 4
45	DV	100/102 (98%)	91 (91%)	4 (4%)	5 (5%)	1 6
46	CW	92/94 (98%)	84 (91%)	8 (9%)	0	100 100
46	DW	92/94 (98%)	89 (97%)	3 (3%)	0	100 100
47	CX	73/76 (96%)	70 (96%)	3 (4%)	0	100 100
47	DX	76/76 (100%)	72 (95%)	3 (4%)	1 (1%)	9 32
48	CY	75/77 (97%)	69 (92%)	3 (4%)	3 (4%)	2 9
48	DY	75/77 (97%)	72 (96%)	3 (4%)	0	100 100
49	CZ	60/62 (97%)	51 (85%)	7 (12%)	2 (3%)	3 13
49	DZ	60/62 (97%)	55 (92%)	2 (3%)	3 (5%)	1 6
50	C0	56/58 (97%)	51 (91%)	3 (5%)	2 (4%)	2 11
50	D0	57/58 (98%)	56 (98%)	1 (2%)	0	100 100
51	C1	54/56 (96%)	41 (76%)	10 (18%)	3 (6%)	1 4
51	D1	54/56 (96%)	49 (91%)	3 (6%)	2 (4%)	2 11
52	C2	48/51 (94%)	41 (85%)	6 (12%)	1 (2%)	5 21
52	D2	49/51 (96%)	46 (94%)	2 (4%)	1 (2%)	6 22
53	C3	44/46 (96%)	40 (91%)	2 (4%)	2 (4%)	2 8
53	D3	44/46 (96%)	42 (96%)	2 (4%)	0	100 100
54	C4	62/64 (97%)	56 (90%)	4 (6%)	2 (3%)	3 13
54	D4	62/64 (97%)	59 (95%)	3 (5%)	0	100 100
55	C5	42/45 (93%)	26 (62%)	12 (29%)	4 (10%)	0 1
55	D5	43/45 (96%)	30 (70%)	6 (14%)	7 (16%)	0 0
56	DD	206/209 (99%)	198 (96%)	7 (3%)	1 (0%)	24 54
57	D7	66/68 (97%)	23 (35%)	22 (33%)	21 (32%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	11321/11536 (98%)	9810 (87%)	961 (8%)	550 (5%)	1 6

All (550) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	AB	10	LEU
6	AB	33	GLY
6	AB	88	ASP
6	AB	126	PHE
6	AB	150	GLY
6	AB	152	LYS
6	AB	155	GLY
6	AB	182	PRO
6	AB	201	PRO
6	AB	220	THR
7	AC	61	ALA
7	AC	127	ARG
7	AC	139	GLN
7	AC	140	ASN
8	AD	5	LEU
8	AD	20	PHE
8	AD	151	LYS
8	AD	168	PRO
8	AD	191	LEU
8	AD	192	SER
8	AD	193	ALA
9	AE	24	THR
9	AE	51	GLY
9	AE	103	THR
9	AE	109	GLY
9	AE	150	PRO
10	AF	6	ILE
10	AF	99	ALA
11	AG	57	SER
11	AG	146	GLU
13	AI	58	VAL
13	AI	91	ASP
14	AJ	34	ALA
14	AJ	35	GLN
14	AJ	41	PRO
14	AJ	57	VAL
14	AJ	61	ALA

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Mol	Chain	Res	Type
14	AJ	74	VAL
14	AJ	93	ALA
15	AK	14	LYS
15	AK	52	PHE
15	AK	89	PRO
16	AL	3	THR
16	AL	103	ASP
16	AL	123	LYS
17	AM	3	ARG
17	AM	5	ALA
17	AM	27	LYS
17	AM	114	LYS
18	AN	22	LYS
18	AN	26	LEU
18	AN	42	TRP
18	AN	43	ASN
18	AN	45	VAL
18	AN	47	LYS
18	AN	62	ASN
18	AN	92	GLU
20	AP	43	ALA
20	AP	46	LYS
21	AQ	13	VAL
21	AQ	80	GLU
21	AQ	82	ALA
24	AT	4	ILE
24	AT	6	SER
24	AT	69	LYS
25	AU	8	GLU
25	AU	9	ASN
6	BB	10	LEU
6	BB	16	PHE
6	BB	19	GLN
6	BB	20	THR
6	BB	21	ARG
6	BB	34	ALA
6	BB	74	ARG
6	BB	87	CYS
6	BB	103	ASN
6	BB	123	ASP
6	BB	124	GLY
6	BB	126	PHE

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Mol	Chain	Res	Type
6	BB	149	GLY
6	BB	152	LYS
6	BB	193	PRO
6	BB	194	ASP
6	BB	222	ARG
7	BC	66	VAL
7	BC	127	ARG
7	BC	140	ASN
7	BC	156	ARG
8	BD	5	LEU
8	BD	34	ILE
8	BD	192	SER
8	BD	193	ALA
9	BE	24	THR
9	BE	45	ARG
9	BE	51	GLY
9	BE	100	SER
9	BE	101	GLU
9	BE	102	GLY
9	BE	103	THR
9	BE	123	VAL
10	BF	53	LYS
10	BF	98	GLU
13	BI	26	GLY
13	BI	38	TYR
13	BI	56	ASP
13	BI	58	VAL
13	BI	129	LYS
14	BJ	93	ALA
15	BK	41	ALA
26	BL	24	LEU
26	BL	44	LYS
17	BM	5	ALA
17	BM	14	HIS
18	BN	17	ASP
18	BN	26	LEU
18	BN	45	VAL
18	BN	49	GLN
18	BN	53	ARG
18	BN	60	GLN
18	BN	62	ASN
20	BP	15	PRO

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Mol	Chain	Res	Type
20	BP	43	ALA
20	BP	80	LYS
21	BQ	5	ILE
21	BQ	17	MET
21	BQ	70	THR
22	BR	21	ILE
22	BR	47	THR
23	BS	5	LEU
23	BS	28	LYS
24	BT	6	SER
25	BU	12	PHE
25	BU	26	ALA
25	BU	27	GLY
27	CC	2	VAL
27	CC	121	ALA
28	CD	151	THR
28	CD	152	PRO
28	CD	174	SER
29	CE	42	GLY
29	CE	153	LEU
30	CF	61	GLY
30	CF	122	ASP
31	CG	91	VAL
31	CG	118	ALA
32	CH	3	VAL
32	CH	9	VAL
32	CH	10	ALA
32	CH	136	GLU
33	CJ	14	ALA
33	CJ	85	ILE
33	CJ	89	SER
33	CJ	92	PRO
33	CJ	116	MET
34	CK	81	ILE
35	CL	119	ALA
35	CL	120	PRO
36	CM	82	LEU
36	CM	111	ILE
36	CM	137	ALA
36	CM	140	GLY
37	CN	61	GLY
38	CO	70	THR

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Mol	Chain	Res	Type
38	CO	104	ALA
38	CO	105	GLY
40	CQ	93	LYS
40	CQ	113	LEU
43	CT	65	ASP
44	CU	17	SER
44	CU	46	ALA
45	CV	6	ARG
48	CY	62	GLY
50	C0	3	THR
51	C1	55	ALA
53	C3	45	SER
56	DD	86	GLU
32	DH	3	VAL
32	DH	13	GLY
32	DH	28	ASN
32	DH	41	LYS
33	DJ	6	ALA
33	DJ	18	ASN
33	DJ	44	LYS
33	DJ	57	VAL
33	DJ	62	ALA
33	DJ	82	ALA
33	DJ	116	MET
35	DL	108	ARG
35	DL	110	GLU
38	DO	118	ARG
38	DO	119	SER
44	DU	3	ARG
45	DV	51	LEU
45	DV	97	SER
47	DX	9	ARG
49	DZ	46	VAL
51	D1	55	ALA
52	D2	4	ILE
57	D7	5	ILE
57	D7	18	SER
57	D7	27	SER
57	D7	34	GLU
57	D7	35	ILE
57	D7	37	LEU
57	D7	40	VAL

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Mol	Chain	Res	Type
57	D7	47	ILE
57	D7	56	PHE
6	AB	12	ALA
6	AB	34	ALA
6	AB	68	LEU
6	AB	86	SER
6	AB	87	CYS
6	AB	120	GLN
6	AB	130	THR
6	AB	149	GLY
6	AB	202	GLY
7	AC	62	LYS
8	AD	25	VAL
8	AD	169	THR
9	AE	12	GLN
9	AE	99	ALA
9	AE	108	GLY
9	AE	110	ALA
9	AE	138	ARG
11	AG	56	LYS
11	AG	69	VAL
13	AI	39	PHE
13	AI	120	LYS
14	AJ	28	THR
14	AJ	30	LYS
14	AJ	33	GLY
14	AJ	36	VAL
14	AJ	62	ARG
14	AJ	101	SER
15	AK	90	GLY
17	AM	4	ILE
17	AM	12	HIS
17	AM	13	LYS
18	AN	27	LYS
18	AN	34	ASN
18	AN	44	ALA
18	AN	48	LEU
19	AO	3	LEU
19	AO	47	LYS
19	AO	88	ARG
20	AP	44	SER
20	AP	80	LYS

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Mol	Chain	Res	Type
23	AS	6	LYS
24	AT	5	LYS
25	AU	13	ASP
6	BB	22	TYR
6	BB	64	LYS
6	BB	86	SER
6	BB	97	LEU
6	BB	100	MET
6	BB	119	THR
6	BB	120	GLN
7	BC	81	GLY
7	BC	139	GLN
7	BC	141	ALA
8	BD	24	GLY
9	BE	138	ARG
9	BE	155	ALA
9	BE	157	ARG
11	BG	37	SER
13	BI	10	GLY
13	BI	41	ARG
13	BI	121	ALA
14	BJ	17	LEU
14	BJ	41	PRO
14	BJ	57	VAL
14	BJ	89	ARG
14	BJ	90	LEU
15	BK	50	SER
15	BK	52	PHE
15	BK	93	ARG
26	BL	25	GLU
26	BL	76	GLU
26	BL	89	ASP
17	BM	4	ILE
17	BM	67	GLY
18	BN	2	LYS
18	BN	27	LYS
18	BN	55	SER
18	BN	61	ARG
19	BO	18	ASP
19	BO	73	LYS
19	BO	88	ARG
20	BP	79	ASN

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Mol	Chain	Res	Type
23	BS	6	LYS
24	BT	7	ALA
24	BT	68	HIS
25	BU	9	ASN
25	BU	13	ASP
29	CE	6	LYS
29	CE	82	GLY
30	CF	101	ARG
30	CF	120	SER
31	CG	174	LYS
32	CH	16	GLY
33	CJ	71	LYS
33	CJ	97	VAL
33	CJ	100	ILE
33	CJ	111	THR
33	CJ	117	THR
33	CJ	133	ARG
33	CJ	136	GLY
34	CK	25	LEU
35	CL	35	VAL
36	CM	22	GLY
39	CP	57	ALA
39	CP	59	ALA
39	CP	101	GLY
40	CQ	104	GLY
42	CS	23	GLU
42	CS	29	THR
43	CT	63	GLY
44	CU	18	GLU
44	CU	38	ALA
45	CV	7	ASP
45	CV	51	LEU
45	CV	74	ALA
45	CV	98	ASN
48	CY	72	ALA
51	C1	51	ARG
53	C3	44	VAL
54	C4	55	GLY
55	C5	22	ARG
55	C5	43	LYS
27	DC	196	ASN
27	DC	252	LYS

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Mol	Chain	Res	Type
29	DE	10	SER
32	DH	2	GLN
33	DJ	2	LYS
33	DJ	3	LYS
33	DJ	10	LEU
33	DJ	24	GLY
33	DJ	37	PHE
33	DJ	48	ILE
33	DJ	58	ILE
33	DJ	59	THR
33	DJ	69	VAL
33	DJ	77	VAL
49	DZ	62	GLY
55	D5	19	ILE
55	D5	43	LYS
55	D5	44	LYS
57	D7	41	THR
57	D7	43	PRO
57	D7	53	SER
57	D7	54	HIS
6	AB	15	HIS
6	AB	21	ARG
6	AB	107	VAL
7	AC	66	VAL
7	AC	146	ALA
10	AF	69	GLU
10	AF	98	GLU
14	AJ	24	GLU
14	AJ	32	THR
14	AJ	38	GLY
21	AQ	16	LYS
22	AR	73	ARG
23	AS	4	SER
23	AS	5	LEU
24	AT	7	ALA
6	BB	82	ASP
6	BB	101	LEU
6	BB	136	MET
6	BB	219	ALA
6	BB	225	ARG
7	BC	17	PRO
7	BC	80	LYS

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Mol	Chain	Res	Type
9	BE	142	ASP
10	BF	52	ASN
14	BJ	43	PRO
14	BJ	95	GLY
14	BJ	101	SER
15	BK	92	GLY
17	BM	114	LYS
18	BN	46	LEU
18	BN	58	SER
19	BO	21	ASP
19	BO	46	HIS
19	BO	47	LYS
19	BO	72	ARG
21	BQ	82	ALA
22	BR	43	ARG
23	BS	74	PHE
24	BT	5	LYS
28	CD	86	GLU
28	CD	130	GLN
30	CF	106	ALA
30	CF	148	VAL
30	CF	176	PHE
31	CG	117	PRO
32	CH	2	GLN
33	CJ	30	GLN
33	CJ	83	ALA
33	CJ	107	GLU
36	CM	29	LYS
36	CM	40	SER
36	CM	69	ARG
36	CM	115	GLU
37	CN	69	PRO
37	CN	119	LEU
39	CP	66	GLY
42	CS	53	PHE
45	CV	97	SER
49	CZ	37	LEU
49	CZ	57	LEU
51	C1	54	ILE
55	C5	19	ILE
29	DE	6	LYS
32	DH	9	VAL

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Mol	Chain	Res	Type
32	DH	119	ASN
33	DJ	29	GLN
40	DQ	113	LEU
55	D5	42	ARG
57	D7	8	GLU
57	D7	55	PRO
6	AB	76	ALA
6	AB	119	THR
6	AB	183	VAL
7	AC	103	ILE
8	AD	131	ASN
9	AE	78	ASN
11	AG	80	VAL
19	AO	18	ASP
20	AP	79	ASN
21	AQ	6	ARG
6	BB	15	HIS
6	BB	139	ARG
8	BD	167	LYS
13	BI	44	ALA
14	BJ	36	VAL
26	BL	26	ALA
17	BM	82	ASP
18	BN	28	ALA
21	BQ	18	GLU
28	CD	30	GLU
30	CF	173	ASP
30	CF	174	PHE
31	CG	58	ALA
32	CH	33	GLN
33	CJ	22	PRO
33	CJ	64	ARG
36	CM	70	LYS
36	CM	87	GLY
38	CO	118	ARG
39	CP	100	HIS
54	C4	29	ARG
29	DE	9	GLN
33	DJ	22	PRO
33	DJ	97	VAL
33	DJ	112	LYS
33	DJ	114	ALA

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Mol	Chain	Res	Type
39	DP	2	ASP
45	DV	96	LYS
51	D1	54	ILE
55	D5	23	LYS
57	D7	7	PRO
57	D7	26	GLY
6	AB	13	GLY
6	AB	16	PHE
6	AB	73	LYS
6	AB	161	LEU
9	AE	45	ARG
9	AE	98	PRO
14	AJ	42	LEU
14	AJ	75	ASP
17	AM	105	ASN
18	AN	52	PRO
19	AO	21	ASP
19	AO	46	HIS
20	AP	48	GLU
22	AR	22	ASP
23	AS	29	LYS
24	AT	86	LEU
6	BB	68	LEU
11	BG	82	GLY
11	BG	130	ASN
13	BI	42	GLU
14	BJ	34	ALA
26	BL	22	PRO
27	CC	123	ILE
27	CC	239	PHE
27	CC	260	LYS
29	CE	5	LEU
32	CH	31	VAL
33	CJ	8	VAL
41	CR	58	GLN
33	DJ	105	LEU
35	DL	120	PRO
39	DP	100	HIS
45	DV	49	PRO
45	DV	53	GLN
49	DZ	61	ALA
55	D5	4	LEU

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Mol	Chain	Res	Type
57	D7	45	VAL
6	AB	219	ALA
10	AF	54	LEU
20	AP	45	GLU
7	BC	125	GLU
10	BF	54	LEU
10	BF	93	LYS
12	BH	88	ARG
13	BI	55	VAL
15	BK	15	GLN
15	BK	89	PRO
26	BL	77	HIS
17	BM	13	LYS
27	CC	252	LYS
42	CS	55	ASP
52	C2	15	GLY
33	DJ	74	PRO
36	DM	29	LYS
55	D5	6	SER
57	D7	2	LYS
57	D7	9	TYR
20	AP	10	GLY
24	AT	42	GLY
55	C5	3	VAL
44	DU	90	GLY
57	D7	19	VAL
8	BD	45	LYS
18	BN	52	PRO
48	CY	11	PRO
27	DC	125	PRO
32	DH	121	VAL
33	DJ	12	VAL
33	DJ	100	ILE
6	AB	67	ILE
9	BE	143	GLY
20	BP	14	ARG
50	C0	13	ILE
32	DH	72	ILE
17	AM	38	GLY
23	AS	68	GLY
14	BJ	38	GLY
26	BL	45	PRO

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Mol	Chain	Res	Type
17	BM	7	ILE
21	BQ	76	VAL
23	BS	29	LYS
25	BU	10	GLU
29	CE	71	GLY
29	CE	83	VAL
34	CK	64	VAL
36	CM	31	GLY
42	CS	50	GLY

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	AB	180/180 (100%)	131 (73%)	49 (27%)	0 1
6	BB	180/180 (100%)	138 (77%)	42 (23%)	1 3
7	AC	170/170 (100%)	145 (85%)	25 (15%)	3 10
7	BC	170/170 (100%)	138 (81%)	32 (19%)	1 5
8	AD	172/172 (100%)	145 (84%)	27 (16%)	2 9
8	BD	172/172 (100%)	148 (86%)	24 (14%)	3 11
9	AE	113/113 (100%)	81 (72%)	32 (28%)	0 1
9	BE	113/113 (100%)	88 (78%)	25 (22%)	1 3
10	AF	87/87 (100%)	73 (84%)	14 (16%)	2 8
10	BF	87/87 (100%)	62 (71%)	25 (29%)	0 1
11	AG	124/124 (100%)	106 (86%)	18 (14%)	3 10
11	BG	124/124 (100%)	98 (79%)	26 (21%)	1 4
12	AH	104/104 (100%)	83 (80%)	21 (20%)	1 4
12	BH	104/104 (100%)	79 (76%)	25 (24%)	1 2
13	AI	105/105 (100%)	84 (80%)	21 (20%)	1 4
13	BI	105/105 (100%)	83 (79%)	22 (21%)	1 4
14	AJ	86/86 (100%)	69 (80%)	17 (20%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
14	BJ	86/86 (100%)	63 (73%)	23 (27%)	0 1
15	AK	90/90 (100%)	74 (82%)	16 (18%)	2 6
15	BK	90/90 (100%)	79 (88%)	11 (12%)	5 16
16	AL	102/102 (100%)	89 (87%)	13 (13%)	4 14
17	AM	92/92 (100%)	71 (77%)	21 (23%)	1 3
17	BM	92/92 (100%)	73 (79%)	19 (21%)	1 4
18	AN	79/83 (95%)	59 (75%)	20 (25%)	0 2
18	BN	79/83 (95%)	70 (89%)	9 (11%)	5 18
19	AO	76/76 (100%)	63 (83%)	13 (17%)	2 7
19	BO	76/76 (100%)	65 (86%)	11 (14%)	3 10
20	AP	65/65 (100%)	55 (85%)	10 (15%)	2 9
20	BP	65/65 (100%)	49 (75%)	16 (25%)	1 2
21	AQ	74/74 (100%)	56 (76%)	18 (24%)	1 2
21	BQ	74/74 (100%)	55 (74%)	19 (26%)	0 2
22	AR	48/48 (100%)	44 (92%)	4 (8%)	10 32
22	BR	48/48 (100%)	42 (88%)	6 (12%)	4 15
23	AS	70/70 (100%)	66 (94%)	4 (6%)	18 49
23	BS	70/70 (100%)	57 (81%)	13 (19%)	1 5
24	AT	65/65 (100%)	50 (77%)	15 (23%)	1 3
24	BT	65/65 (100%)	50 (77%)	15 (23%)	1 3
25	AU	46/46 (100%)	36 (78%)	10 (22%)	1 3
25	BU	46/46 (100%)	36 (78%)	10 (22%)	1 3
26	BL	103/103 (100%)	86 (84%)	17 (16%)	2 8
27	CC	216/216 (100%)	189 (88%)	27 (12%)	4 15
27	DC	216/216 (100%)	195 (90%)	21 (10%)	8 25
28	CD	164/164 (100%)	150 (92%)	14 (8%)	10 31
29	CE	165/165 (100%)	146 (88%)	19 (12%)	5 18
29	DE	165/165 (100%)	150 (91%)	15 (9%)	9 28
30	CF	148/148 (100%)	126 (85%)	22 (15%)	3 10
30	DF	148/148 (100%)	124 (84%)	24 (16%)	2 8
31	CG	137/137 (100%)	112 (82%)	25 (18%)	2 6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
31	DG	137/137 (100%)	121 (88%)	16 (12%)	5 17
32	CH	113/113 (100%)	87 (77%)	26 (23%)	1 3
32	DH	113/113 (100%)	96 (85%)	17 (15%)	3 10
33	CJ	109/109 (100%)	82 (75%)	27 (25%)	1 2
33	DJ	109/109 (100%)	88 (81%)	21 (19%)	1 5
34	CK	116/116 (100%)	105 (90%)	11 (10%)	8 26
34	DK	116/116 (100%)	107 (92%)	9 (8%)	11 35
35	CL	103/104 (99%)	92 (89%)	11 (11%)	6 22
35	DL	104/104 (100%)	96 (92%)	8 (8%)	12 35
36	CM	102/103 (99%)	88 (86%)	14 (14%)	3 12
36	DM	103/103 (100%)	96 (93%)	7 (7%)	14 42
37	CN	109/109 (100%)	97 (89%)	12 (11%)	6 20
37	DN	110/109 (101%)	100 (91%)	10 (9%)	9 28
38	CO	100/100 (100%)	85 (85%)	15 (15%)	3 10
38	DO	100/100 (100%)	92 (92%)	8 (8%)	11 34
39	CP	86/87 (99%)	71 (83%)	15 (17%)	2 7
39	DP	87/87 (100%)	77 (88%)	10 (12%)	5 18
40	CQ	99/99 (100%)	82 (83%)	17 (17%)	2 7
40	DQ	99/99 (100%)	90 (91%)	9 (9%)	9 28
41	CR	89/89 (100%)	80 (90%)	9 (10%)	7 24
41	DR	89/89 (100%)	86 (97%)	3 (3%)	32 66
42	CS	84/84 (100%)	73 (87%)	11 (13%)	4 13
42	DS	84/84 (100%)	73 (87%)	11 (13%)	4 13
43	CT	93/93 (100%)	75 (81%)	18 (19%)	1 5
43	DT	93/93 (100%)	78 (84%)	15 (16%)	2 8
44	CU	80/80 (100%)	65 (81%)	15 (19%)	1 5
44	DU	79/80 (99%)	71 (90%)	8 (10%)	7 24
45	CV	83/83 (100%)	71 (86%)	12 (14%)	3 10
45	DV	83/83 (100%)	73 (88%)	10 (12%)	5 16
46	CW	78/78 (100%)	63 (81%)	15 (19%)	1 5
46	DW	78/78 (100%)	69 (88%)	9 (12%)	5 18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
47	CX	56/58 (97%)	46 (82%)	10 (18%)	2 6
47	DX	58/58 (100%)	49 (84%)	9 (16%)	2 9
48	CY	67/67 (100%)	58 (87%)	9 (13%)	4 12
48	DY	67/67 (100%)	62 (92%)	5 (8%)	12 37
49	CZ	54/54 (100%)	45 (83%)	9 (17%)	2 7
49	DZ	54/54 (100%)	47 (87%)	7 (13%)	4 13
50	C0	48/48 (100%)	39 (81%)	9 (19%)	1 5
50	D0	49/48 (102%)	44 (90%)	5 (10%)	7 23
51	C1	47/47 (100%)	38 (81%)	9 (19%)	1 5
51	D1	47/47 (100%)	44 (94%)	3 (6%)	16 44
52	C2	45/45 (100%)	42 (93%)	3 (7%)	15 43
52	D2	45/45 (100%)	44 (98%)	1 (2%)	45 77
53	C3	38/38 (100%)	31 (82%)	7 (18%)	1 6
53	D3	38/38 (100%)	33 (87%)	5 (13%)	4 13
54	C4	51/51 (100%)	47 (92%)	4 (8%)	11 35
54	D4	51/51 (100%)	49 (96%)	2 (4%)	28 63
55	C5	39/41 (95%)	28 (72%)	11 (28%)	0 1
55	D5	40/41 (98%)	31 (78%)	9 (22%)	1 3
56	DD	163/163 (100%)	150 (92%)	13 (8%)	11 34
57	D7	60/63 (95%)	37 (62%)	23 (38%)	0 0
All	All	9401/9419 (100%)	7924 (84%)	1477 (16%)	2 9

All (1477) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	AB	9	MET
6	AB	11	LYS
6	AB	14	VAL
6	AB	19	GLN
6	AB	20	THR
6	AB	27	MET
6	AB	31	ILE
6	AB	32	PHE
6	AB	35	ARG
6	AB	37	LYS

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Mol	Chain	Res	Type
6	AB	38	VAL
6	AB	41	ILE
6	AB	43	LEU
6	AB	50	PHE
6	AB	52	GLU
6	AB	54	LEU
6	AB	66	LYS
6	AB	68	LEU
6	AB	73	LYS
6	AB	85	LEU
6	AB	87	CYS
6	AB	91	PHE
6	AB	100	MET
6	AB	102	THR
6	AB	111	ILE
6	AB	116	ASP
6	AB	117	LEU
6	AB	120	GLN
6	AB	123	ASP
6	AB	126	PHE
6	AB	129	LEU
6	AB	133	GLU
6	AB	143	LYS
6	AB	144	LEU
6	AB	146	ASN
6	AB	148	LEU
6	AB	153	ASP
6	AB	161	LEU
6	AB	163	VAL
6	AB	164	ILE
6	AB	174	LYS
6	AB	186	ILE
6	AB	199	VAL
6	AB	205	ASP
6	AB	207	ILE
6	AB	208	ARG
6	AB	213	TYR
6	AB	225	ARG
6	AB	226	SER
7	AC	3	GLN
7	AC	15	VAL
7	AC	16	LYS

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Mol	Chain	Res	Type
7	AC	27	LYS
7	AC	38	LYS
7	AC	43	LEU
7	AC	55	ILE
7	AC	58	GLU
7	AC	59	ARG
7	AC	64	ILE
7	AC	85	GLU
7	AC	101	ILE
7	AC	103	ILE
7	AC	121	THR
7	AC	122	SER
7	AC	123	GLN
7	AC	127	ARG
7	AC	128	VAL
7	AC	129	MET
7	AC	131	ARG
7	AC	151	VAL
7	AC	154	SER
7	AC	165	THR
7	AC	186	THR
7	AC	200	VAL
8	AD	5	LEU
8	AD	26	ARG
8	AD	36	GLN
8	AD	48	LEU
8	AD	55	LEU
8	AD	58	LYS
8	AD	68	LEU
8	AD	70	ARG
8	AD	83	LYS
8	AD	93	LEU
8	AD	101	VAL
8	AD	123	ILE
8	AD	132	ILE
8	AD	135	TYR
8	AD	145	ILE
8	AD	153	SER
8	AD	163	GLU
8	AD	173	VAL
8	AD	177	LYS
8	AD	179	GLU

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Mol	Chain	Res	Type
8	AD	183	LYS
8	AD	189	SER
8	AD	194	ASP
8	AD	197	GLU
8	AD	198	HIS
8	AD	200	ILE
8	AD	206	LYS
9	AE	10	GLU
9	AE	11	LEU
9	AE	14	LYS
9	AE	15	LEU
9	AE	18	VAL
9	AE	22	SER
9	AE	30	ILE
9	AE	32	SER
9	AE	38	VAL
9	AE	46	VAL
9	AE	52	LYS
9	AE	65	GLU
9	AE	72	ILE
9	AE	73	ASN
9	AE	74	VAL
9	AE	78	ASN
9	AE	80	THR
9	AE	81	LEU
9	AE	94	VAL
9	AE	96	MET
9	AE	105	ILE
9	AE	111	MET
9	AE	114	VAL
9	AE	115	LEU
9	AE	120	VAL
9	AE	124	LEU
9	AE	136	VAL
9	AE	141	ILE
9	AE	149	SER
9	AE	152	MET
9	AE	157	ARG
9	AE	159	LYS
10	AF	7	VAL
10	AF	17	GLN
10	AF	24	ARG

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Mol	Chain	Res	Type
10	AF	39	LEU
10	AF	44	ARG
10	AF	68	GLN
10	AF	71	ILE
10	AF	77	THR
10	AF	84	VAL
10	AF	86	ARG
10	AF	89	VAL
10	AF	90	MET
10	AF	93	LYS
10	AF	100	SER
11	AG	4	ARG
11	AG	6	VAL
11	AG	7	ILE
11	AG	13	LEU
11	AG	37	SER
11	AG	47	LEU
11	AG	48	GLU
11	AG	53	ARG
11	AG	59	LEU
11	AG	63	GLU
11	AG	70	ARG
11	AG	75	VAL
11	AG	77	SER
11	AG	78	ARG
11	AG	79	ARG
11	AG	83	SER
11	AG	120	LEU
11	AG	149	LYS
12	AH	2	SER
12	AH	3	MET
12	AH	10	MET
12	AH	18	GLN
12	AH	22	LYS
12	AH	25	VAL
12	AH	42	GLU
12	AH	52	GLU
12	AH	59	LEU
12	AH	60	GLU
12	AH	65	TYR
12	AH	69	LYS
12	AH	75	ILE

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Mol	Chain	Res	Type
12	AH	77	ARG
12	AH	83	LEU
12	AH	87	LYS
12	AH	105	SER
12	AH	107	SER
12	AH	117	ARG
12	AH	121	LEU
12	AH	125	ILE
13	AI	21	ILE
13	AI	30	ILE
13	AI	43	THR
13	AI	45	ARG
13	AI	46	MET
13	AI	47	VAL
13	AI	49	ARG
13	AI	57	MET
13	AI	60	LYS
13	AI	61	LEU
13	AI	66	THR
13	AI	68	LYS
13	AI	85	ARG
13	AI	88	MET
13	AI	94	LEU
13	AI	95	ARG
13	AI	98	LEU
13	AI	119	ARG
13	AI	120	LYS
13	AI	126	GLN
13	AI	127	PHE
14	AJ	6	ILE
14	AJ	19	ASP
14	AJ	40	ILE
14	AJ	42	LEU
14	AJ	46	LYS
14	AJ	50	THR
14	AJ	57	VAL
14	AJ	59	LYS
14	AJ	62	ARG
14	AJ	73	LEU
14	AJ	80	THR
14	AJ	81	GLU
14	AJ	82	LYS

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Mol	Chain	Res	Type
14	AJ	87	LEU
14	AJ	88	MET
14	AJ	92	LEU
14	AJ	100	ILE
15	AK	23	ILE
15	AK	31	ILE
15	AK	33	THR
15	AK	38	GLN
15	AK	56	ARG
15	AK	65	VAL
15	AK	82	LEU
15	AK	85	MET
15	AK	93	ARG
15	AK	97	ILE
15	AK	100	LEU
15	AK	107	ILE
15	AK	108	THR
15	AK	109	ASN
15	AK	119	ASN
15	AK	121	CYS
16	AL	10	LYS
16	AL	21	VAL
16	AL	24	LEU
16	AL	33	VAL
16	AL	35	THR
16	AL	44	LYS
16	AL	49	LEU
16	AL	54	ARG
16	AL	55	VAL
16	AL	58	THR
16	AL	88	LYS
16	AL	90	LEU
16	AL	121	ARG
17	AM	7	ILE
17	AM	9	ILE
17	AM	13	LYS
17	AM	16	VAL
17	AM	19	LEU
17	AM	25	VAL
17	AM	27	LYS
17	AM	43	VAL
17	AM	45	ILE

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Mol	Chain	Res	Type
17	AM	48	LEU
17	AM	53	ILE
17	AM	57	ARG
17	AM	59	GLU
17	AM	71	ARG
17	AM	83	LEU
17	AM	87	ARG
17	AM	90	ARG
17	AM	101	ARG
17	AM	107	ARG
17	AM	108	THR
17	AM	113	ARG
18	AN	4	SER
18	AN	6	LYS
18	AN	9	GLU
18	AN	11	LYS
18	AN	13	VAL
18	AN	18	LYS
18	AN	23	ARG
18	AN	27	LYS
18	AN	29	ILE
18	AN	30	ILE
18	AN	32	ASP
18	AN	34	ASN
18	AN	46	LEU
18	AN	48	LEU
18	AN	49	GLN
18	AN	50	THR
18	AN	53	ARG
18	AN	63	ARG
18	AN	65	ARG
18	AN	98	LYS
19	AO	3	LEU
19	AO	5	THR
19	AO	6	GLU
19	AO	35	GLN
19	AO	39	LEU
19	AO	40	GLN
19	AO	57	LEU
19	AO	73	LYS
19	AO	83	GLU
19	AO	85	LEU

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Mol	Chain	Res	Type
19	AO	87	LEU
19	AO	88	ARG
19	AO	89	ARG
20	AP	1	MET
20	AP	2	VAL
20	AP	6	LEU
20	AP	17	TYR
20	AP	18	GLN
20	AP	19	VAL
20	AP	20	VAL
20	AP	36	VAL
20	AP	46	LYS
20	AP	63	GLN
21	AQ	4	LYS
21	AQ	6	ARG
21	AQ	7	THR
21	AQ	13	VAL
21	AQ	14	SER
21	AQ	16	LYS
21	AQ	21	ILE
21	AQ	22	VAL
21	AQ	29	VAL
21	AQ	38	ILE
21	AQ	42	THR
21	AQ	55	ILE
21	AQ	59	VAL
21	AQ	61	ILE
21	AQ	70	THR
21	AQ	76	VAL
21	AQ	79	VAL
21	AQ	81	LYS
22	AR	21	ILE
22	AR	25	ASP
22	AR	30	LYS
22	AR	55	LEU
23	AS	6	LYS
23	AS	31	LEU
23	AS	55	ARG
23	AS	65	GLU
24	AT	3	ASN
24	AT	5	LYS
24	AT	6	SER

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Mol	Chain	Res	Type
24	AT	12	ILE
24	AT	15	GLU
24	AT	24	ARG
24	AT	27	MET
24	AT	34	LYS
24	AT	40	GLU
24	AT	49	LYS
24	AT	54	MET
24	AT	58	VAL
24	AT	67	ILE
24	AT	69	LYS
24	AT	86	LEU
25	AU	6	VAL
25	AU	7	ARG
25	AU	8	GLU
25	AU	9	ASN
25	AU	12	PHE
25	AU	16	LEU
25	AU	20	LYS
25	AU	34	ARG
25	AU	40	LYS
25	AU	44	GLU
6	BB	10	LEU
6	BB	14	VAL
6	BB	15	HIS
6	BB	16	PHE
6	BB	21	ARG
6	BB	27	MET
6	BB	43	LEU
6	BB	45	LYS
6	BB	47	VAL
6	BB	50	PHE
6	BB	59	LYS
6	BB	64	LYS
6	BB	66	LYS
6	BB	68	LEU
6	BB	81	LYS
6	BB	85	LEU
6	BB	93	ASN
6	BB	95	ARG
6	BB	103	ASN
6	BB	106	THR

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Mol	Chain	Res	Type
6	BB	109	GLN
6	BB	111	ILE
6	BB	117	LEU
6	BB	119	THR
6	BB	120	GLN
6	BB	122	GLN
6	BB	127	ASP
6	BB	133	GLU
6	BB	137	ARG
6	BB	147	SER
6	BB	151	ILE
6	BB	157	LEU
6	BB	164	ILE
6	BB	179	LEU
6	BB	186	ILE
6	BB	187	VAL
6	BB	191	SER
6	BB	207	ILE
6	BB	208	ARG
6	BB	212	LEU
6	BB	220	THR
6	BB	222	ARG
7	BC	3	GLN
7	BC	14	ILE
7	BC	20	SER
7	BC	27	LYS
7	BC	28	GLU
7	BC	38	LYS
7	BC	43	LEU
7	BC	45	LYS
7	BC	53	SER
7	BC	55	ILE
7	BC	58	GLU
7	BC	59	ARG
7	BC	75	ILE
7	BC	80	LYS
7	BC	82	GLU
7	BC	86	LYS
7	BC	101	ILE
7	BC	103	ILE
7	BC	110	GLU
7	BC	116	VAL

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Mol	Chain	Res	Type
7	BC	121	THR
7	BC	127	ARG
7	BC	152	GLU
7	BC	157	LEU
7	BC	162	ILE
7	BC	164	ARG
7	BC	165	THR
7	BC	169	ARG
7	BC	179	ARG
7	BC	186	THR
7	BC	192	THR
7	BC	200	VAL
8	BD	5	LEU
8	BD	8	LYS
8	BD	13	ARG
8	BD	26	ARG
8	BD	49	SER
8	BD	56	ARG
8	BD	58	LYS
8	BD	81	ARG
8	BD	83	LYS
8	BD	142	VAL
8	BD	148	LYS
8	BD	153	SER
8	BD	155	VAL
8	BD	161	LEU
8	BD	163	GLU
8	BD	164	GLN
8	BD	166	GLU
8	BD	167	LYS
8	BD	173	VAL
8	BD	192	SER
8	BD	197	GLU
8	BD	200	ILE
8	BD	203	LEU
8	BD	206	LYS
9	BE	11	LEU
9	BE	12	GLN
9	BE	15	LEU
9	BE	22	SER
9	BE	26	LYS
9	BE	38	VAL

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Mol	Chain	Res	Type
9	BE	46	VAL
9	BE	52	LYS
9	BE	69	ARG
9	BE	80	THR
9	BE	81	LEU
9	BE	86	LYS
9	BE	93	ARG
9	BE	94	VAL
9	BE	96	MET
9	BE	101	GLU
9	BE	105	ILE
9	BE	114	VAL
9	BE	115	LEU
9	BE	116	GLU
9	BE	120	VAL
9	BE	126	LYS
9	BE	149	SER
9	BE	151	GLU
9	BE	153	VAL
10	BF	7	VAL
10	BF	10	VAL
10	BF	16	GLU
10	BF	22	ILE
10	BF	26	THR
10	BF	35	LYS
10	BF	36	ILE
10	BF	38	ARG
10	BF	51	ILE
10	BF	53	LYS
10	BF	54	LEU
10	BF	55	HIS
10	BF	56	LYS
10	BF	68	GLN
10	BF	71	ILE
10	BF	73	GLU
10	BF	77	THR
10	BF	85	ILE
10	BF	86	ARG
10	BF	87	SER
10	BF	90	MET
10	BF	91	ARG
10	BF	92	THR

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Mol	Chain	Res	Type
10	BF	93	LYS
10	BF	98	GLU
11	BG	5	ARG
11	BG	22	LEU
11	BG	29	ILE
11	BG	38	THR
11	BG	41	SER
11	BG	47	LEU
11	BG	48	GLU
11	BG	59	LEU
11	BG	60	GLU
11	BG	63	GLU
11	BG	66	LEU
11	BG	70	ARG
11	BG	73	VAL
11	BG	78	ARG
11	BG	89	VAL
11	BG	90	GLU
11	BG	91	VAL
11	BG	97	ASN
11	BG	123	GLU
11	BG	124	LEU
11	BG	126	ASP
11	BG	129	GLU
11	BG	136	LYS
11	BG	140	ASP
11	BG	143	ARG
11	BG	144	MET
12	BH	3	MET
12	BH	10	MET
12	BH	18	GLN
12	BH	25	VAL
12	BH	26	THR
12	BH	38	ASN
12	BH	50	LYS
12	BH	51	VAL
12	BH	59	LEU
12	BH	67	GLN
12	BH	75	ILE
12	BH	77	ARG
12	BH	80	ARG
12	BH	83	LEU

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Mol	Chain	Res	Type
12	BH	87	LYS
12	BH	90	ASP
12	BH	92	LEU
12	BH	94	LYS
12	BH	104	VAL
12	BH	107	SER
12	BH	111	MET
12	BH	114	ARG
12	BH	117	ARG
12	BH	121	LEU
12	BH	125	ILE
13	BI	12	ARG
13	BI	18	ARG
13	BI	22	LYS
13	BI	28	ILE
13	BI	32	GLN
13	BI	45	ARG
13	BI	46	MET
13	BI	49	ARG
13	BI	52	LEU
13	BI	53	GLU
13	BI	63	LEU
13	BI	66	THR
13	BI	68	LYS
13	BI	84	THR
13	BI	85	ARG
13	BI	88	MET
13	BI	90	TYR
13	BI	100	LYS
13	BI	114	LYS
13	BI	120	LYS
13	BI	127	PHE
13	BI	129	LYS
14	BJ	5	ARG
14	BJ	9	ARG
14	BJ	16	ARG
14	BJ	19	ASP
14	BJ	22	THR
14	BJ	24	GLU
14	BJ	25	ILE
14	BJ	37	ARG
14	BJ	51	VAL

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Mol	Chain	Res	Type
14	BJ	59	LYS
14	BJ	62	ARG
14	BJ	63	ASP
14	BJ	67	ILE
14	BJ	69	THR
14	BJ	73	LEU
14	BJ	77	VAL
14	BJ	82	LYS
14	BJ	83	THR
14	BJ	88	MET
14	BJ	90	LEU
14	BJ	98	VAL
14	BJ	99	GLN
14	BJ	101	SER
15	BK	33	THR
15	BK	38	GLN
15	BK	57	LYS
15	BK	65	VAL
15	BK	82	LEU
15	BK	83	GLU
15	BK	93	ARG
15	BK	100	LEU
15	BK	107	ILE
15	BK	109	ASN
15	BK	114	THR
26	BL	4	VAL
26	BL	12	ARG
26	BL	14	ARG
26	BL	18	LYS
26	BL	19	SER
26	BL	24	LEU
26	BL	29	GLN
26	BL	44	LYS
26	BL	49	LEU
26	BL	54	ARG
26	BL	55	VAL
26	BL	58	THR
26	BL	78	SER
26	BL	88	LYS
26	BL	89	ASP
26	BL	90	LEU
26	BL	121	ARG

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Mol	Chain	Res	Type
17	BM	4	ILE
17	BM	16	VAL
17	BM	25	VAL
17	BM	27	LYS
17	BM	29	ARG
17	BM	31	LYS
17	BM	46	SER
17	BM	47	GLU
17	BM	48	LEU
17	BM	53	ILE
17	BM	58	ASP
17	BM	59	GLU
17	BM	72	GLU
17	BM	79	ARG
17	BM	90	ARG
17	BM	91	HIS
17	BM	107	ARG
17	BM	110	LYS
17	BM	114	LYS
18	BN	3	GLN
18	BN	8	ARG
18	BN	9	GLU
18	BN	18	LYS
18	BN	22	LYS
18	BN	27	LYS
18	BN	32	ASP
18	BN	48	LEU
18	BN	100	SER
19	BO	3	LEU
19	BO	6	GLU
19	BO	8	THR
19	BO	17	ARG
19	BO	18	ASP
19	BO	39	LEU
19	BO	64	ARG
19	BO	70	LEU
19	BO	85	LEU
19	BO	87	LEU
19	BO	89	ARG
20	BP	2	VAL
20	BP	3	THR
20	BP	12	LYS

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Mol	Chain	Res	Type
20	BP	18	GLN
20	BP	19	VAL
20	BP	20	VAL
20	BP	23	ASP
20	BP	36	VAL
20	BP	42	ILE
20	BP	46	LYS
20	BP	52	LEU
20	BP	53	ASP
20	BP	63	GLN
20	BP	68	SER
20	BP	69	ASP
20	BP	76	LYS
21	BQ	5	ILE
21	BQ	7	THR
21	BQ	13	VAL
21	BQ	14	SER
21	BQ	17	MET
21	BQ	22	VAL
21	BQ	26	GLU
21	BQ	29	VAL
21	BQ	40	ARG
21	BQ	51	ASN
21	BQ	55	ILE
21	BQ	59	VAL
21	BQ	61	ILE
21	BQ	65	ARG
21	BQ	75	LEU
21	BQ	76	VAL
21	BQ	78	VAL
21	BQ	79	VAL
21	BQ	81	LYS
22	BR	21	ILE
22	BR	26	ILE
22	BR	44	ILE
22	BR	47	THR
22	BR	55	LEU
22	BR	61	ARG
23	BS	5	LEU
23	BS	6	LYS
23	BS	7	LYS
23	BS	11	ILE

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Mol	Chain	Res	Type
23	BS	13	LEU
23	BS	27	ASP
23	BS	29	LYS
23	BS	33	THR
23	BS	37	ARG
23	BS	49	ILE
23	BS	58	VAL
23	BS	63	THR
23	BS	65	GLU
24	BT	10	ARG
24	BT	15	GLU
24	BT	23	SER
24	BT	24	ARG
24	BT	27	MET
24	BT	30	THR
24	BT	36	TYR
24	BT	40	GLU
24	BT	54	MET
24	BT	58	VAL
24	BT	64	LYS
24	BT	66	LEU
24	BT	69	LYS
24	BT	84	ASN
24	BT	86	LEU
25	BU	10	GLU
25	BU	12	PHE
25	BU	14	VAL
25	BU	16	LEU
25	BU	24	GLU
25	BU	34	ARG
25	BU	40	LYS
25	BU	46	LYS
25	BU	51	SER
25	BU	56	HIS
27	CC	4	LYS
27	CC	13	ARG
27	CC	51	ARG
27	CC	58	LYS
27	CC	87	SER
27	CC	96	LYS
27	CC	104	LEU
27	CC	109	LEU

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Mol	Chain	Res	Type
27	CC	110	LYS
27	CC	129	LEU
27	CC	138	SER
27	CC	140	VAL
27	CC	155	ARG
27	CC	156	SER
27	CC	159	THR
27	CC	167	ASP
27	CC	186	ASP
27	CC	194	VAL
27	CC	202	ARG
27	CC	203	VAL
27	CC	204	LEU
27	CC	212	TRP
27	CC	238	ASN
27	CC	250	GLN
27	CC	266	ILE
27	CC	267	VAL
27	CC	268	ARG
28	CD	4	LEU
28	CD	12	THR
28	CD	33	ARG
28	CD	39	ASP
28	CD	51	THR
28	CD	73	VAL
28	CD	81	GLU
28	CD	91	THR
28	CD	95	SER
28	CD	104	VAL
28	CD	150	GLN
28	CD	170	VAL
28	CD	177	VAL
28	CD	199	SER
29	CE	12	LEU
29	CE	25	GLU
29	CE	44	ARG
29	CE	65	THR
29	CE	67	ARG
29	CE	69	ARG
29	CE	80	SER
29	CE	91	ASP
29	CE	93	SER

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Mol	Chain	Res	Type
29	CE	108	ILE
29	CE	109	LEU
29	CE	126	VAL
29	CE	133	LEU
29	CE	139	LYS
29	CE	146	VAL
29	CE	149	ILE
29	CE	164	LEU
29	CE	187	VAL
29	CE	200	LEU
30	CF	2	LYS
30	CF	13	LYS
30	CF	17	THR
30	CF	25	MET
30	CF	30	VAL
30	CF	34	THR
30	CF	35	LEU
30	CF	45	ASP
30	CF	46	LYS
30	CF	63	LYS
30	CF	71	LYS
30	CF	79	ARG
30	CF	80	GLN
30	CF	103	ILE
30	CF	116	LEU
30	CF	131	VAL
30	CF	132	ARG
30	CF	141	ASP
30	CF	148	VAL
30	CF	153	ILE
30	CF	163	GLU
30	CF	177	ARG
31	CG	5	LYS
31	CG	10	VAL
31	CG	16	VAL
31	CG	24	THR
31	CG	28	LYS
31	CG	33	THR
31	CG	36	LEU
31	CG	42	VAL
31	CG	43	LYS
31	CG	44	HIS

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Mol	Chain	Res	Type
31	CG	48	THR
31	CG	59	ASP
31	CG	66	THR
31	CG	72	ASN
31	CG	73	SER
31	CG	79	THR
31	CG	91	VAL
31	CG	97	VAL
31	CG	116	LEU
31	CG	126	THR
31	CG	136	ASP
31	CG	138	GLN
31	CG	154	GLU
31	CG	167	VAL
31	CG	170	THR
32	CH	3	VAL
32	CH	6	LEU
32	CH	7	ASP
32	CH	11	ASN
32	CH	12	LEU
32	CH	14	SER
32	CH	17	ASP
32	CH	41	LYS
32	CH	42	LYS
32	CH	46	PHE
32	CH	51	ARG
32	CH	75	LEU
32	CH	77	THR
32	CH	78	VAL
32	CH	87	GLU
32	CH	89	LYS
32	CH	97	ARG
32	CH	110	VAL
32	CH	117	LEU
32	CH	121	VAL
32	CH	123	THR
32	CH	133	VAL
32	CH	136	GLU
32	CH	141	VAL
32	CH	142	ILE
32	CH	143	VAL
33	CJ	7	TYR

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Mol	Chain	Res	Type
33	CJ	9	LYS
33	CJ	10	LEU
33	CJ	11	GLN
33	CJ	20	SER
33	CJ	23	VAL
33	CJ	37	PHE
33	CJ	39	LYS
33	CJ	46	ASP
33	CJ	48	ILE
33	CJ	52	LEU
33	CJ	54	ILE
33	CJ	58	ILE
33	CJ	63	ASP
33	CJ	80	LYS
33	CJ	85	ILE
33	CJ	86	LYS
33	CJ	95	ASP
33	CJ	100	ILE
33	CJ	101	SER
33	CJ	102	ARG
33	CJ	105	LEU
33	CJ	116	MET
33	CJ	124	MET
33	CJ	128	ILE
33	CJ	133	ARG
33	CJ	135	MET
34	CK	28	LEU
34	CK	30	THR
34	CK	39	LYS
34	CK	57	LEU
34	CK	81	ILE
34	CK	95	ARG
34	CK	123	LYS
34	CK	124	VAL
34	CK	128	ASN
34	CK	129	GLU
34	CK	142	ILE
35	CL	49	ARG
35	CL	65	THR
35	CL	66	LYS
35	CL	67	LYS
35	CL	76	VAL

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Mol	Chain	Res	Type
35	CL	80	ASP
35	CL	90	ASN
35	CL	91	SER
35	CL	107	LEU
35	CL	114	LYS
35	CL	121	GLU
36	CM	3	LEU
36	CM	14	LYS
36	CM	19	LEU
36	CM	25	SER
36	CM	29	LYS
36	CM	33	ARG
36	CM	59	ARG
36	CM	80	SER
36	CM	82	LEU
36	CM	100	ILE
36	CM	107	PHE
36	CM	115	GLU
36	CM	118	THR
36	CM	120	VAL
37	CN	3	GLN
37	CN	20	LEU
37	CN	27	SER
37	CN	40	ARG
37	CN	47	GLU
37	CN	53	MET
37	CN	58	LYS
37	CN	59	ARG
37	CN	74	THR
37	CN	78	LEU
37	CN	100	LYS
37	CN	115	GLU
38	CO	1	MET
38	CO	2	ARG
38	CO	18	GLN
38	CO	20	MET
38	CO	51	LEU
38	CO	53	THR
38	CO	59	SER
38	CO	63	ARG
38	CO	69	ARG
38	CO	70	THR

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Mol	Chain	Res	Type
38	CO	71	ARG
38	CO	76	VAL
38	CO	90	ARG
38	CO	95	THR
38	CO	116	VAL
39	CP	9	ARG
39	CP	16	ARG
39	CP	18	LEU
39	CP	31	THR
39	CP	38	GLN
39	CP	46	GLU
39	CP	47	VAL
39	CP	78	VAL
39	CP	85	LYS
39	CP	89	ASP
39	CP	91	SER
39	CP	94	ARG
39	CP	102	ARG
39	CP	103	VAL
39	CP	116	GLN
40	CQ	5	LYS
40	CQ	7	LEU
40	CQ	10	GLU
40	CQ	13	LYS
40	CQ	15	ASP
40	CQ	25	VAL
40	CQ	36	LYS
40	CQ	38	ARG
40	CQ	65	ASN
40	CQ	71	ARG
40	CQ	72	VAL
40	CQ	74	GLN
40	CQ	79	VAL
40	CQ	95	LYS
40	CQ	101	GLU
40	CQ	111	GLU
40	CQ	113	LEU
41	CR	4	LYS
41	CR	8	ILE
41	CR	10	ARG
41	CR	12	ARG
41	CR	15	LYS

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Mol	Chain	Res	Type
41	CR	40	LYS
41	CR	50	ARG
41	CR	101	ASP
41	CR	102	LYS
42	CS	10	LYS
42	CS	26	ASP
42	CS	38	VAL
42	CS	45	GLU
42	CS	47	VAL
42	CS	48	LYS
42	CS	58	VAL
42	CS	60	LYS
42	CS	62	GLU
42	CS	86	GLN
42	CS	102	SER
43	CT	19	LEU
43	CT	23	LEU
43	CT	41	LYS
43	CT	46	LEU
43	CT	52	GLU
43	CT	62	ASP
43	CT	65	ASP
43	CT	66	ILE
43	CT	68	ASP
43	CT	69	LEU
43	CT	76	VAL
43	CT	81	SER
43	CT	86	MET
43	CT	96	ILE
43	CT	97	LEU
43	CT	107	VAL
43	CT	109	ASP
43	CT	110	ARG
44	CU	2	ILE
44	CU	3	ARG
44	CU	10	VAL
44	CU	18	GLU
44	CU	22	THR
44	CU	26	LYS
44	CU	28	ASN
44	CU	30	ILE
44	CU	32	LEU

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Mol	Chain	Res	Type
44	CU	49	LYS
44	CU	50	LEU
44	CU	69	ARG
44	CU	70	HIS
44	CU	77	ARG
44	CU	91	GLN
45	CV	6	ARG
45	CV	14	THR
45	CV	28	LEU
45	CV	34	ILE
45	CV	36	GLU
45	CV	40	LEU
45	CV	44	HIS
45	CV	46	LYS
45	CV	52	ASN
45	CV	60	LYS
45	CV	71	ILE
45	CV	78	LYS
46	CW	7	GLU
46	CW	10	LYS
46	CW	20	LEU
46	CW	29	ILE
46	CW	34	LYS
46	CW	40	ILE
46	CW	41	GLU
46	CW	51	GLN
46	CW	53	LYS
46	CW	61	LEU
46	CW	62	THR
46	CW	65	VAL
46	CW	66	ASP
46	CW	70	ILE
46	CW	85	LYS
47	CX	10	ASN
47	CX	15	GLU
47	CX	18	ARG
47	CX	28	SER
47	CX	36	VAL
47	CX	48	ASN
47	CX	64	LYS
47	CX	68	GLU
47	CX	75	ARG

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Mol	Chain	Res	Type
47	CX	80	ILE
48	CY	16	ASN
48	CY	19	HIS
48	CY	21	LEU
48	CY	24	THR
48	CY	34	SER
48	CY	36	ARG
48	CY	41	SER
48	CY	55	MET
48	CY	70	LEU
49	CZ	2	LYS
49	CZ	8	GLU
49	CZ	18	LEU
49	CZ	19	LEU
49	CZ	21	LEU
49	CZ	37	LEU
49	CZ	38	GLN
49	CZ	45	GLN
49	CZ	57	LEU
50	C0	2	LYS
50	C0	3	THR
50	C0	4	ILE
50	C0	9	THR
50	C0	18	LYS
50	C0	24	LEU
50	C0	35	VAL
50	C0	48	ASN
50	C0	56	VAL
51	C1	4	GLN
51	C1	5	ASN
51	C1	9	ARG
51	C1	10	SER
51	C1	25	THR
51	C1	27	LEU
51	C1	28	SER
51	C1	37	HIS
51	C1	51	ARG
52	C2	7	LYS
52	C2	26	LYS
52	C2	46	VAL
53	C3	1	MET
53	C3	3	ARG

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Mol	Chain	Res	Type
53	C3	4	THR
53	C3	24	THR
53	C3	41	ARG
53	C3	42	LEU
53	C3	44	VAL
54	C4	12	ARG
54	C4	18	LYS
54	C4	29	ARG
54	C4	46	LYS
55	C5	2	LYS
55	C5	3	VAL
55	C5	9	THR
55	C5	12	GLU
55	C5	13	ARG
55	C5	20	VAL
55	C5	26	LEU
55	C5	27	TYR
55	C5	29	ILE
55	C5	40	GLN
55	C5	44	LYS
27	DC	2	VAL
27	DC	19	VAL
27	DC	38	LYS
27	DC	39	SER
27	DC	82	TYR
27	DC	96	LYS
27	DC	110	LYS
27	DC	129	LEU
27	DC	138	SER
27	DC	155	ARG
27	DC	167	ASP
27	DC	173	LEU
27	DC	183	VAL
27	DC	194	VAL
27	DC	198	GLU
27	DC	203	VAL
27	DC	219	VAL
27	DC	238	ASN
27	DC	251	THR
27	DC	252	LYS
27	DC	257	ARG
56	DD	1	MET

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Mol	Chain	Res	Type
56	DD	4	LEU
56	DD	12	THR
56	DD	13	ARG
56	DD	14	ILE
56	DD	32	ASN
56	DD	62	LYS
56	DD	95	SER
56	DD	104	VAL
56	DD	129	THR
56	DD	171	THR
56	DD	177	VAL
56	DD	199	SER
29	DE	44	ARG
29	DE	72	SER
29	DE	108	ILE
29	DE	125	SER
29	DE	126	VAL
29	DE	127	GLU
29	DE	141	MET
29	DE	149	ILE
29	DE	159	LEU
29	DE	164	LEU
29	DE	169	VAL
29	DE	185	LYS
29	DE	197	GLU
29	DE	198	GLU
29	DE	200	LEU
30	DF	2	LYS
30	DF	30	VAL
30	DF	34	THR
30	DF	35	LEU
30	DF	41	GLU
30	DF	47	LYS
30	DF	50	ASP
30	DF	71	LYS
30	DF	72	SER
30	DF	88	VAL
30	DF	93	GLU
30	DF	94	ARG
30	DF	102	LEU
30	DF	103	ILE
30	DF	104	THR

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Mol	Chain	Res	Type
30	DF	116	LEU
30	DF	119	LYS
30	DF	128	SER
30	DF	131	VAL
30	DF	135	ILE
30	DF	147	ARG
30	DF	151	LEU
30	DF	153	ILE
30	DF	157	THR
31	DG	5	LYS
31	DG	8	VAL
31	DG	10	VAL
31	DG	17	LYS
31	DG	25	ILE
31	DG	26	LYS
31	DG	28	LYS
31	DG	75	VAL
31	DG	76	ILE
31	DG	84	LYS
31	DG	97	VAL
31	DG	103	ASN
31	DG	151	ARG
31	DG	154	GLU
31	DG	170	THR
31	DG	176	LYS
32	DH	1	MET
32	DH	12	LEU
32	DH	14	SER
32	DH	15	LEU
32	DH	27	ARG
32	DH	42	LYS
32	DH	48	GLU
32	DH	50	ARG
32	DH	53	GLU
32	DH	60	GLU
32	DH	61	VAL
32	DH	76	GLU
32	DH	77	THR
32	DH	113	SER
32	DH	114	GLU
32	DH	124	THR
32	DH	132	GLN

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Mol	Chain	Res	Type
33	DJ	11	GLN
33	DJ	16	MET
33	DJ	23	VAL
33	DJ	27	LEU
33	DJ	30	GLN
33	DJ	37	PHE
33	DJ	39	LYS
33	DJ	41	PHE
33	DJ	48	ILE
33	DJ	49	GLU
33	DJ	64	ARG
33	DJ	68	PHE
33	DJ	71	LYS
33	DJ	81	LYS
33	DJ	85	ILE
33	DJ	94	LYS
33	DJ	96	LYS
33	DJ	108	ILE
33	DJ	111	THR
33	DJ	115	ASP
33	DJ	116	MET
34	DK	12	LYS
34	DK	17	VAL
34	DK	30	THR
34	DK	39	LYS
34	DK	61	LYS
34	DK	65	THR
34	DK	70	THR
34	DK	124	VAL
34	DK	142	ILE
35	DL	20	MET
35	DL	49	ARG
35	DL	51	LYS
35	DL	58	LEU
35	DL	77	ILE
35	DL	86	LEU
35	DL	88	ASN
35	DL	114	LYS
36	DM	1	MET
36	DM	2	ARG
36	DM	5	THR
36	DM	59	ARG

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Mol	Chain	Res	Type
36	DM	91	ASP
36	DM	115	GLU
36	DM	120	VAL
37	DN	2	LEU
37	DN	14	LYS
37	DN	24	THR
37	DN	27	SER
37	DN	47	GLU
37	DN	100	LYS
37	DN	110	GLU
37	DN	115	GLU
37	DN	129	THR
37	DN	135	VAL
38	DO	54	LEU
38	DO	69	ARG
38	DO	71	ARG
38	DO	75	ILE
38	DO	95	THR
38	DO	96	ARG
38	DO	116	VAL
38	DO	119	SER
39	DP	4	LYS
39	DP	13	ARG
39	DP	17	LYS
39	DP	18	LEU
39	DP	45	SER
39	DP	47	VAL
39	DP	49	VAL
39	DP	54	VAL
39	DP	65	THR
39	DP	85	LYS
40	DQ	4	ILE
40	DQ	5	LYS
40	DQ	6	GLN
40	DQ	18	SER
40	DQ	37	LYS
40	DQ	39	LEU
40	DQ	62	LYS
40	DQ	67	GLU
40	DQ	72	VAL
41	DR	10	ARG
41	DR	50	ARG

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Mol	Chain	Res	Type
41	DR	116	LEU
42	DS	4	VAL
42	DS	26	ASP
42	DS	38	VAL
42	DS	40	MET
42	DS	45	GLU
42	DS	58	VAL
42	DS	85	LYS
42	DS	86	GLN
42	DS	94	THR
42	DS	101	ILE
42	DS	102	SER
43	DT	19	LEU
43	DT	28	LYS
43	DT	29	VAL
43	DT	47	VAL
43	DT	50	VAL
43	DT	55	ILE
43	DT	69	LEU
43	DT	82	MET
43	DT	83	LYS
43	DT	86	MET
43	DT	97	LEU
43	DT	98	LYS
43	DT	101	SER
43	DT	105	VAL
43	DT	109	ASP
44	DU	3	ARG
44	DU	5	GLU
44	DU	10	VAL
44	DU	12	ARG
44	DU	16	VAL
44	DU	74	ILE
44	DU	76	ARG
44	DU	89	GLU
45	DV	27	VAL
45	DV	28	LEU
45	DV	46	LYS
45	DV	51	LEU
45	DV	52	ASN
45	DV	57	ILE
45	DV	60	LYS

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Mol	Chain	Res	Type
45	DV	71	ILE
45	DV	78	LYS
45	DV	99	SER
46	DW	1	MET
46	DW	7	GLU
46	DW	10	LYS
46	DW	29	ILE
46	DW	30	ILE
46	DW	61	LEU
46	DW	65	VAL
46	DW	66	ASP
46	DW	70	ILE
47	DX	9	ARG
47	DX	18	ARG
47	DX	36	VAL
47	DX	39[A]	ARG
47	DX	39[B]	ARG
47	DX	49	VAL
47	DX	70	LYS
47	DX	79	SER
47	DX	80	ILE
48	DY	1	SER
48	DY	27	ARG
48	DY	41	SER
48	DY	70	LEU
48	DY	75	GLU
49	DZ	2	LYS
49	DZ	7	ARG
49	DZ	16	THR
49	DZ	18	LEU
49	DZ	19	LEU
49	DZ	38	GLN
49	DZ	60	LYS
50	D0	2	LYS
50	D0	18	LYS
50	D0	38	GLU
50	D0	40	THR
50	D0	54	VAL
51	D1	9	ARG
51	D1	28	SER
51	D1	51	ARG
52	D2	24	LYS

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Mol	Chain	Res	Type
53	D3	1	MET
53	D3	15	SER
53	D3	21	ARG
53	D3	25	LYS
53	D3	42	LEU
54	D4	29	ARG
54	D4	34	LYS
55	D5	2	LYS
55	D5	3	VAL
55	D5	19	ILE
55	D5	22	ARG
55	D5	31	LYS
55	D5	35	ARG
55	D5	39	VAL
55	D5	40	GLN
55	D5	45	LYS
57	D7	5	ILE
57	D7	11	THR
57	D7	15	HIS
57	D7	19	VAL
57	D7	22	TYR
57	D7	23	PHE
57	D7	24	LYS
57	D7	25	ILE
57	D7	30	LYS
57	D7	33	ARG
57	D7	34	GLU
57	D7	35	ILE
57	D7	37	LEU
57	D7	40	VAL
57	D7	41	THR
57	D7	45	VAL
57	D7	46	THR
57	D7	47	ILE
57	D7	51	SER
57	D7	57	TYR
57	D7	62	ARG
57	D7	63	THR
57	D7	64	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (105) such sidechains are listed below:

Mol	Chain	Res	Type
6	AB	15	HIS
6	AB	120	GLN
7	AC	3	GLN
7	AC	6	HIS
7	AC	41	GLN
7	AC	190	HIS
8	AD	74	ASN
9	AE	43	ASN
9	AE	89	HIS
10	AF	3	HIS
10	AF	63	ASN
11	AG	28	ASN
11	AG	68	ASN
11	AG	148	ASN
12	AH	21	ASN
13	AI	31	ASN
16	AL	73	ASN
20	AP	59	HIS
24	AT	70	ASN
24	AT	84	ASN
6	BB	18	HIS
6	BB	190	ASN
7	BC	69	HIS
7	BC	176	HIS
7	BC	190	HIS
8	BD	71	GLN
8	BD	120	HIS
8	BD	131	ASN
10	BF	52	ASN
10	BF	68	GLN
14	BJ	56	HIS
14	BJ	70	HIS
19	BO	46	HIS
20	BP	9	HIS
20	BP	26	ASN
20	BP	79	ASN
21	BQ	47	HIS
21	BQ	51	ASN
27	CC	52	HIS
27	CC	141	HIS
27	CC	196	ASN
27	CC	238	ASN
28	CD	49	GLN

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Mol	Chain	Res	Type
28	CD	185	ASN
29	CE	90	GLN
29	CE	94	GLN
30	CF	36	ASN
31	CG	110	HIS
32	CH	20	ASN
32	CH	148	GLN
33	CJ	30	GLN
33	CJ	33	ASN
33	CJ	42	ASN
34	CK	47	HIS
35	CL	88	ASN
37	CN	13	HIS
38	CO	107	ASN
40	CQ	14	GLN
41	CR	43	GLN
41	CR	51	GLN
42	CS	89	HIS
43	CT	31	GLN
43	CT	102	HIS
47	CX	44	HIS
48	CY	33	HIS
48	CY	35	HIS
49	CZ	58	ASN
51	C1	3	GLN
52	C2	45	HIS
54	C4	42	HIS
55	C5	14	HIS
27	DC	141	HIS
27	DC	242	HIS
56	DD	42	ASN
56	DD	58	ASN
56	DD	134	HIS
56	DD	173	GLN
29	DE	41	GLN
29	DE	136	GLN
31	DG	21	GLN
31	DG	87	GLN
31	DG	115	GLN
32	DH	2	GLN
32	DH	73	ASN
33	DJ	18	ASN

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Mol	Chain	Res	Type
34	DK	77	HIS
37	DN	13	HIS
38	DO	73	ASN
40	DQ	40	GLN
41	DR	80	ASN
42	DS	12	HIS
42	DS	89	HIS
43	DT	57	ASN
44	DU	70	HIS
45	DV	52	ASN
46	DW	12	GLN
46	DW	87	GLN
48	DY	15	ASN
50	D0	19	HIS
50	D0	48	ASN
51	D1	5	ASN
51	D1	41	HIS
52	D2	18	HIS
52	D2	45	HIS
55	D5	14	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1532/1533 (99%)	388 (25%)	18 (1%)
2	BA	1532/1533 (99%)	410 (26%)	13 (0%)
3	DA	2894/2903 (99%)	725 (25%)	42 (1%)
4	CA	2896/2904 (99%)	866 (29%)	38 (1%)
5	CB	117/119 (98%)	26 (22%)	0
5	DB	118/119 (99%)	23 (19%)	0
All	All	9089/9111 (99%)	2438 (26%)	111 (1%)

All (2438) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	19	A
1	AA	21	G
1	AA	22	G

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Mol	Chain	Res	Type
1	AA	27	G
1	AA	32	A
1	AA	34	C
1	AA	39	G
1	AA	44	A
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	52	C
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	75	G
1	AA	76	G
1	AA	77	A
1	AA	78	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	89	U
1	AA	90	C
1	AA	91	U
1	AA	95	C
1	AA	97	G
1	AA	110	C
1	AA	111	G
1	AA	115	G
1	AA	117	G
1	AA	118	U
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	131	A
1	AA	132	C
1	AA	143	A
1	AA	144	G
1	AA	160	A
1	AA	161	A

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Mol	Chain	Res	Type
1	AA	163	C
1	AA	168	G
1	AA	182	A
1	AA	183	C
1	AA	187	G
1	AA	188	C
1	AA	191	G
1	AA	196	A
1	AA	205	A
1	AA	209	U
1	AA	210	C
1	AA	212	G
1	AA	237	G
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	260	G
1	AA	262	A
1	AA	266	G
1	AA	267	C
1	AA	268	U
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	299	G
1	AA	315	A
1	AA	321	A
1	AA	325	A
1	AA	328	C
1	AA	329	A
1	AA	331	G
1	AA	332	G
1	AA	341	C
1	AA	343	U
1	AA	346	G
1	AA	352	C
1	AA	354	G
1	AA	355	C
1	AA	365	U

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Mol	Chain	Res	Type
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	382	A
1	AA	384	G
1	AA	388	G
1	AA	406	G
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	429	U
1	AA	431	A
1	AA	439	U
1	AA	450	G
1	AA	457	G
1	AA	458	U
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	475	C
1	AA	476	U
1	AA	479	U
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	495	A
1	AA	499	A
1	AA	501	C
1	AA	505	G
1	AA	506	G
1	AA	511	C
1	AA	512	U
1	AA	514	C
1	AA	521	G

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Mol	Chain	Res	Type
1	AA	524	G
1	AA	525	C
1	AA	527	G7M
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	536	C
1	AA	539	A
1	AA	542	G
1	AA	547	A
1	AA	549	C
1	AA	562	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	581	G
1	AA	584	G
1	AA	591	U
1	AA	597	G
1	AA	601	G
1	AA	631	C
1	AA	632	U
1	AA	633	G
1	AA	646	G
1	AA	650	G
1	AA	653	U
1	AA	655	A
1	AA	656	G
1	AA	665	A
1	AA	666	G
1	AA	686	U
1	AA	718	A
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	733	G
1	AA	734	G
1	AA	753	A
1	AA	755	G
1	AA	760	G

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Mol	Chain	Res	Type
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	799	G
1	AA	802	A
1	AA	803	G
1	AA	804	U
1	AA	805	C
1	AA	810	C
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	828	U
1	AA	829	G
1	AA	832	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	846	G
1	AA	852	G
1	AA	853	C
1	AA	856	C
1	AA	859	G
1	AA	861	G
1	AA	869	G
1	AA	870	U
1	AA	873	A
1	AA	874	G
1	AA	876	C
1	AA	887	G
1	AA	889	A
1	AA	898	G
1	AA	899	C
1	AA	902	G
1	AA	910	C
1	AA	914	A
1	AA	915	A
1	AA	918	A
1	AA	922	G
1	AA	926	G
1	AA	927	G
1	AA	932	C

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Mol	Chain	Res	Type
1	AA	934	C
1	AA	935	A
1	AA	936	C
1	AA	940	C
1	AA	942	G
1	AA	951	G
1	AA	960	U
1	AA	968	A
1	AA	969	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	984	C
1	AA	985	C
1	AA	989	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	1004	A
1	AA	1005	A
1	AA	1008	U
1	AA	1009	U
1	AA	1010	U
1	AA	1011	C
1	AA	1012	A
1	AA	1015	G
1	AA	1017	U
1	AA	1019	A
1	AA	1022	A
1	AA	1023	U
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A

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Mol	Chain	Res	Type
1	AA	1037	C
1	AA	1040	U
1	AA	1045	C
1	AA	1052	U
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1065	U
1	AA	1066	C
1	AA	1082	A
1	AA	1086	U
1	AA	1090	U
1	AA	1092	A
1	AA	1094	G
1	AA	1101	A
1	AA	1120	C
1	AA	1124	G
1	AA	1127	G
1	AA	1133	G
1	AA	1134	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	1143	G
1	AA	1145	A
1	AA	1146	A
1	AA	1152	A
1	AA	1157	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1167	A
1	AA	1168	U
1	AA	1171	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A

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Mol	Chain	Res	Type
1	AA	1201	A
1	AA	1202	U
1	AA	1208	C
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1219	A
1	AA	1225	A
1	AA	1227	A
1	AA	1228	C
1	AA	1231	G
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1261	A
1	AA	1275	A
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1287	A
1	AA	1288	A
1	AA	1289	A
1	AA	1290	G
1	AA	1299	A
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1306	A
1	AA	1308	U
1	AA	1309	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1332	A

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Mol	Chain	Res	Type
1	AA	1333	A
1	AA	1335	U
1	AA	1336	C
1	AA	1338	G
1	AA	1352	C
1	AA	1353	G
1	AA	1355	G
1	AA	1359	C
1	AA	1363	A
1	AA	1364	U
1	AA	1368	A
1	AA	1370	G
1	AA	1377	A
1	AA	1378	C
1	AA	1390	U
1	AA	1393	U
1	AA	1395	C
1	AA	1399	C
1	AA	1401	G
1	AA	1414	U
1	AA	1419	G
1	AA	1424	U
1	AA	1440	U
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A
1	AA	1451	U
1	AA	1453	G
1	AA	1454	G
1	AA	1477	U
1	AA	1487	G
1	AA	1489	G
1	AA	1491	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G

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Mol	Chain	Res	Type
1	AA	1525	G
1	AA	1529	G
1	AA	1530	G
1	AA	1534	A
2	BA	3	A
2	BA	4	U
2	BA	5	U
2	BA	6	G
2	BA	9	G
2	BA	12	U
2	BA	16	A
2	BA	17	U
2	BA	19	A
2	BA	31	G
2	BA	32	A
2	BA	39	G
2	BA	45	G
2	BA	47	C
2	BA	48	C
2	BA	51	A
2	BA	66	A
2	BA	70	U
2	BA	71	A
2	BA	73	C
2	BA	74	A
2	BA	75	G
2	BA	77	A
2	BA	80	A
2	BA	82	G
2	BA	83	C
2	BA	84	U
2	BA	87	C
2	BA	88	U
2	BA	95	C
2	BA	99	C
2	BA	104	G
2	BA	108	G
2	BA	110	C
2	BA	117	G
2	BA	120	A
2	BA	121	U
2	BA	122	G

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Mol	Chain	Res	Type
2	BA	128	G
2	BA	131	A
2	BA	143	A
2	BA	144	G
2	BA	159	G
2	BA	163	C
2	BA	168	G
2	BA	169	C
2	BA	172	A
2	BA	182	A
2	BA	191	G
2	BA	194	C
2	BA	197	A
2	BA	199	A
2	BA	200	G
2	BA	201	G
2	BA	203	G
2	BA	204	G
2	BA	207	C
2	BA	208	U
2	BA	209	U
2	BA	210	C
2	BA	211	G
2	BA	212	G
2	BA	213	G
2	BA	240	G
2	BA	245	U
2	BA	247	G
2	BA	251	G
2	BA	254	G
2	BA	259	G
2	BA	262	A
2	BA	263	A
2	BA	266	G
2	BA	267	C
2	BA	270	A
2	BA	272	C
2	BA	278	G
2	BA	279	A
2	BA	280	C
2	BA	283	U
2	BA	289	G

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Mol	Chain	Res	Type
2	BA	298	A
2	BA	299	G
2	BA	300	A
2	BA	304	U
2	BA	312	C
2	BA	316	C
2	BA	321	A
2	BA	325	A
2	BA	328	C
2	BA	329	A
2	BA	330	C
2	BA	331	G
2	BA	332	G
2	BA	339	C
2	BA	345	C
2	BA	347	G
2	BA	352	C
2	BA	354	G
2	BA	356	A
2	BA	367	U
2	BA	372	C
2	BA	376	G
2	BA	378	G
2	BA	379	C
2	BA	384	G
2	BA	398	U
2	BA	399	G
2	BA	406	G
2	BA	411	A
2	BA	412	A
2	BA	413	G
2	BA	414	A
2	BA	421	U
2	BA	422	C
2	BA	424	G
2	BA	429	U
2	BA	430	A
2	BA	438	U
2	BA	439	U
2	BA	450	G
2	BA	451	A
2	BA	452	A

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Mol	Chain	Res	Type
2	BA	457	G
2	BA	458	U
2	BA	459	A
2	BA	463	U
2	BA	464	U
2	BA	467	U
2	BA	468	A
2	BA	469	C
2	BA	473	U
2	BA	478	A
2	BA	479	U
2	BA	484	G
2	BA	485	U
2	BA	486	U
2	BA	495	A
2	BA	498	A
2	BA	509	A
2	BA	510	A
2	BA	511	C
2	BA	518	C
2	BA	527	G
2	BA	528	C
2	BA	530	G
2	BA	531	U
2	BA	532	A
2	BA	533	A
2	BA	547	A
2	BA	550	G
2	BA	559	A
2	BA	560	A
2	BA	563	A
2	BA	564	C
2	BA	566	G
2	BA	568	G
2	BA	572	A
2	BA	573	A
2	BA	576	C
2	BA	577	G
2	BA	587	G
2	BA	595	A
2	BA	608	A
2	BA	615	G

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Mol	Chain	Res	Type
2	BA	618	C
2	BA	619	U
2	BA	622	A
2	BA	632	U
2	BA	635	A
2	BA	642	A
2	BA	650	G
2	BA	653	U
2	BA	654	G
2	BA	665	A
2	BA	666	G
2	BA	678	U
2	BA	687	A
2	BA	695	A
2	BA	698	G
2	BA	702	A
2	BA	703	G
2	BA	721	G
2	BA	723	U
2	BA	724	G
2	BA	728	A
2	BA	729	A
2	BA	731	G
2	BA	733	G
2	BA	734	G
2	BA	736	C
2	BA	747	A
2	BA	755	G
2	BA	758	C
2	BA	760	G
2	BA	763	G
2	BA	765	G
2	BA	771	G
2	BA	776	G
2	BA	777	A
2	BA	785	G
2	BA	793	U
2	BA	794	A
2	BA	801	U
2	BA	802	A
2	BA	804	U
2	BA	810	C

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Mol	Chain	Res	Type
2	BA	814	A
2	BA	815	A
2	BA	817	C
2	BA	818	G
2	BA	819	A
2	BA	820	U
2	BA	821	G
2	BA	828	U
2	BA	829	G
2	BA	832	G
2	BA	841	C
2	BA	843	U
2	BA	844	G
2	BA	845	A
2	BA	846	G
2	BA	848	C
2	BA	849	G
2	BA	857	C
2	BA	876	C
2	BA	880	C
2	BA	888	G
2	BA	899	C
2	BA	902	G
2	BA	903	G
2	BA	908	A
2	BA	909	A
2	BA	914	A
2	BA	916	U
2	BA	922	G
2	BA	926	G
2	BA	932	C
2	BA	933	G
2	BA	934	C
2	BA	935	A
2	BA	936	C
2	BA	940	C
2	BA	941	G
2	BA	942	G
2	BA	945	G
2	BA	946	A
2	BA	960	U
2	BA	966	G

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Mol	Chain	Res	Type
2	BA	968	A
2	BA	969	A
2	BA	973	G
2	BA	974	A
2	BA	975	A
2	BA	976	G
2	BA	977	A
2	BA	979	C
2	BA	981	U
2	BA	982	U
2	BA	983	A
2	BA	987	G
2	BA	988	G
2	BA	992	U
2	BA	993	G
2	BA	1004	A
2	BA	1008	U
2	BA	1009	U
2	BA	1019	A
2	BA	1020	G
2	BA	1026	G
2	BA	1028	C
2	BA	1029	U
2	BA	1030	U
2	BA	1031	C
2	BA	1032	G
2	BA	1033	G
2	BA	1034	G
2	BA	1035	A
2	BA	1037	C
2	BA	1039	G
2	BA	1042	A
2	BA	1043	G
2	BA	1044	A
2	BA	1046	A
2	BA	1047	G
2	BA	1064	G
2	BA	1065	U
2	BA	1066	C
2	BA	1067	A
2	BA	1069	C
2	BA	1086	U

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Mol	Chain	Res	Type
2	BA	1088	G
2	BA	1094	G
2	BA	1095	U
2	BA	1097	C
2	BA	1101	A
2	BA	1116	U
2	BA	1118	U
2	BA	1125	U
2	BA	1126	U
2	BA	1127	G
2	BA	1128	C
2	BA	1129	C
2	BA	1132	C
2	BA	1133	G
2	BA	1134	G
2	BA	1136	C
2	BA	1137	C
2	BA	1139	G
2	BA	1140	C
2	BA	1141	C
2	BA	1142	G
2	BA	1143	G
2	BA	1145	A
2	BA	1151	A
2	BA	1152	A
2	BA	1154	G
2	BA	1157	A
2	BA	1159	U
2	BA	1160	G
2	BA	1161	C
2	BA	1167	A
2	BA	1171	A
2	BA	1182	G
2	BA	1184	G
2	BA	1185	G
2	BA	1192	C
2	BA	1196	A
2	BA	1197	A
2	BA	1203	C
2	BA	1212	U
2	BA	1213	A
2	BA	1214	C

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Mol	Chain	Res	Type
2	BA	1218	C
2	BA	1225	A
2	BA	1227	A
2	BA	1236	A
2	BA	1238	A
2	BA	1239	A
2	BA	1240	U
2	BA	1245	C
2	BA	1256	A
2	BA	1257	A
2	BA	1258	G
2	BA	1260	G
2	BA	1261	A
2	BA	1275	A
2	BA	1278	G
2	BA	1280	A
2	BA	1284	C
2	BA	1285	A
2	BA	1286	U
2	BA	1287	A
2	BA	1293	C
2	BA	1296	C
2	BA	1297	G
2	BA	1299	A
2	BA	1302	C
2	BA	1304	G
2	BA	1305	G
2	BA	1317	C
2	BA	1318	A
2	BA	1320	C
2	BA	1322	C
2	BA	1323	G
2	BA	1332	A
2	BA	1336	C
2	BA	1337	G
2	BA	1341	U
2	BA	1345	U
2	BA	1346	A
2	BA	1348	U
2	BA	1353	G
2	BA	1362	A
2	BA	1363	A

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Mol	Chain	Res	Type
2	BA	1370	G
2	BA	1378	C
2	BA	1379	G
2	BA	1381	U
2	BA	1398	A
2	BA	1400	C
2	BA	1421	G
2	BA	1422	G
2	BA	1426	G
2	BA	1429	A
2	BA	1435	G
2	BA	1441	A
2	BA	1442	G
2	BA	1444	U
2	BA	1446	A
2	BA	1448	C
2	BA	1451	U
2	BA	1452	C
2	BA	1470	U
2	BA	1475	G
2	BA	1486	G
2	BA	1487	G
2	BA	1492	A
2	BA	1497	G
2	BA	1503	A
2	BA	1505	G
2	BA	1506	U
2	BA	1507	A
2	BA	1509	C
2	BA	1515	G
2	BA	1517	G
2	BA	1518	A
2	BA	1529	G
2	BA	1530	G
2	BA	1533	C
2	BA	1534	A
3	DA	10	A
3	DA	12	U
3	DA	13	A
3	DA	14	A
3	DA	15	G
3	DA	27	G

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Mol	Chain	Res	Type
3	DA	28	A
3	DA	32	C
3	DA	34	U
3	DA	45	G
3	DA	46	G
3	DA	55	G
3	DA	58	G
3	DA	61	C
3	DA	63	A
3	DA	66	C
3	DA	71	A
3	DA	74	A
3	DA	75	G
3	DA	81	G
3	DA	82	U
3	DA	84	A
3	DA	87	U
3	DA	88	G
3	DA	97	C
3	DA	102	U
3	DA	118	A
3	DA	119	A
3	DA	120	U
3	DA	122	G
3	DA	125	A
3	DA	126	A
3	DA	138	U
3	DA	139	U
3	DA	140	C
3	DA	141	G
3	DA	142	A
3	DA	146	A
3	DA	162	U
3	DA	163	C
3	DA	165	A
3	DA	173	A
3	DA	181	A
3	DA	196	A
3	DA	199	A
3	DA	203	A
3	DA	204	A
3	DA	207	A

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Mol	Chain	Res	Type
3	DA	215	G
3	DA	216	A
3	DA	221	A
3	DA	222	A
3	DA	227	A
3	DA	228	C
3	DA	230	G
3	DA	240	C
3	DA	241	A
3	DA	248	G
3	DA	255	A
3	DA	264	C
3	DA	265	A
3	DA	266	G
3	DA	271	G
3	DA	272	A
3	DA	274	C
3	DA	276	U
3	DA	277	G
3	DA	302	C
3	DA	303	G
3	DA	305	C
3	DA	306	U
3	DA	310	A
3	DA	311	A
3	DA	317	G
3	DA	325	G
3	DA	329	G
3	DA	330	A
3	DA	331	C
3	DA	339	U
3	DA	348	A
3	DA	353	C
3	DA	355	U
3	DA	357	C
3	DA	361	G
3	DA	362	A
3	DA	372	G
3	DA	383	C
3	DA	384	A
3	DA	385	C
3	DA	386	G

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Mol	Chain	Res	Type
3	DA	390	U
3	DA	391	A
3	DA	396	G
3	DA	404	A
3	DA	405	U
3	DA	411	G
3	DA	412	A
3	DA	414	C
3	DA	420	C
3	DA	424	G
3	DA	439	A
3	DA	448	U
3	DA	455	C
3	DA	457	A
3	DA	459	U
3	DA	460	A
3	DA	465	G
3	DA	467	G
3	DA	475	C
3	DA	479	A
3	DA	481	G
3	DA	485	C
3	DA	490	C
3	DA	491	G
3	DA	504	A
3	DA	505	A
3	DA	508	A
3	DA	509	C
3	DA	513	A
3	DA	522	A
3	DA	528	A
3	DA	530	G
3	DA	531	C
3	DA	532	A
3	DA	533	G
3	DA	538	A
3	DA	539	G
3	DA	543	G
3	DA	546	U
3	DA	547	A
3	DA	548	G
3	DA	549	G

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Mol	Chain	Res	Type
3	DA	550	C
3	DA	551	G
3	DA	557	C
3	DA	563	A
3	DA	564	C
3	DA	573	U
3	DA	575	A
3	DA	586	A
3	DA	597	G
3	DA	603	A
3	DA	610	C
3	DA	613	A
3	DA	614	A
3	DA	615	U
3	DA	627	A
3	DA	628	G
3	DA	637	A
3	DA	644	A
3	DA	645	C
3	DA	646	U
3	DA	647	G
3	DA	654	A
3	DA	655	A
3	DA	682	G
3	DA	686	U
3	DA	695	G
3	DA	698	C
3	DA	702	U
3	DA	717	C
3	DA	719	C
3	DA	728	G
3	DA	729	G
3	DA	730	A
3	DA	735	A
3	DA	738	G
3	DA	745	1MG
3	DA	747	5MU
3	DA	749	A
3	DA	750	A
3	DA	759	G
3	DA	765	C
3	DA	772	C

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Mol	Chain	Res	Type
3	DA	775	G
3	DA	776	G
3	DA	782	A
3	DA	783	A
3	DA	784	G
3	DA	785	G
3	DA	790	U
3	DA	791	C
3	DA	792	A
3	DA	802	A
3	DA	805	G
3	DA	806	C
3	DA	812	C
3	DA	823	C
3	DA	827	U
3	DA	828	U
3	DA	845	A
3	DA	846	U
3	DA	847	U
3	DA	848	C
3	DA	849	A
3	DA	855	G
3	DA	858	G
3	DA	859	G
3	DA	860	U
3	DA	861	A
3	DA	866	A
3	DA	878	A
3	DA	879	G
3	DA	883	G
3	DA	885	C
3	DA	893	C
3	DA	896	A
3	DA	897	C
3	DA	899	A
3	DA	907	G
3	DA	910	A
3	DA	914	G
3	DA	915	C
3	DA	931	U
3	DA	932	U
3	DA	934	U

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Mol	Chain	Res	Type
3	DA	941	A
3	DA	942	G
3	DA	946	C
3	DA	961	C
3	DA	962	G
3	DA	969	G
3	DA	974	G
3	DA	983	A
3	DA	984	A
3	DA	985	C
3	DA	988	A
3	DA	989	G
3	DA	990	A
3	DA	994	C
3	DA	995	C
3	DA	996	A
3	DA	998	C
3	DA	1000	A
3	DA	1005	C
3	DA	1012	U
3	DA	1013	C
3	DA	1022	G
3	DA	1026	G
3	DA	1027	A
3	DA	1030	C
3	DA	1033	U
3	DA	1035	U
3	DA	1039	A
3	DA	1046	A
3	DA	1047	G
3	DA	1057	A
3	DA	1058	U
3	DA	1061	U
3	DA	1062	G
3	DA	1065	U
3	DA	1066	U
3	DA	1067	A
3	DA	1068	G
3	DA	1070	A
3	DA	1071	G
3	DA	1072	C
3	DA	1073	A

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Mol	Chain	Res	Type
3	DA	1074	G
3	DA	1077	A
3	DA	1081	U
3	DA	1083	U
3	DA	1084	A
3	DA	1085	A
3	DA	1088	A
3	DA	1090	A
3	DA	1091	G
3	DA	1092	C
3	DA	1094	U
3	DA	1095	A
3	DA	1096	A
3	DA	1097	U
3	DA	1098	A
3	DA	1100	C
3	DA	1105	U
3	DA	1112	G
3	DA	1119	U
3	DA	1123	C
3	DA	1130	U
3	DA	1131	G
3	DA	1132	U
3	DA	1133	A
3	DA	1135	C
3	DA	1136	G
3	DA	1139	G
3	DA	1142	A
3	DA	1148	U
3	DA	1172	C
3	DA	1174	U
3	DA	1175	A
3	DA	1176	U
3	DA	1177	G
3	DA	1180	U
3	DA	1192	G
3	DA	1198	U
3	DA	1211	C
3	DA	1212	G
3	DA	1218	G
3	DA	1221	C
3	DA	1229	C

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Mol	Chain	Res	Type
3	DA	1232	G
3	DA	1238	G
3	DA	1241	A
3	DA	1249	U
3	DA	1252	G
3	DA	1253	A
3	DA	1256	G
3	DA	1265	A
3	DA	1269	A
3	DA	1271	G
3	DA	1272	A
3	DA	1274	A
3	DA	1284	A
3	DA	1286	A
3	DA	1289	C
3	DA	1291	C
3	DA	1297	C
3	DA	1300	G
3	DA	1301	A
3	DA	1303	G
3	DA	1305	C
3	DA	1306	C
3	DA	1310	G
3	DA	1319	C
3	DA	1320	C
3	DA	1321	A
3	DA	1338	G
3	DA	1342	A
3	DA	1344	U
3	DA	1345	C
3	DA	1352	U
3	DA	1353	A
3	DA	1359	A
3	DA	1364	G
3	DA	1365	A
3	DA	1366	A
3	DA	1367	A
3	DA	1377	G
3	DA	1378	A
3	DA	1379	U
3	DA	1380	G
3	DA	1383	A

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Mol	Chain	Res	Type
3	DA	1390	U
3	DA	1416	G
3	DA	1417	C
3	DA	1420	A
3	DA	1428	C
3	DA	1430	G
3	DA	1435	G
3	DA	1445	G
3	DA	1452	G
3	DA	1453	A
3	DA	1458	U
3	DA	1459	G
3	DA	1460	U
3	DA	1461	C
3	DA	1478	G
3	DA	1479	G
3	DA	1482	G
3	DA	1490	A
3	DA	1493	C
3	DA	1494	A
3	DA	1495	A
3	DA	1497	U
3	DA	1507	C
3	DA	1508	A
3	DA	1509	A
3	DA	1510	G
3	DA	1515	A
3	DA	1519	G
3	DA	1527	G
3	DA	1531	C
3	DA	1534	U
3	DA	1535	A
3	DA	1538	G
3	DA	1554	U
3	DA	1559	U
3	DA	1561	C
3	DA	1566	A
3	DA	1569	A
3	DA	1575	C
3	DA	1576	U
3	DA	1578	U
3	DA	1579	A

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Mol	Chain	Res	Type
3	DA	1582	C
3	DA	1583	A
3	DA	1585	C
3	DA	1595	C
3	DA	1603	A
3	DA	1606	C
3	DA	1607	C
3	DA	1608	A
3	DA	1609	A
3	DA	1613	G
3	DA	1615	C
3	DA	1616	A
3	DA	1632	A
3	DA	1639	C
3	DA	1644	C
3	DA	1647	U
3	DA	1648	U
3	DA	1649	G
3	DA	1652	A
3	DA	1655	A
3	DA	1663	G
3	DA	1665	A
3	DA	1674	G
3	DA	1694	C
3	DA	1700	A
3	DA	1702	G
3	DA	1703	G
3	DA	1710	G
3	DA	1711	A
3	DA	1715	G
3	DA	1717	A
3	DA	1725	U
3	DA	1729	U
3	DA	1730	C
3	DA	1732	C
3	DA	1738	G
3	DA	1739	A
3	DA	1744	A
3	DA	1746	A
3	DA	1751	U
3	DA	1755	A
3	DA	1764	C

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Mol	Chain	Res	Type
3	DA	1770	G
3	DA	1771	C
3	DA	1772	A
3	DA	1773	A
3	DA	1780	A
3	DA	1782	U
3	DA	1787	A
3	DA	1788	C
3	DA	1798	U
3	DA	1800	C
3	DA	1801	A
3	DA	1802	A
3	DA	1807	G
3	DA	1808	A
3	DA	1809	A
3	DA	1813	G
3	DA	1816	C
3	DA	1819	A
3	DA	1829	A
3	DA	1830	C
3	DA	1833	C
3	DA	1835	2MG
3	DA	1839	G
3	DA	1841	U
3	DA	1847	A
3	DA	1849	G
3	DA	1852	U
3	DA	1853	A
3	DA	1854	A
3	DA	1858	A
3	DA	1862	G
3	DA	1866	A
3	DA	1869	G
3	DA	1870	C
3	DA	1871	A
3	DA	1872	A
3	DA	1873	G
3	DA	1889	A
3	DA	1890	A
3	DA	1902	C
3	DA	1906	G
3	DA	1907	G

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Mol	Chain	Res	Type
3	DA	1910	G
3	DA	1913	A
3	DA	1914	C
3	DA	1919	A
3	DA	1921	G
3	DA	1929	G
3	DA	1930	G
3	DA	1931	U
3	DA	1938	A
3	DA	1955	U
3	DA	1966	A
3	DA	1967	C
3	DA	1970	A
3	DA	1971	U
3	DA	1972	G
3	DA	1987	A
3	DA	1988	G
3	DA	1991	U
3	DA	1992	G
3	DA	1993	U
3	DA	1997	C
3	DA	2001	C
3	DA	2009	A
3	DA	2021	C
3	DA	2023	C
3	DA	2026	U
3	DA	2031	A
3	DA	2033	A
3	DA	2043	C
3	DA	2049	G
3	DA	2050	C
3	DA	2055	C
3	DA	2056	G
3	DA	2060	A
3	DA	2061	G
3	DA	2062	A
3	DA	2064	C
3	DA	2069	G7M
3	DA	2080	A
3	DA	2092	U
3	DA	2093	G
3	DA	2097	A

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Mol	Chain	Res	Type
3	DA	2101	A
3	DA	2102	G
3	DA	2105	U
3	DA	2108	A
3	DA	2111	U
3	DA	2112	G
3	DA	2113	U
3	DA	2115	G
3	DA	2117	A
3	DA	2118	U
3	DA	2123	G
3	DA	2126	A
3	DA	2127	G
3	DA	2128	G
3	DA	2131	U
3	DA	2132	U
3	DA	2133	G
3	DA	2134	A
3	DA	2136	G
3	DA	2137	U
3	DA	2139	U
3	DA	2145	C
3	DA	2146	C
3	DA	2147	A
3	DA	2148	G
3	DA	2149	U
3	DA	2159	G
3	DA	2160	C
3	DA	2161	C
3	DA	2162	G
3	DA	2163	A
3	DA	2164	C
3	DA	2165	C
3	DA	2167	U
3	DA	2168	G
3	DA	2169	A
3	DA	2170	A
3	DA	2171	A
3	DA	2172	U
3	DA	2173	A
3	DA	2177	C
3	DA	2178	C

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Mol	Chain	Res	Type
3	DA	2179	C
3	DA	2180	U
3	DA	2181	U
3	DA	2182	U
3	DA	2185	U
3	DA	2187	U
3	DA	2188	U
3	DA	2189	U
3	DA	2193	G
3	DA	2194	U
3	DA	2195	U
3	DA	2198	A
3	DA	2203	U
3	DA	2204	G
3	DA	2210	U
3	DA	2211	A
3	DA	2212	A
3	DA	2214	C
3	DA	2225	A
3	DA	2238	G
3	DA	2239	G
3	DA	2242	G
3	DA	2243	U
3	DA	2245	U
3	DA	2247	A
3	DA	2248	C
3	DA	2250	G
3	DA	2257	U
3	DA	2258	C
3	DA	2268	A
3	DA	2269	G
3	DA	2273	A
3	DA	2278	A
3	DA	2283	C
3	DA	2285	C
3	DA	2286	G
3	DA	2287	A
3	DA	2305	U
3	DA	2306	C
3	DA	2308	G
3	DA	2309	A
3	DA	2310	C

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Mol	Chain	Res	Type
3	DA	2311	A
3	DA	2322	A
3	DA	2325	G
3	DA	2327	A
3	DA	2329	U
3	DA	2333	A
3	DA	2334	U
3	DA	2345	G
3	DA	2346	A
3	DA	2347	C
3	DA	2348	U
3	DA	2357	G
3	DA	2358	A
3	DA	2376	A
3	DA	2379	G
3	DA	2383	G
3	DA	2385	C
3	DA	2389	G
3	DA	2393	U
3	DA	2396	G
3	DA	2402	U
3	DA	2406	A
3	DA	2424	C
3	DA	2425	A
3	DA	2428	G
3	DA	2435	A
3	DA	2440	C
3	DA	2441	U
3	DA	2447	G
3	DA	2448	A
3	DA	2452	C
3	DA	2471	A
3	DA	2476	A
3	DA	2480	C
3	DA	2484	G
3	DA	2487	G
3	DA	2491	U
3	DA	2493	U
3	DA	2497	A
3	DA	2498	OMC
3	DA	2500	U
3	DA	2502	G

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Mol	Chain	Res	Type
3	DA	2503	2MA
3	DA	2504	PSU
3	DA	2505	G
3	DA	2511	U
3	DA	2513	A
3	DA	2518	A
3	DA	2529	G
3	DA	2532	G
3	DA	2538	C
3	DA	2543	G
3	DA	2547	A
3	DA	2548	U
3	DA	2550	G
3	DA	2554	U
3	DA	2555	U
3	DA	2556	C
3	DA	2564	A
3	DA	2566	A
3	DA	2567	G
3	DA	2573	C
3	DA	2581	G
3	DA	2585	U
3	DA	2586	U
3	DA	2591	C
3	DA	2599	G
3	DA	2601	C
3	DA	2602	A
3	DA	2603	G
3	DA	2608	G
3	DA	2609	U
3	DA	2611	C
3	DA	2612	C
3	DA	2613	U
3	DA	2618	G
3	DA	2627	G
3	DA	2629	U
3	DA	2636	C
3	DA	2644	G
3	DA	2656	U
3	DA	2660	A
3	DA	2661	G
3	DA	2663	G

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Mol	Chain	Res	Type
3	DA	2671	G
3	DA	2689	U
3	DA	2690	U
3	DA	2700	A
3	DA	2703	C
3	DA	2707	U
3	DA	2713	U
3	DA	2714	G
3	DA	2726	A
3	DA	2729	G
3	DA	2733	A
3	DA	2739	U
3	DA	2743	U
3	DA	2748	A
3	DA	2750	A
3	DA	2756	U
3	DA	2757	A
3	DA	2765	A
3	DA	2769	U
3	DA	2778	A
3	DA	2791	G
3	DA	2798	U
3	DA	2799	A
3	DA	2800	A
3	DA	2818	U
3	DA	2820	A
3	DA	2821	A
3	DA	2823	A
3	DA	2824	C
3	DA	2825	G
3	DA	2832	U
3	DA	2833	U
3	DA	2850	A
3	DA	2859	G
3	DA	2867	G
3	DA	2873	A
3	DA	2874	C
3	DA	2880	C
3	DA	2883	A
3	DA	2884	U
3	DA	2885	G
3	DA	2886	A

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Mol	Chain	Res	Type
3	DA	2887	A
3	DA	2888	C
3	DA	2891	U
3	DA	2894	G
3	DA	2896	C
4	CA	10	A
4	CA	15	G
4	CA	34	U
4	CA	39	G
4	CA	42	A
4	CA	46	G
4	CA	47	C
4	CA	50	U
4	CA	51	G
4	CA	55	G
4	CA	61	C
4	CA	63	A
4	CA	64	A
4	CA	66	C
4	CA	71	A
4	CA	72	U
4	CA	73	A
4	CA	74	A
4	CA	75	G
4	CA	78	U
4	CA	80	G
4	CA	83	A
4	CA	84	A
4	CA	86	G
4	CA	87	U
4	CA	88	G
4	CA	91	A
4	CA	96	C
4	CA	97	C
4	CA	98	G
4	CA	101	A
4	CA	102	U
4	CA	104	A
4	CA	113	U
4	CA	118	A
4	CA	119	A
4	CA	120	U

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Mol	Chain	Res	Type
4	CA	130	C
4	CA	131	A
4	CA	132	G
4	CA	135	U
4	CA	137	U
4	CA	138	U
4	CA	139	U
4	CA	140	C
4	CA	141	G
4	CA	142	A
4	CA	143	C
4	CA	149	A
4	CA	150	U
4	CA	163	C
4	CA	166	U
4	CA	172	A
4	CA	177	G
4	CA	178	G
4	CA	180	G
4	CA	181	A
4	CA	183	C
4	CA	189	G
4	CA	190	A
4	CA	194	G
4	CA	196	A
4	CA	199	A
4	CA	200	U
4	CA	206	U
4	CA	208	C
4	CA	209	C
4	CA	211	C
4	CA	215	G
4	CA	216	A
4	CA	222	A
4	CA	223	A
4	CA	225	C
4	CA	226	A
4	CA	228	C
4	CA	232	G
4	CA	233	A
4	CA	238	C
4	CA	242	G

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Mol	Chain	Res	Type
4	CA	245	G
4	CA	248	G
4	CA	253	C
4	CA	255	A
4	CA	257	C
4	CA	264	C
4	CA	265	A
4	CA	266	G
4	CA	268	C
4	CA	272	A
4	CA	277	G
4	CA	278	A
4	CA	279	A
4	CA	284	U
4	CA	285	G
4	CA	294	A
4	CA	301	G
4	CA	308	G
4	CA	311	A
4	CA	313	G
4	CA	317	G
4	CA	322	A
4	CA	324	A
4	CA	329	G
4	CA	330	A
4	CA	335	C
4	CA	336	C
4	CA	338	G
4	CA	346	A
4	CA	361	G
4	CA	362	A
4	CA	364	C
4	CA	367	G
4	CA	371	A
4	CA	372	G
4	CA	383	C
4	CA	385	C
4	CA	386	G
4	CA	387	U
4	CA	393	C
4	CA	396	G
4	CA	398	C

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Mol	Chain	Res	Type
4	CA	399	U
4	CA	403	U
4	CA	404	A
4	CA	405	U
4	CA	408	G
4	CA	409	G
4	CA	411	G
4	CA	417	C
4	CA	422	A
4	CA	424	G
4	CA	426	C
4	CA	430	A
4	CA	435	C
4	CA	438	G
4	CA	444	C
4	CA	447	A
4	CA	448	U
4	CA	449	A
4	CA	450	G
4	CA	451	U
4	CA	456	C
4	CA	457	A
4	CA	459	U
4	CA	461	C
4	CA	463	G
4	CA	464	U
4	CA	467	G
4	CA	474	G
4	CA	478	A
4	CA	480	A
4	CA	481	G
4	CA	489	G
4	CA	490	C
4	CA	491	G
4	CA	496	G
4	CA	504	A
4	CA	505	A
4	CA	508	A
4	CA	519	U
4	CA	527	C
4	CA	528	A
4	CA	530	G

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Mol	Chain	Res	Type
4	CA	531	C
4	CA	532	A
4	CA	542	C
4	CA	543	G
4	CA	544	C
4	CA	546	U
4	CA	547	A
4	CA	548	G
4	CA	549	G
4	CA	550	C
4	CA	554	U
4	CA	555	G
4	CA	557	C
4	CA	559	G
4	CA	562	U
4	CA	563	A
4	CA	569	U
4	CA	573	U
4	CA	575	A
4	CA	586	A
4	CA	587	C
4	CA	603	A
4	CA	606	U
4	CA	607	U
4	CA	608	A
4	CA	609	A
4	CA	611	C
4	CA	613	A
4	CA	614	A
4	CA	615	U
4	CA	616	A
4	CA	620	G
4	CA	622	G
4	CA	627	A
4	CA	628	G
4	CA	631	A
4	CA	632	A
4	CA	637	A
4	CA	642	U
4	CA	645	C
4	CA	646	U
4	CA	647	G

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Mol	Chain	Res	Type
4	CA	648	G
4	CA	650	C
4	CA	654	A
4	CA	655	A
4	CA	662	G
4	CA	664	G
4	CA	665	U
4	CA	668	A
4	CA	671	C
4	CA	678	C
4	CA	682	G
4	CA	685	A
4	CA	686	U
4	CA	687	C
4	CA	688	U
4	CA	695	G
4	CA	696	G
4	CA	699	A
4	CA	701	G
4	CA	702	U
4	CA	703	U
4	CA	706	A
4	CA	711	G
4	CA	717	C
4	CA	718	A
4	CA	724	U
4	CA	726	G
4	CA	727	A
4	CA	728	G
4	CA	730	A
4	CA	735	A
4	CA	739	A
4	CA	740	C
4	CA	746	U
4	CA	747	U
4	CA	748	G
4	CA	752	A
4	CA	753	A
4	CA	756	A
4	CA	761	A
4	CA	762	U
4	CA	764	A

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Mol	Chain	Res	Type
4	CA	765	C
4	CA	770	G
4	CA	773	U
4	CA	775	G
4	CA	776	G
4	CA	778	G
4	CA	782	A
4	CA	784	G
4	CA	785	G
4	CA	789	A
4	CA	790	U
4	CA	791	C
4	CA	792	A
4	CA	793	A
4	CA	794	A
4	CA	798	G
4	CA	805	G
4	CA	811	U
4	CA	812	C
4	CA	814	C
4	CA	815	C
4	CA	819	A
4	CA	826	U
4	CA	827	U
4	CA	828	U
4	CA	831	G
4	CA	844	A
4	CA	845	A
4	CA	846	U
4	CA	847	U
4	CA	854	C
4	CA	858	G
4	CA	859	G
4	CA	869	G
4	CA	878	A
4	CA	881	G
4	CA	882	G
4	CA	883	G
4	CA	884	U
4	CA	885	C
4	CA	896	A
4	CA	897	C

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Mol	Chain	Res	Type
4	CA	905	A
4	CA	906	U
4	CA	910	A
4	CA	914	G
4	CA	919	U
4	CA	931	U
4	CA	941	A
4	CA	945	A
4	CA	946	C
4	CA	953	G
4	CA	961	C
4	CA	974	G
4	CA	983	A
4	CA	985	C
4	CA	995	C
4	CA	996	A
4	CA	1009	A
4	CA	1012	U
4	CA	1013	C
4	CA	1014	A
4	CA	1022	G
4	CA	1023	U
4	CA	1025	G
4	CA	1026	G
4	CA	1029	A
4	CA	1033	U
4	CA	1046	A
4	CA	1047	G
4	CA	1053	C
4	CA	1054	A
4	CA	1057	A
4	CA	1059	G
4	CA	1060	U
4	CA	1061	U
4	CA	1062	G
4	CA	1063	G
4	CA	1065	U
4	CA	1066	U
4	CA	1067	A
4	CA	1068	G
4	CA	1069	A
4	CA	1070	A

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Mol	Chain	Res	Type
4	CA	1072	C
4	CA	1073	A
4	CA	1074	G
4	CA	1075	C
4	CA	1078	U
4	CA	1081	U
4	CA	1085	A
4	CA	1087	G
4	CA	1088	A
4	CA	1089	A
4	CA	1090	A
4	CA	1092	C
4	CA	1094	U
4	CA	1097	U
4	CA	1098	A
4	CA	1099	G
4	CA	1104	C
4	CA	1105	U
4	CA	1111	A
4	CA	1112	G
4	CA	1115	G
4	CA	1122	G
4	CA	1126	A
4	CA	1130	U
4	CA	1132	U
4	CA	1133	A
4	CA	1135	C
4	CA	1136	G
4	CA	1139	G
4	CA	1143	A
4	CA	1149	G
4	CA	1151	A
4	CA	1155	A
4	CA	1158	C
4	CA	1168	G
4	CA	1170	C
4	CA	1171	G
4	CA	1173	U
4	CA	1174	U
4	CA	1175	A
4	CA	1176	U
4	CA	1179	G

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Mol	Chain	Res	Type
4	CA	1180	U
4	CA	1186	G
4	CA	1189	A
4	CA	1199	U
4	CA	1204	A
4	CA	1206	G
4	CA	1210	G
4	CA	1212	G
4	CA	1217	U
4	CA	1218	G
4	CA	1230	A
4	CA	1231	U
4	CA	1233	C
4	CA	1236	G
4	CA	1238	G
4	CA	1239	G
4	CA	1244	A
4	CA	1247	A
4	CA	1248	G
4	CA	1250	G
4	CA	1251	C
4	CA	1253	A
4	CA	1254	A
4	CA	1256	G
4	CA	1258	U
4	CA	1262	A
4	CA	1265	A
4	CA	1266	G
4	CA	1269	A
4	CA	1271	G
4	CA	1272	A
4	CA	1273	U
4	CA	1280	G
4	CA	1282	U
4	CA	1288	G
4	CA	1290	C
4	CA	1300	G
4	CA	1301	A
4	CA	1302	A
4	CA	1306	C
4	CA	1312	U
4	CA	1318	U

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Mol	Chain	Res	Type
4	CA	1328	A
4	CA	1329	U
4	CA	1331	G
4	CA	1332	G
4	CA	1342	A
4	CA	1344	U
4	CA	1345	C
4	CA	1348	C
4	CA	1352	U
4	CA	1359	A
4	CA	1362	C
4	CA	1364	G
4	CA	1365	A
4	CA	1376	C
4	CA	1378	A
4	CA	1379	U
4	CA	1380	G
4	CA	1383	A
4	CA	1384	A
4	CA	1388	G
4	CA	1391	U
4	CA	1393	A
4	CA	1395	A
4	CA	1398	C
4	CA	1402	U
4	CA	1406	U
4	CA	1414	C
4	CA	1416	G
4	CA	1417	C
4	CA	1418	G
4	CA	1419	A
4	CA	1420	A
4	CA	1427	A
4	CA	1441	G
4	CA	1443	U
4	CA	1453	A
4	CA	1455	G
4	CA	1456	G
4	CA	1458	U
4	CA	1459	G
4	CA	1476	U
4	CA	1482	G

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Mol	Chain	Res	Type
4	CA	1483	G
4	CA	1493	C
4	CA	1497	U
4	CA	1504	A
4	CA	1509	A
4	CA	1510	G
4	CA	1515	A
4	CA	1529	G
4	CA	1530	G
4	CA	1532	A
4	CA	1533	C
4	CA	1534	U
4	CA	1535	A
4	CA	1536	C
4	CA	1538	G
4	CA	1539	U
4	CA	1540	G
4	CA	1547	C
4	CA	1558	C
4	CA	1560	G
4	CA	1566	A
4	CA	1569	A
4	CA	1576	U
4	CA	1578	U
4	CA	1581	G
4	CA	1583	A
4	CA	1584	U
4	CA	1585	C
4	CA	1586	A
4	CA	1587	G
4	CA	1593	A
4	CA	1602	U
4	CA	1603	A
4	CA	1605	C
4	CA	1606	C
4	CA	1607	C
4	CA	1608	A
4	CA	1609	A
4	CA	1610	A
4	CA	1615	C
4	CA	1616	A
4	CA	1618	A

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Mol	Chain	Res	Type
4	CA	1619	G
4	CA	1622	G
4	CA	1626	A
4	CA	1629	U
4	CA	1630	A
4	CA	1631	G
4	CA	1632	A
4	CA	1634	A
4	CA	1643	G
4	CA	1646	C
4	CA	1647	U
4	CA	1648	U
4	CA	1649	G
4	CA	1650	A
4	CA	1651	G
4	CA	1652	A
4	CA	1658	C
4	CA	1661	G
4	CA	1674	G
4	CA	1678	A
4	CA	1681	G
4	CA	1685	C
4	CA	1690	A
4	CA	1693	U
4	CA	1694	C
4	CA	1695	G
4	CA	1705	A
4	CA	1706	C
4	CA	1707	G
4	CA	1714	U
4	CA	1715	G
4	CA	1722	A
4	CA	1726	C
4	CA	1729	U
4	CA	1730	C
4	CA	1732	C
4	CA	1734	G
4	CA	1735	A
4	CA	1738	G
4	CA	1739	A
4	CA	1740	G
4	CA	1757	A

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Mol	Chain	Res	Type
4	CA	1758	U
4	CA	1759	A
4	CA	1760	C
4	CA	1764	C
4	CA	1773	A
4	CA	1778	U
4	CA	1780	A
4	CA	1781	U
4	CA	1782	U
4	CA	1784	A
4	CA	1789	A
4	CA	1791	A
4	CA	1792	G
4	CA	1794	A
4	CA	1798	U
4	CA	1799	G
4	CA	1800	C
4	CA	1801	A
4	CA	1802	A
4	CA	1808	A
4	CA	1809	A
4	CA	1810	A
4	CA	1812	U
4	CA	1815	A
4	CA	1816	C
4	CA	1820	U
4	CA	1822	C
4	CA	1828	G
4	CA	1829	A
4	CA	1833	C
4	CA	1834	U
4	CA	1848	A
4	CA	1856	U
4	CA	1857	G
4	CA	1858	A
4	CA	1864	U
4	CA	1870	C
4	CA	1873	G
4	CA	1876	A
4	CA	1880	U
4	CA	1882	U
4	CA	1889	A

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Mol	Chain	Res	Type
4	CA	1892	C
4	CA	1897	G
4	CA	1900	A
4	CA	1901	A
4	CA	1902	C
4	CA	1903	G
4	CA	1906	G
4	CA	1907	G
4	CA	1914	C
4	CA	1920	C
4	CA	1927	A
4	CA	1929	G
4	CA	1930	G
4	CA	1931	U
4	CA	1932	A
4	CA	1935	G
4	CA	1937	A
4	CA	1938	A
4	CA	1945	G
4	CA	1952	A
4	CA	1955	U
4	CA	1966	A
4	CA	1967	C
4	CA	1970	A
4	CA	1971	U
4	CA	1972	G
4	CA	1976	U
4	CA	1977	A
4	CA	1987	A
4	CA	1989	G
4	CA	1991	U
4	CA	1993	U
4	CA	1997	C
4	CA	2000	C
4	CA	2002	G
4	CA	2003	A
4	CA	2004	G
4	CA	2007	U
4	CA	2015	A
4	CA	2018	G
4	CA	2022	U
4	CA	2023	C

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Mol	Chain	Res	Type
4	CA	2030	A
4	CA	2031	A
4	CA	2032	G
4	CA	2033	A
4	CA	2035	G
4	CA	2036	C
4	CA	2043	C
4	CA	2045	C
4	CA	2049	G
4	CA	2051	A
4	CA	2055	C
4	CA	2056	G
4	CA	2060	A
4	CA	2061	G
4	CA	2062	A
4	CA	2069	G
4	CA	2072	C
4	CA	2079	U
4	CA	2080	A
4	CA	2082	A
4	CA	2087	G
4	CA	2092	U
4	CA	2093	G
4	CA	2110	G
4	CA	2111	U
4	CA	2112	G
4	CA	2113	U
4	CA	2115	G
4	CA	2116	G
4	CA	2117	A
4	CA	2118	U
4	CA	2120	G
4	CA	2121	G
4	CA	2124	G
4	CA	2125	G
4	CA	2126	A
4	CA	2127	G
4	CA	2128	G
4	CA	2131	U
4	CA	2132	U
4	CA	2133	G
4	CA	2135	A

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Mol	Chain	Res	Type
4	CA	2137	U
4	CA	2142	A
4	CA	2147	A
4	CA	2155	U
4	CA	2157	G
4	CA	2161	C
4	CA	2163	A
4	CA	2164	C
4	CA	2165	C
4	CA	2168	G
4	CA	2171	A
4	CA	2172	U
4	CA	2173	A
4	CA	2178	C
4	CA	2181	U
4	CA	2183	A
4	CA	2189	U
4	CA	2190	G
4	CA	2198	A
4	CA	2200	C
4	CA	2203	U
4	CA	2204	G
4	CA	2211	A
4	CA	2212	A
4	CA	2214	C
4	CA	2223	G
4	CA	2224	G
4	CA	2225	A
4	CA	2226	C
4	CA	2227	A
4	CA	2231	U
4	CA	2234	G
4	CA	2238	G
4	CA	2239	G
4	CA	2242	G
4	CA	2243	U
4	CA	2250	G
4	CA	2268	A
4	CA	2271	G
4	CA	2273	A
4	CA	2278	A
4	CA	2279	G

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Mol	Chain	Res	Type
4	CA	2283	C
4	CA	2287	A
4	CA	2293	G
4	CA	2297	A
4	CA	2305	U
4	CA	2307	G
4	CA	2308	G
4	CA	2309	A
4	CA	2310	C
4	CA	2311	A
4	CA	2313	C
4	CA	2316	G
4	CA	2320	U
4	CA	2321	U
4	CA	2322	A
4	CA	2324	U
4	CA	2327	A
4	CA	2333	A
4	CA	2335	A
4	CA	2345	G
4	CA	2347	C
4	CA	2350	C
4	CA	2354	C
4	CA	2357	G
4	CA	2361	G
4	CA	2383	G
4	CA	2385	C
4	CA	2391	G
4	CA	2398	U
4	CA	2402	U
4	CA	2403	C
4	CA	2406	A
4	CA	2407	A
4	CA	2410	G
4	CA	2411	A
4	CA	2412	A
4	CA	2417	C
4	CA	2422	C
4	CA	2423	U
4	CA	2424	C
4	CA	2425	A
4	CA	2426	A

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Mol	Chain	Res	Type
4	CA	2429	G
4	CA	2430	A
4	CA	2431	U
4	CA	2435	A
4	CA	2436	G
4	CA	2438	U
4	CA	2440	C
4	CA	2441	U
4	CA	2442	C
4	CA	2448	A
4	CA	2455	G
4	CA	2459	A
4	CA	2469	A
4	CA	2474	U
4	CA	2476	A
4	CA	2482	A
4	CA	2483	C
4	CA	2484	G
4	CA	2486	C
4	CA	2491	U
4	CA	2494	G
4	CA	2502	G
4	CA	2503	A
4	CA	2505	G
4	CA	2506	U
4	CA	2507	C
4	CA	2513	A
4	CA	2518	A
4	CA	2519	U
4	CA	2520	C
4	CA	2529	G
4	CA	2542	A
4	CA	2547	A
4	CA	2554	U
4	CA	2556	C
4	CA	2566	A
4	CA	2567	G
4	CA	2572	A
4	CA	2573	C
4	CA	2575	C
4	CA	2578	G
4	CA	2579	C

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Mol	Chain	Res	Type
4	CA	2580	U
4	CA	2581	G
4	CA	2582	G
4	CA	2585	U
4	CA	2596	U
4	CA	2600	A
4	CA	2602	A
4	CA	2603	G
4	CA	2604	U
4	CA	2609	U
4	CA	2613	U
4	CA	2619	C
4	CA	2621	G
4	CA	2626	C
4	CA	2627	G
4	CA	2629	U
4	CA	2630	G
4	CA	2645	G
4	CA	2646	C
4	CA	2661	G
4	CA	2681	C
4	CA	2682	A
4	CA	2689	U
4	CA	2690	U
4	CA	2695	U
4	CA	2718	G
4	CA	2726	A
4	CA	2729	G
4	CA	2733	A
4	CA	2739	U
4	CA	2748	A
4	CA	2751	G
4	CA	2762	C
4	CA	2765	A
4	CA	2769	U
4	CA	2774	C
4	CA	2778	A
4	CA	2791	G
4	CA	2792	A
4	CA	2793	C
4	CA	2794	C
4	CA	2800	A

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Mol	Chain	Res	Type
4	CA	2801	G
4	CA	2803	G
4	CA	2807	U
4	CA	2808	G
4	CA	2809	A
4	CA	2818	U
4	CA	2820	A
4	CA	2821	A
4	CA	2826	A
4	CA	2831	G
4	CA	2832	U
4	CA	2834	G
4	CA	2835	A
4	CA	2849	U
4	CA	2850	A
4	CA	2861	U
4	CA	2866	U
4	CA	2867	G
4	CA	2868	A
4	CA	2872	A
4	CA	2873	A
4	CA	2879	A
4	CA	2891	U
4	CA	2893	A
4	CA	2897	U
4	CA	2898	U
4	CA	2900	A
4	CA	2901	C
4	CA	2902	C
4	CA	2903	U
4	CA	2904	U
5	DB	15	A
5	DB	21	G
5	DB	24	G
5	DB	25	U
5	DB	35	C
5	DB	41	G
5	DB	42	C
5	DB	44	G
5	DB	47	C
5	DB	56	G
5	DB	57	A

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Mol	Chain	Res	Type
5	DB	66	A
5	DB	67	G
5	DB	68	C
5	DB	85	G
5	DB	87	U
5	DB	88	C
5	DB	89	U
5	DB	90	C
5	DB	98	G
5	DB	106	G
5	DB	109	A
5	DB	110	C
5	CB	5	U
5	CB	13	G
5	CB	15	A
5	CB	16	G
5	CB	17	C
5	CB	23	G
5	CB	27	C
5	CB	35	C
5	CB	36	C
5	CB	40	U
5	CB	41	G
5	CB	44	G
5	CB	50	A
5	CB	54	G
5	CB	56	G
5	CB	66	A
5	CB	67	G
5	CB	84	G
5	CB	87	U
5	CB	88	C
5	CB	89	U
5	CB	90	C
5	CB	98	G
5	CB	99	A
5	CB	109	A
5	CB	116	G

All (111) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type

Mol	Chain	Res	Type
1	AA	121	U
1	AA	209	U
1	AA	243	A
1	AA	329	A
1	AA	353	A
1	AA	438	U
1	AA	653	U
1	AA	722	G
1	AA	723	U
1	AA	1010	U
1	AA	1024	G
1	AA	1031	C
1	AA	1211	U
1	AA	1227	A
1	AA	1260	G
1	AA	1280	A
1	AA	1335	U
1	AA	1533	C
2	BA	4	U
2	BA	209	U
2	BA	429	U
2	BA	438	U
2	BA	559	A
2	BA	560	A
2	BA	793	U
2	BA	884	U
2	BA	1065	U
2	BA	1211	U
2	BA	1279	G
2	BA	1317	C
2	BA	1346	A
3	DA	27	G
3	DA	62	U
3	DA	125	A
3	DA	215	G
3	DA	226	A
3	DA	271	G
3	DA	310	A
3	DA	404	A
3	DA	627	A
3	DA	681	G

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Mol	Chain	Res	Type
3	DA	764	A
3	DA	784	G
3	DA	790	U
3	DA	859	G
3	DA	892	A
3	DA	1073	A
3	DA	1128	G
3	DA	1342	A
3	DA	1378	A
3	DA	1434	A
3	DA	1452	G
3	DA	1494	A
3	DA	1606	C
3	DA	1713	A
3	DA	1738	G
3	DA	1800	C
3	DA	1929	G
3	DA	2127	G
3	DA	2133	G
3	DA	2158	A
3	DA	2242	G
3	DA	2308	G
3	DA	2324	U
3	DA	2326	C
3	DA	2406	A
3	DA	2513	A
3	DA	2585	U
3	DA	2602	A
3	DA	2756	U
3	DA	2820	A
3	DA	2873	A
3	DA	2885	G
4	CA	125	A
4	CA	177	G
4	CA	189	G
4	CA	199	A
4	CA	241	A
4	CA	335	C
4	CA	403	U
4	CA	404	A
4	CA	503	A
4	CA	527	C

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Mol	Chain	Res	Type
4	CA	612	G
4	CA	647	G
4	CA	784	G
4	CA	793	A
4	CA	846	U
4	CA	945	A
4	CA	982	C
4	CA	1066	U
4	CA	1344	U
4	CA	1378	A
4	CA	1379	U
4	CA	1458	U
4	CA	1606	C
4	CA	1610	A
4	CA	1721	G
4	CA	1847	A
4	CA	1900	A
4	CA	2146	C
4	CA	2162	G
4	CA	2211	A
4	CA	2225	A
4	CA	2238	G
4	CA	2286	G
4	CA	2326	C
4	CA	2425	A
4	CA	2581	G
4	CA	2602	A
4	CA	2680	U

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

37 non-standard protein/DNA/RNA residues are modelled in this entry.

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	$\#\|Z\|>2$
3	2MA	DA	2503	58,3	22,25,26	1.56	4 (18%)	33,37,40	2.77	13 (39%)
1	MA6	AA	1518	1	23,26,27	1.49	5 (21%)	34,38,41	2.30	12 (35%)
3	G7M	DA	2069	3	23,26,27	1.70	3 (13%)	35,39,42	2.13	7 (20%)
3	PSU	DA	746	58,3	18,21,22	1.18	2 (11%)	22,30,33	1.91	4 (18%)
3	2MG	DA	1835	3	23,26,27	1.31	3 (13%)	32,38,41	2.08	5 (15%)
1	5MC	AA	967	1	18,22,23	1.03	1 (5%)	26,32,35	1.81	4 (15%)
3	6MZ	DA	1618	3	22,25,26	1.53	5 (22%)	30,36,39	3.06	10 (33%)
1	2MG	AA	1207	1	23,26,27	1.33	5 (21%)	32,38,41	2.12	7 (21%)
3	PSU	DA	955	3	18,21,22	1.13	0	22,30,33	2.18	4 (18%)
3	PSU	DA	2604	3	18,21,22	1.21	1 (5%)	22,30,33	1.63	3 (13%)
3	2MG	DA	2445	3	23,26,27	1.35	4 (17%)	32,38,41	2.48	8 (25%)
1	UR3	AA	1498	1	19,22,23	1.03	2 (10%)	26,32,35	1.94	4 (15%)
3	PSU	DA	1911	3	18,21,22	1.09	1 (5%)	22,30,33	1.74	4 (18%)
1	2MG	AA	1516	1	23,26,27	1.25	4 (17%)	32,38,41	2.11	7 (21%)
3	5MC	DA	1962	3	18,22,23	0.89	1 (5%)	26,32,35	1.37	3 (11%)
3	5MU	DA	1939	3	19,22,23	1.46	2 (10%)	28,32,35	2.87	9 (32%)
1	4OC	AA	1402	1	20,23,24	0.99	1 (5%)	26,32,35	1.26	4 (15%)
3	3TD	DA	1915	3	18,22,23	1.56	4 (22%)	22,32,35	2.57	6 (27%)
3	5MU	DA	747	3	19,22,23	1.69	5 (26%)	28,32,35	2.54	10 (35%)
3	6MZ	DA	2030	3	22,25,26	1.81	5 (22%)	30,36,39	2.65	8 (26%)
3	OMU	DA	2552	3	19,22,23	1.52	4 (21%)	26,31,34	2.78	7 (26%)
3	PSU	DA	2605	3	18,21,22	1.69	4 (22%)	22,30,33	1.90	4 (18%)
1	G7M	AA	527	1	23,26,27	1.42	4 (17%)	35,39,42	2.04	8 (22%)
1	PSU	AA	516	58,1	18,21,22	1.06	2 (11%)	22,30,33	1.65	3 (13%)
3	OMG	DA	2251	3	23,26,27	1.29	3 (13%)	33,38,41	2.32	10 (30%)
3	PSU	DA	1917	3	18,21,22	1.21	2 (11%)	22,30,33	1.89	7 (31%)
3	OMC	DA	2498	58,3	19,22,23	1.32	3 (15%)	26,31,34	1.24	4 (15%)
56	MEQ	DD	150	56	8,9,10	1.51	1 (12%)	5,10,12	1.52	1 (20%)
3	PSU	DA	2504	3	18,21,22	1.74	4 (22%)	22,30,33	2.03	5 (22%)
16	D2T	AL	89	16	7,9,10	1.00	0	6,11,13	2.31	3 (50%)
1	2MG	AA	966	1	23,26,27	1.44	3 (13%)	32,38,41	2.01	6 (18%)
3	PSU	DA	2457	3	18,21,22	1.30	3 (16%)	22,30,33	1.48	4 (18%)
3	1MG	DA	745	3	22,26,27	1.27	4 (18%)	33,39,42	2.36	13 (39%)
1	MA6	AA	1519	1	23,26,27	1.45	4 (17%)	34,38,41	2.05	10 (29%)
1	5MC	AA	1407	1	18,22,23	1.04	2 (11%)	26,32,35	1.63	4 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	PSU	DA	2580	3	18,21,22	1.03	2 (11%)	22,30,33	1.65	4 (18%)
3	H2U	DA	2449	3	18,21,22	1.57	3 (16%)	21,30,33	2.15	3 (14%)

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
3	2MA	DA	2503	58,3	-	3/7/25/26	0/3/3/3
1	MA6	AA	1518	1	-	2/11/29/30	0/3/3/3
3	G7M	DA	2069	3	-	2/7/25/26	0/3/3/3
3	PSU	DA	746	58,3	-	3/7/25/26	0/2/2/2
3	2MG	DA	1835	3	-	4/9/27/28	0/3/3/3
1	5MC	AA	967	1	-	0/7/25/26	0/2/2/2
3	6MZ	DA	1618	3	-	1/9/27/28	0/3/3/3
1	2MG	AA	1207	1	-	2/9/27/28	0/3/3/3
3	PSU	DA	955	3	-	0/7/25/26	0/2/2/2
3	PSU	DA	2604	3	-	0/7/25/26	0/2/2/2
3	2MG	DA	2445	3	-	0/9/27/28	0/3/3/3
1	UR3	AA	1498	1	-	0/7/25/26	0/2/2/2
3	PSU	DA	1911	3	-	0/7/25/26	0/2/2/2
1	2MG	AA	1516	1	-	0/9/27/28	0/3/3/3
3	5MC	DA	1962	3	-	4/7/25/26	0/2/2/2
3	5MU	DA	1939	3	-	0/7/25/26	0/2/2/2
1	4OC	AA	1402	1	-	1/9/29/30	0/2/2/2
3	3TD	DA	1915	3	-	2/7/25/26	0/2/2/2
3	5MU	DA	747	3	-	2/7/25/26	0/2/2/2
3	6MZ	DA	2030	3	-	1/9/27/28	0/3/3/3
3	OMU	DA	2552	3	-	2/9/27/28	0/2/2/2
3	PSU	DA	2605	3	-	0/7/25/26	0/2/2/2
1	G7M	AA	527	1	-	2/7/25/26	0/3/3/3
1	PSU	AA	516	58,1	-	0/7/25/26	0/2/2/2
3	OMG	DA	2251	3	-	1/9/27/28	0/3/3/3
3	PSU	DA	1917	3	-	0/7/25/26	0/2/2/2
3	OMC	DA	2498	58,3	-	3/9/27/28	0/2/2/2
56	MEQ	DD	150	56	-	2/8/9/11	-
3	PSU	DA	2504	3	-	2/7/25/26	0/2/2/2
16	D2T	AL	89	16	-	2/7/12/14	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	2MG	AA	966	1	-	2/9/27/28	0/3/3/3
3	PSU	DA	2457	3	-	1/7/25/26	0/2/2/2
3	1MG	DA	745	3	-	2/7/25/26	0/3/3/3
1	MA6	AA	1519	1	-	3/11/29/30	0/3/3/3
1	5MC	AA	1407	1	-	0/7/25/26	0/2/2/2
3	PSU	DA	2580	3	-	0/7/25/26	0/2/2/2
3	H2U	DA	2449	3	-	0/7/38/39	0/2/2/2

All (106) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2069	G7M	C5-N7	-5.68	1.32	1.39
3	DA	2504	PSU	C6-C5	4.79	1.40	1.35
3	DA	1939	5MU	C6-N1	-4.69	1.30	1.38
3	DA	2449	H2U	C2-N3	-4.27	1.30	1.38
1	AA	1519	MA6	C5-C4	4.21	1.46	1.39
1	AA	527	G7M	C5-N7	-4.14	1.34	1.39
1	AA	1518	MA6	C5-C4	4.05	1.46	1.39
3	DA	2605	PSU	C6-C5	3.89	1.39	1.35
3	DA	2030	6MZ	C4-N9	-3.85	1.29	1.37
3	DA	746	PSU	C6-C5	3.85	1.39	1.35
3	DA	2552	OMU	C4-N3	-3.82	1.31	1.38
3	DA	747	5MU	C6-N1	-3.78	1.31	1.38
3	DA	2030	6MZ	C5-C4	3.76	1.46	1.39
3	DA	2449	H2U	C4-N3	-3.74	1.31	1.37
3	DA	2030	6MZ	C5-N7	-3.70	1.32	1.39
3	DA	2503	2MA	C5-C4	3.65	1.45	1.39
1	AA	967	5MC	C6-N1	-3.61	1.31	1.38
1	AA	966	2MG	C5-C4	3.49	1.48	1.38
1	AA	1518	MA6	C5-N7	-3.40	1.32	1.39
3	DA	2251	OMG	C6-N1	-3.38	1.32	1.38
3	DA	1618	6MZ	C4-N9	-3.35	1.30	1.37
1	AA	966	2MG	C2-N3	3.31	1.38	1.31
3	DA	1915	3TD	C10-N3	3.29	1.53	1.47
3	DA	1911	PSU	C6-C5	3.29	1.39	1.35
3	DA	1618	6MZ	C5-N7	-3.28	1.32	1.39
3	DA	2445	2MG	C5-N7	-3.28	1.32	1.39
3	DA	1835	2MG	C6-N1	-3.24	1.32	1.38
3	DA	1915	3TD	C6-C5	3.16	1.39	1.35
3	DA	1917	PSU	C6-C5	3.15	1.39	1.35
3	DA	2069	G7M	C6-N1	-3.14	1.33	1.38
1	AA	1207	2MG	C5-C4	3.14	1.47	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	516	PSU	C6-C5	3.08	1.38	1.35
3	DA	2503	2MA	C5-N7	-3.05	1.33	1.39
56	DD	150	MEQ	CE-NE2	-3.03	1.40	1.45
3	DA	1618	6MZ	C5-C4	3.03	1.44	1.39
3	DA	747	5MU	C4-C5	3.02	1.49	1.44
1	AA	1519	MA6	C5-N7	-2.97	1.33	1.39
3	DA	745	1MG	C5-C4	2.95	1.47	1.38
3	DA	1962	5MC	C6-N1	-2.94	1.33	1.38
3	DA	2504	PSU	C4-C5	-2.94	1.35	1.44
3	DA	2552	OMU	C5-C4	-2.91	1.37	1.43
1	AA	527	G7M	C5-C4	2.89	1.45	1.38
3	DA	2503	2MA	C8-N9	-2.88	1.32	1.37
3	DA	2251	OMG	C5-C4	2.84	1.46	1.38
3	DA	2503	2MA	C6-N1	-2.83	1.31	1.35
3	DA	1835	2MG	C5-C4	2.76	1.46	1.38
3	DA	1915	3TD	C4-N3	-2.74	1.34	1.40
3	DA	747	5MU	O4-C4	2.72	1.28	1.23
3	DA	2030	6MZ	C8-N7	2.71	1.36	1.31
3	DA	2445	2MG	C6-N1	-2.70	1.33	1.38
3	DA	2069	G7M	C5-C4	2.69	1.45	1.38
3	DA	2457	PSU	O4'-C1'	-2.68	1.40	1.43
3	DA	2604	PSU	C4-C5	-2.66	1.36	1.44
1	AA	1516	2MG	C5-N7	-2.65	1.33	1.39
3	DA	1917	PSU	C4-C5	-2.63	1.36	1.44
1	AA	1519	MA6	C4-N9	-2.63	1.31	1.37
1	AA	1407	5MC	C6-C5	2.58	1.38	1.34
3	DA	2445	2MG	C2-N1	-2.57	1.32	1.36
3	DA	2504	PSU	O4'-C1'	-2.52	1.40	1.43
3	DA	2605	PSU	O4-C4	-2.52	1.18	1.23
1	AA	1207	2MG	C2-N3	2.51	1.36	1.31
3	DA	1835	2MG	C5-N7	-2.50	1.34	1.39
3	DA	747	5MU	C4-N3	-2.50	1.34	1.38
3	DA	2457	PSU	C6-C5	2.50	1.38	1.35
3	DA	2030	6MZ	C8-N9	-2.48	1.33	1.37
1	AA	1516	2MG	C6-N1	-2.48	1.34	1.38
3	DA	2580	PSU	O4'-C1'	-2.47	1.40	1.43
3	DA	2552	OMU	C6-N1	-2.47	1.32	1.38
1	AA	966	2MG	C5-N7	-2.46	1.34	1.39
3	DA	1618	6MZ	C8-N7	2.46	1.36	1.31
3	DA	2504	PSU	O5'-C5'	-2.45	1.38	1.44
1	AA	1519	MA6	C8-N7	2.44	1.36	1.31
1	AA	1516	2MG	C5-C4	2.40	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1518	MA6	C8-N9	-2.40	1.33	1.37
1	AA	1518	MA6	C4-N9	-2.39	1.32	1.37
1	AA	1207	2MG	C4-N9	-2.35	1.32	1.38
3	DA	2449	H2U	C2-N1	2.33	1.39	1.35
3	DA	2498	OMC	O5'-C5'	-2.32	1.39	1.44
1	AA	1207	2MG	C5-N7	-2.31	1.34	1.39
1	AA	1407	5MC	C6-N1	-2.29	1.34	1.38
1	AA	1498	UR3	C6-C5	2.29	1.40	1.35
3	DA	2251	OMG	C5-N7	-2.25	1.34	1.39
3	DA	2580	PSU	C4-C5	-2.25	1.37	1.44
1	AA	1516	2MG	C4-N9	-2.21	1.32	1.38
3	DA	2605	PSU	C4-C5	-2.19	1.37	1.44
3	DA	745	1MG	C5-N7	-2.17	1.34	1.39
3	DA	2605	PSU	O4'-C1'	-2.17	1.40	1.43
3	DA	747	5MU	C2-N1	2.16	1.41	1.38
1	AA	1498	UR3	C6-N1	-2.15	1.32	1.38
3	DA	746	PSU	C2-N1	2.15	1.39	1.36
3	DA	1915	3TD	O4'-C1'	-2.12	1.40	1.43
3	DA	2457	PSU	C4-C5	-2.11	1.38	1.44
3	DA	2552	OMU	C2-N3	-2.11	1.34	1.38
3	DA	745	1MG	C4-N9	-2.10	1.32	1.38
3	DA	2498	OMC	C6-N1	-2.10	1.32	1.38
1	AA	1518	MA6	C8-N7	2.09	1.35	1.31
3	DA	2498	OMC	C5-C4	-2.07	1.38	1.42
3	DA	1618	6MZ	C8-N9	-2.07	1.33	1.37
1	AA	527	G7M	C6-N1	-2.06	1.35	1.38
1	AA	1207	2MG	C6-N1	-2.06	1.35	1.38
3	DA	745	1MG	O5'-C5'	-2.04	1.39	1.44
3	DA	1939	5MU	C4-N3	-2.03	1.35	1.38
1	AA	516	PSU	C4-C5	-2.02	1.38	1.44
3	DA	2445	2MG	C4-N9	-2.01	1.32	1.38
1	AA	1402	4OC	C6-N1	-2.01	1.33	1.38
1	AA	527	G7M	C4-N9	-2.01	1.32	1.38

All (228) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1618	6MZ	C9-N6-C6	-11.88	112.64	122.87
3	DA	2030	6MZ	C9-N6-C6	-9.14	115.00	122.87
3	DA	1915	3TD	N1-C2-N3	9.04	123.27	116.14
3	DA	2503	2MA	C5-C4-N3	-8.77	117.33	127.19
3	DA	2445	2MG	C2-N3-C4	8.26	122.28	112.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2503	2MA	N3-C4-N9	7.96	138.03	126.99
3	DA	2449	H2U	C4-N3-C2	-7.62	119.47	125.79
3	DA	2251	OMG	C5-C4-N3	-7.27	116.66	128.46
3	DA	2552	OMU	O2-C2-N1	-7.22	113.19	122.79
3	DA	1835	2MG	C2-N3-C4	7.19	120.95	112.04
1	AA	1498	UR3	C4-N3-C2	-7.00	117.97	124.56
3	DA	2552	OMU	C4-N3-C2	-6.99	117.35	126.58
1	AA	1516	2MG	C2-N3-C4	6.97	120.69	112.04
3	DA	1939	5MU	C4-N3-C2	-6.76	118.60	127.35
3	DA	1939	5MU	N3-C2-N1	6.59	123.64	114.89
3	DA	747	5MU	N3-C2-N1	6.43	123.42	114.89
3	DA	955	PSU	C4-N3-C2	-6.41	117.10	126.34
3	DA	2069	G7M	C5-C4-N3	-6.31	116.05	128.15
3	DA	1939	5MU	O4-C4-C5	-6.28	117.62	124.90
3	DA	1939	5MU	O2-C2-N1	-6.23	114.50	122.79
3	DA	2445	2MG	C5-C4-N3	-6.22	118.38	128.46
1	AA	1207	2MG	C2-N3-C4	6.07	119.57	112.04
3	DA	2030	6MZ	C5-C4-N3	-5.91	119.04	126.75
3	DA	2251	OMG	N9-C4-N3	5.84	137.66	125.94
3	DA	2069	G7M	N9-C4-N3	5.83	137.65	125.94
3	DA	747	5MU	O2-C2-N1	-5.82	115.05	122.79
3	DA	745	1MG	CM1-N1-C2	-5.79	114.71	120.72
1	AA	966	2MG	C5-C4-N3	-5.71	119.19	128.46
1	AA	527	G7M	N9-C4-N3	5.71	137.40	125.94
1	AA	966	2MG	C2-N3-C4	5.63	119.02	112.04
3	DA	1835	2MG	C5-C4-N3	-5.58	119.42	128.46
3	DA	746	PSU	C4-N3-C2	-5.55	118.34	126.34
1	AA	1519	MA6	C5-C4-N3	-5.54	119.52	126.75
3	DA	745	1MG	CM1-N1-C6	5.48	126.09	117.69
3	DA	2552	OMU	N3-C2-N1	5.43	122.09	114.89
3	DA	2605	PSU	C6-C5-C4	-5.42	114.41	118.20
1	AA	967	5MC	C5-C6-N1	-5.41	117.77	123.34
3	DA	2504	PSU	N1-C2-N3	5.41	121.26	115.13
3	DA	1618	6MZ	C5-C4-N3	-5.30	119.83	126.75
3	DA	747	5MU	C4-N3-C2	-5.25	120.55	127.35
1	AA	1207	2MG	C5-C4-N3	-5.25	119.94	128.46
3	DA	745	1MG	C5-C4-N3	-5.21	120.01	128.46
3	DA	2251	OMG	C2-N3-C4	5.19	121.56	112.30
1	AA	1407	5MC	C5-C4-N3	-5.15	116.12	121.67
1	AA	1516	2MG	C5-C4-N3	-5.11	120.17	128.46
1	AA	1518	MA6	C5-C4-N3	-5.09	120.11	126.75
1	AA	1207	2MG	N9-C4-N3	4.94	135.85	125.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	955	PSU	N1-C2-N3	4.93	120.71	115.13
1	AA	527	G7M	C2-N3-C4	4.91	121.05	112.30
3	DA	2069	G7M	C2-N3-C4	4.89	121.00	112.30
1	AA	527	G7M	C5-C4-N3	-4.88	118.79	128.15
3	DA	746	PSU	N1-C2-N3	4.88	120.66	115.13
3	DA	2445	2MG	N9-C4-N3	4.83	135.64	125.94
3	DA	2030	6MZ	N1-C2-N3	-4.81	121.08	128.60
1	AA	1518	MA6	N3-C4-N9	4.70	134.83	127.08
1	AA	1518	MA6	C2-N1-C6	4.69	122.83	111.75
3	DA	1915	3TD	C4-N3-C2	-4.68	119.53	124.61
3	DA	1911	PSU	C4-N3-C2	-4.65	119.64	126.34
3	DA	2504	PSU	C4-N3-C2	-4.62	119.68	126.34
3	DA	2445	2MG	O6-C6-C5	-4.60	114.39	126.60
1	AA	966	2MG	N9-C4-N3	4.59	135.16	125.94
3	DA	2605	PSU	C4-N3-C2	-4.52	119.82	126.34
1	AA	527	G7M	O6-C6-C5	-4.49	117.93	128.06
1	AA	1519	MA6	C2-N1-C6	4.46	122.28	111.75
3	DA	2604	PSU	C4-N3-C2	-4.43	119.96	126.34
3	DA	745	1MG	N9-C4-N3	4.39	134.75	125.94
3	DA	1618	6MZ	C6-C5-N7	4.36	137.11	132.39
3	DA	2030	6MZ	N3-C4-N9	4.35	134.25	127.08
1	AA	1498	UR3	C6-N1-C2	-4.35	117.90	121.79
1	AA	1518	MA6	N1-C6-N6	4.33	121.82	117.08
3	DA	2552	OMU	C5-C4-N3	4.30	121.28	114.84
3	DA	745	1MG	C2-N3-C4	4.17	121.36	111.98
3	DA	1911	PSU	N1-C2-N3	4.17	119.85	115.13
3	DA	1618	6MZ	C2-N3-C4	4.16	121.58	111.75
3	DA	747	5MU	C5M-C5-C6	-4.16	117.30	122.85
3	DA	2030	6MZ	C2-N3-C4	4.15	121.56	111.75
1	AA	516	PSU	O2-C2-N1	-4.14	118.23	122.79
3	DA	2457	PSU	O2-C2-N1	-4.13	118.24	122.79
1	AA	1519	MA6	N3-C4-N9	4.06	133.77	127.08
1	AA	967	5MC	C1'-N1-C6	-4.01	114.44	121.12
3	DA	2604	PSU	O2-C2-N1	-3.99	118.40	122.79
1	AA	1402	4OC	CM4-N4-C4	-3.99	114.66	122.45
3	DA	2552	OMU	O4-C4-C5	-3.96	118.20	125.16
1	AA	967	5MC	CM5-C5-C6	-3.90	117.64	122.85
1	AA	1519	MA6	N1-C6-N6	3.90	121.35	117.08
3	DA	1939	5MU	C6-C5-C4	3.89	121.28	118.03
3	DA	1917	PSU	C4-N3-C2	-3.87	120.76	126.34
3	DA	2503	2MA	CM2-C2-N3	3.86	123.18	117.15
3	DA	2580	PSU	C4-N3-C2	-3.83	120.82	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1618	6MZ	N1-C2-N3	-3.83	122.61	128.60
1	AA	516	PSU	C4-N3-C2	-3.83	120.82	126.34
1	AA	1518	MA6	C4-N9-C8	3.79	109.84	105.73
3	DA	1835	2MG	N9-C4-N3	3.79	133.55	125.94
3	DA	2552	OMU	C5-C6-N1	-3.77	115.50	121.81
3	DA	2449	H2U	C5-C6-N1	-3.77	99.21	111.61
3	DA	2503	2MA	CM2-C2-N1	-3.76	111.27	117.15
3	DA	1835	2MG	C6-C5-N7	3.62	136.99	130.25
1	AA	1516	2MG	N9-C4-N3	3.62	133.21	125.94
3	DA	2504	PSU	C6-N1-C2	-3.61	118.99	122.68
1	AA	1518	MA6	N1-C2-N3	-3.60	122.97	128.60
3	DA	1939	5MU	C5-C6-N1	-3.60	119.64	123.34
1	AA	516	PSU	N1-C2-N3	3.58	119.19	115.13
3	DA	1618	6MZ	N3-C4-N9	3.57	132.97	127.08
3	DA	2503	2MA	C1'-N9-C8	-3.55	119.13	127.14
3	DA	2605	PSU	C5-C4-N3	3.54	124.58	116.58
3	DA	1962	5MC	C5-C6-N1	-3.53	119.71	123.34
16	AL	89	D2T	OD1-CG-CB	-3.50	115.11	122.44
3	DA	745	1MG	O6-C6-N1	3.48	126.69	120.30
3	DA	1939	5MU	C5M-C5-C6	-3.42	118.28	122.85
3	DA	2580	PSU	C6-C5-C4	-3.39	115.83	118.20
3	DA	1917	PSU	O2-C2-N1	-3.35	119.10	122.79
3	DA	2445	2MG	C2-N1-C6	-3.35	120.63	124.48
3	DA	1917	PSU	N1-C2-N3	3.34	118.91	115.13
1	AA	527	G7M	C5-C6-N1	3.33	118.74	111.79
16	AL	89	D2T	CB-CA-N	3.29	116.12	109.10
3	DA	747	5MU	C6-N1-C2	-3.27	117.98	121.30
3	DA	747	5MU	C6-C5-C4	3.26	120.76	118.03
3	DA	955	PSU	O2-C2-N1	-3.24	119.22	122.79
3	DA	1915	3TD	O2-C2-N3	-3.24	117.05	121.83
3	DA	2449	H2U	C5-C4-N3	3.24	120.28	116.65
1	AA	1518	MA6	C2-N3-C4	3.23	119.38	111.75
3	DA	2503	2MA	C4-N9-C8	3.20	109.20	105.73
3	DA	1618	6MZ	C4-C5-N7	-3.20	106.72	110.62
3	DA	2445	2MG	O6-C6-N1	3.20	126.24	120.12
3	DA	747	5MU	O4-C4-C5	-3.19	121.20	124.90
3	DA	1915	3TD	C5-C6-N1	-3.18	117.33	122.11
1	AA	1407	5MC	O2-C2-N3	-3.17	117.18	122.33
3	DA	1911	PSU	O2-C2-N1	-3.13	119.34	122.79
3	DA	2503	2MA	O4'-C1'-N9	-3.09	101.97	108.06
3	DA	1917	PSU	O4-C4-C5	-3.04	116.09	124.05
3	DA	2069	G7M	C2-N1-C6	-3.01	119.61	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1917	PSU	C6-C5-C4	3.00	120.30	118.20
3	DA	955	PSU	C5-C4-N3	2.99	123.34	116.58
1	AA	967	5MC	C5-C4-N3	-2.97	118.47	121.67
3	DA	745	1MG	O6-C6-C5	-2.94	116.89	124.70
1	AA	1516	2MG	O6-C6-C5	-2.93	118.82	126.60
1	AA	1516	2MG	C6-C5-N7	2.93	135.69	130.25
1	AA	1519	MA6	C2-N3-C4	2.92	118.65	111.75
3	DA	1618	6MZ	C4-N9-C8	2.92	108.89	105.73
3	DA	2251	OMG	O6-C6-C5	-2.91	118.89	126.60
3	DA	2069	G7M	N2-C2-N3	-2.91	114.08	119.73
3	DA	2069	G7M	O6-C6-C5	-2.90	121.51	128.06
1	AA	1518	MA6	C10-N6-C6	-2.89	112.91	120.40
3	DA	747	5MU	C5M-C5-C4	2.89	121.94	118.77
1	AA	1519	MA6	C4-C5-N7	-2.86	107.13	110.62
1	AA	1518	MA6	C5-N7-C8	2.82	107.52	103.51
3	DA	1618	6MZ	N9-C8-N7	-2.80	110.08	113.91
3	DA	1962	5MC	C5-C4-N4	-2.78	117.33	121.48
3	DA	2503	2MA	C5-N7-C8	2.75	107.41	103.51
3	DA	2580	PSU	O2-C2-N1	-2.72	119.79	122.79
3	DA	2457	PSU	C4-N3-C2	-2.72	122.42	126.34
1	AA	1518	MA6	C4-C5-N7	-2.70	107.33	110.62
1	AA	1518	MA6	C5-C6-N6	-2.70	120.59	125.30
3	DA	1915	3TD	C6-C5-C4	2.68	120.08	118.22
1	AA	1518	MA6	N9-C8-N7	-2.68	110.24	113.91
3	DA	1939	5MU	O4-C4-N3	2.66	125.22	120.12
3	DA	2504	PSU	O4-C4-C5	-2.66	117.10	124.05
1	AA	1207	2MG	C8-N9-C4	2.65	111.10	106.05
3	DA	1835	2MG	C4-C5-N7	-2.65	106.53	110.72
3	DA	2251	OMG	C2-N1-C6	-2.65	120.27	125.10
1	AA	1207	2MG	C6-C5-N7	2.63	135.13	130.25
1	AA	527	G7M	CN7-N7-C5	2.61	130.02	126.77
3	DA	2503	2MA	N6-C6-N1	2.61	120.73	117.03
3	DA	2251	OMG	C6-C5-N7	2.61	135.10	130.25
3	DA	2030	6MZ	O3'-C3'-C2'	-2.59	103.44	111.82
1	AA	966	2MG	O6-C6-C5	-2.59	119.73	126.60
3	DA	2457	PSU	N1-C2-N3	2.56	118.04	115.13
3	DA	1618	6MZ	C5-N7-C8	2.56	107.15	103.51
3	DA	2251	OMG	C5-C6-N1	2.56	119.68	113.19
16	AL	89	D2T	OD2-CG-OD1	2.55	129.88	124.09
3	DA	1917	PSU	C6-N1-C2	-2.54	120.09	122.68
3	DA	2251	OMG	C4-C5-N7	-2.52	106.73	110.72
3	DA	1962	5MC	N4-C4-N3	2.51	123.06	118.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2504	PSU	O2-C2-N3	-2.51	117.08	121.82
1	AA	1207	2MG	O6-C6-C5	-2.50	119.96	126.60
3	DA	2503	2MA	C4-C5-N7	-2.48	107.60	110.62
1	AA	1519	MA6	C4-C5-C6	2.43	118.61	115.88
3	DA	2445	2MG	C5-C6-N1	2.43	119.37	113.19
1	AA	1498	UR3	C3U-N3-C2	2.43	121.57	117.31
3	DA	1915	3TD	O4'-C1'-C2'	2.42	108.56	105.14
1	AA	1519	MA6	N1-C2-N3	-2.42	124.83	128.60
56	DD	150	MEQ	CB-CG-CD	-2.41	107.65	113.04
1	AA	1407	5MC	C4-N3-C2	2.40	123.93	120.69
3	DA	1917	PSU	O4-C4-N3	2.39	124.70	120.12
3	DA	2552	OMU	CM2-O2'-C2'	2.34	120.66	114.52
3	DA	2605	PSU	O4-C4-C5	-2.34	117.94	124.05
3	DA	2069	G7M	C5-C6-N1	2.33	116.66	111.79
1	AA	1402	4OC	CM2-O2'-C2'	-2.32	108.44	114.52
3	DA	745	1MG	C4-C5-N7	-2.31	107.06	110.72
1	AA	1516	2MG	C2'-C1'-N9	-2.31	106.66	113.22
3	DA	2498	OMC	C5-C6-N1	-2.30	117.95	121.81
1	AA	1402	4OC	C2'-C1'-N1	-2.30	109.76	114.22
3	DA	745	1MG	C8-N9-C4	2.30	110.42	106.05
3	DA	2498	OMC	C2'-C1'-N1	-2.30	109.76	114.22
3	DA	2498	OMC	C1'-N1-C2	-2.30	113.30	118.42
1	AA	1207	2MG	CM2-N2-C2	-2.26	118.86	123.86
3	DA	2580	PSU	N1-C2-N3	2.26	117.69	115.13
3	DA	2503	2MA	C2-N1-C6	2.24	121.58	118.08
3	DA	2445	2MG	C6-C5-N7	2.24	134.42	130.25
3	DA	746	PSU	C5-C6-N1	-2.23	118.76	122.11
3	DA	746	PSU	C5-C4-N3	2.22	121.61	116.58
3	DA	745	1MG	N9-C8-N7	-2.22	109.21	113.39
1	AA	1498	UR3	O2-C2-N1	-2.22	117.53	122.72
3	DA	2251	OMG	C8-N7-C5	2.21	108.24	104.24
1	AA	1516	2MG	CM2-N2-C2	-2.21	118.98	123.86
1	AA	966	2MG	CM2-N2-C2	-2.19	119.03	123.86
3	DA	745	1MG	C2-N1-C6	-2.18	119.17	120.95
3	DA	747	5MU	C5-C6-N1	-2.17	121.11	123.34
3	DA	2503	2MA	C2'-C1'-N9	2.17	118.79	113.30
3	DA	2604	PSU	N1-C2-N3	2.16	117.57	115.13
1	AA	527	G7M	C2-N1-C6	-2.15	121.17	125.10
3	DA	1939	5MU	C5-C4-N3	2.15	117.15	115.31
3	DA	1911	PSU	C6-N1-C2	-2.15	120.49	122.68
3	DA	2457	PSU	O2'-C2'-C1'	-2.14	106.14	111.23
3	DA	2030	6MZ	C2'-C1'-N9	2.14	118.71	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	745	1MG	C6-C5-N7	2.12	134.16	129.35
3	DA	2251	OMG	C1'-N9-C8	-2.12	120.66	126.70
1	AA	966	2MG	C4-C5-N7	-2.12	107.36	110.72
3	DA	745	1MG	C8-N7-C5	2.11	108.07	104.24
1	AA	1407	5MC	C5-C6-N1	-2.11	121.17	123.34
3	DA	2498	OMC	C1'-N1-C6	2.10	125.42	120.84
3	DA	747	5MU	C1'-N1-C2	2.08	121.34	117.57
1	AA	1519	MA6	C4-N9-C8	2.05	107.95	105.73
1	AA	1519	MA6	C5-N7-C8	2.04	106.41	103.51
1	AA	1402	4OC	C5-C4-N4	-2.03	118.47	122.61
3	DA	2030	6MZ	C2-N1-C6	2.03	122.06	115.25
3	DA	2503	2MA	N9-C8-N7	-2.02	111.15	113.91
1	AA	527	G7M	C8-N7-C5	-2.01	105.27	107.78

There are no chirality outliers.

All (49) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	AA	527	G7M	O4'-C4'-C5'-O5'
1	AA	527	G7M	C3'-C4'-C5'-O5'
1	AA	1518	MA6	C5-C6-N6-C10
1	AA	1519	MA6	C5-C6-N6-C10
3	DA	746	PSU	C2'-C1'-C5-C4
3	DA	1618	6MZ	N1-C6-N6-C9
3	DA	1835	2MG	N1-C2-N2-CM2
3	DA	1835	2MG	N3-C2-N2-CM2
3	DA	2251	OMG	C1'-C2'-O2'-CM2
3	DA	2504	PSU	C3'-C4'-C5'-O5'
3	DA	2504	PSU	O4'-C4'-C5'-O5'
3	DA	2552	OMU	C3'-C2'-O2'-CM2
16	AL	89	D2T	CA-CB-SB-CB1
3	DA	745	1MG	O4'-C4'-C5'-O5'
3	DA	2503	2MA	O4'-C4'-C5'-O5'
1	AA	966	2MG	O4'-C4'-C5'-O5'
1	AA	1519	MA6	O4'-C4'-C5'-O5'
3	DA	745	1MG	C3'-C4'-C5'-O5'
3	DA	2498	OMC	O4'-C4'-C5'-O5'
3	DA	2503	2MA	C3'-C4'-C5'-O5'
1	AA	1518	MA6	N1-C6-N6-C10
56	DD	150	MEQ	NE2-CD-CG-CB
56	DD	150	MEQ	OE1-CD-CG-CB
3	DA	1962	5MC	C2'-C1'-N1-C2

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Mol	Chain	Res	Type	Atoms
3	DA	1835	2MG	O4'-C4'-C5'-O5'
3	DA	1962	5MC	C2'-C1'-N1-C6
3	DA	1835	2MG	C3'-C4'-C5'-O5'
1	AA	1519	MA6	C3'-C4'-C5'-O5'
3	DA	1962	5MC	O4'-C1'-N1-C2
3	DA	2503	2MA	C4'-C5'-O5'-P
1	AA	1207	2MG	O4'-C4'-C5'-O5'
3	DA	747	5MU	C3'-C4'-C5'-O5'
3	DA	1915	3TD	O4'-C4'-C5'-O5'
3	DA	1962	5MC	O4'-C1'-N1-C6
3	DA	2552	OMU	O4'-C4'-C5'-O5'
3	DA	2069	G7M	C4'-C5'-O5'-P
3	DA	1915	3TD	C3'-C4'-C5'-O5'
3	DA	746	PSU	O4'-C1'-C5-C4
3	DA	2457	PSU	O4'-C1'-C5-C4
1	AA	966	2MG	C3'-C4'-C5'-O5'
3	DA	2498	OMC	C3'-C4'-C5'-O5'
3	DA	2498	OMC	C2'-C1'-N1-C2
3	DA	747	5MU	O4'-C4'-C5'-O5'
3	DA	746	PSU	O4'-C1'-C5-C6
16	AL	89	D2T	CG-CB-SB-CB1
1	AA	1402	4OC	O4'-C4'-C5'-O5'
3	DA	2030	6MZ	O4'-C4'-C5'-O5'
3	DA	2069	G7M	O4'-C4'-C5'-O5'
1	AA	1207	2MG	C3'-C4'-C5'-O5'

There are no ring outliers.

28 monomers are involved in 105 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	DA	2503	2MA	3	0
1	AA	1518	MA6	7	0
3	DA	1835	2MG	9	0
1	AA	967	5MC	2	0
3	DA	1618	6MZ	2	0
1	AA	1207	2MG	2	0
3	DA	955	PSU	2	0
3	DA	2445	2MG	2	0
3	DA	1911	PSU	3	0
1	AA	1516	2MG	2	0
3	DA	1962	5MC	3	0
3	DA	1939	5MU	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	AA	1402	4OC	3	0
3	DA	1915	3TD	1	0
3	DA	747	5MU	7	0
3	DA	2030	6MZ	7	0
3	DA	2552	OMU	6	0
3	DA	2605	PSU	1	0
1	AA	516	PSU	1	0
3	DA	2251	OMG	3	0
3	DA	2498	OMC	8	0
56	DD	150	MEQ	4	0
3	DA	2504	PSU	3	0
16	AL	89	D2T	4	0
3	DA	745	1MG	4	0
1	AA	1519	MA6	12	0
1	AA	1407	5MC	4	0
3	DA	2449	H2U	1	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 516 ligands modelled in this entry, 453 are monoatomic - leaving 63 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	$\#\|Z\| > 2$
59	PGE	D3	101	-	9,9,9	0.92	0	8,8,8	0.43	0
59	PGE	AA	1613	-	9,9,9	1.13	1 (11%)	8,8,8	0.70	0
67	EDO	DB	202	-	3,3,3	0.52	0	2,2,2	0.30	0
60	MPD	DA	3077	-	7,7,7	0.50	0	9,10,10	1.43	2 (22%)
63	PUT	DA	3054	-	5,5,5	0.47	0	4,4,4	0.81	0
61	PG4	DR	202	-	12,12,12	0.86	0	11,11,11	0.57	0
65	ACY	DA	3055	-	3,3,3	1.03	0	3,3,3	1.30	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
62	SPD	DA	3031	-	9,9,9	0.62	0	8,8,8	0.31	0
67	EDO	DA	3060	-	3,3,3	0.46	0	2,2,2	0.26	0
59	PGE	DD	301	-	9,9,9	1.16	1 (11%)	8,8,8	0.77	0
67	EDO	DA	3075	-	3,3,3	0.35	0	2,2,2	0.18	0
59	PGE	DS	201	-	9,9,9	1.25	1 (11%)	8,8,8	1.03	0
63	PUT	DA	3037	-	5,5,5	0.32	0	4,4,4	0.81	0
67	EDO	DA	3076	-	3,3,3	0.53	0	2,2,2	0.06	0
66	PEG	D3	102	-	6,6,6	0.92	0	5,5,5	0.27	0
64	1PE	DA	3034	-	15,15,15	0.74	0	14,14,14	1.04	1 (7%)
67	EDO	DB	201	-	3,3,3	0.42	0	2,2,2	0.38	0
66	PEG	DA	3063	-	6,6,6	1.06	0	5,5,5	0.42	0
60	MPD	DA	3067	-	7,7,7	0.65	0	9,10,10	0.67	0
67	EDO	DA	3057	-	3,3,3	0.43	0	2,2,2	0.11	0
59	PGE	DA	3035	-	9,9,9	1.32	2 (22%)	8,8,8	1.12	1 (12%)
60	MPD	DE	302	-	7,7,7	0.56	0	9,10,10	0.43	0
61	PG4	DS	202	-	12,12,12	0.74	0	11,11,11	0.73	0
61	PG4	DA	3048	-	12,12,12	0.89	0	11,11,11	0.67	0
66	PEG	DA	3073	-	6,6,6	1.04	0	5,5,5	0.67	0
59	PGE	DT	202	-	9,9,9	1.16	1 (11%)	8,8,8	0.71	0
60	MPD	DE	301	-	7,7,7	0.56	0	9,10,10	0.56	0
60	MPD	AA	1615	-	7,7,7	0.54	0	9,10,10	0.67	0
67	EDO	D1	101	-	3,3,3	0.38	0	2,2,2	0.15	0
62	SPD	DA	3070	-	9,9,9	0.44	0	8,8,8	1.07	0
66	PEG	DA	3061	-	6,6,6	1.08	0	5,5,5	0.32	0
61	PG4	DQ	202	-	12,12,12	0.71	0	11,11,11	0.45	0
63	PUT	D5	101	-	5,5,5	0.29	0	4,4,4	0.30	0
64	1PE	DA	3065	-	15,15,15	0.86	0	14,14,14	0.88	0
66	PEG	DP	201	-	6,6,6	1.16	0	5,5,5	0.64	0
59	PGE	DA	3066	-	9,9,9	1.07	1 (11%)	8,8,8	0.93	0
60	MPD	DT	201	-	7,7,7	0.55	0	9,10,10	1.02	1 (11%)
60	MPD	DA	3043	-	7,7,7	0.58	0	9,10,10	0.70	0
60	MPD	DA	3072	-	7,7,7	0.56	0	9,10,10	0.30	0
60	MPD	DN	201	-	7,7,7	0.49	0	9,10,10	0.84	1 (11%)
66	PEG	D1	102	-	6,6,6	1.50	1 (16%)	5,5,5	1.35	0
67	EDO	DA	3052	-	3,3,3	0.50	0	2,2,2	0.16	0
60	MPD	DA	3045	-	7,7,7	0.34	0	9,10,10	1.38	2 (22%)
59	PGE	DU	101	-	9,9,9	1.09	1 (11%)	8,8,8	0.58	0
63	PUT	DP	202	-	5,5,5	0.36	0	4,4,4	0.16	0
60	MPD	DA	3046	-	7,7,7	0.76	0	9,10,10	0.99	1 (11%)
67	EDO	DR	204	-	3,3,3	0.55	0	2,2,2	0.28	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
67	EDO	DB	203	-	3,3,3	0.40	0	2,2,2	0.16	0
61	PG4	BA	1607	-	12,12,12	0.89	0	11,11,11	0.57	0
62	SPD	DA	3036	-	9,9,9	0.48	0	8,8,8	0.53	0
63	PUT	DA	3032	-	5,5,5	0.30	0	4,4,4	0.41	0
60	MPD	DA	3071	-	7,7,7	0.65	0	9,10,10	0.46	0
66	PEG	DQ	201	-	6,6,6	1.01	0	5,5,5	0.26	0
66	PEG	DA	3050	-	6,6,6	1.03	0	5,5,5	0.51	0
67	EDO	DA	3059	-	3,3,3	0.52	0	2,2,2	0.61	0
63	PUT	DA	3069	-	5,5,5	0.35	0	4,4,4	0.19	0
65	ACY	DA	3064	-	3,3,3	0.61	0	3,3,3	1.12	0
63	PUT	DM	201	-	5,5,5	0.35	0	4,4,4	0.51	0
68	GUN	DA	3078	-	12,12,12	1.91	2 (16%)	16,17,17	2.77	7 (43%)
60	MPD	DK	201	-	7,7,7	0.55	0	9,10,10	0.66	0
67	EDO	DA	3058	-	3,3,3	0.52	0	2,2,2	0.10	0
66	PEG	DA	3062	-	6,6,6	1.17	1 (16%)	5,5,5	0.57	0
65	ACY	DA	3044	-	3,3,3	0.87	0	3,3,3	1.23	0

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
59	PGE	D3	101	-	-	4/7/7/7	-
59	PGE	AA	1613	-	-	5/7/7/7	-
67	EDO	DB	202	-	-	1/1/1/1	-
60	MPD	DA	3077	-	-	2/5/5/5	-
63	PUT	DA	3054	-	-	0/3/3/3	-
61	PG4	DR	202	-	-	5/10/10/10	-
62	SPD	DA	3031	-	-	6/7/7/7	-
67	EDO	DA	3060	-	-	1/1/1/1	-
59	PGE	DD	301	-	-	1/7/7/7	-
67	EDO	DA	3075	-	-	1/1/1/1	-
59	PGE	DS	201	-	-	2/7/7/7	-
63	PUT	DA	3037	-	-	1/3/3/3	-
67	EDO	DA	3076	-	-	1/1/1/1	-
66	PEG	D3	102	-	-	3/4/4/4	-
64	1PE	DA	3034	-	-	7/13/13/13	-
67	EDO	DB	201	-	-	1/1/1/1	-
66	PEG	DA	3063	-	-	3/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	MPD	DA	3067	-	-	1/5/5/5	-
67	EDO	DA	3057	-	-	0/1/1/1	-
59	PGE	DA	3035	-	-	2/7/7/7	-
60	MPD	DE	302	-	-	0/5/5/5	-
61	PG4	DS	202	-	-	3/10/10/10	-
61	PG4	DA	3048	-	-	7/10/10/10	-
66	PEG	DA	3073	-	-	1/4/4/4	-
59	PGE	DT	202	-	-	3/7/7/7	-
60	MPD	DE	301	-	-	1/5/5/5	-
60	MPD	AA	1615	-	-	3/5/5/5	-
67	EDO	D1	101	-	-	1/1/1/1	-
62	SPD	DA	3070	-	-	3/7/7/7	-
66	PEG	DA	3061	-	-	3/4/4/4	-
61	PG4	DQ	202	-	-	5/10/10/10	-
63	PUT	D5	101	-	-	1/3/3/3	-
64	1PE	DA	3065	-	-	9/13/13/13	-
66	PEG	DP	201	-	-	2/4/4/4	-
59	PGE	DA	3066	-	-	3/7/7/7	-
60	MPD	DT	201	-	-	0/5/5/5	-
60	MPD	DA	3043	-	-	2/5/5/5	-
60	MPD	DA	3072	-	-	0/5/5/5	-
60	MPD	DN	201	-	-	3/5/5/5	-
66	PEG	D1	102	-	-	3/4/4/4	-
67	EDO	DA	3052	-	-	1/1/1/1	-
60	MPD	DA	3045	-	-	2/5/5/5	-
59	PGE	DU	101	-	-	4/7/7/7	-
63	PUT	DP	202	-	-	0/3/3/3	-
60	MPD	DA	3046	-	-	0/5/5/5	-
67	EDO	DR	204	-	-	1/1/1/1	-
67	EDO	DB	203	-	-	0/1/1/1	-
61	PG4	BA	1607	-	-	1/10/10/10	-
62	SPD	DA	3036	-	-	3/7/7/7	-
63	PUT	DA	3032	-	-	2/3/3/3	-
60	MPD	DA	3071	-	-	2/5/5/5	-
66	PEG	DQ	201	-	-	4/4/4/4	-
66	PEG	DA	3050	-	-	1/4/4/4	-
67	EDO	DA	3059	-	-	0/1/1/1	-
63	PUT	DA	3069	-	-	1/3/3/3	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
63	PUT	DM	201	-	-	2/3/3/3	-
68	GUN	DA	3078	-	-	-	0/2/2/2
60	MPD	DK	201	-	-	0/5/5/5	-
67	EDO	DA	3058	-	-	0/1/1/1	-
66	PEG	DA	3062	-	-	3/4/4/4	-

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	DA	3078	GUN	C5-C4	4.54	1.48	1.39
68	DA	3078	GUN	C6-N1	-2.66	1.33	1.38
66	D1	102	PEG	C2-C1	2.46	1.62	1.49
59	DA	3035	PGE	C2-C1	2.30	1.61	1.49
59	DA	3066	PGE	C2-C1	2.28	1.61	1.49
59	DT	202	PGE	C2-C1	2.23	1.61	1.49
59	DD	301	PGE	C2-C1	2.18	1.61	1.49
59	AA	1613	PGE	C2-C1	2.18	1.61	1.49
59	DS	201	PGE	C2-C1	2.18	1.61	1.49
59	DU	101	PGE	C2-C1	2.17	1.61	1.49
59	DA	3035	PGE	C4-C3	2.15	1.60	1.49
66	DA	3062	PEG	C2-C1	2.03	1.60	1.49

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
68	DA	3078	GUN	N9-C4-N3	7.07	135.60	126.05
68	DA	3078	GUN	C2-N3-C4	4.67	121.86	113.43
68	DA	3078	GUN	C6-C5-N7	3.79	137.30	130.25
60	DA	3045	MPD	CM-C2-C1	-3.28	103.74	110.57
64	DA	3034	1PE	OH3-C23-C13	-2.86	97.49	110.39
68	DA	3078	GUN	C4-C5-N7	-2.83	106.04	110.14
68	DA	3078	GUN	C8-N7-C5	2.72	107.83	104.27
60	DA	3077	MPD	CM-C2-C1	-2.42	105.53	110.57
68	DA	3078	GUN	C5-C6-N1	2.38	119.25	113.19
60	DN	201	MPD	CM-C2-C1	-2.22	105.95	110.57
60	DA	3046	MPD	O2-C2-C1	2.20	115.13	108.08
59	DA	3035	PGE	O3-C5-C6	2.19	119.70	110.07
60	DA	3077	MPD	C5-C4-C3	-2.15	101.57	111.69
60	DA	3045	MPD	O2-C2-CM	2.07	114.73	108.08
60	DT	201	MPD	CM-C2-C1	-2.03	106.35	110.57
68	DA	3078	GUN	C2-N1-C6	-2.01	121.44	125.10

There are no chirality outliers.

All (127) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
60	DA	3067	MPD	C2-C3-C4-O4
60	DA	3077	MPD	C1-C2-C3-C4
60	DA	3077	MPD	O2-C2-C3-C4
60	DE	301	MPD	C2-C3-C4-O4
60	DN	201	MPD	O2-C2-C3-C4
60	DN	201	MPD	CM-C2-C3-C4
64	DA	3034	1PE	C16-C26-OH6-C15
64	DA	3065	1PE	C14-C24-OH4-C13
59	DT	202	PGE	C4-C3-O2-C2
61	DA	3048	PG4	O3-C5-C6-O4
64	DA	3034	1PE	OH4-C13-C23-OH3
64	DA	3065	1PE	OH4-C13-C23-OH3
61	DR	202	PG4	O2-C3-C4-O3
61	DR	202	PG4	O1-C1-C2-O2
62	DA	3031	SPD	C3-C4-C5-N6
59	DU	101	PGE	O2-C3-C4-O3
61	DA	3048	PG4	O2-C3-C4-O3
66	DQ	201	PEG	C1-C2-O2-C3
66	D1	102	PEG	C1-C2-O2-C3
59	AA	1613	PGE	O1-C1-C2-O2
61	DQ	202	PG4	O1-C1-C2-O2
64	DA	3034	1PE	OH2-C12-C22-OH3
64	DA	3034	1PE	OH5-C14-C24-OH4
62	DA	3031	SPD	N6-C7-C8-C9
62	DA	3070	SPD	C3-C4-C5-N6
61	DR	202	PG4	O3-C5-C6-O4
62	DA	3036	SPD	C8-C7-N6-C5
64	DA	3065	1PE	OH5-C14-C24-OH4
59	DA	3035	PGE	O1-C1-C2-O2
59	DA	3066	PGE	O3-C5-C6-O4
66	DA	3061	PEG	O1-C1-C2-O2
66	DA	3062	PEG	O1-C1-C2-O2
66	DA	3063	PEG	O1-C1-C2-O2
66	D3	102	PEG	O1-C1-C2-O2
59	DD	301	PGE	O2-C3-C4-O3
66	DA	3073	PEG	O2-C3-C4-O4
62	DA	3036	SPD	C3-C4-C5-N6
63	D5	101	PUT	C1-C2-C3-C4
59	DT	202	PGE	O1-C1-C2-O2
61	DA	3048	PG4	O1-C1-C2-O2

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Mol	Chain	Res	Type	Atoms
61	DS	202	PG4	O1-C1-C2-O2
67	DA	3075	EDO	O1-C1-C2-O2
67	DB	202	EDO	O1-C1-C2-O2
67	DR	204	EDO	O1-C1-C2-O2
59	DA	3066	PGE	C4-C3-O2-C2
63	DM	201	PUT	C1-C2-C3-C4
64	DA	3065	1PE	OH6-C15-C25-OH5
62	DA	3031	SPD	C2-C3-C4-C5
62	DA	3031	SPD	C7-C8-C9-N10
59	DU	101	PGE	O3-C5-C6-O4
59	DU	101	PGE	O1-C1-C2-O2
59	D3	101	PGE	O1-C1-C2-O2
64	DA	3065	1PE	OH2-C12-C22-OH3
66	DA	3061	PEG	O2-C3-C4-O4
66	DA	3063	PEG	O2-C3-C4-O4
66	D1	102	PEG	O1-C1-C2-O2
59	AA	1613	PGE	O2-C3-C4-O3
62	DA	3070	SPD	C2-C3-C4-C5
59	DA	3066	PGE	O2-C3-C4-O3
61	DQ	202	PG4	O2-C3-C4-O3
61	DS	202	PG4	O2-C3-C4-O3
61	DS	202	PG4	O3-C5-C6-O4
62	DA	3070	SPD	N6-C7-C8-C9
60	AA	1615	MPD	O2-C2-C3-C4
62	DA	3036	SPD	C4-C5-N6-C7
63	DA	3032	PUT	C2-C3-C4-N2
63	DA	3069	PUT	N1-C1-C2-C3
63	DM	201	PUT	C2-C3-C4-N2
59	D3	101	PGE	O3-C5-C6-O4
66	DA	3061	PEG	C4-C3-O2-C2
66	DA	3062	PEG	C4-C3-O2-C2
59	AA	1613	PGE	C3-C4-O3-C5
64	DA	3034	1PE	C14-C24-OH4-C13
64	DA	3065	1PE	C15-C25-OH5-C14
66	DA	3063	PEG	C4-C3-O2-C2
66	D3	102	PEG	C4-C3-O2-C2
59	DA	3035	PGE	C3-C4-O3-C5
61	DR	202	PG4	C5-C6-O4-C7
66	D3	102	PEG	C1-C2-O2-C3
62	DA	3031	SPD	C8-C7-N6-C5
61	DA	3048	PG4	C6-C5-O3-C4
60	DA	3043	MPD	C2-C3-C4-C5

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Mol	Chain	Res	Type	Atoms
60	DA	3045	MPD	C2-C3-C4-C5
61	DQ	202	PG4	O4-C7-C8-O5
64	DA	3034	1PE	C12-C22-OH3-C23
66	DA	3062	PEG	C1-C2-O2-C3
61	DQ	202	PG4	C8-C7-O4-C6
59	AA	1613	PGE	C6-C5-O3-C4
60	DA	3045	MPD	C2-C3-C4-O4
61	DA	3048	PG4	C4-C3-O2-C2
64	DA	3065	1PE	C24-C14-OH5-C25
66	DP	201	PEG	O1-C1-C2-O2
60	DN	201	MPD	C1-C2-C3-C4
64	DA	3065	1PE	C23-C13-OH4-C24
66	DQ	201	PEG	O1-C1-C2-O2
61	DA	3048	PG4	C8-C7-O4-C6
62	DA	3031	SPD	C4-C5-N6-C7
66	D1	102	PEG	C4-C3-O2-C2
59	D3	101	PGE	C3-C4-O3-C5
61	BA	1607	PG4	C4-C3-O2-C2
59	D3	101	PGE	O2-C3-C4-O3
61	DQ	202	PG4	C6-C5-O3-C4
66	DQ	201	PEG	C4-C3-O2-C2
67	D1	101	EDO	O1-C1-C2-O2
61	DR	202	PG4	C4-C3-O2-C2
61	DA	3048	PG4	C5-C6-O4-C7
59	DS	201	PGE	O1-C1-C2-O2
67	DA	3052	EDO	O1-C1-C2-O2
66	DQ	201	PEG	O2-C3-C4-O4
66	DP	201	PEG	C1-C2-O2-C3
63	DA	3032	PUT	N1-C1-C2-C3
67	DA	3060	EDO	O1-C1-C2-O2
67	DA	3076	EDO	O1-C1-C2-O2
60	AA	1615	MPD	C2-C3-C4-C5
60	DA	3071	MPD	C2-C3-C4-C5
64	DA	3065	1PE	C25-C15-OH6-C26
64	DA	3034	1PE	C25-C15-OH6-C26
67	DB	201	EDO	O1-C1-C2-O2
59	DT	202	PGE	O2-C3-C4-O3
59	DU	101	PGE	C6-C5-O3-C4
59	AA	1613	PGE	C4-C3-O2-C2
63	DA	3037	PUT	N1-C1-C2-C3
60	AA	1615	MPD	C2-C3-C4-O4
60	DA	3043	MPD	C2-C3-C4-O4

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Mol	Chain	Res	Type	Atoms
60	DA	3071	MPD	C2-C3-C4-O4
59	DS	201	PGE	O2-C3-C4-O3
66	DA	3050	PEG	O2-C3-C4-O4

There are no ring outliers.

39 monomers are involved in 100 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	DA	3077	MPD	1	0
63	DA	3054	PUT	4	0
61	DR	202	PG4	8	0
62	DA	3031	SPD	3	0
67	DA	3060	EDO	5	0
63	DA	3037	PUT	7	0
66	D3	102	PEG	2	0
64	DA	3034	1PE	5	0
66	DA	3063	PEG	1	0
60	DA	3067	MPD	4	0
61	DS	202	PG4	1	0
61	DA	3048	PG4	3	0
59	DT	202	PGE	2	0
60	DE	301	MPD	1	0
60	AA	1615	MPD	1	0
61	DQ	202	PG4	4	0
63	D5	101	PUT	2	0
64	DA	3065	1PE	2	0
66	DP	201	PEG	1	0
59	DA	3066	PGE	2	0
60	DA	3072	MPD	1	0
60	DN	201	MPD	1	0
66	D1	102	PEG	3	0
60	DA	3045	MPD	1	0
63	DP	202	PUT	10	0
60	DA	3046	MPD	1	0
67	DR	204	EDO	2	0
67	DB	203	EDO	1	0
62	DA	3036	SPD	1	0
60	DA	3071	MPD	1	0
66	DQ	201	PEG	1	0
66	DA	3050	PEG	2	0
67	DA	3059	EDO	4	0
63	DA	3069	PUT	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
65	DA	3064	ACY	5	0
63	DM	201	PUT	1	0
68	DA	3078	GUN	2	0
66	DA	3062	PEG	2	0
65	DA	3044	ACY	1	0

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	1522/1533 (99%)	-0.30	7 (0%) 87 83	41, 95, 192, 402	0
2	BA	1533/1533 (100%)	0.17	44 (2%) 53 45	55, 124, 251, 339	0
3	DA	2873/2903 (98%)	-1.05	14 (0%) 87 83	13, 48, 176, 361	2 (0%)
4	CA	2898/2904 (99%)	0.83	285 (9%) 13 11	71, 161, 284, 521	0
5	CB	118/119 (99%)	0.20	1 (0%) 82 77	117, 200, 250, 277	0
5	DB	119/119 (100%)	-1.12	0 100 100	22, 56, 88, 107	0
6	AB	218/218 (100%)	0.45	9 (4%) 41 33	62, 132, 203, 272	0
6	BB	218/218 (100%)	0.66	19 (8%) 16 13	80, 140, 208, 274	0
7	AC	206/206 (100%)	0.35	3 (1%) 72 64	56, 106, 160, 230	0
7	BC	206/206 (100%)	0.67	14 (6%) 23 18	74, 120, 178, 212	0
8	AD	205/205 (100%)	0.88	23 (11%) 10 9	59, 120, 174, 227	0
8	BD	205/205 (100%)	0.42	7 (3%) 48 39	54, 93, 136, 166	0
9	AE	150/150 (100%)	0.65	12 (8%) 18 15	54, 98, 161, 235	0
9	BE	150/150 (100%)	0.73	15 (10%) 12 10	57, 99, 164, 209	0
10	AF	100/100 (100%)	0.39	2 (2%) 65 56	66, 110, 156, 219	0
10	BF	100/100 (100%)	0.54	6 (6%) 27 21	82, 126, 170, 263	0
11	AG	151/151 (100%)	0.69	12 (7%) 18 15	91, 145, 189, 203	0
11	BG	151/151 (100%)	1.32	35 (23%) 2 2	110, 212, 293, 336	0
12	AH	129/129 (100%)	0.56	5 (3%) 43 35	62, 104, 155, 192	0
12	BH	129/129 (100%)	0.67	12 (9%) 14 12	78, 121, 172, 209	0
13	AI	127/127 (100%)	1.06	22 (17%) 4 3	87, 136, 208, 278	0
13	BI	127/127 (100%)	1.51	41 (32%) 1 1	106, 173, 255, 309	0
14	AJ	98/98 (100%)	0.69	8 (8%) 17 14	65, 114, 148, 162	0
14	BJ	98/98 (100%)	0.93	9 (9%) 14 12	79, 136, 164, 175	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
15	AK	117/117 (100%)	0.29	1 (0%) 81 75	50, 118, 172, 211	0
15	BK	117/117 (100%)	0.26	3 (2%) 57 48	60, 116, 169, 196	0
16	AL	122/123 (99%)	0.22	11 (9%) 15 13	53, 82, 135, 200	0
17	AM	114/114 (100%)	0.85	11 (9%) 13 11	80, 134, 199, 264	0
17	BM	114/114 (100%)	1.38	27 (23%) 2 2	166, 282, 369, 424	0
18	AN	96/100 (96%)	1.16	14 (14%) 6 4	65, 119, 213, 248	0
18	BN	96/100 (96%)	1.67	33 (34%) 1 1	101, 177, 271, 348	0
19	AO	88/88 (100%)	0.21	3 (3%) 48 39	52, 101, 142, 188	0
19	BO	88/88 (100%)	0.44	4 (4%) 38 30	77, 120, 158, 239	0
20	AP	82/82 (100%)	0.98	8 (9%) 13 11	70, 102, 210, 261	0
20	BP	82/82 (100%)	2.03	38 (46%) 0 0	83, 135, 210, 311	0
21	AQ	80/80 (100%)	0.48	5 (6%) 26 20	68, 106, 160, 291	0
21	BQ	80/80 (100%)	1.00	10 (12%) 8 7	88, 152, 220, 278	0
22	AR	55/55 (100%)	0.33	5 (9%) 15 12	75, 110, 169, 218	0
22	BR	55/55 (100%)	0.29	3 (5%) 30 24	67, 98, 161, 179	0
23	AS	79/79 (100%)	1.22	14 (17%) 4 3	93, 137, 192, 239	0
23	BS	79/79 (100%)	1.66	30 (37%) 1 0	169, 266, 365, 433	0
24	AT	85/85 (100%)	0.96	7 (8%) 17 14	80, 106, 155, 214	0
24	BT	85/85 (100%)	1.50	21 (24%) 2 1	96, 160, 216, 241	0
25	AU	54/54 (100%)	1.00	9 (16%) 4 3	80, 128, 214, 252	0
25	BU	54/54 (100%)	0.57	2 (3%) 45 37	64, 111, 175, 203	0
26	BL	123/123 (100%)	0.78	21 (17%) 4 3	64, 101, 154, 211	0
27	CC	271/271 (100%)	1.42	64 (23%) 2 2	73, 119, 159, 204	0
27	DC	271/271 (100%)	-0.08	3 (1%) 78 71	24, 61, 95, 128	0
28	CD	209/209 (100%)	1.80	76 (36%) 1 0	95, 156, 264, 431	0
29	CE	201/201 (100%)	2.01	87 (43%) 0 0	98, 238, 501, 716	0
29	DE	201/201 (100%)	-0.38	2 (0%) 79 73	19, 62, 113, 223	0
30	CF	177/177 (100%)	1.19	34 (19%) 3 2	155, 235, 294, 367	0
30	DF	177/177 (100%)	0.14	4 (2%) 61 52	49, 81, 139, 182	0
31	CG	176/176 (100%)	1.06	25 (14%) 6 5	139, 226, 348, 489	0
31	DG	176/176 (100%)	-0.01	1 (0%) 85 81	46, 82, 119, 204	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
32	CH	148/148 (100%)	0.74	12 (8%) 18 15	92, 161, 230, 348	0
32	DH	148/148 (100%)	0.56	7 (4%) 36 28	62, 167, 251, 346	0
33	CJ	141/141 (100%)	0.85	11 (7%) 19 16	186, 269, 360, 457	0
33	DJ	141/141 (100%)	1.22	24 (17%) 4 3	147, 236, 329, 386	0
34	CK	142/142 (100%)	1.77	54 (38%) 1 0	92, 155, 221, 296	0
34	DK	142/142 (100%)	-0.66	0 100 100	18, 39, 73, 141	0
35	CL	122/123 (99%)	1.21	22 (18%) 3 3	95, 139, 192, 270	0
35	DL	123/123 (100%)	-0.49	0 100 100	27, 49, 85, 150	0
36	CM	143/144 (99%)	2.34	73 (51%) 0 0	109, 204, 327, 455	0
36	DM	144/144 (100%)	-0.37	0 100 100	18, 60, 97, 151	0
37	CN	136/136 (100%)	1.00	20 (14%) 6 4	86, 147, 195, 220	0
37	DN	136/136 (100%)	-0.61	0 100 100	13, 46, 82, 141	1 (0%)
38	CO	120/120 (100%)	2.12	55 (45%) 0 0	102, 168, 292, 503	0
38	DO	120/120 (100%)	-0.66	1 (0%) 82 77	15, 42, 65, 186	0
39	CP	116/117 (99%)	1.09	17 (14%) 6 4	151, 205, 272, 305	0
39	DP	117/117 (100%)	-0.21	1 (0%) 81 75	36, 64, 103, 128	0
40	CQ	114/114 (100%)	2.03	50 (43%) 0 0	104, 165, 218, 317	0
40	DQ	114/114 (100%)	-0.22	1 (0%) 81 75	35, 60, 111, 139	0
41	CR	117/117 (100%)	2.09	51 (43%) 0 0	120, 164, 236, 276	0
41	DR	117/117 (100%)	-0.81	0 100 100	7, 33, 61, 123	0
42	CS	103/103 (100%)	2.08	49 (47%) 0 0	106, 195, 307, 404	0
42	DS	103/103 (100%)	-0.50	2 (1%) 66 58	16, 46, 84, 162	0
43	CT	110/110 (100%)	2.23	54 (49%) 0 0	108, 181, 300, 414	0
43	DT	110/110 (100%)	-0.68	0 100 100	13, 36, 75, 120	0
44	CU	93/93 (100%)	2.72	58 (62%) 0 0	132, 254, 491, 644	0
44	DU	92/93 (98%)	-0.01	7 (7%) 20 16	31, 67, 130, 180	0
45	CV	102/102 (100%)	3.79	86 (84%) 0 0	148, 404, 655, 701	0
45	DV	102/102 (100%)	-0.31	1 (0%) 79 73	38, 65, 110, 226	0
46	CW	94/94 (100%)	0.57	5 (5%) 32 25	138, 187, 255, 306	0
46	DW	94/94 (100%)	-0.32	0 100 100	27, 55, 97, 125	0
47	CX	75/76 (98%)	1.79	32 (42%) 0 0	101, 163, 209, 232	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
47	DX	76/76 (100%)	-0.37	1 (1%) 75 67	20, 47, 82, 127	1 (1%)
48	CY	77/77 (100%)	1.99	32 (41%) 0 0	94, 151, 225, 254	0
48	DY	77/77 (100%)	-0.13	0 100 100	34, 69, 114, 147	0
49	CZ	62/62 (100%)	2.15	33 (53%) 0 0	139, 374, 567, 650	0
49	DZ	62/62 (100%)	-0.08	1 (1%) 70 62	48, 81, 122, 246	0
50	C0	58/58 (100%)	1.10	8 (13%) 6 5	117, 160, 212, 242	0
50	D0	58/58 (100%)	-0.54	1 (1%) 69 61	22, 39, 75, 137	0
51	C1	56/56 (100%)	2.35	31 (55%) 0 0	108, 190, 336, 404	0
51	D1	56/56 (100%)	-0.68	2 (3%) 46 38	10, 42, 77, 173	0
52	C2	50/51 (98%)	0.99	6 (12%) 9 7	135, 193, 256, 268	0
52	D2	51/51 (100%)	-0.18	3 (5%) 28 22	45, 71, 113, 165	0
53	C3	46/46 (100%)	2.91	30 (65%) 0 0	110, 145, 226, 259	0
53	D3	46/46 (100%)	-0.14	1 (2%) 62 53	29, 52, 72, 254	0
54	C4	64/64 (100%)	2.77	37 (57%) 0 0	108, 153, 194, 244	0
54	D4	64/64 (100%)	-0.39	0 100 100	27, 49, 71, 86	0
55	C5	44/45 (97%)	3.12	29 (65%) 0 0	111, 162, 226, 282	0
55	D5	45/45 (100%)	-0.37	0 100 100	32, 56, 90, 120	0
56	DD	208/209 (99%)	-0.61	1 (0%) 87 83	12, 44, 81, 162	0
57	D7	68/68 (100%)	1.77	24 (35%) 1 1	66, 116, 186, 289	0
All	All	20582/20647 (99%)	0.38	2114 (10%) 12 10	7, 117, 268, 716	4 (0%)

All (2114) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
36	CM	26	GLY	13.5
36	CM	15	ALA	11.3
36	CM	27	LEU	11.1
44	CU	62	VAL	11.0
45	CV	35	VAL	10.9
53	C3	46	LYS	10.3
55	C5	44	LYS	8.8
38	CO	19	ALA	8.7
41	CR	43	GLN	8.4
45	CV	30	SER	8.4
54	C4	55	GLY	8.3

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Mol	Chain	Res	Type	RSRZ
45	CV	34	ILE	8.2
53	C3	1	MET	8.2
33	DJ	1	ALA	8.1
55	C5	9	THR	8.0
55	C5	24	GLY	8.0
23	AS	3	ARG	7.9
24	AT	4	ILE	7.9
54	C4	56	LEU	7.8
53	D3	46	LYS	7.7
13	BI	130	ARG	7.6
53	C3	42	LEU	7.4
24	BT	4	ILE	7.4
44	CU	78	SER	7.3
45	CV	25	LYS	7.3
45	CV	20	LYS	7.3
45	CV	29	SER	7.3
36	CM	71	ALA	7.2
44	CU	64	LYS	7.2
18	BN	57	PRO	7.1
29	CE	32	VAL	7.1
45	CV	28	LEU	7.1
28	CD	10	GLY	6.8
42	CS	75	VAL	6.7
31	CG	167	VAL	6.7
45	CV	56	GLY	6.7
43	CT	97	LEU	6.5
11	AG	5	ARG	6.5
49	DZ	63	ALA	6.5
45	CV	37	GLY	6.5
24	BT	68	HIS	6.5
54	C4	60	CYS	6.4
29	CE	36	ALA	6.3
43	CT	85	ILE	6.3
30	CF	131	VAL	6.3
41	CR	38	VAL	6.3
45	CV	36	GLU	6.3
51	C1	1	ALA	6.2
51	C1	22	THR	6.2
54	C4	59	ALA	6.2
45	CV	4	ILE	6.1
44	CU	65	GLY	6.1
45	CV	59	GLU	6.0

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Mol	Chain	Res	Type	RSRZ
28	CD	168	GLU	6.0
36	CM	67	THR	6.0
34	CK	111	LYS	6.0
34	CK	81	ILE	6.0
29	CE	180	LEU	6.0
45	CV	61	GLU	6.0
36	CM	106	GLU	5.9
40	CQ	101	GLU	5.9
55	C5	42	ARG	5.9
44	CU	36	LYS	5.9
53	C3	13	ASN	5.9
29	CE	42	GLY	5.9
42	CS	87	GLN	5.9
45	CV	32	LYS	5.9
36	CM	92	LEU	5.9
54	C4	51	LYS	5.8
44	CU	67	VAL	5.8
43	CT	40	ASN	5.8
45	CV	38	ILE	5.8
34	CK	78	THR	5.8
29	CE	39	ALA	5.8
13	AI	43	THR	5.8
45	CV	19	GLY	5.7
48	CY	7	THR	5.7
41	CR	40	LYS	5.7
49	CZ	22	LEU	5.7
45	CV	24	VAL	5.7
40	CQ	109	ILE	5.7
13	AI	130	ARG	5.7
45	CV	8	ASP	5.7
18	AN	20	PHE	5.6
57	D7	18	SER	5.6
54	C4	14	LYS	5.6
40	CQ	107	ALA	5.6
35	CL	68	GLY	5.6
43	CT	92	ARG	5.6
13	AI	129	LYS	5.6
28	CD	154	LYS	5.6
2	BA	1363	A	5.6
38	CO	46	ARG	5.5
27	CC	26	GLY	5.5
41	CR	3	VAL	5.5

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Mol	Chain	Res	Type	RSRZ
28	CD	192	ALA	5.5
53	C3	7	PRO	5.5
34	CK	95	ARG	5.5
45	CV	40	LEU	5.5
48	CY	48	LEU	5.5
2	BA	1362	A	5.5
45	CV	89	GLY	5.5
21	AQ	20	SER	5.4
34	CK	119	PHE	5.4
41	CR	1	ALA	5.4
23	BS	3	ARG	5.4
55	C5	17	CYS	5.4
36	CM	44	GLY	5.4
44	CU	79	ASP	5.4
51	C1	26	SER	5.4
29	CE	75	SER	5.4
36	CM	42	SER	5.4
42	CS	7	SER	5.4
20	BP	20	VAL	5.3
36	CM	69	ARG	5.3
54	C4	58	ILE	5.3
55	C5	26	LEU	5.3
51	C1	5	ASN	5.3
44	DU	2	ILE	5.3
45	CV	88	ASP	5.3
57	D7	44	TYR	5.3
45	CV	57	ILE	5.3
41	CR	36	GLN	5.3
45	CV	82	VAL	5.3
45	CV	74	ALA	5.2
52	D2	53	ALA	5.2
55	C5	10	ALA	5.2
45	CV	27	VAL	5.2
55	C5	39	VAL	5.2
41	CR	29	ARG	5.2
29	CE	73	ILE	5.2
29	CE	177	PRO	5.2
42	CS	76	LYS	5.2
29	CE	164	LEU	5.2
44	CU	41	ALA	5.2
36	CM	74	THR	5.2
54	C4	42	HIS	5.2

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Mol	Chain	Res	Type	RSRZ
27	CC	17	LYS	5.2
44	CU	33	LYS	5.2
44	CU	74	ILE	5.2
26	BL	14	ARG	5.1
39	CP	2	ASP	5.1
40	CQ	41	ALA	5.1
45	CV	2	ALA	5.1
4	CA	801	G	5.1
43	CT	93	ALA	5.1
12	BH	2	SER	5.1
45	CV	49	PRO	5.1
35	CL	75	SER	5.1
34	CK	76	HIS	5.0
48	CY	6	VAL	5.0
40	CQ	103	THR	5.0
36	CM	50	PHE	5.0
29	CE	77	ILE	5.0
33	DJ	4	VAL	5.0
43	CT	86	MET	5.0
21	BQ	20	SER	5.0
45	CV	7	ASP	5.0
44	CU	47	VAL	5.0
54	C4	5	THR	4.9
13	BI	116	VAL	4.9
33	DJ	52	LEU	4.9
54	C4	6	VAL	4.9
34	CK	118	MET	4.9
57	D7	58	THR	4.9
53	C3	32	ALA	4.9
47	CX	36	VAL	4.9
45	CV	72	PHE	4.9
29	CE	79	ARG	4.9
27	CC	244	VAL	4.9
54	C4	48	MET	4.9
28	CD	200	ASP	4.9
41	CR	10	ARG	4.9
48	CY	75	GLU	4.9
38	CO	10	LEU	4.9
28	CD	9	VAL	4.9
42	CS	50	GLY	4.8
54	C4	20	GLY	4.8
20	BP	24	SER	4.8

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Mol	Chain	Res	Type	RSRZ
21	AQ	5	ILE	4.8
24	BT	9	LYS	4.8
11	BG	4	ARG	4.8
35	CL	35	VAL	4.8
40	CQ	63	ILE	4.8
44	CU	37	ASP	4.8
23	BS	74	PHE	4.8
34	CK	115	GLY	4.8
16	AL	124	ALA	4.8
27	CC	227	VAL	4.7
41	CR	100	PHE	4.7
26	BL	2	ALA	4.7
26	BL	25	GLU	4.7
34	CK	74	TYR	4.7
41	CR	7	VAL	4.7
4	CA	2690	U	4.7
29	CE	37	ALA	4.7
33	DJ	2	LYS	4.7
36	CM	70	LYS	4.7
57	D7	64	VAL	4.7
4	CA	1656	C	4.7
20	BP	54	LEU	4.7
27	CC	232	GLY	4.7
42	DS	103	ALA	4.7
13	BI	119	ARG	4.7
36	CM	73	ILE	4.7
27	CC	219	VAL	4.7
42	CS	20	VAL	4.7
55	C5	15	PRO	4.7
44	CU	43	ILE	4.7
47	DX	8	THR	4.6
50	D0	1	ALA	4.6
11	BG	7	ILE	4.6
45	CV	16	LYS	4.6
28	CD	128	ARG	4.6
36	CM	18	ARG	4.6
38	CO	47	VAL	4.6
53	C3	14	ARG	4.6
28	CD	144	GLY	4.6
36	CM	49	GLY	4.6
41	CR	6	GLY	4.6
57	D7	20	ASP	4.6

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Mol	Chain	Res	Type	RSRZ
17	BM	99	GLY	4.6
45	CV	11	ILE	4.6
36	CM	51	GLU	4.6
45	CV	52	ASN	4.6
29	CE	40	ARG	4.5
38	CO	68	ALA	4.5
8	AD	206	LYS	4.5
30	CF	129	MET	4.5
42	CS	36	ALA	4.5
55	C5	12	GLU	4.5
10	BF	80	PHE	4.5
20	BP	39	PHE	4.5
20	BP	60	TRP	4.5
44	CU	80	TRP	4.5
55	C5	2	LYS	4.5
23	BS	41	PHE	4.5
49	CZ	40	SER	4.5
37	CN	129	THR	4.5
36	CM	101	ILE	4.5
27	CC	254	LYS	4.5
38	CO	39	PRO	4.5
45	CV	54	PRO	4.5
28	CD	122	VAL	4.5
41	CR	24	TYR	4.4
53	C3	12	ARG	4.4
54	C4	21	PHE	4.4
11	BG	5	ARG	4.4
3	DA	2885	G	4.4
11	BG	27	VAL	4.4
43	CT	47	VAL	4.4
24	AT	61	GLN	4.4
28	CD	77	ARG	4.4
28	CD	160	LYS	4.4
48	CY	19	HIS	4.4
36	CM	36	LYS	4.4
24	BT	67	ILE	4.4
40	CQ	83	ILE	4.4
38	CO	111	ALA	4.3
36	CM	24	GLY	4.3
50	C0	14	GLY	4.3
17	BM	98	ARG	4.3
39	CP	9	ARG	4.3

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Mol	Chain	Res	Type	RSRZ
4	CA	665	U	4.3
57	D7	65	ALA	4.3
23	AS	39	THR	4.3
45	CV	73	ASN	4.3
45	CV	77	GLY	4.3
43	CT	95	ARG	4.3
29	CE	104	ALA	4.3
34	CK	126	ALA	4.3
7	AC	2	GLY	4.3
41	CR	20	ALA	4.3
48	CY	46	VAL	4.3
51	C1	15	ARG	4.3
49	CZ	21	LEU	4.3
57	D7	66	SER	4.3
57	D7	56	PHE	4.3
13	BI	129	LYS	4.3
41	CR	33	VAL	4.3
49	CZ	44	LYS	4.3
51	C1	11	LYS	4.3
53	C3	36	ALA	4.3
23	AS	5	LEU	4.3
36	CM	19	LEU	4.2
18	BN	95	GLY	4.2
29	CE	56	GLY	4.2
51	C1	7	PRO	4.2
29	CE	60	TRP	4.2
1	AA	121	U	4.2
27	CC	215	VAL	4.2
36	CM	13	LYS	4.2
36	CM	25	SER	4.2
38	CO	6	SER	4.2
41	CR	58	GLN	4.1
29	CE	47	LYS	4.1
13	BI	118	LEU	4.1
28	CD	203	VAL	4.1
29	CE	55	SER	4.1
29	CE	93	SER	4.1
32	CH	10	ALA	4.1
43	CT	32	ALA	4.1
34	CK	86	GLN	4.1
55	C5	8	ARG	4.1
2	BA	1325	C	4.1

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Mol	Chain	Res	Type	RSRZ
45	CV	70	ALA	4.1
23	BS	4	SER	4.1
28	CD	6	GLY	4.1
43	CT	26	GLY	4.1
54	C4	22	LYS	4.1
49	CZ	18	LEU	4.1
49	CZ	15	ASN	4.1
4	CA	2047	C	4.1
47	CX	16	ALA	4.1
13	BI	117	GLY	4.1
40	CQ	26	GLU	4.1
43	CT	34	ASP	4.1
54	C4	61	LEU	4.1
45	CV	86	PHE	4.1
4	CA	1622	G	4.1
44	CU	87	LEU	4.0
28	CD	26	VAL	4.0
18	AN	35	ALA	4.0
45	CV	79	ALA	4.0
41	CR	31	TYR	4.0
43	CT	19	LEU	4.0
45	CV	12	VAL	4.0
55	C5	20	VAL	4.0
29	CE	89	PRO	4.0
4	CA	1311	G	4.0
44	CU	71	GLY	4.0
45	CV	9	GLU	4.0
28	CD	25	THR	4.0
40	CQ	90	ALA	4.0
44	CU	76	ARG	4.0
55	C5	36	PHE	4.0
11	AG	6	VAL	4.0
20	AP	80	LYS	4.0
45	CV	50	ALA	4.0
4	CA	531	C	4.0
41	CR	16	ILE	4.0
43	CT	103	ILE	4.0
20	BP	25	ARG	4.0
24	BT	65	GLY	4.0
10	BF	54	LEU	4.0
52	C2	35	LEU	4.0
31	CG	168	VAL	4.0

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Mol	Chain	Res	Type	RSRZ
38	CO	70	THR	4.0
4	CA	441	U	3.9
11	AG	7	ILE	3.9
42	CS	79	ARG	3.9
40	CQ	67	GLU	3.9
8	AD	77	LYS	3.9
38	CO	5	LYS	3.9
40	CQ	98	TYR	3.9
4	CA	666	A	3.9
31	CG	102	ILE	3.9
51	C1	23	ALA	3.9
20	BP	52	LEU	3.9
50	C0	16	LEU	3.9
29	CE	33	VAL	3.9
40	CQ	29	VAL	3.9
45	CV	45	GLN	3.9
47	CX	34	ILE	3.9
9	BE	157	ARG	3.9
29	CE	50	ALA	3.9
4	CA	1626	A	3.9
28	CD	131	ASP	3.9
28	CD	201	LEU	3.9
41	CR	21	LYS	3.9
18	BN	13	VAL	3.9
43	CT	45	VAL	3.9
45	CV	10	VAL	3.9
54	C4	57	VAL	3.9
17	BM	96	PRO	3.9
25	AU	57	ALA	3.9
27	CC	40	GLY	3.8
49	CZ	49	ASP	3.8
15	BK	129	VAL	3.8
38	CO	18	GLN	3.8
13	BI	124	ARG	3.8
20	BP	17	TYR	3.8
57	D7	22	TYR	3.8
27	CC	209	ALA	3.8
4	CA	1555	G	3.8
27	CC	35	LYS	3.8
29	CE	43	THR	3.8
4	CA	1606	C	3.8
54	C4	13	PHE	3.8

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Mol	Chain	Res	Type	RSRZ
38	CO	97	ILE	3.8
18	BN	15	LEU	3.8
23	BS	31	LEU	3.8
40	CQ	24	THR	3.8
29	CE	178	VAL	3.8
44	CU	34	VAL	3.8
45	CV	48	VAL	3.8
51	C1	53	VAL	3.8
57	D7	47	ILE	3.8
34	CK	47	HIS	3.8
17	AM	105	ASN	3.8
28	CD	116	LYS	3.8
11	AG	152	ALA	3.8
40	CQ	96	LEU	3.8
49	CZ	14	LEU	3.8
49	CZ	43	LEU	3.8
29	CE	85	PHE	3.8
27	CC	37	SER	3.8
43	CT	20	VAL	3.8
4	CA	587	C	3.8
4	CA	2046	G	3.8
45	CV	13	LEU	3.8
13	BI	127	PHE	3.8
28	CD	209	ALA	3.7
29	CE	26	ALA	3.7
4	CA	667	U	3.7
17	AM	99	GLY	3.7
27	CC	11	GLY	3.7
36	CM	11	GLY	3.7
53	C3	18	PHE	3.7
8	BD	77	LYS	3.7
12	BH	85	ILE	3.7
29	CE	175	ILE	3.7
38	CO	72	ASP	3.7
11	BG	39	ALA	3.7
49	CZ	42	LEU	3.7
51	C1	20	ALA	3.7
36	CM	64	PHE	3.7
23	AS	65	GLU	3.7
20	BP	31	ARG	3.7
45	CV	6	ARG	3.7
41	CR	18	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
20	BP	33	ILE	3.7
39	CP	8	ILE	3.7
12	AH	2	SER	3.7
51	D1	26	SER	3.7
13	AI	125	PRO	3.7
55	C5	34	PRO	3.7
7	BC	158	GLY	3.7
4	CA	34	U	3.7
32	CH	27	ARG	3.7
40	CQ	100	ARG	3.7
41	CR	12	ARG	3.7
43	CT	84	ARG	3.7
47	CX	15	GLU	3.7
48	CY	49	ARG	3.7
27	CC	58	LYS	3.7
42	CS	73	LYS	3.7
4	CA	41	C	3.7
27	DC	271	SER	3.7
57	D7	50	SER	3.7
18	AN	51	LEU	3.7
38	CO	8	ARG	3.7
40	CQ	65	ASN	3.7
24	BT	5	LYS	3.7
22	AR	21	ILE	3.7
23	AS	9	PRO	3.6
34	CK	8	PRO	3.6
36	CM	3	LEU	3.6
43	CT	46	LEU	3.6
17	BM	76	SER	3.6
13	BI	108	ALA	3.6
35	CL	15	GLY	3.6
40	CQ	108	ARG	3.6
41	CR	4	LYS	3.6
57	D7	68	GLY	3.6
13	BI	48	VAL	3.6
38	CO	52	ILE	3.6
23	BS	39	THR	3.6
53	C3	31	LEU	3.6
45	CV	99	SER	3.6
18	AN	22	LYS	3.6
34	CK	48	VAL	3.6
44	CU	31	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
27	CC	218	THR	3.6
28	CD	199	SER	3.6
55	C5	11	LYS	3.6
21	BQ	35	GLY	3.6
38	CO	23	ASN	3.6
28	CD	23	PRO	3.6
29	CE	76	PRO	3.6
28	CD	57	ALA	3.6
43	CT	43	ALA	3.6
56	DD	209	ALA	3.6
48	CY	74	GLY	3.6
28	CD	142	VAL	3.6
43	CT	94	ASP	3.6
44	CU	10	VAL	3.6
4	CA	2045	C	3.6
18	BN	51	LEU	3.6
29	CE	134	LEU	3.6
18	BN	44	ALA	3.5
44	CU	83	ALA	3.5
42	CS	35	PHE	3.5
11	BG	19	GLY	3.5
29	CE	72	SER	3.5
25	AU	43	THR	3.5
48	CY	30	PRO	3.5
13	AI	124	ARG	3.5
16	AL	13	ALA	3.5
21	AQ	40	ARG	3.5
29	CE	165	HIS	3.5
34	CK	116	ARG	3.5
44	CU	35	ALA	3.5
22	BR	21	ILE	3.5
26	BL	92	GLY	3.5
42	CS	69	GLY	3.5
42	CS	88	GLY	3.5
44	CU	30	ILE	3.5
45	CV	31	GLY	3.5
6	BB	14	VAL	3.5
13	BI	128	SER	3.5
45	CV	41	VAL	3.5
49	CZ	11	VAL	3.5
27	CC	25	LYS	3.5
48	CY	53	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
54	C4	2	LYS	3.5
28	CD	126	ASN	3.5
45	CV	101	THR	3.5
38	CO	17	ARG	3.5
29	CE	68	ALA	3.5
4	CA	1117	C	3.5
38	CO	21	PHE	3.5
32	CH	24	GLY	3.5
34	CK	105	VAL	3.5
29	CE	147	LEU	3.5
41	CR	17	LEU	3.5
4	CA	559	G	3.5
4	CA	669	G	3.5
14	BJ	61	ALA	3.5
35	CL	83	ALA	3.5
4	CA	1301	A	3.5
7	BC	13	GLY	3.5
36	CM	14	LYS	3.5
42	CS	52	PRO	3.5
45	CV	21	ARG	3.5
53	C3	41	ARG	3.5
30	CF	53	ALA	3.5
13	BI	39	PHE	3.4
4	CA	1202	G	3.4
11	BG	105	VAL	3.4
37	CN	2	LEU	3.4
43	CT	16	LYS	3.4
30	CF	31	GLU	3.4
20	BP	41	PRO	3.4
42	CS	55	ASP	3.4
41	CR	8	ILE	3.4
28	CD	127	PHE	3.4
38	CO	20	MET	3.4
26	BL	16	VAL	3.4
37	CN	37	GLY	3.4
48	CY	12	VAL	3.4
13	BI	112	GLU	3.4
16	AL	14	ARG	3.4
44	CU	73	ARG	3.4
3	DA	2602	A	3.4
4	CA	941	A	3.4
4	CA	33	C	3.4

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Mol	Chain	Res	Type	RSRZ
4	CA	456	C	3.4
24	BT	6	SER	3.4
43	CT	13	SER	3.4
45	CV	39	ASN	3.4
43	CT	49	LYS	3.4
45	CV	42	LYS	3.4
48	CY	55	MET	3.4
38	CO	26	GLY	3.4
42	CS	96	VAL	3.4
17	AM	5	ALA	3.4
23	BS	69	HIS	3.4
4	CA	1276	A	3.4
38	CO	25	ALA	3.4
41	CR	34	ALA	3.4
41	CR	41	ALA	3.4
42	CS	103	ALA	3.4
29	CE	53	THR	3.4
46	CW	82	TYR	3.4
54	C4	19	GLY	3.4
2	BA	1224	U	3.4
10	AF	100	SER	3.4
13	BI	14	SER	3.4
18	BN	76	LYS	3.4
27	CC	250	GLN	3.4
18	BN	19	TYR	3.4
38	CO	38	LEU	3.3
43	CT	36	LEU	3.3
44	CU	63	VAL	3.3
18	BN	11	LYS	3.3
26	BL	10	LYS	3.3
42	CS	28	ALA	3.3
49	CZ	33	ALA	3.3
4	CA	810	U	3.3
17	BM	20	THR	3.3
20	BP	18	GLN	3.3
28	CD	121	THR	3.3
31	CG	83	THR	3.3
49	CZ	31	GLN	3.3
9	AE	11	LEU	3.3
11	BG	13	LEU	3.3
21	BQ	8	LEU	3.3
28	CD	180	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
30	CF	30	VAL	3.3
23	BS	76	PRO	3.3
39	CP	14	ALA	3.3
51	C1	41	HIS	3.3
53	C3	22	MET	3.3
28	CD	186	LEU	3.3
55	C5	18	GLN	3.3
11	BG	94	VAL	3.3
27	CC	249	VAL	3.3
27	CC	236	GLY	3.3
36	CM	58	TYR	3.3
41	CR	44	TYR	3.3
45	CV	98	ASN	3.3
13	BI	125	PRO	3.3
28	CD	8	LYS	3.3
4	CA	2712	C	3.3
12	BH	75	ILE	3.3
38	CO	24	MET	3.3
43	CT	82	MET	3.3
16	AL	2	ALA	3.3
24	BT	63	ALA	3.3
29	CE	128	ALA	3.3
31	CG	149	ALA	3.3
4	CA	189	G	3.3
4	CA	446	G	3.3
4	CA	664	G	3.3
11	AG	23	LEU	3.3
32	CH	29	PHE	3.3
41	CR	27	ARG	3.3
27	CC	212	TRP	3.3
23	BS	68	GLY	3.3
36	CM	52	GLY	3.3
41	CR	28	SER	3.3
4	CA	2891	U	3.3
31	CG	150	TYR	3.3
34	CK	60	ASP	3.3
4	CA	2602	A	3.3
43	CT	4	ILE	3.3
44	CU	70	HIS	3.3
38	CO	28	LEU	3.3
28	CD	118	PHE	3.3
33	DJ	77	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
4	CA	2623	G	3.3
36	CM	34	GLY	3.3
38	CO	101	GLY	3.3
57	D7	59	GLY	3.3
9	BE	100	SER	3.3
3	DA	790	U	3.2
4	CA	1325	U	3.2
28	CD	7	LYS	3.2
40	CQ	94	ALA	3.2
11	BG	62	PHE	3.2
20	BP	28	ARG	3.2
29	CE	183	PHE	3.2
40	CQ	42	PHE	3.2
18	BN	33	VAL	3.2
28	CD	60	VAL	3.2
38	CO	29	VAL	3.2
9	AE	102	GLY	3.2
43	CT	37	THR	3.2
30	CF	173	ASP	3.2
31	CG	165	ASP	3.2
43	CT	22	ASP	3.2
4	CA	389	G	3.2
23	BS	49	ILE	3.2
30	CF	155	ILE	3.2
27	CC	201	LEU	3.2
29	CE	45	ALA	3.2
36	CM	97	ALA	3.2
41	CR	37	ALA	3.2
49	CZ	61	ALA	3.2
44	CU	69	ARG	3.2
42	CS	51	VAL	3.2
29	CE	90	GLN	3.2
17	BM	103	LYS	3.2
45	CV	23	LYS	3.2
54	C4	46	LYS	3.2
7	BC	44	THR	3.2
8	AD	160	GLU	3.2
4	CA	2000	C	3.2
27	CC	224	MET	3.2
54	C4	1	PRO	3.2
13	AI	54	LEU	3.2
50	C0	28	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
51	C1	18	HIS	3.2
2	BA	94	G	3.2
48	CY	57	VAL	3.2
29	CE	30	GLN	3.2
40	CQ	62	LYS	3.2
42	CS	71	LYS	3.2
31	CG	166	GLU	3.2
43	CT	52	GLU	3.2
55	C5	1	MET	3.2
18	AN	42	TRP	3.2
2	BA	1327	C	3.2
6	AB	157	LEU	3.2
8	BD	73	ARG	3.2
36	CM	4	ASN	3.2
37	CN	116	ALA	3.2
45	CV	75	ALA	3.2
13	BI	103	PHE	3.2
27	CC	164	VAL	3.2
34	CK	123	LYS	3.2
43	CT	105	VAL	3.2
2	BA	211	G	3.2
3	DA	549	G	3.2
4	CA	836	G	3.2
27	CC	253	GLY	3.2
28	CD	147	GLY	3.2
36	CM	23	ILE	3.2
1	AA	1534	A	3.1
18	AN	48	LEU	3.1
41	CR	47	ARG	3.1
55	C5	25	ARG	3.1
57	D7	61	LEU	3.1
28	CD	156	PHE	3.1
48	CY	45	PHE	3.1
4	CA	1644	C	3.1
27	CC	8	THR	3.1
6	AB	67	ILE	3.1
47	CX	72	PRO	3.1
57	D7	55	PRO	3.1
13	AI	63	LEU	3.1
44	CU	77	ARG	3.1
45	CV	5	ARG	3.1
48	CY	17	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
11	BG	25	LYS	3.1
43	CT	5	ALA	3.1
43	CT	81	SER	3.1
44	CU	44	LYS	3.1
47	CX	73	LYS	3.1
52	C2	9	LYS	3.1
51	C1	45	ASP	3.1
45	CV	94	PHE	3.1
33	DJ	11	GLN	3.1
43	CT	15	GLN	3.1
9	BE	109	GLY	3.1
18	BN	26	LEU	3.1
30	CF	169	LEU	3.1
32	DH	12	LEU	3.1
44	DU	93	LEU	3.1
51	C1	38	LEU	3.1
27	CC	4	LYS	3.1
45	CV	62	ALA	3.1
53	C3	23	ALA	3.1
54	C4	9	ALA	3.1
41	CR	35	PHE	3.1
4	CA	612	G	3.1
2	BA	1364	U	3.1
4	CA	2506	U	3.1
49	CZ	45	GLN	3.1
23	BS	11	ILE	3.1
42	CS	37	GLU	3.1
31	CG	169	ARG	3.1
40	CQ	61	ARG	3.1
52	C2	23	THR	3.1
53	C3	43	THR	3.1
28	CD	123	LYS	3.1
7	BC	37	PHE	3.1
31	DG	46	ASP	3.1
45	CV	97	SER	3.1
51	C1	14	MET	3.1
40	CQ	53	GLY	3.1
45	CV	83	GLY	3.1
4	CA	1347	A	3.1
13	BI	122	ARG	3.1
34	CK	13	ARG	3.1
11	BG	59	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
26	BL	7	LEU	3.1
38	CO	85	PRO	3.1
40	CQ	7	LEU	3.1
28	CD	197	THR	3.1
20	BP	27	ALA	3.0
11	BG	43	VAL	3.0
12	BH	78	VAL	3.0
8	BD	205	SER	3.0
11	BG	41	SER	3.0
14	AJ	75	ASP	3.0
34	CK	83	GLY	3.0
40	CQ	11	GLN	3.0
28	CD	141	ARG	3.0
42	CS	78	ARG	3.0
11	BG	35	LYS	3.0
32	CH	35	LYS	3.0
37	CN	84	LYS	3.0
38	CO	79	LEU	3.0
43	CT	33	LEU	3.0
44	CU	8	LEU	3.0
28	CD	129	THR	3.0
29	CE	131	THR	3.0
4	CA	1382	G	3.0
33	DJ	13	ALA	3.0
7	BC	52	VAL	3.0
42	CS	77	PHE	3.0
13	BI	37	GLN	3.0
8	AD	73	ARG	3.0
32	DH	4	ILE	3.0
36	CM	33	ARG	3.0
13	BI	54	LEU	3.0
4	CA	967	U	3.0
2	BA	1324	A	3.0
44	CU	38	ALA	3.0
18	BN	71	HIS	3.0
23	AS	41	PHE	3.0
32	CH	129	VAL	3.0
44	CU	57	VAL	3.0
53	C3	9	VAL	3.0
4	CA	561	G	3.0
4	CA	2621	G	3.0
22	BR	51	TYR	3.0

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Mol	Chain	Res	Type	RSRZ
4	CA	2001	C	3.0
18	BN	29	ILE	3.0
33	DJ	85	ILE	3.0
34	CK	79	GLY	3.0
36	CM	21	ARG	3.0
36	CM	48	ARG	3.0
43	CT	42	LYS	3.0
43	CT	48	LYS	3.0
45	CV	64	ILE	3.0
53	C3	2	LYS	3.0
55	C5	13	ARG	3.0
48	CY	32	LEU	3.0
20	BP	36	VAL	3.0
4	CA	529	A	3.0
26	BL	18	LYS	3.0
27	CC	241	LYS	3.0
40	CQ	93	LYS	3.0
45	CV	43	LYS	3.0
6	BB	164	ILE	3.0
37	CN	126	ILE	3.0
47	CX	9	ARG	3.0
35	CL	81	GLY	3.0
41	CR	22	GLY	3.0
45	CV	51	LEU	3.0
54	C4	54	LEU	3.0
4	CA	180	G	3.0
4	CA	1248	G	3.0
28	CD	145	SER	3.0
29	CE	91	ASP	3.0
4	CA	786	C	3.0
34	CK	97	PRO	3.0
36	CM	8	PRO	3.0
9	BE	110	ALA	3.0
20	AP	81	ALA	3.0
28	CD	112	THR	3.0
42	CS	32	THR	3.0
57	D7	17	THR	3.0
28	CD	189	VAL	3.0
14	BJ	59	LYS	2.9
35	CL	67	LYS	2.9
27	CC	47	ARG	2.9
27	CC	51	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
39	CP	7	ARG	2.9
51	C1	9	ARG	2.9
32	CH	12	LEU	2.9
27	CC	85	ASN	2.9
4	CA	914	G	2.9
3	DA	1072	C	2.9
15	BK	21	ALA	2.9
24	BT	72	ALA	2.9
29	CE	87	ALA	2.9
14	BJ	74	VAL	2.9
27	CC	50	THR	2.9
2	BA	121	U	2.9
41	CR	32	ARG	2.9
45	CV	93	ARG	2.9
48	CY	2	ARG	2.9
42	CS	49	ILE	2.9
43	CT	96	ILE	2.9
36	CM	6	LEU	2.9
49	CZ	37	LEU	2.9
49	CZ	56	LEU	2.9
33	DJ	51	GLY	2.9
4	CA	528	A	2.9
4	CA	1654	A	2.9
40	CQ	8	GLU	2.9
47	CX	74	ASN	2.9
47	CX	14	SER	2.9
13	BI	16	ALA	2.9
20	AP	22	ALA	2.9
28	CD	162	ALA	2.9
13	BI	105	THR	2.9
23	AS	74	PHE	2.9
44	CU	55	VAL	2.9
29	CE	48	THR	2.9
31	CG	171	LYS	2.9
39	CP	3	LYS	2.9
2	BA	212	G	2.9
4	CA	245	G	2.9
4	CA	1310	G	2.9
47	CX	35	ILE	2.9
24	BT	66	LEU	2.9
28	CD	198	GLY	2.9
36	CM	53	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
11	BG	16	PRO	2.9
22	BR	20	GLU	2.9
2	BA	1346	A	2.9
48	CY	16	ASN	2.9
13	AI	128	SER	2.9
24	BT	7	ALA	2.9
36	CM	72	ALA	2.9
46	CW	22	ALA	2.9
48	CY	3	VAL	2.9
51	D1	56	LYS	2.9
36	CM	107	PHE	2.9
34	CK	120	ARG	2.9
24	BT	12	ILE	2.9
27	CC	53	ILE	2.9
32	DH	44	ILE	2.9
36	CM	100	ILE	2.9
42	CS	27	ILE	2.9
4	CA	2585	U	2.9
9	BE	102	GLY	2.9
4	CA	530	G	2.9
12	AH	76	GLN	2.9
18	BN	101	TRP	2.9
48	CY	5	GLN	2.9
27	CC	82	TYR	2.9
27	CC	38	LYS	2.9
42	CS	48	LYS	2.9
45	CV	90	LYS	2.9
38	CO	62	ASN	2.9
9	BE	142	ASP	2.9
33	DJ	113	ALA	2.9
34	CK	94	ALA	2.9
42	CS	72	VAL	2.9
44	CU	45	ALA	2.9
49	CZ	63	ALA	2.9
40	CQ	64	SER	2.9
45	CV	95	PHE	2.9
29	CE	173	THR	2.9
38	CO	36	THR	2.9
20	BP	57	ILE	2.9
45	CV	102	ILE	2.9
12	BH	82	GLY	2.8
4	CA	237	C	2.8

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Mol	Chain	Res	Type	RSRZ
4	CA	343	C	2.8
4	CA	1556	C	2.8
2	BA	105	G	2.8
2	BA	108	G	2.8
2	BA	203	G	2.8
4	CA	205	G	2.8
4	CA	291	G	2.8
4	CA	386	G	2.8
4	CA	2780	G	2.8
26	BL	124	ALA	2.8
35	CL	122	VAL	2.8
27	CC	44	ASN	2.8
47	CX	47	ALA	2.8
53	C3	45	SER	2.8
20	BP	6	LEU	2.8
32	DH	5	LEU	2.8
43	CT	39	THR	2.8
43	CT	66	ILE	2.8
45	CV	76	THR	2.8
15	AK	90	GLY	2.8
27	CC	248	GLY	2.8
28	CD	120	GLY	2.8
42	CS	8	GLY	2.8
51	C1	34	GLY	2.8
43	CT	80	PRO	2.8
54	C4	62	PRO	2.8
26	BL	44	LYS	2.8
50	C0	55	LYS	2.8
30	CF	127	TYR	2.8
42	CS	83	TYR	2.8
4	CA	516	C	2.8
37	CN	56	ALA	2.8
11	BG	97	ASN	2.8
41	CR	80	ASN	2.8
36	CM	82	LEU	2.8
38	CO	83	LEU	2.8
41	CR	39	ILE	2.8
19	BO	25	THR	2.8
27	CC	271	SER	2.8
52	C2	22	THR	2.8
57	D7	51	SER	2.8
4	CA	124	G	2.8

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Mol	Chain	Res	Type	RSRZ
4	CA	2640	G	2.8
3	DA	2886	A	2.8
12	BH	3	MET	2.8
18	AN	53	ARG	2.8
25	AU	45	ARG	2.8
34	CK	75	TYR	2.8
43	CT	11	ARG	2.8
4	CA	931	U	2.8
4	CA	1396	U	2.8
23	AS	49	ILE	2.8
2	BA	175	C	2.8
42	CS	26	ASP	2.8
42	CS	99	THR	2.8
48	CY	34	SER	2.8
51	C1	17	SER	2.8
18	BN	97	LYS	2.8
4	CA	185	G	2.8
33	CJ	21	PRO	2.8
36	CM	62	PRO	2.8
4	CA	2725	A	2.8
8	AD	147	GLU	2.8
28	CD	125	TRP	2.8
31	CG	61	TRP	2.8
29	CE	96	VAL	2.8
18	AN	21	ALA	2.8
34	CK	6	ALA	2.8
36	CM	108	ALA	2.8
4	CA	2402	U	2.8
12	BH	11	LEU	2.8
23	BS	71	LEU	2.8
35	CL	66	LYS	2.8
44	CU	40	LYS	2.8
4	CA	2691	C	2.8
6	AB	147	SER	2.8
40	CQ	84	SER	2.8
55	C5	6	SER	2.8
40	CQ	22	GLY	2.8
30	CF	83	PRO	2.8
29	CE	51	GLU	2.7
38	CO	22	ARG	2.7
4	CA	384	A	2.7
4	CA	586	A	2.7

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Mol	Chain	Res	Type	RSRZ
4	CA	685	A	2.7
4	CA	1303	G	2.7
4	CA	1627	G	2.7
4	CA	1660	G	2.7
4	CA	2618	G	2.7
42	CS	93	PHE	2.7
39	CP	4	LYS	2.7
32	CH	119	ASN	2.7
37	CN	19	GLY	2.7
14	BJ	48	ARG	2.7
29	CE	88	ARG	2.7
39	CP	94	ARG	2.7
49	CZ	29	ARG	2.7
4	CA	595	C	2.7
45	CV	100	GLU	2.7
11	BG	80	VAL	2.7
13	BI	47	VAL	2.7
21	BQ	59	VAL	2.7
6	BB	161	LEU	2.7
13	AI	108	ALA	2.7
28	CD	65	ALA	2.7
28	CD	75	ALA	2.7
17	BM	4	ILE	2.7
19	AO	57	LEU	2.7
54	C4	25	HIS	2.7
4	CA	508	A	2.7
4	CA	1808	A	2.7
6	BB	45	LYS	2.7
2	BA	102	G	2.7
3	DA	139	U	2.7
4	CA	776	G	2.7
50	C0	9	THR	2.7
6	BB	139	ARG	2.7
7	BC	131	ARG	2.7
13	AI	123	ARG	2.7
4	CA	517	C	2.7
4	CA	1615	C	2.7
4	CA	2678	C	2.7
22	AR	68	LEU	2.7
23	BS	5	LEU	2.7
32	CH	15	LEU	2.7
36	CM	61	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
48	CY	21	LEU	2.7
8	AD	156	LYS	2.7
9	AE	159	LYS	2.7
33	DJ	3	LYS	2.7
57	D7	42	TYR	2.7
4	CA	1274	A	2.7
23	BS	33	THR	2.7
13	BI	51	PRO	2.7
24	BT	24	ARG	2.7
28	CD	117	GLY	2.7
28	CD	166	GLY	2.7
38	CO	2	ARG	2.7
4	CA	1022	G	2.7
11	BG	12	ILE	2.7
13	BI	28	ILE	2.7
29	CE	105	LEU	2.7
44	CU	46	ALA	2.7
53	C3	20	ALA	2.7
26	BL	15	LYS	2.7
28	CD	159	LYS	2.7
55	C5	23	LYS	2.7
6	BB	100	MET	2.7
4	CA	129	C	2.7
57	D7	57	TYR	2.7
28	CD	59	ARG	2.7
34	CK	96	ARG	2.7
44	CU	12	ARG	2.7
27	CC	56	GLY	2.7
20	BP	69	ASP	2.7
47	CX	13	ASP	2.7
25	AU	14	VAL	2.7
40	CQ	91	VAL	2.7
13	BI	61	LEU	2.7
24	AT	6	SER	2.7
27	CC	258	SER	2.7
30	CF	35	LEU	2.7
31	CG	85	LYS	2.6
31	CG	130	ILE	2.6
41	CR	89	ILE	2.6
47	CX	57	LEU	2.7
6	BB	132	LYS	2.6
11	BG	36	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
14	AJ	59	LYS	2.6
13	AI	44	ALA	2.6
16	AL	17	ALA	2.6
20	BP	65	ALA	2.6
23	AS	61	PHE	2.6
42	CS	24	LYS	2.6
44	CU	66	LYS	2.6
29	CE	135	ALA	2.6
4	CA	1131	G	2.6
45	CV	85	ARG	2.6
54	C4	39	ARG	2.6
4	CA	1118	C	2.6
30	CF	130	GLY	2.6
37	CN	77	PRO	2.6
27	CC	45	ASN	2.6
34	CK	131	ASN	2.6
45	CV	26	ASN	2.6
17	AM	80	LEU	2.6
34	CK	73	VAL	2.6
40	CQ	79	VAL	2.6
40	CQ	110	LYS	2.6
45	CV	46	LYS	2.6
53	C3	37	LYS	2.6
4	CA	563	A	2.6
6	BB	32	PHE	2.6
30	CF	54	ALA	2.6
45	CV	84	PHE	2.6
54	C4	26	ALA	2.6
17	BM	109	ARG	2.6
53	C3	28	ARG	2.6
53	C3	34	ARG	2.6
54	C4	63	TYR	2.6
12	BH	44	GLY	2.6
18	BN	91	GLY	2.6
28	CD	158	GLY	2.6
46	CW	84	PRO	2.6
4	CA	795	C	2.6
4	CA	1348	C	2.6
4	CA	1612	C	2.6
8	AD	148	LYS	2.6
44	CU	29	THR	2.6
44	CU	39	THR	2.6

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Mol	Chain	Res	Type	RSRZ
18	BN	48	LEU	2.6
33	DJ	10	LEU	2.6
33	DJ	78	LEU	2.6
35	CL	107	LEU	2.6
38	CO	54	LEU	2.6
41	CR	59	LEU	2.6
43	CT	23	LEU	2.6
51	C1	2	VAL	2.6
51	C1	21	LEU	2.6
21	BQ	5	ILE	2.6
36	CM	104	GLN	2.6
38	CO	34	ILE	2.6
4	CA	1657	U	2.6
4	CA	2680	U	2.6
11	BG	18	PHE	2.6
4	CA	614	A	2.6
42	CS	82	HIS	2.6
13	AI	122	ARG	2.6
53	C3	33	ARG	2.6
9	BE	158	GLY	2.6
23	BS	9	PRO	2.6
40	CQ	104	GLY	2.6
42	DS	56	GLY	2.6
44	CU	81	LYS	2.6
4	CA	2004	G	2.6
23	BS	15	LEU	2.6
29	CE	143	LEU	2.6
29	CE	186	VAL	2.6
32	CH	117	LEU	2.6
30	CF	136	ILE	2.6
33	DJ	69	VAL	2.6
50	C0	7	THR	2.6
34	CK	103	ILE	2.6
7	BC	129	MET	2.6
18	BN	60	GLN	2.6
20	BP	29	ASN	2.6
24	BT	3	ASN	2.6
27	CC	36	ASN	2.6
27	CC	162	GLN	2.6
38	CO	9	GLN	2.6
6	BB	61	ALA	2.6
29	CE	124	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
34	CK	42	ALA	2.6
34	CK	133	ALA	2.6
4	CA	57	C	2.6
4	CA	341	C	2.6
4	CA	1349	C	2.6
23	AS	4	SER	2.6
29	CE	67	ARG	2.6
48	CY	10	ARG	2.6
4	CA	1205	A	2.6
4	CA	2872	A	2.6
8	AD	177	LYS	2.6
45	CV	3	LYS	2.6
54	C4	38	LYS	2.6
6	BB	13	GLY	2.6
20	BP	30	GLY	2.6
6	BB	129	LEU	2.6
9	BE	124	LEU	2.6
17	BM	80	LEU	2.6
23	BS	13	LEU	2.6
29	DE	153	LEU	2.6
30	CF	151	LEU	2.6
37	CN	33	LEU	2.6
6	BB	67	ILE	2.6
18	BN	45	VAL	2.6
51	C1	25	THR	2.6
28	CD	148	GLN	2.6
38	DO	120	GLU	2.6
42	CS	86	GLN	2.6
45	CV	87	GLU	2.6
8	AD	27	ALA	2.6
9	AE	70	ASN	2.6
17	BM	15	ALA	2.6
18	BN	1	ALA	2.6
25	BU	57	ALA	2.6
29	CE	172	ALA	2.6
30	CF	19	PHE	2.6
33	CJ	6	ALA	2.6
48	CY	72	ALA	2.6
54	C4	47	ALA	2.6
55	C5	38	ALA	2.6
4	CA	88	G	2.5
4	CA	1026	G	2.5

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Mol	Chain	Res	Type	RSRZ
20	AP	14	ARG	2.5
37	CN	6	ARG	2.5
48	CY	33	HIS	2.5
2	BA	1328	C	2.5
4	CA	1625	C	2.5
13	BI	68	LYS	2.5
41	CR	15	LYS	2.5
45	CV	78	LYS	2.5
4	CA	532	A	2.5
11	BG	93	PRO	2.5
30	CF	108	PRO	2.5
39	CP	48	LEU	2.5
6	BB	186	ILE	2.5
11	BG	6	VAL	2.5
47	CX	69	VAL	2.5
9	AE	103	THR	2.5
38	CO	100	CYS	2.5
42	CS	6	GLN	2.5
53	C3	5	PHE	2.5
6	BB	116	ASP	2.5
13	AI	119	ARG	2.5
13	BI	109	ARG	2.5
23	BS	64	ASP	2.5
37	CN	40	ARG	2.5
4	CA	588	U	2.5
26	BL	19	SER	2.5
47	CX	76	LYS	2.5
51	C1	31	LYS	2.5
4	CA	289	G	2.5
4	CA	468	G	2.5
4	CA	535	G	2.5
4	CA	1643	G	2.5
2	BA	1234	C	2.5
4	CA	440	C	2.5
4	CA	2601	C	2.5
4	CA	2610	C	2.5
9	BE	129	GLY	2.5
12	BH	83	LEU	2.5
14	AJ	102	LEU	2.5
23	AS	71	LEU	2.5
28	CD	135	GLY	2.5
29	CE	108	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
37	CN	36	VAL	2.5
51	C1	29	VAL	2.5
9	BE	103	THR	2.5
34	CK	43	GLU	2.5
28	CD	82	PHE	2.5
40	CQ	40	GLN	2.5
9	AE	127	ALA	2.5
11	AG	117	ALA	2.5
43	CT	21	ALA	2.5
17	BM	92	ARG	2.5
20	BP	5	ARG	2.5
27	CC	202	ARG	2.5
27	CC	213	ARG	2.5
32	CH	97	ARG	2.5
43	CT	18	ARG	2.5
22	AR	74	HIS	2.5
36	CM	68	SER	2.5
24	AT	66	LEU	2.5
31	CG	147	LEU	2.5
8	AD	34	ILE	2.5
9	AE	16	ILE	2.5
9	BE	44	GLY	2.5
14	BJ	53	ILE	2.5
20	BP	42	ILE	2.5
21	BQ	61	ILE	2.5
28	CD	14	ILE	2.5
29	CE	103	GLY	2.5
51	C1	54	ILE	2.5
53	C3	17	GLY	2.5
47	CX	21	VAL	2.5
4	CA	1761	C	2.5
2	BA	213	G	2.5
4	CA	1653	G	2.5
4	CA	2410	G	2.5
38	CO	43	GLU	2.5
18	BN	49	GLN	2.5
41	CR	105	PHE	2.5
41	CR	45	ALA	2.5
4	CA	590	A	2.5
4	CA	983	A	2.5
4	CA	1275	A	2.5
4	CA	1321	A	2.5

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Mol	Chain	Res	Type	RSRZ
4	CA	2814	A	2.5
9	BE	23	LYS	2.5
27	CC	238	ASN	2.5
29	CE	132	LYS	2.5
37	CN	20	LEU	2.5
37	CN	119	LEU	2.5
40	CQ	113	LEU	2.5
45	DV	51	LEU	2.5
17	BM	84	GLY	2.5
28	CD	113	SER	2.5
4	CA	431	U	2.5
36	CM	65	GLY	2.5
39	CP	58	ILE	2.5
13	AI	111	VAL	2.5
47	CX	49	VAL	2.5
46	CW	2	PHE	2.5
13	AI	126	GLN	2.5
14	BJ	94	ALA	2.5
25	AU	50	ALA	2.5
27	CC	60	ALA	2.5
29	CE	182	ALA	2.5
30	CF	74	ALA	2.5
30	DF	132	ARG	2.5
38	CO	12	ARG	2.5
49	CZ	38	GLN	2.5
54	C4	64	ALA	2.5
11	BG	137	LYS	2.5
16	AL	10	LYS	2.5
16	AL	15	LYS	2.5
18	AN	11	LYS	2.5
41	CR	14	LYS	2.5
2	BA	134	G	2.5
4	CA	1272	A	2.5
4	CA	1614	A	2.5
11	AG	13	LEU	2.4
17	BM	95	LEU	2.4
30	CF	116	LEU	2.4
31	CG	104	LEU	2.4
35	CL	80	ASP	2.4
44	CU	93	LEU	2.4
8	AD	64	ILE	2.4
48	CY	63	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
17	BM	25	VAL	2.4
40	CQ	66	GLY	2.4
47	CX	50	GLY	2.4
24	BT	14	SER	2.4
29	CE	70	SER	2.4
48	CY	66	VAL	2.4
51	C1	33	SER	2.4
2	BA	209	U	2.4
4	CA	1406	U	2.4
4	CA	1621	U	2.4
22	AR	20	GLU	2.4
25	AU	44	GLU	2.4
30	CF	174	PHE	2.4
36	CM	144	GLU	2.4
44	CU	42	GLU	2.4
52	C2	19	PHE	2.4
8	AD	151	LYS	2.4
13	AI	121	ALA	2.4
13	BI	50	GLN	2.4
26	BL	17	ALA	2.4
30	CF	142	TYR	2.4
43	CT	98	LYS	2.4
44	CU	20	ALA	2.4
47	CX	70	LYS	2.4
51	C1	4	GLN	2.4
36	CM	5	THR	2.4
4	CA	130	C	2.4
18	BN	62	ASN	2.4
37	CN	124	LEU	2.4
1	AA	412	A	2.4
4	CA	735	A	2.4
4	CA	1307	A	2.4
4	CA	2019	A	2.4
4	CA	93	G	2.4
4	CA	859	G	2.4
13	BI	30	ILE	2.4
38	CO	106	ASP	2.4
45	CV	71	ILE	2.4
10	BF	89	VAL	2.4
26	BL	4	VAL	2.4
26	BL	84	GLY	2.4
29	CE	38	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
34	CK	112	GLY	2.4
36	CM	90	VAL	2.4
39	CP	27	VAL	2.4
44	CU	53	VAL	2.4
45	CV	69	VAL	2.4
52	C2	46	VAL	2.4
29	CE	179	SER	2.4
49	CZ	48	ARG	2.4
4	CA	2622	U	2.4
49	CZ	60	LYS	2.4
57	D7	21	GLU	2.4
33	CJ	62	ALA	2.4
41	CR	11	ALA	2.4
50	C0	21	ALA	2.4
24	BT	79	LEU	2.4
38	CO	1	MET	2.4
54	C4	43	LEU	2.4
20	BP	40	ASN	2.4
34	CK	67	ASN	2.4
4	CA	128	C	2.4
4	CA	673	C	2.4
4	CA	1600	C	2.4
4	CA	2815	C	2.4
20	BP	55	ASP	2.4
42	CS	63	VAL	2.4
3	DA	142	A	2.4
4	CA	125	A	2.4
4	CA	2009	A	2.4
4	CA	2062	A	2.4
11	BG	10	ARG	2.4
34	CK	85	LYS	2.4
44	CU	68	LYS	2.4
4	CA	1	G	2.4
4	CA	39	G	2.4
4	CA	2825	G	2.4
20	BP	16	PHE	2.4
31	CG	82	PHE	2.4
31	CG	173	ALA	2.4
36	CM	83	ALA	2.4
9	AE	97	GLN	2.4
21	BQ	9	GLN	2.4
41	CR	19	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
44	CU	72	GLN	2.4
2	BA	1326	U	2.4
4	CA	290	U	2.4
4	CA	562	U	2.4
4	CA	1758	U	2.4
28	CD	151	THR	2.4
30	CF	104	THR	2.4
41	CR	13	HIS	2.4
44	CU	1	MET	2.4
44	DU	70	HIS	2.4
45	CV	44	HIS	2.4
48	CY	70	LEU	2.4
11	AG	12	ILE	2.4
11	AG	94	VAL	2.4
13	BI	40	GLY	2.4
23	BS	58	VAL	2.4
13	AI	115	LYS	2.4
28	CD	19	GLY	2.4
36	CM	28	GLY	2.4
38	CO	116	VAL	2.4
40	CQ	31	VAL	2.4
44	CU	58	VAL	2.4
17	BM	85	CYS	2.4
20	BP	8	ARG	2.4
37	CN	118	LYS	2.4
38	CO	69	ARG	2.4
43	CT	99	ARG	2.4
54	C4	53	ASP	2.4
4	CA	22	C	2.4
4	CA	32	C	2.4
4	CA	560	C	2.4
4	CA	680	C	2.4
5	CB	88	C	2.4
4	CA	344	A	2.4
4	CA	972	A	2.4
13	AI	127	PHE	2.4
18	AN	44	ALA	2.4
28	CD	132	ALA	2.4
30	CF	118	ALA	2.4
20	AP	24	SER	2.4
42	CS	18	GLN	2.4
2	BA	230	G	2.4

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Mol	Chain	Res	Type	RSRZ
3	DA	138	U	2.4
4	CA	2625	G	2.4
7	AC	192	THR	2.4
17	BM	28	THR	2.4
30	CF	34	THR	2.4
39	DP	1	MET	2.4
39	CP	106	LEU	2.4
42	CS	22	LEU	2.4
49	CZ	6	LEU	2.4
50	C0	33	HIS	2.4
14	BJ	25	ILE	2.4
14	AJ	45	ARG	2.3
15	BK	13	ARG	2.3
21	AQ	83	VAL	2.3
28	CD	53	GLY	2.3
38	CO	105	GLY	2.3
8	AD	35	GLU	2.3
29	CE	34	ALA	2.3
4	CA	228	C	2.3
4	CA	867	C	2.3
4	CA	1350	C	2.3
4	CA	1764	C	2.3
4	CA	1127	A	2.3
4	CA	1247	A	2.3
4	CA	1641	A	2.3
4	CA	1655	A	2.3
4	CA	2020	A	2.3
18	AN	31	SER	2.3
27	CC	87	SER	2.3
27	CC	247	TRP	2.3
30	CF	156	THR	2.3
36	CM	79	LEU	2.3
36	CM	125	LEU	2.3
38	CO	51	LEU	2.3
44	CU	60	THR	2.3
34	CK	84	ILE	2.3
38	CO	113	ILE	2.3
40	CQ	3	ILE	2.3
38	CO	40	LYS	2.3
42	CS	85	LYS	2.3
4	CA	2708	G	2.3
8	AD	143	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
17	BM	87	ARG	2.3
18	BN	65	ARG	2.3
31	CG	91	VAL	2.3
43	CT	25	ARG	2.3
44	DU	3	ARG	2.3
11	BG	8	GLY	2.3
11	BG	81	GLY	2.3
27	CC	55	GLY	2.3
17	AM	63	PHE	2.3
27	CC	29	PHE	2.3
47	CX	24	PHE	2.3
20	BP	7	ALA	2.3
41	CR	9	ALA	2.3
6	BB	136	MET	2.3
46	CW	48	MET	2.3
20	AP	6	LEU	2.3
29	CE	200	LEU	2.3
37	CN	41	LEU	2.3
4	CA	184	C	2.3
4	CA	455	C	2.3
4	CA	2507	C	2.3
4	CA	631	A	2.3
4	CA	2042	A	2.3
7	BC	207	ILE	2.3
17	BM	102	THR	2.3
21	BQ	70	THR	2.3
27	CC	48	ILE	2.3
30	CF	158	THR	2.3
42	CS	74	ILE	2.3
49	CZ	16	THR	2.3
51	C1	42	ILE	2.3
11	AG	11	LYS	2.3
4	CA	1258	U	2.3
23	BS	42	PRO	2.3
40	CQ	21	PRO	2.3
20	AP	20	VAL	2.3
9	BE	91	GLY	2.3
47	CX	20	GLY	2.3
47	CX	32	GLY	2.3
23	BS	43	ASN	2.3
40	CQ	114	ASN	2.3
2	BA	1331	G	2.3

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Mol	Chain	Res	Type	RSRZ
4	CA	506	G	2.3
4	CA	969	G	2.3
4	CA	1299	G	2.3
4	CA	1537	G	2.3
4	CA	1826	G	2.3
4	CA	2444	G	2.3
25	BU	36	GLU	2.3
47	CX	59	ALA	2.3
48	CY	23	ALA	2.3
55	C5	16	ASP	2.3
18	BN	74	LEU	2.3
19	BO	57	LEU	2.3
42	CS	25	LEU	2.3
11	AG	37	SER	2.3
12	BH	125	ILE	2.3
20	BP	80	LYS	2.3
27	DC	37	SER	2.3
27	CC	222	THR	2.3
10	BF	91	ARG	2.3
38	CO	103	ARG	2.3
42	CS	80	ARG	2.3
4	CA	11	C	2.3
4	CA	127	A	2.3
4	CA	961	C	2.3
4	CA	1297	C	2.3
11	BG	87	VAL	2.3
23	BS	67	VAL	2.3
31	CG	10	VAL	2.3
41	CR	87	VAL	2.3
44	CU	85	VAL	2.3
20	BP	62	GLY	2.3
33	DJ	15	GLY	2.3
45	CV	55	GLY	2.3
13	AI	20	PHE	2.3
39	CP	97	PHE	2.3
47	CX	43	PHE	2.3
48	CY	37	PHE	2.3
26	BL	23	ALA	2.3
27	CC	34	GLU	2.3
8	AD	21	LEU	2.3
17	BM	19	LEU	2.3
23	BS	12	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
27	CC	104	LEU	2.3
29	CE	27	LEU	2.3
36	CM	57	LEU	2.3
44	CU	50	LEU	2.3
53	C3	10	LEU	2.3
30	DF	71	LYS	2.3
4	CA	187	G	2.3
4	CA	214	G	2.3
4	CA	583	G	2.3
4	CA	1356	G	2.3
4	CA	1407	G	2.3
28	CD	22	ILE	2.3
34	CK	80	HIS	2.3
34	CK	93	ILE	2.3
35	CL	22	ILE	2.3
6	BB	96	TRP	2.3
13	BI	84	THR	2.3
14	AJ	101	SER	2.3
38	CO	45	ARG	2.3
47	CX	23	ARG	2.3
48	CY	47	THR	2.3
24	BT	36	TYR	2.3
17	AM	97	VAL	2.3
33	DJ	25	PRO	2.3
26	BL	118	GLY	2.3
3	DA	2098	U	2.3
1	AA	1493	A	2.2
2	BA	977	A	2.2
2	BA	1236	A	2.2
4	CA	61	C	2.2
4	CA	394	C	2.2
4	CA	2813	A	2.2
8	AD	20	PHE	2.2
10	BF	8	PHE	2.2
33	DJ	41	PHE	2.2
28	CD	165	MET	2.2
24	BT	70	ASN	2.2
27	CC	1	ALA	2.2
44	DU	92	ASN	2.2
45	CV	63	ALA	2.2
49	CZ	59	GLU	2.2
8	AD	98	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
13	BI	63	LEU	2.2
19	BO	56	LEU	2.2
29	CE	138	LEU	2.2
33	CJ	52	LEU	2.2
37	CN	95	LEU	2.2
29	CE	136	GLN	2.2
34	CK	68	LYS	2.2
49	CZ	54	LYS	2.2
42	CS	101	ILE	2.2
25	AU	34	ARG	2.2
28	CD	140	HIS	2.2
44	CU	15	HIS	2.2
47	CX	75	ARG	2.2
32	DH	9	VAL	2.2
33	CJ	69	VAL	2.2
34	CK	46	PRO	2.2
45	CV	14	THR	2.2
48	CY	13	THR	2.2
57	D7	46	THR	2.2
7	BC	173	VAL	2.2
28	CD	5	VAL	2.2
7	BC	42	TYR	2.2
7	BC	193	TYR	2.2
17	BM	86	TYR	2.2
29	CE	80	SER	2.2
38	CO	119	SER	2.2
41	CR	30	VAL	2.2
43	CT	30	SER	2.2
51	C1	10	SER	2.2
53	C3	30	VAL	2.2
2	BA	1432	G	2.2
4	CA	2642	G	2.2
34	CK	127	GLY	2.2
36	CM	102	GLY	2.2
29	CE	199	MET	2.2
35	CL	100	PHE	2.2
44	CU	51	PHE	2.2
1	AA	1030	U	2.2
2	BA	4	U	2.2
2	BA	1030	U	2.2
4	CA	12	U	2.2
4	CA	589	U	2.2

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Mol	Chain	Res	Type	RSRZ
4	CA	767	U	2.2
13	BI	44	ALA	2.2
27	CC	179	GLU	2.2
29	CE	86	ALA	2.2
29	CE	155	GLU	2.2
33	CJ	13	ALA	2.2
35	CL	60	ALA	2.2
37	CN	121	ALA	2.2
49	CZ	32	ALA	2.2
4	CA	515	A	2.2
4	CA	1295	C	2.2
4	CA	1607	C	2.2
4	CA	1639	C	2.2
4	CA	2406	A	2.2
4	CA	2422	C	2.2
4	CA	2820	A	2.2
16	AL	18	LYS	2.2
27	CC	204	LEU	2.2
34	CK	114	LEU	2.2
44	CU	11	LEU	2.2
54	C4	27	ASN	2.2
55	C5	43	LYS	2.2
9	AE	30	ILE	2.2
17	AM	7	ILE	2.2
30	CF	84	ILE	2.2
33	CJ	58	ILE	2.2
33	DJ	54	ILE	2.2
24	AT	68	HIS	2.2
29	CE	92	HIS	2.2
35	CL	29	HIS	2.2
51	C1	16	ARG	2.2
26	BL	27	CYS	2.2
29	CE	65	THR	2.2
33	DJ	21	PRO	2.2
34	CK	50	THR	2.2
35	CL	94	PRO	2.2
44	CU	14	PRO	2.2
40	CQ	19	PHE	2.2
9	AE	86	LYS	2.2
2	BA	380	G	2.2
2	BA	1032	G	2.2
4	CA	774	G	2.2

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Mol	Chain	Res	Type	RSRZ
4	CA	2035	G	2.2
4	CA	2627	G	2.2
4	CA	2641	G	2.2
20	BP	58	ALA	2.2
23	AS	50	ALA	2.2
27	CC	111	ALA	2.2
33	DJ	40	ALA	2.2
40	DQ	113	LEU	2.2
44	DU	41	ALA	2.2
53	C3	25	LYS	2.2
55	C5	4	LEU	2.2
4	CA	1217	U	2.2
8	AD	70	ARG	2.2
9	BE	93	ARG	2.2
11	AG	10	ARG	2.2
13	BI	126	GLN	2.2
18	BN	23	ARG	2.2
28	CD	146	ILE	2.2
29	CE	148	ILE	2.2
34	CK	142	ILE	2.2
1	AA	1441	A	2.2
4	CA	1780	A	2.2
2	BA	135	C	2.2
4	CA	968	C	2.2
4	CA	1305	C	2.2
4	CA	1994	C	2.2
4	CA	2036	C	2.2
14	AJ	74	VAL	2.2
18	AN	10	VAL	2.2
21	BQ	29	VAL	2.2
29	CE	28	VAL	2.2
33	CJ	25	PRO	2.2
34	CK	124	VAL	2.2
40	CQ	60	VAL	2.2
41	CR	103	VAL	2.2
54	C4	45	PRO	2.2
18	BN	42	TRP	2.2
28	CD	80	TRP	2.2
36	CM	94	THR	2.2
40	CQ	59	THR	2.2
28	CD	3	GLY	2.2
33	CJ	7	TYR	2.2

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Mol	Chain	Res	Type	RSRZ
44	CU	75	GLY	2.2
17	BM	63	PHE	2.2
11	BG	23	LEU	2.2
18	AN	79	LEU	2.2
14	BJ	66	GLU	2.2
18	BN	99	ALA	2.2
27	DC	185	ALA	2.2
38	CO	88	ALA	2.2
43	CT	44	ALA	2.2
11	BG	102	ARG	2.2
17	AM	101	ARG	2.2
17	BM	73	ILE	2.2
20	BP	4	ILE	2.2
20	BP	26	ASN	2.2
49	CZ	58	ASN	2.2
4	CA	438	G	2.2
4	CA	539	G	2.2
4	CA	1300	G	2.2
4	CA	1324	G	2.2
4	CA	471	A	2.2
4	CA	1308	A	2.2
4	CA	2003	A	2.2
12	BH	34	VAL	2.2
16	AL	16	VAL	2.2
21	BQ	83	VAL	2.2
29	CE	120	VAL	2.2
29	CE	126	VAL	2.2
32	DH	118	PRO	2.2
33	DJ	73	PRO	2.2
35	CL	10	VAL	2.2
40	CQ	85	VAL	2.2
43	CT	87	PRO	2.2
2	BA	63	C	2.2
33	DJ	67	THR	2.2
34	CK	1	MET	2.2
13	BI	102	GLY	2.2
17	AM	27	LYS	2.2
24	AT	69	LYS	2.2
30	CF	160	LYS	2.2
35	CL	74	GLY	2.2
36	CM	96	LYS	2.2
41	CR	25	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
18	BN	77	PHE	2.2
34	CK	89	PHE	2.2
40	CQ	73	PHE	2.2
29	CE	3	LEU	2.2
34	CK	122	LEU	2.2
55	C5	7	LEU	2.2
11	BG	152	ALA	2.2
17	BM	2	ALA	2.2
18	BN	9	GLU	2.2
30	CF	58	ALA	2.2
30	CF	69	ALA	2.2
34	CK	87	ALA	2.2
34	CK	104	ALA	2.2
29	CE	61	ARG	2.1
44	DU	69	ARG	2.1
47	CX	37	ARG	2.1
29	CE	115	GLN	2.1
1	AA	1286	U	2.1
4	CA	1559	U	2.1
4	CA	2034	U	2.1
4	CA	2584	U	2.1
29	CE	156	ASN	2.1
9	AE	74	VAL	2.1
27	CC	19	VAL	2.1
36	CM	89	VAL	2.1
12	AH	3	MET	2.1
30	CF	55	ASP	2.1
2	BA	65	A	2.1
3	DA	2133	G	2.1
4	CA	27	G	2.1
4	CA	42	A	2.1
4	CA	377	G	2.1
4	CA	467	G	2.1
4	CA	1032	A	2.1
4	CA	1381	G	2.1
4	CA	1984	G	2.1
24	BT	8	LYS	2.1
28	CD	133	THR	2.1
28	CD	204	LYS	2.1
29	CE	17	THR	2.1
29	CE	174	GLY	2.1
42	CS	29	THR	2.1

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Mol	Chain	Res	Type	RSRZ
43	CT	3	THR	2.1
11	BG	103	TRP	2.1
2	BA	1226	C	2.1
4	CA	985	C	2.1
11	BG	30	LEU	2.1
23	BS	10	PHE	2.1
29	CE	157	LEU	2.1
31	CG	156	TYR	2.1
55	C5	27	TYR	2.1
10	AF	95	ALA	2.1
24	AT	63	ALA	2.1
28	CD	119	ALA	2.1
49	CZ	3	ALA	2.1
6	BB	108	ARG	2.1
20	AP	77	GLU	2.1
20	BP	51	ARG	2.1
27	CC	86	ARG	2.1
6	BB	40	ILE	2.1
17	BM	39	ILE	2.1
25	AU	4	ILE	2.1
34	CK	101	ILE	2.1
43	CT	60	HIS	2.1
4	CA	1778	U	2.1
6	BB	163	VAL	2.1
11	BG	14	PRO	2.1
27	CC	15	VAL	2.1
29	CE	196	VAL	2.1
33	CJ	12	VAL	2.1
38	CO	48	VAL	2.1
45	CV	33	VAL	2.1
51	C1	24	VAL	2.1
13	BI	100	LYS	2.1
25	AU	49	LYS	2.1
47	CX	42	LYS	2.1
57	D7	24	LYS	2.1
30	DF	173	ASP	2.1
8	AD	30	THR	2.1
9	AE	109	GLY	2.1
13	AI	102	GLY	2.1
20	BP	10	GLY	2.1
33	DJ	70	THR	2.1
33	DJ	111	THR	2.1

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Mol	Chain	Res	Type	RSRZ
34	CK	70	THR	2.1
36	CM	124	GLY	2.1
38	CO	95	THR	2.1
28	CD	90	PHE	2.1
49	CZ	26	PHE	2.1
29	CE	78	TRP	2.1
4	CA	470	A	2.1
4	CA	514	A	2.1
4	CA	1365	A	2.1
4	CA	1420	A	2.1
4	CA	1439	A	2.1
4	CA	1630	A	2.1
4	CA	2679	A	2.1
7	BC	180	ALA	2.1
19	AO	17	ARG	2.1
29	CE	35	TYR	2.1
36	CM	75	ALA	2.1
36	CM	134	ALA	2.1
47	CX	39	ARG	2.1
47	CX	61	ALA	2.1
2	BA	202	G	2.1
4	CA	748	G	2.1
4	CA	768	G	2.1
4	CA	1309	G	2.1
4	CA	2644	G	2.1
4	CA	2693	G	2.1
4	CA	2803	G	2.1
4	CA	2885	G	2.1
11	BG	60	GLU	2.1
13	BI	72	ILE	2.1
23	BS	38	SER	2.1
23	BS	73	GLU	2.1
29	CE	119	ILE	2.1
31	CG	1	SER	2.1
36	CM	105	ILE	2.1
4	CA	671	C	2.1
4	CA	1574	C	2.1
43	CT	12	SER	2.1
28	CD	130	GLN	2.1
57	D7	15	HIS	2.1
18	BN	47	LYS	2.1
23	BS	19	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
26	BL	93	VAL	2.1
35	CL	13	ASN	2.1
3	DA	1094	U	2.1
4	CA	1971	U	2.1
18	AN	46	LEU	2.1
20	BP	74	LEU	2.1
21	AQ	35	GLY	2.1
23	AS	64	ASP	2.1
38	CO	98	LEU	2.1
42	CS	17	GLY	2.1
30	DF	79	ARG	2.1
8	BD	200	ILE	2.1
30	CF	21	TYR	2.1
35	CL	39	ILE	2.1
36	CM	9	ALA	2.1
36	CM	77	ILE	2.1
40	CQ	47	ILE	2.1
42	CS	3	ALA	2.1
54	C4	36	ALA	2.1
42	CS	34	GLU	2.1
2	BA	60	A	2.1
4	CA	751	A	2.1
19	BO	2	SER	2.1
31	CG	105	SER	2.1
13	BI	32	GLN	2.1
13	BI	110	GLN	2.1
17	BM	100	GLN	2.1
2	BA	1312	G	2.1
2	BA	1320	C	2.1
4	CA	16	C	2.1
4	CA	326	G	2.1
4	CA	385	C	2.1
4	CA	425	G	2.1
4	CA	989	G	2.1
4	CA	1573	G	2.1
4	CA	1999	C	2.1
6	AB	14	VAL	2.1
8	AD	67	VAL	2.1
8	AD	142	VAL	2.1
16	AL	44	LYS	2.1
23	BS	70	LYS	2.1
43	CT	9	HIS	2.1

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Mol	Chain	Res	Type	RSRZ
28	CD	24	VAL	2.1
35	CL	69	VAL	2.1
36	CM	46	VAL	2.1
40	CQ	46	VAL	2.1
45	CV	18	LYS	2.1
47	CX	60	LYS	2.1
52	D2	52	LYS	2.1
55	C5	21	LYS	2.1
57	D7	19	VAL	2.1
31	CG	155	PRO	2.1
6	AB	135	LEU	2.1
7	BC	33	LEU	2.1
49	CZ	28	LEU	2.1
4	CA	292	U	2.1
4	CA	593	U	2.1
4	CA	1599	U	2.1
4	CA	1781	U	2.1
4	CA	2629	U	2.1
13	AI	10	GLY	2.1
14	BJ	49	PHE	2.1
30	CF	123	GLY	2.1
18	BN	50	THR	2.1
22	AR	73	ARG	2.1
33	CJ	59	THR	2.1
34	CK	71	ASP	2.1
35	CL	64	ARG	2.1
36	CM	30	THR	2.1
41	CR	54	ARG	2.1
7	AC	64	ILE	2.1
26	BL	82	ILE	2.1
28	CD	71	ALA	2.1
28	CD	206	ALA	2.1
40	CQ	49	ILE	2.1
6	AB	213	TYR	2.1
12	BH	128	TYR	2.1
13	BI	38	TYR	2.1
39	CP	99	TYR	2.1
8	BD	167	LYS	2.0
16	AL	30	LYS	2.0
17	AM	78	LYS	2.0
40	CQ	18	SER	2.0
6	AB	18	HIS	2.0

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Mol	Chain	Res	Type	RSRZ
24	BT	13	GLN	2.0
39	CP	19	GLN	2.0
51	C1	6	LYS	2.0
47	CX	55	HIS	2.0
4	CA	342	A	2.0
4	CA	1008	A	2.0
4	CA	2060	A	2.0
4	CA	2726	A	2.0
8	AD	102	VAL	2.0
13	BI	55	VAL	2.0
36	CM	127	VAL	2.0
27	CC	230	PRO	2.0
2	BA	183	C	2.0
4	CA	1261	C	2.0
4	CA	1708	C	2.0
4	CA	2078	C	2.0
4	CA	325	G	2.0
4	CA	1277	G	2.0
4	CA	2048	G	2.0
4	CA	2686	G	2.0
8	BD	39	GLY	2.0
26	BL	12	ARG	2.0
38	CO	102	PHE	2.0
52	D2	3	GLY	2.0
53	C3	19	ARG	2.0
4	CA	1201	U	2.0
6	AB	20	THR	2.0
17	BM	7	ILE	2.0
39	CP	87	ILE	2.0
45	CV	80	ASP	2.0
54	C4	3	ILE	2.0
9	BE	127	ALA	2.0
17	AM	36	ALA	2.0
36	CM	133	ALA	2.0
8	BD	147	GLU	2.0
39	CP	20	GLU	2.0
44	CU	56	GLU	2.0
20	BP	13	LYS	2.0
24	BT	64	LYS	2.0
8	AD	153	SER	2.0
12	AH	72	VAL	2.0
17	BM	21	SER	2.0

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Mol	Chain	Res	Type	RSRZ
20	BP	9	HIS	2.0
32	DH	18	GLN	2.0
49	CZ	36	GLN	2.0
53	C3	6	GLN	2.0
31	CG	111	PRO	2.0
2	BA	101	A	2.0
2	BA	109	A	2.0
4	CA	91	A	2.0
4	CA	670	A	2.0
4	CA	800	A	2.0
4	CA	1597	A	2.0
10	BF	39	LEU	2.0
14	AJ	73	LEU	2.0
29	DE	164	LEU	2.0
32	CH	75	LEU	2.0
23	AS	55	ARG	2.0
23	BS	37	ARG	2.0
36	CM	47	ARG	2.0
40	CQ	71	ARG	2.0
7	BC	2	GLY	2.0
36	CM	45	GLY	2.0
6	AB	31	ILE	2.0
12	AH	14	ILE	2.0
14	AJ	6	ILE	2.0
27	CC	63	ILE	2.0
31	CG	170	THR	2.0
2	BA	1235	U	2.0
4	CA	40	U	2.0
4	CA	1249	U	2.0
18	BN	25	GLU	2.0
18	BN	54	ASP	2.0
3	DA	141	G	2.0
3	DA	1074	G	2.0
4	CA	55	G	2.0
4	CA	695	G	2.0
4	CA	1642	G	2.0
19	AO	48	LYS	2.0
49	CZ	24	GLU	2.0
41	CR	23	TYR	2.0
43	CT	38	TYR	2.0
13	AI	47	VAL	2.0
23	BS	23	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
27	CC	267	VAL	2.0
30	CF	12	VAL	2.0
42	CS	58	VAL	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (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
3	3TD	DA	1915	21/22	0.93	0.07	59,91,109,122	0
3	PSU	DA	1917	20/21	0.93	0.07	42,78,92,94	0
1	2MG	AA	966	24/25	0.94	0.10	48,77,86,88	0
3	PSU	DA	1911	20/21	0.95	0.06	51,84,101,113	0
1	G7M	AA	527	24/25	0.95	0.10	56,75,85,87	0
1	2MG	AA	1207	24/25	0.95	0.07	54,77,99,121	0
1	5MC	AA	967	21/22	0.96	0.11	69,77,90,103	0
1	PSU	AA	516	20/21	0.96	0.06	53,86,108,117	0
1	UR3	AA	1498	21/22	0.96	0.08	32,52,68,74	0
1	4OC	AA	1402	22/23	0.97	0.08	44,63,81,91	0
1	5MC	AA	1407	21/22	0.97	0.07	45,56,73,104	0
16	D2T	AL	89	10/11	0.97	0.09	44,60,96,108	0
1	2MG	AA	1516	24/25	0.98	0.07	33,63,70,86	0
1	MA6	AA	1518	24/25	0.98	0.06	21,41,61,72	0
1	MA6	AA	1519	24/25	0.98	0.07	37,65,78,84	0
3	5MU	DA	1939	21/22	0.98	0.07	9,38,57,72	0
3	5MC	DA	1962	21/22	0.98	0.06	35,51,64,84	0
3	G7M	DA	2069	24/25	0.98	0.06	8,35,48,61	0
3	2MG	DA	1835	24/25	0.98	0.06	27,50,59,62	0
56	MEQ	DD	150	10/11	0.98	0.07	6,23,48,48	0
3	6MZ	DA	1618	23/24	0.99	0.06	7,32,46,47	0
3	1MG	DA	745	24/25	0.99	0.05	5,29,42,63	0
3	6MZ	DA	2030	23/24	0.99	0.04	2,12,24,37	0
3	PSU	DA	746	20/21	0.99	0.04	3,21,34,43	0
3	OMG	DA	2251	24/25	0.99	0.05	3,28,44,58	0
3	2MG	DA	2445	24/25	0.99	0.05	13,28,44,45	0
3	H2U	DA	2449	20/21	0.99	0.04	3,20,42,50	0
3	PSU	DA	2457	20/21	0.99	0.04	3,30,46,59	0
3	OMC	DA	2498	21/22	0.99	0.04	3,20,38,49	0
3	2MA	DA	2503	23/24	0.99	0.05	3,24,39,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	PSU	DA	2504	20/21	0.99	0.04	2,22,42,46	0
3	OMU	DA	2552	21/22	0.99	0.04	13,27,47,70	0
3	PSU	DA	2580	20/21	0.99	0.05	6,38,52,53	0
3	PSU	DA	2604	20/21	0.99	0.04	14,33,48,70	0
3	PSU	DA	2605	20/21	0.99	0.06	12,38,48,57	0
3	5MU	DA	747	21/22	0.99	0.05	3,19,31,42	0
3	PSU	DA	955	20/21	0.99	0.05	8,30,58,70	0

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1642	1/1	0.44	0.19	120,120,120,120	0
58	MG	CA	3148	1/1	0.47	0.26	126,126,126,126	0
58	MG	CA	3067	1/1	0.58	0.32	117,117,117,117	0
58	MG	CA	3154	1/1	0.59	0.49	134,134,134,134	0
58	MG	CA	3017	1/1	0.60	0.42	112,112,112,112	0
58	MG	CA	3133	1/1	0.60	0.11	163,163,163,163	0
58	MG	CA	3083	1/1	0.61	0.43	135,135,135,135	0
58	MG	CA	3049	1/1	0.67	0.09	188,188,188,188	0
58	MG	CA	3084	1/1	0.68	0.14	163,163,163,163	0
58	MG	CA	3129	1/1	0.69	0.17	176,176,176,176	0
58	MG	BA	1643	1/1	0.69	0.08	171,171,171,171	0
58	MG	CA	3159	1/1	0.70	0.22	202,202,202,202	0
58	MG	CA	3118	1/1	0.72	0.10	207,207,207,207	0
58	MG	BA	1605	1/1	0.73	0.16	107,107,107,107	0
58	MG	D5	102	1/1	0.73	0.24	207,207,207,207	0
58	MG	AA	1606	1/1	0.74	0.30	77,77,77,77	0
58	MG	CA	3157	1/1	0.74	0.19	157,157,157,157	0
60	MPD	DK	201	8/8	0.75	0.17	113,136,162,162	0
58	MG	AA	1623	1/1	0.76	0.28	107,107,107,107	0
58	MG	CA	3102	1/1	0.77	0.24	199,199,199,199	0
58	MG	CA	3050	1/1	0.77	0.10	181,181,181,181	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3059	1/1	0.78	0.20	167,167,167,167	0
58	MG	CA	3173	1/1	0.78	0.17	201,201,201,201	0
58	MG	CA	3019	1/1	0.79	0.27	84,84,84,84	0
63	PUT	DP	202	6/6	0.79	0.37	98,114,117,119	0
60	MPD	DE	301	8/8	0.80	0.19	142,176,194,201	0
58	MG	CA	3027	1/1	0.81	0.14	94,94,94,94	0
58	MG	CA	3043	1/1	0.81	0.16	69,69,69,69	0
58	MG	CA	3070	1/1	0.81	0.23	199,199,199,199	0
58	MG	CA	3008	1/1	0.82	0.10	97,97,97,97	0
60	MPD	DA	3072	8/8	0.83	0.36	117,148,172,178	0
58	MG	CA	3068	1/1	0.83	0.18	181,181,181,181	0
58	MG	CA	3047	1/1	0.84	0.12	170,170,170,170	0
58	MG	CA	3144	1/1	0.84	0.18	143,143,143,143	0
58	MG	CA	3022	1/1	0.84	0.12	89,89,89,89	0
60	MPD	DN	201	8/8	0.84	0.16	51,89,115,115	0
58	MG	CA	3131	1/1	0.84	0.10	142,142,142,142	0
58	MG	BA	1602	1/1	0.85	0.19	74,74,74,74	0
58	MG	BA	1636	1/1	0.86	0.11	131,131,131,131	0
58	MG	CA	3044	1/1	0.86	0.10	157,157,157,157	0
58	MG	CA	3009	1/1	0.86	0.08	85,85,85,85	0
58	MG	AA	1612	1/1	0.86	0.17	71,71,71,71	0
58	MG	AA	1610	1/1	0.86	0.21	82,82,82,82	0
58	MG	CA	3053	1/1	0.86	0.10	123,123,123,123	0
58	MG	CA	3002	1/1	0.86	0.20	70,70,70,70	0
58	MG	CA	3061	1/1	0.86	0.08	139,139,139,139	0
58	MG	CA	3005	1/1	0.86	0.09	81,81,81,81	0
58	MG	CA	3032	1/1	0.86	0.20	79,79,79,79	0
65	ACY	DA	3055	4/4	0.86	0.17	43,67,78,78	0
58	MG	DA	3027	1/1	0.87	0.15	77,77,77,77	0
58	MG	CA	3048	1/1	0.87	0.13	172,172,172,172	0
63	PUT	DA	3054	6/6	0.87	0.24	38,81,86,88	0
58	MG	CA	3140	1/1	0.87	0.15	161,161,161,161	0
58	MG	BA	1604	1/1	0.87	0.23	70,70,70,70	0
67	EDO	DB	202	4/4	0.87	0.17	74,84,88,90	0
58	MG	C3	101	1/1	0.88	0.16	168,168,168,168	0
58	MG	CA	3023	1/1	0.88	0.15	82,82,82,82	0
58	MG	CA	3120	1/1	0.88	0.11	143,143,143,143	0
58	MG	CA	3166	1/1	0.88	0.13	123,123,123,123	0
66	PEG	DQ	201	7/7	0.88	0.21	109,111,119,123	0
58	MG	CA	3015	1/1	0.88	0.10	91,91,91,91	0
59	PGE	D3	101	10/10	0.89	0.27	97,121,145,145	0
60	MPD	DA	3067	8/8	0.89	0.15	79,113,125,135	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3130	1/1	0.89	0.12	149,149,149,149	0
58	MG	BA	1611	1/1	0.89	0.08	136,136,136,136	0
58	MG	CA	3132	1/1	0.89	0.22	177,177,177,177	0
58	MG	CA	3103	1/1	0.89	0.16	98,98,98,98	0
58	MG	CA	3037	1/1	0.89	0.10	63,63,63,63	0
58	MG	CR	201	1/1	0.89	0.13	75,75,75,75	0
58	MG	CA	3026	1/1	0.89	0.14	89,89,89,89	0
66	PEG	DP	201	7/7	0.89	0.14	78,92,105,106	0
58	MG	CA	3001	1/1	0.89	0.23	68,68,68,68	0
66	PEG	D1	102	7/7	0.89	0.27	57,70,83,89	0
59	PGE	DT	202	10/10	0.89	0.22	78,121,145,152	0
58	MG	CA	3110	1/1	0.90	0.07	136,136,136,136	0
58	MG	CA	3147	1/1	0.90	0.12	95,95,95,95	0
58	MG	CA	3010	1/1	0.90	0.13	89,89,89,89	0
58	MG	CA	3153	1/1	0.90	0.07	96,96,96,96	0
60	MPD	DE	302	8/8	0.90	0.32	135,162,187,187	0
58	MG	BA	1637	1/1	0.90	0.07	143,143,143,143	0
58	MG	CA	3126	1/1	0.90	0.17	183,183,183,183	0
61	PG4	BA	1607	13/13	0.90	0.24	77,89,111,117	0
58	MG	AA	1611	1/1	0.90	0.13	65,65,65,65	0
58	MG	CA	3036	1/1	0.90	0.16	67,67,67,67	0
58	MG	BA	1634	1/1	0.90	0.09	114,114,114,114	0
58	MG	CA	3090	1/1	0.90	0.06	134,134,134,134	0
58	MG	BA	1606	1/1	0.90	0.10	60,60,60,60	0
58	MG	CA	3135	1/1	0.90	0.09	158,158,158,158	0
67	EDO	DA	3060	4/4	0.90	0.19	55,57,80,84	0
67	EDO	DB	201	4/4	0.90	0.20	62,69,70,77	0
58	MG	DA	3038	1/1	0.90	0.17	56,56,56,56	0
58	MG	CA	3136	1/1	0.91	0.08	143,143,143,143	0
58	MG	AA	1602	1/1	0.91	0.10	73,73,73,73	0
58	MG	CM	201	1/1	0.91	0.10	135,135,135,135	0
58	MG	CA	3089	1/1	0.91	0.14	148,148,148,148	0
58	MG	CA	3062	1/1	0.91	0.11	102,102,102,102	0
63	PUT	DA	3069	6/6	0.91	0.26	53,86,95,96	0
58	MG	CA	3098	1/1	0.91	0.25	171,171,171,171	0
58	MG	CA	3151	1/1	0.91	0.16	92,92,92,92	0
58	MG	CA	3011	1/1	0.91	0.11	87,87,87,87	0
60	MPD	AA	1615	8/8	0.91	0.17	83,114,154,154	0
60	MPD	DA	3046	8/8	0.91	0.18	56,87,103,110	0
58	MG	CA	3007	1/1	0.91	0.16	83,83,83,83	0
58	MG	BA	1638	1/1	0.91	0.08	156,156,156,156	0
58	MG	CA	3004	1/1	0.91	0.18	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1615	1/1	0.92	0.09	124,124,124,124	0
58	MG	CA	3074	1/1	0.92	0.31	159,159,159,159	0
58	MG	CA	3082	1/1	0.92	0.08	137,137,137,137	0
60	MPD	DT	201	8/8	0.92	0.27	115,144,166,166	0
59	PGE	DS	201	10/10	0.92	0.13	38,84,110,122	0
61	PG4	DR	202	13/13	0.92	0.23	93,108,117,118	0
58	MG	CA	3035	1/1	0.92	0.18	66,66,66,66	0
59	PGE	DU	101	10/10	0.92	0.15	59,92,160,162	0
58	MG	CA	3066	1/1	0.92	0.30	141,141,141,141	0
65	ACY	DA	3044	4/4	0.92	0.14	60,73,98,98	0
58	MG	CA	3086	1/1	0.92	0.07	136,136,136,136	0
60	MPD	DA	3045	8/8	0.92	0.22	69,120,140,144	0
58	MG	CA	3122	1/1	0.92	0.15	109,109,109,109	0
58	MG	CA	3028	1/1	0.92	0.07	73,73,73,73	0
60	MPD	DA	3071	8/8	0.92	0.14	52,97,138,149	0
58	MG	CA	3176	1/1	0.92	0.07	128,128,128,128	0
58	MG	CA	3030	1/1	0.92	0.08	67,67,67,67	0
68	GUN	DA	3078	11/11	0.92	0.16	77,96,105,107	0
58	MG	CA	3164	1/1	0.93	0.13	117,117,117,117	0
58	MG	BA	1609	1/1	0.93	0.21	141,141,141,141	0
58	MG	CA	3168	1/1	0.93	0.10	93,93,93,93	0
58	MG	CA	3021	1/1	0.93	0.16	83,83,83,83	0
58	MG	CA	3134	1/1	0.93	0.06	145,145,145,145	0
58	MG	DA	3047	1/1	0.93	0.14	52,52,52,52	0
58	MG	DA	3051	1/1	0.93	0.12	57,57,57,57	0
61	PG4	DA	3048	13/13	0.93	0.18	48,76,98,100	0
58	MG	CA	3024	1/1	0.93	0.08	61,61,61,61	0
58	MG	CA	3143	1/1	0.93	0.19	117,117,117,117	0
59	PGE	DD	301	10/10	0.93	0.21	82,129,155,165	0
58	MG	CA	3045	1/1	0.93	0.08	133,133,133,133	0
58	MG	AA	1601	1/1	0.93	0.16	54,54,54,54	0
58	MG	AA	1616	1/1	0.93	0.15	91,91,91,91	0
66	PEG	DA	3062	7/7	0.93	0.27	56,86,100,103	0
66	PEG	DA	3063	7/7	0.93	0.22	82,120,134,137	0
58	MG	CA	3079	1/1	0.93	0.11	156,156,156,156	0
58	MG	CA	3012	1/1	0.93	0.08	82,82,82,82	0
60	MPD	DA	3043	8/8	0.93	0.13	75,104,118,125	0
58	MG	AA	1608	1/1	0.93	0.14	64,64,64,64	0
58	MG	CA	3051	1/1	0.93	0.08	129,129,129,129	0
58	MG	CA	3158	1/1	0.93	0.08	132,132,132,132	0
67	EDO	DB	203	4/4	0.93	0.17	61,72,76,79	0
58	MG	AA	1655	1/1	0.93	0.11	148,148,148,148	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3033	1/1	0.94	0.11	60,60,60,60	0
59	PGE	AA	1613	10/10	0.94	0.11	41,88,109,113	0
59	PGE	DA	3066	10/10	0.94	0.17	52,88,126,129	0
58	MG	CA	3149	1/1	0.94	0.15	111,111,111,111	0
62	SPD	DA	3070	10/10	0.94	0.19	59,83,96,97	0
63	PUT	DA	3032	6/6	0.94	0.20	50,68,76,81	0
63	PUT	DA	3037	6/6	0.94	0.10	28,40,58,59	0
58	MG	BA	1603	1/1	0.94	0.19	65,65,65,65	0
58	MG	CA	3018	1/1	0.94	0.10	75,75,75,75	0
58	MG	CA	3029	1/1	0.94	0.09	59,59,59,59	0
58	MG	CA	3038	1/1	0.94	0.11	61,61,61,61	0
58	MG	CA	3091	1/1	0.94	0.07	153,153,153,153	0
66	PEG	DA	3061	7/7	0.94	0.17	52,94,106,108	0
58	MG	CA	3039	1/1	0.94	0.09	74,74,74,74	0
58	MG	CA	3160	1/1	0.94	0.14	157,157,157,157	0
58	MG	CA	3100	1/1	0.94	0.14	149,149,149,149	0
58	MG	CA	3071	1/1	0.94	0.11	118,118,118,118	0
58	MG	CA	3052	1/1	0.94	0.10	136,136,136,136	0
66	PEG	D3	102	7/7	0.94	0.18	82,87,94,100	0
58	MG	CA	3077	1/1	0.94	0.10	139,139,139,139	0
58	MG	CA	3141	1/1	0.94	0.09	129,129,129,129	0
58	MG	CA	3117	1/1	0.94	0.07	143,143,143,143	0
58	MG	BA	1622	1/1	0.94	0.08	89,89,89,89	0
58	MG	DA	3007	1/1	0.94	0.13	48,48,48,48	0
58	MG	CA	3119	1/1	0.95	0.06	112,112,112,112	0
58	MG	AA	1605	1/1	0.95	0.26	54,54,54,54	0
58	MG	DA	3056	1/1	0.95	0.10	69,69,69,69	0
58	MG	CA	3124	1/1	0.95	0.07	115,115,115,115	0
58	MG	BA	1618	1/1	0.95	0.07	107,107,107,107	0
58	MG	CA	3171	1/1	0.95	0.08	113,113,113,113	0
58	MG	CA	3014	1/1	0.95	0.12	82,82,82,82	0
58	MG	DA	3009	1/1	0.95	0.17	54,54,54,54	0
61	PG4	DS	202	13/13	0.95	0.09	29,44,81,89	0
62	SPD	DA	3031	10/10	0.95	0.17	27,70,87,89	0
58	MG	CB	203	1/1	0.95	0.12	123,123,123,123	0
58	MG	CA	3031	1/1	0.95	0.06	64,64,64,64	0
58	MG	CA	3003	1/1	0.95	0.14	61,61,61,61	0
58	MG	DA	3017	1/1	0.95	0.11	60,60,60,60	0
58	MG	CA	3087	1/1	0.95	0.07	139,139,139,139	0
58	MG	DA	3026	1/1	0.95	0.20	52,52,52,52	0
58	MG	CA	3056	1/1	0.95	0.12	130,130,130,130	0
58	MG	CA	3058	1/1	0.95	0.08	124,124,124,124	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3006	1/1	0.95	0.11	49,49,49,49	0
58	MG	BA	1601	1/1	0.95	0.14	67,67,67,67	0
58	MG	CA	3101	1/1	0.95	0.14	147,147,147,147	0
66	PEG	DA	3073	7/7	0.95	0.18	53,58,93,101	0
58	MG	BA	1640	1/1	0.95	0.10	85,85,85,85	0
58	MG	AA	1604	1/1	0.95	0.22	51,51,51,51	0
58	MG	CA	3109	1/1	0.95	0.09	112,112,112,112	0
58	MG	CA	3040	1/1	0.95	0.29	60,60,60,60	0
67	EDO	DA	3059	4/4	0.95	0.21	50,62,77,77	0
58	MG	CA	3113	1/1	0.95	0.08	106,106,106,106	0
58	MG	CA	3115	1/1	0.95	0.12	109,109,109,109	0
58	MG	CA	3041	1/1	0.95	0.11	75,75,75,75	0
58	MG	CA	3025	1/1	0.95	0.06	84,84,84,84	0
60	MPD	DA	3077	8/8	0.95	0.15	44,97,123,123	0
58	MG	AA	1636	1/1	0.96	0.06	101,101,101,101	0
58	MG	CA	3060	1/1	0.96	0.07	114,114,114,114	0
58	MG	CA	3123	1/1	0.96	0.05	103,103,103,103	0
58	MG	CA	3042	1/1	0.96	0.11	57,57,57,57	0
58	MG	CA	3163	1/1	0.96	0.07	113,113,113,113	0
58	MG	CA	3125	1/1	0.96	0.08	115,115,115,115	0
58	MG	AA	1609	1/1	0.96	0.08	69,69,69,69	0
58	MG	DA	3033	1/1	0.96	0.07	52,52,52,52	0
58	MG	CA	3170	1/1	0.96	0.07	111,111,111,111	0
58	MG	CA	3094	1/1	0.96	0.06	118,118,118,118	0
58	MG	CA	3097	1/1	0.96	0.15	115,115,115,115	0
58	MG	DA	3010	1/1	0.96	0.09	40,40,40,40	0
58	MG	DA	3039	1/1	0.96	0.19	82,82,82,82	0
58	MG	DA	3041	1/1	0.96	0.22	52,52,52,52	0
58	MG	CA	3034	1/1	0.96	0.07	60,60,60,60	0
58	MG	CA	3072	1/1	0.96	0.10	95,95,95,95	0
58	MG	DR	201	1/1	0.96	0.07	27,27,27,27	0
58	MG	CA	3137	1/1	0.96	0.06	95,95,95,95	0
58	MG	CA	3106	1/1	0.96	0.15	106,106,106,106	0
65	ACY	DA	3064	4/4	0.96	0.10	12,15,38,45	0
59	PGE	DA	3035	10/10	0.96	0.10	38,81,109,119	0
58	MG	CA	3107	1/1	0.96	0.13	92,92,92,92	0
58	MG	DA	3015	1/1	0.96	0.20	48,48,48,48	0
58	MG	CA	3076	1/1	0.96	0.09	105,105,105,105	0
58	MG	CA	3146	1/1	0.96	0.17	106,106,106,106	0
58	MG	BA	1635	1/1	0.96	0.07	112,112,112,112	0
58	MG	DA	3018	1/1	0.96	0.16	49,49,49,49	0
58	MG	CA	3116	1/1	0.96	0.10	106,106,106,106	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
67	EDO	DA	3057	4/4	0.96	0.11	47,57,58,71	0
58	MG	CA	3150	1/1	0.96	0.15	84,84,84,84	0
58	MG	DA	3074	1/1	0.96	0.19	75,75,75,75	0
58	MG	DA	3022	1/1	0.96	0.07	51,51,51,51	0
58	MG	CA	3013	1/1	0.96	0.15	66,66,66,66	0
58	MG	CA	3155	1/1	0.96	0.07	110,110,110,110	0
67	EDO	DR	204	4/4	0.96	0.16	49,74,82,89	0
67	EDO	D1	101	4/4	0.96	0.10	47,52,68,74	0
58	MG	CA	3156	1/1	0.96	0.10	142,142,142,142	0
58	MG	BA	1620	1/1	0.97	0.08	87,87,87,87	0
58	MG	AA	1603	1/1	0.97	0.05	45,45,45,45	0
58	MG	BA	1625	1/1	0.97	0.10	107,107,107,107	0
58	MG	DA	3099	1/1	0.97	0.19	177,177,177,177	0
58	MG	CA	3080	1/1	0.97	0.14	111,111,111,111	0
58	MG	CA	3081	1/1	0.97	0.08	102,102,102,102	0
58	MG	DA	3118	1/1	0.97	0.09	80,80,80,80	0
58	MG	CA	3165	1/1	0.97	0.06	84,84,84,84	0
61	PG4	DQ	202	13/13	0.97	0.06	42,58,66,70	0
58	MG	DA	3182	1/1	0.97	0.13	73,73,73,73	0
58	MG	CA	3167	1/1	0.97	0.09	93,93,93,93	0
58	MG	DA	3013	1/1	0.97	0.15	44,44,44,44	0
62	SPD	DA	3036	10/10	0.97	0.14	33,53,66,69	0
58	MG	AA	1645	1/1	0.97	0.08	93,93,93,93	0
58	MG	AA	1648	1/1	0.97	0.09	96,96,96,96	0
58	MG	AA	1614	1/1	0.97	0.04	39,39,39,39	0
58	MG	CA	3175	1/1	0.97	0.05	107,107,107,107	0
58	MG	DA	3019	1/1	0.97	0.05	34,34,34,34	0
63	PUT	DM	201	6/6	0.97	0.12	25,58,65,71	0
58	MG	CA	3054	1/1	0.97	0.08	98,98,98,98	0
63	PUT	D5	101	6/6	0.97	0.21	82,99,108,108	0
64	1PE	DA	3065	16/16	0.97	0.13	40,72,82,90	0
58	MG	DA	3020	1/1	0.97	0.06	46,46,46,46	0
58	MG	CA	3096	1/1	0.97	0.09	111,111,111,111	0
58	MG	AA	1656	1/1	0.97	0.07	94,94,94,94	0
66	PEG	DA	3050	7/7	0.97	0.13	51,62,68,78	0
58	MG	DA	3024	1/1	0.97	0.16	60,60,60,60	0
58	MG	CA	3139	1/1	0.97	0.07	124,124,124,124	0
58	MG	AA	1657	1/1	0.97	0.08	95,95,95,95	0
58	MG	BA	1612	1/1	0.97	0.05	135,135,135,135	0
58	MG	DA	3028	1/1	0.97	0.06	36,36,36,36	0
58	MG	CA	3063	1/1	0.97	0.08	92,92,92,92	0
58	MG	CA	3145	1/1	0.97	0.04	119,119,119,119	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3065	1/1	0.97	0.06	115,115,115,115	0
58	MG	AA	1631	1/1	0.97	0.05	100,100,100,100	0
67	EDO	DA	3058	4/4	0.97	0.14	62,73,84,87	0
58	MG	AA	1634	1/1	0.97	0.06	64,64,64,64	0
58	MG	BA	1645	1/1	0.97	0.09	94,94,94,94	0
67	EDO	DA	3076	4/4	0.97	0.18	74,92,96,101	0
58	MG	CA	3111	1/1	0.97	0.30	55,55,55,55	0
58	MG	CA	3112	1/1	0.97	0.10	102,102,102,102	0
58	MG	CA	3152	1/1	0.97	0.05	138,138,138,138	0
58	MG	BA	1648	1/1	0.97	0.06	91,91,91,91	0
58	MG	CA	3016	1/1	0.97	0.07	100,100,100,100	0
58	MG	DA	3003	1/1	0.97	0.18	53,53,53,53	0
58	MG	AA	1625	1/1	0.98	0.04	77,77,77,77	0
58	MG	AA	1630	1/1	0.98	0.05	89,89,89,89	0
58	MG	DA	3023	1/1	0.98	0.20	36,36,36,36	0
58	MG	AA	1637	1/1	0.98	0.06	92,92,92,92	0
58	MG	CA	3069	1/1	0.98	0.05	96,96,96,96	0
58	MG	CA	3114	1/1	0.98	0.04	116,116,116,116	0
58	MG	BA	1628	1/1	0.98	0.04	95,95,95,95	0
58	MG	BA	1650	1/1	0.98	0.06	96,96,96,96	0
58	MG	BA	1633	1/1	0.98	0.04	66,66,66,66	0
58	MG	CA	3161	1/1	0.98	0.04	78,78,78,78	0
58	MG	CA	3162	1/1	0.98	0.10	94,94,94,94	0
58	MG	DA	3030	1/1	0.98	0.06	37,37,37,37	0
58	MG	CA	3075	1/1	0.98	0.06	107,107,107,107	0
58	MG	DA	3005	1/1	0.98	0.06	35,35,35,35	0
58	MG	DA	3006	1/1	0.98	0.10	31,31,31,31	0
58	MG	BA	1610	1/1	0.98	0.09	78,78,78,78	0
58	MG	AA	1624	1/1	0.98	0.09	65,65,65,65	0
58	MG	CA	3169	1/1	0.98	0.10	80,80,80,80	0
58	MG	DA	3042	1/1	0.98	0.13	60,60,60,60	0
58	MG	AA	1646	1/1	0.98	0.07	99,99,99,99	0
58	MG	CA	3046	1/1	0.98	0.10	107,107,107,107	0
58	MG	CA	3174	1/1	0.98	0.07	123,123,123,123	0
64	1PE	DA	3034	16/16	0.98	0.09	21,51,96,96	0
58	MG	DA	3049	1/1	0.98	0.14	56,56,56,56	0
58	MG	DA	3012	1/1	0.98	0.09	33,33,33,33	0
58	MG	CB	202	1/1	0.98	0.05	116,116,116,116	0
58	MG	AA	1647	1/1	0.98	0.13	100,100,100,100	0
58	MG	CA	3088	1/1	0.98	0.12	127,127,127,127	0
58	MG	CA	3020	1/1	0.98	0.06	71,71,71,71	0
58	MG	DA	3068	1/1	0.98	0.16	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DA	3014	1/1	0.98	0.12	36,36,36,36	0
58	MG	DR	203	1/1	0.98	0.06	38,38,38,38	0
58	MG	CA	3092	1/1	0.98	0.05	93,93,93,93	0
58	MG	CA	3138	1/1	0.98	0.07	117,117,117,117	0
58	MG	DA	3096	1/1	0.98	0.05	35,35,35,35	0
58	MG	BA	1617	1/1	0.98	0.09	73,73,73,73	0
67	EDO	DA	3052	4/4	0.98	0.12	48,48,57,58	0
58	MG	DA	3016	1/1	0.98	0.16	41,41,41,41	0
58	MG	CA	3142	1/1	0.98	0.06	103,103,103,103	0
58	MG	DA	3120	1/1	0.98	0.09	31,31,31,31	0
58	MG	DA	3148	1/1	0.98	0.10	65,65,65,65	0
67	EDO	DA	3075	4/4	0.98	0.15	68,83,95,95	0
58	MG	DA	3174	1/1	0.98	0.09	67,67,67,67	0
58	MG	BA	1639	1/1	0.98	0.09	91,91,91,91	0
58	MG	AA	1633	1/1	0.98	0.06	84,84,84,84	0
58	MG	CA	3104	1/1	0.98	0.07	80,80,80,80	0
58	MG	BA	1641	1/1	0.98	0.04	62,62,62,62	0
58	MG	CA	3064	1/1	0.98	0.06	104,104,104,104	0
58	MG	CA	3108	1/1	0.98	0.04	92,92,92,92	0
58	MG	BA	1626	1/1	0.99	0.04	62,62,62,62	0
58	MG	BA	1627	1/1	0.99	0.04	81,81,81,81	0
58	MG	CA	3085	1/1	0.99	0.05	91,91,91,91	0
58	MG	AA	1607	1/1	0.99	0.05	46,46,46,46	0
58	MG	BA	1630	1/1	0.99	0.04	74,74,74,74	0
58	MG	BA	1631	1/1	0.99	0.03	76,76,76,76	0
58	MG	DA	3021	1/1	0.99	0.12	37,37,37,37	0
58	MG	CA	3172	1/1	0.99	0.04	94,94,94,94	0
58	MG	BA	1632	1/1	0.99	0.04	59,59,59,59	0
58	MG	AA	1658	1/1	0.99	0.07	59,59,59,59	0
58	MG	AA	1639	1/1	0.99	0.08	50,50,50,50	0
58	MG	CA	3093	1/1	0.99	0.03	65,65,65,65	0
58	MG	DB	204	1/1	0.99	0.08	62,62,62,62	0
58	MG	DB	206	1/1	0.99	0.02	41,41,41,41	0
58	MG	CB	201	1/1	0.99	0.04	131,131,131,131	0
58	MG	DA	3025	1/1	0.99	0.06	25,25,25,25	0
58	MG	CA	3095	1/1	0.99	0.03	82,82,82,82	0
58	MG	AA	1641	1/1	0.99	0.03	70,70,70,70	0
58	MG	AA	1642	1/1	0.99	0.03	73,73,73,73	0
58	MG	AA	1643	1/1	0.99	0.03	78,78,78,78	0
58	MG	CA	3099	1/1	0.99	0.06	77,77,77,77	0
58	MG	DA	3029	1/1	0.99	0.07	57,57,57,57	0
58	MG	AA	1644	1/1	0.99	0.05	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	1618	1/1	0.99	0.06	105,105,105,105	0
58	MG	BA	1608	1/1	0.99	0.03	82,82,82,82	0
58	MG	AA	1632	1/1	0.99	0.03	63,63,63,63	0
58	MG	CA	3105	1/1	0.99	0.04	83,83,83,83	0
58	MG	DA	3040	1/1	0.99	0.04	38,38,38,38	0
58	MG	AA	1620	1/1	0.99	0.02	84,84,84,84	0
58	MG	AA	1626	1/1	0.99	0.03	69,69,69,69	0
58	MG	BA	1644	1/1	0.99	0.05	94,94,94,94	0
58	MG	AA	1649	1/1	0.99	0.02	66,66,66,66	0
58	MG	BA	1646	1/1	0.99	0.04	59,59,59,59	0
58	MG	DA	3053	1/1	0.99	0.15	44,44,44,44	0
58	MG	BA	1647	1/1	0.99	0.07	68,68,68,68	0
58	MG	BA	1613	1/1	0.99	0.04	96,96,96,96	0
58	MG	BA	1649	1/1	0.99	0.12	107,107,107,107	0
58	MG	DA	3081	1/1	0.99	0.10	63,63,63,63	0
58	MG	DA	3082	1/1	0.99	0.08	61,61,61,61	0
58	MG	DA	3083	1/1	0.99	0.03	74,74,74,74	0
58	MG	DA	3089	1/1	0.99	0.03	46,46,46,46	0
58	MG	BA	1614	1/1	0.99	0.06	96,96,96,96	0
58	MG	CA	3121	1/1	0.99	0.03	88,88,88,88	0
58	MG	DA	3001	1/1	0.99	0.03	12,12,12,12	0
58	MG	DA	3101	1/1	0.99	0.09	50,50,50,50	0
58	MG	DA	3102	1/1	0.99	0.03	35,35,35,35	0
58	MG	DA	3106	1/1	0.99	0.09	40,40,40,40	0
58	MG	DA	3107	1/1	0.99	0.04	41,41,41,41	0
58	MG	CA	3127	1/1	0.99	0.05	106,106,106,106	0
58	MG	CA	3128	1/1	0.99	0.04	104,104,104,104	0
58	MG	DA	3002	1/1	0.99	0.04	10,10,10,10	0
58	MG	DA	3119	1/1	0.99	0.06	51,51,51,51	0
58	MG	AA	1651	1/1	0.99	0.04	74,74,74,74	0
58	MG	DA	3121	1/1	0.99	0.04	68,68,68,68	0
58	MG	DA	3125	1/1	0.99	0.04	48,48,48,48	0
58	MG	DA	3133	1/1	0.99	0.03	24,24,24,24	0
58	MG	DA	3139	1/1	0.99	0.03	85,85,85,85	0
58	MG	DA	3146	1/1	0.99	0.04	55,55,55,55	0
58	MG	CA	3055	1/1	0.99	0.10	82,82,82,82	0
58	MG	DA	3147	1/1	0.99	0.08	104,104,104,104	0
58	MG	CA	3057	1/1	0.99	0.06	90,90,90,90	0
58	MG	DA	3004	1/1	0.99	0.04	30,30,30,30	0
58	MG	DA	3155	1/1	0.99	0.04	65,65,65,65	0
58	MG	DA	3156	1/1	0.99	0.02	58,58,58,58	0
58	MG	DA	3157	1/1	0.99	0.04	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DA	3159	1/1	0.99	0.03	56,56,56,56	0
58	MG	DA	3165	1/1	0.99	0.10	22,22,22,22	0
58	MG	DA	3166	1/1	0.99	0.04	12,12,12,12	0
58	MG	DA	3168	1/1	0.99	0.09	51,51,51,51	0
58	MG	DA	3170	1/1	0.99	0.10	64,64,64,64	0
58	MG	DA	3172	1/1	0.99	0.07	46,46,46,46	0
58	MG	BA	1616	1/1	0.99	0.06	96,96,96,96	0
58	MG	AA	1652	1/1	0.99	0.03	80,80,80,80	0
58	MG	DA	3184	1/1	0.99	0.07	60,60,60,60	0
58	MG	DA	3186	1/1	0.99	0.06	36,36,36,36	0
58	MG	DA	3188	1/1	0.99	0.03	36,36,36,36	0
58	MG	CA	3073	1/1	0.99	0.05	109,109,109,109	0
58	MG	AA	1653	1/1	0.99	0.04	70,70,70,70	0
58	MG	DA	3008	1/1	0.99	0.05	27,27,27,27	0
58	MG	BA	1619	1/1	0.99	0.03	81,81,81,81	0
58	MG	AA	1654	1/1	0.99	0.05	63,63,63,63	0
58	MG	CA	3078	1/1	0.99	0.06	73,73,73,73	0
58	MG	BA	1621	1/1	0.99	0.04	69,69,69,69	0
58	MG	AA	1635	1/1	0.99	0.03	89,89,89,89	0
58	MG	BA	1624	1/1	0.99	0.05	70,70,70,70	0
58	MG	AA	1628	1/1	0.99	0.03	70,70,70,70	0
58	MG	DA	3091	1/1	1.00	0.02	30,30,30,30	0
58	MG	DA	3167	1/1	1.00	0.02	21,21,21,21	0
58	MG	DA	3092	1/1	1.00	0.03	24,24,24,24	0
58	MG	DA	3169	1/1	1.00	0.02	8,8,8,8	0
58	MG	DA	3093	1/1	1.00	0.01	22,22,22,22	0
58	MG	DA	3171	1/1	1.00	0.02	60,60,60,60	0
58	MG	DA	3094	1/1	1.00	0.03	10,10,10,10	0
58	MG	DA	3173	1/1	1.00	0.03	50,50,50,50	0
58	MG	DA	3095	1/1	1.00	0.02	35,35,35,35	0
58	MG	DA	3175	1/1	1.00	0.03	22,22,22,22	0
58	MG	DA	3176	1/1	1.00	0.03	27,27,27,27	0
58	MG	DA	3177	1/1	1.00	0.04	31,31,31,31	0
58	MG	DA	3178	1/1	1.00	0.02	36,36,36,36	0
58	MG	DA	3179	1/1	1.00	0.02	36,36,36,36	0
58	MG	DA	3180	1/1	1.00	0.02	19,19,19,19	0
58	MG	DA	3181	1/1	1.00	0.03	47,47,47,47	0
58	MG	BA	1623	1/1	1.00	0.04	68,68,68,68	0
58	MG	DA	3183	1/1	1.00	0.01	38,38,38,38	0
58	MG	DA	3097	1/1	1.00	0.01	31,31,31,31	0
58	MG	DB	205	1/1	1.00	0.02	38,38,38,38	0
58	MG	DA	3185	1/1	1.00	0.03	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DB	207	1/1	1.00	0.03	36,36,36,36	0
58	MG	DA	3098	1/1	1.00	0.02	27,27,27,27	0
58	MG	DA	3187	1/1	1.00	0.02	18,18,18,18	0
58	MG	AA	1619	1/1	1.00	0.04	80,80,80,80	0
58	MG	DA	3189	1/1	1.00	0.02	47,47,47,47	0
58	MG	DA	3190	1/1	1.00	0.01	29,29,29,29	0
58	MG	DA	3191	1/1	1.00	0.03	16,16,16,16	0
58	MG	DD	302	1/1	1.00	0.06	49,49,49,49	0
58	MG	DM	202	1/1	1.00	0.03	47,47,47,47	0
58	MG	DA	3100	1/1	1.00	0.04	29,29,29,29	0
58	MG	DA	3011	1/1	1.00	0.02	27,27,27,27	0
58	MG	AA	1629	1/1	1.00	0.04	30,30,30,30	0
58	MG	DA	3103	1/1	1.00	0.02	37,37,37,37	0
58	MG	DA	3104	1/1	1.00	0.02	20,20,20,20	0
58	MG	DA	3105	1/1	1.00	0.01	32,32,32,32	0
58	MG	AA	1617	1/1	1.00	0.03	61,61,61,61	0
58	MG	AA	1621	1/1	1.00	0.05	63,63,63,63	0
58	MG	DA	3108	1/1	1.00	0.01	28,28,28,28	0
58	MG	DA	3109	1/1	1.00	0.03	7,7,7,7	0
58	MG	DA	3110	1/1	1.00	0.01	19,19,19,19	0
58	MG	DA	3111	1/1	1.00	0.02	15,15,15,15	0
58	MG	DA	3112	1/1	1.00	0.02	25,25,25,25	0
58	MG	DA	3113	1/1	1.00	0.05	75,75,75,75	0
58	MG	DA	3114	1/1	1.00	0.08	17,17,17,17	0
58	MG	DA	3115	1/1	1.00	0.02	28,28,28,28	0
58	MG	DA	3116	1/1	1.00	0.02	23,23,23,23	0
58	MG	DA	3117	1/1	1.00	0.04	16,16,16,16	0
58	MG	AA	1638	1/1	1.00	0.01	51,51,51,51	0
58	MG	BA	1629	1/1	1.00	0.03	65,65,65,65	0
58	MG	AA	1622	1/1	1.00	0.03	73,73,73,73	0
58	MG	DA	3079	1/1	1.00	0.01	25,25,25,25	0
58	MG	DA	3122	1/1	1.00	0.02	27,27,27,27	0
58	MG	DA	3123	1/1	1.00	0.02	19,19,19,19	0
58	MG	DA	3124	1/1	1.00	0.01	19,19,19,19	0
58	MG	DA	3080	1/1	1.00	0.02	29,29,29,29	0
58	MG	DA	3126	1/1	1.00	0.05	44,44,44,44	0
58	MG	DA	3127	1/1	1.00	0.02	19,19,19,19	0
58	MG	DA	3128	1/1	1.00	0.01	34,34,34,34	0
58	MG	DA	3129	1/1	1.00	0.02	19,19,19,19	0
58	MG	DA	3130	1/1	1.00	0.04	52,52,52,52	0
58	MG	DA	3131	1/1	1.00	0.03	34,34,34,34	0
58	MG	DA	3132	1/1	1.00	0.02	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	1640	1/1	1.00	0.02	71,71,71,71	0
58	MG	DA	3134	1/1	1.00	0.01	38,38,38,38	0
58	MG	DA	3135	1/1	1.00	0.02	25,25,25,25	0
58	MG	DA	3136	1/1	1.00	0.01	9,9,9,9	0
58	MG	DA	3137	1/1	1.00	0.06	52,52,52,52	0
58	MG	DA	3138	1/1	1.00	0.02	30,30,30,30	0
58	MG	AA	1627	1/1	1.00	0.05	55,55,55,55	0
58	MG	DA	3140	1/1	1.00	0.02	38,38,38,38	0
58	MG	DA	3141	1/1	1.00	0.03	12,12,12,12	0
58	MG	DA	3142	1/1	1.00	0.04	20,20,20,20	0
58	MG	DA	3143	1/1	1.00	0.02	15,15,15,15	0
58	MG	DA	3144	1/1	1.00	0.03	52,52,52,52	0
58	MG	DA	3145	1/1	1.00	0.03	38,38,38,38	0
58	MG	AA	1659	1/1	1.00	0.02	55,55,55,55	0
58	MG	DA	3084	1/1	1.00	0.02	46,46,46,46	0
58	MG	DA	3085	1/1	1.00	0.03	75,75,75,75	0
58	MG	DA	3149	1/1	1.00	0.04	55,55,55,55	0
58	MG	DA	3150	1/1	1.00	0.02	18,18,18,18	0
58	MG	DA	3151	1/1	1.00	0.03	61,61,61,61	0
58	MG	DA	3152	1/1	1.00	0.04	38,38,38,38	0
58	MG	DA	3153	1/1	1.00	0.04	26,26,26,26	0
58	MG	DA	3154	1/1	1.00	0.01	38,38,38,38	0
58	MG	DA	3086	1/1	1.00	0.01	15,15,15,15	0
58	MG	DA	3087	1/1	1.00	0.02	21,21,21,21	0
58	MG	DA	3088	1/1	1.00	0.02	25,25,25,25	0
58	MG	DA	3158	1/1	1.00	0.02	27,27,27,27	0
58	MG	AA	1650	1/1	1.00	0.06	65,65,65,65	0
58	MG	DA	3160	1/1	1.00	0.04	31,31,31,31	0
58	MG	DA	3161	1/1	1.00	0.01	29,29,29,29	0
58	MG	DA	3162	1/1	1.00	0.02	42,42,42,42	0
58	MG	DA	3163	1/1	1.00	0.02	27,27,27,27	0
58	MG	DA	3164	1/1	1.00	0.02	27,27,27,27	0
58	MG	DA	3090	1/1	1.00	0.02	4,4,4,4	0

6.5 Other polymers (i)

There are no such residues in this entry.