Full wwPDB X-ray Structure Validation Report ⓘ

Jul 3, 2024 – 05:41 PM EDT

PDB ID	:	4U1V
Title	:	Crystal structure of the E. coli ribosome bound to linopristin.
Authors	:	Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.
Deposited on	:	2014-07-16
Resolution	:	3.00 Å(reported)

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

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

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

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

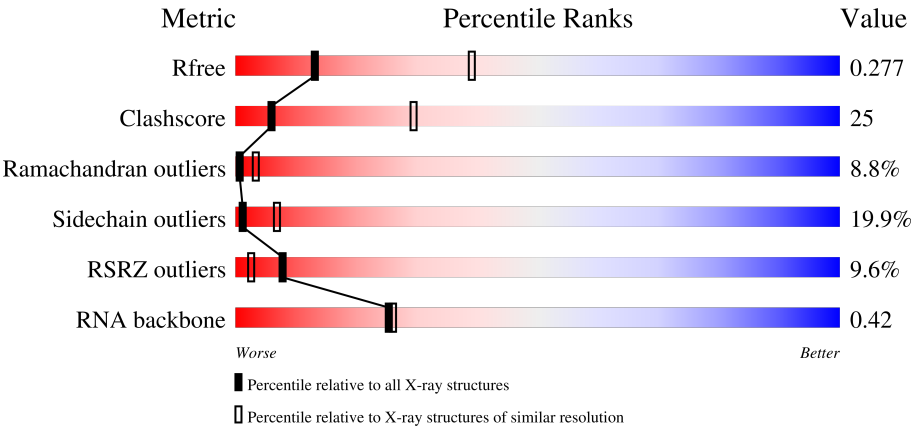
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	AA	1539	23% 58% 19%
1	CA	1539	29% 53% 17%
2	AB	218	24% 22% 48% 25% 5%
2	CB	218	32% 31% 44% 22%

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Mol	Chain	Length	Quality of chain
3	AC	206	2% 40% 46% 12%
3	CC	206	21% 43% 41% 15%
4	AD	205	% 30% 45% 21%
4	CD	205	% 39% 41% 18%
5	AE	150	2% 36% 42% 21%
5	CE	150	% 35% 38% 25%
6	AF	100	30% 39% 25% 6%
6	CF	100	% 34% 43% 15% 8%
7	AG	151	17% 38% 46% 16%
7	CG	151	40% 46% 40% 13%
8	AH	129	% 39% 37% 23%
8	CH	129	3% 45% 41% 12%
9	AI	127	17% 35% 43% 22%
9	CI	127	28% 31% 53% 16%
10	AJ	98	7% 21% 43% 33%
10	CJ	98	42% 41% 40% 19%
11	AK	117	12% 40% 40% 17%
11	CK	117	3% 29% 55% 14%
12	AL	123	2% 42% 42% 12%
12	CL	123	3% 36% 41% 20%
13	AM	114	6% 33% 41% 23%
13	CM	114	48% 44% 41% 14%
14	AN	100	16% 31% 45% 16%
14	CN	100	36% 43% 35% 17%
15	AO	88	% 42% 44% 14%

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Mol	Chain	Length	Quality of chain
15	CO	88	2% 48% 42% 9%
16	AP	82	5% 34% 44% 18%
16	CP	82	15% 49% 37% 15%
17	AQ	80	4% 18% 54% 25%
17	CQ	80	6% 32% 45% 19%
18	AR	55	5% 49% 40% 11%
18	CR	55	2% 49% 38% 11%
19	AS	79	18% 43% 44% 10%
19	CS	79	70% 35% 51% 11%
20	AT	85	4% 34% 49% 13%
20	CT	85	24% 34% 49% 15%
21	AU	51	41% 29% 41% 25%
21	CU	51	12% 18% 47% 27% 8%
22	BA	2903	4% 28% 48% 21%
22	DA	2903	2% 30% 54% 16%
23	BB	119	42% 44% 13%
23	DB	119	29% 59% 12%
24	BC	271	3% 40% 50% 9%
24	DC	271	8% 45% 45% 10%
25	BD	209	54% 39% 7%
25	DD	209	6% 59% 33% 7%
26	BE	201	47% 43% 9%
26	DE	201	16% 44% 41% 14%
27	BF	177	6% 37% 49% 13%
27	DF	177	52% 49% 40% 11%

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Mol	Chain	Length	Quality of chain
28	BG	176	55% 38% 7%
28	DG	176	22% 54% 36% 9%
29	BH	149	44% 28% 50% 19%
29	DH	149	24% 35% 52% 11%
30	BI	141	47% 34% 40% 25%
30	DI	141	69% 42% 40% 17%
31	BJ	142	56% 38% 6%
31	DJ	142	8% 52% 42% 6%
32	BK	122	35% 50% 15%
32	DK	122	11% 61% 28% 11%
33	BL	143	58% 30% 11%
33	DL	143	25% 43% 41% 16%
34	BM	136	49% 41% 8%
34	DM	136	13% 54% 36% 10%
35	BN	120	51% 38% 8%
35	DN	120	14% 47% 39% 12%
36	BO	116	47% 38% 15%
36	DO	116	39% 53% 40% 8%
37	BP	114	53% 39% 7%
37	DP	114	11% 54% 35% 11%
38	BQ	117	48% 44% 9%
38	DQ	117	8% 52% 44%
39	BR	103	37% 49% 14%
39	DR	103	17% 51% 40% 9%
40	BS	110	39% 48% 13%

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Mol	Chain	Length	Quality of chain
40	DS	110	23% 50% 44% 5%
41	BT	93	2% 44% 42% 12%
41	DT	93	42% 39% 44% 17%
42	BU	102	3% 37% 51% 11%
42	DU	102	52% 28% 50% 20%
43	BV	94	51% 40% 9%
43	DV	94	10% 64% 32%
44	BW	76	55% 39% 5%
44	DW	76	37% 55% 36% 8%
45	BX	77	44% 44% 12%
45	DX	77	18% 34% 55% 12%
46	BY	63	5% 43% 35% 21%
46	DY	63	24% 37% 46% 16%
47	BZ	58	50% 43% 5%
47	DZ	58	5% 52% 38% 9%
48	B0	56	38% 46% 16%
48	D0	56	14% 61% 34% 5%
49	B1	50	4% 32% 50% 16%
49	D1	50	22% 46% 48% 6%
50	B2	46	2% 57% 35% 9%
50	D2	46	20% 28% 59% 11%
51	B3	64	55% 34% 9%
51	D3	64	23% 61% 33% 5%
52	B4	38	61% 32% 8%
52	D4	38	34% 55% 32% 13%

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Mol	Chain	Length	Quality of chain
53	B5	228	74% 49% 26% 9% 16%
54	B6	7	43% 57%
54	D6	7	29% 57% 14%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MHW	B6	1	-	X	-	-
54	MHW	D6	1	-	X	X	-
55	MG	AA	1627	-	-	-	X
55	MG	AA	1644	-	-	-	X
55	MG	AA	1665	-	-	-	X
55	MG	AA	1667	-	-	-	X
55	MG	AA	1670	-	-	-	X
55	MG	BA	3015	-	-	-	X
55	MG	BA	3098	-	-	-	X
55	MG	BA	3115	-	-	-	X
55	MG	BA	3190	-	-	-	X
55	MG	CA	1655	-	-	-	X
55	MG	DA	3002	-	-	-	X
55	MG	DA	3015	-	-	-	X
55	MG	DA	3016	-	-	-	X
55	MG	DA	3028	-	-	-	X
55	MG	DA	3041	-	-	-	X
55	MG	DA	3061	-	-	-	X
55	MG	DA	3062	-	-	-	X
55	MG	DA	3071	-	-	-	X
55	MG	DA	3072	-	-	-	X
55	MG	DA	3092	-	-	-	X
55	MG	DA	3120	-	-	-	X
55	MG	DA	3132	-	-	-	X
55	MG	DA	3134	-	-	-	X
55	MG	DA	3151	-	-	-	X
55	MG	DA	3158	-	-	-	X
55	MG	DA	3164	-	-	-	X

2 Entry composition (i)

There are 57 unique types of molecules in this entry. The entry contains 288320 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1538	Total	C	N	O	P	0	0	0
			32995	14716	6050	10691	1538			
1	CA	1539	Total	C	N	O	P	0	0	0
			33015	14725	6052	10699	1539			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 54 is a protein called Linopristin.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	B6	7	Total 69	C 50	N 9	O 10	0	0	0
54	D6	7	Total 69	C 50	N 9	O 10	0	0	0

- Molecule 55 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	AA	71	Total 71	Mg 71	0	0
55	AM	1	Total 1	Mg 1	0	0
55	BA	195	Total 195	Mg 195	0	0
55	BB	4	Total 4	Mg 4	0	0
55	CA	55	Total 55	Mg 55	0	0
55	CM	1	Total 1	Mg 1	0	0
55	DA	167	Total 167	Mg 167	0	0
55	DB	3	Total 3	Mg 3	0	0
55	DQ	1	Total 1	Mg 1	0	0

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

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

- Molecule 57 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	194	Total O 194 194	0	0
57	AL	1	Total O 1 1	0	0
57	AN	5	Total O 5 5	0	0
57	AT	2	Total O 2 2	0	0
57	AU	1	Total O 1 1	0	0
57	BA	615	Total O 615 615	0	0
57	BB	14	Total O 14 14	0	0
57	BC	10	Total O 10 10	0	0
57	BD	4	Total O 4 4	0	0
57	BE	4	Total O 4 4	0	0
57	BF	1	Total O 1 1	0	0
57	BG	1	Total O 1 1	0	0
57	BJ	1	Total O 1 1	0	0
57	BL	6	Total O 6 6	0	0
57	BN	2	Total O 2 2	0	0
57	BS	1	Total O 1 1	0	0
57	BU	1	Total O 1 1	0	0
57	B2	1	Total O 1 1	0	0
57	B3	3	Total O 3 3	0	0
57	B4	2	Total O 2 2	0	0
57	CA	189	Total O 189 189	0	0
57	CL	1	Total O 1 1	0	0

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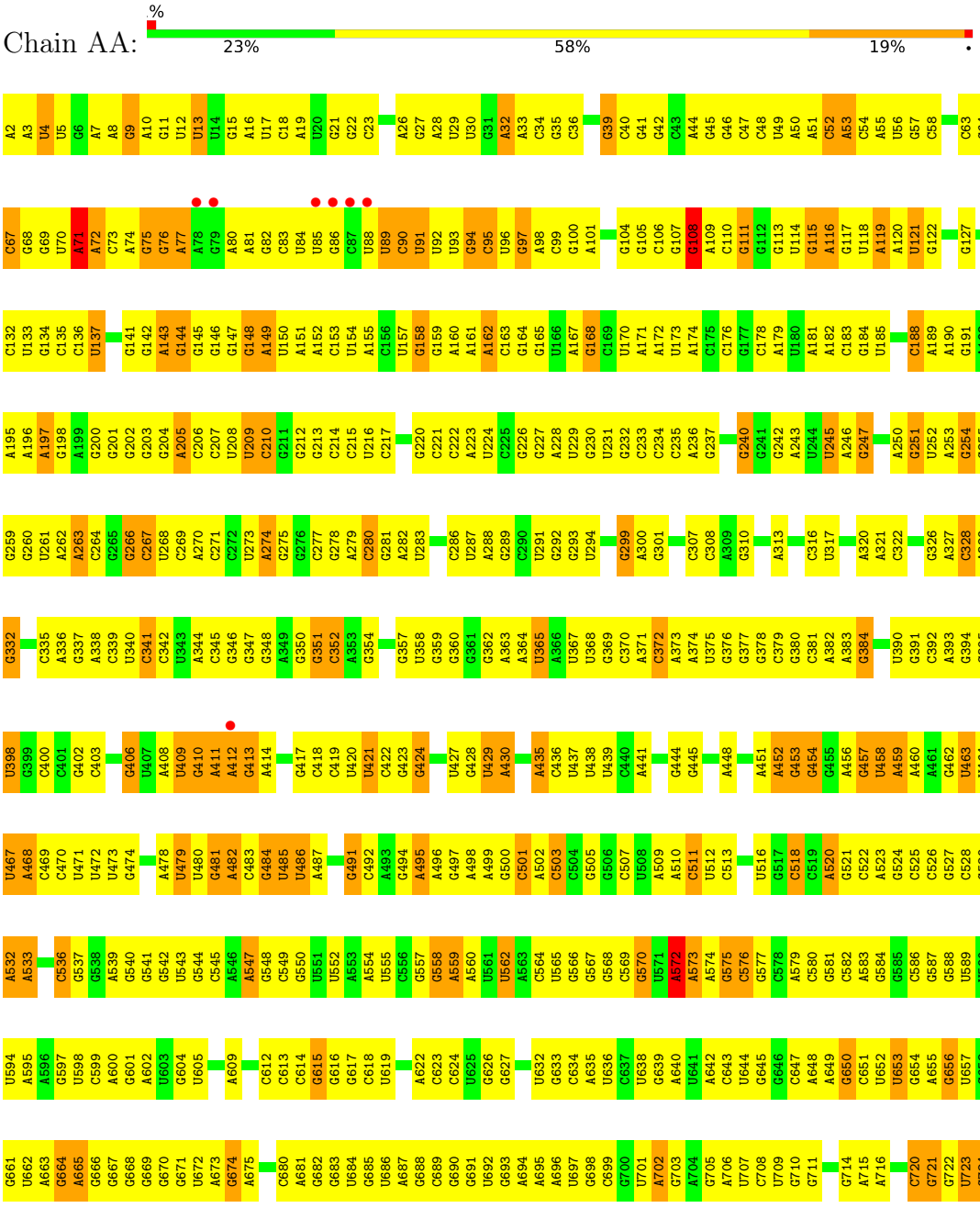
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	CN	3	Total O 3 3	0	0
57	CT	3	Total O 3 3	0	0
57	CU	2	Total O 2 2	0	0
57	DA	607	Total O 607 607	0	0
57	DB	13	Total O 13 13	0	0
57	DC	9	Total O 9 9	0	0
57	DD	4	Total O 4 4	0	0
57	DE	6	Total O 6 6	0	0
57	DL	5	Total O 5 5	0	0
57	DN	2	Total O 2 2	0	0
57	DT	2	Total O 2 2	0	0
57	DU	1	Total O 1 1	0	0
57	DV	1	Total O 1 1	0	0
57	D0	1	Total O 1 1	0	0
57	D2	2	Total O 2 2	0	0
57	D3	2	Total O 2 2	0	0
57	D4	1	Total O 1 1	0	0

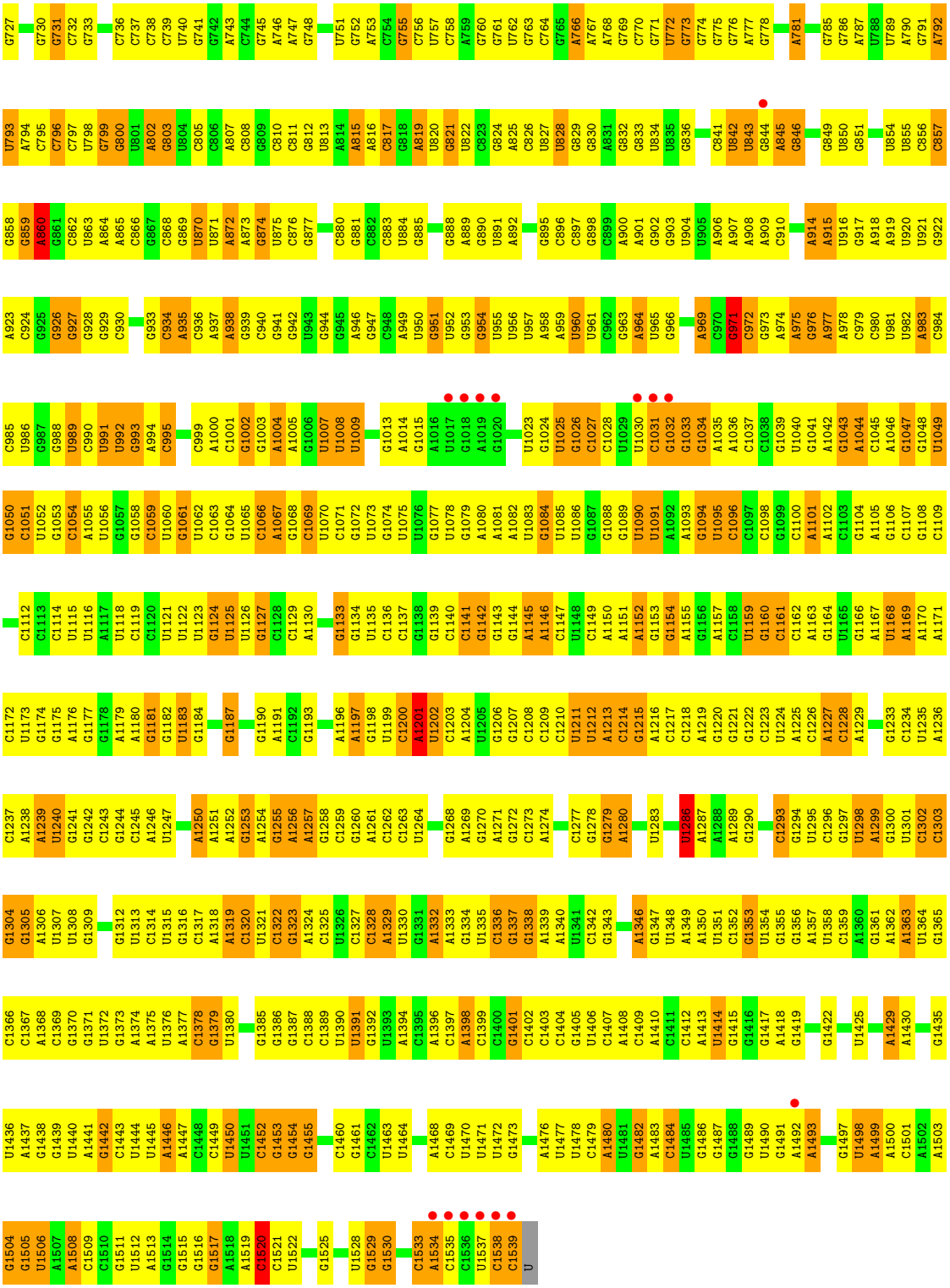
3 Residue-property plots (i)

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

- Molecule 1: 16S rRNA

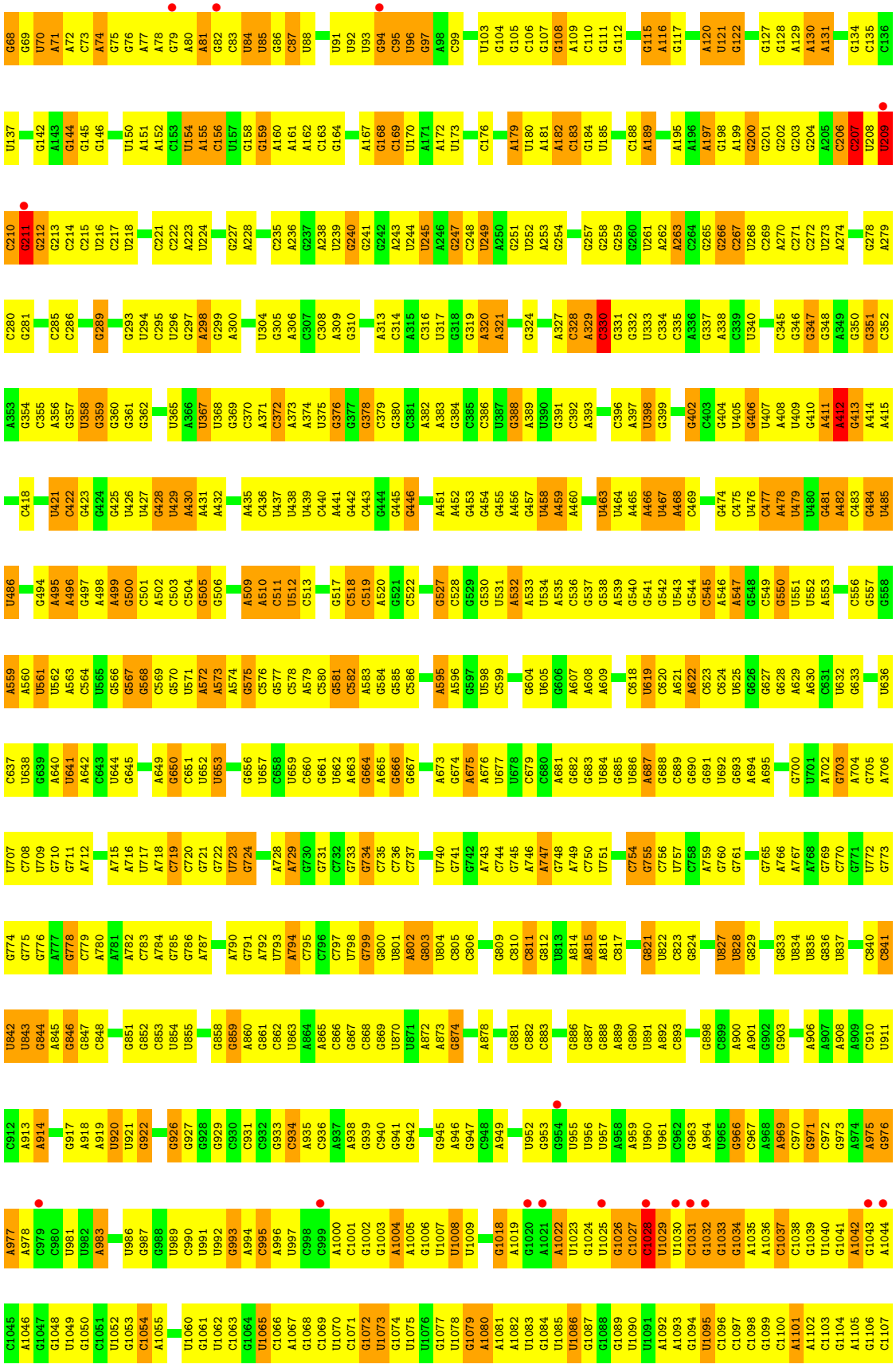
Chain AA:

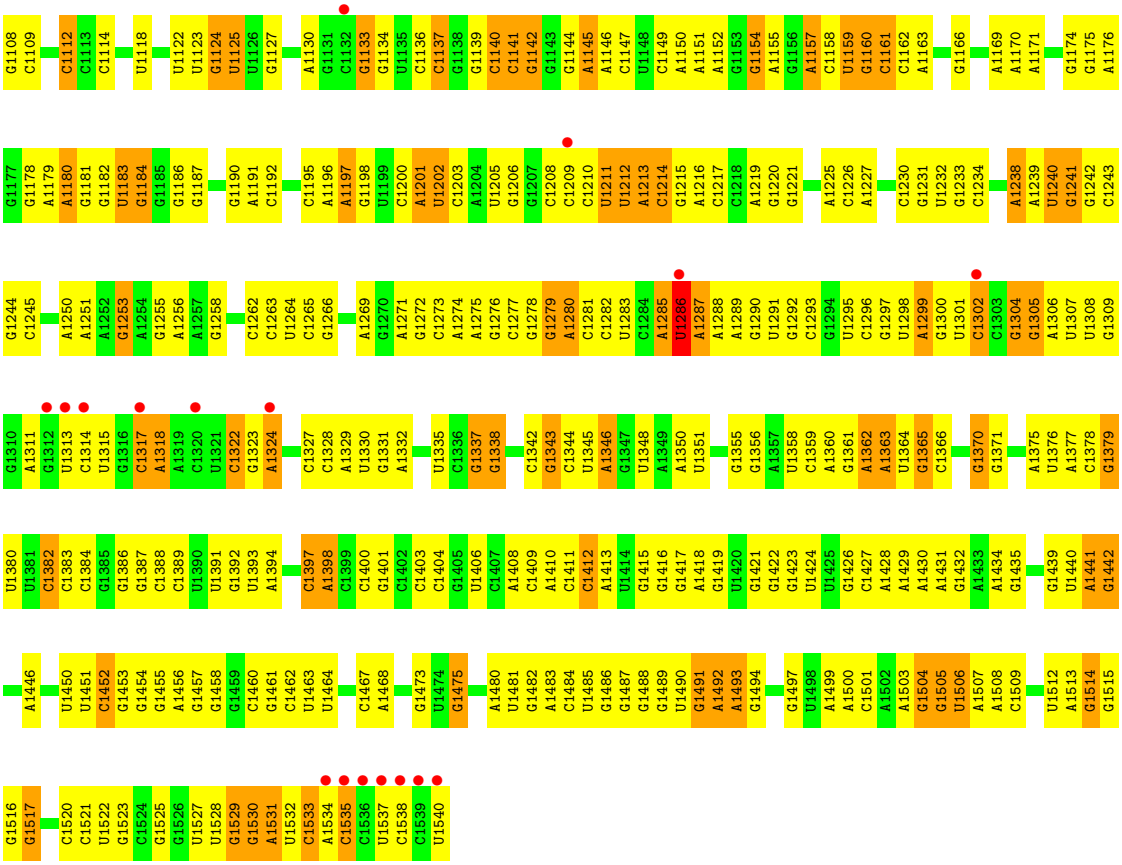




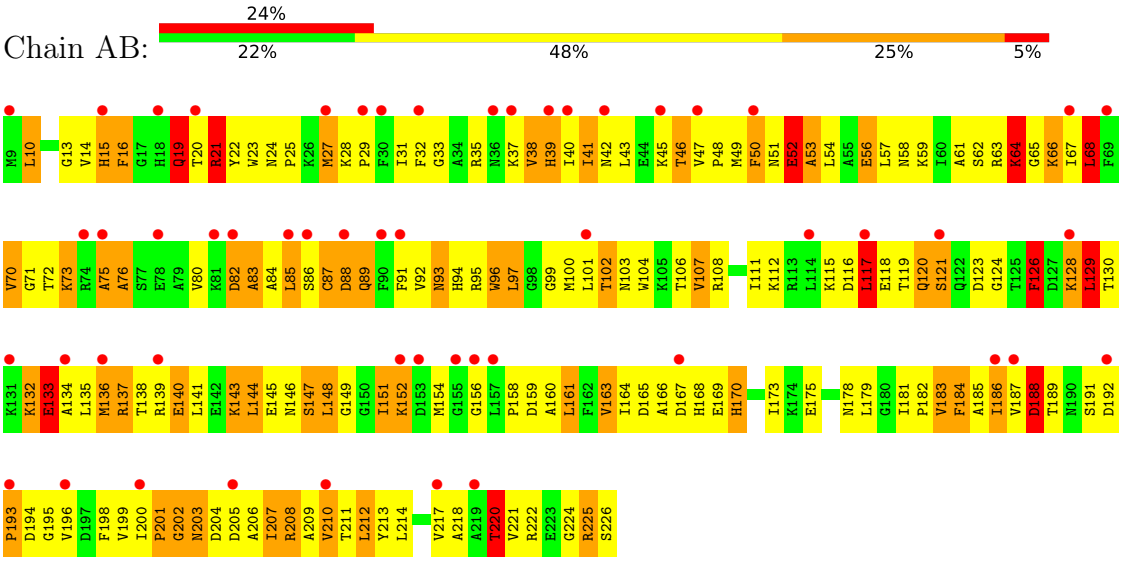
• Molecule 1: 16S rRNA

Chain CA:

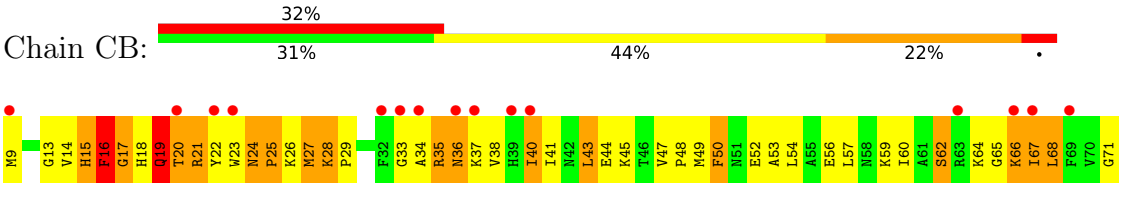


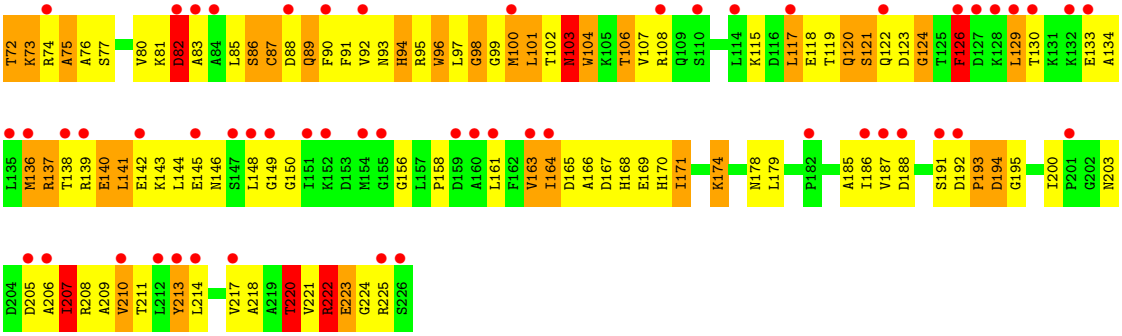


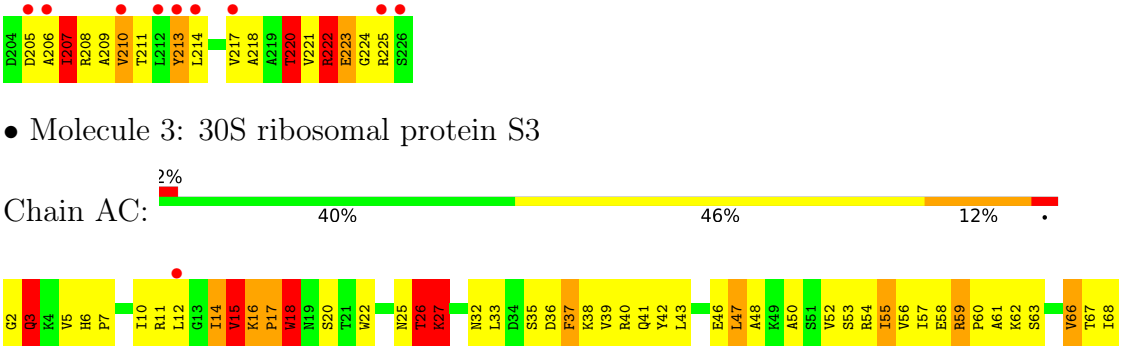
• Molecule 2: 30S ribosomal protein S2

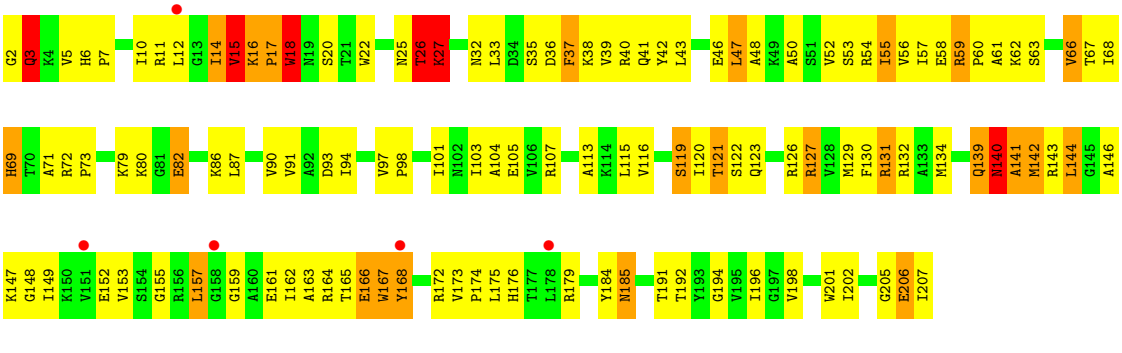


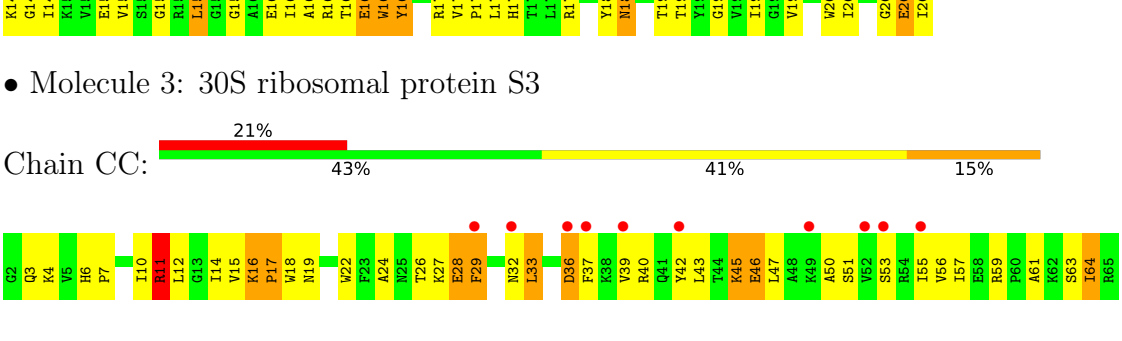
• Molecule 2: 30S ribosomal protein S2





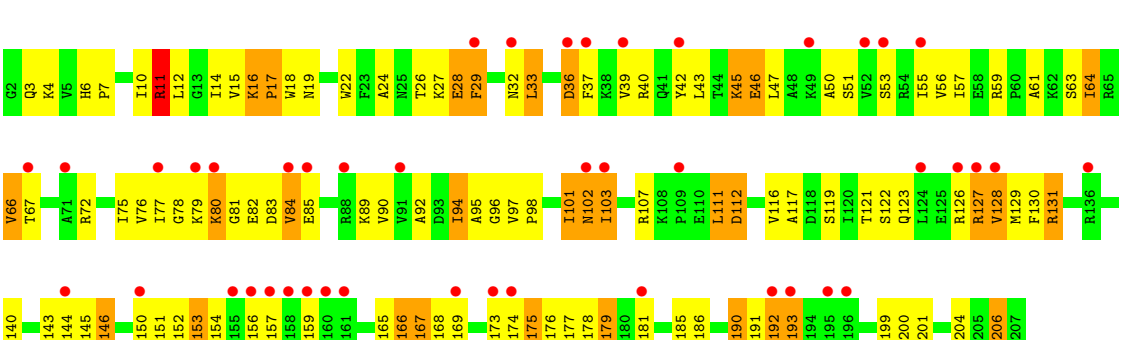






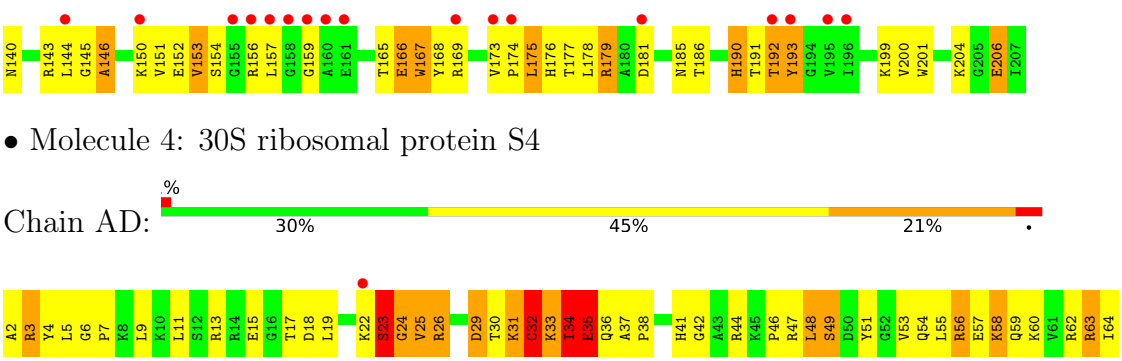
• Molecule 3: 30S ribosomal protein S3

Chain AC:



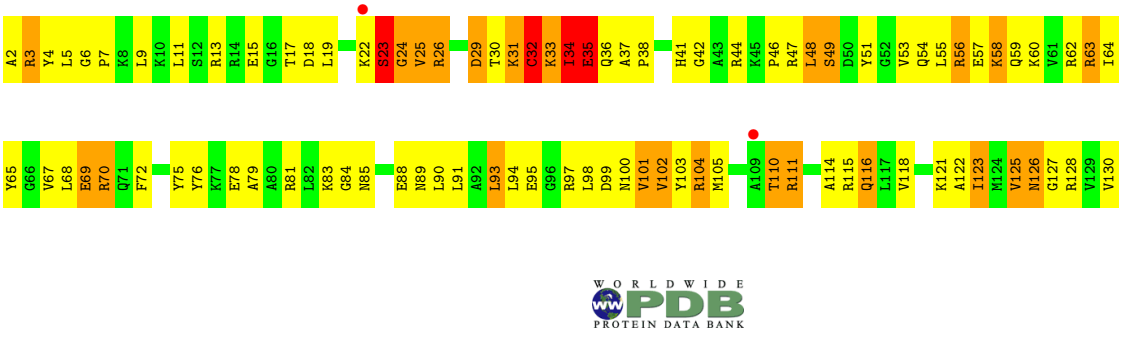
• Molecule 3: 30S ribosomal protein S3

Chain CC:

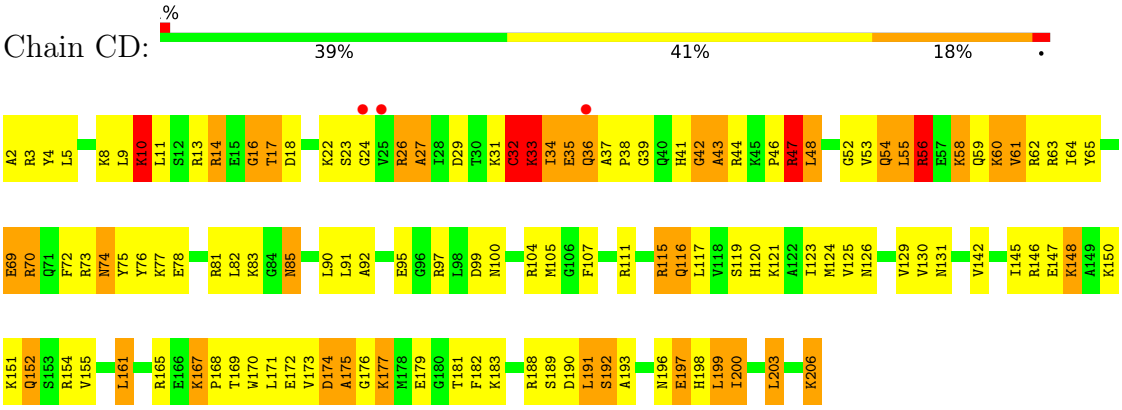


• Molecule 4: 30S ribosomal protein S4

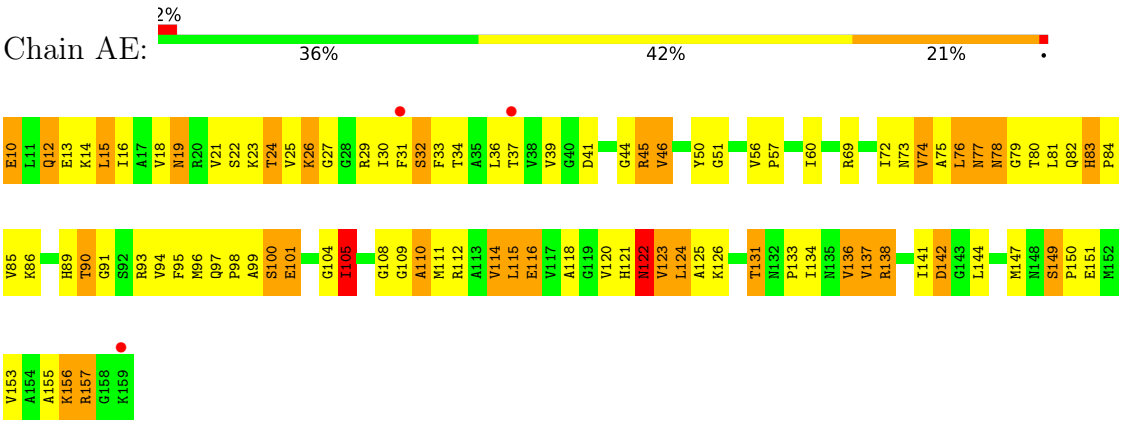
Chain AD:



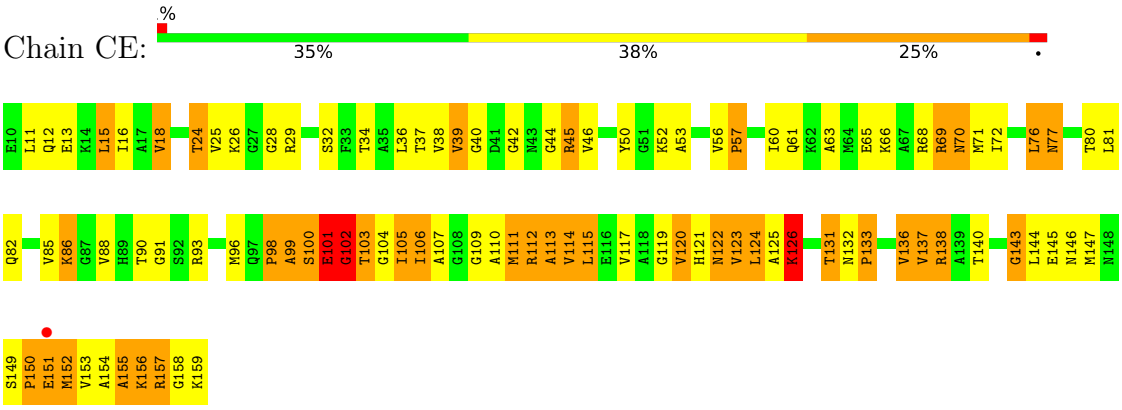
• Molecule 4: 30S ribosomal protein S4



• Molecule 5: 30S ribosomal protein S5

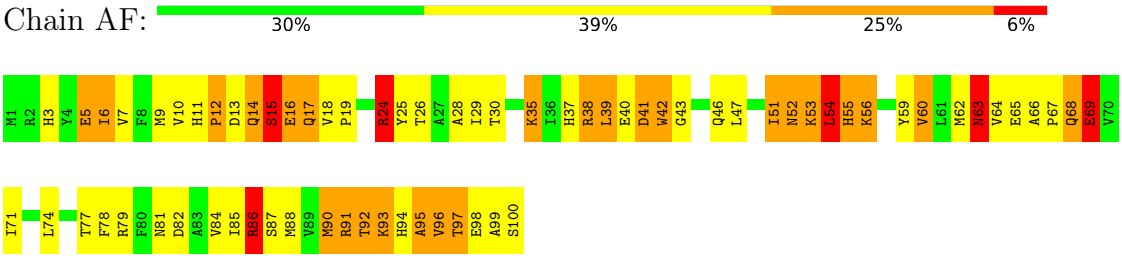


• Molecule 5: 30S ribosomal protein S5



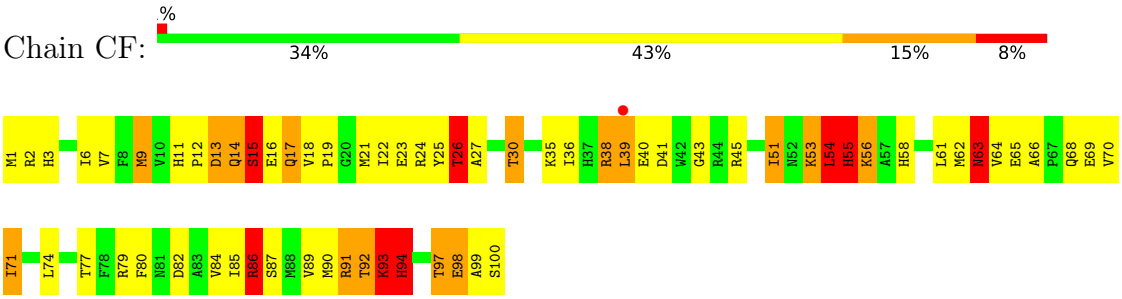
• Molecule 6: 30S ribosomal protein S6

Chain AF:



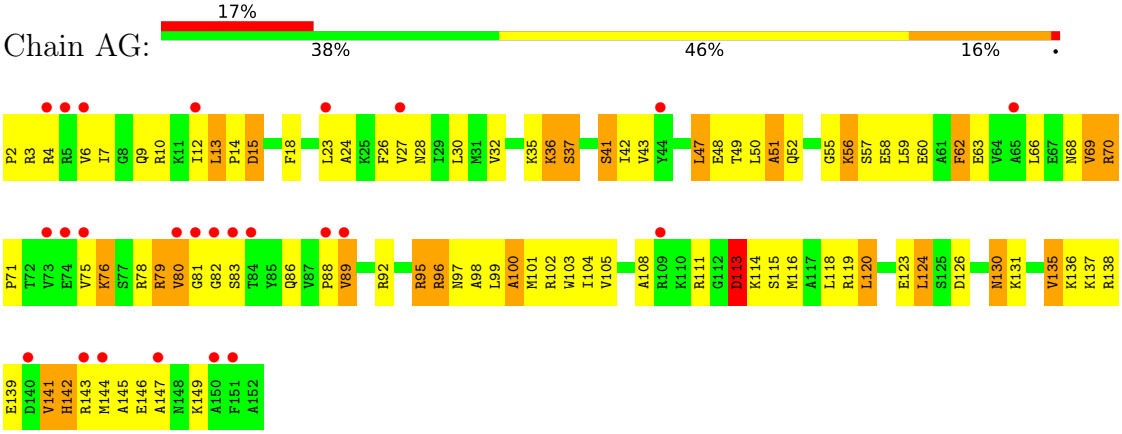
• Molecule 6: 30S ribosomal protein S6

Chain CF:



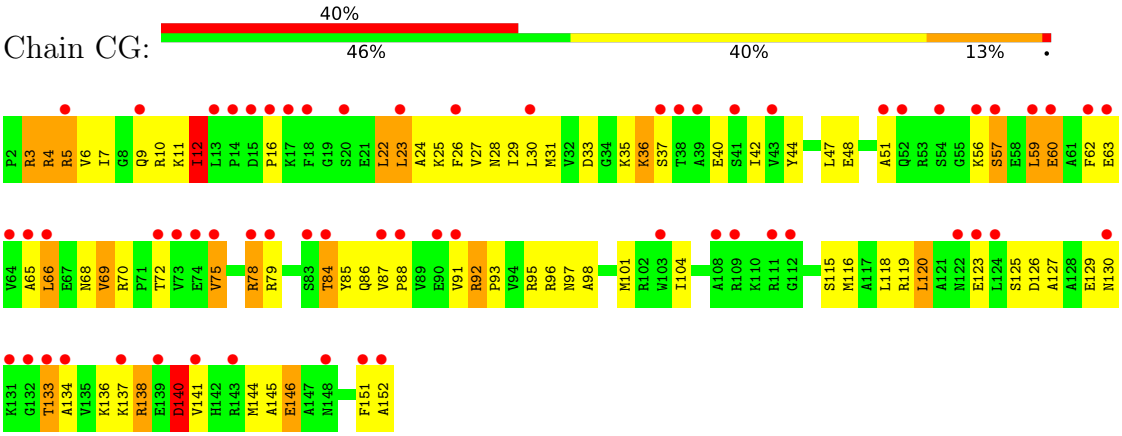
• Molecule 7: 30S ribosomal protein S7

Chain AG:

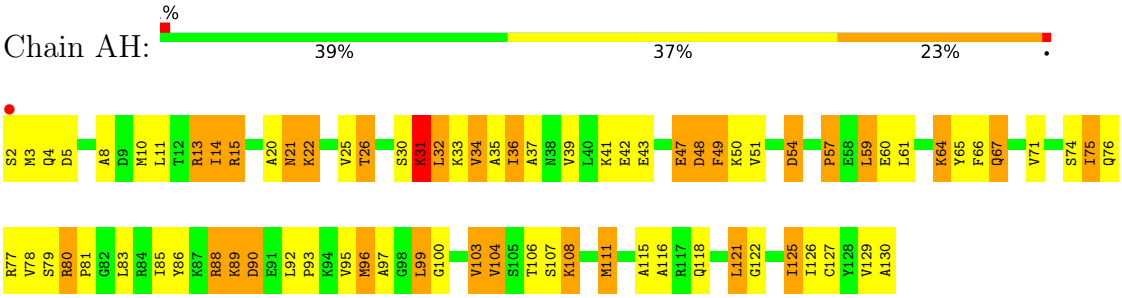


• Molecule 7: 30S ribosomal protein S7

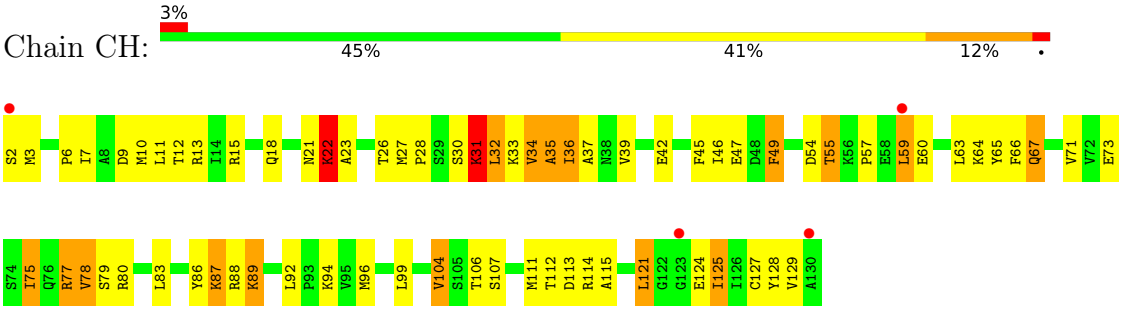
Chain CG:



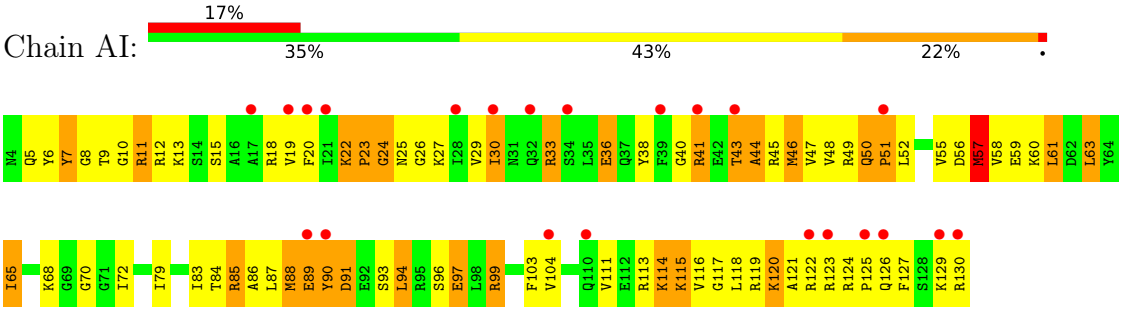
• Molecule 8: 30S ribosomal protein S8



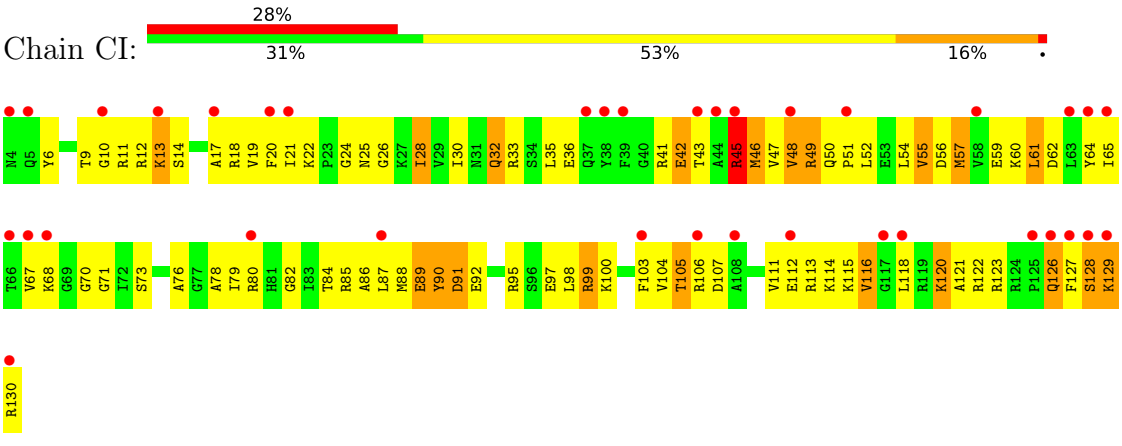
• Molecule 8: 30S ribosomal protein S8



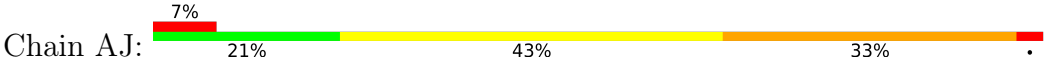
• Molecule 9: 30S ribosomal protein S9

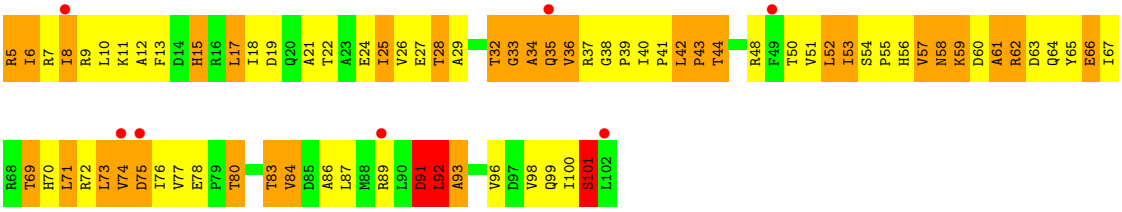


• Molecule 9: 30S ribosomal protein S9



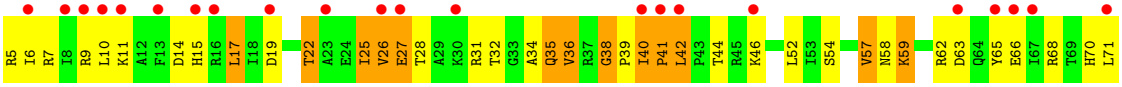
• Molecule 10: 30S ribosomal protein S10

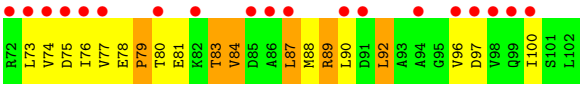




• Molecule 10: 30S ribosomal protein S10

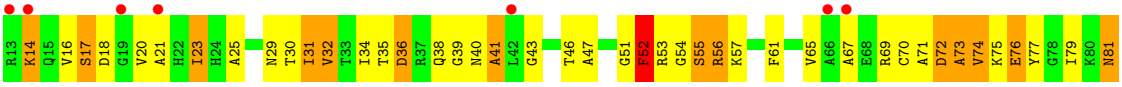
Chain CJ:

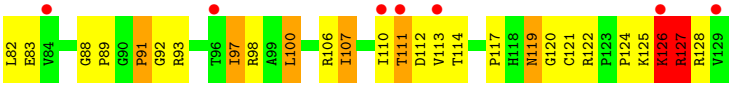




• Molecule 11: 30S ribosomal protein S11

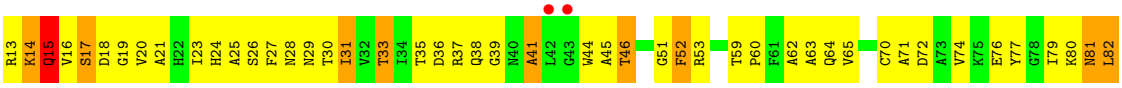
Chain AK:





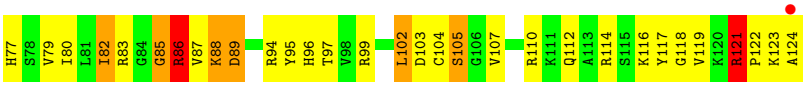
• Molecule 11: 30S ribosomal protein S11

Chain CK:



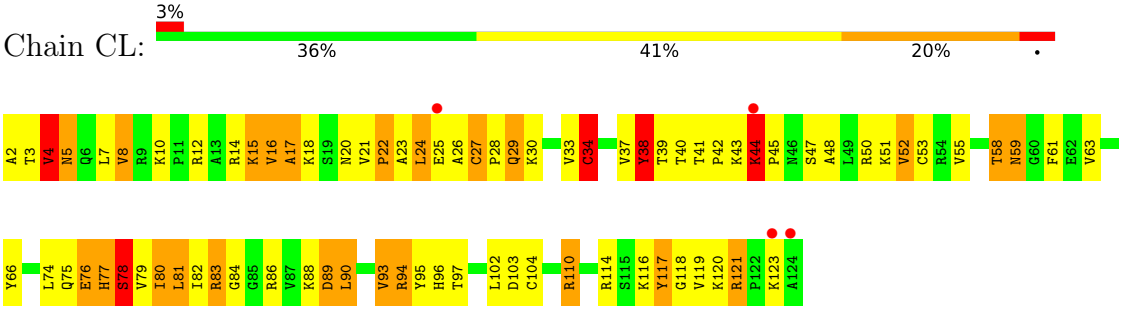
• Molecule 12: 30S ribosomal protein S12

Chain AL:



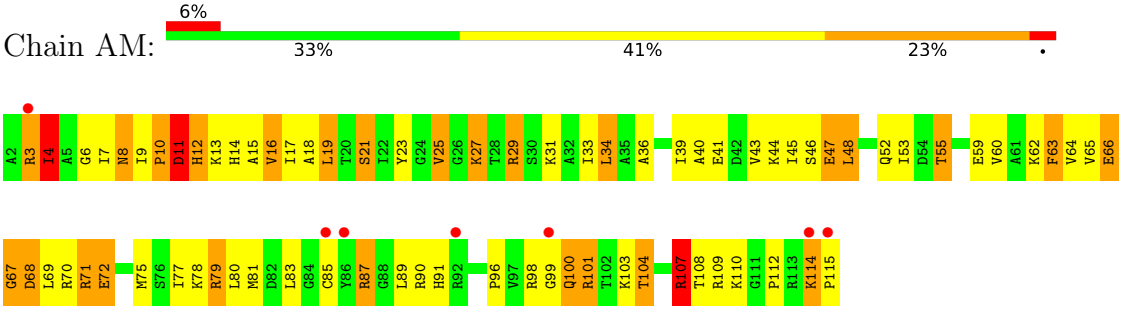
• Molecule 12: 30S ribosomal protein S12

Chain CL:



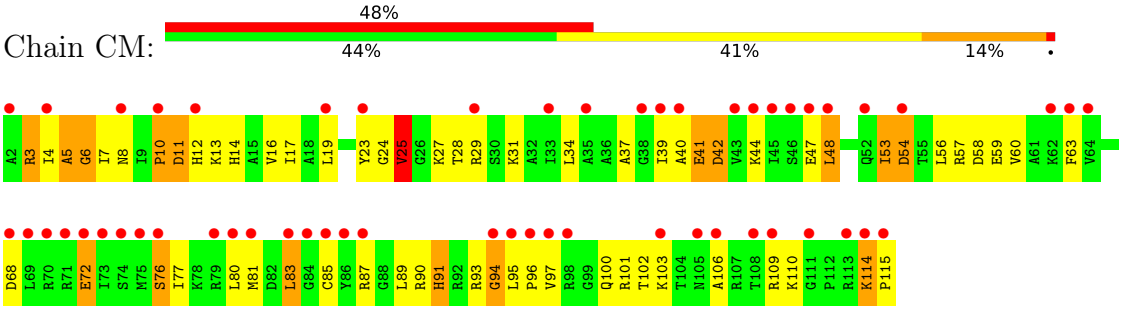
• Molecule 13: 30S ribosomal protein S13

Chain AM:



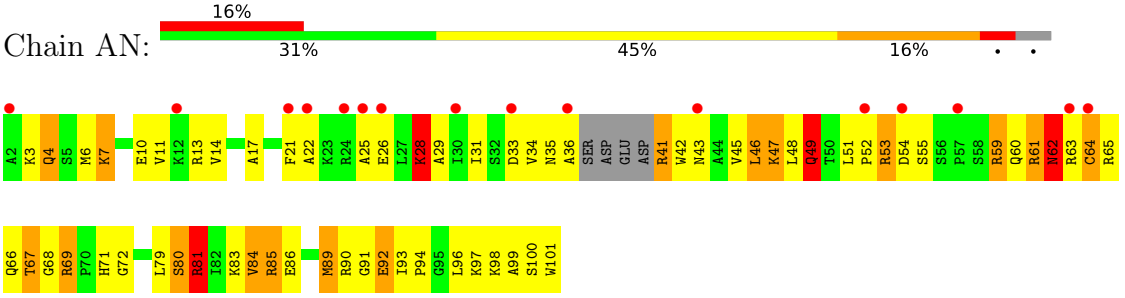
• Molecule 13: 30S ribosomal protein S13

Chain CM:



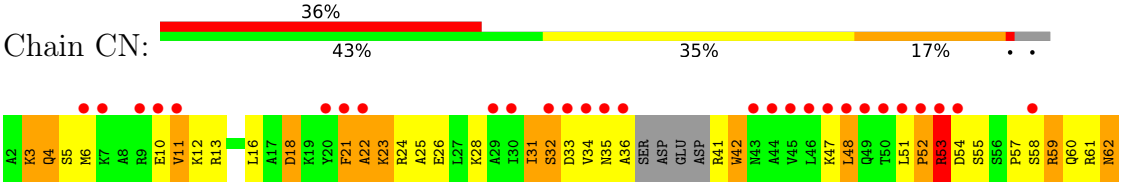
• Molecule 14: 30S ribosomal protein S14

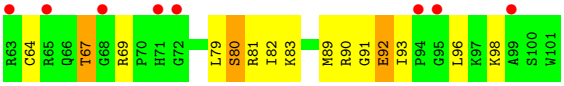
Chain AN:



• Molecule 14: 30S ribosomal protein S14

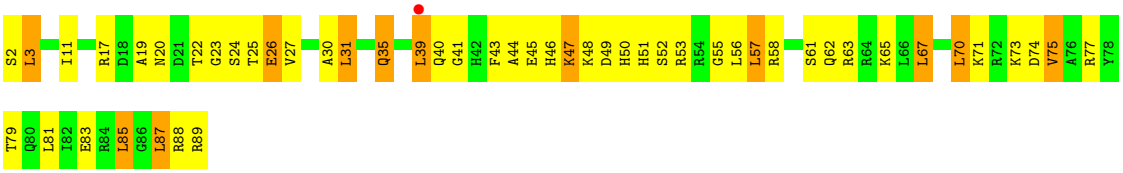
Chain CN:





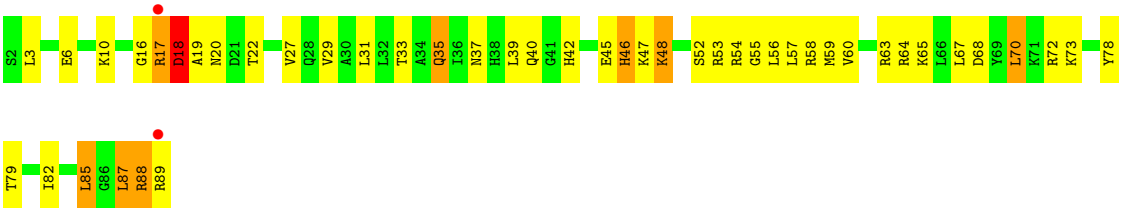
• Molecule 15: 30S ribosomal protein S15

Chain AO:



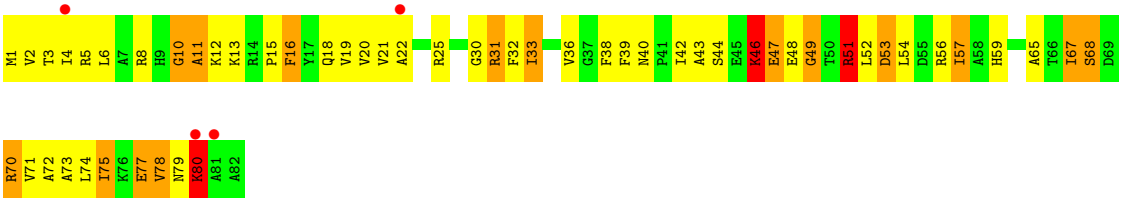
• Molecule 15: 30S ribosomal protein S15

Chain CO:



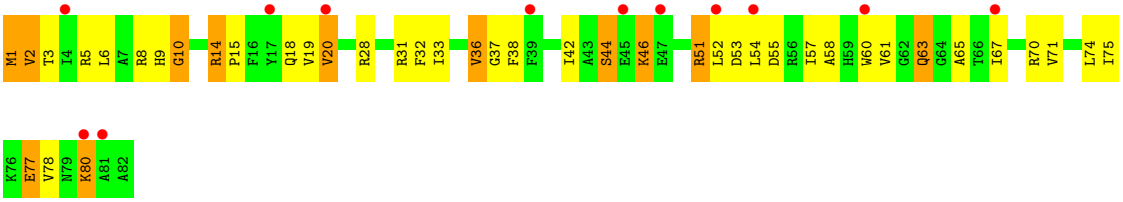
• Molecule 16: 30S ribosomal protein S16

Chain AP:



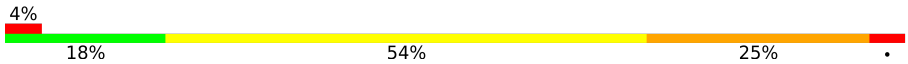
• Molecule 16: 30S ribosomal protein S16

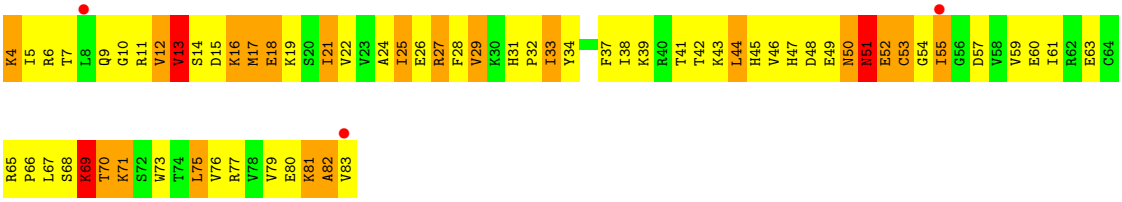
Chain CP:



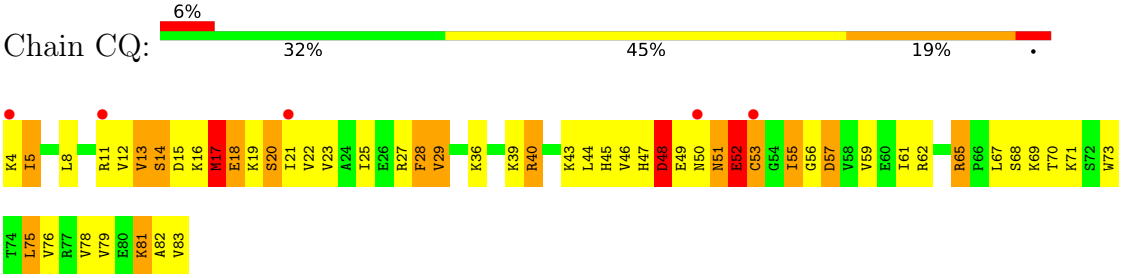
• Molecule 17: 30S ribosomal protein S17

Chain AQ:

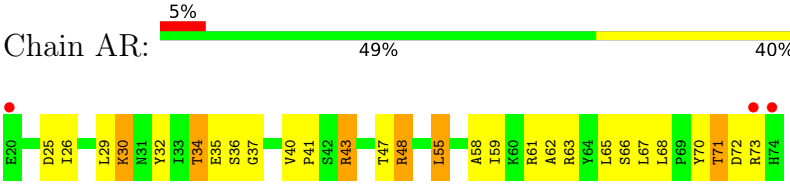




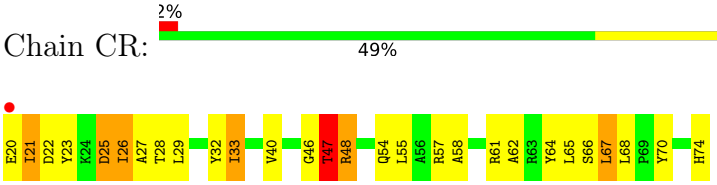
• Molecule 17: 30S ribosomal protein S17



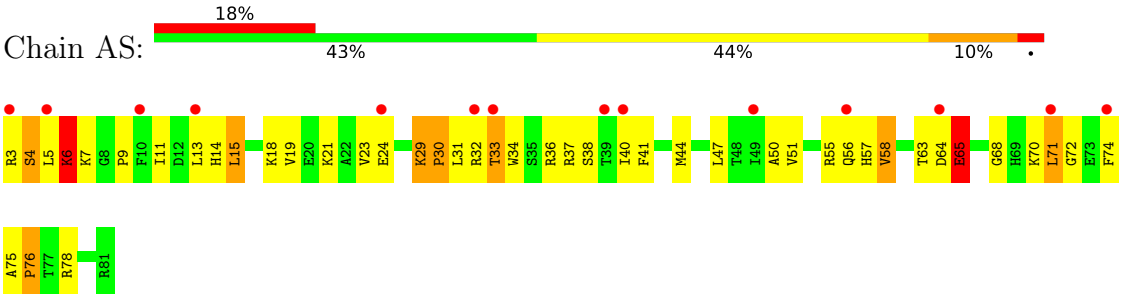
• Molecule 18: 30S ribosomal protein S18



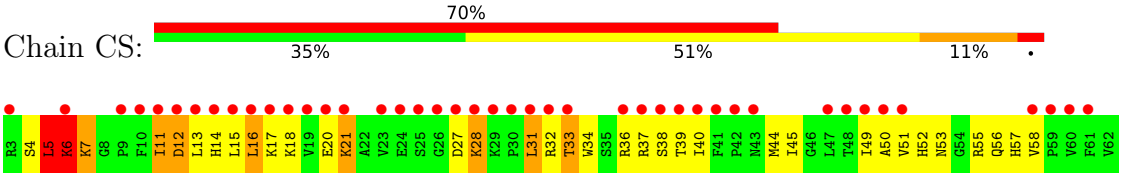
• Molecule 18: 30S ribosomal protein S18



• Molecule 19: 30S ribosomal protein S19

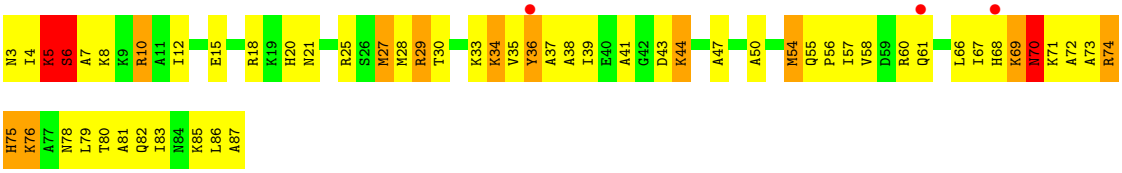


• Molecule 19: 30S ribosomal protein S19



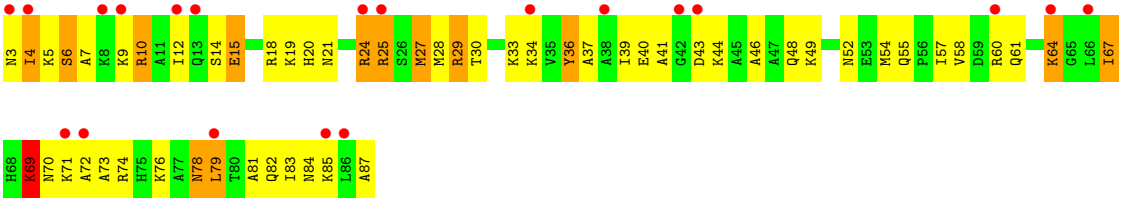
• Molecule 20: 30S ribosomal protein S20

Chain AT:



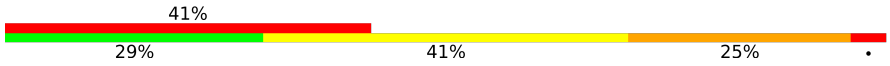
• Molecule 20: 30S ribosomal protein S20

Chain CT:



• Molecule 21: 30S ribosomal protein S21

Chain AU:

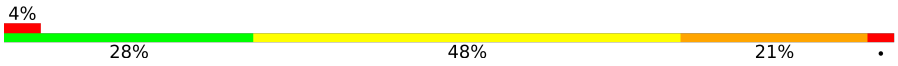


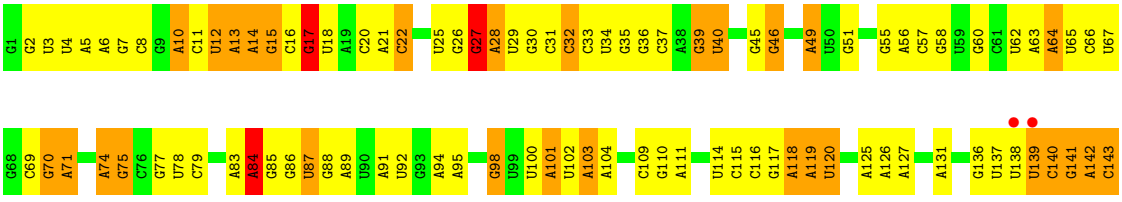
• Molecule 21: 30S ribosomal protein S21

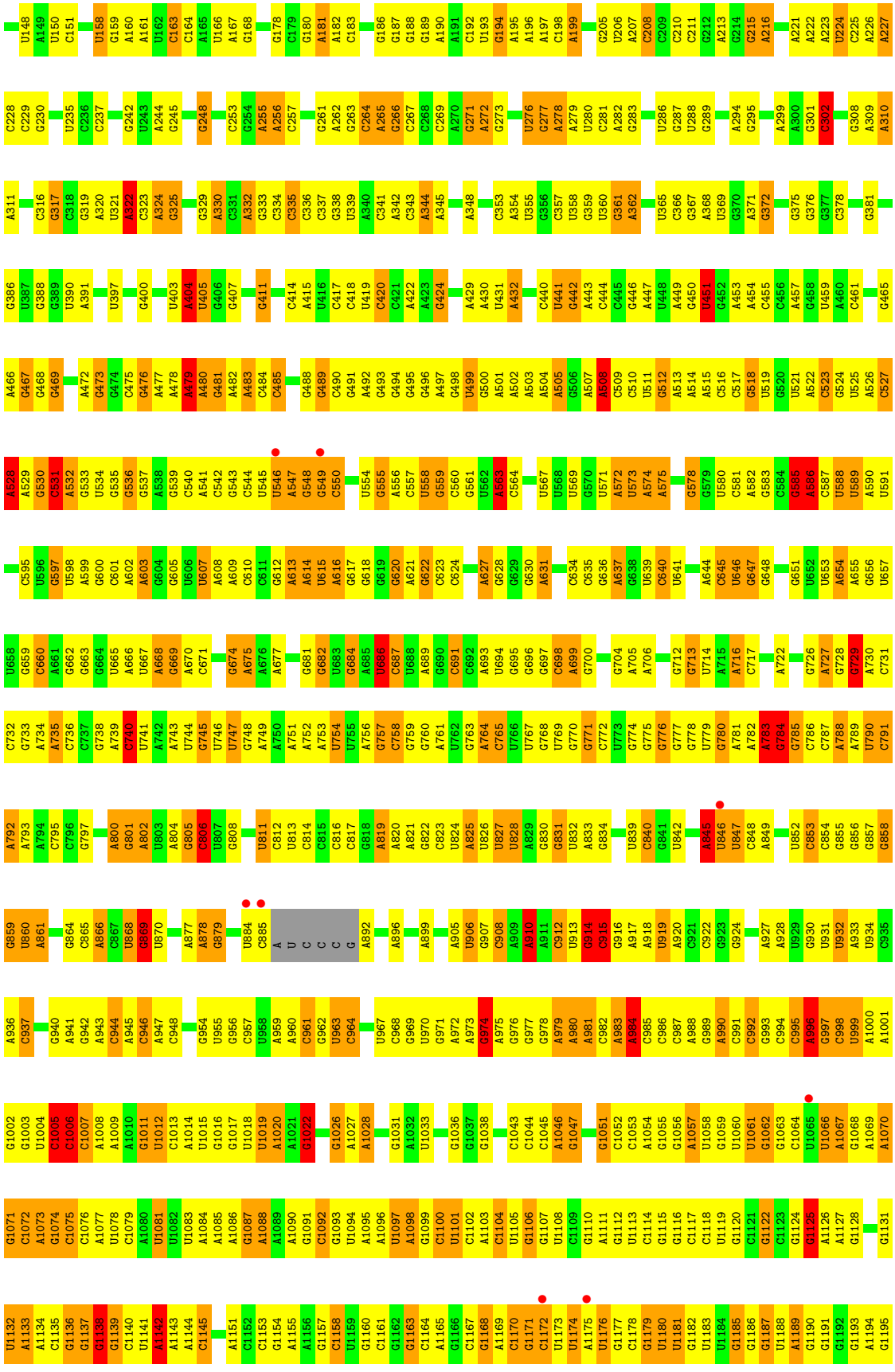
Chain CU:

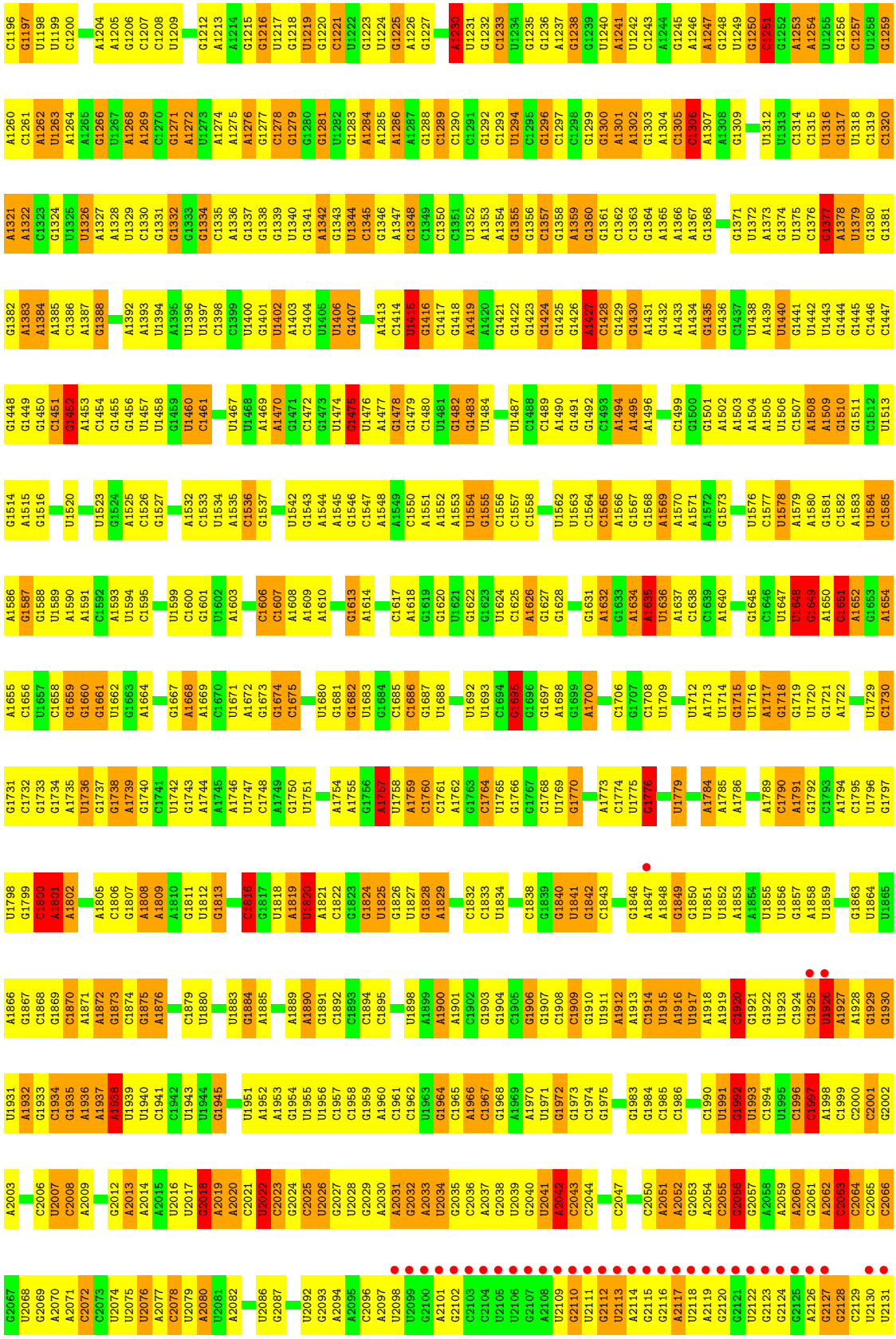
• Molecule 22: 23S rRNA

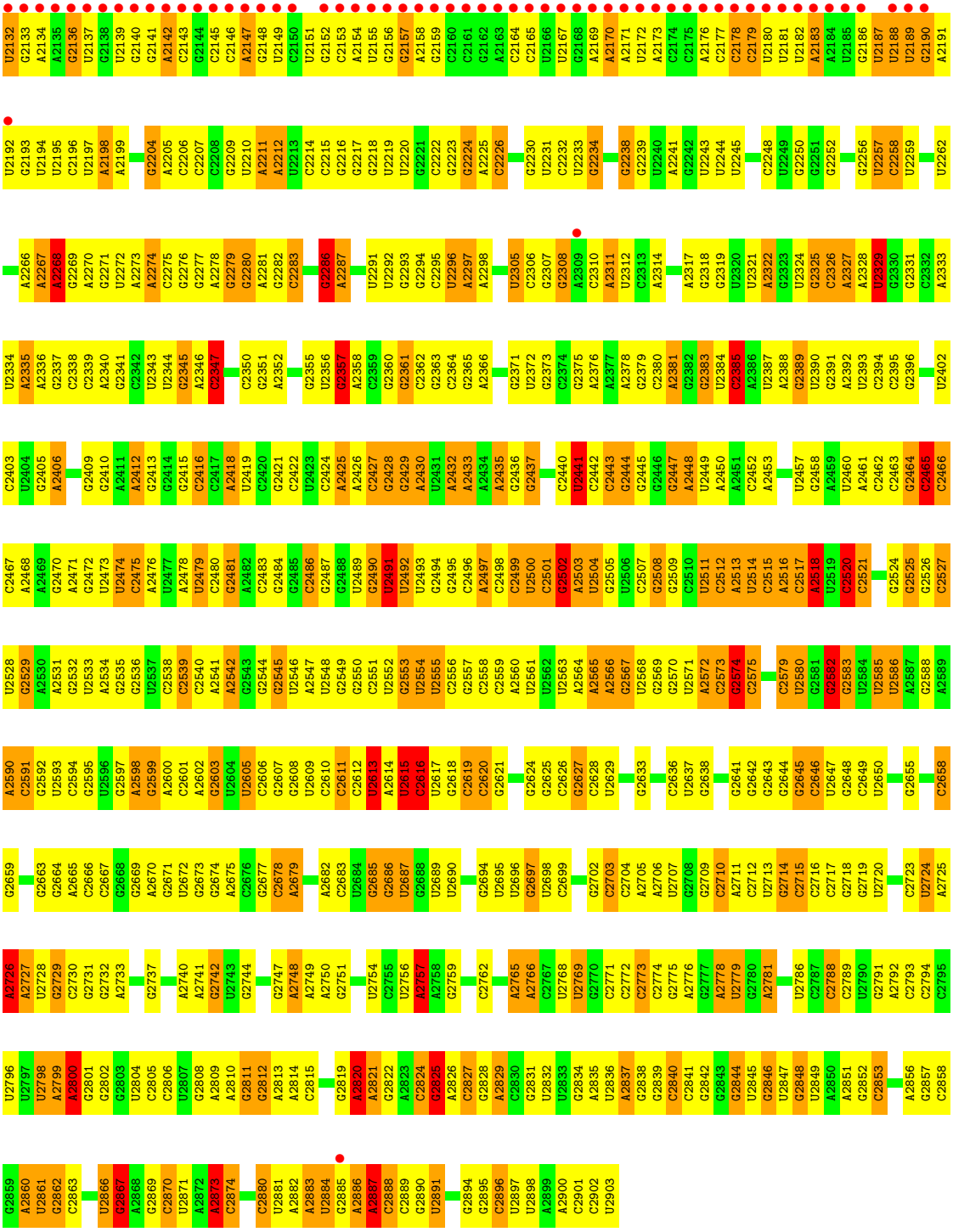
Chain BA:





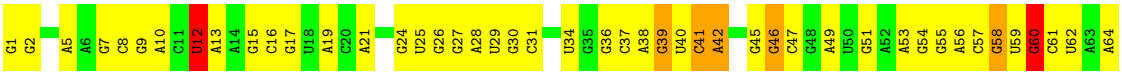


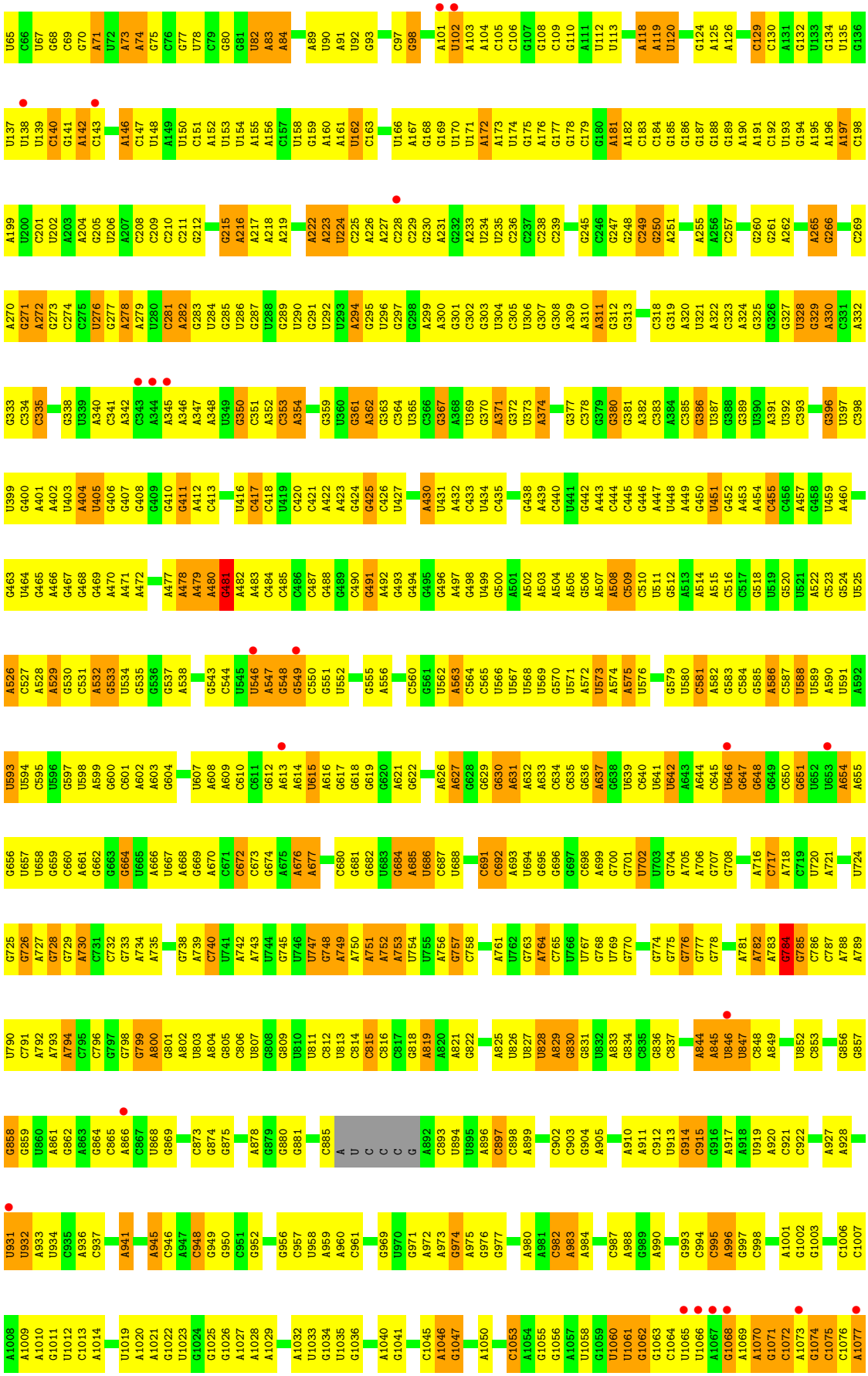


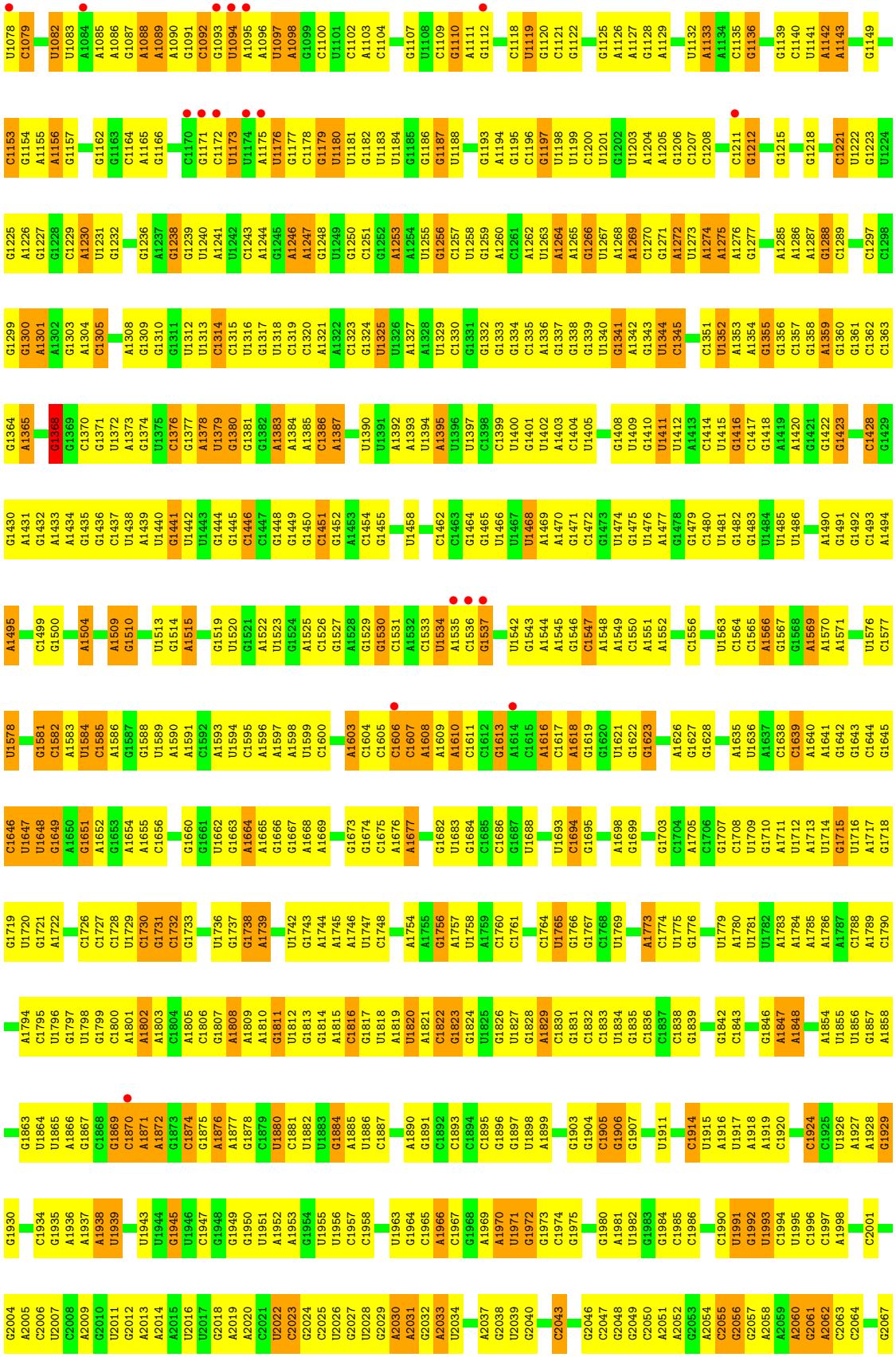


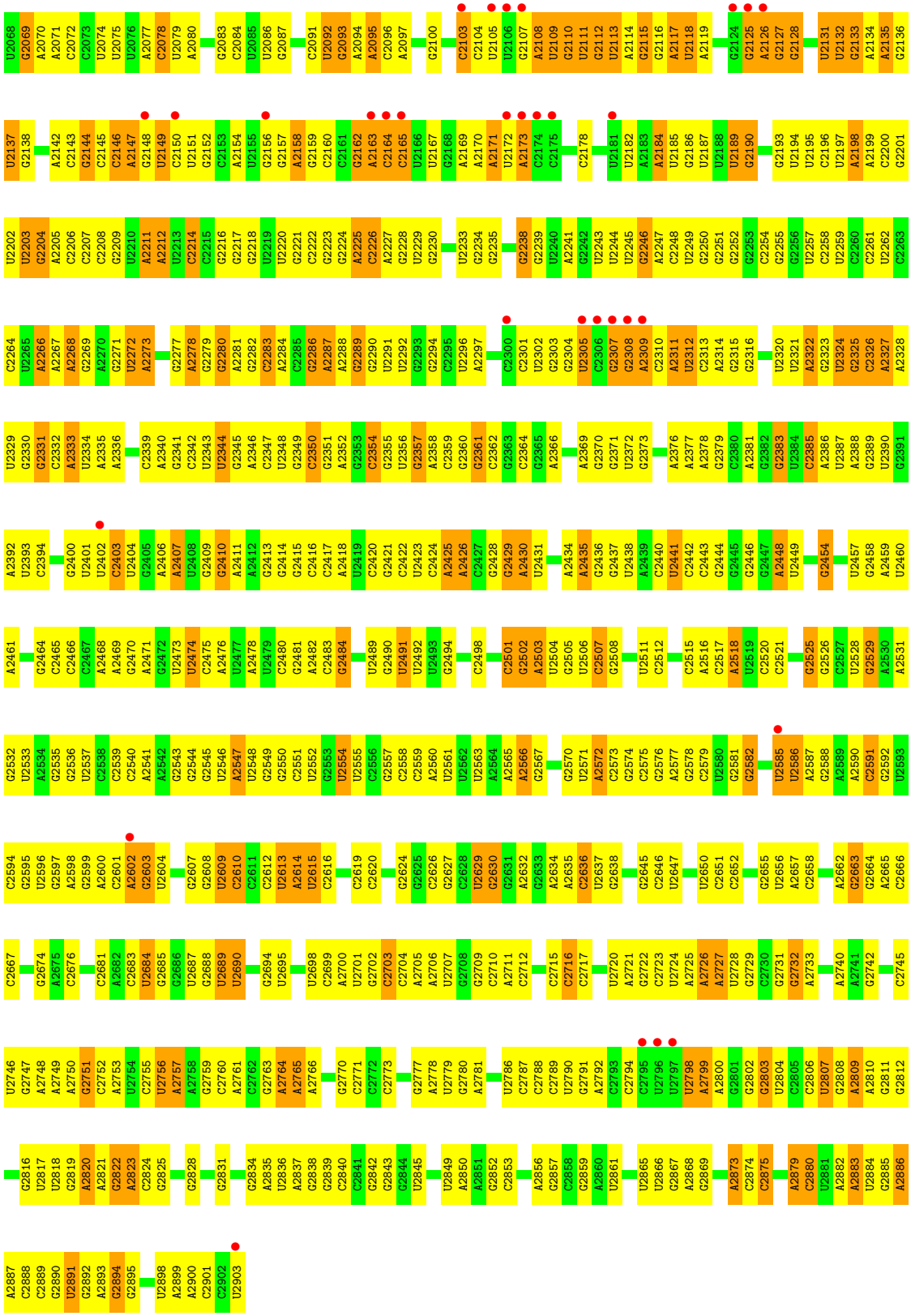
• Molecule 22: 23S rRNA

Chain DA:



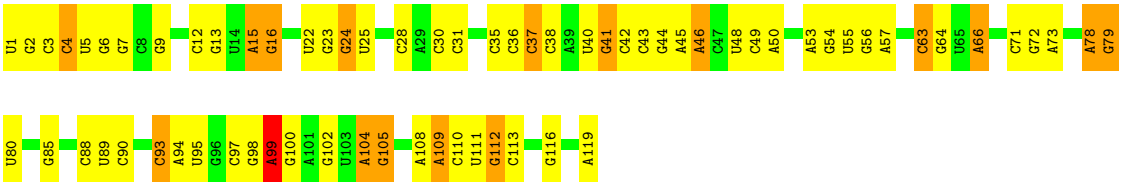






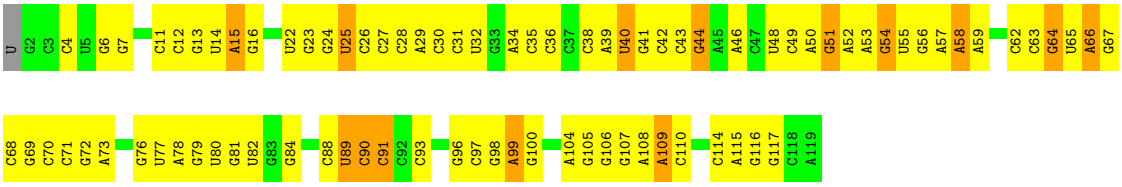
• Molecule 23: 5S rRNA

Chain BB:



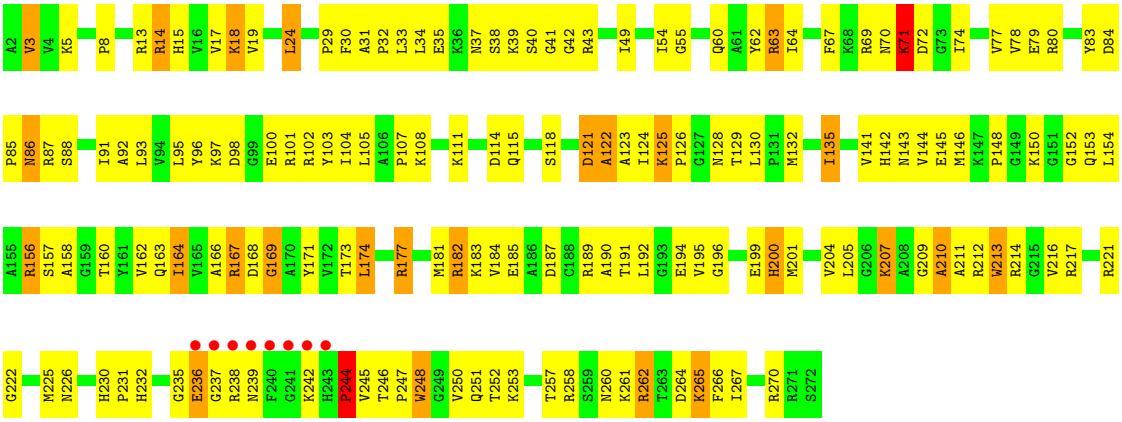
• Molecule 23: 5S rRNA

Chain DB:



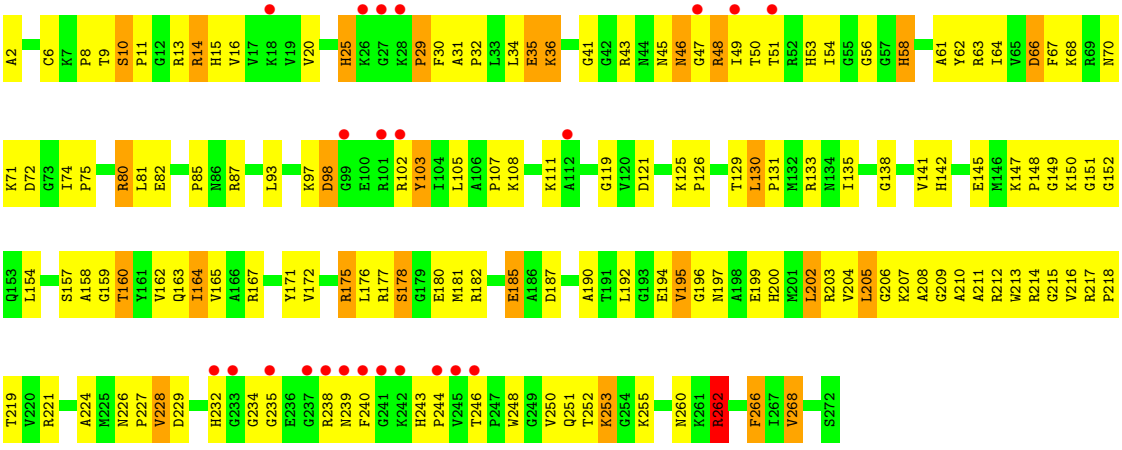
• Molecule 24: 50S ribosomal protein L2

Chain BC:



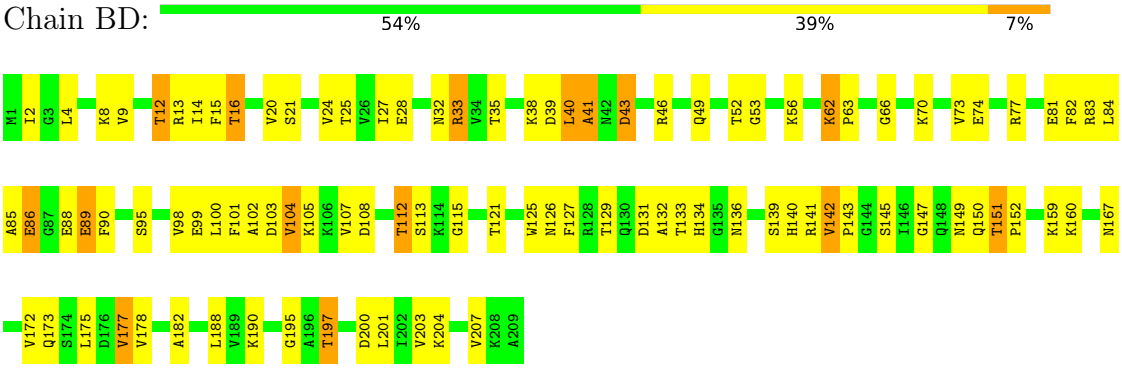
• Molecule 24: 50S ribosomal protein L2

Chain DC:



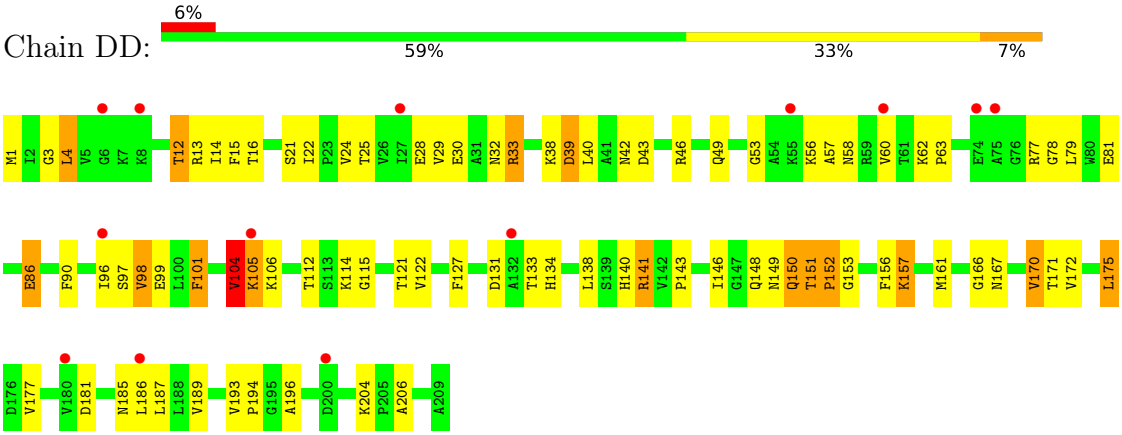
• Molecule 25: 50S ribosomal protein L3

Chain BD:



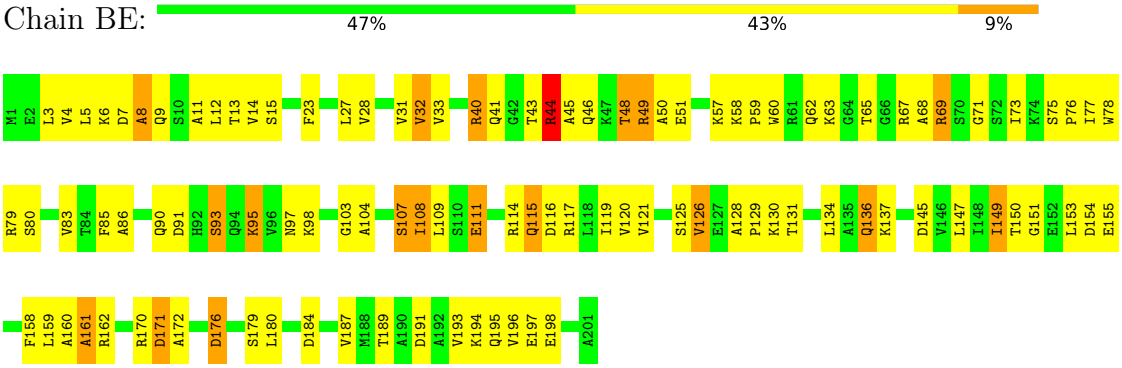
• Molecule 25: 50S ribosomal protein L3

Chain DD:



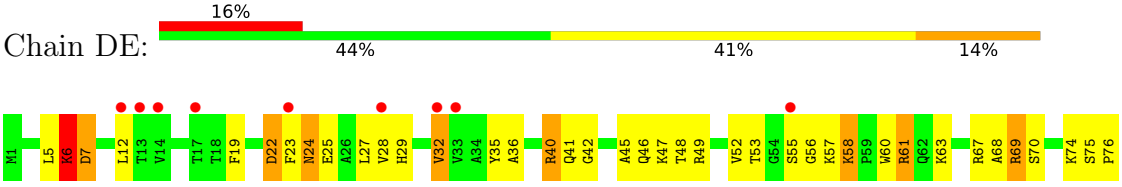
• Molecule 26: 50S ribosomal protein L4

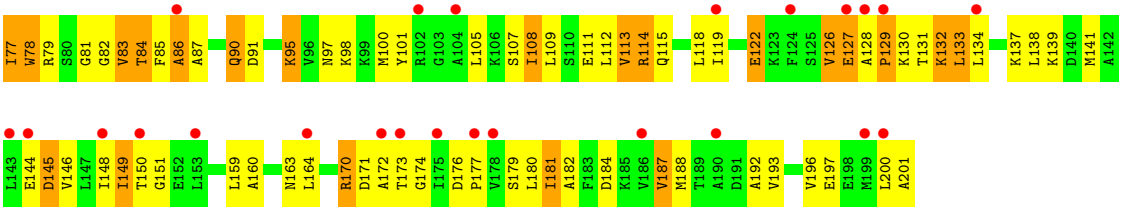
Chain BE:



• Molecule 26: 50S ribosomal protein L4

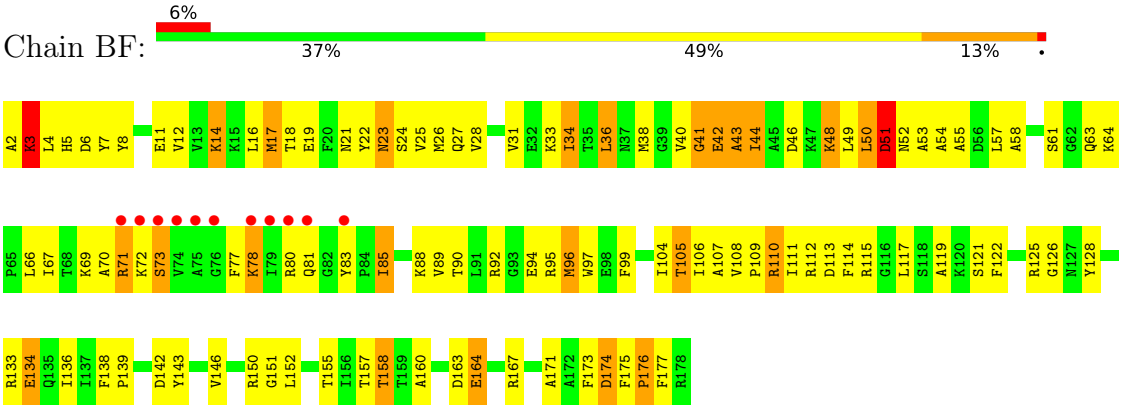
Chain DE:





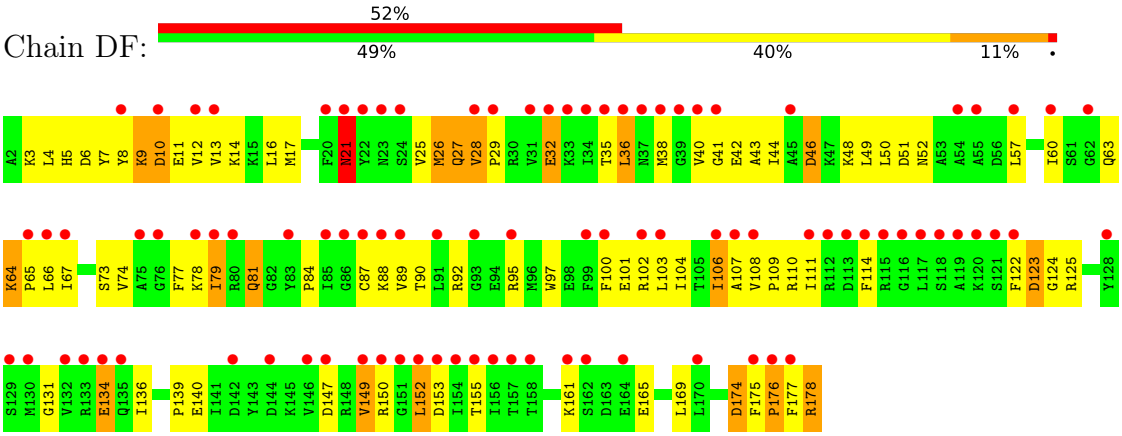
• Molecule 27: 50S ribosomal protein L5

Chain BF:



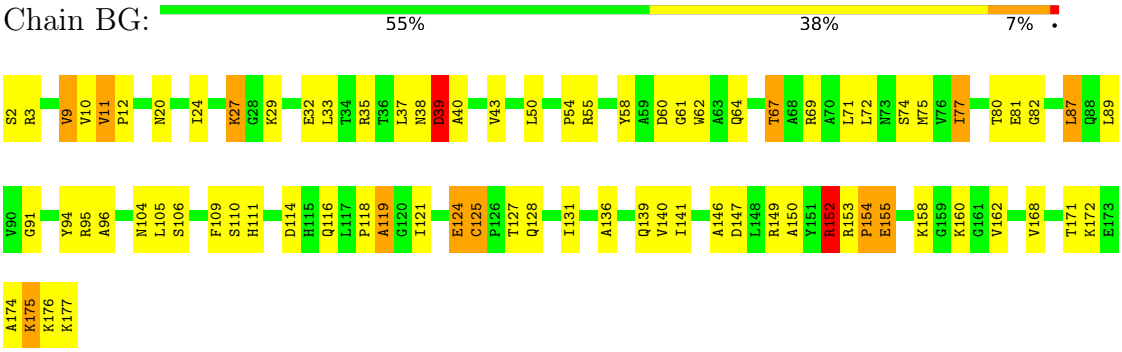
• Molecule 27: 50S ribosomal protein L5

Chain DF:



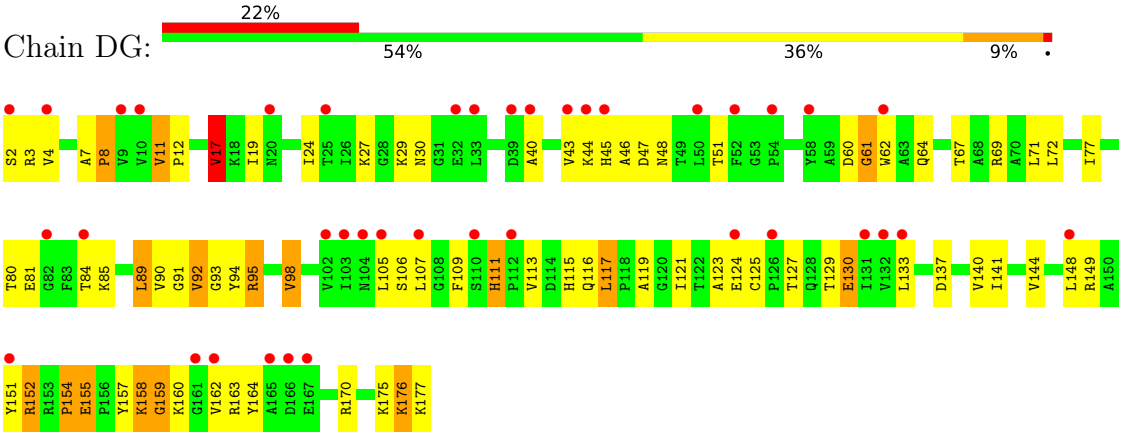
• Molecule 28: 50S ribosomal protein L6

Chain BG:



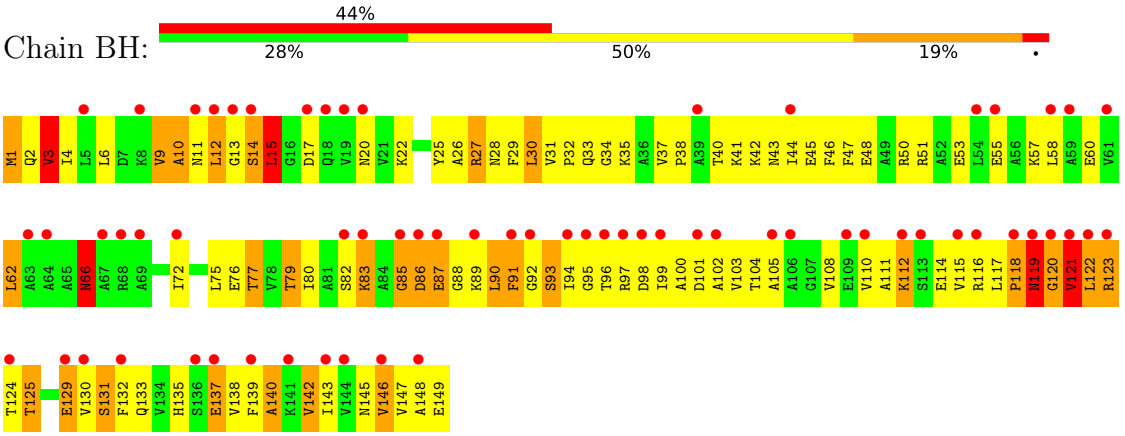
• Molecule 28: 50S ribosomal protein L6

Chain DG:



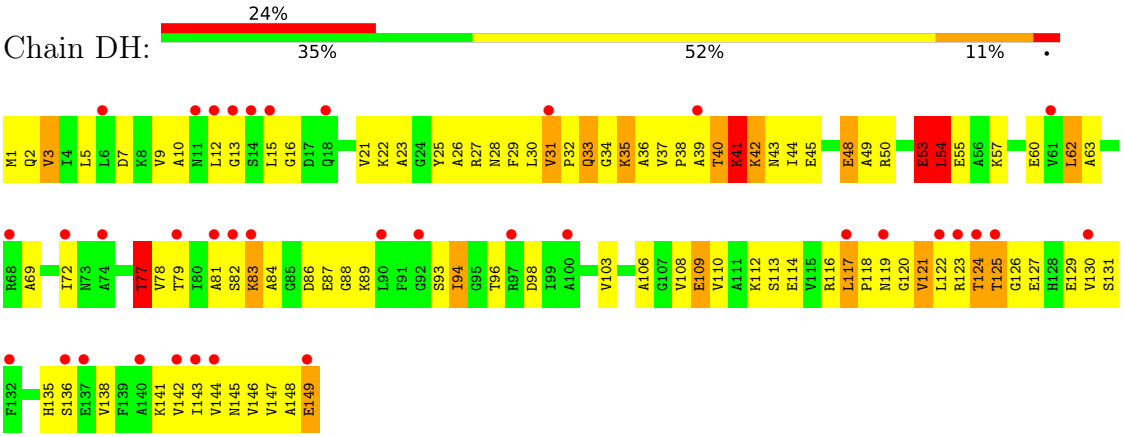
• Molecule 29: 50S ribosomal protein L9

Chain BH:



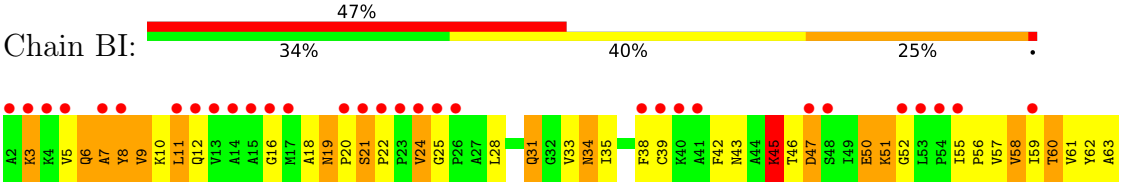
• Molecule 29: 50S ribosomal protein L9

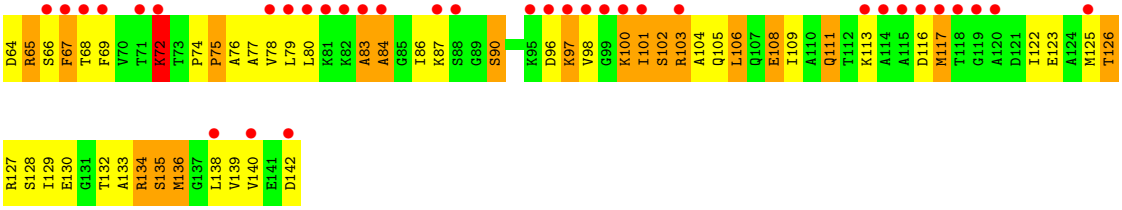
Chain DH:



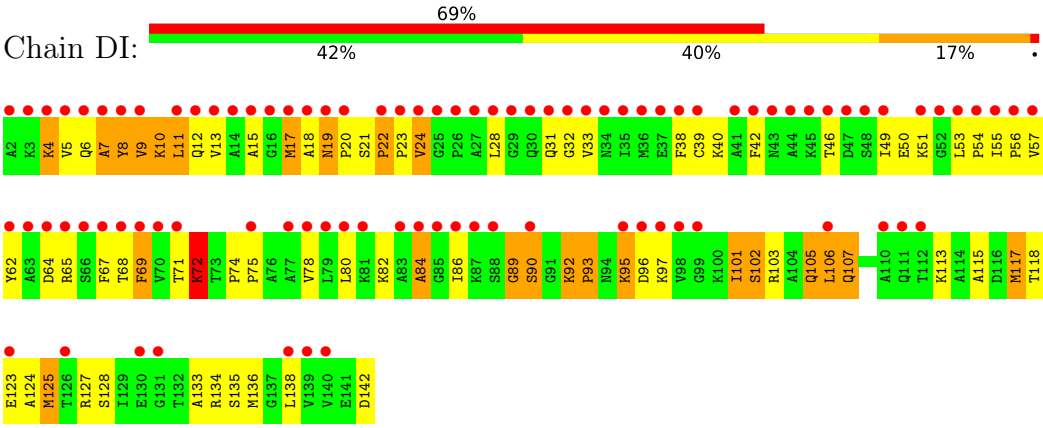
• Molecule 30: 50S ribosomal protein L11

Chain BI:

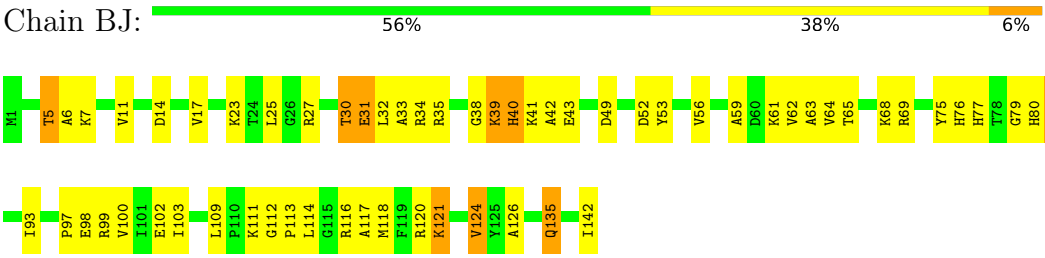




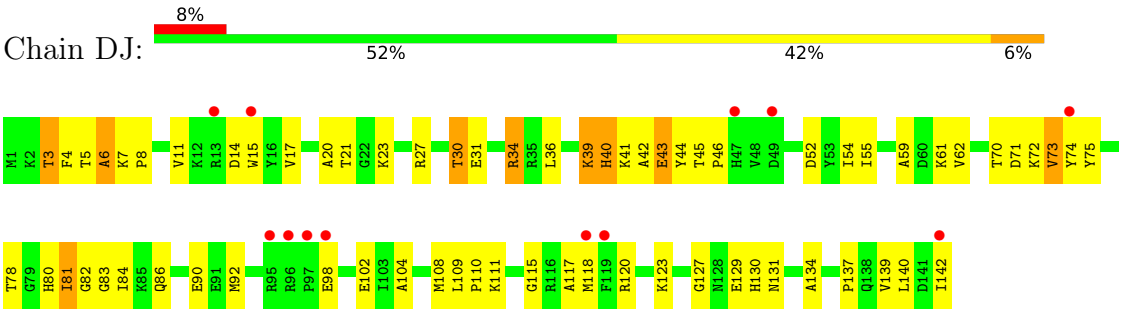
• Molecule 30: 50S ribosomal protein L11



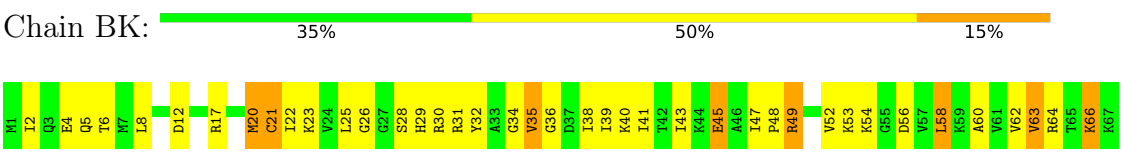
• Molecule 31: 50S ribosomal protein L13

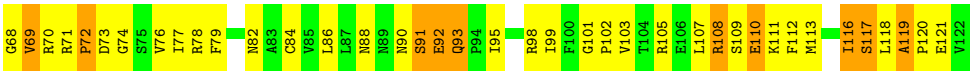


• Molecule 31: 50S ribosomal protein L13



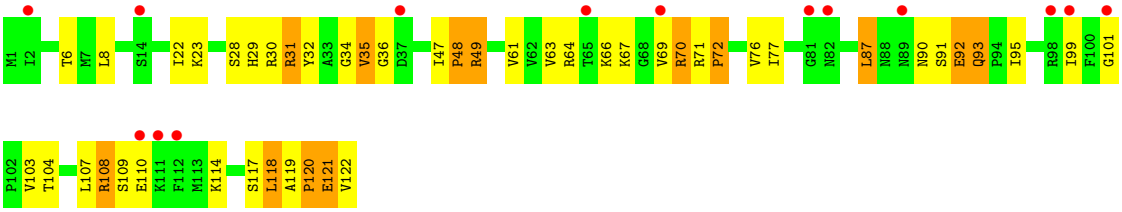
• Molecule 32: 50S ribosomal protein L14





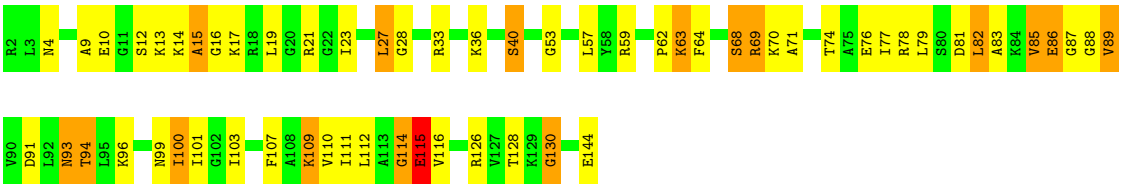
• Molecule 32: 50S ribosomal protein L14

Chain DK:



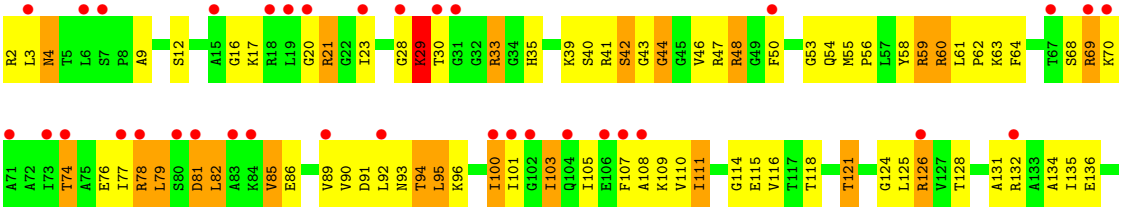
• Molecule 33: 50S ribosomal protein L15

Chain BL:



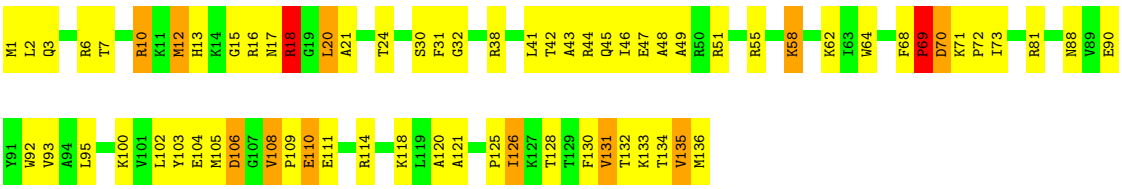
• Molecule 33: 50S ribosomal protein L15

Chain DL:



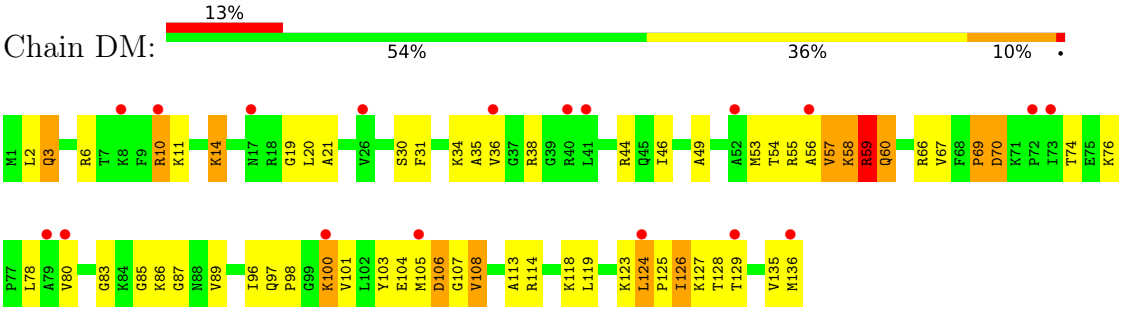
• Molecule 34: 50S ribosomal protein L16

Chain BM:



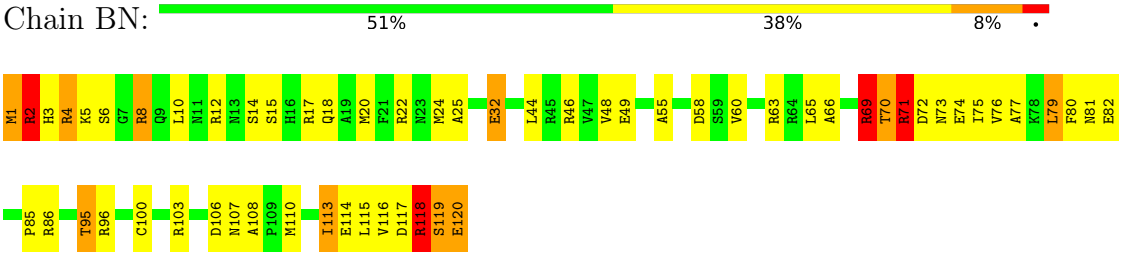
• Molecule 34: 50S ribosomal protein L16

Chain DM:



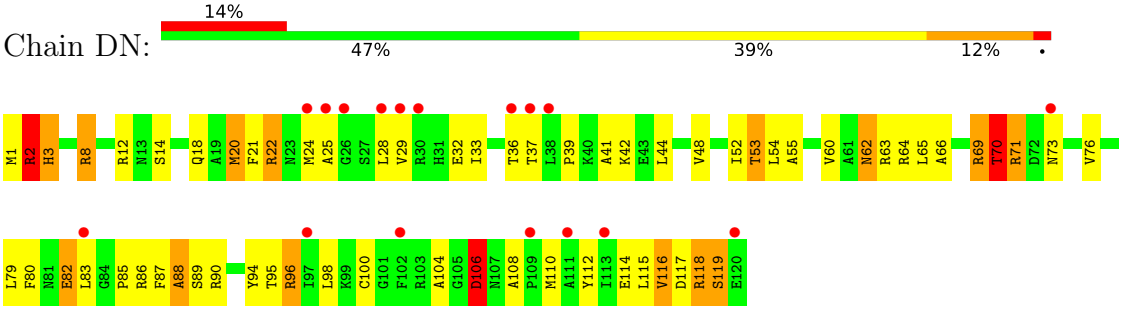
• Molecule 35: 50S ribosomal protein L17

Chain BN:



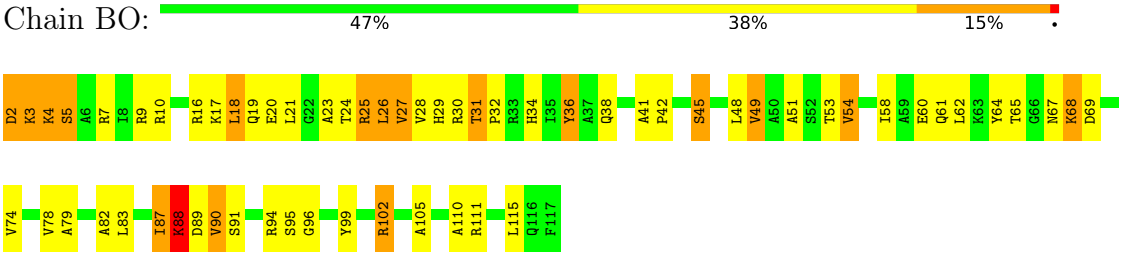
• Molecule 35: 50S ribosomal protein L17

Chain DN:



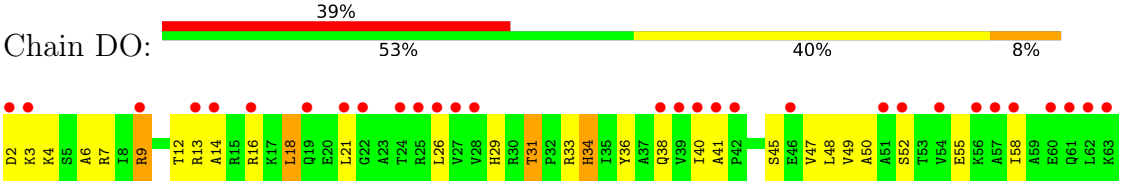
• Molecule 36: 50S ribosomal protein L18

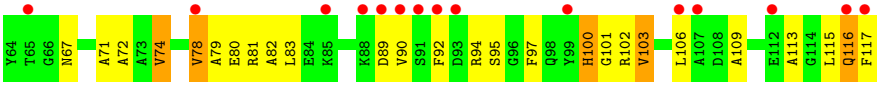
Chain BO:



• Molecule 36: 50S ribosomal protein L18

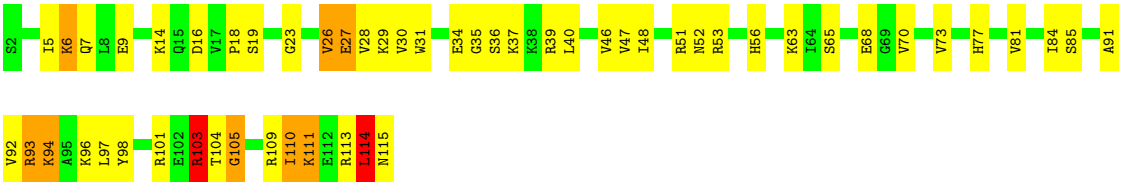
Chain DO:





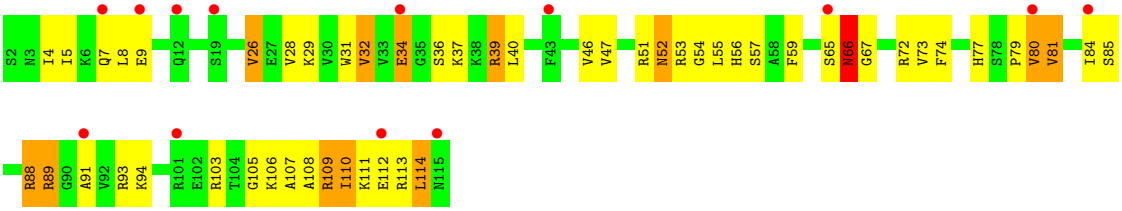
• Molecule 37: 50S ribosomal protein L19

Chain BP:



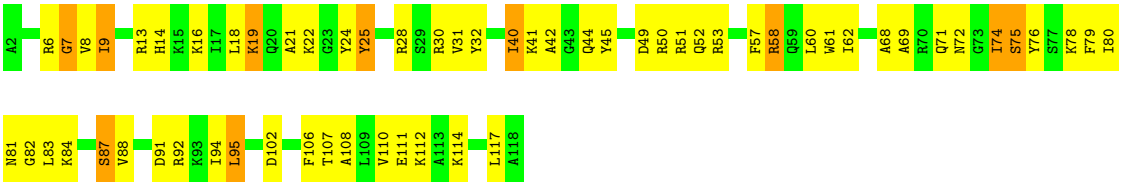
• Molecule 37: 50S ribosomal protein L19

Chain DP:



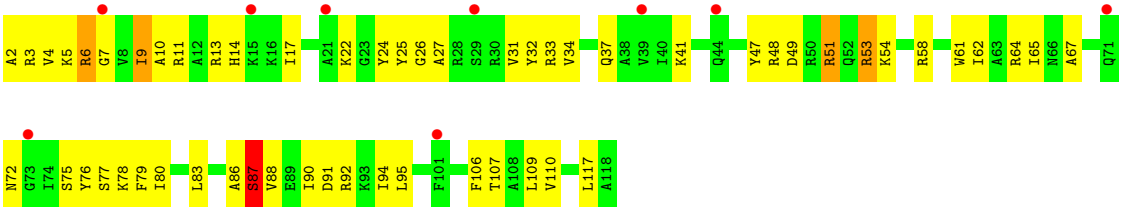
• Molecule 38: 50S ribosomal protein L20

Chain BQ:



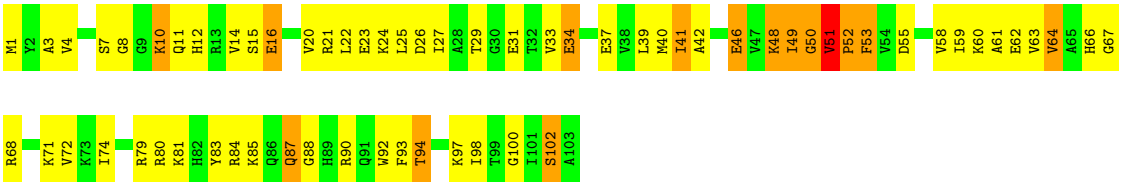
• Molecule 38: 50S ribosomal protein L20

Chain DQ:



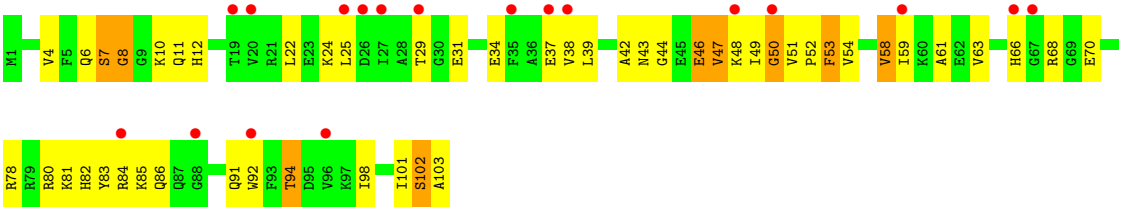
• Molecule 39: 50S ribosomal protein L21

Chain BR:



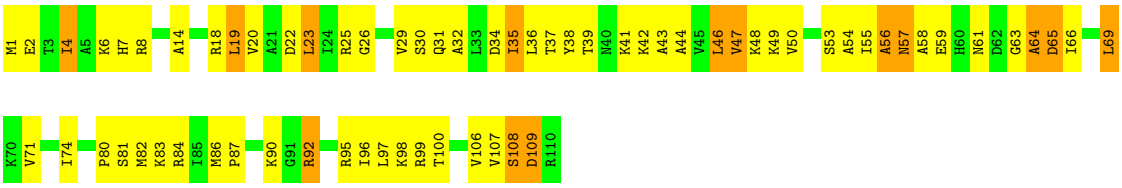
• Molecule 39: 50S ribosomal protein L21

Chain DR:



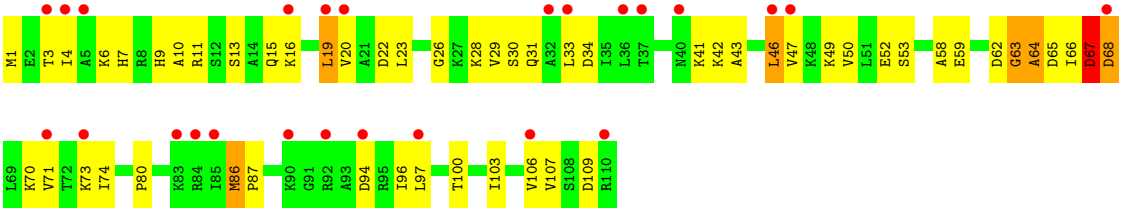
• Molecule 40: 50S ribosomal protein L22

Chain BS:



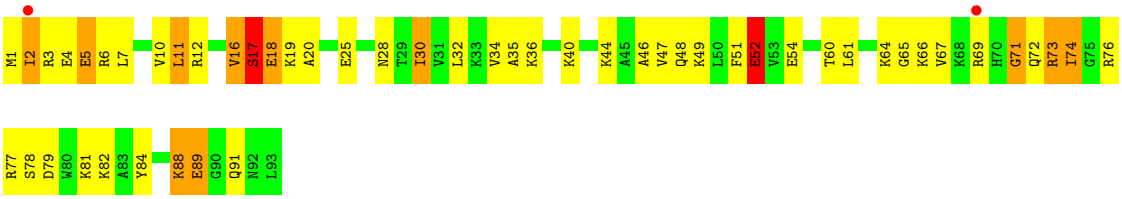
• Molecule 40: 50S ribosomal protein L22

Chain DS:

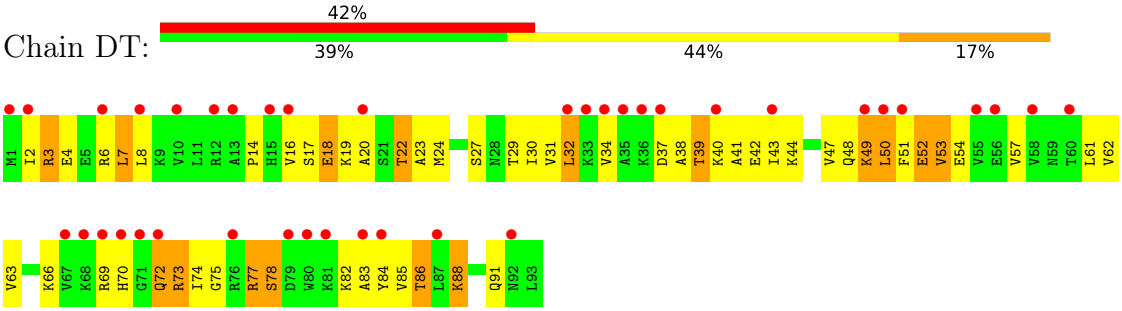


• Molecule 41: 50S ribosomal protein L23

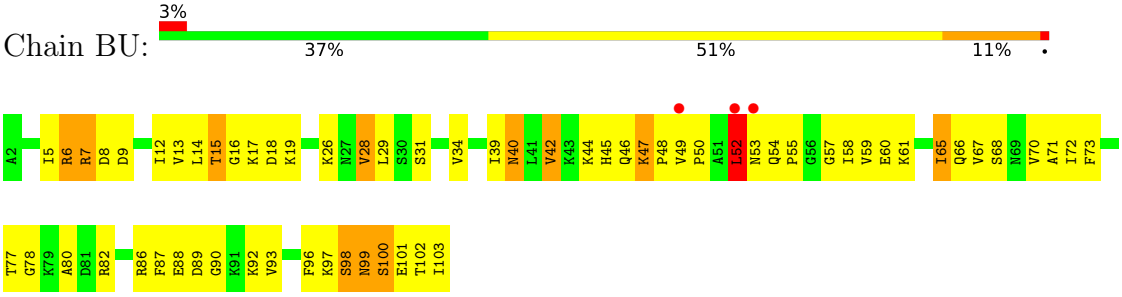
Chain BT:



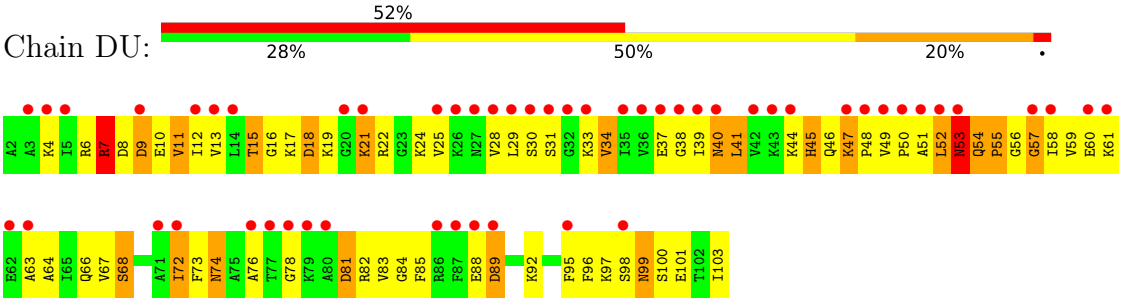
• Molecule 41: 50S ribosomal protein L23



• Molecule 42: 50S ribosomal protein L24

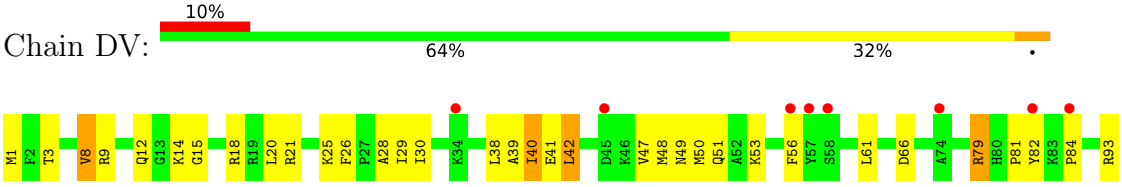


• Molecule 42: 50S ribosomal protein L24



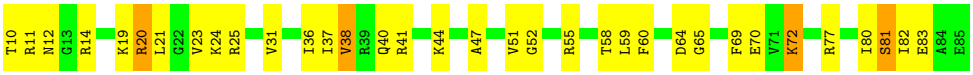
• Molecule 43: 50S ribosomal protein L25

• Molecule 43: 50S ribosomal protein L25



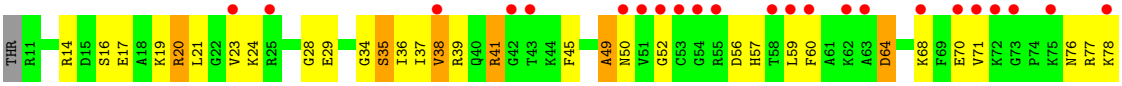
• Molecule 44: 50S ribosomal protein L27

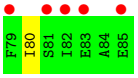
Chain BW:



• Molecule 44: 50S ribosomal protein L27

Chain DW:



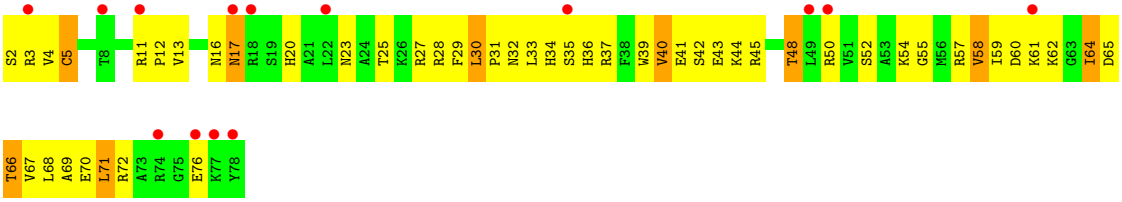


• Molecule 45: 50S ribosomal protein L28

Chain BX:

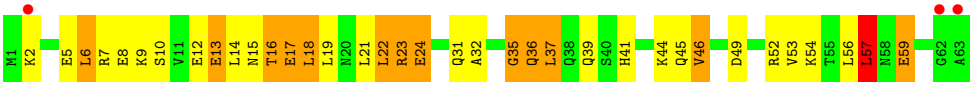
• Molecule 45: 50S ribosomal protein L28

Chain DX:



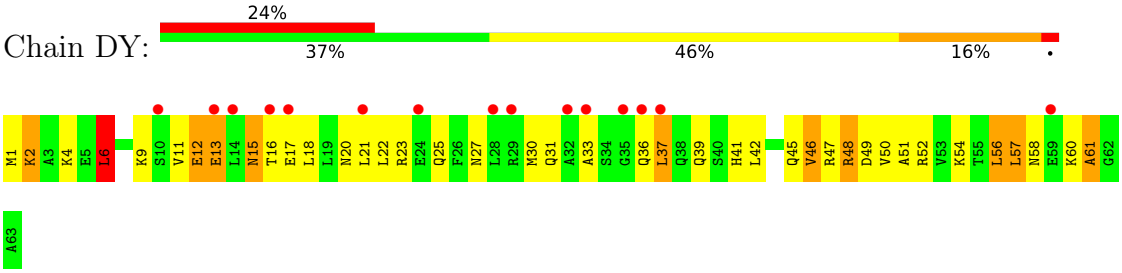
• Molecule 46: 50S ribosomal protein L29

Chain BY:



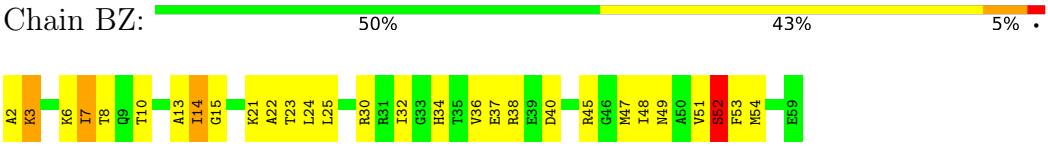
• Molecule 46: 50S ribosomal protein L29

Chain DY:



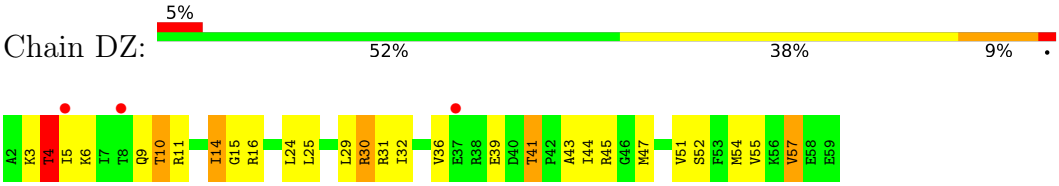
• Molecule 47: 50S ribosomal protein L30

Chain BZ:



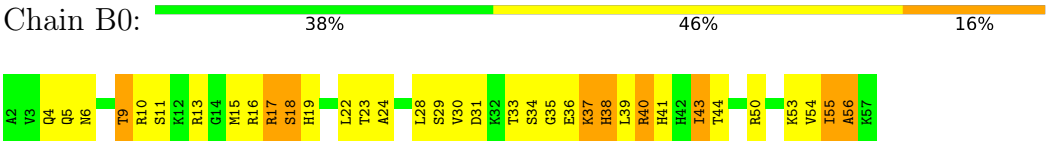
• Molecule 47: 50S ribosomal protein L30

Chain DZ:



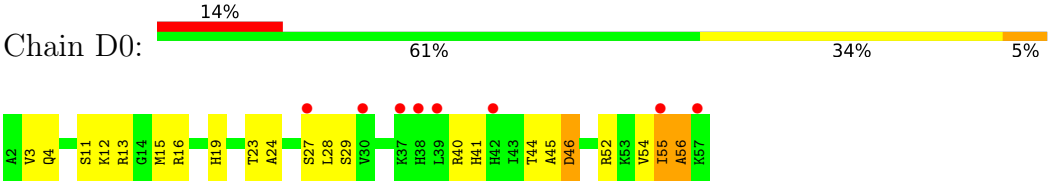
• Molecule 48: 50S ribosomal protein L32

Chain B0:



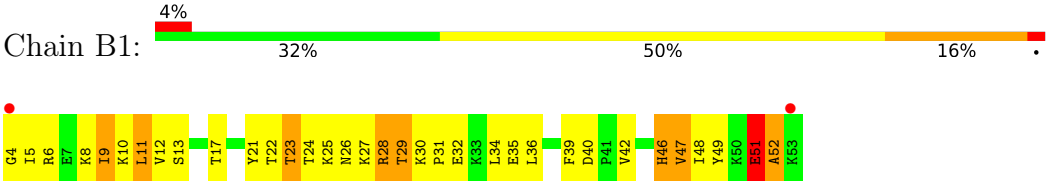
• Molecule 48: 50S ribosomal protein L32

Chain D0:



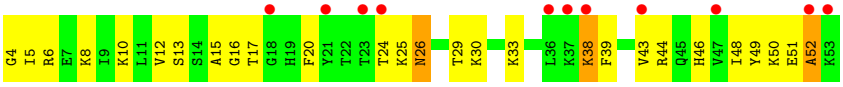
• Molecule 49: 50S ribosomal protein L33

Chain B1:



• Molecule 49: 50S ribosomal protein L33

Chain D1:

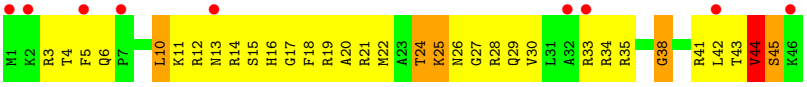


• Molecule 50: 50S ribosomal protein L34

Chain B2:

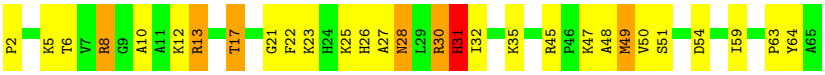
• Molecule 50: 50S ribosomal protein L34

Chain D2:



• Molecule 51: 50S ribosomal protein L35

Chain B3:



• Molecule 51: 50S ribosomal protein L35

Chain D3:

• Molecule 52: 50S ribosomal protein L36

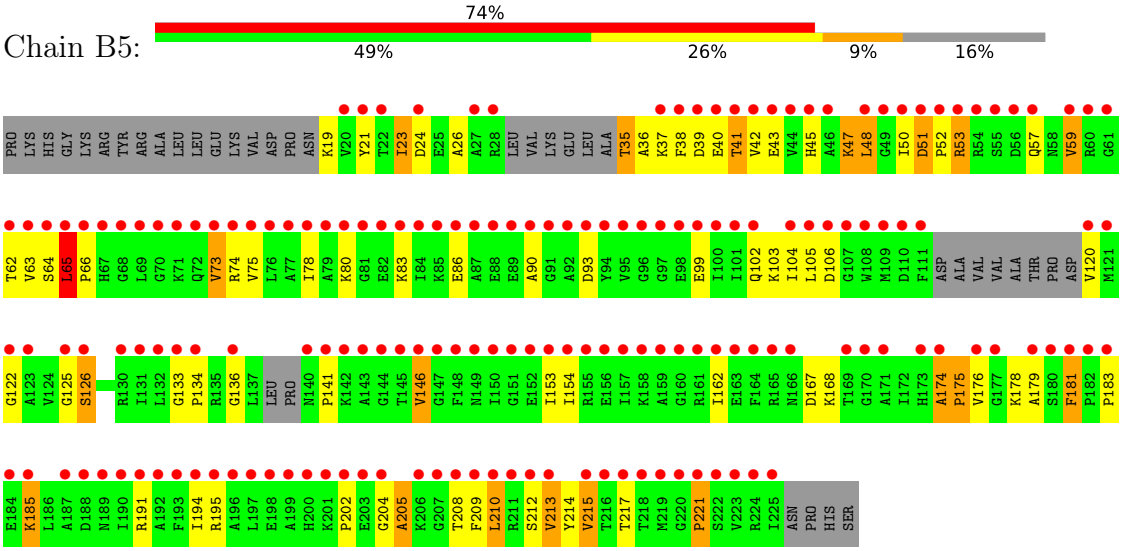
Chain B4:

• Molecule 52: 50S ribosomal protein L36

Chain D4:

• Molecule 53: 50S ribosomal protein L1

Chain B5:



• Molecule 54: Linopristin

Chain B6:

• Molecule 54: Linopristin

Chain D6:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.49Å 433.90Å 621.76Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.15 – 3.00 69.15 – 3.00	Depositor EDS
% Data completeness (in resolution range)	90.2 (69.15-3.00) 90.2 (69.15-3.00)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.46 (at 3.01Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.225 , 0.274 0.228 , 0.277	Depositor DCC
R_{free} test set	4092 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å^2)	57.2	Xtriage
Anisotropy	0.316	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.25 , 49.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.43$, $< L^2 > = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	288320	wwPDB-VP
Average B, all atoms (Å^2)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.64% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: MHW, MHU, DBB, ZN, MG, 004, 04X

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	0.52	0/36944	1.02	48/57632 (0.1%)
1	CA	0.45	0/36966	0.96	27/57666 (0.0%)
2	AB	0.44	0/1736	0.65	0/2338
2	CB	0.38	0/1736	0.59	0/2338
3	AC	0.39	0/1652	0.61	0/2225
3	CC	0.37	0/1652	0.58	1/2225 (0.0%)
4	AD	0.39	0/1665	0.64	0/2227
4	CD	0.43	0/1665	0.65	0/2227
5	AE	0.41	0/1119	0.75	0/1504
5	CE	0.41	0/1119	0.73	0/1504
6	AF	0.41	0/836	0.77	2/1128 (0.2%)
6	CF	0.35	0/836	0.64	1/1128 (0.1%)
7	AG	0.37	0/1196	0.60	0/1602
7	CG	0.38	0/1196	0.54	0/1602
8	AH	0.40	0/989	0.63	0/1326
8	CH	0.34	0/989	0.57	0/1326
9	AI	0.39	0/1034	0.65	0/1375
9	CI	0.36	0/1034	0.59	0/1375
10	AJ	0.37	0/797	0.62	0/1077
10	CJ	0.36	0/797	0.61	0/1077
11	AK	0.38	0/893	0.63	0/1205
11	CK	0.37	0/893	0.61	0/1205
12	AL	0.41	0/969	0.71	0/1300
12	CL	0.41	0/969	0.73	0/1300
13	AM	0.38	0/893	0.70	1/1193 (0.1%)
13	CM	0.39	0/893	0.62	0/1193
14	AN	0.38	0/785	0.61	0/1043
14	CN	0.34	0/785	0.52	0/1043
15	AO	0.34	0/718	0.59	0/959
15	CO	0.32	0/718	0.57	0/959
16	AP	0.40	0/659	0.70	1/884 (0.1%)
16	CP	0.36	0/659	0.60	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.37	0/658	0.66	0/881
17	CQ	0.39	0/658	0.61	0/881
18	AR	0.37	0/463	0.61	0/621
18	CR	0.37	0/463	0.58	0/621
19	AS	0.43	0/653	0.66	0/877
19	CS	0.38	0/653	0.58	0/877
20	AT	0.43	0/671	0.63	0/888
20	CT	0.35	0/671	0.56	0/888
21	AU	0.50	0/431	0.71	0/570
21	CU	0.44	0/431	0.66	0/570
22	BA	0.90	44/69659 (0.1%)	1.39	725/108672 (0.7%)
22	DA	0.45	0/69659	0.95	28/108672 (0.0%)
23	BB	0.78	2/2850 (0.1%)	1.29	20/4444 (0.5%)
23	DB	0.39	0/2828	0.89	0/4410
24	BC	0.56	1/2122 (0.0%)	0.75	1/2852 (0.0%)
24	DC	0.37	0/2122	0.61	0/2852
25	BD	0.62	0/1586	0.80	1/2134 (0.0%)
25	DD	0.34	0/1586	0.55	0/2134
26	BE	0.54	0/1571	0.70	0/2113
26	DE	0.38	0/1571	0.60	0/2113
27	BF	0.41	0/1435	0.62	0/1926
27	DF	0.37	0/1435	0.53	0/1926
28	BG	0.45	0/1343	0.67	0/1816
28	DG	0.34	0/1343	0.52	0/1816
29	BH	0.36	0/1121	0.66	1/1515 (0.1%)
29	DH	0.35	0/1121	0.56	0/1515
30	BI	0.44	0/1046	0.62	0/1410
30	DI	0.43	0/1046	0.59	0/1410
31	BJ	0.61	0/1152	0.75	1/1551 (0.1%)
31	DJ	0.35	0/1152	0.57	0/1551
32	BK	0.64	0/948	0.81	0/1268
32	DK	0.37	0/948	0.57	0/1268
33	BL	0.52	0/1054	0.75	0/1403
33	DL	0.38	0/1054	0.62	0/1403
34	BM	0.62	0/1093	0.80	1/1460 (0.1%)
34	DM	0.33	0/1093	0.56	0/1460
35	BN	0.61	0/974	0.88	3/1301 (0.2%)
35	DN	0.36	0/974	0.56	0/1301
36	BO	0.48	0/902	0.71	0/1209
36	DO	0.34	0/902	0.53	0/1209
37	BP	0.54	0/929	0.75	1/1242 (0.1%)
37	DP	0.37	0/929	0.58	0/1242
38	BQ	0.73	0/960	0.82	1/1278 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DQ	0.36	0/960	0.54	0/1278
39	BR	0.66	0/829	0.91	2/1107 (0.2%)
39	DR	0.36	0/829	0.59	0/1107
40	BS	0.72	0/864	0.81	0/1156
40	DS	0.36	0/864	0.63	0/1156
41	BT	0.49	0/745	0.68	0/994
41	DT	0.38	0/745	0.60	0/994
42	BU	0.48	0/788	0.72	0/1051
42	DU	0.43	0/788	0.61	0/1051
43	BV	0.52	0/766	0.70	0/1025
43	DV	0.32	0/766	0.48	0/1025
44	BW	0.64	0/587	0.79	0/776
44	DW	0.33	0/576	0.54	0/762
45	BX	0.45	0/635	0.73	0/848
45	DX	0.36	0/635	0.60	0/848
46	BY	0.46	0/510	0.71	0/677
46	DY	0.39	0/510	0.61	0/677
47	BZ	0.61	0/453	0.82	1/605 (0.2%)
47	DZ	0.32	0/453	0.58	0/605
48	B0	0.64	0/450	0.91	2/599 (0.3%)
48	D0	0.35	0/450	0.58	0/599
49	B1	0.46	0/417	0.67	0/554
49	D1	0.35	0/417	0.51	0/554
50	B2	0.55	0/380	0.83	0/498
50	D2	0.38	0/380	0.61	0/498
51	B3	0.58	0/513	0.75	0/676
51	D3	0.33	0/513	0.57	0/676
52	B4	0.60	0/303	0.71	0/397
52	D4	0.32	0/303	0.54	0/397
53	B5	0.39	0/1145	0.56	0/1556
54	B6	3.67	4/13 (30.8%)	4.12	3/15 (20.0%)
54	D6	3.86	3/13 (23.1%)	3.82	4/15 (26.7%)
All	All	0.59	54/310652 (0.0%)	1.02	876/464396 (0.2%)

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
5	CE	0	1
6	CF	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	AK	0	1
12	CL	0	2
21	AU	0	1
25	BD	0	1
25	DD	0	1
33	BL	0	1
48	B0	0	1
All	All	0	10

All (54) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	1142	A	N9-C4	-12.83	1.30	1.37
22	BA	528	A	N9-C4	-10.27	1.31	1.37
22	BA	528	A	N3-C4	-8.70	1.29	1.34
22	BA	974	G	N9-C4	-8.12	1.31	1.38
22	BA	979	A	N9-C4	-7.80	1.33	1.37
22	BA	1936	A	N9-C4	-7.45	1.33	1.37
22	BA	984	A	N9-C4	-7.35	1.33	1.37
22	BA	974	G	N3-C4	-7.34	1.30	1.35
54	D6	4	PRO	N-CD	-7.09	1.38	1.47
23	BB	99	A	N9-C4	-6.97	1.33	1.37
22	BA	2860	A	N9-C4	-6.96	1.33	1.37
22	BA	1254	A	N3-C4	-6.86	1.30	1.34
22	BA	979	A	N3-C4	-6.54	1.30	1.34
22	BA	1142	A	N3-C4	-6.48	1.30	1.34
22	BA	1779	U	N3-C4	-6.31	1.32	1.38
22	BA	1785	A	N9-C4	-6.23	1.34	1.37
22	BA	561	G	N9-C4	-6.18	1.33	1.38
54	B6	4	PRO	N-CA	-6.15	1.36	1.47
54	D6	2	THR	CB-OG1	-6.13	1.30	1.43
24	BC	213	TRP	CB-CG	-5.95	1.39	1.50
22	BA	974	G	N1-C2	5.87	1.42	1.37
22	BA	1779	U	C2-N3	-5.82	1.33	1.37
54	B6	4	PRO	N-CD	-5.77	1.39	1.47
22	BA	974	G	C5-C6	-5.75	1.36	1.42
22	BA	2453	A	N9-C4	-5.75	1.34	1.37
54	B6	2	THR	N-CA	-5.74	1.34	1.46
22	BA	1020	A	N9-C4	-5.72	1.34	1.37
22	BA	2250	G	N9-C4	-5.72	1.33	1.38
22	BA	528	A	N7-C5	-5.68	1.35	1.39
22	BA	689	A	N9-C4	-5.66	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	675	A	C5-C6	-5.63	1.35	1.41
22	BA	752	A	C5-C6	-5.52	1.36	1.41
22	BA	1274	A	N3-C4	-5.50	1.31	1.34
23	BB	78	A	N9-C4	-5.50	1.34	1.37
22	BA	677	A	N9-C4	-5.49	1.34	1.37
22	BA	1268	A	N9-C4	-5.42	1.34	1.37
22	BA	677	A	N3-C4	-5.42	1.31	1.34
22	BA	1296	G	C6-N1	-5.35	1.35	1.39
22	BA	974	G	N9-C8	5.34	1.41	1.37
54	D6	4	PRO	N-CA	-5.30	1.38	1.47
22	BA	1675	C	N1-C6	-5.29	1.33	1.37
22	BA	2829	A	N9-C4	-5.27	1.34	1.37
22	BA	2516	A	C5-C4	-5.26	1.35	1.38
22	BA	752	A	N7-C5	-5.21	1.36	1.39
22	BA	1800	C	N1-C6	-5.21	1.34	1.37
54	B6	2	THR	CB-OG1	-5.20	1.32	1.43
22	BA	2494	G	N3-C4	-5.10	1.31	1.35
22	BA	1302	A	N7-C5	-5.07	1.36	1.39
22	BA	783	A	N9-C4	-5.07	1.34	1.37
22	BA	2542	A	N3-C4	-5.05	1.31	1.34
22	BA	2082	A	N3-C4	-5.04	1.31	1.34
22	BA	461	C	N1-C6	-5.02	1.34	1.37
22	BA	1187	G	N7-C5	-5.01	1.36	1.39
22	BA	1233	C	N1-C6	-5.00	1.34	1.37

All (876) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	974	G	C4-C5-N7	15.39	116.95	110.80
22	BA	974	G	C5-N7-C8	-15.02	96.79	104.30
22	BA	752	A	N1-C6-N6	14.90	127.54	118.60
22	BA	974	G	N1-C6-O6	14.51	128.61	119.90
22	BA	1779	U	N3-C4-O4	-13.09	110.24	119.40
22	BA	974	G	C6-C5-N7	-12.68	122.79	130.40
22	BA	1779	U	N3-C2-O2	-12.40	113.52	122.20
22	BA	528	A	C2-N3-C4	-11.89	104.66	110.60
22	BA	974	G	N3-C4-C5	11.82	134.51	128.60
22	BA	1259	G	N1-C6-O6	-11.60	112.94	119.90
22	BA	981	A	O5'-P-OP1	-11.50	95.35	105.70
22	BA	974	G	C2-N3-C4	-11.30	106.25	111.90
22	BA	1189	A	O5'-P-OP2	-11.05	95.75	105.70
22	BA	752	A	C5-C6-N6	-10.90	114.98	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	984	A	C2-N3-C4	-10.79	105.21	110.60
22	BA	2820	A	N1-C6-N6	10.60	124.96	118.60
22	BA	2837	A	O5'-P-OP1	-10.52	96.23	105.70
22	BA	1779	U	C5-C4-O4	10.47	132.19	125.90
22	BA	1142	A	C2-N3-C4	-10.29	105.45	110.60
22	BA	2499	C	N1-C2-O2	-10.21	112.78	118.90
22	BA	752	A	C4-C5-N7	10.20	115.80	110.70
22	BA	752	A	C6-C5-N7	-10.19	125.17	132.30
22	BA	1936	A	C2-N3-C4	-9.95	105.62	110.60
22	BA	2492	U	O5'-P-OP2	-9.95	96.75	105.70
22	BA	2250	G	N3-C4-C5	9.90	133.55	128.60
22	BA	2250	G	C2-N3-C4	-9.86	106.97	111.90
22	BA	2275	C	O5'-P-OP2	-9.86	96.83	105.70
22	BA	532	A	O5'-P-OP1	-9.81	96.87	105.70
22	BA	783	A	N1-C6-N6	9.81	124.48	118.60
22	BA	1006	C	O5'-P-OP1	-9.56	97.10	105.70
22	BA	2347	C	O5'-P-OP1	-9.49	97.16	105.70
22	BA	974	G	N7-C8-N9	9.46	117.83	113.10
22	BA	1377	G	C8-N9-C4	-9.39	102.64	106.40
22	BA	1779	U	C5-C6-N1	-9.30	118.05	122.70
22	BA	1142	A	N3-C4-N9	-9.17	120.06	127.40
22	BA	752	A	C5-N7-C8	-9.16	99.32	103.90
22	BA	2250	G	C5-N7-C8	-9.13	99.73	104.30
22	BA	1142	A	N3-C4-C5	9.08	133.16	126.80
22	BA	1997	C	C6-N1-C2	8.99	123.90	120.30
22	BA	974	G	C5-C6-O6	-8.98	123.21	128.60
22	BA	1259	G	C5-C6-O6	8.91	133.95	128.60
22	BA	2822	G	N1-C6-O6	8.89	125.23	119.90
1	AA	857	C	O5'-P-OP2	-8.89	97.70	105.70
22	BA	1007	C	O5'-P-OP1	-8.80	97.78	105.70
22	BA	2250	G	N3-C4-N9	-8.79	120.73	126.00
22	BA	1779	U	N1-C2-O2	8.77	128.94	122.80
22	BA	2499	C	N3-C2-O2	8.69	127.98	121.90
22	BA	2825	G	N3-C4-C5	-8.67	124.27	128.60
22	BA	2071	A	O5'-P-OP2	-8.66	97.91	105.70
22	BA	2781	A	O5'-P-OP2	-8.59	97.97	105.70
22	BA	512	G	O4'-C1'-N9	8.49	114.99	108.20
22	BA	2677	G	O5'-P-OP2	-8.48	98.07	105.70
54	D6	4	PRO	CA-C-O	-8.41	100.01	120.20
22	BA	2042	A	O5'-P-OP2	-8.41	98.13	105.70
1	CA	1079	G	C8-N9-C4	-8.38	103.05	106.40
22	BA	2041	U	N1-C2-O2	-8.38	116.94	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	784	G	O4'-C1'-N9	-8.37	101.50	108.20
22	BA	14	A	C8-N9-C4	-8.36	102.46	105.80
22	BA	2573	C	N1-C2-O2	8.34	123.90	118.90
22	BA	2766	A	N9-C4-C5	-8.33	102.47	105.80
22	BA	992	C	C6-N1-C2	-8.30	116.98	120.30
22	BA	2679	A	N1-C6-N6	8.29	123.58	118.60
22	BA	1225	G	N3-C4-N9	8.29	130.97	126.00
22	BA	1660	G	N1-C6-O6	-8.28	114.93	119.90
22	BA	528	A	C5-C6-N1	-8.26	113.57	117.70
22	BA	2018	G	C8-N9-C4	-8.25	103.10	106.40
22	BA	740	C	C2-N3-C4	-8.23	115.79	119.90
22	BA	675	A	N1-C6-N6	8.22	123.53	118.60
22	BA	788	A	N1-C6-N6	8.22	123.53	118.60
22	BA	740	C	N1-C2-O2	-8.19	113.99	118.90
22	BA	783	A	C5-N7-C8	-8.19	99.81	103.90
22	BA	2825	G	N3-C4-N9	8.16	130.90	126.00
22	BA	2825	G	C4-N9-C1'	8.13	137.07	126.50
22	BA	1279	G	O5'-P-OP2	-8.11	98.40	105.70
22	BA	705	A	N1-C6-N6	8.10	123.46	118.60
22	BA	957	C	C6-N1-C2	8.06	123.53	120.30
22	BA	2503	A	C8-N9-C4	8.06	109.02	105.80
22	BA	561	G	N3-C4-C5	8.03	132.62	128.60
22	BA	2437	G	C5-C6-O6	-7.96	123.82	128.60
22	BA	2588	G	O5'-P-OP2	-7.96	98.54	105.70
22	BA	1223	G	N3-C4-C5	7.95	132.58	128.60
22	BA	1230	A	O5'-P-OP2	-7.95	98.55	105.70
22	BA	2799	A	N1-C6-N6	7.93	123.36	118.60
22	BA	783	A	C4-C5-N7	7.93	114.66	110.70
22	BA	2889	C	N1-C2-O2	-7.93	114.14	118.90
1	AA	53	A	O5'-P-OP2	-7.85	98.64	105.70
22	BA	1278	C	C6-N1-C2	7.77	123.41	120.30
16	AP	51	ARG	NE-CZ-NH1	7.74	124.17	120.30
22	BA	1223	G	N3-C4-N9	-7.74	121.36	126.00
22	BA	2590	A	O5'-P-OP2	7.70	119.94	110.70
22	BA	2030	A	C5-C6-N6	7.70	129.86	123.70
22	BA	2250	G	N1-C6-O6	7.69	124.52	119.90
22	BA	2277	G	N1-C6-O6	-7.68	115.29	119.90
22	BA	2820	A	C2-N3-C4	-7.68	106.76	110.60
25	BD	151	THR	C-N-CD	-7.68	103.71	120.60
37	BP	103	ARG	NE-CZ-NH1	7.64	124.12	120.30
22	BA	1264	A	O5'-P-OP1	-7.63	98.83	105.70
23	BB	99	A	C2-N3-C4	-7.63	106.78	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1328	A	OP2-P-O3'	7.62	121.97	105.20
22	BA	1654	A	O5'-P-OP1	-7.60	98.86	105.70
22	BA	1324	G	O4'-C1'-N9	7.59	114.27	108.20
22	BA	729	G	C8-N9-C4	-7.57	103.37	106.40
22	BA	530	G	C8-N9-C4	-7.57	103.37	106.40
22	BA	530	G	N9-C4-C5	7.57	108.43	105.40
22	BA	2620	C	C6-N1-C2	-7.54	117.29	120.30
6	AF	86	ARG	NE-CZ-NH1	7.52	124.06	120.30
22	BA	528	A	N3-C4-N9	-7.52	121.38	127.40
22	BA	698	C	C6-N1-C2	7.51	123.31	120.30
22	BA	2030	A	C4-C5-N7	-7.50	106.95	110.70
22	BA	1828	G	C5-C6-O6	7.49	133.10	128.60
1	AA	971	G	O4'-C1'-N9	7.48	114.19	108.20
22	BA	1262	A	OP1-P-O3'	7.48	121.66	105.20
22	BA	1223	G	C4-N9-C1'	-7.47	116.79	126.50
1	CA	1079	G	N3-C4-C5	-7.45	124.87	128.60
22	BA	995	C	O4'-C1'-N1	-7.43	102.25	108.20
22	BA	2825	G	C8-N9-C1'	-7.42	117.35	127.00
22	BA	2466	C	N1-C2-O2	-7.38	114.47	118.90
22	BA	675	A	C4-C5-N7	7.38	114.39	110.70
35	BN	71	ARG	NE-CZ-NH2	7.38	123.99	120.30
22	BA	2019	A	O5'-P-OP2	-7.36	99.08	105.70
22	BA	1945	G	N3-C4-C5	-7.35	124.92	128.60
22	BA	525	U	N3-C2-O2	-7.34	117.06	122.20
22	BA	2453	A	C8-N9-C4	7.29	108.72	105.80
22	BA	1609	A	N1-C6-N6	7.29	122.97	118.60
22	BA	1936	A	N3-C4-C5	7.28	131.89	126.80
22	BA	984	A	N3-C4-N9	-7.26	121.59	127.40
22	BA	1427	A	N1-C6-N6	-7.26	114.24	118.60
1	AA	108	G	C8-N9-C4	-7.26	103.50	106.40
1	AA	1484	C	N3-C2-O2	7.26	126.98	121.90
22	BA	675	A	C5-C6-N6	-7.22	117.92	123.70
22	BA	869	G	O5'-P-OP2	-7.22	99.20	105.70
22	BA	2023	C	C6-N1-C2	7.22	123.19	120.30
22	BA	2625	G	OP2-P-O3'	7.21	121.06	105.20
22	BA	788	A	N9-C4-C5	-7.20	102.92	105.80
22	BA	802	A	C8-N9-C4	-7.18	102.93	105.80
22	BA	1990	C	C6-N1-C2	7.16	123.16	120.30
22	BA	528	A	C5-N7-C8	-7.15	100.33	103.90
22	BA	2766	A	C8-N9-C4	7.13	108.65	105.80
22	BA	691	C	C6-N1-C2	7.11	123.14	120.30
1	AA	888	G	O5'-P-OP2	-7.10	99.31	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	984	A	N3-C4-C5	7.09	131.76	126.80
23	BB	95	U	N3-C2-O2	-7.06	117.26	122.20
22	DA	1815	A	O5'-P-OP2	-7.05	99.35	105.70
22	BA	752	A	N9-C4-C5	-7.03	102.99	105.80
22	BA	1660	G	C4-C5-N7	-7.03	107.99	110.80
22	BA	2518	A	O4'-C1'-N9	-7.02	102.59	108.20
23	BB	99	A	N3-C4-C5	7.00	131.70	126.80
22	BA	2250	G	C4-C5-N7	6.99	113.59	110.80
22	BA	1945	G	N3-C4-N9	6.97	130.19	126.00
22	BA	732	C	N1-C2-O2	-6.96	114.72	118.90
22	BA	670	A	O5'-P-OP2	-6.96	99.44	105.70
22	BA	2606	C	C6-N1-C2	6.95	123.08	120.30
22	BA	432	A	O5'-P-OP1	-6.95	99.45	105.70
22	BA	2481	G	N3-C4-C5	-6.94	125.13	128.60
22	BA	1296	G	N1-C6-O6	-6.94	115.74	119.90
22	BA	2018	G	N3-C4-C5	-6.93	125.14	128.60
22	BA	15	G	OP1-P-O3'	6.92	120.42	105.20
22	BA	2008	C	C6-N1-C2	-6.91	117.54	120.30
54	B6	2	THR	CA-C-O	-6.91	105.59	120.10
22	BA	2030	A	N9-C4-C5	6.91	108.56	105.80
22	BA	2335	A	O5'-P-OP2	-6.88	99.50	105.70
22	BA	180	G	C8-N9-C4	6.86	109.14	106.40
22	BA	2574	G	O5'-P-OP2	-6.85	99.53	105.70
22	DA	1257	C	C6-N1-C2	-6.85	117.56	120.30
22	BA	801	G	N9-C4-C5	6.85	108.14	105.40
22	BA	2873	A	C8-N9-C4	-6.85	103.06	105.80
22	BA	1128	G	C8-N9-C4	6.84	109.14	106.40
22	BA	1708	C	C6-N1-C2	6.84	123.03	120.30
22	BA	2625	G	O5'-P-OP1	-6.83	99.55	105.70
22	BA	943	A	C2-N3-C4	-6.82	107.19	110.60
22	BA	1225	G	N3-C4-C5	-6.80	125.20	128.60
22	BA	575	A	O5'-P-OP2	6.80	118.86	110.70
22	BA	1332	G	N1-C2-N2	-6.80	110.08	116.20
22	BA	2539	C	N1-C2-O2	6.80	122.98	118.90
22	BA	727	A	N1-C6-N6	6.79	122.68	118.60
22	BA	2441	U	O5'-P-OP1	-6.78	99.59	105.70
1	AA	1508	A	C8-N9-C4	6.78	108.51	105.80
22	BA	2633	G	C2-N3-C4	-6.77	108.51	111.90
35	BN	71	ARG	NE-CZ-NH1	-6.77	116.91	120.30
1	AA	1484	C	C6-N1-C2	6.77	123.01	120.30
22	BA	2712	C	C6-N1-C2	6.77	123.01	120.30
22	BA	1609	A	O5'-P-OP1	-6.76	99.61	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	752	A	N7-C8-N9	6.75	117.17	113.80
22	BA	772	C	N3-C4-C5	6.75	124.60	121.90
22	BA	2846	G	N1-C6-O6	6.74	123.94	119.90
22	BA	772	C	C6-N1-C2	6.74	122.99	120.30
22	BA	1926	U	N1-C2-O2	6.74	127.52	122.80
22	BA	1008	A	C8-N9-C4	-6.73	103.11	105.80
22	BA	2824	C	C6-N1-C2	-6.71	117.62	120.30
22	BA	1655	A	C6-N1-C2	-6.70	114.58	118.60
22	BA	180	G	N3-C4-C5	6.70	131.95	128.60
22	BA	1142	A	C5-N7-C8	-6.70	100.55	103.90
22	BA	2820	A	C4-C5-N7	6.69	114.05	110.70
22	DA	692	C	C6-N1-C2	-6.69	117.62	120.30
22	BA	2466	C	N3-C2-O2	6.68	126.58	121.90
22	BA	967	U	N3-C4-O4	-6.67	114.73	119.40
22	BA	2020	A	C8-N9-C4	-6.67	103.13	105.80
22	BA	2642	G	C8-N9-C4	6.67	109.07	106.40
22	BA	2357	G	C4-C5-N7	6.66	113.47	110.80
22	BA	801	G	N3-C4-N9	-6.66	122.00	126.00
23	BB	104	A	N1-C6-N6	6.65	122.59	118.60
22	BA	2633	G	C8-N9-C4	6.65	109.06	106.40
22	BA	974	G	C5-C6-N1	-6.64	108.18	111.50
22	BA	2814	A	N1-C6-N6	6.63	122.58	118.60
22	BA	559	G	O5'-P-OP2	-6.61	99.75	105.70
22	BA	914	G	C4-C5-N7	6.61	113.45	110.80
22	BA	1289	C	C6-N1-C2	-6.61	117.66	120.30
22	BA	1138	G	C8-N9-C4	-6.61	103.76	106.40
1	AA	400	C	C6-N1-C2	6.60	122.94	120.30
22	BA	1974	C	N1-C2-O2	-6.60	114.94	118.90
22	BA	2633	G	N3-C4-C5	6.59	131.89	128.60
22	BA	2250	G	N7-C8-N9	6.59	116.39	113.10
22	BA	2788	C	N3-C4-C5	6.58	124.53	121.90
22	BA	816	C	C6-N1-C2	-6.58	117.67	120.30
1	CA	1028	C	C6-N1-C2	-6.58	117.67	120.30
22	BA	1263	U	O5'-P-OP1	-6.57	99.79	105.70
22	BA	1938	A	C8-N9-C4	6.57	108.43	105.80
22	BA	2520	C	N3-C4-C5	-6.57	119.27	121.90
22	DA	1314	C	C2-N1-C1'	6.56	126.02	118.80
13	AM	107	ARG	NE-CZ-NH1	6.54	123.57	120.30
22	BA	745	G	N3-C4-N9	6.54	129.92	126.00
1	CA	412	A	O4'-C1'-N9	6.53	113.43	108.20
22	BA	14	A	N9-C4-C5	6.53	108.41	105.80
22	BA	1163	G	O5'-P-OP1	-6.53	99.83	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2822	G	C5-C6-O6	-6.52	124.69	128.60
22	BA	2517	C	O4'-C1'-N1	6.52	113.42	108.20
1	CA	330	C	C6-N1-C2	6.52	122.91	120.30
22	BA	2267	A	OP1-P-O3'	6.51	119.51	105.20
22	BA	2329	U	O5'-P-OP1	6.51	118.51	110.70
22	BA	995	C	N1-C2-O2	-6.49	115.01	118.90
22	BA	788	A	C5-C6-N6	-6.48	118.52	123.70
22	BA	84	A	N1-C6-N6	-6.47	114.72	118.60
22	BA	745	G	N1-C2-N2	-6.47	110.38	116.20
22	BA	2521	C	O5'-P-OP2	-6.46	99.88	105.70
22	BA	2773	C	N3-C4-C5	6.46	124.48	121.90
22	BA	1945	G	C4-N9-C1'	6.45	134.89	126.50
22	BA	1322	A	C8-N9-C4	-6.45	103.22	105.80
22	BA	2279	G	O5'-P-OP2	-6.45	99.90	105.70
22	BA	1259	G	C8-N9-C4	-6.45	103.82	106.40
22	BA	264	C	N3-C2-O2	-6.44	117.39	121.90
22	BA	1225	G	N3-C2-N2	6.44	124.41	119.90
22	BA	2055	C	C6-N1-C2	6.43	122.87	120.30
22	BA	528	A	N1-C6-N6	6.43	122.46	118.60
22	BA	1964	G	N3-C4-N9	6.43	129.86	126.00
22	BA	2057	G	N1-C6-O6	6.43	123.76	119.90
22	BA	1377	G	N3-C4-C5	-6.42	125.39	128.60
22	BA	1997	C	N3-C2-O2	6.42	126.39	121.90
22	DA	757	G	N3-C4-C5	6.42	131.81	128.60
22	BA	13	A	C8-N9-C4	-6.41	103.23	105.80
22	BA	974	G	N3-C4-N9	-6.41	122.15	126.00
22	BA	2527	C	C6-N1-C2	6.41	122.86	120.30
22	BA	2713	U	C6-N1-C2	-6.41	117.16	121.00
22	BA	2802	G	C2-N3-C4	-6.41	108.70	111.90
22	BA	2613	U	N1-C2-O2	6.39	127.27	122.80
22	BA	2788	C	C2-N3-C4	-6.39	116.70	119.90
22	BA	1964	G	N3-C4-C5	-6.39	125.41	128.60
22	BA	823	C	O5'-P-OP1	-6.38	99.95	105.70
22	BA	1328	A	P-O3'-C3'	6.38	127.36	119.70
22	BA	1997	C	N3-C4-C5	6.38	124.45	121.90
22	BA	528	A	N1-C2-N3	6.37	132.48	129.30
22	BA	2248	C	O5'-P-OP2	-6.36	99.97	105.70
23	BB	99	A	N3-C4-N9	-6.36	122.31	127.40
22	BA	2890	G	N1-C6-O6	6.34	123.71	119.90
22	BA	1128	G	N9-C4-C5	-6.34	102.86	105.40
22	BA	2483	C	O5'-P-OP1	-6.33	100.00	105.70
22	BA	528	A	N3-C4-C5	6.33	131.23	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	691	C	C6-N1-C2	-6.33	117.77	120.30
22	BA	1452	G	C5-N7-C8	-6.33	101.14	104.30
22	BA	2580	U	OP2-P-O3'	6.33	119.12	105.20
22	BA	2799	A	C5-C6-N6	-6.32	118.64	123.70
22	BA	2012	G	C5-C6-O6	-6.31	124.81	128.60
22	BA	1259	G	N9-C4-C5	6.31	107.92	105.40
23	BB	99	A	OP1-P-OP2	6.31	129.06	119.60
22	BA	527	C	C2-N1-C1'	-6.30	111.87	118.80
22	BA	528	A	C8-N9-C4	-6.29	103.28	105.80
22	BA	2352	A	C5-C6-N6	-6.29	118.67	123.70
22	BA	1475	G	O4'-C1'-N9	6.28	113.23	108.20
22	BA	1779	U	O4'-C1'-N1	6.28	113.23	108.20
1	AA	299	G	N9-C4-C5	-6.28	102.89	105.40
22	BA	967	U	C2-N1-C1'	-6.28	110.17	117.70
22	BA	2572	A	O5'-P-OP2	-6.27	100.06	105.70
22	BA	2030	A	N1-C6-N6	-6.26	114.84	118.60
6	AF	24	ARG	NE-CZ-NH1	6.26	123.43	120.30
22	BA	27	G	N3-C4-C5	-6.26	125.47	128.60
22	BA	817	C	N1-C2-O2	-6.26	115.14	118.90
22	BA	1792	G	N3-C4-C5	6.26	131.73	128.60
22	BA	2453	A	C2-N3-C4	-6.25	107.48	110.60
54	B6	2	THR	N-CA-C	-6.24	94.14	111.00
1	AA	558	G	O5'-P-OP1	-6.24	100.08	105.70
22	BA	1125	G	C6-C5-N7	-6.24	126.66	130.40
22	BA	808	G	C8-N9-C4	6.23	108.89	106.40
1	AA	1286	U	C2-N1-C1'	6.23	125.17	117.70
23	BB	97	C	N1-C2-O2	-6.22	115.17	118.90
22	BA	1997	C	C2-N1-C1'	-6.22	111.95	118.80
22	BA	2464	G	N1-C6-O6	-6.22	116.17	119.90
23	BB	100	G	C8-N9-C4	6.22	108.89	106.40
1	AA	1530	G	N3-C4-C5	6.21	131.70	128.60
22	BA	2056	G	OP1-P-O3'	6.20	118.83	105.20
22	BA	1215	G	N9-C4-C5	6.20	107.88	105.40
22	BA	1022	G	N9-C4-C5	6.19	107.88	105.40
22	BA	1377	G	N7-C8-N9	6.19	116.20	113.10
22	BA	2378	A	C8-N9-C4	6.19	108.28	105.80
1	CA	920	U	O5'-P-OP2	-6.19	100.13	105.70
22	BA	2050	C	C6-N1-C2	-6.19	117.82	120.30
22	BA	2867	G	O5'-P-OP1	-6.19	100.13	105.70
22	BA	1330	C	OP2-P-O3'	6.19	118.81	105.20
22	BA	967	U	C5-C4-O4	6.18	129.61	125.90
22	DA	1938	A	C8-N9-C4	-6.18	103.33	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	783	A	C6-C5-N7	-6.18	127.97	132.30
22	BA	783	A	C2-N3-C4	-6.17	107.52	110.60
39	BR	51	VAL	C-N-CD	6.17	141.35	128.40
22	BA	758	C	C2-N3-C4	-6.16	116.82	119.90
22	BA	2060	A	O4'-C1'-N9	6.15	113.12	108.20
22	DA	2591	C	C6-N1-C2	-6.14	117.84	120.30
1	CA	428	G	C4-N9-C1'	-6.14	118.52	126.50
22	BA	578	G	N3-C4-C5	-6.14	125.53	128.60
22	BA	961	C	N1-C2-O2	-6.13	115.22	118.90
22	BA	1185	G	N9-C4-C5	6.12	107.85	105.40
22	BA	1005	C	C6-N1-C2	-6.12	117.85	120.30
22	BA	2579	C	N3-C4-C5	6.12	124.35	121.90
22	BA	705	A	N9-C4-C5	-6.11	103.36	105.80
22	BA	2820	A	C5-N7-C8	-6.11	100.85	103.90
22	BA	729	G	N9-C4-C5	6.11	107.84	105.40
22	BA	446	G	N1-C6-O6	6.10	123.56	119.90
22	BA	1996	C	C6-N1-C2	6.10	122.74	120.30
22	BA	745	G	N3-C4-C5	-6.09	125.55	128.60
22	BA	675	A	C5-N7-C8	-6.09	100.86	103.90
22	BA	1620	G	N3-C4-N9	-6.09	122.35	126.00
22	BA	1649	G	N3-C4-C5	-6.08	125.56	128.60
22	BA	558	U	C5-C4-O4	6.08	129.55	125.90
22	BA	944	C	OP1-P-OP2	6.08	128.72	119.60
1	CA	207	C	C6-N1-C2	-6.07	117.87	120.30
22	BA	1125	G	N3-C4-N9	6.06	129.64	126.00
22	BA	686	U	C6-N1-C2	6.06	124.63	121.00
22	BA	1655	A	C5-C6-N1	6.06	120.73	117.70
22	BA	518	G	O5'-P-OP2	-6.06	100.25	105.70
22	BA	1550	C	N1-C2-O2	-6.06	115.27	118.90
22	BA	213	A	N1-C6-N6	6.05	122.23	118.60
22	BA	1651	G	OP1-P-O3'	6.04	118.49	105.20
22	BA	1620	G	N3-C4-C5	6.04	131.62	128.60
22	BA	2465	C	O5'-P-OP2	-6.03	100.27	105.70
22	BA	1394	U	O5'-P-OP1	-6.02	100.28	105.70
54	D6	2	THR	N-CA-CB	-6.01	98.87	110.30
22	BA	2437	G	C4-C5-N7	6.00	113.20	110.80
22	BA	758	C	C5-C6-N1	-5.99	118.00	121.00
22	BA	1020	A	C5-N7-C8	-5.99	100.90	103.90
22	DA	12	U	C2-N1-C1'	5.99	124.89	117.70
22	BA	1686	C	N1-C2-O2	-5.99	115.31	118.90
22	BA	64	A	C8-N9-C4	-5.98	103.41	105.80
22	BA	1478	G	N3-C2-N2	-5.97	115.72	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	766	A	C8-N9-C4	5.97	108.19	105.80
22	BA	740	C	OP1-P-OP2	-5.97	110.65	119.60
22	BA	2029	G	N3-C2-N2	-5.97	115.72	119.90
22	BA	646	U	C2-N1-C1'	-5.96	110.55	117.70
22	BA	2513	A	N1-C6-N6	-5.96	115.02	118.60
1	AA	1201	A	P-O3'-C3'	5.96	126.85	119.70
22	BA	2076	U	N3-C2-O2	-5.95	118.03	122.20
22	BA	2444	G	OP2-P-O3'	5.95	118.30	105.20
22	BA	2387	U	O5'-P-OP2	-5.95	100.34	105.70
22	BA	1828	G	C5-C6-N1	-5.95	108.53	111.50
23	BB	79	G	C2-N3-C4	5.94	114.87	111.90
22	BA	561	G	N3-C4-N9	-5.94	122.44	126.00
23	BB	79	G	C5-C6-N1	5.94	114.47	111.50
1	AA	1279	G	C6-C5-N7	-5.93	126.84	130.40
22	BA	1722	A	C8-N9-C4	5.93	108.17	105.80
1	AA	1322	C	C5-C6-N1	5.93	123.96	121.00
22	BA	1671	U	OP1-P-O3'	5.92	118.23	105.20
22	BA	1661	G	N3-C4-N9	-5.92	122.45	126.00
22	BA	461	C	C6-N1-C2	5.92	122.67	120.30
22	BA	1945	G	C8-N9-C4	-5.92	104.03	106.40
22	BA	1317	G	OP1-P-O3'	5.92	118.21	105.20
22	BA	2727	A	O5'-P-OP2	-5.92	100.38	105.70
35	BN	69	ARG	NE-CZ-NH2	5.92	123.26	120.30
1	CA	428	G	C8-N9-C1'	5.91	134.68	127.00
22	BA	2571	U	N3-C2-O2	-5.91	118.06	122.20
22	BA	2520	C	C6-N1-C2	-5.91	117.94	120.30
3	CC	11	ARG	NE-CZ-NH1	5.90	123.25	120.30
22	BA	2820	A	C6-C5-N7	-5.90	128.17	132.30
22	BA	2034	U	N3-C2-O2	-5.90	118.07	122.20
22	BA	914	G	N1-C6-O6	5.89	123.44	119.90
22	BA	942	G	N3-C4-N9	-5.89	122.47	126.00
22	BA	2018	G	N9-C4-C5	5.89	107.76	105.40
22	BA	1660	G	O5'-P-OP2	-5.89	100.40	105.70
22	BA	530	G	C4-C5-N7	-5.88	108.45	110.80
1	AA	860	A	N1-C6-N6	5.88	122.13	118.60
22	BA	1997	C	C5-C4-N4	-5.88	116.08	120.20
22	BA	2385	C	C6-N1-C2	5.88	122.65	120.30
22	BA	2357	G	C6-C5-N7	-5.87	126.88	130.40
23	BB	100	G	O5'-P-OP2	-5.87	100.42	105.70
22	BA	801	G	N3-C2-N2	-5.87	115.79	119.90
22	BA	2606	C	O5'-P-OP2	-5.86	100.42	105.70
22	BA	302	C	C6-N1-C2	-5.86	117.96	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1187	G	N3-C4-C5	5.86	131.53	128.60
22	BA	523	C	C5-C4-N4	-5.86	116.10	120.20
22	BA	2274	A	N1-C6-N6	5.86	122.11	118.60
48	B0	17	ARG	NE-CZ-NH1	5.86	123.23	120.30
22	BA	2820	A	N9-C4-C5	-5.85	103.46	105.80
22	BA	1792	G	N9-C1'-C2'	-5.85	105.57	112.00
22	BA	1936	A	N3-C4-N9	-5.84	122.73	127.40
1	AA	1484	C	N1-C2-O2	-5.84	115.40	118.90
22	BA	530	G	N3-C4-C5	-5.84	125.68	128.60
22	BA	531	C	C6-N1-C2	-5.83	117.97	120.30
1	AA	67	C	C6-N1-C2	-5.83	117.97	120.30
22	BA	2616	C	N3-C2-O2	-5.82	117.83	121.90
22	BA	2250	G	C5-C6-N1	-5.82	108.59	111.50
22	BA	1022	G	C8-N9-C4	-5.82	104.07	106.40
22	BA	1332	G	N3-C4-N9	5.82	129.49	126.00
22	BA	687	C	N1-C2-O2	-5.82	115.41	118.90
22	BA	906	U	N1-C2-O2	5.82	126.87	122.80
23	BB	79	G	O5'-P-OP1	5.82	117.68	110.70
1	AA	1322	C	C2-N3-C4	5.81	122.81	119.90
22	BA	727	A	C5-C6-N6	-5.81	119.05	123.70
22	BA	1660	G	C5-C6-O6	5.81	132.09	128.60
22	BA	1945	G	C6-C5-N7	-5.81	126.91	130.40
22	BA	1828	G	C4-C5-N7	-5.81	108.48	110.80
22	BA	1185	G	C5-C6-O6	5.80	132.08	128.60
22	BA	2606	C	O5'-P-OP1	5.80	117.66	110.70
22	BA	2757	A	N1-C6-N6	5.80	122.08	118.60
22	BA	572	A	OP1-P-OP2	5.79	128.29	119.60
22	BA	2829	A	OP1-P-OP2	5.79	128.29	119.60
22	BA	2037	A	O5'-P-OP2	-5.79	100.49	105.70
22	BA	1820	U	C2-N1-C1'	-5.78	110.76	117.70
1	CA	1112	C	C6-N1-C2	-5.78	117.99	120.30
22	BA	2705	A	N1-C6-N6	5.78	122.06	118.60
22	BA	727	A	N9-C4-C5	-5.77	103.49	105.80
22	BA	745	G	N3-C2-N2	5.77	123.94	119.90
22	BA	783	A	C5-C6-N1	-5.76	114.82	117.70
22	BA	2687	U	O5'-P-OP1	-5.76	100.51	105.70
1	AA	299	G	C4-C5-N7	5.76	113.11	110.80
22	BA	998	C	C6-N1-C2	-5.76	118.00	120.30
22	BA	1254	A	C6-N1-C2	-5.76	115.14	118.60
22	BA	2846	G	C5-C6-O6	-5.76	125.14	128.60
22	BA	2511	U	O5'-P-OP1	-5.76	100.52	105.70
22	BA	1219	U	N3-C2-O2	-5.75	118.17	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2222	C	C6-N1-C2	-5.75	118.00	120.30
22	BA	1673	G	OP1-P-O3'	5.75	117.85	105.20
22	BA	2591	C	N1-C2-O2	-5.75	115.45	118.90
22	BA	33	C	C5-C4-N4	-5.75	116.18	120.20
22	BA	2713	U	N1-C2-N3	5.74	118.35	114.90
22	BA	2686	G	N3-C4-N9	-5.73	122.56	126.00
1	AA	507	C	N1-C2-O2	5.73	122.34	118.90
1	CA	4	U	C2-N1-C1'	5.73	124.58	117.70
22	BA	2539	C	N3-C2-O2	-5.73	117.89	121.90
22	DA	974	G	C4-N9-C1'	5.72	133.94	126.50
22	BA	2705	A	C5-C6-N6	-5.72	119.12	123.70
22	BA	1223	G	C8-N9-C1'	5.72	134.44	127.00
22	BA	2685	G	OP1-P-O3'	5.72	117.78	105.20
22	BA	660	C	N1-C2-O2	-5.72	115.47	118.90
22	BA	1259	G	N3-C4-C5	-5.72	125.74	128.60
22	BA	2646	C	C6-N1-C2	-5.71	118.02	120.30
38	BQ	53	ARG	NE-CZ-NH1	5.71	123.16	120.30
22	BA	1706	C	C6-N1-C2	5.70	122.58	120.30
22	BA	1774	C	N1-C2-O2	-5.70	115.48	118.90
22	BA	2047	C	N3-C2-O2	5.70	125.89	121.90
22	BA	2352	A	N1-C6-N6	5.70	122.02	118.60
1	AA	819	A	O5'-P-OP1	-5.70	100.57	105.70
22	BA	856	G	OP2-P-O3'	5.70	117.74	105.20
22	BA	602	A	O5'-P-OP2	-5.70	100.57	105.70
22	BA	589	U	O5'-P-OP2	-5.70	100.57	105.70
22	BA	774	G	O5'-P-OP2	-5.69	100.58	105.70
22	BA	853	C	C6-N1-C2	5.69	122.58	120.30
22	BA	1031	G	C8-N9-C4	-5.69	104.12	106.40
22	BA	1779	U	C2-N3-C4	-5.68	123.59	127.00
22	BA	2252	G	C8-N9-C4	5.68	108.67	106.40
22	BA	2524	G	C5-C6-N1	5.68	114.34	111.50
22	BA	1938	A	N7-C8-N9	-5.68	110.96	113.80
22	BA	2545	G	C4-N9-C1'	5.68	133.89	126.50
22	BA	2076	U	N1-C2-N3	5.68	118.31	114.90
39	BR	4	VAL	CB-CA-C	-5.68	100.61	111.40
22	BA	1302	A	C4-C5-C6	5.67	119.84	117.00
22	BA	1675	C	C2-N3-C4	-5.67	117.06	119.90
22	BA	567	U	N3-C2-O2	5.67	126.17	122.20
22	BA	2481	G	C8-N9-C4	-5.67	104.13	106.40
23	BB	93	C	O5'-P-OP2	-5.67	100.59	105.70
1	AA	891	U	C6-N1-C2	5.67	124.40	121.00
22	BA	2452	C	N3-C4-C5	-5.67	119.63	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2890	G	C5-C6-O6	-5.66	125.20	128.60
22	BA	993	G	C5-C6-O6	5.66	132.00	128.60
22	BA	674	G	N3-C2-N2	5.66	123.86	119.90
22	BA	1259	G	C4-C5-N7	-5.66	108.54	110.80
22	BA	1801	A	N1-C6-N6	5.66	122.00	118.60
22	BA	1189	A	O5'-P-OP1	5.66	117.49	110.70
22	BA	2844	G	N3-C4-N9	5.66	129.39	126.00
1	CA	1286	U	C2-N1-C1'	5.65	124.48	117.70
22	BA	1452	G	C4-C5-N7	5.65	113.06	110.80
22	BA	1636	U	C6-N1-C2	-5.65	117.61	121.00
22	BA	686	U	C2-N1-C1'	-5.65	110.92	117.70
22	BA	908	C	O5'-P-OP2	-5.65	100.61	105.70
22	BA	640	C	C6-N1-C2	5.65	122.56	120.30
1	AA	664	G	N3-C4-N9	-5.65	122.61	126.00
22	BA	1613	G	N9-C4-C5	-5.65	103.14	105.40
22	BA	739	A	C2-N3-C4	-5.64	107.78	110.60
22	BA	2848	G	O4'-C1'-N9	5.64	112.72	108.20
22	BA	2437	G	N1-C6-O6	5.64	123.28	119.90
22	BA	2789	C	C2-N3-C4	-5.64	117.08	119.90
22	BA	787	C	C6-N1-C2	5.63	122.55	120.30
22	BA	998	C	OP1-P-O3'	5.63	117.59	105.20
1	AA	664	G	C4-N9-C1'	-5.63	119.18	126.50
22	BA	745	G	C4-N9-C1'	5.63	133.82	126.50
22	BA	1828	G	N9-C4-C5	5.63	107.65	105.40
22	BA	528	A	N7-C8-N9	5.63	116.61	113.80
22	BA	783	A	N7-C8-N9	5.63	116.61	113.80
22	BA	1019	U	N1-C2-O2	-5.63	118.86	122.80
22	BA	1609	A	N9-C4-C5	-5.63	103.55	105.80
22	BA	2054	A	OP2-P-O3'	5.63	117.58	105.20
22	BA	2270	A	OP2-P-O3'	5.63	117.58	105.20
22	BA	1235	G	C8-N9-C4	-5.62	104.15	106.40
22	BA	1635	A	C2-N3-C4	-5.62	107.79	110.60
22	BA	1816	C	C2-N1-C1'	-5.62	112.61	118.80
22	BA	479	A	O4'-C1'-N9	5.62	112.70	108.20
22	BA	2887	A	N1-C6-N6	5.61	121.97	118.60
6	CF	86	ARG	NE-CZ-NH1	5.61	123.11	120.30
22	BA	451	U	C2-N1-C1'	-5.61	110.97	117.70
22	BA	706	A	O5'-P-OP2	-5.60	100.66	105.70
1	AA	1508	A	N7-C8-N9	-5.60	111.00	113.80
22	BA	1185	G	C4-C5-N7	-5.60	108.56	110.80
22	BA	806	C	C6-N1-C2	-5.60	118.06	120.30
22	BA	1185	G	N1-C6-O6	-5.60	116.54	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	535	G	N1-C2-N2	-5.59	111.17	116.20
22	BA	974	G	N9-C1'-C2'	5.59	121.26	114.00
22	BA	27	G	C2-N3-C4	5.58	114.69	111.90
22	BA	684	G	N3-C4-C5	5.58	131.39	128.60
22	BA	2645	G	O4'-C1'-N9	5.58	112.67	108.20
22	BA	675	A	C6-C5-N7	-5.58	128.39	132.30
22	BA	1415	U	C2-N1-C1'	5.58	124.39	117.70
1	AA	1279	G	N1-C6-O6	5.58	123.25	119.90
22	BA	1472	C	C6-N1-C2	5.58	122.53	120.30
22	BA	1645	G	N1-C2-N2	-5.58	111.18	116.20
22	BA	2582	G	OP1-P-O3'	5.58	117.47	105.20
22	BA	523	C	N3-C4-N4	5.57	121.90	118.00
22	BA	537	G	O5'-P-OP2	5.57	117.39	110.70
22	BA	1790	C	N3-C4-C5	5.57	124.13	121.90
22	BA	1945	G	N7-C8-N9	5.57	115.88	113.10
22	BA	2022	U	O5'-P-OP1	-5.57	100.69	105.70
22	BA	454	A	O5'-P-OP2	-5.57	100.69	105.70
22	BA	1520	U	C6-N1-C2	5.56	124.34	121.00
22	BA	1332	G	C8-N9-C1'	-5.56	119.78	127.00
22	BA	2443	C	N1-C2-O2	-5.56	115.56	118.90
22	BA	2553	G	N3-C4-C5	-5.56	125.82	128.60
22	BA	1909	C	C2-N1-C1'	5.56	124.91	118.80
1	AA	1279	G	N7-C8-N9	5.55	115.88	113.10
22	DA	2771	C	C6-N1-C2	-5.55	118.08	120.30
22	BA	2063	C	C6-N1-C2	-5.55	118.08	120.30
22	BA	264	C	C6-N1-C2	-5.55	118.08	120.30
22	BA	1609	A	C8-N9-C4	5.55	108.02	105.80
22	BA	2800	A	O5'-P-OP2	-5.55	100.71	105.70
22	BA	2825	G	O5'-P-OP2	-5.55	100.71	105.70
22	BA	1271	G	C8-N9-C4	5.54	108.62	106.40
22	BA	906	U	N3-C2-O2	-5.53	118.33	122.20
22	BA	993	G	C4-C5-N7	-5.53	108.59	110.80
22	BA	1573	G	N3-C4-C5	5.53	131.37	128.60
23	BB	80	U	N3-C2-O2	5.53	126.07	122.20
22	BA	597	G	N3-C4-C5	-5.53	125.84	128.60
22	BA	2363	G	C2-N3-C4	-5.53	109.14	111.90
54	D6	4	PRO	CA-N-CD	-5.53	103.76	111.50
22	BA	2888	C	C6-N1-C2	-5.52	118.09	120.30
24	BC	213	TRP	CB-CA-C	5.52	121.45	110.40
1	AA	536	C	C6-N1-C2	-5.52	118.09	120.30
22	BA	2036	C	OP2-P-O3'	5.52	117.35	105.20
22	BA	740	C	O5'-P-OP1	5.52	117.32	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	527	C	O4'-C1'-N1	5.52	112.61	108.20
22	BA	670	A	N1-C6-N6	-5.52	115.29	118.60
22	BA	980	A	OP1-P-O3'	5.52	117.34	105.20
22	BA	1022	G	C8-N9-C1'	5.52	134.17	127.00
22	BA	1920	C	C6-N1-C2	-5.52	118.09	120.30
22	BA	1966	A	O4'-C1'-N9	-5.52	103.79	108.20
54	B6	4	PRO	N-CD-CG	5.52	111.47	103.20
22	BA	442	G	N3-C4-C5	-5.51	125.84	128.60
22	BA	1299	G	C6-C5-N7	-5.51	127.09	130.40
22	BA	1792	G	N1-C6-O6	5.51	123.21	119.90
22	BA	2598	A	C5-C6-N1	5.51	120.46	117.70
22	BA	2710	C	OP2-P-O3'	5.51	117.32	105.20
22	BA	2611	C	N1-C2-O2	-5.51	115.59	118.90
22	BA	525	U	C5-C4-O4	5.51	129.20	125.90
48	B0	17	ARG	NE-CZ-NH2	-5.51	117.55	120.30
1	AA	71	A	N1-C6-N6	5.50	121.90	118.60
22	BA	1215	G	OP1-P-O3'	5.49	117.29	105.20
1	CA	209	U	C2-N1-C1'	5.49	124.29	117.70
1	AA	1520	C	OP2-P-O3'	5.49	117.28	105.20
22	BA	2773	C	C6-N1-C2	5.49	122.50	120.30
22	BA	942	G	N3-C4-C5	5.49	131.34	128.60
22	BA	1656	C	C6-N1-C2	-5.49	118.10	120.30
22	BA	2466	C	C5-C4-N4	-5.49	116.36	120.20
22	BA	469	G	N3-C2-N2	-5.49	116.06	119.90
22	BA	2421	G	C8-N9-C4	-5.49	104.20	106.40
22	BA	801	G	C8-N9-C1'	5.49	134.13	127.00
22	BA	914	G	C5-C6-O6	-5.49	125.31	128.60
22	BA	2616	C	C6-N1-C2	-5.49	118.11	120.30
22	BA	1784	A	C2-N3-C4	-5.48	107.86	110.60
1	CA	575	G	N3-C4-C5	5.48	131.34	128.60
22	BA	508	A	O5'-P-OP1	-5.48	100.77	105.70
1	CA	18	C	C6-N1-C2	-5.48	118.11	120.30
1	AA	1504	G	O4'-C1'-N9	5.47	112.58	108.20
22	BA	2378	A	N9-C4-C5	-5.47	103.61	105.80
1	AA	503	C	C6-N1-C2	-5.47	118.11	120.30
22	BA	1613	G	C8-N9-C4	5.47	108.59	106.40
22	BA	2096	C	C6-N1-C2	-5.47	118.11	120.30
22	BA	772	C	N1-C2-O2	5.47	122.18	118.90
22	BA	1764	C	C6-N1-C2	5.47	122.49	120.30
22	BA	2820	A	C5-C6-N6	-5.46	119.33	123.70
22	BA	1332	G	N3-C2-N2	5.46	123.72	119.90
22	BA	1648	U	O5'-P-OP2	5.46	117.25	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	365	U	C2-N1-C1'	-5.46	111.15	117.70
22	BA	783	A	N9-C4-C5	-5.46	103.62	105.80
22	BA	1020	A	C4-C5-N7	5.46	113.43	110.70
22	BA	2520	C	N3-C4-N4	5.45	121.82	118.00
22	BA	616	A	C8-N9-C4	5.45	107.98	105.80
22	BA	512	G	O5'-P-OP2	-5.45	100.80	105.70
22	BA	1357	C	N1-C2-O2	-5.45	115.63	118.90
22	BA	2866	U	N3-C2-O2	-5.45	118.38	122.20
22	BA	805	G	C8-N9-C4	5.45	108.58	106.40
22	BA	1003	G	O5'-P-OP1	-5.45	100.80	105.70
22	BA	586	A	C8-N9-C4	5.44	107.98	105.80
22	BA	1137	G	O5'-P-OP2	-5.44	100.80	105.70
22	BA	1328	A	O5'-P-OP1	5.44	117.23	110.70
22	BA	2605	U	O5'-P-OP2	-5.44	100.81	105.70
22	DA	784	G	N3-C4-N9	5.44	129.26	126.00
22	BA	749	A	OP1-P-O3'	5.43	117.15	105.20
22	BA	956	G	N3-C4-C5	5.43	131.32	128.60
22	BA	557	C	O5'-P-OP2	-5.43	100.81	105.70
22	BA	1926	U	N3-C2-O2	-5.43	118.40	122.20
22	BA	2003	A	N1-C6-N6	5.43	121.86	118.60
22	BA	1117	C	C6-N1-C2	5.42	122.47	120.30
22	BA	2029	G	C5-C6-N1	-5.42	108.79	111.50
22	BA	745	G	C6-C5-N7	-5.42	127.15	130.40
22	DA	1677	A	N1-C6-N6	5.42	121.85	118.60
22	BA	527	C	C6-N1-C1'	5.42	127.31	120.80
22	BA	528	A	O4'-C1'-N9	-5.42	103.87	108.20
22	BA	2726	A	O5'-P-OP1	-5.42	100.82	105.70
22	BA	822	G	N1-C2-N3	5.42	127.15	123.90
22	DA	974	G	C6-C5-N7	-5.41	127.15	130.40
22	BA	932	U	N3-C2-O2	-5.41	118.41	122.20
22	BA	2615	U	C2-N1-C1'	5.41	124.19	117.70
22	BA	918	A	OP2-P-O3'	5.41	117.09	105.20
22	DA	129	C	C6-N1-C2	5.40	122.46	120.30
22	BA	1190	G	OP2-P-O3'	5.40	117.08	105.20
22	BA	2497	A	N1-C6-N6	-5.40	115.36	118.60
22	BA	727	A	C8-N9-C4	5.39	107.96	105.80
31	BJ	5	THR	CB-CA-C	-5.39	97.04	111.60
1	CA	428	G	O4'-C1'-N9	5.39	112.51	108.20
22	BA	1388	G	C8-N9-C4	5.39	108.56	106.40
22	BA	1640	A	N1-C6-N6	-5.38	115.37	118.60
22	BA	1926	U	P-O3'-C3'	-5.38	113.24	119.70
22	BA	840	C	N1-C2-O2	-5.38	115.67	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2822	G	C4-C5-N7	5.38	112.95	110.80
22	BA	746	U	O4'-C1'-N1	5.38	112.50	108.20
22	BA	671	C	C2-N3-C4	-5.38	117.21	119.90
22	BA	2421	G	N3-C4-C5	-5.37	125.91	128.60
22	BA	937	C	N1-C2-O2	-5.37	115.68	118.90
22	BA	2378	A	N1-C6-N6	5.37	121.82	118.60
22	BA	1430	G	O5'-P-OP2	5.37	117.14	110.70
22	BA	1658	C	C6-N1-C2	5.36	122.44	120.30
22	BA	2894	G	C4-N9-C1'	-5.36	119.53	126.50
22	BA	1020	A	N1-C6-N6	5.36	121.82	118.60
22	BA	1648	U	O5'-P-OP1	-5.36	100.88	105.70
1	AA	915	A	OP1-P-O3'	5.36	116.99	105.20
22	BA	2503	A	N7-C8-N9	-5.36	111.12	113.80
22	BA	1305	C	OP1-P-O3'	5.35	116.98	105.20
22	DA	1368	G	N3-C4-C5	-5.35	125.92	128.60
22	BA	784	G	P-O3'-C3'	5.35	126.12	119.70
22	BA	968	C	N3-C4-C5	5.35	124.04	121.90
23	BB	79	G	N3-C4-N9	5.35	129.21	126.00
22	BA	404	A	C8-N9-C4	-5.34	103.66	105.80
22	BA	1807	G	C8-N9-C4	-5.34	104.26	106.40
22	BA	2699	C	O5'-P-OP2	-5.34	100.89	105.70
22	BA	2624	G	N3-C2-N2	-5.34	116.16	119.90
22	BA	2050	C	C2-N1-C1'	5.34	124.67	118.80
22	BA	1262	A	C8-N9-C4	-5.33	103.67	105.80
22	BA	2678	C	C6-N1-C2	5.33	122.43	120.30
22	BA	2375	G	N3-C4-N9	-5.33	122.80	126.00
22	BA	563	A	OP1-P-O3'	5.33	116.92	105.20
22	BA	2008	C	C5-C6-N1	5.33	123.67	121.00
1	CA	1029	U	C2-N1-C1'	5.33	124.09	117.70
1	AA	1322	C	C2-N1-C1'	5.32	124.66	118.80
22	BA	1426	G	C4-C5-N7	5.32	112.93	110.80
22	BA	2013	A	N1-C6-N6	5.32	121.79	118.60
22	BA	2853	C	C6-N1-C2	5.32	122.43	120.30
22	BA	2894	G	N3-C4-C5	5.32	131.26	128.60
22	BA	2277	G	C5-C6-O6	5.32	131.79	128.60
23	BB	100	G	N9-C4-C5	-5.32	103.27	105.40
22	BA	1216	G	O5'-P-OP2	5.31	117.08	110.70
22	BA	322	A	O5'-P-OP1	-5.31	100.92	105.70
22	BA	915	C	C6-N1-C2	-5.31	118.18	120.30
22	DA	481	G	O4'-C1'-N9	5.31	112.45	108.20
22	BA	2846	G	C4-C5-N7	5.31	112.92	110.80
22	BA	912	C	OP1-P-OP2	5.30	127.56	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2590	A	OP1-P-OP2	-5.30	111.64	119.60
22	BA	2846	G	N3-C4-C5	5.30	131.25	128.60
22	BA	248	G	N1-C6-O6	5.30	123.08	119.90
22	BA	2481	G	C4-N9-C1'	5.29	133.38	126.50
22	BA	1626	A	C2-N3-C4	-5.29	107.95	110.60
22	BA	2870	C	OP2-P-O3'	5.29	116.83	105.20
22	BA	2437	G	N9-C4-C5	-5.29	103.28	105.40
22	BA	195	A	C8-N9-C4	-5.29	103.69	105.80
22	BA	2416	C	C6-N1-C2	-5.28	118.19	120.30
22	BA	2433	A	O5'-P-OP1	-5.28	100.95	105.70
22	BA	2025	C	O5'-P-OP2	-5.28	100.95	105.70
22	DA	2078	C	C6-N1-C2	5.27	122.41	120.30
22	BA	745	G	C8-N9-C1'	-5.27	120.15	127.00
22	BA	1994	C	C6-N1-C2	5.27	122.41	120.30
22	BA	2274	A	OP2-P-O3'	5.27	116.79	105.20
22	BA	535	G	N3-C2-N2	5.27	123.59	119.90
22	BA	1426	G	N9-C4-C5	-5.27	103.29	105.40
23	BB	78	A	C2-N3-C4	-5.27	107.97	110.60
22	DA	581	C	C6-N1-C2	-5.27	118.19	120.30
22	BA	2697	G	C8-N9-C4	-5.26	104.29	106.40
22	DA	948	C	C6-N1-C2	-5.26	118.19	120.30
22	BA	1306	C	O5'-P-OP2	5.26	117.01	110.70
22	BA	1824	G	N3-C4-C5	-5.26	125.97	128.60
22	BA	2871	U	C5-C6-N1	-5.25	120.07	122.70
22	BA	585	G	N3-C4-C5	-5.25	125.97	128.60
1	AA	575	G	N3-C4-N9	-5.25	122.85	126.00
22	BA	1791	A	OP1-P-OP2	-5.25	111.72	119.60
22	BA	2021	C	OP1-P-O3'	5.25	116.75	105.20
22	BA	578	G	N3-C4-N9	5.25	129.15	126.00
22	BA	706	A	N1-C6-N6	5.25	121.75	118.60
22	BA	866	A	N1-C6-N6	5.25	121.75	118.60
22	BA	795	C	OP2-P-O3'	5.24	116.73	105.20
22	BA	1125	G	C8-N9-C1'	-5.24	120.19	127.00
1	AA	254	G	C8-N9-C4	-5.24	104.31	106.40
22	BA	2041	U	N3-C2-O2	5.24	125.86	122.20
22	BA	1470	A	N1-C6-N6	5.23	121.74	118.60
22	BA	1992	G	N3-C4-C5	-5.23	125.98	128.60
22	BA	1609	A	C5-C6-N6	-5.23	119.52	123.70
22	BA	2514	U	N1-C2-O2	-5.23	119.14	122.80
22	BA	811	U	C5-C4-O4	5.23	129.03	125.90
22	BA	2874	C	N3-C4-C5	5.22	123.99	121.90
54	D6	2	THR	CA-C-O	-5.22	109.13	120.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	748	G	C8-N9-C1'	5.22	133.79	127.00
1	AA	781	A	N1-C6-N6	5.22	121.73	118.60
22	BA	1299	G	N3-C4-C5	-5.22	125.99	128.60
22	BA	2425	A	P-O3'-C3'	5.21	125.96	119.70
22	BA	2502	G	C8-N9-C4	-5.21	104.31	106.40
22	BA	397	U	OP2-P-O3'	5.21	116.67	105.20
22	DA	2803	G	C4-N9-C1'	-5.21	119.73	126.50
23	BB	102	G	O5'-P-OP1	-5.21	101.01	105.70
22	BA	2432	A	OP1-P-O3'	5.21	116.66	105.20
22	BA	788	A	C4-C5-N7	5.20	113.30	110.70
22	BA	2814	A	C5-C6-N6	-5.20	119.54	123.70
22	BA	684	G	N1-C6-O6	5.20	123.02	119.90
22	BA	1281	G	OP1-P-OP2	-5.19	111.81	119.60
22	BA	2057	G	C6-C5-N7	-5.19	127.28	130.40
23	BB	79	G	C5-C6-O6	-5.19	125.48	128.60
22	BA	930	G	O5'-P-OP2	-5.19	101.03	105.70
22	BA	919	U	C5-C4-O4	-5.19	122.79	125.90
22	BA	805	G	N3-C4-C5	5.19	131.19	128.60
22	BA	2837	A	O5'-P-OP2	5.19	116.92	110.70
22	BA	2063	C	C5-C6-N1	5.18	123.59	121.00
1	AA	362	G	N3-C4-N9	5.18	129.11	126.00
22	BA	2703	C	O5'-P-OP2	-5.18	101.04	105.70
1	CA	811	C	OP2-P-O3'	5.18	116.60	105.20
22	BA	40	U	O5'-P-OP1	-5.16	101.05	105.70
22	BA	180	G	C4-N9-C1'	-5.16	119.79	126.50
22	BA	646	U	C6-N1-C1'	5.16	128.43	121.20
22	BA	974	G	N9-C4-C5	-5.16	103.34	105.40
22	BA	2710	C	C2-N3-C4	-5.16	117.32	119.90
22	BA	2715	C	O5'-P-OP2	-5.16	101.06	105.70
22	BA	1929	G	N3-C4-N9	5.16	129.09	126.00
22	BA	1306	C	C6-N1-C2	-5.16	118.24	120.30
22	BA	963	U	OP2-P-O3'	5.16	116.54	105.20
22	BA	1294	U	O5'-P-OP2	-5.16	101.06	105.70
22	BA	1158	C	N1-C2-O2	5.15	121.99	118.90
22	BA	2699	C	OP2-P-O3'	5.15	116.53	105.20
29	BH	121	VAL	C-N-CA	5.15	134.58	121.70
1	CA	496	A	O4'-C1'-N9	5.15	112.32	108.20
22	DA	684	G	N3-C4-C5	5.15	131.18	128.60
1	CA	664	G	N3-C2-N2	-5.15	116.30	119.90
22	BA	1658	C	C5-C4-N4	-5.15	116.60	120.20
22	BA	2624	G	N1-C2-N2	5.15	120.83	116.20
22	BA	2509	G	C5-C6-N1	5.14	114.07	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	910	A	O5'-P-OP1	5.14	116.87	110.70
22	BA	588	U	C5-C4-O4	-5.14	122.82	125.90
22	BA	790	U	P-O3'-C3'	-5.13	113.54	119.70
22	BA	915	C	C2-N1-C1'	5.13	124.44	118.80
22	BA	1660	G	C6-C5-N7	5.13	133.48	130.40
22	BA	1790	C	OP1-P-O3'	5.13	116.49	105.20
22	BA	525	U	N1-C2-N3	5.13	117.98	114.90
22	BA	1145	C	C6-N1-C2	-5.13	118.25	120.30
22	DA	748	G	O4'-C1'-N9	5.13	112.30	108.20
22	BA	1776	G	C8-N9-C1'	-5.12	120.34	127.00
22	BA	2427	C	C6-N1-C2	5.12	122.35	120.30
22	BA	574	A	O5'-P-OP1	-5.12	101.09	105.70
22	BA	751	A	O5'-P-OP1	-5.12	101.09	105.70
22	BA	704	G	O4'-C1'-N9	5.12	112.30	108.20
22	BA	824	U	N1-C2-O2	-5.12	119.22	122.80
22	BA	1757	A	OP1-P-O3'	5.12	116.45	105.20
22	BA	845	A	N1-C6-N6	5.11	121.67	118.60
22	BA	1776	G	C4-N9-C1'	5.11	133.15	126.50
22	BA	2026	U	OP2-P-O3'	5.11	116.44	105.20
22	BA	1649	G	N3-C4-N9	5.11	129.06	126.00
47	BZ	7	ILE	CB-CA-C	-5.11	101.39	111.60
22	BA	746	U	C2-N1-C1'	-5.10	111.58	117.70
22	BA	1426	G	N3-C4-N9	5.10	129.06	126.00
22	BA	2381	A	C8-N9-C4	5.10	107.84	105.80
22	BA	1934	C	OP2-P-O3'	5.10	116.42	105.20
22	BA	2014	A	C5-C6-N6	-5.10	119.62	123.70
22	DA	60	G	P-O3'-C3'	5.10	125.82	119.70
22	BA	536	G	O5'-P-OP1	5.10	116.82	110.70
22	BA	2766	A	N1-C6-N6	5.10	121.66	118.60
1	AA	1482	G	C6-C5-N7	-5.10	127.34	130.40
22	BA	2503	A	N9-C4-C5	-5.09	103.76	105.80
22	BA	2889	C	C2-N3-C4	-5.09	117.35	119.90
1	CA	1412	C	C6-N1-C2	-5.09	118.26	120.30
22	BA	473	G	O5'-P-OP2	-5.09	101.12	105.70
22	BA	1617	C	C2-N1-C1'	-5.09	113.20	118.80
22	BA	2583	G	C8-N9-C4	-5.09	104.37	106.40
22	BA	2788	C	C6-N1-C2	5.09	122.33	120.30
22	BA	143	C	N3-C4-N4	5.08	121.56	118.00
22	BA	1276	A	O5'-P-OP1	5.08	116.80	110.70
22	BA	2825	G	O4'-C1'-N9	5.08	112.27	108.20
22	BA	2896	C	OP2-P-O3'	5.08	116.38	105.20
22	BA	595	C	C6-N1-C2	5.08	122.33	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2624	G	C5-C6-O6	-5.08	125.55	128.60
22	BA	2565	A	N1-C6-N6	5.07	121.64	118.60
22	BA	999	U	C5-C4-O4	-5.07	122.86	125.90
22	BA	1659	G	C8-N9-C4	5.07	108.43	106.40
22	BA	914	G	C5-N7-C8	-5.06	101.77	104.30
22	BA	248	G	C5-C6-O6	-5.06	125.56	128.60
22	BA	740	C	C5-C6-N1	-5.06	118.47	121.00
22	BA	811	U	N3-C2-O2	-5.06	118.66	122.20
22	BA	2276	G	C5-C6-N1	5.05	114.03	111.50
22	BA	2815	C	C2-N3-C4	-5.05	117.37	119.90
22	BA	1671	U	C5-C6-N1	5.05	125.23	122.70
1	AA	572	A	N1-C6-N6	-5.05	115.57	118.60
22	BA	758	C	C6-N1-C2	5.05	122.32	120.30
22	BA	17	G	C8-N9-C4	-5.05	104.38	106.40
22	BA	745	G	C4-C5-C6	5.05	121.83	118.80
22	BA	2286	G	P-O3'-C3'	5.05	125.76	119.70
22	BA	1262	A	OP1-P-OP2	-5.05	112.03	119.60
22	BA	2491	U	O5'-P-OP1	-5.05	101.16	105.70
1	CA	211	G	N3-C4-N9	5.05	129.03	126.00
22	BA	735	A	N1-C6-N6	5.04	121.63	118.60
22	BA	1242	U	N1-C2-O2	-5.04	119.27	122.80
22	BA	1251	C	OP2-P-O3'	5.04	116.30	105.20
22	BA	1682	G	C8-N9-C1'	-5.04	120.44	127.00
22	BA	2619	C	N3-C4-C5	5.04	123.92	121.90
22	BA	1695	G	N3-C4-N9	5.04	129.02	126.00
22	DA	2803	G	N3-C4-N9	-5.04	122.98	126.00
1	AA	332	G	N3-C4-C5	5.04	131.12	128.60
22	BA	22	C	C6-N1-C2	-5.04	118.28	120.30
22	BA	780	G	N1-C2-N2	-5.04	111.67	116.20
1	CA	1504	G	N3-C4-C5	5.04	131.12	128.60
22	DA	1939	U	C6-N1-C2	-5.04	117.98	121.00
22	BA	996	A	O5'-P-OP1	-5.03	101.17	105.70
1	AA	575	G	C8-N9-C1'	5.03	133.54	127.00
22	BA	1819	A	C8-N9-C4	-5.03	103.79	105.80
22	BA	2250	G	N3-C2-N2	-5.03	116.38	119.90
22	BA	682	G	C4-N9-C1'	5.03	133.03	126.50
22	BA	1636	U	O5'-P-OP1	5.03	116.73	110.70
22	BA	1997	C	N1-C2-O2	-5.03	115.89	118.90
22	BA	2066	C	OP1-P-O3'	5.03	116.25	105.20
22	BA	2362	C	C6-N1-C2	5.03	122.31	120.30
1	CA	903	G	C8-N9-C4	5.02	108.41	106.40
1	AA	575	G	C4-N9-C1'	-5.02	119.97	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	28	A	N3-C4-C5	-5.02	123.28	126.80
22	BA	1426	G	C5-C6-O6	-5.02	125.59	128.60
22	BA	1807	G	N9-C4-C5	5.02	107.41	105.40
22	BA	822	G	C8-N9-C4	-5.02	104.39	106.40
1	CA	52	C	N1-C2-O2	-5.02	115.89	118.90
22	BA	752	A	O4'-C1'-N9	5.02	112.21	108.20
22	BA	2512	C	N1-C2-O2	-5.02	115.89	118.90
1	AA	501	C	C6-N1-C2	-5.01	118.30	120.30
22	BA	2250	G	O4'-C1'-N9	-5.01	104.19	108.20
23	BB	104	A	C5-C6-N6	-5.01	119.69	123.70
22	BA	964	C	C5-C4-N4	-5.01	116.69	120.20
22	BA	2250	G	C6-C5-N7	-5.01	127.39	130.40
34	BM	18	ARG	NE-CZ-NH2	5.01	122.81	120.30
1	CA	207	C	C2-N1-C1'	5.01	124.31	118.80
22	DA	952	G	N3-C4-C5	-5.01	126.09	128.60
22	BA	2008	C	C2-N1-C1'	5.01	124.31	118.80
22	BA	1974	C	C2-N1-C1'	-5.01	113.29	118.80
22	BA	1213	A	OP2-P-O3'	5.01	116.21	105.20
22	BA	2844	G	N9-C4-C5	-5.01	103.40	105.40
1	CA	47	C	C6-N1-C2	5.01	122.30	120.30
22	BA	825	A	OP2-P-O3'	5.00	116.21	105.20
22	BA	2268	A	O5'-P-OP1	-5.00	101.20	105.70

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
21	AU	39	GLU	Peptide
48	B0	24	ALA	Peptide
25	BD	151	THR	Peptide
33	BL	28	GLY	Peptide
5	CE	102	GLY	Peptide
6	CF	54	LEU	Peptide
12	CL	24	LEU	Peptide
12	CL	38	TYR	Peptide
25	DD	151	THR	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32995	0	16607	1338	4
1	CA	33015	0	16617	1198	0
2	AB	1705	0	1732	164	0
2	CB	1705	0	1732	121	0
3	AC	1625	0	1696	89	0
3	CC	1625	0	1696	80	0
4	AD	1643	0	1707	133	0
4	CD	1643	0	1707	144	0
5	AE	1106	0	1148	83	0
5	CE	1106	0	1148	104	0
6	AF	818	0	808	62	0
6	CF	818	0	808	56	0
7	AG	1182	0	1238	65	0
7	CG	1182	0	1238	59	0
8	AH	979	0	1031	67	0
8	CH	979	0	1031	47	0
9	AI	1022	0	1070	77	0
9	CI	1022	0	1070	69	0
10	AJ	787	0	828	87	0
10	CJ	787	0	828	48	0
11	AK	877	0	887	79	0
11	CK	877	0	887	72	0
12	AL	955	0	1016	65	0
12	CL	955	0	1016	61	0
13	AM	884	0	941	80	0
13	CM	884	0	941	46	0
14	AN	774	0	824	66	0
14	CN	774	0	824	44	0
15	AO	710	0	728	35	0
15	CO	710	0	728	42	0
16	AP	649	0	666	53	0
16	CP	649	0	666	30	0
17	AQ	649	0	691	69	0
17	CQ	649	0	691	50	0
18	AR	456	0	478	22	0
18	CR	456	0	478	23	0
19	AS	638	0	665	48	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CS	638	0	665	38	0
20	AT	665	0	714	54	0
20	CT	665	0	714	38	0
21	AU	426	0	449	61	0
21	CU	426	0	449	37	0
22	BA	62195	0	31280	2134	0
22	DA	62195	0	31280	2174	0
23	BB	2549	0	1291	56	0
23	DB	2529	0	1281	72	0
24	BC	2083	0	2154	157	0
24	DC	2083	0	2154	123	0
25	BD	1565	0	1616	92	0
25	DD	1565	0	1616	81	0
26	BE	1552	0	1619	75	0
26	DE	1552	0	1619	103	0
27	BF	1411	0	1444	105	0
27	DF	1411	0	1444	63	0
28	BG	1323	0	1371	61	0
28	DG	1323	0	1371	56	0
29	BH	1110	0	1147	154	0
29	DH	1110	0	1148	90	4
30	BI	1032	0	1085	82	0
30	DI	1032	0	1085	72	0
31	BJ	1129	0	1162	64	0
31	DJ	1129	0	1162	55	0
32	BK	939	0	1012	75	0
32	DK	939	0	1012	38	0
33	BL	1045	0	1117	51	0
33	DL	1045	0	1117	81	0
34	BM	1074	0	1157	47	0
34	DM	1074	0	1157	43	0
35	BN	961	0	1000	51	0
35	DN	961	0	1000	55	0
36	BO	892	0	923	57	0
36	DO	892	0	923	50	0
37	BP	917	0	962	48	0
37	DP	917	0	962	47	0
38	BQ	947	0	1019	61	0
38	DQ	947	0	1019	55	0
39	BR	816	0	839	84	0
39	DR	816	0	839	47	0
40	BS	857	0	922	64	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DS	857	0	922	39	0
41	BT	739	0	807	46	0
41	DT	739	0	807	44	0
42	BU	780	0	831	50	0
42	DU	780	0	831	65	0
43	BV	753	0	780	31	0
43	DV	753	0	780	25	0
44	BW	580	0	594	23	0
44	DW	569	0	581	26	0
45	BX	625	0	652	35	0
45	DX	625	0	652	55	0
46	BY	509	0	543	29	0
46	DY	509	0	543	38	0
47	BZ	449	0	488	19	0
47	DZ	449	0	488	14	0
48	B0	444	0	458	33	0
48	D0	444	0	458	18	0
49	B1	410	0	440	32	0
49	D1	410	0	440	19	0
50	B2	377	0	418	19	0
50	D2	377	0	418	34	0
51	B3	504	0	572	22	0
51	D3	504	0	572	29	0
52	B4	302	0	340	12	0
52	D4	302	0	342	17	0
53	B5	1142	0	865	49	0
54	B6	69	0	60	5	0
54	D6	69	0	60	14	0
55	AA	71	0	0	0	0
55	AM	1	0	0	0	0
55	BA	195	0	0	0	0
55	BB	4	0	0	0	0
55	CA	55	0	0	0	0
55	CM	1	0	0	0	0
55	DA	167	0	0	0	0
55	DB	3	0	0	0	0
55	DQ	1	0	0	0	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	194	0	0	23	0
57	AL	1	0	0	0	0
57	AN	5	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	AT	2	0	0	1	0
57	AU	1	0	0	1	0
57	B2	1	0	0	0	0
57	B3	3	0	0	0	0
57	B4	2	0	0	0	0
57	BA	615	0	0	101	0
57	BB	14	0	0	0	0
57	BC	10	0	0	0	0
57	BD	4	0	0	2	0
57	BE	4	0	0	0	0
57	BF	1	0	0	1	0
57	BG	1	0	0	0	0
57	BJ	1	0	0	0	0
57	BL	6	0	0	0	0
57	BN	2	0	0	0	0
57	BS	1	0	0	0	0
57	BU	1	0	0	0	0
57	CA	189	0	0	20	0
57	CL	1	0	0	0	0
57	CN	3	0	0	2	0
57	CT	3	0	0	0	0
57	CU	2	0	0	0	0
57	D0	1	0	0	0	0
57	D2	2	0	0	0	0
57	D3	2	0	0	0	0
57	D4	1	0	0	0	0
57	DA	607	0	0	82	0
57	DB	13	0	0	3	0
57	DC	9	0	0	1	0
57	DD	4	0	0	2	0
57	DE	6	0	0	1	0
57	DL	5	0	0	1	0
57	DN	2	0	0	0	0
57	DT	2	0	0	0	0
57	DU	1	0	0	1	0
57	DV	1	0	0	0	0
All	All	288320	0	192909	11780	4

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 25.

All (11780) 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)
22:BA:1006:C:OP2	57:BA:3781:HOH:O	1.56	1.22
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
22:BA:2714:G:OP2	57:BA:3548:HOH:O	1.61	1.18
22:BA:1603:A:OP1	57:BA:3411:HOH:O	1.61	1.15
54:D6:4:PRO:HB2	54:D6:5:MHU:HM1	1.15	1.14
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
22:BA:15:G:OP2	57:BA:3553:HOH:O	1.69	1.09
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
22:DA:1010:A:OP2	57:DA:3775:HOH:O	1.72	1.07
22:BA:2550:G:OP1	57:BA:3723:HOH:O	1.68	1.07
22:DA:784:G:OP2	57:DA:3310:HOH:O	1.74	1.04
22:BA:2498:C:OP2	57:BA:3684:HOH:O	1.74	1.03
22:BA:842:U:O4	57:BA:3586:HOH:O	1.74	1.02
22:BA:1376:C:OP2	57:BA:3400:HOH:O	1.78	1.02
1:AA:533:A:OP1	57:AA:1848:HOH:O	1.76	1.01
22:BA:192:C:OP1	57:BA:3740:HOH:O	1.78	1.01
4:CD:41:HIS:O	4:CD:43:ALA:N	1.94	1.01
6:CF:12:PRO:O	6:CF:15:SER:OG	1.79	1.00
22:DA:2004:G:OP2	57:DA:3797:HOH:O	1.80	1.00
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	1.00
22:BA:2016:U:OP1	57:BA:3271:HOH:O	1.80	0.99
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
22:BA:2819:G:OP1	57:BA:3803:HOH:O	1.80	0.98
1:CA:1500:A:OP2	57:CA:1881:HOH:O	1.81	0.98
22:BA:1179:G:C5	22:BA:1180:U:H1'	1.98	0.98
22:BA:2094:A:OP1	29:BH:22:LYS:HE3	1.64	0.98
22:BA:2243:U:OP1	57:BA:3740:HOH:O	1.82	0.98
22:DA:370:G:N7	57:DA:3555:HOH:O	1.96	0.98
22:DA:2271:G:O6	57:DA:3506:HOH:O	1.82	0.98
22:DA:1823:G:N7	57:DA:3649:HOH:O	1.96	0.97
22:DA:1378:A:O2'	22:DA:1380:G:N7	1.97	0.97
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.97
22:BA:526:A:OP1	57:BA:3245:HOH:O	1.81	0.96
1:AA:1031:C:O2'	1:AA:1032:G:OP2	1.82	0.96
15:AO:89:ARG:NH1	22:BA:716:A:OP2	1.98	0.96
1:CA:1124:G:O2'	1:CA:1145:A:N6	1.99	0.96
22:BA:614:A:O2'	22:BA:615:U:OP2	1.83	0.96
22:BA:2484:G:OP1	34:BM:44:ARG:NH2	1.98	0.96
1:CA:736:C:OP1	18:CR:61:ARG:NH1	1.99	0.96
22:BA:2062:A:O2'	22:BA:2063:C:H5'	1.66	0.95
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.95
24:BC:244:PRO:O	24:BC:251:GLN:NE2	2.00	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:731:C:OP2	57:BA:3692:HOH:O	1.84	0.94
27:DF:122:PHE:O	27:DF:124:GLY:N	2.00	0.94
22:BA:1439:A:OP2	57:BA:3632:HOH:O	1.85	0.94
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.01	0.94
22:DA:618:G:O6	57:DA:3289:HOH:O	1.85	0.94
22:BA:784:G:OP2	57:BA:3311:HOH:O	1.84	0.94
35:BN:103:ARG:HB2	35:BN:110:MET:HE3	1.49	0.94
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.01	0.94
26:DE:58:LYS:NZ	26:DE:70:SER:O	2.02	0.93
22:DA:2588:G:OP1	57:DA:3311:HOH:O	1.86	0.93
2:AB:21:ARG:O	2:AB:23:TRP:N	2.00	0.93
1:CA:683:G:N2	11:CK:39:GLY:O	2.00	0.93
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.01	0.93
32:BK:121:GLU:OE2	37:BP:65:SER:OG	1.86	0.93
1:CA:111:G:O6	1:CA:330:C:N4	2.02	0.92
1:AA:516:U:O4	57:AA:1848:HOH:O	1.87	0.92
22:BA:480:A:OP2	42:BU:44:LYS:NZ	2.04	0.91
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.88	0.91
22:BA:1002:G:O6	57:BA:3739:HOH:O	1.87	0.91
22:DA:602:A:O2'	22:DA:604:G:O2'	1.86	0.90
54:D6:4:PRO:HB2	54:D6:5:MHU:CM	2.00	0.90
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.03	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
1:CA:1198:G:OP1	57:CA:1836:HOH:O	1.89	0.90
1:CA:1499:A:OP2	57:CA:1881:HOH:O	1.89	0.90
22:BA:790:U:O2'	22:BA:791:C:O5'	1.90	0.90
22:BA:618:G:N7	57:BA:3286:HOH:O	2.04	0.89
22:DA:27:G:O2'	22:DA:28:A:OP2	1.89	0.89
22:DA:784:G:OP1	57:DA:3311:HOH:O	1.89	0.89
22:BA:1253:A:N7	57:BA:3333:HOH:O	2.06	0.89
22:BA:1937:A:N7	22:BA:1939:U:O2'	2.05	0.89
8:CH:28:PRO:O	8:CH:33:LYS:NZ	2.05	0.89
5:CE:101:GLU:O	5:CE:103:THR:N	2.07	0.88
22:DA:58:G:OP1	41:DT:78:SER:OG	1.91	0.88
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.89	0.88
22:BA:1342:A:OP2	57:BA:3714:HOH:O	1.90	0.88
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.73	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.88
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.07	0.88
41:DT:18:GLU:O	41:DT:22:THR:OG1	1.92	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:668:A:N6	22:DA:670:A:O2'	2.07	0.87
22:DA:1265:A:OP1	57:DA:3742:HOH:O	1.92	0.87
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.07	0.87
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.07	0.87
22:BA:945:A:N7	57:BA:3258:HOH:O	2.07	0.87
1:CA:495:A:C2	1:CA:496:A:C6	2.62	0.87
22:BA:2502:G:OP2	57:BA:3491:HOH:O	1.92	0.87
27:BF:158:THR:O	57:BF:201:HOH:O	1.92	0.86
22:DA:1006:C:OP2	57:DA:3776:HOH:O	1.93	0.86
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.86
3:AC:139:GLN:O	3:AC:141:ALA:N	2.08	0.86
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.74	0.86
22:DA:2507:C:OP1	57:DA:3705:HOH:O	1.94	0.86
22:BA:1153:C:P	57:BA:3360:HOH:O	2.33	0.86
23:DB:34:A:N6	23:DB:44:G:O2'	2.08	0.86
22:DA:822:G:OP2	57:DA:3343:HOH:O	1.92	0.86
1:AA:1407:C:O2'	22:BA:1912:A:N6	2.09	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.86
22:BA:621:A:OP2	57:BA:3291:HOH:O	1.93	0.85
2:CB:206:ALA:O	2:CB:208:ARG:N	2.09	0.85
1:AA:64:G:C8	1:AA:99:C:N4	2.44	0.85
20:AT:69:LYS:O	20:AT:71:LYS:N	2.08	0.85
22:BA:1260:A:N6	57:BA:3275:HOH:O	2.09	0.85
22:DA:185:G:C6	22:DA:212:G:C2	2.65	0.85
22:DA:2057:G:OP2	57:DA:3483:HOH:O	1.92	0.85
22:DA:2438:U:O2'	22:DA:2440:C:OP1	1.93	0.85
1:AA:194:C:OP1	57:AA:1879:HOH:O	1.92	0.85
22:BA:2278:A:OP1	34:BM:10:ARG:NH2	2.10	0.85
22:BA:1061:U:O2'	22:BA:1062:G:O5'	1.92	0.85
22:BA:118:A:C8	22:BA:119:A:C8	2.65	0.84
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.12	0.84
18:CR:25:ASP:O	18:CR:27:ALA:N	2.11	0.84
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	2.11	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.07	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
22:DA:1325:U:OP1	22:DA:1647:U:O2'	1.93	0.84
22:BA:1338:G:O6	41:BT:66:LYS:NZ	2.10	0.84
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.93	0.84
22:DA:310:A:O2'	22:DA:311:A:OP2	1.94	0.84
1:AA:875:U:O2'	8:AH:15:ARG:NH1	2.11	0.84
31:BJ:53:TYR:CD1	31:BJ:121:LYS:HB3	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2171:A:O2'	22:DA:2173:A:OP1	1.94	0.84
8:AH:10:MET:HE1	8:AH:33:LYS:HA	1.56	0.84
22:BA:481:G:C4	22:BA:507:A:C2	2.66	0.84
22:BA:2391:G:O2'	22:BA:2424:C:N4	2.10	0.84
22:DA:118:A:C8	22:DA:119:A:C8	2.66	0.84
22:DA:2407:A:OP2	57:DA:3558:HOH:O	1.96	0.84
24:BC:260:ASN:O	24:BC:262:ARG:N	2.11	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.84
1:AA:7:A:N6	5:AE:97:GLN:OE1	2.11	0.83
22:DA:1530:G:N2	22:DA:1542:U:O2	2.10	0.83
22:BA:981:A:OP1	57:BA:3594:HOH:O	1.93	0.83
22:DA:2134:A:N6	22:DA:2157:G:O2'	2.11	0.83
22:BA:481:G:O2'	22:BA:507:A:N1	2.11	0.83
22:BA:31:C:OP1	57:BA:3700:HOH:O	1.95	0.83
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.08	0.83
1:CA:484:G:H4'	1:CA:485:U:O5'	1.77	0.83
22:DA:1937:A:OP1	57:DA:3453:HOH:O	1.96	0.83
47:BZ:24:LEU:HD11	47:BZ:54:MET:HE1	1.61	0.83
22:DA:822:G:P	57:DA:3343:HOH:O	2.34	0.83
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.11	0.83
39:BR:49:ILE:HG22	39:BR:52:PRO:C	1.99	0.83
12:CL:34:CYS:HA	12:CL:55:VAL:HA	1.61	0.83
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.12	0.83
22:DA:2249:U:O4	57:DA:3504:HOH:O	1.97	0.83
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.82
22:DA:1817:G:OP1	24:DC:62:TYR:OH	1.95	0.82
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.82
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.12	0.82
22:BA:731:C:P	57:BA:3692:HOH:O	2.35	0.82
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.12	0.82
22:BA:761:A:C8	57:BA:3293:HOH:O	2.32	0.82
25:BD:140:HIS:NE2	57:BD:303:HOH:O	2.12	0.82
1:AA:509:A:O5'	57:AA:1722:HOH:O	1.98	0.82
1:AA:858:G:O6	57:AA:1823:HOH:O	1.97	0.82
2:CB:35:ARG:O	2:CB:37:LYS:N	2.13	0.82
22:BA:1171:G:N2	22:BA:1178:C:O2	2.12	0.82
22:DA:1378:A:O2'	57:DA:3748:HOH:O	1.97	0.82
22:DA:1935:G:H1'	22:DA:1964:G:N2	1.95	0.82
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.14	0.82
22:BA:2211:A:O2'	22:BA:2212:A:OP1	1.97	0.82
4:AD:75:TYR:OH	4:AD:97:ARG:NH1	2.12	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:797:G:O6	57:BA:3320:HOH:O	1.97	0.81
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.62	0.81
22:DA:2125:G:N1	22:DA:2171:A:OP1	2.13	0.81
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.15	0.81
22:DA:514:A:N3	22:DA:581:C:O2'	2.12	0.81
22:DA:756:A:N7	57:DA:3298:HOH:O	2.13	0.81
22:BA:1153:C:OP2	57:BA:3357:HOH:O	1.98	0.81
22:BA:2786:U:OP1	25:BD:70:LYS:NZ	2.13	0.81
22:BA:273:G:N2	22:BA:365:U:O2	2.14	0.81
22:BA:500:G:N2	22:BA:502:A:H3'	1.95	0.81
22:BA:1916:A:H2'	22:BA:1917:U:O4'	1.80	0.81
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.14	0.81
22:DA:1515:A:HO2'	22:DA:1556:C:HO2'	1.24	0.81
29:BH:97:ARG:HD2	1:CA:369:G:O2'	1.81	0.81
54:D6:4:PRO:CB	54:D6:5:MHU:HM1	2.06	0.81
22:DA:1371:G:N7	57:DA:3396:HOH:O	2.13	0.81
54:D6:3:DBB:HG2	54:D6:4:PRO:HA	1.63	0.81
22:BA:761:A:OP1	57:BA:3694:HOH:O	1.98	0.80
22:BA:1070:A:O2'	22:BA:1097:U:OP1	1.98	0.80
22:DA:300:A:HO2'	22:DA:318:C:HO2'	1.27	0.80
22:DA:1826:G:C6	22:DA:1827:U:C4	2.69	0.80
22:DA:821:A:O3'	57:DA:3343:HOH:O	1.98	0.80
24:DC:157:SER:O	24:DC:160:THR:OG1	1.99	0.80
1:AA:452:A:N6	1:AA:480:U:O2	2.14	0.80
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	2.14	0.80
29:BH:83:LYS:HD2	1:CA:55:A:O2'	1.82	0.80
1:CA:55:A:C6	1:CA:56:U:C2	2.70	0.80
4:AD:22:LYS:O	4:AD:24:GLY:N	2.15	0.80
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.29	0.80
22:DA:60:G:O2'	22:DA:62:U:OP2	1.99	0.80
22:DA:761:A:N7	57:DA:3294:HOH:O	2.15	0.80
22:DA:46:G:C2	22:DA:47:C:C5	2.69	0.80
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.17	0.80
22:DA:1014:A:OP2	57:DA:3596:HOH:O	1.99	0.79
22:BA:819:A:C4	22:BA:1189:A:C2	2.70	0.79
22:BA:1417:C:H2'	22:BA:1418:G:O4'	1.82	0.79
22:BA:2800:A:H3'	22:BA:2801:G:H5'	1.64	0.79
24:BC:209:GLY:O	24:BC:212:ARG:N	2.15	0.79
28:BG:104:ASN:ND2	28:BG:114:ASP:OD1	2.14	0.79
22:BA:2080:A:O5'	45:BX:19:SER:OG	1.99	0.79
5:CE:102:GLY:O	5:CE:104:GLY:N	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:4:PHE:O	38:DQ:64:ARG:NH2	2.13	0.79
22:BA:1669:A:OP2	57:BA:3723:HOH:O	2.01	0.79
1:AA:1014:A:C2	19:AS:34:TRP:CH2	2.71	0.79
1:AA:1049:U:OP1	57:AA:1781:HOH:O	2.00	0.79
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.17	0.79
1:CA:568:G:O6	12:CL:2:ALA:HB2	1.83	0.79
22:DA:613:A:OP2	22:DA:614:A:N7	2.16	0.79
22:BA:510:C:OP1	57:BA:3770:HOH:O	2.00	0.79
22:BA:1350:C:N4	22:BA:1381:G:O6	2.15	0.79
2:CB:15:HIS:O	2:CB:17:GLY:N	2.16	0.79
22:BA:858:G:H3'	22:BA:859:G:C8	2.18	0.79
22:DA:608:A:H2'	22:DA:609:A:C8	2.17	0.79
2:AB:82:ASP:O	2:AB:85:LEU:N	2.16	0.79
22:BA:1061:U:HO2'	22:BA:1062:G:P	2.06	0.79
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.18	0.79
27:BF:133:ARG:O	27:BF:134:GLU:HB2	1.82	0.78
39:BR:34:GLU:OE2	39:BR:60:LYS:NZ	2.13	0.78
22:DA:1958:C:OP2	57:DA:3454:HOH:O	2.01	0.78
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.13	0.78
1:AA:1299:A:H2'	1:AA:1299:A:N3	1.96	0.78
22:BA:2017:U:OP2	57:BA:3268:HOH:O	2.01	0.78
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.37	0.78
28:DG:158:LYS:O	28:DG:160:LYS:N	2.16	0.78
1:AA:689:C:HO2'	1:AA:705:G:HO2'	1.29	0.78
22:BA:27:G:C4	22:BA:512:G:N2	2.52	0.78
24:DC:70:ASN:O	24:DC:72:ASP:N	2.16	0.78
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.16	0.78
22:DA:1669:A:OP2	57:DA:3716:HOH:O	2.01	0.78
22:DA:2162:G:H4'	22:DA:2163:A:OP1	1.82	0.78
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	1.65	0.78
22:BA:572:A:H5"	22:BA:573:U:OP2	1.83	0.78
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.16	0.78
29:BH:91:PHE:HB3	1:CA:55:A:N3	1.98	0.78
11:CK:17:SER:O	11:CK:80:LYS:N	2.17	0.78
22:BA:1439:A:OP2	57:BA:3635:HOH:O	2.02	0.78
20:CT:5:LYS:O	20:CT:7:ALA:N	2.16	0.78
22:DA:53:A:C8	22:DA:54:G:C8	2.72	0.78
22:DA:450:G:O6	57:DA:3240:HOH:O	2.00	0.78
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.33	0.78
22:DA:161:A:H3'	22:DA:162:U:H5"	1.66	0.78
41:DT:73:ARG:NH1	41:DT:74:ILE:O	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.17	0.77
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.16	0.77
22:DA:192:C:OP1	57:DA:3733:HOH:O	2.03	0.77
2:CB:43:LEU:HG	2:CB:44:GLU:HG2	1.67	0.77
22:DA:2711:A:OP2	57:DA:3544:HOH:O	2.03	0.77
3:AC:130:PHE:CE1	3:AC:131:ARG:HD2	2.20	0.77
23:DB:29:A:O2'	23:DB:58:A:N1	2.16	0.77
29:BH:123:ARG:HH22	1:CA:367:U:P	2.08	0.77
1:AA:869:G:N7	57:AA:1825:HOH:O	2.17	0.77
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.18	0.77
28:DG:170:ARG:NH1	52:D4:29:ALA:O	2.18	0.77
22:BA:695:G:C2	22:BA:696:G:C8	2.73	0.77
5:CE:157:ARG:O	5:CE:159:LYS:N	2.17	0.77
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.67	0.77
22:BA:1380:G:OP2	57:BA:3752:HOH:O	2.03	0.77
21:CU:25:LYS:HD3	21:CU:26:ALA:N	1.99	0.77
1:AA:562:U:OP2	12:AL:14:ARG:NH1	2.18	0.76
22:BA:622:G:O5'	57:BA:3292:HOH:O	2.02	0.76
22:DA:1361:G:C2	22:DA:1362:C:C6	2.73	0.76
1:CA:207:C:HO2'	1:CA:213:G:N2	1.83	0.76
1:CA:209:U:H4'	1:CA:210:C:OP2	1.85	0.76
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.76
22:DA:1050:A:N6	22:DA:1109:C:O2	2.17	0.76
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.20	0.76
12:AL:24:LEU:O	12:AL:26:ALA:N	2.18	0.76
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.18	0.76
22:DA:787:C:OP1	57:DA:3750:HOH:O	2.04	0.76
22:DA:1428:C:O2'	22:DA:1569:A:OP2	2.03	0.76
22:DA:1439:A:OP2	57:DA:3626:HOH:O	2.03	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
22:BA:784:G:H5"	24:BC:226:ASN:OD1	1.86	0.76
1:AA:91:U:H2'	1:AA:92:U:O4'	1.86	0.76
22:BA:1125:G:OP2	22:BA:1126:A:O2'	2.00	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
1:AA:1060:U:O2	1:AA:1061:G:C8	2.38	0.76
22:BA:2757:A:N1	28:BG:67:THR:HG21	2.01	0.76
10:CJ:65:TYR:HB3	14:CN:96:LEU:HD11	1.68	0.76
22:DA:118:A:N3	22:DA:178:G:H1'	2.01	0.76
22:DA:488:G:N2	22:DA:493:G:O6	2.19	0.76
1:AA:872:A:C5	1:AA:874:G:C8	2.74	0.75
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.19	0.75
11:CK:122:ARG:CZ	21:CU:36:GLU:HG2	2.16	0.75
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.02	0.75
1:AA:381:C:H2'	1:AA:382:A:O4'	1.86	0.75
1:CA:1097:C:OP1	2:CB:139:ARG:NH2	2.20	0.75
22:DA:199:A:OP2	57:DA:3736:HOH:O	2.03	0.75
22:DA:2093:G:O2'	22:DA:2094:A:H5'	1.86	0.75
1:AA:965:U:OP2	57:AA:1832:HOH:O	2.04	0.75
22:BA:733:G:OP2	57:BA:3294:HOH:O	2.04	0.75
53:B5:59:VAL:HG21	53:B5:167:ASP:C	2.06	0.75
8:CH:9:ASP:OD2	8:CH:13:ARG:NH1	2.19	0.75
22:DA:1019:U:O2	22:DA:1142:A:N6	2.19	0.75
1:CA:1101:A:H61	2:CB:102:THR:HG21	1.52	0.75
1:AA:680:C:C2	1:AA:711:G:N2	2.55	0.75
1:AA:972:C:H4'	10:AJ:59:LYS:HE3	1.68	0.75
22:BA:2052:A:C2	22:BA:2053:G:C8	2.75	0.75
22:DA:2420:C:OP1	51:D3:34:THR:HB	1.87	0.75
1:AA:983:A:N3	1:AA:983:A:H2'	1.99	0.75
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.20	0.75
27:DF:32:GLU:OE1	27:DF:92:ARG:NH1	2.20	0.75
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.18	0.75
25:BD:9:VAL:O	25:BD:197:THR:OG1	2.04	0.75
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.22	0.75
37:BP:93:ARG:O	37:BP:94:LYS:HB2	1.87	0.75
22:DA:856:G:N2	22:DA:922:C:C2	2.54	0.75
22:DA:2144:G:N2	22:DA:2148:G:O6	2.19	0.75
22:BA:1288:G:C4	22:BA:1327:A:C2	2.75	0.74
49:B1:4:GLY:O	49:B1:6:ARG:N	2.20	0.74
1:AA:542:G:C2	1:AA:543:U:C5	2.75	0.74
22:DA:2225:A:H4'	22:DA:2226:C:O5'	1.86	0.74
8:AH:22:LYS:N	8:AH:65:TYR:OH	2.20	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.74
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.70	0.74
1:CA:920:U:H2'	1:CA:921:U:C6	2.22	0.74
22:BA:1997:C:OP2	25:BD:129:THR:OG1	2.03	0.74
31:BJ:98:GLU:O	31:BJ:102:GLU:HG3	1.88	0.74
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.05	0.74
22:DA:1918:A:O2'	22:DA:1920:C:N4	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.21	0.74
22:DA:1604:C:OP2	57:DA:3404:HOH:O	2.04	0.74
22:BA:1779:U:H5	22:BA:1784:A:N7	1.85	0.74
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.52	0.74
22:BA:1925:C:H4'	22:BA:1926:U:C4	2.23	0.74
1:CA:495:A:C2	1:CA:496:A:N6	2.56	0.74
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.02	0.74
1:AA:980:C:OP1	57:AA:1837:HOH:O	2.04	0.74
4:AD:62:ARG:HG3	4:AD:72:PHE:CD2	2.22	0.74
6:AF:91:ARG:O	6:AF:92:THR:OG1	2.05	0.74
12:AL:85:GLY:O	12:AL:96:HIS:ND1	2.20	0.74
22:BA:2025:C:OP2	57:BA:3473:HOH:O	2.05	0.74
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.36	0.74
1:CA:207:C:O2'	1:CA:213:G:N2	2.21	0.74
1:CA:484:G:C5	1:CA:486:U:H1'	2.23	0.74
22:DA:2209:G:C2	22:DA:2216:G:C2	2.74	0.74
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.70	0.74
17:AQ:69:LYS:O	17:AQ:70:THR:HB	1.88	0.74
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.36	0.74
22:DA:187:G:C2	22:DA:210:C:C2	2.76	0.74
24:DC:226:ASN:ND2	57:DC:304:HOH:O	2.20	0.74
1:AA:663:A:C2	1:AA:743:A:C2	2.76	0.73
22:BA:1509:A:O2'	22:BA:1510:G:P	2.45	0.73
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.69	0.73
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.21	0.73
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.22	0.73
22:BA:64:A:H2'	22:BA:65:U:C6	2.22	0.73
29:BH:90:LEU:O	1:CA:358:U:H4'	1.88	0.73
1:CA:552:U:C4	1:CA:553:A:N7	2.56	0.73
22:DA:2502:G:H5'	22:DA:2503:A:H5"	1.70	0.73
1:AA:1108:G:O6	57:AA:1861:HOH:O	2.05	0.73
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.18	0.73
29:BH:93:SER:O	1:CA:368:U:C6	2.41	0.73
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	1.71	0.73
22:DA:587:C:OP2	33:DL:21:ARG:NH1	2.21	0.73
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.23	0.73
22:DA:2594:C:N4	22:DA:2595:G:O6	2.21	0.73
1:AA:80:A:C2	1:AA:90:C:N3	2.56	0.73
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.21	0.73
7:AG:55:GLY:O	7:AG:57:SER:N	2.20	0.73
22:DA:761:A:OP2	57:DA:3292:HOH:O	2.07	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:2:SER:C	8:AH:4:GLN:H	1.92	0.73
24:BC:157:SER:O	24:BC:195:VAL:HG11	1.87	0.73
27:BF:40:VAL:O	27:BF:42:GLU:N	2.22	0.73
30:BI:122:ILE:O	30:BI:126:THR:OG1	2.07	0.73
42:BU:16:GLY:O	42:BU:18:ASP:N	2.21	0.73
22:DA:2028:U:O4	57:DA:3475:HOH:O	2.06	0.73
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.87	0.73
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.42	0.73
22:BA:1695:G:H1'	24:BC:8:PRO:O	1.88	0.73
14:CN:91:GLY:O	14:CN:93:ILE:N	2.21	0.73
22:DA:1826:G:C5	22:DA:1827:U:C5	2.76	0.73
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.22	0.73
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.70	0.73
22:BA:1935:G:C6	22:BA:1962:C:C5	2.77	0.73
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.70	0.73
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.86	0.73
22:DA:247:G:N7	22:DA:249:C:C2	2.56	0.73
1:AA:792:A:H4'	1:AA:793:U:O5'	1.89	0.73
22:BA:1009:A:OP1	31:BJ:39:LYS:NZ	2.16	0.73
22:BA:368:A:N6	22:BA:369:U:O4	2.21	0.73
22:BA:572:A:C2	22:BA:2033:A:C2	2.77	0.73
1:CA:404:G:O6	4:CD:2:ALA:N	2.22	0.73
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.27	0.72
22:BA:1269:A:OP2	57:BA:3384:HOH:O	2.06	0.72
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.88	0.72
12:CL:116:LYS:O	12:CL:117:TYR:CG	2.42	0.72
22:DA:389:G:C8	22:DA:2413:G:H4'	2.24	0.72
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.72	0.72
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.71	0.72
1:AA:914:A:C2	1:AA:915:A:C8	2.77	0.72
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.37	0.72
22:BA:1779:U:C5	22:BA:1784:A:N7	2.57	0.72
22:BA:2714:G:P	57:BA:3548:HOH:O	2.38	0.72
1:CA:485:U:O2'	1:CA:486:U:OP1	2.05	0.72
1:AA:157:U:H1'	1:AA:165:G:N2	2.04	0.72
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.69	0.72
17:AQ:52:GLU:OE1	17:AQ:52:GLU:N	2.22	0.72
22:BA:1917:U:C4	22:BA:1918:A:C5	2.76	0.72
24:BC:15:HIS:O	24:BC:204:VAL:HG21	1.89	0.72
25:BD:77:ARG:NH2	25:BD:200:ASP:OD1	2.22	0.72
1:AA:1091:U:O2	1:AA:1095:U:C2	2.42	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:536:C:OP1	57:AA:1884:HOH:O	2.07	0.72
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.69	0.72
2:CB:169:GLU:O	2:CB:171:ILE:N	2.22	0.72
1:AA:481:G:O2'	1:AA:483:C:N4	2.22	0.72
22:BA:1069:A:N1	22:BA:1073:A:N6	2.38	0.72
40:BS:57:ASN:O	40:BS:61:ASN:HB2	1.89	0.72
1:CA:278:G:OP2	17:CQ:43:LYS:NZ	2.21	0.72
1:CA:978:A:HO2'	1:CA:1322:C:H5	1.35	0.72
22:DA:1342:A:OP2	57:DA:3708:HOH:O	2.06	0.72
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.20	0.72
1:AA:1151:A:O2'	1:AA:1152:A:O5'	2.06	0.72
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.69	0.72
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.23	0.72
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.72	0.72
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	1.89	0.72
1:CA:890:G:O2'	1:CA:906:A:N6	2.22	0.72
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.71	0.72
22:DA:2415:G:C6	22:DA:2416:C:C4	2.78	0.72
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.23	0.72
36:BO:25:ARG:HG3	36:BO:27:VAL:CG1	2.20	0.72
1:CA:1055:A:C6	1:CA:1206:G:C5	2.77	0.72
22:DA:511:U:O2'	22:DA:1215:G:N2	2.23	0.72
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.21	0.72
22:BA:1157:G:N2	22:BA:1158:C:C2	2.57	0.72
22:BA:2346:A:H4'	22:BA:2347:C:OP2	1.90	0.72
1:AA:872:A:C4	1:AA:874:G:N7	2.58	0.72
22:BA:790:U:O2'	22:BA:791:C:P	2.47	0.72
22:DA:59:U:O2'	22:DA:74:A:OP2	2.04	0.72
22:DA:2711:A:OP2	57:DA:3541:HOH:O	2.07	0.72
1:AA:667:G:OP1	1:AA:732:C:O2'	2.06	0.71
22:BA:1288:G:C5	22:BA:1327:A:C2	2.78	0.71
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.24	0.71
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.03	0.71
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.00	0.71
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.90	0.71
22:BA:1712:U:OP2	22:BA:1713:A:O2'	2.07	0.71
23:BB:28:C:OP1	36:BO:31:THR:HG21	1.89	0.71
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.22	0.71
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.89	0.71
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.71
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.25	0.71
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.26	0.71
25:DD:151:THR:O	25:DD:153:GLY:N	2.23	0.71
16:AP:39:PHE:CD2	16:AP:74:LEU:HD11	2.25	0.71
22:BA:726:G:O2'	22:BA:727:A:OP2	2.06	0.71
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	1.72	0.71
22:DA:301:G:C2	22:DA:302:C:C2	2.78	0.71
22:DA:347:A:C2	22:DA:348:A:C4	2.78	0.71
22:DA:1344:U:O2'	22:DA:1345:C:OP2	2.08	0.71
1:AA:69:G:O6	1:AA:98:A:N6	2.23	0.71
22:BA:792:A:N3	22:BA:2072:C:O2'	2.23	0.71
1:CA:552:U:C2	1:CA:553:A:C8	2.79	0.71
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.26	0.71
4:CD:59:GLN:O	4:CD:63:ARG:HG3	1.91	0.71
5:CE:81:LEU:HG	5:CE:147:MET:SD	2.31	0.71
22:DA:1973:G:C5	22:DA:1974:C:C4	2.78	0.71
1:AA:927:G:C2	1:AA:1391:U:O2	2.44	0.71
1:AA:1014:A:N3	19:AS:34:TRP:CZ3	2.58	0.71
7:AG:99:LEU:O	7:AG:102:ARG:N	2.23	0.71
1:CA:131:A:O2'	1:CA:262:A:N3	2.21	0.71
22:BA:450:G:O6	57:BA:3243:HOH:O	2.06	0.71
39:BR:27:ILE:HG21	39:BR:63:VAL:HG21	1.71	0.71
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.21	0.71
22:DA:749:A:C5	22:DA:750:A:N7	2.58	0.71
26:DE:98:LYS:NZ	57:DE:305:HOH:O	2.24	0.71
1:AA:328:C:O2	1:AA:328:C:H2'	1.90	0.71
22:BA:686:U:O5'	57:BA:3719:HOH:O	2.07	0.71
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	1.89	0.71
1:CA:662:U:H2'	1:CA:663:A:C8	2.25	0.71
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.90	0.71
22:DA:1738:G:O2'	22:DA:1739:A:O5'	2.09	0.71
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.24	0.71
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.08	0.71
14:AN:91:GLY:O	14:AN:93:ILE:N	2.24	0.71
22:BA:1359:A:OP1	57:BA:3618:HOH:O	2.09	0.71
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.26	0.71
23:BB:109:A:C5	23:BB:110:C:C5	2.79	0.71
24:BC:247:PRO:HD2	24:BC:248:TRP:CZ3	2.26	0.71
1:CA:757:U:OP1	1:CA:822:U:O2'	2.08	0.71
22:DA:789:A:N1	57:DA:3309:HOH:O	2.22	0.71
22:BA:1196:C:O4'	22:BA:1226:A:C2	2.44	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:580:U:H2'	22:BA:581:C:C6	2.25	0.70
22:BA:580:U:H2'	22:BA:581:C:H6	1.56	0.70
22:BA:1730:C:H4'	22:BA:1730:C:OP1	1.90	0.70
1:CA:495:A:N1	1:CA:496:A:N6	2.39	0.70
4:CD:174:ASP:OD1	4:CD:175:ALA:N	2.24	0.70
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.24	0.70
22:BA:1272:A:N7	22:BA:1618:A:H1'	2.06	0.70
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.23	0.70
40:BS:29:VAL:CG1	40:BS:55:ILE:HD11	2.21	0.70
22:DA:297:G:H5"	42:DU:85:PHE:HB2	1.73	0.70
22:DA:1060:U:O4'	22:DA:1062:G:H5'	1.91	0.70
22:DA:1566:A:C2	24:DC:213:TRP:CE3	2.79	0.70
22:BA:2187:U:C4	22:BA:2188:U:C4	2.79	0.70
1:CA:268:U:H2'	1:CA:269:C:C6	2.26	0.70
8:CH:21:ASN:O	8:CH:22:LYS:C	2.29	0.70
22:DA:482:A:N6	22:DA:506:G:O2'	2.24	0.70
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.72	0.70
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.73	0.70
22:DA:46:G:C2	22:DA:47:C:C6	2.78	0.70
50:D2:43:THR:O	50:D2:44:VAL:HB	1.92	0.70
22:BA:15:G:C5	22:BA:16:C:C5	2.79	0.70
22:BA:83:A:OP1	42:BU:92:LYS:NZ	2.24	0.70
22:BA:357:C:H2'	22:BA:358:U:C6	2.26	0.70
1:CA:1169:A:C2	1:CA:1170:A:C4	2.79	0.70
22:DA:1384:A:O2'	22:DA:1404:C:O2	2.08	0.70
22:BA:528:A:C2	22:BA:2043:C:H4'	2.26	0.70
22:BA:2127:G:H4'	22:BA:2128:G:OP1	1.91	0.70
22:BA:2151:U:H2'	22:BA:2152:G:C8	2.27	0.70
47:BZ:14:ILE:HG22	47:BZ:15:GLY:N	2.07	0.70
1:CA:1491:G:C6	1:CA:1492:A:C6	2.79	0.70
22:DA:654:A:H3'	22:DA:654:A:N3	2.07	0.70
1:AA:600:A:H2'	1:AA:601:G:C8	2.27	0.70
13:AM:11:ASP:OD1	13:AM:12:HIS:N	2.25	0.70
22:BA:276:U:H2'	22:BA:276:U:O2	1.91	0.70
22:BA:2297:A:N1	22:BA:2321:U:H5	1.89	0.70
47:DZ:41:THR:HG23	47:DZ:44:ILE:HG12	1.73	0.70
1:AA:869:G:N7	57:AA:1823:HOH:O	2.23	0.70
4:AD:17:THR:HG22	4:AD:18:ASP:N	2.06	0.70
24:BC:132:MET:HA	24:BC:135:ILE:HG13	1.74	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
34:BM:2:LEU:O	34:BM:3:GLN:HB3	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:409:U:OP1	4:CD:24:GLY:HA3	1.91	0.70
2:CB:221:VAL:O	2:CB:223:GLU:N	2.24	0.70
22:DA:581:C:OP2	38:DQ:33:ARG:NH1	2.24	0.70
36:DO:26:LEU:HD23	36:DO:117:PHE:CE2	2.27	0.70
1:AA:66:A:H4'	1:AA:173:U:C5	2.27	0.70
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.22	0.70
22:BA:747:U:C4	22:BA:2613:U:C4	2.79	0.70
22:BA:1474:U:O4	22:BA:1475:G:N2	2.25	0.70
34:BM:51:ARG:O	34:BM:55:ARG:HG2	1.91	0.70
1:CA:1074:G:H4'	2:CB:103:ASN:HB3	1.71	0.70
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.72	0.70
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.06	0.70
22:DA:1365:A:OP1	45:DX:28:ARG:NH2	2.24	0.70
27:DF:44:ILE:HG21	27:DF:79:ILE:HG22	1.74	0.70
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.10	0.70
10:CJ:36:VAL:HA	10:CJ:76:ILE:HA	1.73	0.70
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.74	0.70
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.40	0.69
22:BA:58:G:OP1	41:BT:78:SER:HB2	1.92	0.69
22:BA:1341:G:C4	41:BT:84:TYR:CD1	2.80	0.69
40:BS:18:ARG:O	40:BS:20:VAL:N	2.25	0.69
14:CN:16:LEU:HB3	14:CN:55:SER:HA	1.73	0.69
14:CN:61:ARG:O	14:CN:62:ASN:HB2	1.91	0.69
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.24	0.69
1:AA:702:A:N6	22:BA:1846:G:O2'	2.25	0.69
22:DA:2128:G:O6	22:DA:2160:C:N4	2.25	0.69
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.74	0.69
1:AA:1377:A:N3	7:AG:2:PRO:HG3	2.08	0.69
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.70	0.69
22:BA:977:G:C6	57:BA:3592:HOH:O	2.45	0.69
29:BH:123:ARG:NH2	1:CA:367:U:O5'	2.26	0.69
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.22	0.69
22:DA:2136:G:N1	22:DA:2156:G:H1'	2.07	0.69
1:AA:663:A:N1	1:AA:743:A:C2	2.60	0.69
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.92	0.69
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.25	0.69
1:CA:858:G:O6	57:CA:1818:HOH:O	2.09	0.69
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.08	0.69
22:DA:1359:A:C8	22:DA:1373:A:N1	2.60	0.69
23:DB:81:G:C5	23:DB:82:U:C5	2.81	0.69
40:DS:33:LEU:HD21	40:DS:52:GLU:CG	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.51	0.69
22:BA:492:A:H2'	22:BA:493:G:O4'	1.93	0.69
22:BA:1925:C:H4'	22:BA:1926:U:C5	2.27	0.69
1:CA:32:A:C2	1:CA:33:A:C5	2.80	0.69
1:CA:72:A:C6	1:CA:73:C:N4	2.60	0.69
1:CA:1022:A:C5	1:CA:1023:U:C4	2.80	0.69
4:CD:26:ARG:O	4:CD:27:ALA:HB2	1.90	0.69
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.23	0.69
20:AT:6:SER:OG	20:AT:7:ALA:N	2.23	0.69
22:BA:2191:A:C2	22:BA:2192:U:C2	2.80	0.69
22:BA:2325:G:C6	22:BA:2326:C:N4	2.61	0.69
1:CA:213:G:C8	1:CA:214:C:C5	2.81	0.69
1:CA:496:A:C2	1:CA:497:G:C5	2.79	0.69
1:CA:527:G:C2	1:CA:528:C:C6	2.81	0.69
5:CE:57:PRO:O	5:CE:60:ILE:HG13	1.93	0.69
1:AA:1406:U:C5	1:AA:1407:C:C5	2.81	0.69
1:CA:945:G:C2	1:CA:946:A:C8	2.81	0.69
1:CA:1323:G:O2'	1:CA:1362:A:N3	2.21	0.69
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.73	0.69
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.24	0.69
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.75	0.69
1:AA:205:A:OP1	1:AA:205:A:H4'	1.92	0.69
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.07	0.69
4:AD:26:ARG:CD	4:AD:31:LYS:HE3	2.23	0.69
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.07	0.69
22:BA:1582:C:O2'	22:BA:1585:C:N3	2.25	0.69
34:BM:47:GLU:OE2	34:BM:51:ARG:NE	2.26	0.69
39:BR:37:GLU:HG2	39:BR:53:PHE:CD2	2.28	0.69
43:BV:80:HIS:CE1	43:BV:83:LYS:HG3	2.27	0.69
45:BX:63:GLY:O	45:BX:65:ASP:N	2.26	0.69
46:BY:56:LEU:O	46:BY:57:LEU:HB2	1.93	0.69
1:CA:72:A:N6	1:CA:73:C:N4	2.40	0.69
1:CA:686:U:O2'	1:CA:687:A:OP2	2.10	0.69
22:DA:152:A:C2	22:DA:175:G:C2	2.80	0.69
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.75	0.69
22:DA:2062:A:C5	54:D6:1:MHW:CD	2.76	0.69
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.27	0.69
22:BA:6:A:O2'	31:BJ:135:GLN:OE1	2.06	0.69
22:BA:1842:G:N3	22:BA:1901:A:C2	2.61	0.69
1:CA:111:G:C6	1:CA:330:C:N4	2.60	0.69
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2062:A:HO2'	22:BA:2063:C:H5'	1.58	0.69
46:BY:32:ALA:HB2	46:BY:37:LEU:HD23	1.75	0.69
22:DA:1335:C:N4	57:DA:3389:HOH:O	2.23	0.69
22:DA:2164:C:H2'	22:DA:2165:C:H6	1.57	0.69
1:AA:68:G:C5	1:AA:69:G:H1'	2.28	0.68
1:AA:858:G:OP2	57:AA:1822:HOH:O	2.10	0.68
4:AD:168:PRO:O	4:AD:169:THR:OG1	2.09	0.68
16:AP:52:LEU:O	16:AP:54:LEU:N	2.25	0.68
22:BA:1932:A:H5"	22:BA:1933:G:OP2	1.93	0.68
14:AN:90:ARG:NH1	14:AN:92:GLU:OE2	2.26	0.68
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.75	0.68
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.68
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.28	0.68
17:CQ:21:ILE:N	17:CQ:48:ASP:OD1	2.27	0.68
22:DA:1351:C:C2	22:DA:1381:G:C2	2.80	0.68
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.09	0.68
1:CA:38:G:N2	1:CA:397:A:C4	2.62	0.68
1:CA:939:G:OP1	7:CG:95:ARG:NH2	2.26	0.68
5:CE:122:ASN:OD1	5:CE:123:VAL:N	2.25	0.68
13:CM:54:ASP:HA	13:CM:57:ARG:HB3	1.76	0.68
22:DA:511:U:O4	22:DA:512:G:N1	2.27	0.68
1:AA:995:C:N3	1:AA:1046:A:O2'	2.25	0.68
1:AA:1144:G:N1	1:AA:1145:A:C2	2.62	0.68
22:BA:100:U:H4'	22:BA:101:A:O5'	1.93	0.68
22:BA:497:A:C5	22:BA:498:G:N7	2.61	0.68
12:CL:51:LYS:N	12:CL:51:LYS:HD2	2.07	0.68
17:CQ:48:ASP:N	17:CQ:48:ASP:OD2	2.26	0.68
1:AA:587:G:N2	1:AA:755:G:C5	2.62	0.68
1:AA:1048:G:N3	1:AA:1050:G:N7	2.41	0.68
22:BA:973:A:O4'	22:BA:1188:U:C6	2.46	0.68
22:BA:1924:C:O2	22:BA:1926:U:O4	2.11	0.68
1:CA:990:C:C4	1:CA:991:U:O4	2.47	0.68
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.12	0.68
22:DA:2143:C:H2'	22:DA:2144:G:O4'	1.93	0.68
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.28	0.68
1:AA:1074:G:C4	1:AA:1102:A:C2	2.82	0.68
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.75	0.68
22:BA:1153:C:OP2	57:BA:3360:HOH:O	2.12	0.68
22:BA:1154:G:OP2	38:BQ:58:ARG:NH1	2.26	0.68
22:BA:1439:A:C2	22:BA:1553:A:C4	2.81	0.68
22:BA:2097:A:C2	22:BA:2193:G:C6	2.81	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:4:GLU:OE2	32:BK:23:LYS:NZ	2.27	0.68
1:CA:1133:G:C2	1:CA:1142:G:C2	2.82	0.68
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.32	0.68
22:DA:120:U:O4	22:DA:177:G:C8	2.47	0.68
22:DA:2269:G:OP1	57:DA:3505:HOH:O	2.10	0.68
22:DA:2820:A:C8	25:DD:196:ALA:CB	2.77	0.68
41:DT:51:PHE:C	41:DT:52:GLU:HG2	2.14	0.68
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.76	0.68
22:BA:1606:C:H4'	22:BA:1607:C:H5'	1.73	0.68
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.29	0.68
22:BA:2567:G:H2'	22:BA:2568:U:H6	1.58	0.68
1:CA:1161:C:O2	1:CA:1176:A:C2	2.47	0.68
2:AB:49:MET:O	2:AB:53:ALA:HB2	1.93	0.68
22:BA:1340:U:OP1	41:BT:19:LYS:NZ	2.26	0.68
35:BN:74:GLU:O	35:BN:77:ALA:HB3	1.94	0.68
1:CA:657:U:O2	15:CO:22:THR:HG23	1.93	0.68
22:DA:82:U:N3	22:DA:83:A:N7	2.41	0.68
22:DA:2043:C:H1'	22:DA:2779:U:O4	1.94	0.68
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	1.76	0.68
14:AN:33:ASP:O	14:AN:35:ASN:N	2.26	0.68
22:BA:14:A:OP2	57:BA:3552:HOH:O	2.10	0.68
22:BA:244:A:C2	22:BA:255:A:C4	2.82	0.68
22:BA:1292:G:H2'	22:BA:1293:C:C6	2.29	0.68
22:BA:2191:A:C6	22:BA:2192:U:C4	2.82	0.68
34:BM:17:ASN:O	34:BM:38:ARG:HD3	1.94	0.68
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.75	0.68
1:CA:563:A:H2'	1:CA:567:G:C8	2.29	0.68
1:AA:11:G:C5	1:AA:12:U:C5	2.81	0.67
1:AA:109:A:C6	1:AA:326:G:C6	2.82	0.67
21:AU:35:ARG:O	21:AU:37:PHE:N	2.27	0.67
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.34	0.67
4:CD:29:ASP:O	4:CD:31:LYS:N	2.26	0.67
11:CK:35:THR:OG1	11:CK:36:ASP:N	2.27	0.67
22:DA:593:U:C2	22:DA:594:U:C5	2.82	0.67
22:DA:1153:C:H5'	38:DQ:62:ILE:HD13	1.76	0.67
22:DA:1530:G:N2	22:DA:1542:U:C2	2.61	0.67
33:DL:61:LEU:O	51:D3:13:ARG:HD3	1.95	0.67
37:DP:65:SER:O	37:DP:67:GLY:N	2.26	0.67
22:BA:45:G:H5'	22:BA:46:G:OP1	1.94	0.67
32:BK:68:GLY:O	32:BK:69:VAL:HG13	1.94	0.67
2:CB:16:PHE:CE1	2:CB:18:HIS:CE1	2.83	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1359:A:C8	22:DA:1373:A:C2	2.82	0.67
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.09	0.67
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.42	0.67
22:BA:332:A:O2'	22:BA:334:C:OP2	2.11	0.67
22:BA:696:G:C2	22:BA:697:G:C8	2.83	0.67
22:BA:1161:C:H1'	39:BR:8:GLY:O	1.94	0.67
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.10	0.67
22:BA:1565:C:C5	22:BA:1567:G:C6	2.81	0.67
25:BD:136:ASN:ND2	25:BD:140:HIS:CD2	2.62	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
43:BV:36:ALA:O	43:BV:93:ARG:NH2	2.27	0.67
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.26	0.67
18:CR:25:ASP:O	18:CR:28:THR:N	2.27	0.67
22:DA:1266:G:O2'	22:DA:2012:G:O6	2.13	0.67
1:AA:659:U:H2'	1:AA:660:C:C6	2.30	0.67
1:AA:980:C:OP2	57:AA:1836:HOH:O	2.11	0.67
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.13	0.67
9:AI:114:LYS:NZ	9:AI:118:LEU:O	2.25	0.67
18:AR:37:GLY:O	18:AR:63:ARG:NH2	2.27	0.67
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.77	0.67
1:CA:805:C:C2	1:CA:806:C:C5	2.82	0.67
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.10	0.67
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.94	0.67
22:BA:1826:G:O6	57:BA:3786:HOH:O	2.09	0.67
32:BK:31:ARG:HD3	32:BK:32:TYR:CZ	2.29	0.67
39:BR:39:LEU:O	39:BR:49:ILE:HG23	1.94	0.67
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.30	0.67
5:CE:133:PRO:HA	5:CE:136:VAL:HG13	1.75	0.67
22:DA:211:C:OP1	50:D2:25:LYS:NZ	2.27	0.67
22:DA:299:A:N3	22:DA:319:G:O2'	2.24	0.67
22:DA:2466:C:OP1	52:D4:4:ARG:HB2	1.95	0.67
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.29	0.67
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.25	0.67
22:BA:2473:U:C5	22:BA:2474:U:C5	2.83	0.67
31:BJ:64:VAL:CG2	31:BJ:68:LYS:HD2	2.25	0.67
1:CA:324:G:N7	57:CA:1740:HOH:O	2.27	0.67
1:CA:522:C:OP2	12:CL:66:TYR:OH	2.12	0.67
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.77	0.67
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	1.95	0.67
22:DA:2637:U:O4	22:DA:2638:G:N1	2.28	0.67
1:AA:21:G:N2	1:AA:22:G:C6	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:130:VAL:HG11	4:AD:135:TYR:CD1	2.29	0.67
22:BA:1090:A:H2'	22:BA:1091:G:H5'	1.76	0.67
22:BA:1344:U:O2'	22:BA:1345:C:P	2.51	0.67
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.76	0.67
1:CA:892:A:C5	1:CA:893:C:C5	2.83	0.67
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.76	0.67
22:DA:1277:G:H5'	35:DN:20:MET:HE1	1.77	0.67
22:DA:1918:A:HO2'	22:DA:1920:C:N4	1.93	0.67
3:AC:148:GLY:HA3	3:AC:172:ARG:O	1.94	0.67
22:BA:455:C:N3	22:BA:472:A:H2'	2.10	0.67
22:BA:2024:G:OP2	22:BA:2034:U:H4'	1.95	0.67
1:CA:1166:G:N1	1:CA:1169:A:OP2	2.26	0.67
50:B2:35:ARG:HG2	50:B2:42:LEU:HD11	1.75	0.67
1:CA:552:U:N3	1:CA:553:A:C8	2.63	0.67
1:CA:632:U:O2	1:CA:632:U:H2'	1.94	0.67
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.30	0.67
18:CR:32:TYR:CD1	18:CR:55:LEU:HD21	2.29	0.67
22:DA:668:A:C2	22:DA:670:A:C5	2.83	0.67
22:DA:2248:C:OP2	57:DA:3501:HOH:O	2.12	0.67
23:DB:72:G:O2'	23:DB:104:A:N6	2.28	0.67
1:AA:1378:C:H2'	1:AA:1379:G:O5'	1.95	0.67
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.68	0.67
22:BA:2311:A:N3	27:BF:85:ILE:HD11	2.09	0.67
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.67
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.77	0.67
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.48	0.67
1:CA:1397:C:O2'	1:CA:1398:A:OP1	2.13	0.67
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.28	0.67
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.94	0.67
22:DA:1440:U:O4	57:DA:3626:HOH:O	2.08	0.67
1:AA:796:C:OP1	11:AK:126:LYS:HB2	1.95	0.66
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.13	0.66
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.95	0.66
22:BA:2310:C:H2'	22:BA:2311:A:H5'	1.77	0.66
47:BZ:24:LEU:HD11	47:BZ:54:MET:CE	2.26	0.66
5:CE:69:ARG:O	5:CE:70:ASN:HB2	1.94	0.66
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.30	0.66
29:BH:91:PHE:O	1:CA:55:A:C6	2.48	0.66
1:CA:86:G:H1'	1:CA:87:C:O4'	1.94	0.66
1:CA:833:G:C5	1:CA:834:U:C5	2.82	0.66
22:DA:276:U:O2'	22:DA:278:A:N7	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1357:C:C5	57:DA:3397:HOH:O	2.49	0.66
25:DD:148:GLN:OE1	25:DD:148:GLN:N	2.29	0.66
1:AA:42:G:O2'	1:AA:622:A:N1	2.25	0.66
1:AA:1147:C:O2	9:AI:18:ARG:NH1	2.27	0.66
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.11	0.66
22:BA:277:G:O2'	22:BA:361:G:N1	2.29	0.66
34:BM:136:MET:HE2	43:BV:57:TYR:CD2	2.29	0.66
45:BX:2:SER:O	45:BX:4:VAL:N	2.28	0.66
1:CA:435:A:H2'	1:CA:436:C:O5'	1.95	0.66
4:CD:35:GLU:O	4:CD:38:PRO:HD3	1.95	0.66
22:DA:782:A:O2'	24:DC:224:ALA:O	2.14	0.66
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.95	0.66
22:DA:2024:G:OP2	22:DA:2034:U:H4'	1.95	0.66
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.31	0.66
10:AJ:52:LEU:HB3	14:AN:81:ARG:NE	2.09	0.66
13:AM:3:ARG:HG2	13:AM:4:ILE:N	2.10	0.66
22:BA:634:C:H2'	22:BA:635:C:C6	2.30	0.66
22:BA:1624:U:C2	22:BA:1625:C:C5	2.83	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
32:BK:116:ILE:O	32:BK:118:LEU:O	2.14	0.66
42:BU:39:ILE:HG22	42:BU:40:ASN:H	1.59	0.66
1:CA:373:A:C2	1:CA:374:A:C8	2.83	0.66
1:CA:675:A:OP1	18:CR:74:HIS:CE1	2.48	0.66
1:CA:718:A:C8	1:CA:719:C:C5	2.84	0.66
1:CA:1490:U:H2'	1:CA:1491:G:C8	2.30	0.66
14:CN:21:PHE:O	14:CN:23:LYS:N	2.28	0.66
22:DA:444:C:OP1	26:DE:40:ARG:NH1	2.28	0.66
22:DA:626:A:C2	33:DL:78:ARG:HD3	2.30	0.66
22:DA:1936:A:OP1	57:DA:3455:HOH:O	2.13	0.66
22:DA:2728:U:O2'	22:DA:2729:G:H5"	1.96	0.66
27:DF:8:TYR:OH	27:DF:29:PRO:O	2.13	0.66
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.77	0.66
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.25	0.66
18:AR:67:LEU:O	18:AR:68:LEU:HG	1.96	0.66
22:BA:1840:G:C6	22:BA:1841:U:C4	2.84	0.66
24:BC:162:VAL:HG11	24:BC:174:LEU:HG	1.75	0.66
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.28	0.66
22:DA:1638:C:H4'	22:DA:2710:C:O2	1.95	0.66
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.28	0.66
26:DE:181:ILE:HG23	33:DL:2:ARG:NH1	2.11	0.66
1:AA:119:A:C2	1:AA:240:G:C8	2.82	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:562:U:OP2	12:CL:14:ARG:NH2	2.28	0.66
22:DA:82:U:C2	22:DA:83:A:C8	2.83	0.66
22:DA:2612:C:H5"	22:DA:2613:U:OP1	1.96	0.66
1:AA:397:A:C6	1:AA:548:G:N7	2.64	0.66
22:BA:1754:A:C6	22:BA:1755:A:C6	2.84	0.66
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.44	0.66
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.95	0.66
4:CD:64:ILE:HG22	4:CD:65:TYR:CD1	2.31	0.66
1:AA:451:A:H4'	1:AA:452:A:O5'	1.94	0.66
1:AA:792:A:H1'	1:AA:794:A:N7	2.11	0.66
1:AA:909:A:H2'	1:AA:910:C:O4'	1.96	0.66
1:AA:1130:A:O2'	9:AI:5:GLN:HG3	1.96	0.66
22:BA:1022:G:N7	31:BJ:68:LYS:HE2	2.11	0.66
22:BA:2838:G:OP1	57:BA:3806:HOH:O	2.13	0.66
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.31	0.66
22:DA:1364:G:N7	45:DX:2:SER:N	2.44	0.66
28:DG:111:HIS:ND1	28:DG:111:HIS:O	2.29	0.66
1:AA:172:A:C6	1:AA:174:A:C8	2.84	0.66
22:BA:1297:C:O2'	22:BA:1302:A:N1	2.28	0.66
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.31	0.66
1:CA:681:A:C2	1:CA:710:G:N3	2.64	0.66
22:DA:749:A:C4	22:DA:750:A:C8	2.84	0.66
22:DA:2415:G:C2	22:DA:2416:C:C2	2.84	0.66
1:AA:1074:G:N3	1:AA:1102:A:C2	2.64	0.66
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.11	0.66
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	2.84	0.66
4:AD:9:LEU:HD21	4:AD:22:LYS:HB2	1.76	0.66
22:BA:756:A:N7	57:BA:3299:HOH:O	2.29	0.66
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.28	0.66
35:BN:3:HIS:O	35:BN:4:ARG:HB2	1.96	0.66
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.78	0.66
22:DA:844:A:C2	22:DA:845:A:N7	2.64	0.66
22:DA:2550:G:O6	22:DA:2551:C:N4	2.29	0.66
22:DA:2818:U:OP2	35:DN:42:LYS:NZ	2.20	0.66
34:DM:76:LYS:NZ	34:DM:85:GLY:O	2.28	0.66
1:AA:880:C:P	12:AL:5:ASN:HD22	2.19	0.65
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.79	0.65
22:BA:686:U:P	57:BA:3719:HOH:O	2.55	0.65
22:BA:2390:U:OP2	51:B3:35:LYS:NZ	2.29	0.65
24:BC:17:VAL:H	24:BC:204:VAL:HG22	1.61	0.65
24:BC:222:GLY:HA2	24:BC:225:MET:HE3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:52:ASN:O	27:BF:54:ALA:N	2.28	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
1:CA:369:G:OP2	1:CA:388:G:N2	2.29	0.65
19:CS:11:ILE:HG13	19:CS:12:ASP:N	2.10	0.65
22:DA:1809:A:C6	22:DA:1810:A:C6	2.84	0.65
10:AJ:59:LYS:HD2	10:AJ:60:ASP:N	2.11	0.65
22:BA:1494:A:H2'	22:BA:1495:A:O5'	1.95	0.65
22:BA:2006:C:OP1	57:BA:3379:HOH:O	2.14	0.65
22:BA:2526:G:C2	22:BA:2538:C:O2	2.49	0.65
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.32	0.65
1:CA:1244:G:C6	1:CA:1245:C:N4	2.65	0.65
2:CB:53:ALA:O	2:CB:57:LEU:HB2	1.96	0.65
13:CM:72:GLU:O	13:CM:76:SER:OG	2.14	0.65
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.78	0.65
22:BA:1124:G:N7	57:BA:3606:HOH:O	2.29	0.65
22:BA:1910:G:H2'	22:BA:1911:U:O4'	1.97	0.65
22:BA:2517:C:C6	22:BA:2542:A:N7	2.64	0.65
22:BA:2683:C:H4'	25:BD:13:ARG:NH1	2.11	0.65
22:DA:834:G:H1'	22:DA:2358:A:N3	2.11	0.65
22:DA:2591:C:C2	22:DA:2592:G:C8	2.84	0.65
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.31	0.65
30:BI:43:ASN:OD1	30:BI:46:THR:HB	1.97	0.65
49:B1:25:LYS:NZ	49:B1:52:ALA:O	2.19	0.65
53:B5:50:ILE:O	53:B5:52:PRO:HD3	1.96	0.65
1:CA:1022:A:C6	1:CA:1023:U:C4	2.85	0.65
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.12	0.65
22:DA:1359:A:C5	22:DA:1360:G:C8	2.85	0.65
22:DA:1676:A:H2'	22:DA:1677:A:O4'	1.97	0.65
1:AA:665:A:C2	1:AA:732:C:C4	2.84	0.65
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.78	0.65
26:BE:176:ASP:OD2	26:BE:179:SER:OG	2.12	0.65
22:DA:977:G:O6	57:DA:3581:HOH:O	2.12	0.65
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.31	0.65
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.20	0.65
1:AA:652:U:C4	1:AA:752:G:N3	2.65	0.65
1:AA:843:U:OP1	1:AA:846:G:N2	2.30	0.65
22:BA:28:A:C5	22:BA:29:U:C5	2.83	0.65
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.96	0.65
22:BA:2824:C:C4	22:BA:2825:G:C5	2.85	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
47:BZ:36:VAL:HG21	47:BZ:38:ARG:NH2	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:499:A:C6	1:CA:547:A:C8	2.85	0.65
1:CA:966:G:O2'	9:CI:130:ARG:OXT	2.14	0.65
15:CO:19:ALA:O	15:CO:20:ASN:HB2	1.95	0.65
22:DA:1019:U:O2'	22:DA:1021:A:N7	2.29	0.65
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.44	0.65
19:AS:29:LYS:HB3	19:AS:30:PRO:CD	2.26	0.65
22:BA:194:G:N7	57:BA:3759:HOH:O	2.29	0.65
25:BD:103:ASP:O	25:BD:104:VAL:HG22	1.96	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
2:CB:54:LEU:HD12	2:CB:220:THR:HG21	1.79	0.65
6:CF:3:HIS:O	6:CF:92:THR:OG1	2.15	0.65
22:DA:481:G:C4	22:DA:507:A:C2	2.85	0.65
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.31	0.65
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.10	0.65
21:AU:25:LYS:O	21:AU:29:LEU:CB	2.45	0.65
25:BD:13:ARG:HD2	25:BD:15:PHE:CE1	2.32	0.65
32:BK:113:MET:O	32:BK:116:ILE:HG13	1.96	0.65
1:CA:369:G:OP2	1:CA:388:G:N1	2.30	0.65
1:CA:608:A:C8	57:CA:1798:HOH:O	2.49	0.65
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.44	0.65
1:AA:145:G:N2	1:AA:178:C:N3	2.45	0.65
1:AA:872:A:C4	1:AA:874:G:C8	2.83	0.65
11:AK:29:ASN:OD1	11:AK:47:ALA:HB3	1.97	0.65
22:BA:622:G:OP2	57:BA:3291:HOH:O	2.14	0.65
22:BA:1935:G:C5	22:BA:1962:C:C5	2.85	0.65
24:BC:235:GLY:O	24:BC:236:GLU:HB2	1.96	0.65
1:CA:673:A:H2'	1:CA:674:G:C8	2.32	0.65
1:CA:851:G:C2	1:CA:852:G:C8	2.85	0.65
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.44	0.65
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.79	0.65
7:AG:24:ALA:HA	7:AG:27:VAL:HG22	1.79	0.65
22:BA:1359:A:P	57:BA:3616:HOH:O	2.55	0.65
22:BA:1492:G:C6	22:BA:1499:C:N3	2.65	0.65
22:BA:2555:U:H5"	22:BA:2556:C:OP2	1.96	0.65
14:CN:52:PRO:O	14:CN:53:ARG:HB3	1.97	0.65
22:DA:752:A:N3	22:DA:752:A:H2'	2.11	0.65
22:DA:1010:A:N7	57:DA:3773:HOH:O	2.30	0.65
22:DA:2311:A:O2'	22:DA:2312:U:P	2.54	0.65
1:AA:914:A:C4	1:AA:915:A:C8	2.85	0.64
12:AL:21:VAL:HG23	12:AL:95:TYR:CE1	2.31	0.64
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:25:LYS:O	21:AU:29:LEU:HB2	1.97	0.64
22:BA:45:G:C5'	22:BA:46:G:OP1	2.45	0.64
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.79	0.64
50:B2:43:THR:O	50:B2:44:VAL:HB	1.97	0.64
22:DA:352:A:H2'	22:DA:353:C:O4'	1.97	0.64
22:DA:2684:U:C4	22:DA:2685:G:N7	2.65	0.64
34:DM:30:SER:N	34:DM:106:ASP:OD1	2.30	0.64
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.79	0.64
22:BA:1413:A:C6	22:BA:1414:C:N3	2.65	0.64
22:BA:2334:U:O4	36:BO:16:ARG:NH2	2.30	0.64
26:BE:28:VAL:O	26:BE:32:VAL:HG13	1.98	0.64
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.64
40:BS:80:PRO:O	40:BS:100:THR:OG1	2.15	0.64
6:CF:38:ARG:HG2	6:CF:63:ASN:HB3	1.77	0.64
1:AA:771:G:O2'	1:AA:772:U:H5'	1.97	0.64
8:AH:2:SER:O	8:AH:4:GLN:N	2.30	0.64
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.32	0.64
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.16	0.64
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.77	0.64
27:BF:158:THR:HG23	27:BF:160:ALA:H	1.62	0.64
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.79	0.64
1:CA:1151:A:C2	1:CA:1152:A:C5	2.85	0.64
22:DA:1317:G:C2	22:DA:1336:A:C2	2.85	0.64
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.32	0.64
22:DA:2345:G:C5	22:DA:2381:A:C2	2.86	0.64
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.80	0.64
22:BA:1246:A:H2'	22:BA:1247:A:O5'	1.97	0.64
22:BA:1386:C:H5"	22:BA:1396:U:O2	1.96	0.64
22:BA:1925:C:H5"	22:BA:1926:U:O4	1.96	0.64
22:BA:2579:C:OP1	57:BA:3543:HOH:O	2.15	0.64
49:B1:11:LEU:N	49:B1:11:LEU:HD23	2.11	0.64
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.76	0.64
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.31	0.64
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.11	0.64
22:DA:1738:G:HO2'	22:DA:1739:A:P	2.20	0.64
41:DT:17:SER:O	41:DT:19:LYS:N	2.31	0.64
1:AA:411:A:C5	1:AA:429:U:C5	2.86	0.64
22:BA:1478:G:H1	22:BA:1513:U:H3	1.45	0.64
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.32	0.64
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.32	0.64
38:BQ:41:LYS:HA	38:BQ:44:GLN:HG3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:689:C:OP1	11:CK:46:THR:OG1	2.15	0.64
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.78	0.64
22:DA:305:C:C2	22:DA:313:G:C6	2.85	0.64
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.65	0.64
13:AM:71:ARG:HB2	27:BF:143:TYR:CD2	2.33	0.64
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.28	0.64
27:BF:105:THR:HG23	27:BF:106:ILE:HG23	1.79	0.64
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.31	0.64
49:B1:23:THR:OG1	49:B1:24:THR:N	2.31	0.64
1:CA:437:U:H4'	4:CD:154:ARG:NH2	2.12	0.64
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	1.80	0.64
22:DA:1153:C:P	57:DA:3356:HOH:O	2.55	0.64
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.12	0.64
22:DA:2341:G:C6	22:DA:2342:C:C4	2.86	0.64
1:AA:1378:C:C2'	1:AA:1379:G:O5'	2.46	0.64
11:AK:69:ARG:HD2	22:BA:2146:C:N3	2.12	0.64
12:AL:25:GLU:O	12:AL:26:ALA:C	2.35	0.64
1:CA:405:U:OP1	1:CA:406:G:O2'	2.09	0.64
1:CA:859:G:C8	1:CA:869:G:N2	2.65	0.64
4:CD:24:GLY:O	4:CD:161:LEU:HD11	1.98	0.64
18:CR:20:GLU:O	18:CR:22:ASP:N	2.31	0.64
22:DA:301:G:H1'	22:DA:302:C:C6	2.33	0.64
22:DA:833:A:OP1	33:DL:39:LYS:HE2	1.97	0.64
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.33	0.64
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.12	0.64
22:BA:1250:G:H5"	38:BQ:6:ARG:HD3	1.80	0.64
22:BA:2551:C:H2'	22:BA:2552:U:C6	2.33	0.64
22:BA:2886:A:C5	22:BA:2887:A:C8	2.85	0.64
38:BQ:40:ILE:O	38:BQ:44:GLN:HG3	1.97	0.64
48:B0:55:ILE:O	48:B0:56:ALA:CB	2.45	0.64
1:CA:380:G:N2	1:CA:383:A:OP2	2.29	0.64
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.98	0.64
22:DA:187:G:C2	22:DA:210:C:O2	2.51	0.64
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.33	0.64
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.32	0.64
45:DX:41:GLU:O	45:DX:44:LYS:HD2	1.98	0.64
1:AA:188:C:O2	1:AA:188:C:H2'	1.98	0.64
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.79	0.64
11:AK:91:PRO:O	11:AK:93:ARG:N	2.31	0.64
22:BA:1253:A:C8	57:BA:3333:HOH:O	2.48	0.64
22:BA:1428:C:C5	22:BA:1569:A:H5"	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1867:G:O2'	22:BA:1868:C:H5'	1.98	0.64
34:BM:31:PHE:CZ	34:BM:110:GLU:HA	2.32	0.64
9:CI:54:LEU:O	9:CI:55:VAL:HG22	1.98	0.64
13:CM:40:ALA:O	13:CM:42:ASP:N	2.31	0.64
22:DA:1973:G:C6	22:DA:1974:C:C4	2.85	0.64
22:DA:2199:A:C6	22:DA:2200:C:C2	2.86	0.64
1:AA:49:U:O4	1:AA:365:U:C5	2.51	0.64
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.71	0.64
5:AE:25:VAL:O	5:AE:27:GLY:N	2.31	0.64
22:BA:125:A:OP2	50:B2:19:ARG:HD3	1.98	0.64
22:BA:163:C:H2'	22:BA:164:C:C6	2.33	0.64
22:BA:1011:G:N2	22:BA:1151:A:C4	2.66	0.64
22:BA:1250:G:C5'	38:BQ:6:ARG:HD3	2.27	0.64
22:BA:2547:A:C2	22:BA:2548:U:N3	2.66	0.64
1:CA:577:G:C2	1:CA:578:C:C5	2.85	0.64
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.13	0.64
22:DA:53:A:C2	22:DA:179:C:H4'	2.33	0.64
22:DA:2458:G:O2'	22:DA:2460:U:O4	2.15	0.64
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.64
1:AA:427:U:OP2	1:AA:428:G:O2'	2.15	0.63
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.77	0.63
22:BA:1510:G:H2'	22:BA:1511:G:O4'	1.98	0.63
22:BA:2468:A:C2	22:BA:2481:G:C2	2.86	0.63
22:BA:2498:C:C2'	22:BA:2499:C:H5'	2.28	0.63
1:CA:38:G:C2	1:CA:397:A:C2	2.86	0.63
2:CB:193:PRO:O	2:CB:195:GLY:N	2.32	0.63
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.78	0.63
22:DA:846:U:O2'	22:DA:847:U:O5'	2.16	0.63
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.32	0.63
22:DA:1308:A:H2'	22:DA:1309:G:O4'	1.98	0.63
22:DA:1609:A:C2	22:DA:1616:A:C8	2.87	0.63
1:AA:988:G:N2	1:AA:1217:C:O2	2.31	0.63
1:AA:1181:G:C2	1:AA:1182:G:N2	2.66	0.63
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.80	0.63
11:AK:35:THR:OG1	11:AK:41:ALA:N	2.31	0.63
22:BA:877:A:N6	22:BA:899:A:N6	2.46	0.63
22:BA:1061:U:O4	30:BI:11:LEU:HA	1.98	0.63
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.80	0.63
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	1.79	0.63
33:BL:87:GLY:O	33:BL:89:VAL:N	2.29	0.63
1:CA:455:G:N2	1:CA:478:A:C2	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:496:A:C2	1:CA:497:G:C6	2.87	0.63
1:CA:898:G:N2	1:CA:901:A:OP2	2.31	0.63
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.99	0.63
1:CA:1362:A:OP1	1:CA:1362:A:H4'	1.98	0.63
22:DA:866:A:O4'	22:DA:914:G:N2	2.31	0.63
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.33	0.63
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.13	0.63
4:AD:97:ARG:HB3	4:AD:99:ASP:OD1	1.99	0.63
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.33	0.63
24:BC:246:THR:N	24:BC:250:VAL:O	2.28	0.63
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	1.80	0.63
37:BP:14:LYS:HD2	37:BP:77:HIS:HA	1.80	0.63
45:BX:74:ARG:NH2	45:BX:76:GLU:HG3	2.13	0.63
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.33	0.63
24:DC:29:PRO:HG3	24:DC:63:ARG:CZ	2.27	0.63
29:DH:27:ARG:HE	45:DX:60:ASP:CB	2.11	0.63
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.67	0.63
39:DR:61:ALA:HB2	39:DR:98:ILE:HD13	1.80	0.63
40:DS:66:ILE:O	40:DS:68:ASP:N	2.32	0.63
1:AA:1223:C:P	1:AA:1224:U:H2'	2.39	0.63
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.80	0.63
11:AK:70:CYS:O	11:AK:74:VAL:HG22	1.97	0.63
22:BA:1436:G:N2	22:BA:1557:C:C2	2.66	0.63
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.81	0.63
22:BA:2286:G:H4'	22:BA:2287:A:O5'	1.99	0.63
22:BA:2564:A:C6	22:BA:2565:A:N1	2.66	0.63
25:BD:140:HIS:CE1	57:BD:303:HOH:O	2.48	0.63
50:B2:43:THR:O	50:B2:44:VAL:CB	2.46	0.63
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.33	0.63
33:DL:35:HIS:O	57:DL:201:HOH:O	2.15	0.63
1:AA:76:G:N2	1:AA:95:C:C2	2.66	0.63
4:AD:150:LYS:O	4:AD:151:LYS:C	2.37	0.63
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.79	0.63
1:CA:866:C:C4	1:CA:867:G:H1'	2.34	0.63
1:CA:1250:A:N1	1:CA:1251:A:C2	2.66	0.63
13:CM:106:ALA:O	13:CM:110:LYS:HB3	1.98	0.63
22:DA:699:A:N6	22:DA:733:G:O2'	2.31	0.63
1:AA:144:G:C5	1:AA:179:A:C2	2.87	0.63
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.98	0.63
22:BA:360:U:H3'	22:BA:361:G:C8	2.33	0.63
22:BA:1084:A:C5	22:BA:1085:A:C6	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1418:A:C2	1:CA:1483:A:C2	2.87	0.63
6:CF:91:ARG:O	6:CF:92:THR:OG1	2.14	0.63
22:DA:1780:A:OP1	57:DA:3684:HOH:O	2.15	0.63
22:DA:2610:C:O4'	54:D6:7:004:HD2	1.98	0.63
25:DD:115:GLY:O	35:DN:3:HIS:NE2	2.30	0.63
29:DH:27:ARG:HE	45:DX:60:ASP:CG	2.01	0.63
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.66	0.63
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.81	0.63
22:BA:545:U:H3'	22:BA:546:U:H4'	1.80	0.63
39:BR:49:ILE:HA	39:BR:52:PRO:O	1.99	0.63
22:DA:132:G:N2	22:DA:148:U:C2	2.67	0.63
22:DA:2346:A:H3'	22:DA:2347:C:H5'	1.81	0.63
22:DA:2526:G:N3	52:D4:1:MET:N	2.46	0.63
26:DE:108:ILE:HD13	26:DE:181:ILE:HG12	1.81	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
31:DJ:5:THR:O	31:DJ:7:LYS:NZ	2.32	0.63
1:AA:30:U:C4	1:AA:554:A:N1	2.67	0.63
1:AA:760:G:C5	1:AA:761:G:C8	2.87	0.63
5:AE:149:SER:O	5:AE:153:VAL:HG12	1.99	0.63
22:BA:622:G:P	57:BA:3292:HOH:O	2.57	0.63
22:BA:2297:A:C2	22:BA:2298:A:C8	2.86	0.63
22:BA:2646:C:OP2	22:BA:2732:G:O2'	2.16	0.63
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	1.99	0.63
27:BF:4:LEU:HD11	27:BF:104:ILE:HD11	1.80	0.63
1:CA:439:U:O3'	4:CD:121:LYS:HE3	1.99	0.63
3:CC:81:GLY:O	3:CC:83:ASP:N	2.32	0.63
16:CP:20:VAL:HG21	16:CP:32:PHE:CG	2.34	0.63
22:DA:78:U:OP2	46:DY:2:LYS:HD2	1.99	0.63
22:DA:193:U:C5	22:DA:194:G:N7	2.66	0.63
22:DA:2062:A:C6	54:D6:1:MHW:CE	2.82	0.63
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.45	0.63
22:BA:784:G:O2'	22:BA:785:G:H5'	1.99	0.63
22:BA:927:A:H2'	22:BA:928:A:C8	2.33	0.63
22:BA:2343:U:HO2'	22:BA:2373:G:HO2'	1.46	0.63
24:BC:14:ARG:HG2	24:BC:15:HIS:ND1	2.13	0.63
1:CA:104:G:C2	1:CA:105:G:C8	2.86	0.63
3:CC:36:ASP:O	3:CC:40:ARG:HG3	1.99	0.63
5:CE:99:ALA:O	5:CE:122:ASN:ND2	2.32	0.63
22:DA:277:G:H1'	22:DA:361:G:O6	1.99	0.63
22:DA:563:A:C4	22:DA:2018:G:C2	2.87	0.63
1:AA:209:U:H4'	1:AA:210:C:OP2	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.72	0.62
22:BA:115:C:HO2'	22:BA:127:A:HO2'	1.47	0.62
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.99	0.62
22:BA:1353:A:O2'	22:BA:1354:A:H5'	1.99	0.62
4:CD:31:LYS:N	4:CD:31:LYS:HD3	2.14	0.62
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.98	0.62
22:DA:1995:U:OP1	57:DA:3804:HOH:O	2.16	0.62
22:DA:2469:A:O2'	34:DM:55:ARG:NH2	2.32	0.62
22:DA:2576:G:O2'	22:DA:2579:C:OP2	2.14	0.62
22:DA:2681:C:C2	22:DA:2724:U:O4	2.52	0.62
35:DN:87:PHE:O	35:DN:89:SER:N	2.31	0.62
2:AB:82:ASP:O	2:AB:84:ALA:N	2.32	0.62
3:AC:40:ARG:NH2	14:AN:92:GLU:OE1	2.32	0.62
4:AD:191:LEU:O	4:AD:192:SER:CB	2.46	0.62
10:AJ:36:VAL:HA	10:AJ:75:ASP:O	1.98	0.62
12:AL:21:VAL:HG22	12:AL:21:VAL:O	1.99	0.62
22:BA:2127:G:H2'	22:BA:2128:G:C8	2.34	0.62
22:BA:2380:C:H5'	36:BO:17:LYS:NZ	2.14	0.62
34:BM:70:ASP:OD2	34:BM:70:ASP:C	2.37	0.62
37:BP:31:TRP:CZ2	37:BP:40:LEU:HD11	2.34	0.62
46:BY:5:GLU:HA	46:BY:8:GLU:HG3	1.80	0.62
1:CA:1028:C:C6	1:CA:1034:G:N2	2.67	0.62
5:CE:122:ASN:CG	5:CE:123:VAL:N	2.53	0.62
22:DA:2674:G:H4'	32:DK:30:ARG:HD2	1.81	0.62
1:AA:484:G:H4'	1:AA:485:U:OP1	1.98	0.62
1:AA:760:G:H2'	1:AA:761:G:H5'	1.81	0.62
5:AE:137:VAL:O	5:AE:138:ARG:HB3	1.99	0.62
11:AK:17:SER:HA	11:AK:79:ILE:HA	1.80	0.62
22:BA:693:A:H2'	22:BA:694:U:O4'	2.00	0.62
22:BA:1230:A:H2'	22:BA:1231:U:O4'	1.98	0.62
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.79	0.62
43:BV:32:GLY:O	43:BV:93:ARG:NH1	2.32	0.62
43:BV:48:MET:SD	43:BV:86:LEU:HG	2.39	0.62
1:CA:929:G:H5"	1:CA:1535:C:H5"	1.80	0.62
1:CA:1505:G:H4'	1:CA:1506:U:H5"	1.81	0.62
22:DA:1669:A:N3	22:DA:1669:A:H3'	2.15	0.62
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.46	0.62
2:AB:163:VAL:HG13	2:AB:185:ALA:HB2	1.80	0.62
22:BA:189:G:OP1	45:BX:26:LYS:HD2	1.99	0.62
22:BA:2444:G:P	26:BE:63:LYS:HD2	2.40	0.62
31:BJ:49:ASP:OD1	31:BJ:121:LYS:NZ	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:27:ILE:CG2	39:BR:63:VAL:HG21	2.28	0.62
42:DU:72:ILE:HD11	42:DU:83:VAL:HG23	1.82	0.62
4:AD:168:PRO:HG2	4:AD:171:LEU:HD11	1.81	0.62
5:AE:96:MET:HB3	5:AE:125:ALA:HB2	1.80	0.62
13:AM:27:LYS:O	13:AM:31:LYS:HG3	2.00	0.62
22:BA:2498:C:OP2	57:BA:3685:HOH:O	2.16	0.62
24:BC:204:VAL:O	24:BC:205:LEU:HB2	1.98	0.62
1:CA:32:A:OP1	1:CA:398:U:H1'	1.99	0.62
1:CA:1028:C:O2	1:CA:1028:C:H2'	2.00	0.62
17:CQ:8:LEU:HB2	17:CQ:61:ILE:CG2	2.29	0.62
22:DA:82:U:H5'	22:DA:296:U:H5"	1.81	0.62
22:DA:1316:U:C2	22:DA:1337:G:N2	2.68	0.62
1:AA:277:C:H2'	1:AA:278:G:H5'	1.81	0.62
1:AA:1129:C:O2	1:AA:1130:A:N6	2.32	0.62
1:AA:1312:G:N7	19:AS:3:ARG:N	2.47	0.62
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.34	0.62
5:AE:99:ALA:O	5:AE:101:GLU:N	2.31	0.62
19:AS:32:ARG:HA	19:AS:50:ALA:HB3	1.80	0.62
1:CA:55:A:N7	1:CA:56:U:C4	2.67	0.62
1:CA:1118:U:OP1	9:CI:11:ARG:NH1	2.31	0.62
3:CC:19:ASN:HA	3:CC:56:VAL:HG13	1.81	0.62
22:DA:187:G:N2	22:DA:210:C:C2	2.68	0.62
22:DA:1317:G:H2'	22:DA:1318:U:O4'	1.99	0.62
35:DN:118:ARG:O	35:DN:119:SER:CB	2.47	0.62
1:AA:109:A:H2'	1:AA:326:G:N2	2.15	0.62
1:AA:1258:G:C6	1:AA:1259:C:N4	2.68	0.62
5:AE:32:SER:O	5:AE:33:PHE:CD2	2.53	0.62
11:AK:55:SER:O	11:AK:57:LYS:N	2.32	0.62
21:AU:4:ILE:HA	21:AU:20:LYS:HE3	1.81	0.62
22:BA:475:C:C4	22:BA:481:G:O6	2.52	0.62
22:BA:877:A:C6	22:BA:899:A:C6	2.88	0.62
22:BA:1098:A:C5	22:BA:1099:G:C6	2.87	0.62
22:BA:1450:G:C6	22:BA:1451:C:N4	2.68	0.62
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.82	0.62
17:CQ:19:LYS:NZ	17:CQ:49:GLU:OE1	2.32	0.62
22:DA:931:U:H4'	22:DA:932:U:OP2	2.00	0.62
39:DR:24:LYS:HA	39:DR:94:THR:OG1	2.00	0.62
42:DU:7:ARG:O	42:DU:25:VAL:HB	1.99	0.62
1:AA:438:U:C2	1:AA:494:G:C6	2.88	0.62
1:AA:1014:A:C2	19:AS:34:TRP:CZ3	2.88	0.62
4:AD:122:ALA:O	4:AD:123:ILE:HG23	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:76:GLU:O	11:AK:77:TYR:CD1	2.53	0.62
22:BA:627:A:C6	22:BA:637:A:C8	2.87	0.62
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.13	0.62
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.30	0.62
12:CL:79:VAL:O	12:CL:103:ASP:HB2	1.99	0.62
22:DA:1450:G:C6	22:DA:1451:C:N4	2.67	0.62
1:AA:919:A:O2'	1:AA:920:U:H5'	2.00	0.62
13:AM:15:ALA:CB	13:AM:34:LEU:HD21	2.30	0.62
21:AU:41:PRO:O	21:AU:45:ARG:HD3	1.99	0.62
22:BA:545:U:H2'	22:BA:546:U:O3'	1.99	0.62
24:BC:232:HIS:NE2	24:BC:244:PRO:HA	2.14	0.62
1:CA:563:A:N7	1:CA:567:G:H1'	2.15	0.62
3:CC:53:SER:OG	3:CC:112:ASP:OD2	2.16	0.62
22:DA:927:A:C2	47:DZ:43:ALA:HB1	2.34	0.62
22:DA:1474:U:O4	22:DA:1475:G:N1	2.32	0.62
22:DA:2131:U:H4'	22:DA:2133:G:C1'	2.28	0.62
26:DE:113:VAL:HG23	26:DE:118:LEU:HD23	1.82	0.62
1:AA:26:A:H2'	1:AA:27:G:H5'	1.82	0.62
1:AA:844:G:N3	1:AA:845:A:N7	2.48	0.62
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.00	0.62
22:BA:999:U:O2'	22:BA:1000:A:H5'	1.99	0.62
22:BA:1185:G:H5"	22:BA:1186:G:OP1	2.00	0.62
22:BA:1232:G:C5	22:BA:1233:C:C5	2.87	0.62
22:BA:2305:U:O3'	27:BF:133:ARG:NH1	2.33	0.62
22:BA:2478:A:C2'	22:BA:2479:U:H5'	2.30	0.62
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.48	0.62
25:BD:12:THR:CG2	37:BP:9:GLU:OE2	2.48	0.62
26:BE:7:ASP:OD2	26:BE:8:ALA:N	2.32	0.62
31:BJ:80:HIS:HB3	31:BJ:81:ILE:HG22	1.81	0.62
1:CA:667:G:C2	1:CA:740:U:O2	2.52	0.62
2:CB:73:LYS:O	2:CB:75:ALA:N	2.33	0.62
4:CD:26:ARG:O	4:CD:27:ALA:CB	2.48	0.62
7:CG:88:PRO:HD2	7:CG:151:PHE:O	1.98	0.62
22:DA:2297:A:N1	22:DA:2321:U:C5	2.68	0.62
25:DD:3:GLY:HA3	25:DD:204:LYS:HG2	1.80	0.62
26:DE:170:ARG:HG3	26:DE:174:GLY:O	1.99	0.62
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.34	0.61
7:AG:146:GLU:HA	7:AG:149:LYS:HB2	1.81	0.61
22:BA:1825:U:H2'	22:BA:1826:G:C8	2.34	0.61
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.34	0.61
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.00	0.61
43:BV:13:GLY:O	43:BV:17:SER:OG	2.18	0.61
1:CA:4:U:H5"	1:CA:5:U:OP1	2.00	0.61
1:CA:604:G:H2'	1:CA:605:U:O4'	1.99	0.61
1:CA:687:A:N3	1:CA:688:G:H1'	2.15	0.61
1:CA:840:C:N3	1:CA:842:U:H4'	2.15	0.61
5:CE:133:PRO:HA	5:CE:136:VAL:CG1	2.29	0.61
11:CK:16:VAL:HG12	11:CK:77:TYR:HB3	1.82	0.61
22:DA:189:G:C4	22:DA:205:G:N2	2.68	0.61
22:DA:347:A:N1	22:DA:348:A:C5	2.68	0.61
1:AA:8:A:H5"	5:AE:126:LYS:HE2	1.82	0.61
1:AA:1404:C:H1'	1:AA:1499:A:C2	2.34	0.61
3:AC:25:ASN:O	3:AC:27:LYS:N	2.33	0.61
10:AJ:48:ARG:NH1	10:AJ:66:GLU:OE1	2.33	0.61
12:AL:23:ALA:O	12:AL:24:LEU:O	2.18	0.61
13:AM:15:ALA:HB1	13:AM:34:LEU:HD21	1.82	0.61
16:AP:56:ARG:O	16:AP:59:HIS:N	2.33	0.61
22:BA:58:G:OP1	41:BT:78:SER:CB	2.47	0.61
22:BA:2308:G:O6	22:BA:2311:A:C8	2.52	0.61
20:CT:78:ASN:O	20:CT:82:GLN:HG2	2.01	0.61
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.33	0.61
22:DA:600:G:C5	22:DA:601:C:C4	2.89	0.61
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.82	0.61
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.34	0.61
22:DA:2133:G:C2	22:DA:2158:A:N6	2.68	0.61
26:DE:29:HIS:HA	26:DE:32:VAL:HG23	1.82	0.61
33:DL:96:LYS:HG3	33:DL:101:ILE:HD11	1.80	0.61
1:AA:212:G:N2	1:AA:213:G:C4	2.68	0.61
1:AA:568:G:C4	1:AA:569:C:C5	2.88	0.61
1:AA:609:A:N7	57:AA:1851:HOH:O	2.31	0.61
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.25	0.61
2:AB:188:ASP:HB2	2:AB:204:ASP:OD1	2.00	0.61
4:AD:150:LYS:O	4:AD:152:GLN:N	2.33	0.61
22:BA:211:C:OP1	50:B2:25:LYS:NZ	2.33	0.61
22:BA:488:G:O2'	40:BS:49:LYS:NZ	2.34	0.61
22:BA:597:G:C5	22:BA:598:U:C5	2.88	0.61
31:BJ:5:THR:HG22	31:BJ:6:ALA:O	2.00	0.61
41:BT:2:ILE:HA	41:BT:3:ARG:C	2.20	0.61
42:BU:57:GLY:O	42:BU:59:VAL:HG23	1.99	0.61
1:CA:18:C:OP1	5:CE:132:ASN:ND2	2.33	0.61
1:CA:429:U:C3'	4:CD:9:LEU:HD23	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:718:A:N7	1:CA:719:C:C5	2.68	0.61
1:CA:1397:C:HO2'	1:CA:1398:A:P	2.23	0.61
4:CD:198:HIS:CE1	4:CD:199:LEU:HD23	2.35	0.61
40:DS:33:LEU:HD21	40:DS:52:GLU:HG2	1.81	0.61
1:AA:819:A:N7	1:AA:1529:G:C2	2.68	0.61
1:AA:1259:C:O2'	1:AA:1283:U:O2	2.13	0.61
12:AL:79:VAL:O	12:AL:102:LEU:HB3	2.01	0.61
22:BA:324:A:N6	22:BA:338:G:O2'	2.31	0.61
22:BA:1972:G:C2	22:BA:1973:G:N7	2.68	0.61
5:CE:115:LEU:O	5:CE:120:VAL:HG23	2.01	0.61
7:CG:92:ARG:HE	7:CG:93:PRO:HD2	1.66	0.61
22:DA:1797:G:N2	22:DA:1823:G:C4	2.68	0.61
22:DA:2474:U:H5"	22:DA:2475:C:OP2	2.00	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
52:D4:11:CYS:SG	52:D4:12:ARG:N	2.72	0.61
3:AC:143:ARG:HG3	3:AC:144:LEU:HD13	1.81	0.61
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.01	0.61
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.17	0.61
41:BT:69:ARG:HB2	41:BT:74:ILE:HG22	1.82	0.61
22:DA:186:G:C2	22:DA:211:C:O2	2.53	0.61
22:DA:2079:U:H2'	22:DA:2080:A:O4'	1.99	0.61
1:AA:49:U:O4	1:AA:365:U:H5	1.83	0.61
1:AA:721:G:H4'	1:AA:722:G:O4'	2.00	0.61
1:AA:1125:U:C5	1:AA:1127:G:C6	2.89	0.61
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.82	0.61
22:BA:319:G:C4	22:BA:333:G:N2	2.69	0.61
22:BA:481:G:N3	22:BA:507:A:C2	2.68	0.61
22:BA:666:A:O2'	22:BA:667:U:H5'	2.01	0.61
22:BA:977:G:O6	57:BA:3592:HOH:O	2.16	0.61
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.35	0.61
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	2.00	0.61
25:BD:133:THR:O	25:BD:134:HIS:HB2	2.01	0.61
32:BK:26:GLY:HA3	32:BK:30:ARG:HH11	1.66	0.61
40:BS:18:ARG:O	40:BS:19:LEU:C	2.38	0.61
1:CA:240:G:H4'	1:CA:240:G:OP1	2.01	0.61
1:CA:604:G:C6	1:CA:605:U:N3	2.69	0.61
22:DA:1599:U:O4	22:DA:1600:C:N4	2.34	0.61
22:BA:2470:G:N2	22:BA:2471:A:C4	2.68	0.61
22:BA:2585:U:H2'	54:B6:3:DBB:HG1	1.83	0.61
37:BP:103:ARG:CG	37:BP:103:ARG:HH11	2.14	0.61
1:CA:50:A:N6	1:CA:361:G:H4'	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.01	0.61
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.35	0.61
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.35	0.61
24:DC:80:ARG:NE	24:DC:82:GLU:OE2	2.33	0.61
31:DJ:7:LYS:O	31:DJ:11:VAL:HG23	2.01	0.61
1:AA:584:G:C6	1:AA:758:C:O2	2.53	0.61
1:AA:988:G:C6	1:AA:989:U:C4	2.88	0.61
1:AA:1133:G:N2	1:AA:1142:G:C4	2.68	0.61
2:AB:71:GLY:HA2	2:AB:164:ILE:HG22	1.81	0.61
3:AC:205:GLY:O	3:AC:206:GLU:HG2	2.01	0.61
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	1.99	0.61
39:BR:46:GLU:N	39:BR:46:GLU:OE1	2.34	0.61
46:BY:23:ARG:O	46:BY:24:GLU:O	2.19	0.61
5:CE:98:PRO:O	5:CE:99:ALA:CB	2.49	0.61
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.53	0.61
22:DA:2823:A:C5	22:DA:2824:C:C5	2.89	0.61
23:DB:106:G:H2'	23:DB:107:G:O4'	2.00	0.61
42:DU:96:PHE:CZ	42:DU:103:ILE:HG12	2.36	0.61
1:AA:96:U:O2'	1:AA:97:G:P	2.59	0.61
1:AA:859:G:H2'	1:AA:860:A:C8	2.36	0.61
1:AA:1108:G:H2'	1:AA:1108:G:N3	2.16	0.61
2:AB:83:ALA:HA	2:AB:86:SER:OG	2.00	0.61
5:AE:13:GLU:HB3	5:AE:39:VAL:HG12	1.83	0.61
22:BA:686:U:H2'	22:BA:788:A:C2	2.35	0.61
22:BA:783:A:C8	22:BA:784:G:H4'	2.36	0.61
22:BA:1073:A:N7	22:BA:1074:G:H8	1.98	0.61
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.01	0.61
1:CA:728:A:H2'	1:CA:729:A:C8	2.36	0.61
1:CA:791:G:C6	1:CA:792:A:N7	2.69	0.61
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.15	0.61
4:CD:35:GLU:O	4:CD:37:ALA:N	2.33	0.61
22:DA:1027:A:N6	22:DA:1126:A:N3	2.49	0.61
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.14	0.61
22:DA:2091:C:H3'	22:DA:2092:U:H5"	1.83	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
48:D0:55:ILE:HG22	48:D0:56:ALA:N	2.16	0.61
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.15	0.61
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.82	0.61
7:AG:139:GLU:O	7:AG:143:ARG:HG3	2.01	0.61
11:AK:18:ASP:OD1	11:AK:81:ASN:ND2	2.33	0.61
12:AL:51:LYS:HD3	12:AL:51:LYS:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:962:G:O2'	22:BA:963:U:H5'	2.00	0.61
22:BA:1866:A:N1	22:BA:1876:A:C8	2.69	0.61
22:BA:2808:G:N2	22:BA:2891:U:C6	2.69	0.61
25:BD:105:LYS:O	25:BD:177:VAL:HG13	2.01	0.61
35:BN:22:ARG:HG2	35:BN:70:THR:HA	1.83	0.61
40:BS:84:ARG:HB2	40:BS:96:ILE:CD1	2.31	0.61
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.35	0.61
2:CB:21:ARG:HA	2:CB:21:ARG:CZ	2.31	0.61
22:DA:247:G:C8	22:DA:249:C:C6	2.89	0.61
22:DA:1581:G:C6	22:DA:1582:C:C4	2.89	0.61
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.33	0.61
22:DA:2550:G:C6	22:DA:2551:C:C4	2.89	0.61
27:DF:38:MET:HG3	27:DF:152:LEU:HB3	1.82	0.61
1:AA:977:A:H1'	1:AA:982:U:O4	2.02	0.60
2:AB:104:TRP:CZ2	2:AB:154:MET:HG2	2.36	0.60
4:AD:123:ILE:N	4:AD:123:ILE:CD1	2.64	0.60
4:AD:133:ALA:O	4:AD:135:TYR:N	2.33	0.60
10:AJ:33:GLY:O	10:AJ:34:ALA:HB2	2.01	0.60
20:AT:25:ARG:HG2	20:AT:29:ARG:NH1	2.16	0.60
22:BA:476:G:C2	22:BA:479:A:C8	2.89	0.60
22:BA:716:A:C6	22:BA:717:C:C5	2.88	0.60
22:BA:2262:U:OP2	44:BW:19:LYS:HE2	2.01	0.60
25:BD:40:LEU:O	25:BD:41:ALA:C	2.39	0.60
30:BI:34:ASN:OD1	30:BI:65:ARG:NH2	2.35	0.60
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.36	0.60
22:DA:108:G:O2'	22:DA:347:A:N3	2.26	0.60
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.00	0.60
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.36	0.60
1:AA:203:G:O2'	1:AA:465:A:N1	2.32	0.60
1:AA:316:C:C2	1:AA:317:U:C5	2.89	0.60
1:AA:661:G:N2	1:AA:662:U:C2	2.69	0.60
1:AA:914:A:C6	1:AA:915:A:N7	2.69	0.60
4:AD:125:VAL:O	4:AD:127:GLY:N	2.34	0.60
22:BA:320:A:H4'	22:BA:322:A:N7	2.16	0.60
22:BA:528:A:C8	22:BA:528:A:H3'	2.36	0.60
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.01	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
29:BH:123:ARG:NH2	1:CA:367:U:OP2	2.33	0.60
53:B5:52:PRO:HB2	53:B5:205:ALA:HB3	1.83	0.60
1:CA:858:G:O6	1:CA:869:G:H3'	2.01	0.60
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.82	0.60
9:CI:12:ARG:HD2	9:CI:107:ASP:HB3	1.83	0.60
22:DA:463:G:N2	22:DA:466:A:OP2	2.33	0.60
22:DA:482:A:H1'	22:DA:498:G:N2	2.15	0.60
22:DA:647:G:C5	22:DA:648:G:N7	2.69	0.60
22:DA:811:U:O2	22:DA:1251:C:C5	2.54	0.60
22:DA:1454:C:O2	35:DN:64:ARG:NE	2.35	0.60
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.83	0.60
46:DY:23:ARG:NE	46:DY:23:ARG:HA	2.16	0.60
1:AA:960:U:H2'	1:AA:1225:A:H62	1.65	0.60
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.64	0.60
22:BA:65:U:H2'	22:BA:66:C:H6	1.64	0.60
22:BA:588:U:O2'	22:BA:589:U:H5'	2.02	0.60
26:BE:27:LEU:O	26:BE:31:VAL:HG23	2.01	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.36	0.60
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.83	0.60
41:BT:71:GLY:O	41:BT:73:ARG:N	2.34	0.60
1:CA:571:U:H5"	1:CA:572:A:OP2	2.01	0.60
1:CA:976:G:OP2	1:CA:1358:U:O2'	2.16	0.60
22:DA:105:C:H2'	22:DA:106:C:C6	2.36	0.60
22:DA:176:A:N7	22:DA:177:G:C6	2.69	0.60
22:DA:1566:A:C2	24:DC:213:TRP:CD2	2.88	0.60
22:DA:1627:G:C2	22:DA:1628:G:C8	2.90	0.60
6:AF:16:GLU:OE2	4:CD:188:ARG:NH1	2.34	0.60
7:AG:120:LEU:HD22	7:AG:124:LEU:HD23	1.84	0.60
12:AL:57:LEU:O	12:AL:59:ASN:N	2.35	0.60
22:BA:1260:A:C6	22:BA:1261:C:C4	2.90	0.60
22:BA:1269:A:N7	57:BA:3384:HOH:O	2.31	0.60
22:BA:2595:G:N2	22:BA:2597:G:H3'	2.16	0.60
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	1.84	0.60
33:BL:68:SER:O	33:BL:69:ARG:HB2	2.00	0.60
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.16	0.60
1:CA:362:G:N7	57:CA:1749:HOH:O	2.31	0.60
1:CA:510:A:OP2	57:CA:1760:HOH:O	2.16	0.60
1:CA:1298:U:O2	1:CA:1298:U:H2'	1.99	0.60
18:CR:48:ARG:N	18:CR:48:ARG:HD2	2.16	0.60
20:CT:67:ILE:HD11	20:CT:71:LYS:HD3	1.81	0.60
22:DA:204:A:C8	22:DA:206:U:C2	2.89	0.60
22:DA:1805:A:C2	22:DA:1813:G:N1	2.70	0.60
39:DR:34:GLU:HA	39:DR:59:ILE:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:58:VAL:HG13	39:DR:102:SER:HB2	1.83	0.60
1:AA:145:G:N2	1:AA:178:C:C2	2.70	0.60
1:AA:151:A:H2'	1:AA:152:A:O4'	2.00	0.60
1:AA:880:C:OP1	12:AL:5:ASN:ND2	2.35	0.60
1:AA:1000:A:C2	1:AA:1041:G:C2	2.89	0.60
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.50	0.60
7:AG:37:SER:O	7:AG:41:SER:OG	2.20	0.60
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	1.84	0.60
20:AT:29:ARG:O	20:AT:33:LYS:HG2	2.01	0.60
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.01	0.60
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.84	0.60
22:BA:2462:C:H2'	22:BA:2463:C:C6	2.37	0.60
33:BL:68:SER:O	33:BL:69:ARG:CB	2.49	0.60
1:CA:496:A:H2'	1:CA:496:A:N3	2.16	0.60
1:CA:1029:U:O2	1:CA:1029:U:H2'	2.02	0.60
22:DA:12:U:O2	22:DA:12:U:H2'	2.02	0.60
22:DA:161:A:C3'	22:DA:162:U:H5"	2.30	0.60
22:DA:720:U:H2'	22:DA:721:A:C8	2.37	0.60
22:DA:1014:A:C2	22:DA:1149:G:C2	2.90	0.60
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.36	0.60
1:AA:173:U:C2	1:AA:197:A:N1	2.69	0.60
1:AA:189:A:N6	1:AA:190:A:N1	2.49	0.60
22:BA:585:G:H5"	22:BA:586:A:OP1	2.02	0.60
22:BA:645:C:O2'	22:BA:646:U:H5"	2.02	0.60
22:BA:1073:A:C3'	22:BA:1074:G:H5"	2.31	0.60
22:BA:2468:A:N3	22:BA:2481:G:N2	2.50	0.60
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.17	0.60
51:B3:23:LYS:HA	51:B3:48:ALA:O	2.01	0.60
1:CA:463:U:H3'	1:CA:464:U:C6	2.37	0.60
1:CA:477:C:H2'	1:CA:478:A:C8	2.36	0.60
1:CA:542:G:C2	1:CA:543:U:C5	2.89	0.60
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.50	0.60
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.00	0.60
22:DA:1361:G:C2	22:DA:1362:C:C5	2.90	0.60
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.33	0.60
1:AA:262:A:H2'	1:AA:263:A:C8	2.37	0.60
4:AD:59:GLN:O	4:AD:63:ARG:HG2	2.01	0.60
4:AD:105:MET:SD	4:AD:180:GLY:HA3	2.42	0.60
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.35	0.60
22:BA:2548:U:C4	22:BA:2549:G:N7	2.69	0.60
29:BH:83:LYS:CD	1:CA:55:A:O2'	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
34:BM:42:THR:HG22	34:BM:93:VAL:CG1	2.30	0.60
35:BN:1:MET:O	35:BN:2:ARG:CB	2.49	0.60
22:DA:1581:G:C5	22:DA:1582:C:C4	2.89	0.60
22:DA:2834:G:O6	22:DA:2879:A:O2'	2.07	0.60
1:AA:270:A:C5	1:AA:271:C:C4	2.90	0.60
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.84	0.60
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	1.84	0.60
5:AE:23:LYS:HB3	5:AE:30:ILE:HG23	1.83	0.60
22:BA:253:C:OP2	51:B3:5:LYS:NZ	2.24	0.60
22:BA:1587:G:C5	22:BA:1588:G:N7	2.70	0.60
22:BA:1590:A:C2	22:BA:1591:A:C5	2.89	0.60
22:BA:1958:C:O2'	22:BA:1959:G:H5'	2.01	0.60
22:BA:2468:A:C2	22:BA:2481:G:N3	2.70	0.60
2:CB:210:VAL:O	2:CB:214:LEU:HB2	2.02	0.60
13:CM:6:GLY:O	13:CM:8:ASN:N	2.31	0.60
15:CO:46:HIS:O	15:CO:48:LYS:N	2.35	0.60
22:DA:527:C:H2'	22:DA:2779:U:O2	2.02	0.60
22:DA:1344:U:O2'	22:DA:1345:C:P	2.59	0.60
22:DA:2062:A:C5	54:D6:1:MHW:CE	2.84	0.60
22:DA:2491:U:C5'	22:DA:2570:G:H5"	2.30	0.60
24:DC:67:PHE:HB3	24:DC:151:GLY:O	2.01	0.60
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.83	0.60
22:BA:498:G:N3	22:BA:499:U:C6	2.70	0.60
22:BA:712:G:C2'	22:BA:713:G:H5'	2.31	0.60
22:BA:1019:U:C4	22:BA:1020:A:N6	2.69	0.60
22:BA:1057:A:C2	22:BA:1086:A:C2	2.89	0.60
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.55	0.60
22:BA:1086:A:H5"	22:BA:1087:G:OP1	2.02	0.60
22:BA:2191:A:C5	22:BA:2192:U:C4	2.90	0.60
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.65	0.60
22:BA:2820:A:H2'	22:BA:2821:A:OP1	2.01	0.60
44:BW:38:VAL:HG23	44:BW:59:LEU:HB2	1.84	0.60
49:B1:27:LYS:O	49:B1:29:THR:N	2.34	0.60
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.32	0.60
3:CC:150:LYS:HB2	3:CC:169:ARG:CG	2.32	0.60
22:DA:1605:C:O2	22:DA:1610:A:O2'	2.18	0.60
22:DA:2283:C:C2	22:DA:2389:G:C2	2.90	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
38:DQ:47:TYR:CE1	38:DQ:51:ARG:NH2	2.70	0.60
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:33:LEU:HD21	40:DS:52:GLU:HG3	1.84	0.60
1:AA:363:A:C2	1:AA:364:A:C4	2.90	0.60
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.02	0.60
7:AG:120:LEU:HD22	7:AG:124:LEU:CD2	2.32	0.60
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.31	0.60
22:BA:1935:G:C6	22:BA:1962:C:C6	2.90	0.60
23:BB:30:C:O2'	23:BB:57:A:N1	2.31	0.60
25:BD:177:VAL:HG22	25:BD:177:VAL:O	2.01	0.60
38:BQ:88:VAL:HG13	39:BR:49:ILE:CD1	2.32	0.60
39:BR:49:ILE:C	39:BR:51:VAL:O	2.40	0.60
1:CA:1308:U:OP1	13:CM:97:VAL:N	2.32	0.60
22:DA:1838:C:C5	22:DA:1899:A:C6	2.89	0.60
1:AA:484:G:N7	1:AA:486:U:H1'	2.16	0.59
1:AA:880:C:OP1	12:AL:9:ARG:NH1	2.35	0.59
2:AB:88:ASP:HB2	2:AB:221:VAL:HG12	1.84	0.59
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.02	0.59
4:AD:197:GLU:O	4:AD:199:LEU:N	2.35	0.59
22:BA:819:A:OP2	22:BA:1187:G:N2	2.30	0.59
22:BA:1064:C:O2	22:BA:1064:C:H2'	2.02	0.59
22:BA:1301:A:C2	22:BA:1303:G:C6	2.90	0.59
22:BA:1364:G:OP2	45:BX:2:SER:N	2.35	0.59
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.83	0.59
22:BA:2191:A:C2	22:BA:2192:U:N3	2.69	0.59
22:BA:2826:A:N7	22:BA:2827:C:C5	2.69	0.59
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.84	0.59
31:BJ:49:ASP:OD1	31:BJ:121:LYS:CE	2.50	0.59
39:BR:61:ALA:HB1	39:BR:97:LYS:O	2.01	0.59
41:BT:51:PHE:O	41:BT:52:GLU:C	2.40	0.59
1:CA:203:G:N2	1:CA:215:C:C2	2.70	0.59
1:CA:862:C:C4	1:CA:863:U:C5	2.90	0.59
1:CA:1097:C:H5"	2:CB:139:ARG:NH2	2.16	0.59
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.01	0.59
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.34	0.59
19:CS:34:TRP:HA	19:CS:52:HIS:HB2	1.84	0.59
22:DA:301:G:N2	22:DA:302:C:O2	2.34	0.59
22:DA:311:A:H5'	22:DA:332:A:C2	2.37	0.59
22:DA:724:U:H2'	22:DA:725:G:O4'	2.01	0.59
22:DA:1581:G:C6	22:DA:1582:C:N4	2.70	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
12:AL:29:GLN:HB2	12:AL:82:ILE:O	2.02	0.59
22:BA:2461:A:H2'	22:BA:2462:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:3291:HOH:O	33:BL:99:ASN:ND2	2.28	0.59
28:BG:109:PHE:HE2	28:BG:152:ARG:CZ	2.15	0.59
39:BR:29:THR:O	39:BR:29:THR:HG22	2.02	0.59
39:BR:46:GLU:OE1	39:BR:46:GLU:O	2.20	0.59
1:CA:933:G:N7	7:CG:3:ARG:NH2	2.50	0.59
1:CA:1182:G:H5'	1:CA:1184:G:H5"	1.84	0.59
6:CF:64:VAL:HG12	6:CF:65:GLU:N	2.16	0.59
14:CN:51:LEU:O	14:CN:53:ARG:N	2.34	0.59
22:DA:228:C:H4'	22:DA:229:C:H5"	1.85	0.59
22:DA:551:G:C6	22:DA:552:U:C4	2.90	0.59
22:DA:1027:A:C6	22:DA:1126:A:C4	2.90	0.59
1:AA:544:G:C5	1:AA:545:C:C5	2.90	0.59
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.55	0.59
1:AA:1197:A:OP1	1:AA:1198:G:OP2	2.19	0.59
5:AE:74:VAL:O	5:AE:76:LEU:HD12	2.01	0.59
22:BA:588:U:H2'	22:BA:589:U:C6	2.37	0.59
22:BA:2028:U:O4	57:BA:3477:HOH:O	2.12	0.59
22:BA:2837:A:C2	22:BA:2882:A:C2	2.90	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
32:BK:17:ARG:HB2	32:BK:45:GLU:HG2	1.83	0.59
35:BN:2:ARG:NE	35:BN:2:ARG:O	2.35	0.59
36:BO:94:ARG:O	36:BO:96:GLY:N	2.35	0.59
22:DA:659:G:H4'	26:DE:95:LYS:CD	2.33	0.59
22:DA:696:G:C2	22:DA:767:U:O2	2.55	0.59
22:DA:730:A:OP1	22:DA:1775:U:O2'	2.15	0.59
22:DA:1288:G:C4	22:DA:1327:A:C2	2.89	0.59
24:DC:108:LYS:N	24:DC:194:GLU:O	2.35	0.59
28:DG:115:HIS:HE1	28:DG:144:VAL:HG13	1.68	0.59
41:DT:54:GLU:HB3	41:DT:88:LYS:HG3	1.84	0.59
1:AA:152:A:N6	1:AA:170:U:C2	2.71	0.59
1:AA:665:A:N1	1:AA:732:C:C4	2.70	0.59
1:AA:1048:G:C2	1:AA:1050:G:N7	2.70	0.59
9:AI:57:MET:SD	9:AI:58:VAL:N	2.73	0.59
22:BA:28:A:C4	22:BA:29:U:C6	2.90	0.59
22:BA:644:A:H2'	22:BA:645:C:O4'	2.01	0.59
22:BA:1314:C:OP1	57:BA:3763:HOH:O	2.17	0.59
22:BA:1439:A:C8	22:BA:1440:U:C6	2.90	0.59
22:BA:2856:A:N6	22:BA:2857:G:C6	2.71	0.59
24:BC:135:ILE:HD13	24:BC:192:LEU:HD21	1.85	0.59
24:BC:154:LEU:HD23	24:BC:154:LEU:N	2.16	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:34:VAL:HG23	41:BT:81:LYS:HB3	1.82	0.59
45:BX:17:ASN:OD1	45:BX:27:ARG:HD2	2.02	0.59
1:CA:581:G:OP1	15:CO:65:LYS:NZ	2.26	0.59
1:CA:691:G:OP2	11:CK:28:ASN:ND2	2.36	0.59
8:CH:83:LEU:O	8:CH:83:LEU:HD13	2.02	0.59
11:CK:31:ILE:HB	11:CK:46:THR:HB	1.83	0.59
14:CN:4:GLN:OE1	57:CN:203:HOH:O	2.16	0.59
16:CP:52:LEU:HD23	16:CP:53:ASP:N	2.17	0.59
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.38	0.59
22:DA:192:C:C5	22:DA:193:U:C2	2.90	0.59
22:DA:769:U:C4	22:DA:770:G:N7	2.70	0.59
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.38	0.59
1:AA:189:A:C6	1:AA:190:A:C2	2.91	0.59
1:AA:403:C:OP1	4:AD:134:SER:OG	2.21	0.59
1:AA:792:A:N3	1:AA:794:A:C5	2.71	0.59
1:AA:857:C:H2'	1:AA:858:G:C8	2.37	0.59
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.38	0.59
4:AD:147:GLU:HA	4:AD:150:LYS:HD2	1.85	0.59
13:AM:10:PRO:O	13:AM:11:ASP:HB3	2.01	0.59
22:BA:761:A:N7	57:BA:3293:HOH:O	2.34	0.59
22:BA:1170:C:H2'	22:BA:1171:G:C8	2.38	0.59
22:BA:1171:G:C5	22:BA:1172:C:C4	2.90	0.59
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.38	0.59
22:BA:2529:G:OP1	28:BG:172:LYS:NZ	2.31	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
1:CA:41:G:H2'	1:CA:42:G:C8	2.38	0.59
1:CA:407:U:H2'	1:CA:408:A:C8	2.38	0.59
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.01	0.59
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.38	0.59
22:DA:192:C:O2'	22:DA:802:A:N3	2.34	0.59
22:DA:1649:G:C6	22:DA:2009:A:C6	2.91	0.59
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.56	0.59
22:DA:2898:U:O2'	31:DJ:134:ALA:O	2.18	0.59
4:AD:123:ILE:N	4:AD:123:ILE:HD13	2.17	0.59
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.82	0.59
11:AK:107:ILE:HD11	11:AK:110:ILE:HD11	1.84	0.59
22:BA:70:G:H4'	22:BA:71:A:OP1	2.01	0.59
22:BA:747:U:C4	22:BA:2613:U:C5	2.91	0.59
22:BA:1061:U:HO2'	22:BA:1062:G:C5'	2.13	0.59
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.03	0.59
22:BA:1460:U:H3'	22:BA:1461:C:H5'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2466:C:OP1	52:B4:4:ARG:HD2	2.02	0.59
22:BA:2563:U:H1'	22:BA:2566:A:N6	2.18	0.59
45:BX:11:ARG:HB2	45:BX:12:PRO:HD2	1.85	0.59
53:B5:204:GLY:O	53:B5:205:ALA:CB	2.51	0.59
1:CA:39:G:H2'	1:CA:40:C:H6	1.67	0.59
1:CA:378:G:C2	1:CA:386:C:O2	2.55	0.59
1:CA:506:G:OP1	57:CA:1759:HOH:O	2.16	0.59
3:CC:150:LYS:HG2	3:CC:201:TRP:CE3	2.38	0.59
22:DA:71:A:OP2	22:DA:113:U:H5'	2.03	0.59
22:DA:488:G:C2	22:DA:493:G:O6	2.55	0.59
22:DA:1351:C:O2'	22:DA:1571:A:N3	2.32	0.59
22:DA:2603:G:C6	22:DA:2604:U:C4	2.91	0.59
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.18	0.59
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.02	0.59
41:DT:34:VAL:HG21	41:DT:43:ILE:HD11	1.83	0.59
1:AA:684:U:O2'	11:AK:40:ASN:O	2.21	0.59
1:AA:1373:G:H5"	7:AG:36:LYS:HB2	1.84	0.59
7:AG:111:ARG:NH1	7:AG:123:GLU:OE2	2.35	0.59
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.42	0.59
10:AJ:53:ILE:HG12	14:AN:85:ARG:CZ	2.32	0.59
13:AM:75:MET:SD	27:BF:112:ARG:HD3	2.43	0.59
22:BA:65:U:C2	22:BA:66:C:C5	2.91	0.59
22:BA:586:A:C2	22:BA:1254:A:C2	2.91	0.59
22:BA:1956:U:C2'	22:BA:1957:C:H5'	2.33	0.59
22:BA:2427:C:H5"	22:BA:2428:G:OP1	2.02	0.59
22:BA:2544:G:C2'	22:BA:2545:G:H5'	2.33	0.59
22:BA:2554:U:C4	22:BA:2555:U:O4	2.56	0.59
22:BA:2557:G:H2'	22:BA:2558:C:H6	1.67	0.59
23:BB:45:A:C4	23:BB:46:A:C8	2.91	0.59
38:BQ:110:VAL:O	38:BQ:114:LYS:HG3	2.03	0.59
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.84	0.59
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.17	0.59
12:CL:82:ILE:HD11	12:CL:95:TYR:HB2	1.85	0.59
22:DA:455:C:N3	22:DA:472:A:H2'	2.16	0.59
22:DA:1351:C:O3'	22:DA:1571:A:O2'	2.18	0.59
22:DA:1430:G:H2'	22:DA:1431:A:O4'	2.02	0.59
22:DA:1525:A:C6	22:DA:1526:C:N3	2.70	0.59
24:DC:125:LYS:HB2	24:DC:126:PRO:HD2	1.84	0.59
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.33	0.59
17:AQ:19:LYS:NZ	17:AQ:49:GLU:OE2	2.26	0.59
22:BA:627:A:P	33:BL:78:ARG:HH11	2.25	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1401:G:C2'	22:BA:1402:U:O5'	2.51	0.59
22:BA:1759:A:H2'	22:BA:1760:C:C6	2.37	0.59
22:BA:2114:A:H2'	22:BA:2114:A:N3	2.16	0.59
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.84	0.59
41:BT:73:ARG:CZ	41:BT:73:ARG:HB3	2.32	0.59
1:CA:978:A:H4'	1:CA:1322:C:C5	2.37	0.59
1:CA:994:A:N3	1:CA:994:A:H2'	2.18	0.59
1:CA:1240:U:H5'	1:CA:1241:G:C8	2.37	0.59
11:CK:35:THR:HA	11:CK:41:ALA:HA	1.83	0.59
15:CO:42:HIS:ND1	15:CO:42:HIS:O	2.35	0.59
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.38	0.59
22:DA:680:C:H2'	22:DA:681:G:C8	2.38	0.59
22:DA:1604:C:OP1	57:DA:3400:HOH:O	2.17	0.59
22:DA:2054:A:C2	22:DA:2616:C:C2	2.91	0.59
22:DA:2491:U:H5'	22:DA:2570:G:H5"	1.83	0.59
1:AA:579:A:H2'	1:AA:580:C:H6	1.68	0.59
1:AA:680:C:C2	1:AA:711:G:C2	2.91	0.59
1:AA:895:G:C6	1:AA:896:C:C4	2.91	0.59
1:AA:944:G:C2	1:AA:1340:A:N6	2.71	0.59
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.33	0.59
22:BA:137:U:H2'	22:BA:140:C:C2	2.38	0.59
22:BA:497:A:C4	22:BA:498:G:C8	2.91	0.59
22:BA:830:G:H4'	22:BA:831:G:OP2	2.03	0.59
22:BA:1786:A:C4	22:BA:1938:A:C6	2.91	0.59
22:BA:1922:G:C2	22:BA:1923:U:C6	2.90	0.59
22:BA:2479:U:C4	22:BA:2480:C:C5	2.90	0.59
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.68	0.59
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.85	0.59
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.35	0.59
41:BT:65:GLY:N	41:BT:79:ASP:OD1	2.35	0.59
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.38	0.59
1:CA:152:A:N6	1:CA:170:U:C2	2.71	0.59
1:CA:247:G:C6	1:CA:278:G:C2	2.91	0.59
1:CA:438:U:C2	1:CA:494:G:C6	2.91	0.59
1:CA:1426:G:C5	1:CA:1475:G:C2	2.90	0.59
4:CD:145:ILE:HG21	4:CD:150:LYS:HA	1.85	0.59
5:CE:99:ALA:O	5:CE:101:GLU:N	2.36	0.59
21:CU:25:LYS:HD3	21:CU:26:ALA:H	1.66	0.59
22:DA:118:A:H1'	22:DA:178:G:O4'	2.01	0.59
22:DA:453:A:H4'	22:DA:472:A:N6	2.16	0.59
22:DA:457:A:N1	22:DA:470:A:H5"	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.51	0.59
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.02	0.59
54:D6:3:DBB:HG2	54:D6:4:PRO:CA	2.31	0.59
1:AA:1079:G:N2	1:AA:1080:A:C2	2.71	0.59
1:AA:1084:G:C5	1:AA:1085:U:C4	2.91	0.59
1:AA:1370:G:C2	1:AA:1371:G:C8	2.91	0.59
9:AI:43:THR:O	9:AI:44:ALA:HB3	2.03	0.59
13:AM:11:ASP:O	13:AM:12:HIS:ND1	2.35	0.59
22:BA:281:C:H2'	22:BA:282:A:C8	2.38	0.59
22:BA:1263:U:OP1	48:B0:13:ARG:NH1	2.36	0.59
22:BA:1754:A:C8	37:BP:94:LYS:HE2	2.38	0.59
22:BA:1768:C:C4	22:BA:1769:U:C5	2.91	0.59
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.37	0.59
1:CA:66:A:H4'	1:CA:173:U:C5	2.37	0.59
1:CA:109:A:C2	1:CA:327:A:N1	2.71	0.59
1:CA:517:G:C8	1:CA:531:U:C5	2.91	0.59
1:CA:1166:G:O2'	1:CA:1169:A:N6	2.36	0.59
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.38	0.59
1:CA:1439:G:C2	1:CA:1463:U:O2	2.56	0.59
1:AA:207:C:O2	1:AA:213:G:N2	2.36	0.58
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.17	0.58
5:AE:95:PHE:CZ	5:AE:97:GLN:HG3	2.37	0.58
22:BA:2189:U:H2'	22:BA:2190:G:O4'	2.03	0.58
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.38	0.58
24:BC:144:VAL:HG12	24:BC:145:GLU:O	2.03	0.58
1:CA:439:U:H4'	4:CD:121:LYS:HD2	1.85	0.58
1:CA:976:G:N2	1:CA:1363:A:N3	2.51	0.58
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.38	0.58
2:CB:99:GLY:O	2:CB:101:LEU:N	2.36	0.58
4:CD:13:ARG:O	4:CD:14:ARG:C	2.41	0.58
11:CK:24:HIS:HB3	11:CK:31:ILE:HG23	1.84	0.58
22:DA:9:G:C6	22:DA:2629:U:C5	2.90	0.58
22:DA:60:G:C4	22:DA:74:A:C2	2.91	0.58
22:DA:1877:A:C6	22:DA:1878:G:C6	2.91	0.58
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.51	0.58
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.02	0.58
33:DL:23:ILE:HD12	39:DR:84:ARG:NE	2.18	0.58
1:AA:483:C:O2	16:AP:13:LYS:NZ	2.36	0.58
1:AA:1133:G:N1	1:AA:1142:G:C6	2.71	0.58
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.03	0.58
10:AJ:52:LEU:CB	14:AN:81:ARG:NE	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:60:GLU:OE2	17:AQ:77:ARG:NH1	2.34	0.58
22:BA:225:C:H2'	22:BA:226:A:O4'	2.03	0.58
22:BA:517:C:OP1	48:B0:13:ARG:NH2	2.31	0.58
22:BA:1022:G:N2	22:BA:1142:A:C2	2.67	0.58
22:BA:2062:A:OP1	57:BA:3497:HOH:O	2.17	0.58
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.19	0.58
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.33	0.58
1:CA:296:U:O2'	1:CA:556:C:O2	2.18	0.58
1:CA:867:G:C4	1:CA:868:C:C5	2.90	0.58
2:CB:82:ASP:OD1	2:CB:82:ASP:N	2.36	0.58
6:CF:38:ARG:HG2	6:CF:63:ASN:CB	2.33	0.58
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.02	0.58
21:CU:15:ALA:O	21:CU:17:ARG:N	2.35	0.58
22:DA:335:C:H5"	42:DU:82:ARG:HD3	1.84	0.58
22:DA:560:C:O2	38:DQ:48:ARG:NH1	2.36	0.58
22:DA:864:G:O2'	22:DA:914:G:O6	2.21	0.58
22:DA:1020:A:C2	22:DA:1141:U:C2	2.91	0.58
22:DA:1200:C:O2	22:DA:1246:A:C2	2.56	0.58
22:DA:2345:G:C4	22:DA:2381:A:C2	2.91	0.58
1:AA:554:A:H2'	1:AA:555:U:C6	2.38	0.58
1:AA:1407:C:O2'	22:BA:1912:A:C6	2.50	0.58
4:AD:152:GLN:O	4:AD:153:SER:C	2.41	0.58
11:AK:117:PRO:O	11:AK:119:ASN:N	2.35	0.58
13:AM:85:CYS:O	13:AM:89:LEU:HG	2.04	0.58
22:BA:753:A:H2'	22:BA:754:U:H6	1.69	0.58
22:BA:994:C:H1'	39:BR:10:LYS:HE3	1.85	0.58
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.02	0.58
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.04	0.58
24:BC:235:GLY:HA2	24:BC:239:ASN:HB2	1.84	0.58
28:BG:40:ALA:HB2	28:BG:58:TYR:CD2	2.38	0.58
1:CA:73:C:O2'	1:CA:74:A:O5'	2.21	0.58
1:CA:238:A:C5	1:CA:239:U:C5	2.90	0.58
22:DA:236:C:H4'	22:DA:431:U:O2'	2.03	0.58
22:DA:777:G:C2	22:DA:778:G:C8	2.92	0.58
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.86	0.58
22:DA:2289:G:O2'	22:DA:2383:G:O2'	2.17	0.58
22:DA:2421:G:OP1	49:D1:8:LYS:NZ	2.35	0.58
24:DC:135:ILE:O	24:DC:167:ARG:NH2	2.37	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
9:AI:117:GLY:C	9:AI:118:LEU:HD12	2.24	0.58
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1187:G:H5”	39:BR:83:TYR:CE2	2.39	0.58
1:CA:454:G:N2	1:CA:479:U:O2	2.36	0.58
10:CJ:5:ARG:HG3	10:CJ:6:ILE:HG13	1.85	0.58
22:DA:1953:A:O2’	22:DA:2559:C:O2’	2.21	0.58
23:DB:57:A:H1’	27:DF:27:GLN:HA	1.86	0.58
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.85	0.58
38:DQ:47:TYR:CZ	38:DQ:51:ARG:CZ	2.86	0.58
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.04	0.58
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.35	0.58
1:AA:11:G:C6	1:AA:12:U:C4	2.91	0.58
7:AG:15:ASP:OD2	7:AG:18:PHE:N	2.36	0.58
22:BA:1487:U:C2	22:BA:1503:A:C2	2.91	0.58
22:BA:1624:U:N3	22:BA:1625:C:C5	2.71	0.58
22:BA:2193:G:O2’	22:BA:2194:U:H5’	2.03	0.58
22:BA:2886:A:C2	22:BA:2887:A:H1’	2.39	0.58
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.85	0.58
30:BI:100:LYS:HB3	30:BI:139:VAL:HB	1.84	0.58
1:CA:106:C:O2	1:CA:379:C:H4’	2.03	0.58
1:CA:975:A:N3	1:CA:975:A:H5’	2.18	0.58
5:CE:137:VAL:O	5:CE:138:ARG:HB3	2.03	0.58
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.03	0.58
22:DA:2031:A:HO2’	22:DA:2454:G:H21	1.51	0.58
32:DK:76:VAL:HG12	37:DP:73:VAL:CG2	2.33	0.58
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.69	0.58
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.04	0.58
22:BA:510:C:P	57:BA:3770:HOH:O	2.59	0.58
22:BA:609:A:H2’	22:BA:610:C:O4’	2.04	0.58
22:BA:1846:G:O6	22:BA:1894:C:N4	2.37	0.58
22:BA:2594:C:N4	57:BA:3787:HOH:O	2.35	0.58
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.24	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.18	0.58
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.32	0.58
42:BU:97:LYS:O	42:BU:98:SER:CB	2.51	0.58
1:CA:1422:G:C2	1:CA:1423:G:C8	2.91	0.58
5:CE:36:LEU:HD21	5:CE:137:VAL:CG1	2.33	0.58
22:DA:627:A:C6	22:DA:637:A:C8	2.91	0.58
22:DA:1075:C:H2’	22:DA:1076:C:C6	2.37	0.58
22:DA:1288:G:C5	22:DA:1327:A:C2	2.91	0.58
22:DA:2356:U:O3’	44:DW:20:ARG:HD3	2.03	0.58
22:DA:2627:G:N2	22:DA:2777:G:OP2	2.37	0.58
35:DN:2:ARG:HG3	35:DN:3:HIS:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:58:VAL:HG12	45:DX:59:ILE:N	2.18	0.58
1:AA:9:G:C6	1:AA:26:A:N6	2.72	0.58
1:AA:723:U:H5'	1:AA:724:G:OP1	2.04	0.58
1:AA:828:U:O2	2:AB:25:PRO:HG2	2.04	0.58
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.86	0.58
12:AL:55:VAL:HG21	12:AL:80:ILE:HD11	1.85	0.58
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.04	0.58
22:BA:1198:U:H2'	22:BA:1199:U:H6	1.69	0.58
22:BA:1385:A:N3	22:BA:1386:C:C6	2.72	0.58
22:BA:1985:C:H2'	22:BA:1985:C:O2	2.04	0.58
22:BA:2379:G:H4'	36:BO:21:LEU:HD11	1.84	0.58
24:BC:88:SER:HB2	24:BC:200:HIS:CD2	2.38	0.58
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.04	0.58
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.33	0.58
33:BL:89:VAL:O	33:BL:94:THR:HG21	2.02	0.58
1:CA:552:U:O2'	12:CL:83:ARG:O	2.20	0.58
1:CA:747:A:C6	1:CA:748:G:C5	2.92	0.58
1:CA:1375:A:C5	1:CA:1376:U:C5	2.91	0.58
2:CB:141:LEU:O	2:CB:145:GLU:N	2.36	0.58
8:CH:55:THR:C	8:CH:57:PRO:HD3	2.23	0.58
22:DA:450:G:H2'	22:DA:451:U:H5"	1.86	0.58
22:DA:563:A:C6	22:DA:2018:G:C4	2.92	0.58
22:DA:752:A:C2	22:DA:1781:U:C6	2.91	0.58
22:DA:2115:G:HO2'	22:DA:2117:A:N6	2.01	0.58
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.36	0.58
22:DA:2131:U:H5'	22:DA:2132:U:H5"	1.86	0.58
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.18	0.58
1:AA:1157:A:N6	1:AA:1180:A:N7	2.51	0.58
1:AA:1168:U:O2	1:AA:1168:U:H2'	2.03	0.58
1:AA:1306:A:C4	1:AA:1307:U:C6	2.91	0.58
1:AA:1319:A:C8	1:AA:1323:G:C6	2.92	0.58
4:AD:2:ALA:O	4:AD:68:LEU:HD21	2.04	0.58
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.03	0.58
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.34	0.58
22:BA:1401:G:H2'	22:BA:1402:U:O5'	2.03	0.58
23:BB:110:C:C4	23:BB:111:U:C5	2.92	0.58
27:BF:40:VAL:HG11	27:BF:50:LEU:HD13	1.86	0.58
30:BI:11:LEU:O	30:BI:24:VAL:HG11	2.02	0.58
37:BP:113:ARG:O	37:BP:114:LEU:HG	2.04	0.58
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.52	0.58
1:CA:268:U:C4	1:CA:269:C:N4	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:350:G:C6	1:CA:351:G:C6	2.91	0.58
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.34	0.58
22:DA:959:A:H2'	22:DA:960:A:C8	2.39	0.58
22:DA:2094:A:OP1	29:DH:22:LYS:HG3	2.03	0.58
22:DA:2262:U:N3	22:DA:2279:G:C2	2.72	0.58
22:DA:2341:G:C6	22:DA:2342:C:N4	2.72	0.58
26:DE:75:SER:HB3	26:DE:78:TRP:CE3	2.39	0.58
47:DZ:52:SER:HA	47:DZ:55:VAL:HG22	1.86	0.58
1:AA:452:A:N7	1:AA:453:G:N9	2.52	0.58
1:AA:685:G:N1	1:AA:686:U:O4	2.36	0.58
10:AJ:7:ARG:HB2	10:AJ:75:ASP:OD1	2.03	0.58
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.03	0.58
19:AS:15:LEU:HB2	19:AS:33:THR:HG21	1.86	0.58
22:BA:959:A:C6	22:BA:960:A:N1	2.72	0.58
22:BA:996:A:H4'	38:BQ:91:ASP:OD1	2.04	0.58
22:BA:1219:U:H2'	22:BA:1220:G:C8	2.38	0.58
22:BA:1406:U:C2	22:BA:1407:G:C8	2.91	0.58
22:BA:2094:A:OP1	29:BH:22:LYS:CE	2.46	0.58
22:BA:2564:A:C5	22:BA:2565:A:C6	2.92	0.58
22:BA:2824:C:N4	22:BA:2825:G:C5	2.71	0.58
44:BW:37:ILE:HG21	44:BW:80:ILE:HG21	1.85	0.58
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.04	0.58
48:B0:11:SER:O	48:B0:15:MET:HG3	2.03	0.58
1:CA:109:A:C6	1:CA:327:A:C6	2.92	0.58
1:CA:406:G:C2	1:CA:407:U:C5	2.91	0.58
1:CA:435:A:C6	1:CA:436:C:C5	2.92	0.58
1:CA:938:A:O3'	7:CG:95:ARG:NH2	2.36	0.58
2:CB:86:SER:O	2:CB:87:CYS:O	2.22	0.58
5:CE:25:VAL:N	5:CE:28:GLY:O	2.32	0.58
11:CK:17:SER:OG	11:CK:18:ASP:N	2.37	0.58
22:DA:1064:C:N3	22:DA:1074:G:N2	2.51	0.58
22:DA:1805:A:C2	22:DA:1813:G:C2	2.92	0.58
22:DA:2343:U:HO2'	22:DA:2373:G:HO2'	1.50	0.58
24:DC:212:ARG:O	24:DC:215:GLY:N	2.33	0.58
41:DT:29:THR:OG1	41:DT:86:THR:HG22	2.04	0.58
1:AA:951:G:C2	1:AA:952:U:C2	2.92	0.58
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.57	0.58
4:AD:84:GLY:O	4:AD:89:ASN:ND2	2.37	0.58
7:AG:86:GLN:O	7:AG:88:PRO:HD3	2.03	0.58
9:AI:40:GLY:O	9:AI:41:ARG:HB2	2.03	0.58
22:BA:269:C:C2	22:BA:424:G:C2	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1508:A:H4'	22:BA:1508:A:OP1	2.04	0.58
22:BA:1536:C:H4'	22:BA:1537:G:H5"	1.86	0.58
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.03	0.58
22:BA:2191:A:C6	22:BA:2192:U:O4	2.57	0.58
22:BA:2502:G:C5'	22:BA:2503:A:H5"	2.34	0.58
22:BA:2641:G:OP1	31:BJ:76:HIS:NE2	2.33	0.58
31:BJ:117:ALA:HA	31:BJ:120:ARG:NH2	2.18	0.58
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.37	0.58
38:BQ:88:VAL:HG22	39:BR:49:ILE:HG13	1.85	0.58
44:BW:10:THR:O	44:BW:11:ARG:HB2	2.03	0.58
1:CA:211:G:O2'	1:CA:212:G:H4'	2.04	0.58
1:CA:1358:U:C5	1:CA:1359:C:N3	2.72	0.58
4:CD:173:VAL:O	4:CD:174:ASP:HB3	2.04	0.58
22:DA:583:G:N7	57:DA:3280:HOH:O	2.32	0.58
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.39	0.58
22:DA:1563:U:H2'	22:DA:1564:C:H6	1.68	0.58
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.38	0.58
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.57	0.58
22:DA:2575:C:H2'	22:DA:2578:G:O6	2.03	0.58
22:DA:2634:A:O2'	25:DD:79:LEU:HD12	2.02	0.58
46:DY:6:LEU:O	46:DY:60:LYS:NZ	2.37	0.58
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.51	0.58
1:AA:155:A:C2	1:AA:167:A:C2	2.92	0.57
1:AA:826:C:H5'	8:AH:13:ARG:NH1	2.18	0.57
1:AA:1429:A:C2	1:AA:1430:A:C8	2.92	0.57
2:AB:94:HIS:CE1	2:AB:146:ASN:HB2	2.39	0.57
6:AF:51:ILE:HD12	6:AF:86:ARG:NH1	2.18	0.57
8:AH:64:LYS:HB2	8:AH:71:VAL:HG21	1.85	0.57
22:BA:1180:U:H2'	22:BA:1181:U:H5'	1.86	0.57
22:BA:1342:A:C8	22:BA:1397:U:O2	2.57	0.57
22:BA:1838:C:C2	22:BA:1898:U:C4	2.91	0.57
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.04	0.57
22:BA:2318:G:C6	22:BA:2319:G:C6	2.92	0.57
39:BR:79:ARG:O	39:BR:80:ARG:HB3	2.04	0.57
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.18	0.57
1:CA:552:U:N3	1:CA:553:A:N7	2.51	0.57
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.03	0.57
2:CB:206:ALA:O	2:CB:209:ALA:N	2.37	0.57
5:CE:150:PRO:O	5:CE:153:VAL:HG22	2.04	0.57
22:DA:1581:G:C5	22:DA:1582:C:N4	2.72	0.57
22:DA:2054:A:C2	22:DA:2616:C:N3	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2118:U:O4	22:DA:2149:U:H1'	2.03	0.57
22:DA:2347:C:O2'	49:D1:39:PHE:HB3	2.04	0.57
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.38	0.57
33:DL:29:LYS:C	33:DL:30:THR:HG1	2.03	0.57
42:DU:22:ARG:CZ	42:DU:73:PHE:CE2	2.87	0.57
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.34	0.57
1:AA:71:A:O2'	1:AA:72:A:P	2.62	0.57
1:AA:1538:C:C2'	1:AA:1539:C:H5'	2.35	0.57
13:AM:25:VAL:HG12	13:AM:29:ARG:HB3	1.86	0.57
19:AS:5:LEU:HD23	19:AS:9:PRO:HA	1.85	0.57
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.52	0.57
22:BA:1079:C:C5	22:BA:1088:A:C2	2.92	0.57
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.04	0.57
22:BA:1911:U:H2'	22:BA:1918:A:C2	2.39	0.57
22:BA:2474:U:H5"	22:BA:2475:C:OP2	2.03	0.57
41:BT:67:VAL:HG23	41:BT:76:ARG:HG3	1.86	0.57
46:BY:17:GLU:HG3	46:BY:18:LEU:N	2.18	0.57
1:CA:158:G:C5	1:CA:164:G:C6	2.93	0.57
1:CA:676:A:H2'	1:CA:677:U:C6	2.40	0.57
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.85	0.57
1:CA:1311:A:C2	1:CA:1327:C:N3	2.72	0.57
1:CA:1540:U:O3'	21:CU:18:ARG:NE	2.37	0.57
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.19	0.57
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.52	0.57
22:DA:615:U:C4	26:DE:35:TYR:CE1	2.92	0.57
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.57
33:DL:93:ASN:O	33:DL:95:LEU:N	2.33	0.57
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.37	0.57
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.85	0.57
1:AA:983:A:N3	1:AA:983:A:C2'	2.67	0.57
22:BA:1107:G:C5	22:BA:1108:U:C5	2.93	0.57
22:BA:2444:G:OP2	26:BE:63:LYS:HD2	2.04	0.57
22:BA:2585:U:HO2'	22:BA:2586:U:C5'	2.17	0.57
22:BA:2808:G:C2	22:BA:2891:U:C6	2.92	0.57
53:B5:35:THR:O	53:B5:35:THR:OG1	2.21	0.57
1:CA:519:C:H2'	1:CA:520:A:O4'	2.04	0.57
1:CA:570:G:C2	1:CA:571:U:C4	2.93	0.57
1:CA:1147:C:O2'	9:CI:18:ARG:NH1	2.37	0.57
1:CA:1255:G:C6	1:CA:1279:G:C8	2.93	0.57
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.04	0.57
9:CI:95:ARG:O	9:CI:99:ARG:N	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.40	0.57
22:DA:728:G:C2	22:DA:730:A:C4	2.92	0.57
22:DA:1083:U:O2	22:DA:1086:A:N1	2.37	0.57
22:DA:1203:U:H1'	33:DL:4:ASN:HB3	1.85	0.57
22:DA:1607:C:N4	22:DA:1622:G:N7	2.53	0.57
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.37	0.57
22:DA:2146:C:H5"	22:DA:2147:A:OP1	2.04	0.57
46:DY:9:LYS:N	46:DY:12:GLU:HG3	2.19	0.57
49:D1:26:ASN:OD1	49:D1:29:THR:OG1	2.19	0.57
1:AA:452:A:C8	1:AA:453:G:C8	2.93	0.57
1:AA:598:U:H4'	8:AH:86:TYR:CD1	2.39	0.57
5:AE:94:VAL:HG21	5:AE:111:MET:SD	2.45	0.57
11:AK:21:ALA:HB2	11:AK:34:ILE:HD13	1.87	0.57
22:BA:528:A:H2	22:BA:2043:C:H5'	1.70	0.57
22:BA:1338:G:O2'	22:BA:1339:G:H5'	2.05	0.57
22:BA:1341:G:C5	41:BT:84:TYR:CE1	2.92	0.57
39:BR:25:LEU:H	39:BR:94:THR:HG23	1.68	0.57
48:B0:17:ARG:O	48:B0:19:HIS:N	2.38	0.57
1:CA:786:G:C2	1:CA:797:C:O2	2.57	0.57
5:CE:77:ASN:HB2	5:CE:82:GLN:HG2	1.85	0.57
16:CP:44:SER:O	16:CP:46:LYS:HG3	2.04	0.57
17:CQ:46:VAL:HG21	17:CQ:61:ILE:HD11	1.86	0.57
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD13	1.86	0.57
22:DA:669:G:N2	22:DA:670:A:C2	2.72	0.57
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.39	0.57
23:DB:84:G:C2	23:DB:93:C:C2	2.93	0.57
28:DG:89:LEU:HD12	28:DG:162:VAL:HG22	1.86	0.57
36:DO:50:ALA:O	36:DO:81:ARG:NH2	2.37	0.57
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.70	0.57
46:DY:27:ASN:HA	46:DY:30:MET:HB2	1.86	0.57
1:AA:601:G:H2'	1:AA:602:A:C8	2.40	0.57
6:AF:39:LEU:O	6:AF:40:GLU:HG3	2.04	0.57
10:AJ:52:LEU:HD21	10:AJ:59:LYS:HA	1.87	0.57
22:BA:555:G:O2'	22:BA:556:A:OP2	2.21	0.57
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.19	0.57
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.20	0.57
22:BA:2826:A:C5	22:BA:2827:C:C5	2.92	0.57
24:BC:34:LEU:HA	24:BC:62:TYR:O	2.03	0.57
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.85	0.57
1:CA:127:G:C2	1:CA:128:G:C8	2.93	0.57
1:CA:675:A:OP1	18:CR:74:HIS:NE2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1140:C:O2'	1:CA:1141:C:O5'	2.22	0.57
1:CA:1431:A:C6	1:CA:1432:G:C6	2.93	0.57
5:CE:76:LEU:HD23	5:CE:120:VAL:HG13	1.86	0.57
12:CL:21:VAL:N	12:CL:22:PRO:HD3	2.19	0.57
14:CN:31:ILE:O	14:CN:33:ASP:N	2.36	0.57
22:DA:155:A:H2'	22:DA:156:A:C8	2.40	0.57
22:DA:223:A:H2'	22:DA:408:G:N3	2.20	0.57
22:DA:301:G:N3	22:DA:302:C:C2	2.72	0.57
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.40	0.57
22:DA:1805:A:N3	22:DA:1813:G:C2	2.73	0.57
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.40	0.57
22:DA:2550:G:C5	22:DA:2551:C:C5	2.92	0.57
25:DD:170:VAL:HG23	25:DD:194:PRO:HB3	1.86	0.57
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.57
40:DS:59:GLU:HA	40:DS:64:ALA:HA	1.85	0.57
1:AA:8:A:N6	4:AD:202:GLU:O	2.36	0.57
1:AA:15:G:C4	1:AA:16:A:C8	2.92	0.57
1:AA:1251:A:N3	1:AA:1369:C:O2'	2.35	0.57
10:AJ:52:LEU:HB3	14:AN:81:ARG:HE	1.69	0.57
22:BA:15:G:C6	22:BA:16:C:C5	2.93	0.57
22:BA:581:C:H2'	22:BA:582:A:C8	2.39	0.57
22:BA:668:A:H2'	22:BA:669:G:OP1	2.04	0.57
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.04	0.57
25:BD:103:ASP:O	25:BD:105:LYS:N	2.33	0.57
27:BF:2:ALA:O	27:BF:3:LYS:C	2.43	0.57
1:CA:790:A:C6	1:CA:791:G:C6	2.92	0.57
1:CA:1082:A:C6	1:CA:1083:U:N3	2.73	0.57
22:DA:528:A:C2	22:DA:2043:C:H4'	2.39	0.57
22:DA:627:A:OP1	33:DL:78:ARG:NH1	2.37	0.57
22:DA:1141:U:H4'	22:DA:1142:A:O4'	2.04	0.57
22:DA:1693:U:OP2	22:DA:1694:C:N4	2.34	0.57
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.04	0.57
32:DK:63:VAL:HG23	32:DK:64:ARG:HG3	1.86	0.57
4:AD:151:LYS:HB2	4:AD:156:LYS:HE3	1.86	0.57
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.52	0.57
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.34	0.57
22:BA:198:C:OP2	57:BA:3761:HOH:O	2.18	0.57
22:BA:1967:C:H2'	22:BA:1968:G:H5'	1.86	0.57
22:BA:2191:A:N1	22:BA:2192:U:N3	2.52	0.57
22:BA:2551:C:OP1	57:BA:3431:HOH:O	2.18	0.57
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	2.05	0.57
1:CA:109:A:C4	1:CA:327:A:C2	2.93	0.57
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.39	0.57
1:CA:1072:G:C6	1:CA:1073:U:C4	2.93	0.57
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.22	0.57
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.03	0.57
11:CK:126:LYS:O	11:CK:127:ARG:HB2	2.05	0.57
22:DA:609:A:H2'	22:DA:610:C:O4'	2.03	0.57
22:DA:749:A:C6	22:DA:750:A:N7	2.73	0.57
22:DA:2138:G:N2	22:DA:2154:A:H1'	2.20	0.57
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.85	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
39:DR:101:ILE:O	39:DR:103:ALA:N	2.38	0.57
1:AA:258:G:N2	1:AA:259:G:H1'	2.19	0.57
1:AA:328:C:O2	1:AA:328:C:C2'	2.53	0.57
1:AA:990:C:C4	1:AA:991:U:O4	2.57	0.57
1:AA:1501:C:C4	1:AA:1504:G:C5	2.93	0.57
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.35	0.57
11:AK:97:ILE:HG13	11:AK:98:ARG:N	2.18	0.57
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.58	0.57
22:BA:1606:C:H4'	22:BA:1607:C:C5'	2.35	0.57
22:BA:2435:A:C2'	22:BA:2436:G:O5'	2.53	0.57
22:BA:2647:U:O2'	22:BA:2648:G:H5'	2.05	0.57
22:BA:2896:C:N3	22:BA:2897:U:C5	2.73	0.57
25:BD:101:PHE:CE2	25:BD:203:VAL:HG12	2.39	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.70	0.57
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.40	0.57
1:CA:756:C:C2	1:CA:757:U:C6	2.93	0.57
1:CA:1124:G:N2	1:CA:1127:G:C2	2.73	0.57
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.05	0.57
1:CA:1408:A:N1	1:CA:1494:G:C6	2.73	0.57
2:CB:24:ASN:O	2:CB:26:LYS:N	2.37	0.57
7:CG:31:MET:SD	7:CG:36:LYS:HD3	2.45	0.57
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.20	0.57
22:DA:270:A:C2	22:DA:369:U:H4'	2.38	0.57
22:DA:526:A:N6	22:DA:2626:C:H4'	2.20	0.57
22:DA:948:C:O2	22:DA:984:A:O2'	2.22	0.57
22:DA:2032:G:N3	25:DD:150:GLN:HG2	2.20	0.57
22:DA:2812:G:N2	22:DA:2889:C:C2	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:128:ALA:O	26:DE:130:LYS:N	2.38	0.57
45:DX:17:ASN:CB	45:DX:25:THR:HB	2.35	0.57
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.28	0.57
2:AB:184:PHE:CE1	2:AB:198:PHE:CD2	2.92	0.57
3:AC:6:HIS:HB3	14:AN:89:MET:HG3	1.87	0.57
5:AE:109:GLY:O	5:AE:110:ALA:HB3	2.05	0.57
22:BA:1341:G:C4	41:BT:84:TYR:CE1	2.93	0.57
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.04	0.57
23:BB:109:A:C4	23:BB:110:C:C6	2.93	0.57
27:BF:173:PHE:O	27:BF:174:ASP:HB3	2.04	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
32:BK:70:ARG:NH1	32:BK:74:GLY:O	2.38	0.57
38:BQ:9:ILE:O	38:BQ:13:ARG:HG3	2.05	0.57
1:CA:258:G:C2	1:CA:269:C:O2	2.58	0.57
1:CA:358:U:H2'	1:CA:359:G:C8	2.40	0.57
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.35	0.57
1:CA:1370:G:O5'	9:CI:111:VAL:HG21	2.05	0.57
1:CA:1403:C:H2'	1:CA:1404:C:C6	2.40	0.57
1:CA:1450:U:O2'	1:CA:1451:U:H2'	2.05	0.57
5:CE:82:GLN:OE1	5:CE:150:PRO:HD3	2.04	0.57
9:CI:47:VAL:O	9:CI:80:ARG:HG2	2.05	0.57
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.20	0.57
11:CK:125:LYS:HG2	21:CU:35:ARG:NE	2.20	0.57
12:CL:38:TYR:N	12:CL:52:VAL:O	2.37	0.57
22:DA:377:G:C6	22:DA:378:C:C4	2.93	0.57
22:DA:404:A:C6	22:DA:406:G:C2	2.93	0.57
22:DA:681:G:C4	22:DA:682:G:C8	2.93	0.57
22:DA:764:A:N3	22:DA:781:A:C6	2.72	0.57
22:DA:1082:U:OP1	30:DI:124:ALA:CB	2.53	0.57
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.40	0.57
22:DA:1668:A:O4'	22:DA:1669:A:N1	2.36	0.57
22:DA:1984:G:C6	22:DA:1985:C:C4	2.93	0.57
22:DA:2372:U:H2'	22:DA:2373:G:C8	2.40	0.57
22:DA:2574:G:N1	22:DA:2575:C:C2	2.72	0.57
24:DC:30:PHE:CE2	24:DC:32:PRO:HG2	2.40	0.57
24:DC:204:VAL:O	24:DC:206:GLY:N	2.38	0.57
35:DN:28:LEU:O	35:DN:32:GLU:HA	2.04	0.57
37:DP:55:LEU:HA	37:DP:77:HIS:CD2	2.39	0.57
44:DW:24:LYS:N	44:DW:37:ILE:O	2.37	0.57
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.04	0.57
1:AA:63:C:O2	1:AA:105:G:C2	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:371:A:C2	1:AA:372:C:C5	2.92	0.57
1:AA:557:G:H2'	1:AA:558:G:C8	2.40	0.57
1:AA:681:A:C2	1:AA:710:G:C2	2.93	0.57
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.40	0.57
9:AI:23:PRO:HA	9:AI:61:LEU:HA	1.86	0.57
22:BA:729:G:H2'	22:BA:1775:U:H1'	1.87	0.57
22:BA:1883:U:O4	22:BA:1884:G:N1	2.38	0.57
22:BA:2531:A:C6	22:BA:2532:G:C5	2.93	0.57
33:BL:68:SER:HB3	33:BL:71:ALA:HB2	1.87	0.57
38:BQ:68:ALA:HB1	38:BQ:106:PHE:CE1	2.40	0.57
1:CA:728:A:C8	15:CO:54:ARG:NH1	2.73	0.57
1:CA:913:A:H4'	1:CA:914:A:OP1	2.05	0.57
1:CA:1007:U:H2'	1:CA:1008:U:H5"	1.87	0.57
1:CA:1380:U:C5	7:CG:3:ARG:HA	2.39	0.57
12:CL:83:ARG:N	12:CL:96:HIS:O	2.37	0.57
22:DA:945:A:C8	22:DA:2448:A:C2	2.93	0.57
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.40	0.57
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.39	0.57
22:DA:2131:U:C4'	22:DA:2133:G:H1'	2.34	0.57
22:DA:2261:C:C6	44:DW:16:SER:HB3	2.39	0.57
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.40	0.57
26:DE:192:ALA:O	26:DE:196:VAL:HB	2.05	0.57
33:DL:64:PHE:CE1	51:D3:47:LYS:NZ	2.73	0.57
42:DU:4:LYS:NZ	57:DU:201:HOH:O	2.37	0.57
46:DY:1:MET:SD	46:DY:52:ARG:NH1	2.78	0.57
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.40	0.56
4:AD:29:ASP:C	4:AD:30:THR:O	2.41	0.56
22:BA:868:U:C4	22:BA:869:G:N7	2.73	0.56
22:BA:1794:A:C2	22:BA:1795:C:C4	2.92	0.56
22:BA:1842:G:C4	22:BA:1901:A:C2	2.93	0.56
23:BB:116:G:H4'	36:BO:54:VAL:HG13	1.87	0.56
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.56
45:BX:74:ARG:NH2	45:BX:76:GLU:CG	2.68	0.56
1:CA:435:A:C2'	1:CA:436:C:O5'	2.53	0.56
4:CD:145:ILE:CG2	4:CD:150:LYS:HA	2.35	0.56
22:DA:2333:A:N7	22:DA:2335:A:C2	2.73	0.56
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.40	0.56
23:DB:52:A:C5	36:DO:33:ARG:NH2	2.73	0.56
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.87	0.56
42:DU:47:LYS:CG	42:DU:48:PRO:HD2	2.34	0.56
50:D2:11:LYS:O	50:D2:15:SER:N	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:468:A:C2	1:AA:469:C:C4	2.93	0.56
1:AA:942:G:H2'	1:AA:942:G:N3	2.20	0.56
1:AA:1060:U:H4'	10:AJ:53:ILE:CG2	2.35	0.56
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.86	0.56
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.05	0.56
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.83	0.56
22:BA:1607:C:N4	22:BA:1622:G:N7	2.52	0.56
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.05	0.56
22:BA:2555:U:C5	22:BA:2556:C:C2	2.93	0.56
27:BF:52:ASN:O	27:BF:55:ALA:N	2.38	0.56
27:BF:107:ALA:O	27:BF:110:ARG:N	2.39	0.56
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.87	0.56
1:CA:64:G:C8	1:CA:99:C:N4	2.72	0.56
1:CA:1080:A:OP1	5:CE:52:LYS:HE3	2.05	0.56
1:CA:1491:G:C5	1:CA:1492:A:C5	2.93	0.56
4:CD:99:ASP:OD1	4:CD:100:ASN:N	2.38	0.56
6:CF:86:ARG:CG	6:CF:86:ARG:HH11	2.19	0.56
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.05	0.56
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.38	0.56
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.04	0.56
22:DA:197:A:H62	22:DA:2430:A:H2'	1.70	0.56
22:DA:478:A:C6	22:DA:480:A:C6	2.93	0.56
22:DA:2163:A:OP1	22:DA:2171:A:C8	2.58	0.56
22:DA:2294:G:OP2	36:DO:94:ARG:NH1	2.38	0.56
1:AA:69:G:H2'	1:AA:69:G:N3	2.21	0.56
1:AA:237:G:OP1	17:AQ:42:THR:OG1	2.23	0.56
1:AA:375:U:C4	1:AA:376:G:N7	2.73	0.56
1:AA:464:U:N3	1:AA:466:A:H5"	2.21	0.56
1:AA:481:G:HO2'	1:AA:483:C:N4	2.02	0.56
1:AA:657:U:O2	15:AO:22:THR:HG23	2.06	0.56
1:AA:877:G:H21	8:AH:2:SER:N	2.02	0.56
1:AA:895:G:C5	1:AA:896:C:C4	2.94	0.56
1:AA:914:A:N3	1:AA:915:A:C8	2.73	0.56
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.53	0.56
2:AB:115:LYS:O	2:AB:117:LEU:N	2.38	0.56
7:AG:47:LEU:O	7:AG:51:ALA:HB2	2.05	0.56
13:AM:29:ARG:NH2	13:AM:63:PHE:HB2	2.19	0.56
22:BA:15:G:C6	22:BA:16:C:C4	2.93	0.56
22:BA:223:A:C6	22:BA:422:A:C5	2.93	0.56
22:BA:1300:G:C4	22:BA:1626:A:C2	2.93	0.56
22:BA:1360:G:O6	22:BA:1372:U:C2	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1492:G:O6	22:BA:1499:C:N4	2.39	0.56
22:BA:2245:U:O2'	22:BA:2436:G:OP2	2.17	0.56
22:BA:2256:G:H2'	22:BA:2257:U:O5'	2.05	0.56
22:BA:2600:A:H2'	22:BA:2601:C:H6	1.69	0.56
22:BA:2824:C:N4	22:BA:2825:G:N7	2.52	0.56
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.87	0.56
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	1.87	0.56
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.21	0.56
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.20	0.56
3:CC:57:ILE:HG13	3:CC:66:VAL:HG22	1.85	0.56
3:CC:63:SER:OG	3:CC:64:ILE:N	2.37	0.56
6:CF:14:GLN:C	6:CF:16:GLU:H	2.07	0.56
9:CI:84:THR:HG21	9:CI:103:PHE:CB	2.34	0.56
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.05	0.56
12:CL:86:ARG:CZ	12:CL:88:LYS:HB3	2.35	0.56
17:CQ:52:GLU:HG2	17:CQ:53:CYS:SG	2.45	0.56
22:DA:82:U:C2	22:DA:83:A:N7	2.73	0.56
22:DA:201:C:C5	22:DA:202:U:C5	2.94	0.56
22:DA:265:A:H4'	22:DA:266:G:OP1	2.05	0.56
22:DA:447:A:H4'	22:DA:449:A:N7	2.20	0.56
22:DA:529:A:C6	22:DA:2023:C:C2	2.93	0.56
22:DA:575:A:C2	22:DA:576:U:C6	2.93	0.56
22:DA:579:G:N2	22:DA:1262:A:C4	2.74	0.56
22:DA:864:G:C6	22:DA:865:C:N4	2.73	0.56
22:DA:1225:G:C6	22:DA:1226:A:N6	2.73	0.56
22:DA:1838:C:C5	22:DA:1899:A:C5	2.93	0.56
22:DA:2209:G:N2	22:DA:2216:G:N3	2.53	0.56
22:DA:2325:G:C6	22:DA:2326:C:N4	2.73	0.56
22:DA:2345:G:C6	22:DA:2347:C:N4	2.73	0.56
22:DA:2371:G:C6	22:DA:2372:U:C5	2.93	0.56
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.56
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.86	0.56
35:DN:90:ARG:NH1	35:DN:116:VAL:HG11	2.20	0.56
42:DU:12:ILE:HG13	42:DU:21:LYS:O	2.05	0.56
1:AA:588:G:C5	1:AA:589:U:C4	2.94	0.56
1:AA:1277:C:H2'	1:AA:1279:G:H8	1.70	0.56
7:AG:42:ILE:HD13	7:AG:116:MET:HB3	1.87	0.56
17:AQ:67:LEU:N	17:AQ:67:LEU:HD12	2.21	0.56
19:AS:3:ARG:NH2	19:AS:68:GLY:O	2.39	0.56
22:BA:65:U:O2'	22:BA:66:C:H5'	2.05	0.56
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.05	0.56
22:BA:1251:C:OP2	38:BQ:6:ARG:HD2	2.05	0.56
22:BA:1317:G:C2	22:BA:1336:A:C2	2.94	0.56
22:BA:1326:U:C2	22:BA:1648:U:O2'	2.58	0.56
22:BA:2198:A:C2	29:BH:29:PHE:HB2	2.41	0.56
41:BT:28:ASN:ND2	41:BT:91:GLN:OE1	2.39	0.56
45:BX:2:SER:O	45:BX:4:VAL:HG23	2.06	0.56
1:CA:32:A:H2'	1:CA:32:A:N3	2.20	0.56
1:CA:216:U:H4'	1:CA:464:U:H4'	1.86	0.56
1:CA:755:G:C2	1:CA:756:C:C5	2.93	0.56
1:CA:853:C:H2'	1:CA:854:U:O4'	2.05	0.56
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.04	0.56
1:CA:1074:G:H4'	2:CB:102:THR:O	2.06	0.56
1:CA:1255:G:N1	1:CA:1279:G:C8	2.73	0.56
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.21	0.56
1:CA:1441:A:C8	1:CA:1442:G:C8	2.94	0.56
22:DA:1827:U:H2'	22:DA:1828:G:O4'	2.06	0.56
22:DA:2142:A:C2	22:DA:2150:C:N3	2.74	0.56
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.05	0.56
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.88	0.56
38:DQ:47:TYR:CZ	38:DQ:51:ARG:NH2	2.73	0.56
38:DQ:58:ARG:HA	38:DQ:61:TRP:CE3	2.40	0.56
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.34	0.56
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.05	0.56
1:AA:17:U:H2'	1:AA:18:C:C6	2.41	0.56
1:AA:206:C:H2'	1:AA:207:C:O4'	2.06	0.56
1:AA:269:C:H2'	1:AA:270:A:C8	2.41	0.56
1:AA:340:U:H2'	1:AA:341:C:C6	2.41	0.56
1:AA:775:G:O2'	1:AA:776:G:H5'	2.06	0.56
1:AA:1055:A:C6	1:AA:1206:G:C5	2.93	0.56
1:AA:1335:U:H5"	1:AA:1336:C:H5'	1.87	0.56
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.05	0.56
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.06	0.56
3:AC:153:VAL:HG12	3:AC:198:VAL:HG22	1.86	0.56
4:AD:58:LYS:HG2	4:AD:203:LEU:HD23	1.88	0.56
8:AH:59:LEU:HD13	8:AH:60:GLU:N	2.21	0.56
13:AM:80:LEU:HD22	13:AM:87:ARG:HB2	1.87	0.56
22:BA:500:G:N2	22:BA:502:A:C3'	2.69	0.56
22:BA:528:A:H3'	22:BA:528:A:H8	1.69	0.56
22:BA:591:U:H1'	51:B3:2:PRO:N	2.19	0.56
22:BA:1842:G:C2	22:BA:1901:A:C2	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.35	0.56
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.36	0.56
1:CA:1004:A:C2	1:CA:1026:G:N3	2.74	0.56
5:CE:149:SER:O	5:CE:153:VAL:HG13	2.05	0.56
21:CU:36:GLU:OE1	21:CU:36:GLU:HA	2.05	0.56
22:DA:78:U:OP2	46:DY:2:LYS:CD	2.53	0.56
22:DA:309:A:H5'	42:DU:17:LYS:HG2	1.86	0.56
22:DA:995:C:OP2	38:DQ:53:ARG:NH1	2.39	0.56
22:DA:2415:G:C5	22:DA:2416:C:C4	2.94	0.56
30:DI:69:PHE:N	30:DI:69:PHE:HD1	2.03	0.56
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.20	0.56
34:DM:36:VAL:HG22	34:DM:129:THR:HB	1.86	0.56
1:AA:568:G:N3	1:AA:569:C:C5	2.73	0.56
1:AA:772:U:H2'	1:AA:773:G:O5'	2.05	0.56
3:AC:32:ASN:O	3:AC:35:SER:N	2.38	0.56
4:AD:46:PRO:O	4:AD:48:LEU:N	2.39	0.56
8:AH:32:LEU:O	8:AH:33:LYS:C	2.43	0.56
16:AP:71:VAL:O	16:AP:75:ILE:HG13	2.05	0.56
20:AT:35:VAL:HG22	20:AT:50:ALA:HB3	1.87	0.56
22:BA:994:C:O2	39:BR:10:LYS:HE3	2.06	0.56
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.41	0.56
22:BA:1171:G:C2	22:BA:1172:C:C2	2.93	0.56
22:BA:1941:C:O2	22:BA:1941:C:H2'	2.06	0.56
22:BA:2077:A:C2'	22:BA:2078:C:H5'	2.35	0.56
22:BA:2500:U:H5"	22:BA:2501:C:OP2	2.05	0.56
22:BA:2532:G:C5	22:BA:2533:U:C5	2.94	0.56
26:BE:189:THR:HG22	26:BE:191:ASP:N	2.21	0.56
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.05	0.56
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.46	0.56
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.26	0.56
1:CA:1330:U:H4'	13:CM:23:TYR:CE1	2.40	0.56
22:DA:77:G:H4'	46:DY:56:LEU:HD21	1.88	0.56
22:DA:126:A:C2	50:D2:18:PHE:CE2	2.94	0.56
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.58	0.56
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.05	0.56
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.35	0.56
22:DA:2100:G:C5	22:DA:2190:G:C6	2.94	0.56
22:DA:2725:A:C4	22:DA:2727:A:C8	2.93	0.56
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	1.87	0.56
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.35	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.04	0.56
1:AA:13:U:C4	1:AA:916:U:O4	2.59	0.56
1:AA:1107:C:C4	1:AA:1108:G:C8	2.94	0.56
7:AG:79:ARG:NH1	7:AG:82:GLY:O	2.39	0.56
22:BA:1403:A:C2	22:BA:1404:C:C2	2.94	0.56
22:BA:1456:G:C5	22:BA:1457:U:C5	2.94	0.56
22:BA:1675:C:O2	25:BD:133:THR:OG1	2.24	0.56
22:BA:2077:A:O2'	22:BA:2078:C:H5'	2.05	0.56
36:BO:25:ARG:HG3	36:BO:27:VAL:HG12	1.85	0.56
1:CA:66:A:C6	1:CA:67:C:C5	2.94	0.56
1:CA:392:C:H2'	1:CA:393:A:C8	2.40	0.56
2:CB:21:ARG:C	2:CB:22:TYR:CD1	2.79	0.56
2:CB:186:ILE:HA	2:CB:200:ILE:HB	1.86	0.56
4:CD:167:LYS:HE2	4:CD:173:VAL:HG11	1.88	0.56
12:CL:16:VAL:O	12:CL:17:ALA:O	2.23	0.56
20:CT:81:ALA:O	20:CT:85:LYS:HG2	2.06	0.56
22:DA:247:G:H4'	22:DA:386:G:C4	2.41	0.56
22:DA:1509:A:O2'	22:DA:1510:G:P	2.64	0.56
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.41	0.56
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.24	0.56
22:DA:1783:A:C6	22:DA:2587:A:C2	2.93	0.56
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.36	0.56
23:DB:55:U:C5'	27:DF:25:VAL:HG12	2.36	0.56
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	1.87	0.56
1:AA:148:G:H2'	1:AA:149:A:O5'	2.05	0.56
1:AA:509:A:P	57:AA:1722:HOH:O	2.64	0.56
1:AA:737:C:N3	1:AA:738:C:C5	2.74	0.56
22:BA:608:A:C6	22:BA:609:A:C6	2.94	0.56
22:BA:1083:U:O2	22:BA:1086:A:N1	2.39	0.56
22:BA:2176:A:C6	22:BA:2177:C:N4	2.73	0.56
22:BA:2674:G:H2'	22:BA:2675:A:C8	2.40	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
53:B5:167:ASP:CB	53:B5:176:VAL:O	2.54	0.56
1:CA:96:U:C2'	1:CA:97:G:O5'	2.54	0.56
1:CA:369:G:C6	1:CA:370:C:C4	2.93	0.56
1:CA:684:U:C5	1:CA:685:G:N7	2.74	0.56
22:DA:186:G:C2	22:DA:211:C:C2	2.94	0.56
22:DA:2386:A:H2'	22:DA:2387:U:C6	2.41	0.56
1:AA:832:G:C2	1:AA:833:G:C8	2.93	0.56
1:AA:1048:G:C2	1:AA:1050:G:C5	2.94	0.56
2:AB:147:SER:O	2:AB:148:LEU:CB	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:95:PHE:CE1	5:AE:97:GLN:HG3	2.41	0.56
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.05	0.56
12:AL:87:VAL:O	12:AL:87:VAL:HG12	2.06	0.56
22:BA:636:G:N1	33:BL:111:ILE:HD11	2.21	0.56
22:BA:827:U:H2'	22:BA:2068:U:C2	2.41	0.56
22:BA:1074:G:C2'	22:BA:1075:C:H5'	2.35	0.56
22:BA:1384:A:H5"	22:BA:1385:A:OP2	2.06	0.56
22:BA:2567:G:C4	22:BA:2568:U:C5	2.94	0.56
28:BG:37:LEU:N	28:BG:37:LEU:HD23	2.20	0.56
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.69	0.56
45:BX:68:LEU:HD22	45:BX:78:TYR:CD1	2.41	0.56
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.20	0.56
1:CA:254:G:OP1	17:CQ:69:LYS:O	2.23	0.56
1:CA:978:A:C6	1:CA:1318:A:C6	2.94	0.56
1:CA:1408:A:C2	1:CA:1494:G:C4	2.93	0.56
3:CC:175:LEU:HD12	3:CC:175:LEU:O	2.05	0.56
4:CD:173:VAL:O	4:CD:179:GLU:O	2.23	0.56
5:CE:112:ARG:O	5:CE:115:LEU:N	2.39	0.56
7:CG:92:ARG:NE	7:CG:93:PRO:HD2	2.21	0.56
22:DA:478:A:N6	22:DA:500:G:O2'	2.39	0.56
22:DA:1355:G:C6	22:DA:1377:G:N2	2.73	0.56
22:DA:1644:C:O2	22:DA:1644:C:H2'	2.05	0.56
22:DA:1652:A:C2	22:DA:2006:C:O2	2.59	0.56
22:DA:2234:G:C6	22:DA:2235:G:C5	2.94	0.56
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.06	0.56
28:DG:107:LEU:O	28:DG:152:ARG:NH2	2.38	0.56
28:DG:155:GLU:OE1	28:DG:158:LYS:N	2.37	0.56
52:D4:12:ARG:NH1	52:D4:12:ARG:HB2	2.21	0.56
1:AA:947:G:N2	1:AA:1235:U:C2	2.74	0.56
1:AA:1168:U:O2	1:AA:1168:U:C2'	2.54	0.56
12:AL:44:LYS:HB2	12:AL:45:PRO:HD3	1.87	0.56
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.70	0.56
24:BC:230:HIS:CD2	24:BC:247:PRO:HA	2.40	0.56
25:BD:125:TRP:CD2	25:BD:160:LYS:HD3	2.39	0.56
39:BR:62:GLU:O	39:BR:64:VAL:HG12	2.06	0.56
45:BX:43:GLU:O	45:BX:44:LYS:C	2.44	0.56
1:CA:499:A:H4'	1:CA:500:G:OP1	2.06	0.56
1:CA:505:G:H5'	1:CA:534:U:C2	2.41	0.56
1:CA:575:G:C6	1:CA:821:G:N7	2.73	0.56
1:CA:1089:G:C4	1:CA:1090:U:C6	2.94	0.56
22:DA:567:U:O4	22:DA:568:U:C4	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:586:A:H1'	22:DA:672:C:H1'	1.87	0.56
22:DA:2266:A:C2	22:DA:2272:U:C5	2.93	0.56
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.87	0.56
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.06	0.56
34:DM:46:ILE:O	34:DM:103:TYR:OH	2.20	0.56
35:DN:117:ASP:O	35:DN:118:ARG:HB2	2.06	0.56
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.87	0.55
5:AE:36:LEU:HD21	5:AE:137:VAL:HG11	1.88	0.55
9:AI:90:TYR:O	9:AI:91:ASP:CB	2.54	0.55
13:AM:48:LEU:HD22	13:AM:53:ILE:HG13	1.88	0.55
22:BA:102:U:H4'	22:BA:103:A:OP1	2.06	0.55
22:BA:189:G:P	45:BX:14:THR:HG21	2.46	0.55
22:BA:601:C:O2	22:BA:605:G:H4'	2.07	0.55
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.21	0.55
22:BA:1377:G:H5"	22:BA:1378:A:OP2	2.05	0.55
22:BA:2820:A:H4'	35:BN:3:HIS:CD2	2.40	0.55
32:BK:118:LEU:O	32:BK:119:ALA:O	2.24	0.55
40:BS:41:LYS:O	40:BS:44:ALA:HB3	2.07	0.55
1:CA:120:A:H2'	1:CA:120:A:OP2	2.06	0.55
1:CA:437:U:N3	1:CA:438:U:C5	2.75	0.55
1:CA:681:A:C2	1:CA:710:G:C4	2.94	0.55
7:CG:136:LYS:O	7:CG:140:ASP:HB2	2.06	0.55
12:CL:116:LYS:O	12:CL:117:TYR:CD1	2.59	0.55
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.36	0.55
22:DA:374:A:C2	22:DA:401:A:C4	2.94	0.55
22:DA:439:A:H2'	22:DA:440:C:O4'	2.06	0.55
22:DA:987:C:H2'	22:DA:988:A:O4'	2.05	0.55
22:DA:2056:G:C2	22:DA:2057:G:C8	2.94	0.55
22:DA:2554:U:C2	22:DA:2555:U:C5	2.94	0.55
32:DK:70:ARG:HD3	32:DK:76:VAL:HB	1.87	0.55
1:AA:795:C:H1'	1:AA:1506:U:C5	2.41	0.55
1:AA:979:C:C6	1:AA:1318:A:N1	2.75	0.55
1:AA:1048:G:N3	1:AA:1050:G:C8	2.74	0.55
11:AK:43:GLY:HA3	11:AK:74:VAL:HG13	1.87	0.55
13:AM:85:CYS:HB3	19:AS:74:PHE:CE2	2.41	0.55
15:AO:74:ASP:OD1	15:AO:77:ARG:HD3	2.06	0.55
22:BA:286:U:C2	22:BA:287:G:C8	2.94	0.55
22:BA:503:A:C6	22:BA:505:A:C6	2.94	0.55
22:BA:514:A:O2'	22:BA:515:A:H5'	2.06	0.55
22:BA:868:U:N3	22:BA:869:G:N7	2.54	0.55
22:BA:996:A:N6	22:BA:1160:G:C6	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1171:G:C6	22:BA:1172:C:N3	2.74	0.55
22:BA:1176:U:H2'	22:BA:1177:G:C8	2.41	0.55
22:BA:1359:A:C5	22:BA:1373:A:C2	2.94	0.55
22:BA:1826:G:H2'	22:BA:1827:U:H6	1.71	0.55
22:BA:2478:A:H2'	22:BA:2479:U:H5'	1.88	0.55
22:BA:2896:C:C4	22:BA:2897:U:C5	2.94	0.55
23:BB:53:A:C2	23:BB:54:G:C8	2.94	0.55
24:BC:63:ARG:NH1	24:BC:85:PRO:HD3	2.21	0.55
27:BF:58:ALA:O	27:BF:61:SER:O	2.24	0.55
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.21	0.55
1:CA:412:A:O2'	1:CA:413:G:H4'	2.07	0.55
1:CA:740:U:H4'	15:CO:42:HIS:CD2	2.40	0.55
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.39	0.55
1:CA:755:G:C2	1:CA:756:C:C6	2.94	0.55
1:CA:824:G:H1'	8:CH:2:SER:N	2.22	0.55
16:CP:54:LEU:HD21	16:CP:75:ILE:HG23	1.88	0.55
22:DA:276:U:O2	22:DA:276:U:H2'	2.06	0.55
22:DA:614:A:H4'	22:DA:616:A:N7	2.21	0.55
22:DA:1565:C:C5	22:DA:1567:G:C6	2.95	0.55
22:DA:2109:U:H2'	22:DA:2110:G:N7	2.21	0.55
22:DA:2700:A:C6	22:DA:2701:U:O4	2.59	0.55
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.21	0.55
27:DF:65:PRO:HB3	27:DF:89:VAL:HG23	1.87	0.55
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.42	0.55
1:AA:731:G:OP1	1:AA:766:A:H1'	2.06	0.55
1:AA:908:A:C2	1:AA:909:A:C4	2.94	0.55
1:AA:978:A:C5	1:AA:1318:A:C6	2.94	0.55
1:AA:1033:G:H2'	1:AA:1034:G:H5'	1.87	0.55
2:AB:20:THR:HA	2:AB:38:VAL:HA	1.88	0.55
2:AB:187:VAL:O	2:AB:188:ASP:O	2.25	0.55
5:AE:115:LEU:CD2	5:AE:123:VAL:HG21	2.35	0.55
6:AF:99:ALA:O	6:AF:100:SER:CB	2.54	0.55
7:AG:146:GLU:HA	7:AG:149:LYS:CB	2.36	0.55
8:AH:2:SER:C	8:AH:4:GLN:N	2.58	0.55
16:AP:73:ALA:O	16:AP:77:GLU:HB2	2.07	0.55
22:BA:447:A:C4	22:BA:473:G:N7	2.74	0.55
22:BA:1972:G:N2	22:BA:1973:G:C5	2.74	0.55
22:BA:2468:A:N3	22:BA:2481:G:C2	2.75	0.55
24:BC:248:TRP:O	24:BC:250:VAL:HG23	2.06	0.55
33:BL:93:ASN:O	33:BL:94:THR:CB	2.53	0.55
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.52	0.55
1:CA:692:U:O2'	1:CA:694:A:N7	2.27	0.55
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.88	0.55
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.21	0.55
12:CL:94:ARG:O	12:CL:95:TYR:CD1	2.59	0.55
14:CN:61:ARG:NH1	57:CN:202:HOH:O	2.40	0.55
22:DA:42:A:C2	22:DA:438:G:C2	2.94	0.55
22:DA:529:A:H4'	22:DA:530:G:OP1	2.06	0.55
22:DA:852:U:H2'	22:DA:853:C:O4'	2.06	0.55
22:DA:996:A:O3'	38:DQ:91:ASP:HB2	2.06	0.55
22:DA:2310:C:C4	27:DF:77:PHE:CZ	2.94	0.55
22:DA:2461:A:N1	22:DA:2490:G:N2	2.55	0.55
30:DI:10:LYS:HB3	30:DI:56:PRO:HB2	1.88	0.55
1:AA:30:U:N3	1:AA:554:A:C2	2.74	0.55
1:AA:121:U:OP2	1:AA:121:U:H4'	2.05	0.55
1:AA:413:G:N1	4:AD:32:CYS:O	2.37	0.55
1:AA:615:G:C2	1:AA:616:G:C8	2.94	0.55
1:AA:720:C:H5'	18:AR:41:PRO:HA	1.88	0.55
1:AA:1167:A:N7	1:AA:1169:A:C5	2.75	0.55
2:AB:126:PHE:N	2:AB:126:PHE:HD2	2.05	0.55
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.21	0.55
12:AL:73:ASN:O	12:AL:74:LEU:HD22	2.05	0.55
22:BA:521:U:H2'	22:BA:522:A:C8	2.42	0.55
22:BA:1319:C:C2'	22:BA:1320:C:O5'	2.55	0.55
22:BA:1742:U:H2'	22:BA:1743:G:O5'	2.06	0.55
22:BA:1827:U:O2	22:BA:1827:U:H2'	2.06	0.55
22:BA:1937:A:C8	22:BA:1939:U:H2'	2.41	0.55
22:BA:1992:G:H4'	22:BA:1993:U:OP1	2.04	0.55
34:BM:136:MET:CE	43:BV:57:TYR:CD2	2.89	0.55
44:BW:36:ILE:HG23	44:BW:58:THR:HG23	1.88	0.55
53:B5:42:VAL:O	53:B5:179:ALA:N	2.40	0.55
1:CA:436:C:C2	1:CA:437:U:C5	2.94	0.55
1:CA:846:G:C2	1:CA:847:G:C8	2.95	0.55
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.87	0.55
3:CC:153:VAL:O	3:CC:165:THR:O	2.23	0.55
22:DA:132:G:N2	22:DA:148:U:O2	2.39	0.55
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.29	0.55
22:DA:2466:C:H5'	52:D4:5:ALA:HB3	1.89	0.55
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.42	0.55
23:DB:32:U:C2	23:DB:51:G:N2	2.75	0.55
23:DB:55:U:H5'	27:DF:25:VAL:HG12	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:97:SER:O	25:DD:99:GLU:N	2.39	0.55
34:DM:124:LEU:HD23	34:DM:124:LEU:N	2.22	0.55
39:DR:82:HIS:ND1	39:DR:82:HIS:O	2.40	0.55
1:AA:1167:A:N7	1:AA:1169:A:C6	2.74	0.55
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.41	0.55
1:AA:1212:U:H4'	1:AA:1213:A:C8	2.42	0.55
1:AA:1315:U:C4	1:AA:1316:G:C6	2.95	0.55
2:AB:50:PHE:HA	2:AB:213:TYR:OH	2.06	0.55
3:AC:6:HIS:ND1	14:AN:89:MET:HB3	2.22	0.55
22:BA:78:U:H2'	22:BA:79:C:C6	2.41	0.55
22:BA:990:A:H5"	22:BA:991:C:P	2.46	0.55
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.85	0.55
22:BA:1091:G:O2'	22:BA:1092:C:OP2	2.22	0.55
22:BA:1440:U:O2	22:BA:1440:U:H2'	2.06	0.55
22:BA:1479:G:O2'	22:BA:1480:C:H5'	2.06	0.55
22:BA:1917:U:C4	22:BA:1918:A:C4	2.95	0.55
22:BA:2600:A:H2'	22:BA:2601:C:C6	2.41	0.55
24:BC:41:GLY:HA2	24:BC:54:ILE:O	2.06	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
34:BM:71:LYS:HD2	34:BM:95:LEU:HD21	1.89	0.55
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.42	0.55
48:B0:54:VAL:O	48:B0:55:ILE:C	2.43	0.55
1:CA:134:G:H2'	1:CA:135:C:O4'	2.06	0.55
1:CA:976:G:C2	1:CA:1363:A:C2	2.95	0.55
1:CA:1521:C:N3	1:CA:1522:U:C4	2.75	0.55
2:CB:35:ARG:O	2:CB:38:VAL:N	2.39	0.55
7:CG:68:ASN:O	7:CG:138:ARG:NH2	2.40	0.55
8:CH:77:ARG:NE	8:CH:79:SER:O	2.40	0.55
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.89	0.55
22:DA:223:A:C5	22:DA:422:A:C8	2.94	0.55
22:DA:445:C:H2'	22:DA:446:G:C8	2.42	0.55
22:DA:658:U:N3	22:DA:659:G:N7	2.54	0.55
22:DA:830:G:C6	22:DA:2448:A:C8	2.95	0.55
22:DA:1229:C:C2	22:DA:1230:A:C8	2.94	0.55
22:DA:1355:G:C6	22:DA:1377:G:C2	2.94	0.55
22:DA:2028:U:C4	57:DA:3475:HOH:O	2.53	0.55
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.37	0.55
35:DN:117:ASP:O	35:DN:118:ARG:CB	2.55	0.55
46:DY:20:ASN:HB3	46:DY:50:VAL:HG22	1.89	0.55
46:DY:46:VAL:O	46:DY:46:VAL:HG12	2.06	0.55
1:AA:41:G:H2'	1:AA:42:G:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:350:G:O2'	1:AA:351:G:H5'	2.06	0.55
1:AA:1015:G:H1'	1:AA:1218:C:O2'	2.06	0.55
2:AB:193:PRO:O	2:AB:195:GLY:N	2.30	0.55
17:AQ:19:LYS:O	17:AQ:71:LYS:NZ	2.39	0.55
22:BA:747:U:C5	22:BA:2613:U:C5	2.95	0.55
22:BA:1198:U:H2'	22:BA:1199:U:C6	2.41	0.55
22:BA:1227:G:OP2	38:BQ:16:LYS:NZ	2.28	0.55
22:BA:1427:A:H4'	22:BA:1428:C:O5'	2.06	0.55
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.06	0.55
22:BA:1789:A:OP1	24:BC:221:ARG:HD3	2.07	0.55
22:BA:1866:A:C2	22:BA:1876:A:C4	2.95	0.55
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.42	0.55
24:BC:162:VAL:HG12	24:BC:163:GLN:N	2.22	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
31:BJ:114:LEU:O	31:BJ:114:LEU:HD12	2.06	0.55
34:BM:88:ASN:O	34:BM:90:GLU:HG2	2.06	0.55
49:B1:21:TYR:OH	49:B1:39:PHE:O	2.15	0.55
1:CA:568:G:N2	1:CA:883:C:C2	2.74	0.55
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.42	0.55
2:CB:119:THR:O	2:CB:120:GLN:CB	2.55	0.55
19:CS:63:THR:HG22	19:CS:64:ASP:N	2.21	0.55
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.89	0.55
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.05	0.55
22:DA:167:A:H2'	22:DA:168:G:O4'	2.05	0.55
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.20	0.55
22:DA:1304:A:C6	22:DA:1305:C:C4	2.95	0.55
22:DA:2062:A:C4	54:D6:1:MHW:CG2	2.90	0.55
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.07	0.55
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.41	0.55
22:DA:2889:C:H2'	22:DA:2890:G:C8	2.42	0.55
1:AA:1202:U:O2	1:AA:1202:U:H2'	2.06	0.55
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.06	0.55
5:AE:79:GLY:O	5:AE:121:HIS:N	2.39	0.55
12:AL:110:ARG:NH1	12:AL:112:GLN:O	2.34	0.55
22:BA:1193:G:O2'	22:BA:1194:A:H5'	2.07	0.55
22:BA:1915:U:H2'	22:BA:1916:A:H5'	1.88	0.55
22:BA:1926:U:H2'	22:BA:1926:U:O2	2.07	0.55
22:BA:1984:G:C2	22:BA:1985:C:C6	2.94	0.55
22:BA:2498:C:O2'	22:BA:2499:C:H5'	2.07	0.55
22:BA:2561:U:O3'	32:BK:40:LYS:HE2	2.06	0.55
22:BA:2568:U:C2	22:BA:2569:G:C8	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.06	0.55
28:BG:11:VAL:CG2	28:BG:11:VAL:O	2.54	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
1:CA:376:G:C5'	16:CP:5:ARG:HB2	2.36	0.55
1:CA:1151:A:C2	1:CA:1152:A:C4	2.94	0.55
2:CB:203:ASN:HD22	2:CB:206:ALA:HB2	1.71	0.55
4:CD:91:LEU:O	4:CD:92:ALA:C	2.45	0.55
12:CL:63:VAL:HG21	12:CL:95:TYR:CD2	2.42	0.55
15:CO:56:LEU:O	15:CO:59:MET:HB2	2.06	0.55
22:DA:572:A:H5"	22:DA:573:U:OP2	2.07	0.55
22:DA:607:U:O4	22:DA:619:G:H2'	2.07	0.55
22:DA:1173:U:O2'	22:DA:1176:U:O2	2.13	0.55
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.22	0.55
22:DA:1544:A:N6	22:DA:1545:A:N1	2.54	0.55
22:DA:1627:G:C2	22:DA:1628:G:N7	2.75	0.55
22:DA:1730:C:OP1	22:DA:1730:C:H4'	2.07	0.55
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.21	0.55
23:DB:27:C:OP1	36:DO:34:HIS:NE2	2.39	0.55
26:DE:126:VAL:HG22	26:DE:133:LEU:HD22	1.88	0.55
30:DI:39:CYS:HA	30:DI:42:PHE:HB3	1.87	0.55
38:DQ:79:PHE:CZ	38:DQ:83:LEU:HD11	2.41	0.55
1:AA:499:A:H4'	1:AA:500:G:OP1	2.07	0.55
1:AA:640:A:O3'	8:AH:108:LYS:NZ	2.40	0.55
1:AA:929:G:N2	1:AA:1389:C:C2	2.74	0.55
1:AA:1406:U:C6	1:AA:1407:C:C5	2.95	0.55
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.22	0.55
12:AL:24:LEU:O	12:AL:25:GLU:C	2.44	0.55
20:AT:36:TYR:HA	20:AT:39:ILE:HD12	1.88	0.55
22:BA:1356:G:C2	22:BA:1357:C:C2	2.95	0.55
22:BA:1392:A:C6	22:BA:1393:A:C6	2.95	0.55
22:BA:2017:U:H4'	48:B0:5:GLN:O	2.07	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
1:CA:328:C:H2'	1:CA:328:C:O2	2.06	0.55
1:CA:563:A:C8	1:CA:567:G:H1'	2.42	0.55
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.71	0.55
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.88	0.55
22:DA:1082:U:P	30:DI:124:ALA:HB1	2.47	0.55
22:DA:2440:C:N3	22:DA:2441:U:H1'	2.22	0.55
33:DL:77:ILE:HD11	33:DL:101:ILE:HG21	1.88	0.55
39:DR:46:GLU:C	39:DR:46:GLU:CD	2.66	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:81:LYS:HD3	39:DR:81:LYS:N	2.22	0.55
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.07	0.55
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.89	0.55
46:DY:45:GLN:O	46:DY:47:ARG:N	2.40	0.55
1:AA:147:G:H2'	1:AA:148:G:C8	2.42	0.55
1:AA:683:G:N2	11:AK:39:GLY:O	2.40	0.55
1:AA:1014:A:N7	1:AA:1015:G:C6	2.75	0.55
1:AA:1525:G:OP1	11:AK:122:ARG:NH2	2.40	0.55
5:AE:115:LEU:HG	5:AE:123:VAL:HG21	1.89	0.55
8:AH:80:ARG:HB2	8:AH:81:PRO:CD	2.37	0.55
13:AM:96:PRO:N	13:AM:109:ARG:HG2	2.22	0.55
21:AU:34:ARG:NH2	21:AU:35:ARG:HD2	2.22	0.55
22:BA:226:A:C6	22:BA:227:A:C6	2.95	0.55
22:BA:368:A:C6	22:BA:369:U:C4	2.94	0.55
22:BA:404:A:H1'	22:BA:405:U:OP2	2.07	0.55
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.54	0.55
22:BA:581:C:H2'	22:BA:582:A:H8	1.71	0.55
22:BA:1268:A:C2	22:BA:2013:A:C4	2.95	0.55
22:BA:2187:U:C4	22:BA:2188:U:O4	2.60	0.55
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.42	0.55
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.42	0.55
30:BI:79:LEU:HD22	30:BI:109:ILE:CG2	2.37	0.55
31:BJ:84:ILE:HG23	31:BJ:84:ILE:O	2.07	0.55
39:BR:7:SER:HB3	39:BR:22:LEU:HD13	1.87	0.55
47:BZ:13:ALA:O	47:BZ:21:LYS:HE3	2.06	0.55
1:CA:853:C:C2	1:CA:854:U:C6	2.95	0.55
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.71	0.55
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.42	0.55
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.07	0.55
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.24	0.55
8:CH:7:ILE:O	8:CH:10:MET:N	2.40	0.55
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.42	0.55
22:DA:1655:A:C2	22:DA:1656:C:H1'	2.42	0.55
23:DB:62:C:H2'	23:DB:63:C:C6	2.41	0.55
24:DC:154:LEU:HD13	24:DC:176:LEU:HD21	1.88	0.55
1:AA:196:A:N3	1:AA:222:C:H1'	2.21	0.55
1:AA:203:G:N2	1:AA:215:C:C2	2.75	0.55
1:AA:1085:U:H5'	1:AA:1094:G:N2	2.21	0.55
1:AA:1304:G:N2	1:AA:1334:G:C6	2.75	0.55
2:AB:67:ILE:O	2:AB:68:LEU:HB2	2.06	0.55
4:AD:26:ARG:NH1	4:AD:31:LYS:HB3	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:103:TRP:CH2	7:AG:141:VAL:HG21	2.42	0.55
12:AL:24:LEU:HG	12:AL:25:GLU:H	1.70	0.55
14:AN:4:GLN:HA	14:AN:7:LYS:HE2	1.89	0.55
22:BA:78:U:OP2	46:BY:2:LYS:HD3	2.07	0.55
22:BA:483:A:C8	22:BA:484:C:C5	2.95	0.55
22:BA:668:A:C2'	22:BA:669:G:OP1	2.54	0.55
22:BA:1098:A:C6	22:BA:1099:G:C6	2.95	0.55
22:BA:2539:C:O2'	22:BA:2540:C:H5'	2.07	0.55
24:BC:86:ASN:N	24:BC:86:ASN:OD1	2.40	0.55
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.55
40:BS:83:LYS:O	40:BS:84:ARG:HD3	2.07	0.55
1:CA:1504:G:H3'	57:CA:1883:HOH:O	2.06	0.55
5:CE:105:ILE:H	5:CE:122:ASN:CA	2.20	0.55
7:CG:60:GLU:HA	7:CG:63:GLU:HB3	1.89	0.55
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.37	0.55
14:CN:41:ARG:NH1	14:CN:42:TRP:O	2.39	0.55
17:CQ:14:SER:O	17:CQ:17:MET:HE1	2.07	0.55
22:DA:60:G:C5	22:DA:62:U:C4	2.94	0.55
22:DA:118:A:C8	22:DA:119:A:N7	2.75	0.55
22:DA:119:A:H4'	22:DA:120:U:O5'	2.07	0.55
22:DA:579:G:N3	22:DA:1262:A:C2	2.75	0.55
28:DG:27:LYS:HG3	28:DG:27:LYS:O	2.05	0.55
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.89	0.55
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.07	0.55
1:AA:270:A:C6	1:AA:271:C:N3	2.74	0.54
1:AA:370:C:C2	1:AA:371:A:C8	2.95	0.54
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.06	0.54
1:AA:568:G:C2	1:AA:569:C:C5	2.94	0.54
1:AA:937:A:C2'	1:AA:938:A:H5'	2.37	0.54
22:BA:335:C:H5"	42:BU:82:ARG:HD3	1.89	0.54
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.22	0.54
22:BA:1421:G:C2	22:BA:1422:G:C8	2.95	0.54
22:BA:1927:A:H2'	22:BA:1928:A:C8	2.43	0.54
22:BA:2211:A:HO2'	22:BA:2212:A:P	2.28	0.54
22:BA:2305:U:N3	27:BF:151:GLY:HA3	2.22	0.54
22:BA:2590:A:C2	22:BA:2605:U:C2	2.95	0.54
37:BP:23:GLY:O	37:BP:110:ILE:HD11	2.07	0.54
51:B3:30:ARG:O	51:B3:31:HIS:HB3	2.05	0.54
4:CD:33:LYS:O	4:CD:34:ILE:C	2.45	0.54
15:CO:87:LEU:O	15:CO:88:ARG:HB3	2.07	0.54
16:CP:2:VAL:HG23	16:CP:65:ALA:HA	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:593:U:H2'	22:DA:594:U:C6	2.42	0.54
22:DA:996:A:C2	22:DA:997:G:C8	2.95	0.54
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.07	0.54
22:DA:2114:A:C5	22:DA:2167:U:H4'	2.42	0.54
47:DZ:5:ILE:HD11	47:DZ:57:VAL:HG21	1.88	0.54
1:AA:842:U:H3'	1:AA:843:U:C5'	2.36	0.54
1:AA:1152:A:C4	1:AA:1153:G:C8	2.95	0.54
1:AA:1533:C:H4'	1:AA:1534:A:O5'	2.07	0.54
5:AE:13:GLU:CB	5:AE:39:VAL:HG12	2.37	0.54
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.07	0.54
9:AI:90:TYR:HB3	9:AI:94:LEU:HD21	1.89	0.54
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.28	0.54
22:BA:65:U:H2'	22:BA:66:C:C6	2.42	0.54
22:BA:489:G:O4'	22:BA:1284:A:C8	2.59	0.54
22:BA:622:G:C5'	57:BA:3292:HOH:O	2.53	0.54
22:BA:947:A:HO2'	22:BA:984:A:H2	1.53	0.54
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.06	0.54
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.22	0.54
22:BA:1936:A:H3'	22:BA:1937:A:H5'	1.90	0.54
22:BA:2000:C:C2'	22:BA:2001:C:H5'	2.37	0.54
24:BC:14:ARG:HD3	24:BC:15:HIS:CE1	2.41	0.54
25:BD:104:VAL:O	25:BD:105:LYS:HB2	2.07	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.36	0.54
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.70	0.54
30:BI:72:LYS:N	30:BI:72:LYS:HD3	2.23	0.54
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.40	0.54
39:BR:41:ILE:O	39:BR:46:GLU:HB2	2.06	0.54
1:CA:213:G:C8	1:CA:214:C:C6	2.95	0.54
1:CA:676:A:C2	1:CA:677:U:C4	2.96	0.54
1:CA:1162:C:C2	1:CA:1175:G:C2	2.95	0.54
1:CA:1306:A:H1'	1:CA:1332:A:C5	2.42	0.54
2:CB:102:THR:O	2:CB:103:ASN:HB3	2.06	0.54
3:CC:11:ARG:HH11	3:CC:11:ARG:CG	2.21	0.54
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.37	0.54
22:DA:167:A:C2	22:DA:168:G:H1'	2.42	0.54
22:DA:584:C:N4	22:DA:585:G:C6	2.76	0.54
22:DA:1289:C:O2'	22:DA:1330:C:H4'	2.06	0.54
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.22	0.54
22:DA:1665:A:N6	57:DA:3419:HOH:O	2.27	0.54
22:DA:1896:G:C4	22:DA:1897:G:C8	2.96	0.54
22:DA:2330:G:C2	22:DA:2386:A:C2	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2364:C:H4'	44:DW:56:ASP:OD1	2.07	0.54
23:DB:84:G:N2	23:DB:93:C:C2	2.75	0.54
31:DJ:31:GLU:HG3	31:DJ:142:ILE:HD11	1.89	0.54
33:DL:85:VAL:O	33:DL:86:GLU:HB3	2.07	0.54
1:AA:451:A:H5"	16:AP:70:ARG:NH2	2.21	0.54
1:AA:762:U:H2'	1:AA:763:G:H8	1.72	0.54
5:AE:77:ASN:O	5:AE:78:ASN:CB	2.54	0.54
12:AL:66:TYR:CD2	12:AL:87:VAL:HG21	2.42	0.54
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.43	0.54
19:AS:44:MET:HA	19:AS:47:LEU:HD12	1.89	0.54
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.90	0.54
22:BA:1001:A:H2'	22:BA:1002:G:O4'	2.07	0.54
22:BA:1056:G:H5"	22:BA:1057:A:H5'	1.89	0.54
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.89	0.54
22:BA:1402:U:C2'	22:BA:1403:A:O5'	2.55	0.54
22:BA:1857:G:C4	22:BA:1884:G:C2	2.95	0.54
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.42	0.54
22:BA:2233:U:H2'	22:BA:2234:G:H8	1.71	0.54
22:BA:2550:G:OP2	57:BA:3722:HOH:O	2.18	0.54
22:BA:2748:A:H1'	28:BG:67:THR:HG22	1.89	0.54
22:BA:2800:A:H3'	22:BA:2801:G:C5'	2.34	0.54
27:BF:34:ILE:HD11	27:BF:96:MET:HG3	1.88	0.54
27:BF:112:ARG:O	27:BF:113:ASP:HB2	2.07	0.54
30:BI:47:ASP:HA	30:BI:51:LYS:HD2	1.90	0.54
33:BL:93:ASN:O	33:BL:94:THR:HB	2.07	0.54
1:CA:37:U:O2'	1:CA:500:G:H4'	2.07	0.54
1:CA:108:G:C5'	1:CA:108:G:N3	2.70	0.54
1:CA:518:C:H4'	1:CA:519:C:O5'	2.08	0.54
1:CA:666:G:C6	1:CA:741:G:C6	2.96	0.54
1:CA:1065:U:C5	1:CA:1190:G:C4	2.95	0.54
1:CA:1125:U:C6	10:CJ:40:ILE:HD13	2.42	0.54
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.72	0.54
2:CB:97:LEU:O	2:CB:98:GLY:C	2.44	0.54
4:CD:85:ASN:C	4:CD:85:ASN:OD1	2.45	0.54
4:CD:145:ILE:HD12	4:CD:145:ILE:N	2.23	0.54
10:CJ:52:LEU:HD22	10:CJ:59:LYS:HA	1.89	0.54
13:CM:27:LYS:O	13:CM:27:LYS:HD3	2.07	0.54
22:DA:64:A:H2'	22:DA:65:U:C6	2.43	0.54
22:DA:69:C:O2'	22:DA:73:A:O2'	2.18	0.54
22:DA:790:U:OP2	57:DA:3749:HOH:O	2.18	0.54
22:DA:1713:A:C5	22:DA:1716:U:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2199:A:C5	22:DA:2225:A:C6	2.96	0.54
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.54
32:DK:76:VAL:CG1	37:DP:73:VAL:HG22	2.37	0.54
1:AA:188:C:O2	1:AA:188:C:C2'	2.56	0.54
1:AA:543:U:O2'	1:AA:544:G:H5'	2.07	0.54
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.06	0.54
1:AA:1319:A:C5	1:AA:1323:G:C4	2.95	0.54
1:AA:1539:C:H5"	21:AU:18:ARG:CB	2.37	0.54
5:AE:104:GLY:O	5:AE:105:ILE:HG22	2.07	0.54
6:AF:81:ASN:HB3	6:AF:84:VAL:HG12	1.90	0.54
9:AI:40:GLY:O	9:AI:41:ARG:CB	2.54	0.54
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.40	0.54
11:AK:89:PRO:HD3	21:AU:29:LEU:HD11	1.90	0.54
12:AL:114:ARG:HB3	12:AL:119:VAL:HB	1.89	0.54
14:AN:72:GLY:O	14:AN:80:SER:HA	2.08	0.54
22:BA:39:G:H2'	22:BA:40:U:C6	2.41	0.54
22:BA:223:A:N1	22:BA:407:G:O2'	2.31	0.54
22:BA:559:G:H2'	22:BA:560:C:O4'	2.07	0.54
22:BA:1167:C:H2'	22:BA:1168:G:H5"	1.90	0.54
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.07	0.54
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.07	0.54
23:BB:5:U:O2'	23:BB:6:G:H5'	2.07	0.54
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.43	0.54
28:BG:20:ASN:O	28:BG:20:ASN:ND2	2.41	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
35:BN:12:ARG:NH1	35:BN:20:MET:HE3	2.21	0.54
37:BP:52:ASN:C	37:BP:53:ARG:HG2	2.28	0.54
1:CA:1005:A:O3'	1:CA:1037:C:O2'	2.25	0.54
2:CB:166:ALA:HB3	2:CB:191:SER:HB3	1.89	0.54
4:CD:124:MET:CE	4:CD:146:ARG:HD2	2.37	0.54
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.07	0.54
22:DA:194:G:C2	22:DA:202:U:H1'	2.43	0.54
22:DA:452:G:C8	26:DE:53:THR:HG21	2.41	0.54
22:DA:523:C:H2'	22:DA:524:G:C8	2.43	0.54
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.15	0.54
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.07	0.54
22:DA:2599:G:N7	24:DC:235:GLY:O	2.41	0.54
24:DC:210:ALA:HA	24:DC:213:TRP:NE1	2.23	0.54
42:DU:59:VAL:HG12	42:DU:61:LYS:HD3	1.88	0.54
50:D2:35:ARG:O	50:D2:38:GLY:N	2.40	0.54
1:AA:113:G:H2'	1:AA:114:U:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1059:C:N3	1:AA:1060:U:C5	2.76	0.54
1:AA:1484:C:O2'	22:BA:1961:C:H5'	2.06	0.54
2:AB:104:TRP:CH2	2:AB:154:MET:HG2	2.43	0.54
22:BA:288:U:C2	22:BA:289:G:C8	2.95	0.54
22:BA:295:G:C2	22:BA:344:A:C4	2.96	0.54
22:BA:447:A:N3	22:BA:473:G:C8	2.75	0.54
22:BA:2462:C:H2'	22:BA:2463:C:H6	1.72	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
32:BK:20:MET:O	32:BK:41:ILE:HB	2.06	0.54
39:BR:66:HIS:CE1	39:BR:94:THR:HB	2.42	0.54
40:BS:56:ALA:O	40:BS:57:ASN:C	2.45	0.54
48:B0:33:THR:HG22	48:B0:33:THR:O	2.07	0.54
53:B5:59:VAL:HG12	53:B5:63:VAL:HG21	1.90	0.54
1:CA:543:U:O2'	1:CA:544:G:H5'	2.08	0.54
1:CA:679:C:O2	1:CA:712:A:C2	2.60	0.54
1:CA:886:G:H2'	1:CA:887:G:O4'	2.07	0.54
1:CA:955:U:H2'	1:CA:956:U:O4'	2.08	0.54
5:CE:50:TYR:O	5:CE:63:ALA:HB2	2.08	0.54
5:CE:81:LEU:HD13	5:CE:120:VAL:HG11	1.90	0.54
22:DA:307:G:N2	22:DA:310:A:C8	2.76	0.54
22:DA:487:C:C2	22:DA:494:G:N2	2.76	0.54
22:DA:1223:G:C6	22:DA:1227:G:C6	2.96	0.54
22:DA:1386:C:H2'	22:DA:1387:A:C8	2.42	0.54
27:DF:9:LYS:O	27:DF:13:VAL:HB	2.07	0.54
33:DL:93:ASN:HB2	33:DL:96:LYS:HB2	1.90	0.54
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.40	0.54
38:DQ:76:TYR:CE1	38:DQ:80:ILE:HD11	2.42	0.54
1:AA:66:A:C4'	1:AA:173:U:C5	2.90	0.54
1:AA:300:A:H2'	1:AA:301:G:O4'	2.07	0.54
1:AA:763:G:C2	1:AA:764:C:C2	2.96	0.54
1:AA:815:A:C2	1:AA:1529:G:C4	2.95	0.54
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.41	0.54
1:AA:1216:A:OP1	14:AN:3:LYS:HE2	2.07	0.54
1:AA:1343:G:H4'	9:AI:124:ARG:HB3	1.90	0.54
1:AA:1454:G:C2	1:AA:1455:G:C8	2.95	0.54
2:AB:106:THR:O	2:AB:107:VAL:HB	2.07	0.54
3:AC:42:TYR:OH	3:AC:90:VAL:HG21	2.07	0.54
9:AI:90:TYR:O	9:AI:91:ASP:CG	2.45	0.54
15:AO:45:GLU:O	15:AO:47:LYS:N	2.41	0.54
18:AR:72:ASP:OD2	21:AU:4:ILE:HG13	2.07	0.54
22:BA:181:A:C2	22:BA:182:A:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1019:U:H2'	22:BA:1020:A:C8	2.43	0.54
22:BA:1731:G:C6	22:BA:1733:G:C5	2.95	0.54
22:BA:2594:C:C2	22:BA:2595:G:C8	2.96	0.54
22:BA:2832:U:C2	22:BA:2834:G:C2	2.95	0.54
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54
31:BJ:49:ASP:OD1	31:BJ:121:LYS:HE3	2.08	0.54
1:CA:55:A:N6	1:CA:56:U:C2	2.75	0.54
1:CA:411:A:C6	1:CA:429:U:C5	2.95	0.54
1:CA:553:A:O2'	12:CL:26:ALA:O	2.24	0.54
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.89	0.54
12:CL:58:THR:HG22	12:CL:59:ASN:N	2.23	0.54
22:DA:1109:C:H5"	22:DA:1110:G:OP2	2.07	0.54
22:DA:1486:U:C2	22:DA:1504:A:C2	2.95	0.54
22:DA:2297:A:N1	22:DA:2321:U:H5	2.04	0.54
22:DA:2750:A:O2'	22:DA:2752:C:N4	2.40	0.54
22:DA:2780:G:N1	31:DJ:102:GLU:OE2	2.40	0.54
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.08	0.54
22:DA:2888:C:H2'	22:DA:2889:C:C6	2.43	0.54
1:AA:380:G:C2	1:AA:384:G:C6	2.95	0.54
1:AA:567:G:C2'	1:AA:568:G:O5'	2.55	0.54
1:AA:1079:G:C2	1:AA:1080:A:C6	2.96	0.54
7:AG:99:LEU:O	7:AG:100:ALA:C	2.46	0.54
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.88	0.54
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.07	0.54
22:BA:1303:G:O2'	22:BA:1304:A:H5'	2.07	0.54
22:BA:1693:U:O2'	24:BC:14:ARG:NH2	2.40	0.54
22:BA:2112:G:H2'	22:BA:2112:G:N3	2.22	0.54
40:BS:18:ARG:C	40:BS:20:VAL:N	2.59	0.54
41:BT:7:LEU:HD22	41:BT:46:ALA:HB2	1.90	0.54
43:BV:15:GLY:O	43:BV:19:ARG:HG3	2.08	0.54
48:B0:37:LYS:O	48:B0:38:HIS:HB3	2.05	0.54
1:CA:652:U:O2'	1:CA:653:U:OP2	2.22	0.54
1:CA:679:C:C2	1:CA:712:A:C2	2.96	0.54
1:CA:1055:A:C6	1:CA:1206:G:C6	2.95	0.54
1:CA:1460:C:N4	1:CA:1461:G:C6	2.76	0.54
4:CD:174:ASP:O	4:CD:175:ALA:HB3	2.08	0.54
7:CG:42:ILE:HG21	7:CG:116:MET:HG3	1.90	0.54
9:CI:52:LEU:HD13	9:CI:57:MET:HG2	1.89	0.54
22:DA:37:C:H2'	22:DA:38:A:O4'	2.08	0.54
22:DA:38:A:C2	22:DA:442:G:C6	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:362:A:C4	22:DA:363:G:C8	2.96	0.54
22:DA:732:C:H2'	22:DA:733:G:O4'	2.07	0.54
22:DA:1027:A:C6	22:DA:1126:A:N3	2.76	0.54
22:DA:1120:G:C6	22:DA:1121:C:C4	2.96	0.54
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.42	0.54
22:DA:2607:G:H2'	22:DA:2608:G:O4'	2.06	0.54
22:DA:2820:A:C8	25:DD:196:ALA:HB3	2.42	0.54
22:DA:2887:A:H5'	22:DA:2888:C:OP2	2.08	0.54
25:DD:56:LYS:O	25:DD:58:ASN:N	2.41	0.54
1:AA:397:A:C5	1:AA:548:G:C8	2.96	0.54
1:AA:522:C:H2'	1:AA:523:A:O4'	2.08	0.54
1:AA:789:U:O2	1:AA:791:G:C8	2.61	0.54
1:AA:862:C:C2'	1:AA:863:U:H5'	2.38	0.54
6:AF:38:ARG:HD2	6:AF:40:GLU:OE2	2.08	0.54
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.45	0.54
22:BA:582:A:H2'	22:BA:583:G:C8	2.43	0.54
22:BA:1085:A:C6	22:BA:1086:A:N6	2.75	0.54
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.72	0.54
22:BA:2231:U:O2'	22:BA:2232:C:H5'	2.07	0.54
24:BC:85:PRO:HG2	24:BC:86:ASN:OD1	2.08	0.54
28:BG:74:SER:HA	28:BG:77:ILE:HG13	1.89	0.54
31:BJ:98:GLU:OE2	31:BJ:126:ALA:HB2	2.07	0.54
32:BK:26:GLY:HA3	32:BK:30:ARG:NH1	2.23	0.54
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.90	0.54
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.08	0.54
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.08	0.54
1:CA:976:G:N2	1:CA:1363:A:C4	2.75	0.54
1:CA:1124:G:C2	1:CA:1127:G:N2	2.76	0.54
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.88	0.54
3:CC:130:PHE:CZ	3:CC:131:ARG:HD3	2.42	0.54
5:CE:60:ILE:HD12	5:CE:61:GLN:N	2.22	0.54
9:CI:32:GLN:OE1	9:CI:64:TYR:OH	2.24	0.54
14:CN:33:ASP:O	14:CN:35:ASN:N	2.40	0.54
15:CO:55:GLY:O	15:CO:59:MET:HG3	2.08	0.54
22:DA:19:A:C2	22:DA:522:A:C2	2.95	0.54
22:DA:749:A:C5	22:DA:750:A:C8	2.96	0.54
22:DA:770:G:O4'	22:DA:1379:U:C5	2.60	0.54
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.42	0.54
22:DA:2058:A:O2'	54:D6:5:MHU:H23	2.08	0.54
22:DA:2093:G:C6	22:DA:2225:A:C8	2.96	0.54
22:DA:2125:G:H5'	22:DA:2126:A:OP2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:48:U:H4'	36:DO:100:HIS:NE2	2.23	0.54
24:DC:160:THR:H	24:DC:195:VAL:HG13	1.73	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.43	0.54
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.76	0.54
1:AA:16:A:O2'	1:AA:17:U:H5'	2.08	0.54
1:AA:64:G:C8	1:AA:99:C:C4	2.96	0.54
1:AA:953:G:C2	1:AA:1229:A:C2	2.96	0.54
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.36	0.54
2:AB:46:THR:HG23	2:AB:201:PRO:HB2	1.89	0.54
2:AB:136:MET:N	2:AB:136:MET:SD	2.81	0.54
4:AD:190:ASP:O	4:AD:191:LEU:HG	2.08	0.54
8:AH:76:GLN:O	8:AH:127:CYS:HB2	2.08	0.54
10:AJ:91:ASP:C	10:AJ:92:LEU:HG	2.27	0.54
22:BA:697:G:H2'	22:BA:698:C:C6	2.42	0.54
22:BA:1257:C:H4'	26:BE:78:TRP:CD1	2.43	0.54
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.25	0.54
22:BA:2094:A:C2	22:BA:2196:C:C2	2.95	0.54
22:BA:2131:U:H5'	22:BA:2132:U:H5"	1.90	0.54
22:BA:2547:A:H5"	32:BK:29:HIS:NE2	2.23	0.54
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.43	0.54
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.08	0.54
41:BT:44:LYS:O	41:BT:48:GLN:HG2	2.08	0.54
1:CA:632:U:O2	1:CA:632:U:C2'	2.55	0.54
10:CJ:35:GLN:HG2	10:CJ:77:VAL:HB	1.90	0.54
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.06	0.54
21:CU:10:GLU:CB	21:CU:11:PRO:HD3	2.36	0.54
22:DA:28:A:H2'	22:DA:29:U:O4'	2.07	0.54
22:DA:247:G:H4'	22:DA:386:G:C5	2.43	0.54
22:DA:1477:A:N6	22:DA:1514:G:O2'	2.40	0.54
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.07	0.54
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.22	0.54
25:DD:33:ARG:NH1	25:DD:53:GLY:O	2.41	0.54
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.47	0.54
28:DG:159:GLY:O	28:DG:163:ARG:NH1	2.40	0.54
33:DL:46:VAL:HB	33:DL:50:PHE:CD1	2.43	0.54
39:DR:47:VAL:O	39:DR:47:VAL:HG12	2.07	0.54
1:AA:212:G:C2	1:AA:213:G:C5	2.96	0.54
1:AA:520:A:C2	1:AA:536:C:H1'	2.43	0.54
1:AA:663:A:H2'	1:AA:664:G:O4'	2.08	0.54
1:AA:708:C:O2'	1:AA:709:U:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:126:PHE:N	2:AB:126:PHE:CD2	2.75	0.54
11:AK:91:PRO:C	11:AK:93:ARG:H	2.11	0.54
16:AP:10:GLY:O	16:AP:11:ALA:CB	2.56	0.54
17:AQ:46:VAL:HG11	17:AQ:61:ILE:HG13	1.89	0.54
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.38	0.54
22:BA:971:G:H2'	22:BA:972:A:C5'	2.38	0.54
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.08	0.54
22:BA:2728:U:O2'	22:BA:2729:G:OP2	2.20	0.54
31:BJ:114:LEU:O	31:BJ:117:ALA:HB3	2.08	0.54
49:B1:34:LEU:N	49:B1:52:ALA:HB3	2.22	0.54
50:B2:44:VAL:O	50:B2:44:VAL:HG13	2.08	0.54
1:CA:748:G:H2'	1:CA:749:A:C8	2.43	0.54
1:CA:1162:C:O2	1:CA:1175:G:C2	2.60	0.54
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.08	0.54
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.56	0.54
4:CD:124:MET:HE2	4:CD:146:ARG:HD2	1.89	0.54
4:CD:168:PRO:HB3	4:CD:170:TRP:CZ3	2.44	0.54
20:CT:15:GLU:OE2	20:CT:18:ARG:NH2	2.41	0.54
22:DA:648:G:H1'	22:DA:2351:G:OP1	2.08	0.54
22:DA:847:U:O2	22:DA:847:U:H2'	2.06	0.54
22:DA:1354:A:C8	22:DA:1355:G:C8	2.96	0.54
22:DA:1534:U:O2'	22:DA:1537:G:O6	2.26	0.54
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.23	0.54
22:DA:2147:A:C8	22:DA:2148:G:C8	2.96	0.54
22:DA:2307:G:N2	22:DA:2312:U:C2	2.76	0.54
22:DA:2347:C:H2'	22:DA:2348:U:C5	2.43	0.54
22:DA:2369:A:H2'	22:DA:2370:G:O4'	2.08	0.54
22:DA:2899:A:H2'	22:DA:2900:A:C8	2.42	0.54
47:DZ:10:THR:HG22	47:DZ:54:MET:HA	1.90	0.54
1:AA:562:U:H1'	12:AL:12:ARG:HB3	1.90	0.53
1:AA:612:C:H2'	1:AA:613:C:H6	1.72	0.53
1:AA:1160:G:O2'	1:AA:1161:C:P	2.66	0.53
1:AA:1332:A:C8	1:AA:1333:A:C8	2.96	0.53
1:AA:1442:G:C6	1:AA:1443:C:C4	2.96	0.53
1:AA:1483:A:H2'	1:AA:1484:C:O4'	2.08	0.53
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.89	0.53
11:AK:126:LYS:C	21:AU:34:ARG:NH2	2.61	0.53
16:AP:42:ILE:O	16:AP:42:ILE:HG22	2.09	0.53
22:BA:1319:C:H2'	22:BA:1320:C:O5'	2.08	0.53
22:BA:2210:U:C2	22:BA:2212:A:N7	2.76	0.53
24:BC:29:PRO:HG2	24:BC:34:LEU:HD11	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:2:ALA:O	27:BF:4:LEU:N	2.40	0.53
1:CA:68:G:C5	1:CA:69:G:H1'	2.43	0.53
1:CA:866:C:C5	1:CA:867:G:H1'	2.42	0.53
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.37	0.53
22:DA:1341:G:C2	41:DT:84:TYR:CD2	2.96	0.53
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.20	0.53
25:DD:177:VAL:CG2	25:DD:187:LEU:HD11	2.38	0.53
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.08	0.53
52:D4:12:ARG:HB2	52:D4:12:ARG:CZ	2.37	0.53
1:AA:144:G:C4	1:AA:179:A:C2	2.96	0.53
1:AA:737:C:C2	1:AA:738:C:C6	2.96	0.53
9:AI:11:ARG:HB2	9:AI:15:SER:O	2.07	0.53
10:AJ:5:ARG:HG3	10:AJ:6:ILE:HG13	1.90	0.53
18:AR:34:THR:OG1	18:AR:35:GLU:N	2.41	0.53
22:BA:39:G:H2'	22:BA:40:U:H6	1.73	0.53
22:BA:498:G:C2	22:BA:499:U:C6	2.97	0.53
22:BA:686:U:H2'	22:BA:788:A:N1	2.22	0.53
22:BA:945:A:H4'	22:BA:946:C:OP2	2.07	0.53
22:BA:1631:G:N1	22:BA:1634:A:OP2	2.40	0.53
22:BA:2486:C:C2'	22:BA:2487:G:O5'	2.56	0.53
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.08	0.53
27:BF:119:ALA:HB2	27:BF:177:PHE:CD2	2.44	0.53
31:BJ:23:LYS:HE3	31:BJ:142:ILE:OXT	2.08	0.53
36:BO:64:TYR:HB3	36:BO:67:ASN:ND2	2.23	0.53
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.89	0.53
44:BW:51:VAL:HG21	44:BW:80:ILE:O	2.07	0.53
22:DA:119:A:H5'	57:DA:3220:HOH:O	2.08	0.53
22:DA:168:G:C2	22:DA:169:G:C8	2.96	0.53
22:DA:696:G:N1	22:DA:767:U:C2	2.76	0.53
22:DA:752:A:O2'	22:DA:753:A:P	2.65	0.53
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.44	0.53
22:DA:1856:U:O4	22:DA:1857:G:C6	2.61	0.53
22:DA:2614:A:OP2	57:DA:3478:HOH:O	2.19	0.53
22:DA:2773:C:OP1	25:DD:171:THR:OG1	2.24	0.53
23:DB:90:C:H2'	23:DB:91:C:O4'	2.09	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
42:DU:47:LYS:HG3	42:DU:48:PRO:HD2	1.91	0.53
1:AA:67:C:O2'	1:AA:171:A:N3	2.38	0.53
1:AA:131:A:H2'	1:AA:132:C:C6	2.43	0.53
1:AA:410:G:H5"	1:AA:411:A:OP1	2.08	0.53
1:AA:652:U:O2'	1:AA:653:U:OP2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1077:G:N1	1:AA:1081:A:C6	2.76	0.53
1:AA:1200:C:OP1	1:AA:1201:A:O2'	2.25	0.53
10:AJ:10:LEU:HG	10:AJ:98:VAL:HG12	1.91	0.53
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.23	0.53
22:BA:1346:G:H2'	22:BA:1347:A:H8	1.72	0.53
22:BA:1406:U:C2'	22:BA:1407:G:O5'	2.56	0.53
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.08	0.53
22:BA:1490:A:O2'	24:BC:98:ASP:OD2	2.25	0.53
22:BA:1715:G:O2'	22:BA:1743:G:O6	2.23	0.53
27:BF:36:LEU:HD11	27:BF:99:PHE:CZ	2.44	0.53
37:BP:96:LYS:HB3	37:BP:98:TYR:CE1	2.43	0.53
1:CA:81:A:H2'	1:CA:82:G:C8	2.43	0.53
1:CA:273:U:H1'	17:CQ:18:GLU:OE2	2.09	0.53
1:CA:688:G:C5	1:CA:700:G:C2	2.96	0.53
1:CA:1208:C:N4	1:CA:1209:C:N4	2.57	0.53
1:CA:1409:C:H4'	22:DA:1915:U:O4	2.09	0.53
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.23	0.53
14:CN:10:GLU:O	14:CN:12:LYS:N	2.41	0.53
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.09	0.53
20:CT:25:ARG:O	20:CT:29:ARG:HG3	2.08	0.53
22:DA:36:G:C6	22:DA:37:C:C4	2.97	0.53
22:DA:636:G:C6	33:DL:111:ILE:HD11	2.44	0.53
22:DA:1651:G:C6	22:DA:1652:A:C5	2.96	0.53
22:DA:1856:U:C4	22:DA:1857:G:C6	2.96	0.53
22:DA:2117:A:N1	22:DA:2171:A:N1	2.57	0.53
22:DA:2722:G:H2'	22:DA:2723:C:C6	2.43	0.53
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.41	0.53
36:DO:34:HIS:HB3	36:DO:36:TYR:CE2	2.44	0.53
50:D2:18:PHE:O	50:D2:19:ARG:C	2.47	0.53
1:AA:91:U:C2	1:AA:92:U:H1'	2.43	0.53
1:AA:927:G:N1	1:AA:1391:U:C2	2.77	0.53
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.42	0.53
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.44	0.53
1:AA:1237:C:C4	1:AA:1336:C:N3	2.76	0.53
2:AB:151:ILE:O	2:AB:152:LYS:C	2.46	0.53
3:AC:22:TRP:CD1	3:AC:59:ARG:HG2	2.43	0.53
5:AE:141:ILE:HG22	5:AE:142:ASP:N	2.23	0.53
5:AE:149:SER:O	5:AE:153:VAL:CG1	2.57	0.53
22:BA:1182:G:H2'	22:BA:1183:U:O4'	2.08	0.53
22:BA:1361:G:C6	22:BA:1362:C:N4	2.77	0.53
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.73	0.53
26:BE:111:GLU:O	26:BE:115:GLN:N	2.39	0.53
32:BK:79:PHE:CD2	37:BP:70:VAL:HG22	2.44	0.53
37:BP:53:ARG:O	37:BP:56:HIS:N	2.42	0.53
42:BU:52:LEU:O	42:BU:53:ASN:HB2	2.07	0.53
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.09	0.53
1:CA:1364:U:O2	1:CA:1364:U:H2'	2.06	0.53
1:CA:1408:A:C2	1:CA:1494:G:C2	2.96	0.53
1:CA:1434:A:N6	1:CA:1435:G:C6	2.76	0.53
22:DA:5:A:C2	22:DA:2899:A:C2	2.96	0.53
22:DA:69:C:HO2'	22:DA:73:A:HO2'	1.52	0.53
22:DA:323:C:H6	22:DA:1205:A:N1	2.06	0.53
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.22	0.53
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.43	0.53
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.91	0.53
22:DA:2808:G:H4'	22:DA:2809:A:O5'	2.08	0.53
38:DQ:47:TYR:OH	38:DQ:51:ARG:NH1	2.41	0.53
40:DS:13:SER:HB3	40:DS:16:LYS:HD2	1.90	0.53
1:AA:665:A:C2	1:AA:732:C:C5	2.96	0.53
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.08	0.53
6:AF:86:ARG:HH11	6:AF:86:ARG:HG3	1.73	0.53
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.09	0.53
8:AH:67:GLN:OE1	8:AH:67:GLN:HA	2.08	0.53
10:AJ:9:ARG:HB2	10:AJ:99:GLN:HB2	1.90	0.53
22:BA:278:A:C2	22:BA:362:A:C8	2.96	0.53
22:BA:481:G:C2	22:BA:507:A:N3	2.76	0.53
22:BA:1984:G:C6	22:BA:1985:C:C5	2.97	0.53
22:BA:2020:A:H5'	48:B0:9:THR:HG22	1.90	0.53
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.08	0.53
22:BA:2271:G:C6	22:BA:2272:U:C4	2.96	0.53
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.44	0.53
22:BA:2527:C:C2'	22:BA:2528:U:H5'	2.38	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
1:CA:211:G:O2'	1:CA:212:G:C4'	2.57	0.53
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.57	0.53
1:CA:1328:C:H5"	13:CM:28:THR:HG21	1.91	0.53
22:DA:2046:G:C2	22:DA:2047:C:C2	2.96	0.53
22:DA:2267:A:H5"	22:DA:2268:A:H5'	1.91	0.53
22:DA:2280:G:O2'	22:DA:2388:A:N1	2.30	0.53
22:DA:2819:G:H5"	57:DA:3802:HOH:O	2.09	0.53
24:DC:107:PRO:HB3	24:DC:142:HIS:CE1	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:44:ILE:CG2	27:DF:79:ILE:HG22	2.39	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
45:DX:67:VAL:O	45:DX:70:GLU:N	2.42	0.53
1:AA:26:A:C2'	1:AA:27:G:H5'	2.39	0.53
1:AA:772:U:C2'	1:AA:773:G:O5'	2.57	0.53
1:AA:807:A:H2'	1:AA:808:C:C6	2.44	0.53
7:AG:147:ALA:O	11:AK:61:PHE:CD1	2.61	0.53
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.38	0.53
22:BA:477:A:H2'	22:BA:478:A:C8	2.43	0.53
22:BA:757:G:N7	57:BA:3302:HOH:O	2.34	0.53
22:BA:1312:U:O2	22:BA:1603:A:C2	2.61	0.53
22:BA:1419:A:C5	22:BA:1421:G:C5	2.97	0.53
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.73	0.53
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.42	0.53
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.07	0.53
24:BC:246:THR:HB	24:BC:248:TRP:HE3	1.74	0.53
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.43	0.53
26:BE:12:LEU:HD23	26:BE:13:THR:N	2.24	0.53
28:BG:27:LYS:HD2	28:BG:32:GLU:OE2	2.09	0.53
33:BL:109:LYS:HG3	33:BL:126:ARG:CB	2.39	0.53
35:BN:118:ARG:O	35:BN:120:GLU:N	2.41	0.53
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.89	0.53
1:CA:429:U:H3'	4:CD:9:LEU:CD2	2.37	0.53
1:CA:484:G:N7	1:CA:486:U:H1'	2.23	0.53
1:CA:577:G:C8	1:CA:816:A:N1	2.77	0.53
1:CA:708:C:H2'	1:CA:709:U:C6	2.43	0.53
4:CD:9:LEU:CD1	4:CD:29:ASP:OD1	2.56	0.53
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.09	0.53
22:DA:684:G:C2	22:DA:794:A:C2	2.96	0.53
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.41	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.56	0.53
1:AA:41:G:H2'	1:AA:42:G:H8	1.72	0.53
1:AA:223:A:H2'	1:AA:224:U:C6	2.44	0.53
1:AA:937:A:H2'	1:AA:938:A:H5'	1.89	0.53
1:AA:1180:A:H5"	1:AA:1181:G:OP2	2.07	0.53
1:AA:1379:G:C6	1:AA:1380:U:C4	2.96	0.53
4:AD:68:LEU:HD22	4:AD:68:LEU:N	2.24	0.53
12:AL:21:VAL:HG23	12:AL:95:TYR:HE1	1.71	0.53
12:AL:122:PRO:O	12:AL:124:ALA:N	2.41	0.53
14:AN:97:LYS:O	14:AN:99:ALA:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:10:GLY:HA3	17:AQ:25:ILE:HD13	1.90	0.53
22:BA:497:A:C6	22:BA:498:G:C5	2.97	0.53
22:BA:569:U:H1'	22:BA:947:A:O4'	2.09	0.53
22:BA:1584:U:O2	22:BA:1584:U:H2'	2.08	0.53
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.38	0.53
22:BA:2256:G:C2'	22:BA:2257:U:O5'	2.56	0.53
38:BQ:76:TYR:C	38:BQ:76:TYR:CD2	2.82	0.53
42:BU:42:VAL:O	42:BU:60:GLU:HA	2.09	0.53
53:B5:212:SER:HA	53:B5:221:PRO:CB	2.39	0.53
1:CA:78:A:N6	1:CA:79:G:C6	2.77	0.53
1:CA:247:G:C5	1:CA:278:G:N2	2.76	0.53
1:CA:299:G:C6	1:CA:300:A:C6	2.97	0.53
1:CA:407:U:H2'	1:CA:408:A:H8	1.73	0.53
1:CA:511:C:C2	1:CA:512:U:C5	2.97	0.53
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.43	0.53
1:CA:1507:A:C5	1:CA:1530:G:C6	2.97	0.53
2:CB:104:TRP:CZ2	2:CB:156:GLY:N	2.77	0.53
4:CD:75:TYR:OH	4:CD:97:ARG:NH1	2.41	0.53
6:CF:99:ALA:O	6:CF:100:SER:HB3	2.09	0.53
7:CG:75:VAL:HG21	7:CG:144:MET:HG2	1.91	0.53
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	1.89	0.53
15:CO:6:GLU:O	15:CO:10:LYS:N	2.42	0.53
19:CS:51:VAL:O	19:CS:58:VAL:HG12	2.09	0.53
22:DA:89:A:C2	22:DA:90:U:C2	2.96	0.53
22:DA:197:A:N6	22:DA:2430:A:H2'	2.24	0.53
22:DA:204:A:H5'	22:DA:206:U:O4'	2.08	0.53
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.42	0.53
22:DA:2311:A:O2'	22:DA:2312:U:O5'	2.25	0.53
22:DA:2560:A:H2'	22:DA:2561:U:O4'	2.08	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
42:DU:82:ARG:O	42:DU:97:LYS:CG	2.57	0.53
1:AA:394:G:C5	1:AA:395:C:C5	2.97	0.53
1:AA:883:C:N3	1:AA:884:U:C4	2.76	0.53
1:AA:1157:A:N7	1:AA:1180:A:N6	2.57	0.53
1:AA:1241:G:C2	1:AA:1242:G:N7	2.77	0.53
2:AB:72:THR:HG22	2:AB:94:HIS:N	2.24	0.53
2:AB:106:THR:O	2:AB:107:VAL:CB	2.57	0.53
7:AG:30:LEU:O	7:AG:30:LEU:HD23	2.08	0.53
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.23	0.53
9:AI:46:MET:SD	9:AI:46:MET:N	2.81	0.53
16:AP:51:ARG:HG2	16:AP:51:ARG:HH11	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:662:G:C2	22:BA:663:G:C8	2.97	0.53
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.44	0.53
22:BA:1296:G:OP1	22:BA:2709:G:O2'	2.24	0.53
24:BC:78:VAL:O	24:BC:78:VAL:HG12	2.08	0.53
26:BE:43:THR:O	26:BE:44:ARG:HB3	2.07	0.53
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.09	0.53
1:CA:55:A:C5	1:CA:56:U:C2	2.96	0.53
1:CA:567:G:C2	1:CA:568:G:H1'	2.44	0.53
1:CA:1112:C:N4	3:CC:178:LEU:HD23	2.24	0.53
7:CG:115:SER:HB3	7:CG:118:LEU:HG	1.89	0.53
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	1.89	0.53
22:DA:30:G:C6	22:DA:31:C:N3	2.77	0.53
22:DA:300:A:N6	57:DA:3551:HOH:O	2.41	0.53
22:DA:1316:U:O2'	22:DA:1317:G:H5'	2.09	0.53
22:DA:2745:C:C4	22:DA:2746:U:C4	2.96	0.53
23:DB:65:U:C4	23:DB:108:A:C4	2.97	0.53
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.57	0.53
36:DO:72:ALA:HA	36:DO:109:ALA:CB	2.37	0.53
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.09	0.53
1:AA:132:C:H5"	20:AT:69:LYS:HE2	1.91	0.53
1:AA:251:G:H4'	1:AA:252:U:O5'	2.09	0.53
1:AA:701:U:H4'	1:AA:702:A:H5"	1.91	0.53
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.35	0.53
2:AB:160:ALA:O	2:AB:161:LEU:HB2	2.08	0.53
4:AD:15:GLU:OE2	4:AD:56:ARG:NH2	2.42	0.53
5:AE:34:THR:HB	5:AE:50:TYR:CE2	2.44	0.53
7:AG:13:LEU:HD13	7:AG:13:LEU:N	2.24	0.53
22:BA:186:G:O2'	22:BA:187:G:H5'	2.08	0.53
22:BA:776:G:C8	22:BA:793:A:C2	2.97	0.53
22:BA:1342:A:OP2	57:BA:3716:HOH:O	2.18	0.53
22:BA:2080:A:P	45:BX:19:SER:HG	2.29	0.53
22:BA:2460:U:H2'	22:BA:2461:A:H8	1.74	0.53
22:BA:2507:C:C2	22:BA:2508:G:C8	2.97	0.53
22:BA:2547:A:N7	22:BA:2566:A:C8	2.76	0.53
25:BD:139:SER:HA	25:BD:142:VAL:HG13	1.90	0.53
32:BK:63:VAL:HG22	32:BK:84:CYS:HA	1.90	0.53
34:BM:55:ARG:CZ	34:BM:55:ARG:HB3	2.38	0.53
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.44	0.53
38:BQ:72:ASN:OD1	38:BQ:107:THR:HG23	2.09	0.53
43:BV:55:GLU:HB3	43:BV:59:GLU:HG3	1.90	0.53
44:BW:23:VAL:CG1	44:BW:25:ARG:O	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.57	0.53
1:CA:706:A:C5	1:CA:707:U:C5	2.96	0.53
1:CA:1061:G:C5	1:CA:1062:U:C5	2.97	0.53
10:CJ:26:VAL:HG22	10:CJ:36:VAL:HG11	1.91	0.53
11:CK:110:ILE:O	21:CU:6:VAL:HG22	2.09	0.53
22:DA:226:A:H5'	22:DA:257:C:O3'	2.08	0.53
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.60	0.53
22:DA:1491:G:C6	22:DA:1500:G:C2	2.97	0.53
22:DA:2113:U:C2	22:DA:2114:A:C8	2.97	0.53
22:DA:2234:G:C5	22:DA:2235:G:C8	2.96	0.53
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.61	0.53
22:DA:2798:U:H4'	22:DA:2799:A:H5'	1.90	0.53
24:DC:129:THR:C	24:DC:130:LEU:HD23	2.28	0.53
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	1.90	0.53
28:DG:129:THR:C	28:DG:130:GLU:HG2	2.29	0.53
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.42	0.53
1:AA:242:G:C2	1:AA:245:U:C4	2.97	0.53
1:AA:880:C:O2'	1:AA:881:G:H5'	2.09	0.53
1:AA:1062:U:C2'	1:AA:1063:C:C6	2.92	0.53
1:AA:1332:A:H2'	1:AA:1333:A:O4'	2.09	0.53
4:AD:100:ASN:OD1	4:AD:111:ARG:NH1	2.41	0.53
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.24	0.53
7:AG:138:ARG:O	7:AG:142:HIS:HB2	2.09	0.53
8:AH:106:THR:HG21	8:AH:121:LEU:HD13	1.90	0.53
20:AT:35:VAL:HG22	20:AT:50:ALA:CB	2.39	0.53
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.42	0.53
22:BA:614:A:HO2'	22:BA:615:U:P	2.23	0.53
22:BA:2042:A:H2'	22:BA:2043:C:H5'	1.91	0.53
22:BA:2515:C:H1'	22:BA:2570:G:N2	2.24	0.53
22:BA:2658:C:H5"	22:BA:2659:G:OP2	2.09	0.53
22:BA:2848:G:N3	22:BA:2867:G:C2	2.77	0.53
22:BA:2896:C:C2	22:BA:2897:U:C6	2.97	0.53
24:BC:92:ALA:HB3	24:BC:104:ILE:HG13	1.92	0.53
28:BG:154:PRO:HD3	28:BG:162:VAL:O	2.09	0.53
34:BM:42:THR:CG2	34:BM:93:VAL:HG12	2.38	0.53
1:CA:734:G:C5	1:CA:735:C:C5	2.97	0.53
1:CA:803:G:C6	1:CA:804:U:N3	2.77	0.53
1:CA:892:A:C6	1:CA:893:C:C4	2.97	0.53
2:CB:134:ALA:O	2:CB:138:THR:HG23	2.09	0.53
11:CK:87:LYS:HG3	11:CK:113:VAL:HG23	1.89	0.53
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:100:LEU:C	11:CK:102:ALA:H	2.11	0.53
22:DA:607:U:H5	22:DA:619:G:C4	2.27	0.53
22:DA:1525:A:C5	22:DA:1526:C:C4	2.96	0.53
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.43	0.53
22:DA:2033:A:OP1	22:DA:2033:A:H2'	2.09	0.53
22:DA:2147:A:N7	22:DA:2148:G:C5	2.77	0.53
22:DA:2334:U:C4	36:DO:16:ARG:HD3	2.44	0.53
22:DA:2341:G:C5	22:DA:2342:C:C4	2.97	0.53
24:DC:15:HIS:O	24:DC:204:VAL:HG21	2.09	0.53
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.53
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.24	0.53
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.38	0.53
34:DM:66:ARG:HB2	34:DM:101:VAL:O	2.09	0.53
41:DT:69:ARG:HA	41:DT:74:ILE:HG22	1.91	0.53
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.56	0.53
1:AA:134:G:H2'	1:AA:135:C:C6	2.45	0.52
1:AA:235:C:H2'	1:AA:236:A:C8	2.44	0.52
1:AA:1170:A:OP1	2:AB:139:ARG:NH2	2.42	0.52
1:AA:1277:C:C2'	1:AA:1279:G:H8	2.22	0.52
2:AB:88:ASP:OD2	2:AB:88:ASP:N	2.42	0.52
3:AC:155:GLY:O	3:AC:196:ILE:HG12	2.10	0.52
4:AD:97:ARG:O	4:AD:100:ASN:HB3	2.09	0.52
9:AI:30:ILE:HD11	9:AI:38:TYR:CD2	2.44	0.52
17:AQ:52:GLU:N	17:AQ:52:GLU:CD	2.63	0.52
22:BA:1144:A:C6	22:BA:1145:C:C4	2.97	0.52
22:BA:1268:A:P	57:BA:3378:HOH:O	2.67	0.52
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.90	0.52
4:CD:46:PRO:O	4:CD:47:ARG:C	2.46	0.52
4:CD:70:ARG:O	4:CD:74:ASN:ND2	2.40	0.52
22:DA:1428:C:C5	22:DA:1569:A:H5"	2.44	0.52
22:DA:2094:A:C2	22:DA:2196:C:C2	2.96	0.52
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.44	0.52
25:DD:122:VAL:HG21	25:DD:141:ARG:HB3	1.90	0.52
34:DM:34:LYS:HD3	43:DV:82:TYR:HA	1.91	0.52
1:AA:542:G:C2	1:AA:543:U:C4	2.97	0.52
1:AA:579:A:C4	1:AA:580:C:C5	2.97	0.52
1:AA:647:C:O2'	1:AA:648:A:H5'	2.09	0.52
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.27	0.52
1:AA:1241:G:C2	1:AA:1242:G:C5	2.96	0.52
8:AH:30:SER:O	8:AH:31:LYS:C	2.47	0.52
12:AL:24:LEU:CG	12:AL:25:GLU:H	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:558:U:OP2	31:BJ:113:PRO:HG2	2.10	0.52
22:BA:860:U:C6	22:BA:2268:A:O4'	2.62	0.52
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.43	0.52
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.20	0.52
22:BA:1993:U:H4'	25:BD:133:THR:CG2	2.39	0.52
22:BA:2297:A:N1	22:BA:2321:U:C5	2.75	0.52
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.91	0.52
24:BC:209:GLY:O	24:BC:211:ALA:N	2.42	0.52
25:BD:46:ARG:NH2	25:BD:88:GLU:O	2.42	0.52
29:BH:83:LYS:HG3	1:CA:55:A:N3	2.23	0.52
53:B5:53:ARG:HD3	53:B5:204:GLY:HA3	1.91	0.52
1:CA:103:U:O2'	1:CA:172:A:N1	2.34	0.52
2:CB:126:PHE:HD2	2:CB:126:PHE:N	2.07	0.52
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.09	0.52
11:CK:127:ARG:N	21:CU:34:ARG:NH2	2.57	0.52
13:CM:93:ARG:CZ	13:CM:93:ARG:HB3	2.38	0.52
14:CN:3:LYS:HB3	14:CN:6:MET:HG2	1.91	0.52
17:CQ:14:SER:C	17:CQ:17:MET:HE1	2.29	0.52
22:DA:247:G:N7	22:DA:249:C:N1	2.57	0.52
22:DA:309:A:H4'	42:DU:16:GLY:HA2	1.90	0.52
22:DA:430:A:H2'	22:DA:431:U:H5'	1.91	0.52
22:DA:868:U:C4	22:DA:869:G:N7	2.77	0.52
22:DA:1799:G:N2	22:DA:1818:U:O2'	2.41	0.52
22:DA:2289:G:C2	22:DA:2290:G:C8	2.97	0.52
22:DA:2666:C:C5	22:DA:2667:C:C4	2.96	0.52
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.08	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.09	0.52
1:AA:281:G:O2'	1:AA:282:A:OP2	2.24	0.52
1:AA:623:C:C4	1:AA:624:C:C5	2.97	0.52
1:AA:1115:U:H2'	1:AA:1116:U:C6	2.44	0.52
1:AA:1250:A:H4'	9:AI:70:GLY:O	2.08	0.52
1:AA:1304:G:N1	1:AA:1305:G:N2	2.57	0.52
1:AA:1538:C:H2'	1:AA:1539:C:H5'	1.91	0.52
3:AC:37:PHE:O	3:AC:41:GLN:HB2	2.10	0.52
3:AC:113:ALA:O	3:AC:116:VAL:HB	2.09	0.52
4:AD:188:ARG:NH2	4:AD:197:GLU:OE1	2.42	0.52
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.91	0.52
22:BA:839:U:H2'	22:BA:840:C:C6	2.44	0.52
22:BA:936:A:H2'	22:BA:937:C:C6	2.45	0.52
22:BA:1341:G:N3	41:BT:84:TYR:CD1	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1360:G:C6	22:BA:1372:U:C2	2.97	0.52
22:BA:1474:U:C4	22:BA:1475:G:N2	2.77	0.52
22:BA:2075:U:C4	22:BA:2238:G:C6	2.96	0.52
22:BA:2199:A:O4'	29:BH:28:ASN:ND2	2.42	0.52
22:BA:2886:A:C4	22:BA:2887:A:C8	2.96	0.52
23:BB:22:U:H2'	23:BB:23:G:C8	2.45	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
32:BK:23:LYS:HB3	32:BK:40:LYS:HB3	1.92	0.52
39:BR:49:ILE:O	39:BR:51:VAL:O	2.26	0.52
45:BX:17:ASN:O	45:BX:24:ALA:HA	2.08	0.52
1:CA:154:U:O4	1:CA:155:A:N6	2.43	0.52
1:CA:374:A:H5"	1:CA:452:A:C2	2.45	0.52
1:CA:475:C:H2'	1:CA:476:U:C6	2.45	0.52
1:CA:834:U:H2'	1:CA:835:U:C6	2.44	0.52
1:CA:847:G:C2	1:CA:848:C:C2	2.98	0.52
1:CA:977:A:H3'	1:CA:977:A:N3	2.24	0.52
1:CA:1048:G:OP2	57:CA:1847:HOH:O	2.19	0.52
2:CB:91:PHE:O	2:CB:150:GLY:HA3	2.10	0.52
4:CD:29:ASP:O	4:CD:31:LYS:NZ	2.40	0.52
9:CI:18:ARG:O	9:CI:65:ILE:HA	2.09	0.52
16:CP:20:VAL:HG21	16:CP:32:PHE:CD1	2.44	0.52
22:DA:299:A:C5	22:DA:322:A:C2	2.97	0.52
22:DA:1566:A:N1	24:DC:213:TRP:CE3	2.77	0.52
22:DA:1649:G:N1	22:DA:2009:A:C6	2.77	0.52
22:DA:2324:U:C6	22:DA:2324:U:OP2	2.63	0.52
22:DA:2347:C:H2'	22:DA:2348:U:C6	2.44	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52
1:AA:1368:A:OP2	9:AI:114:LYS:HD3	2.09	0.52
1:AA:1470:U:H2'	1:AA:1471:U:C6	2.45	0.52
2:AB:35:ARG:HA	2:AB:35:ARG:HE	1.75	0.52
3:AC:149:ILE:HG13	3:AC:201:TRP:O	2.10	0.52
5:AE:97:GLN:HB2	5:AE:124:LEU:HD12	1.91	0.52
8:AH:111:MET:HE1	8:AH:116:ALA:HA	1.91	0.52
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.90	0.52
12:AL:24:LEU:HB2	12:AL:59:ASN:HD22	1.75	0.52
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.10	0.52
22:BA:265:A:H4'	22:BA:266:G:OP1	2.09	0.52
22:BA:696:G:O2'	22:BA:697:G:H5'	2.09	0.52
22:BA:1020:A:C2	22:BA:1141:U:C2	2.98	0.52
22:BA:1090:A:H2'	22:BA:1091:G:C5'	2.39	0.52
22:BA:1353:A:C2'	22:BA:1354:A:H5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1359:A:N7	22:BA:1373:A:C2	2.77	0.52
22:BA:1627:G:C2	22:BA:1628:G:C8	2.98	0.52
22:BA:1917:U:H2'	22:BA:1917:U:O2	2.10	0.52
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.45	0.52
27:BF:117:LEU:HD23	27:BF:176:PRO:HB2	1.91	0.52
36:BO:60:GLU:O	36:BO:62:LEU:N	2.42	0.52
42:BU:97:LYS:O	42:BU:98:SER:OG	2.26	0.52
1:CA:485:U:OP2	1:CA:485:U:H4'	2.09	0.52
1:CA:624:C:H2'	1:CA:625:U:O4'	2.09	0.52
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.10	0.52
1:CA:939:G:P	7:CG:95:ARG:NH2	2.83	0.52
1:CA:1028:C:C6	1:CA:1028:C:OP2	2.63	0.52
1:CA:1250:A:C6	1:CA:1251:A:C6	2.97	0.52
2:CB:123:ASP:O	2:CB:124:GLY:C	2.47	0.52
3:CC:83:ASP:O	3:CC:85:GLU:N	2.43	0.52
3:CC:111:LEU:N	3:CC:111:LEU:HD23	2.24	0.52
4:CD:32:CYS:O	4:CD:33:LYS:HB2	2.09	0.52
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.81	0.52
6:CF:99:ALA:O	6:CF:100:SER:CB	2.58	0.52
16:CP:14:ARG:N	16:CP:15:PRO:CD	2.72	0.52
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.45	0.52
22:DA:756:A:H2'	22:DA:757:G:O4'	2.09	0.52
22:DA:833:A:H2'	22:DA:834:G:C8	2.44	0.52
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.09	0.52
22:DA:1973:G:C6	22:DA:1974:C:N3	2.77	0.52
22:DA:2303:G:O4'	27:DF:123:ASP:HA	2.10	0.52
22:DA:2324:U:OP2	22:DA:2324:U:H6	1.92	0.52
22:DA:2840:C:H5"	35:DN:53:THR:OG1	2.10	0.52
25:DD:29:VAL:HB	25:DD:98:VAL:HB	1.91	0.52
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.09	0.52
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.29	0.52
50:D2:22:MET:SD	50:D2:28:ARG:HG2	2.49	0.52
1:AA:233:C:H2'	1:AA:234:C:C6	2.44	0.52
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.44	0.52
4:AD:191:LEU:O	4:AD:192:SER:HB3	2.08	0.52
11:AK:71:ALA:O	11:AK:73:ALA:N	2.42	0.52
12:AL:86:ARG:NE	12:AL:88:LYS:HB3	2.25	0.52
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.08	0.52
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.09	0.52
20:AT:70:ASN:HA	20:AT:73:ALA:HB3	1.91	0.52
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:813:U:H2'	22:BA:814:C:C6	2.45	0.52
22:BA:944:C:H2'	57:BA:3351:HOH:O	2.08	0.52
22:BA:1556:C:O2'	22:BA:1557:C:H5'	2.10	0.52
22:BA:2489:U:C4	22:BA:2490:G:C6	2.97	0.52
24:BC:121:ASP:O	24:BC:122:ALA:O	2.27	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
32:BK:2:ILE:HG23	32:BK:6:THR:HG21	1.91	0.52
32:BK:34:GLY:O	32:BK:35:VAL:C	2.47	0.52
37:BP:103:ARG:HH11	37:BP:103:ARG:HG2	1.75	0.52
40:BS:38:TYR:CD2	48:B0:28:LEU:HD21	2.44	0.52
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.23	0.52
43:BV:51:GLN:OE1	43:BV:57:TYR:OH	2.27	0.52
46:BY:9:LYS:HG2	46:BY:10:SER:N	2.24	0.52
46:BY:23:ARG:O	46:BY:24:GLU:C	2.47	0.52
49:B1:10:LYS:O	49:B1:51:GLU:HG2	2.08	0.52
1:CA:542:G:C2	1:CA:543:U:C6	2.98	0.52
1:CA:676:A:H2'	1:CA:677:U:H6	1.75	0.52
1:CA:833:G:C4	1:CA:834:U:C6	2.98	0.52
3:CC:72:ARG:O	3:CC:75:ILE:HG22	2.10	0.52
3:CC:165:THR:O	3:CC:166:GLU:O	2.28	0.52
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.10	0.52
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.23	0.52
8:CH:113:ASP:OD1	8:CH:114:ARG:N	2.43	0.52
15:CO:29:VAL:HG13	15:CO:63:ARG:HG3	1.92	0.52
20:CT:70:ASN:O	20:CT:73:ALA:N	2.42	0.52
22:DA:308:G:C6	22:DA:309:A:C6	2.98	0.52
22:DA:320:A:H2'	26:DE:131:THR:HG21	1.91	0.52
22:DA:919:U:H2'	22:DA:920:A:O4'	2.09	0.52
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.10	0.52
22:DA:2810:A:H5"	25:DD:62:LYS:HE2	1.90	0.52
22:DA:2820:A:C8	25:DD:196:ALA:HB1	2.43	0.52
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.39	0.52
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.50	0.52
34:DM:19:GLY:O	34:DM:38:ARG:NH1	2.42	0.52
50:D2:24:THR:HG23	50:D2:27:GLY:HA3	1.91	0.52
1:AA:478:A:H2'	1:AA:479:U:O4'	2.10	0.52
1:AA:587:G:N2	1:AA:755:G:C4	2.77	0.52
1:AA:1212:U:H5'	1:AA:1213:A:C8	2.45	0.52
1:AA:1239:A:H62	1:AA:1299:A:N6	2.08	0.52
1:AA:1258:G:C6	1:AA:1259:C:C4	2.97	0.52
3:AC:87:LEU:O	3:AC:91:VAL:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:192:SER:O	4:AD:193:ALA:HB3	2.09	0.52
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.92	0.52
15:AO:46:HIS:O	15:AO:48:LYS:N	2.35	0.52
17:AQ:43:LYS:O	17:AQ:44:LEU:HD23	2.08	0.52
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.92	0.52
22:BA:141:G:H3'	22:BA:142:A:C8	2.44	0.52
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.39	0.52
22:BA:1795:C:C2	22:BA:1796:U:C6	2.98	0.52
33:BL:109:LYS:HG3	33:BL:126:ARG:HB2	1.92	0.52
35:BN:24:MET:SD	35:BN:44:LEU:HD22	2.50	0.52
42:BU:14:LEU:HD11	42:BU:71:ALA:HB2	1.92	0.52
1:CA:50:A:N6	1:CA:361:G:C4'	2.72	0.52
1:CA:243:A:H4'	1:CA:244:U:H5"	1.92	0.52
6:CF:16:GLU:C	6:CF:18:VAL:H	2.12	0.52
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.08	0.52
15:CO:60:VAL:O	15:CO:63:ARG:HB3	2.08	0.52
22:DA:55:G:C2	22:DA:56:A:C8	2.97	0.52
22:DA:137:U:H5"	22:DA:140:C:C5	2.45	0.52
22:DA:658:U:C2	22:DA:659:G:C8	2.98	0.52
22:DA:830:G:C4	22:DA:2448:A:C5	2.98	0.52
22:DA:836:G:C5	22:DA:837:C:C4	2.97	0.52
22:DA:958:U:OP2	34:DM:14:LYS:HD2	2.10	0.52
22:DA:1029:A:N1	22:DA:2465:C:O2'	2.36	0.52
22:DA:1364:G:C8	45:DX:2:SER:N	2.77	0.52
22:DA:1801:A:C4	24:DC:262:ARG:NH2	2.78	0.52
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.35	0.52
28:DG:154:PRO:HA	28:DG:160:LYS:O	2.10	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
33:DL:90:VAL:N	33:DL:121:THR:O	2.43	0.52
33:DL:105:ILE:CG2	33:DL:107:PHE:O	2.58	0.52
1:AA:19:A:H1'	1:AA:917:G:N2	2.24	0.52
1:AA:100:G:N7	1:AA:101:A:N7	2.58	0.52
1:AA:554:A:H2'	1:AA:555:U:H6	1.73	0.52
1:AA:723:U:OP1	21:AU:49:LYS:HB2	2.10	0.52
1:AA:1358:U:C6	1:AA:1359:C:C5	2.98	0.52
3:AC:22:TRP:CD1	3:AC:59:ARG:HD3	2.44	0.52
4:AD:62:ARG:NH1	4:AD:69:GLU:HG2	2.25	0.52
6:AF:46:GLN:HA	6:AF:56:LYS:HG2	1.92	0.52
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.09	0.52
19:AS:29:LYS:CB	19:AS:30:PRO:CD	2.87	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:527:C:H4'	22:BA:528:A:O5'	2.10	0.52
22:BA:712:G:H2'	22:BA:713:G:H5'	1.91	0.52
22:BA:1019:U:O4	22:BA:1020:A:N6	2.43	0.52
22:BA:1316:U:C2	22:BA:1337:G:N2	2.78	0.52
24:BC:18:LYS:HE2	24:BC:18:LYS:HA	1.89	0.52
30:BI:28:LEU:HD11	30:BI:35:ILE:HA	1.90	0.52
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.25	0.52
37:BP:110:ILE:O	37:BP:111:LYS:O	2.28	0.52
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.90	0.52
1:CA:1211:U:O2'	1:CA:1212:U:P	2.67	0.52
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.09	0.52
2:CB:126:PHE:N	2:CB:126:PHE:CD2	2.78	0.52
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.25	0.52
5:CE:18:VAL:CG2	5:CE:56:VAL:HG13	2.40	0.52
6:CF:22:ILE:O	6:CF:26:THR:OG1	2.25	0.52
8:CH:35:ALA:O	8:CH:39:VAL:HG23	2.09	0.52
22:DA:188:G:C2	22:DA:209:C:N3	2.77	0.52
22:DA:222:A:H3'	22:DA:421:C:H5'	1.90	0.52
22:DA:228:C:C5'	22:DA:229:C:C6	2.93	0.52
22:DA:279:A:H61	22:DA:361:G:H1'	1.75	0.52
22:DA:874:G:C2	22:DA:904:G:C2	2.97	0.52
22:DA:2571:U:C4	22:DA:2574:G:C8	2.98	0.52
24:DC:72:ASP:O	24:DC:74:ILE:HD12	2.09	0.52
31:DJ:17:VAL:HG22	31:DJ:55:ILE:HB	1.91	0.52
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.24	0.52
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.40	0.52
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.40	0.52
1:AA:203:G:C2	1:AA:215:C:C2	2.98	0.52
1:AA:255:G:H4'	17:AQ:19:LYS:HD2	1.91	0.52
1:AA:1070:U:C2	1:AA:1071:C:C5	2.98	0.52
1:AA:1074:G:C2	1:AA:1075:U:C2	2.98	0.52
2:AB:71:GLY:O	2:AB:93:ASN:HA	2.10	0.52
11:AK:53:ARG:O	11:AK:56:ARG:HB2	2.09	0.52
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.10	0.52
22:BA:877:A:N6	22:BA:899:A:C6	2.78	0.52
22:BA:2280:G:C2	22:BA:2281:A:C8	2.98	0.52
22:BA:2526:G:N1	22:BA:2538:C:O2	2.42	0.52
22:BA:2649:C:O2'	22:BA:2650:U:H5'	2.09	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
34:BM:118:LYS:O	34:BM:121:ALA:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:1:MET:O	41:BT:2:ILE:HG13	2.10	0.52
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.90	0.52
53:B5:50:ILE:CG2	53:B5:51:ASP:N	2.73	0.52
1:CA:747:A:N6	1:CA:748:G:C6	2.78	0.52
1:CA:920:U:H2'	1:CA:921:U:H6	1.70	0.52
1:CA:964:A:N3	1:CA:969:A:O2'	2.38	0.52
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.25	0.52
1:CA:1499:A:H3'	57:CA:1881:HOH:O	2.10	0.52
7:CG:59:LEU:O	7:CG:63:GLU:HB2	2.10	0.52
8:CH:12:THR:HG23	8:CH:15:ARG:NH1	2.25	0.52
22:DA:433:C:H2'	22:DA:434:U:C6	2.44	0.52
22:DA:1197:G:H2'	22:DA:1198:U:H6	1.73	0.52
22:DA:1248:G:N3	38:DQ:3:ARG:HG3	2.24	0.52
22:DA:1774:C:OP1	57:DA:3440:HOH:O	2.18	0.52
23:DB:46:A:H5"	36:DO:3:LYS:HE3	1.92	0.52
28:DG:24:ILE:HG21	28:DG:72:LEU:HD21	1.92	0.52
30:DI:89:GLY:HA3	30:DI:136:MET:HE3	1.91	0.52
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	1.92	0.52
1:AA:8:A:C5	4:AD:206:LYS:HB3	2.44	0.52
1:AA:457:G:C6	1:AA:458:U:N3	2.77	0.52
1:AA:472:U:C4	1:AA:473:U:C4	2.98	0.52
1:AA:774:G:C4	1:AA:775:G:C8	2.97	0.52
1:AA:1418:A:C8	1:AA:1419:G:O4'	2.62	0.52
1:AA:1498:U:H1'	1:AA:1499:A:N7	2.24	0.52
2:AB:187:VAL:O	2:AB:187:VAL:HG23	2.10	0.52
3:AC:11:ARG:O	3:AC:14:ILE:O	2.28	0.52
4:AD:9:LEU:CD2	4:AD:22:LYS:HB2	2.40	0.52
6:AF:14:GLN:O	6:AF:15:SER:C	2.47	0.52
6:AF:40:GLU:HB3	6:AF:42:TRP:CD1	2.45	0.52
7:AG:99:LEU:O	7:AG:101:MET:N	2.42	0.52
7:AG:113:ASP:OD2	7:AG:113:ASP:N	2.43	0.52
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.10	0.52
20:AT:75:HIS:O	20:AT:78:ASN:N	2.43	0.52
22:BA:498:G:H2'	22:BA:499:U:H6	1.75	0.52
22:BA:859:G:O2'	22:BA:860:U:P	2.67	0.52
22:BA:1344:U:O2'	22:BA:1345:C:OP2	2.23	0.52
22:BA:2052:A:C2	22:BA:2053:G:N9	2.78	0.52
22:BA:2140:G:C2	22:BA:2152:G:C2	2.98	0.52
22:BA:2310:C:C4	27:BF:77:PHE:CZ	2.98	0.52
22:BA:2600:A:C4	22:BA:2601:C:C5	2.98	0.52
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:207:LYS:O	24:BC:210:ALA:HB3	2.10	0.52
50:B2:43:THR:O	50:B2:44:VAL:HG12	2.09	0.52
1:CA:144:G:C5	1:CA:179:A:C2	2.98	0.52
1:CA:209:U:O2	1:CA:209:U:H2'	2.10	0.52
1:CA:1203:C:H4'	14:CN:67:THR:HB	1.91	0.52
5:CE:101:GLU:C	5:CE:103:THR:N	2.64	0.52
13:CM:96:PRO:HB2	13:CM:100:GLN:HB2	1.92	0.52
22:DA:204:A:C8	22:DA:206:U:N3	2.77	0.52
22:DA:266:G:N2	22:DA:427:U:H1'	2.25	0.52
22:DA:1045:C:H1'	22:DA:1047:G:C6	2.45	0.52
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.43	0.52
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.63	0.52
22:DA:1856:U:O4	22:DA:1857:G:N1	2.43	0.52
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.91	0.52
23:DB:58:A:H2'	23:DB:59:A:O4'	2.10	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.24	0.52
42:DU:72:ILE:HD12	42:DU:81:ASP:O	2.09	0.52
42:DU:95:PHE:O	42:DU:95:PHE:CG	2.62	0.52
1:AA:452:A:N7	1:AA:453:G:C8	2.78	0.52
1:AA:462:G:C8	1:AA:463:U:C5	2.98	0.52
1:AA:858:G:N7	57:AA:1823:HOH:O	2.42	0.52
1:AA:1298:U:N3	7:AG:114:LYS:HA	2.25	0.52
4:AD:191:LEU:HD12	4:AD:192:SER:HB2	1.91	0.52
8:AH:5:ASP:OD1	8:AH:8:ALA:HB2	2.09	0.52
9:AI:113:ARG:NH2	14:AN:101:TRP:CZ2	2.77	0.52
11:AK:21:ALA:CB	11:AK:34:ILE:HD13	2.40	0.52
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.40	0.52
22:BA:1808:A:O2'	45:BX:3:ARG:NH1	2.43	0.52
22:BA:1999:C:OP1	22:BA:2723:C:O2'	2.26	0.52
22:BA:2199:A:C1'	29:BH:28:ASN:ND2	2.73	0.52
22:BA:2210:U:O2	22:BA:2212:A:C8	2.63	0.52
22:BA:2674:G:H2'	22:BA:2675:A:H8	1.75	0.52
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.43	0.52
22:BA:2887:A:C2	22:BA:2888:C:C6	2.98	0.52
30:BI:75:PRO:HB2	30:BI:78:VAL:HG13	1.92	0.52
39:BR:49:ILE:CA	39:BR:52:PRO:O	2.58	0.52
39:BR:58:VAL:HG13	39:BR:102:SER:HB2	1.92	0.52
44:BW:52:GLY:HA3	44:BW:60:PHE:CE2	2.45	0.52
48:B0:31:ASP:OD1	48:B0:34:SER:N	2.43	0.52
48:B0:40:ARG:O	48:B0:41:HIS:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:238:A:O2'	1:CA:239:U:H5'	2.09	0.52
1:CA:505:G:H2'	1:CA:506:G:C8	2.44	0.52
1:CA:1022:A:C5	1:CA:1023:U:C5	2.98	0.52
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.63	0.52
4:CD:29:ASP:C	4:CD:31:LYS:H	2.13	0.52
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.58	0.52
22:DA:54:G:C6	22:DA:55:G:N7	2.78	0.52
22:DA:104:A:H2'	22:DA:105:C:O4'	2.10	0.52
22:DA:528:A:OP1	57:DA:3247:HOH:O	2.19	0.52
22:DA:533:G:H5'	38:DQ:24:TYR:CE2	2.45	0.52
22:DA:571:U:C4	22:DA:575:A:C5	2.98	0.52
22:DA:750:A:H5"	22:DA:751:A:OP2	2.09	0.52
22:DA:2083:G:N7	22:DA:2084:C:C5	2.77	0.52
22:DA:2142:A:N1	22:DA:2150:C:N3	2.58	0.52
22:DA:2596:U:C5	22:DA:2597:G:C5	2.97	0.52
24:DC:9:THR:O	24:DC:10:SER:HB3	2.10	0.52
27:DF:3:LYS:HD3	27:DF:101:GLU:OE2	2.10	0.52
28:DG:60:ASP:O	28:DG:62:TRP:N	2.43	0.52
30:DI:54:PRO:HG2	30:DI:78:VAL:HG21	1.92	0.52
34:DM:31:PHE:CD1	34:DM:113:ALA:HB2	2.45	0.52
39:DR:6:GLN:HB3	39:DR:37:GLU:HB3	1.92	0.52
40:DS:23:LEU:HD22	48:D0:24:ALA:HB2	1.92	0.52
1:AA:390:U:H2'	1:AA:391:G:H8	1.75	0.51
1:AA:444:G:C6	1:AA:445:G:C5	2.98	0.51
1:AA:565:U:C4	1:AA:566:G:C5	2.98	0.51
2:AB:58:ASN:HA	2:AB:61:ALA:HB3	1.91	0.51
6:AF:47:LEU:HD12	6:AF:55:HIS:HA	1.91	0.51
6:AF:68:GLN:HA	6:AF:71:ILE:HG22	1.92	0.51
20:AT:34:LYS:O	20:AT:37:ALA:HB3	2.09	0.51
21:AU:12:PHE:N	21:AU:12:PHE:CD2	2.78	0.51
22:BA:21:A:O2'	22:BA:22:C:H5'	2.10	0.51
22:BA:854:C:O2	22:BA:924:G:C2	2.63	0.51
22:BA:972:A:C6	22:BA:973:A:C6	2.98	0.51
22:BA:1829:A:O2'	24:BC:15:HIS:CD2	2.64	0.51
22:BA:2223:G:C5	22:BA:2224:G:C8	2.98	0.51
32:BK:108:ARG:O	32:BK:110:GLU:N	2.43	0.51
40:BS:43:ALA:HA	40:BS:46:LEU:CD1	2.40	0.51
45:BX:77:LYS:HE3	45:BX:78:TYR:N	2.25	0.51
1:CA:17:U:H2'	1:CA:18:C:C6	2.44	0.51
1:CA:227:G:H2'	1:CA:228:A:O4'	2.10	0.51
1:CA:553:A:H4'	12:CL:27:CYS:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:579:A:H2'	1:CA:580:C:C6	2.45	0.51
1:CA:704:A:C5	1:CA:705:G:C8	2.98	0.51
1:CA:1084:G:C5	1:CA:1085:U:C4	2.97	0.51
7:CG:40:GLU:HB2	7:CG:44:TYR:CE2	2.45	0.51
17:CQ:12:VAL:HG23	17:CQ:57:ASP:O	2.10	0.51
22:DA:185:G:C5	22:DA:212:G:N2	2.79	0.51
22:DA:467:G:H4'	22:DA:796:C:O2'	2.09	0.51
22:DA:2226:C:C4	22:DA:2227:A:C5	2.98	0.51
22:DA:2610:C:H5'	54:D6:7:004:HD2	1.92	0.51
22:DA:2811:G:C6	22:DA:2890:G:N2	2.78	0.51
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.11	0.51
30:DI:105:GLN:O	30:DI:106:LEU:HG	2.10	0.51
48:D0:44:THR:C	48:D0:46:ASP:H	2.13	0.51
1:AA:39:G:N7	1:AA:547:A:H8	2.08	0.51
1:AA:93:U:H2'	1:AA:94:G:H5"	1.92	0.51
1:AA:237:G:H5"	17:AQ:27:ARG:NH2	2.25	0.51
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.42	0.51
1:AA:1152:A:C5	1:AA:1153:G:N7	2.78	0.51
1:AA:1371:G:OP1	9:AI:13:LYS:HD3	2.10	0.51
3:AC:143:ARG:CG	3:AC:144:LEU:HD13	2.40	0.51
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.92	0.51
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.09	0.51
11:AK:25:ALA:CA	11:AK:30:THR:HG22	2.38	0.51
11:AK:127:ARG:N	21:AU:34:ARG:NH2	2.58	0.51
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.91	0.51
19:AS:5:LEU:O	19:AS:7:LYS:N	2.40	0.51
22:BA:515:A:C8	22:BA:516:C:C5	2.98	0.51
22:BA:1195:G:C2'	22:BA:1196:C:H5'	2.40	0.51
22:BA:1321:A:C4	22:BA:1322:A:C8	2.98	0.51
22:BA:1441:G:N2	22:BA:1442:U:C2	2.78	0.51
22:BA:1983:G:O2'	22:BA:1984:G:H5'	2.09	0.51
22:BA:2209:G:C5	22:BA:2210:U:C4	2.98	0.51
22:BA:2307:G:N2	22:BA:2311:A:H2'	2.25	0.51
23:BB:45:A:C5	23:BB:46:A:N7	2.78	0.51
23:BB:109:A:C6	23:BB:110:C:C4	2.98	0.51
24:BC:86:ASN:O	24:BC:87:ARG:HB3	2.10	0.51
24:BC:252:THR:O	24:BC:253:LYS:C	2.47	0.51
25:BD:16:THR:HG23	25:BD:20:VAL:O	2.10	0.51
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.08	0.51
1:CA:690:G:H2'	1:CA:691:G:O4'	2.10	0.51
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:995:C:N3	1:CA:1046:A:O2'	2.40	0.51
1:CA:1386:G:C2	1:CA:1387:G:C8	2.98	0.51
2:CB:72:THR:HG23	2:CB:94:HIS:O	2.10	0.51
3:CC:10:ILE:HD12	14:CN:98:LYS:HG3	1.90	0.51
6:CF:26:THR:O	6:CF:30:THR:OG1	2.28	0.51
11:CK:52:PHE:CZ	11:CK:62:ALA:HA	2.46	0.51
22:DA:185:G:N1	22:DA:212:G:C2	2.78	0.51
22:DA:478:A:C2	22:DA:480:A:C4	2.99	0.51
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.29	0.51
22:DA:1379:U:O2	22:DA:1379:U:H2'	2.08	0.51
22:DA:2134:A:N3	22:DA:2159:G:H1'	2.25	0.51
22:DA:2234:G:C6	22:DA:2235:G:N7	2.78	0.51
22:DA:2598:A:H5"	24:DC:234:GLY:HA3	1.91	0.51
22:DA:2810:A:C8	22:DA:2811:G:C8	2.98	0.51
23:DB:14:U:O2	23:DB:14:U:C2'	2.57	0.51
28:DG:4:VAL:HG12	28:DG:69:ARG:HG2	1.92	0.51
36:DO:79:ALA:HA	36:DO:115:LEU:HD22	1.92	0.51
52:D4:3:VAL:HG23	52:D4:3:VAL:O	2.11	0.51
52:D4:7:VAL:HG13	52:D4:38:GLY:HA2	1.92	0.51
1:AA:114:U:O2'	1:AA:115:G:H5'	2.11	0.51
1:AA:597:G:C2	1:AA:644:U:C2	2.98	0.51
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.40	0.51
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.69	0.51
1:AA:1417:G:C6	1:AA:1482:G:C6	2.98	0.51
2:AB:87:CYS:HB2	2:AB:89:GLN:NE2	2.26	0.51
10:AJ:9:ARG:O	10:AJ:98:VAL:HA	2.11	0.51
16:AP:78:VAL:HG13	16:AP:78:VAL:O	2.09	0.51
17:AQ:15:ASP:HA	17:AQ:21:ILE:HD11	1.93	0.51
19:AS:4:SER:HB2	19:AS:5:LEU:HD12	1.91	0.51
19:AS:18:LYS:O	19:AS:31:LEU:HD21	2.10	0.51
22:BA:451:U:C2	22:BA:453:A:N7	2.79	0.51
22:BA:528:A:H2	22:BA:2043:C:C5'	2.23	0.51
22:BA:571:U:OP1	39:BR:80:ARG:NH1	2.44	0.51
22:BA:696:G:N3	22:BA:697:G:C8	2.79	0.51
22:BA:858:G:H3'	22:BA:859:G:N7	2.26	0.51
22:BA:2305:U:O2'	27:BF:133:ARG:NE	2.43	0.51
22:BA:2594:C:N3	22:BA:2595:G:N7	2.58	0.51
23:BB:37:C:C5	23:BB:38:C:C4	2.97	0.51
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.10	0.51
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.40	0.51
25:BD:178:VAL:N	25:BD:188:LEU:O	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:63:GLN:NE2	27:BF:90:THR:O	2.43	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
30:BI:80:LEU:HD11	30:BI:133:ALA:HA	1.92	0.51
47:BZ:40:ASP:OD2	47:BZ:45:ARG:NH1	2.43	0.51
1:CA:717:U:O2'	1:CA:734:G:O4'	2.23	0.51
1:CA:1089:G:C5	1:CA:1090:U:C5	2.98	0.51
1:CA:1114:C:C2	1:CA:1187:G:N2	2.79	0.51
18:CR:25:ASP:C	18:CR:27:ALA:H	2.14	0.51
22:DA:269:C:O2	22:DA:269:C:H2'	2.11	0.51
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.36	0.51
22:DA:1243:C:C4	22:DA:1244:A:N7	2.79	0.51
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.93	0.51
22:DA:2108:A:C2	22:DA:2182:U:C2	2.99	0.51
24:DC:8:PRO:HB3	24:DC:14:ARG:HB2	1.92	0.51
24:DC:182:ARG:NH1	24:DC:266:PHE:HB2	2.24	0.51
25:DD:101:PHE:O	25:DD:104:VAL:HG22	2.10	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
30:DI:8:TYR:CD1	30:DI:8:TYR:O	2.64	0.51
33:DL:108:ALA:HB3	33:DL:125:LEU:HG	1.92	0.51
33:DL:111:ILE:N	33:DL:111:ILE:HD12	2.25	0.51
42:DU:74:ASN:HA	42:DU:96:PHE:CZ	2.44	0.51
43:DV:51:GLN:HA	43:DV:56:PHE:CB	2.40	0.51
1:AA:189:A:N7	1:AA:190:A:C6	2.77	0.51
1:AA:293:G:C5	1:AA:294:U:C5	2.99	0.51
1:AA:533:A:OP1	57:AA:1847:HOH:O	2.19	0.51
1:AA:541:G:H2'	1:AA:542:G:O4'	2.10	0.51
1:AA:727:G:N1	1:AA:731:G:C6	2.79	0.51
1:AA:1157:A:C6	1:AA:1180:A:C5	2.98	0.51
1:AA:1367:C:P	9:AI:114:LYS:HZ1	2.32	0.51
2:AB:51:ASN:O	2:AB:52:GLU:HB2	2.10	0.51
2:AB:168:HIS:ND1	2:AB:168:HIS:O	2.44	0.51
4:AD:138:SER:HB2	4:AD:139:PRO:HD2	1.92	0.51
6:AF:59:TYR:O	6:AF:60:VAL:HG23	2.09	0.51
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.11	0.51
22:BA:207:A:H2'	22:BA:208:C:O5'	2.09	0.51
22:BA:528:A:H2'	22:BA:529:A:H5"	1.93	0.51
22:BA:1106:G:C2	22:BA:1107:G:C4	2.98	0.51
22:BA:1664:A:C2	22:BA:2726:A:C8	2.98	0.51
22:BA:1826:G:C4	22:BA:1827:U:C5	2.99	0.51
22:BA:1851:U:C4	22:BA:1852:U:C4	2.99	0.51
22:BA:2361:G:OP1	51:B3:26:HIS:ND1	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2435:A:H2'	22:BA:2436:G:O5'	2.10	0.51
22:BA:2820:A:C6	25:BD:197:THR:HG22	2.46	0.51
27:BF:38:MET:HG3	27:BF:151:GLY:O	2.10	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
30:BI:136:MET:SD	30:BI:138:LEU:HD11	2.50	0.51
42:BU:89:ASP:CG	42:BU:90:GLY:H	2.12	0.51
53:B5:48:LEU:HA	53:B5:208:THR:CB	2.40	0.51
1:CA:483:C:H2'	1:CA:484:G:C8	2.46	0.51
1:CA:1431:A:N6	1:CA:1432:G:O6	2.43	0.51
2:CB:53:ALA:C	2:CB:54:LEU:HD22	2.31	0.51
2:CB:187:VAL:HB	2:CB:191:SER:HB2	1.93	0.51
4:CD:188:ARG:O	4:CD:190:ASP:N	2.43	0.51
11:CK:91:PRO:O	11:CK:92:GLY:C	2.47	0.51
15:CO:52:SER:O	15:CO:55:GLY:N	2.43	0.51
17:CQ:27:ARG:CG	17:CQ:40:ARG:HB3	2.41	0.51
21:CU:10:GLU:CG	21:CU:11:PRO:HD3	2.41	0.51
22:DA:322:A:O4'	22:DA:340:A:H1'	2.10	0.51
22:DA:537:G:C6	22:DA:555:G:C2	2.98	0.51
22:DA:956:G:OP2	34:DM:86:LYS:NZ	2.44	0.51
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.45	0.51
22:DA:1073:A:O2'	22:DA:2474:U:H5'	2.09	0.51
22:DA:2029:G:C2	22:DA:2033:A:N7	2.78	0.51
22:DA:2131:U:O4'	22:DA:2133:G:H1'	2.10	0.51
22:DA:2314:A:O4'	27:DF:155:THR:HG21	2.10	0.51
22:DA:2352:A:C4	22:DA:2366:A:C2	2.98	0.51
22:DA:2550:G:N2	22:DA:2559:C:H1'	2.24	0.51
22:DA:2572:A:N7	25:DD:150:GLN:HB3	2.26	0.51
22:DA:2598:A:H2'	22:DA:2599:G:O4'	2.10	0.51
22:DA:2632:A:C2	22:DA:2787:C:C2	2.98	0.51
37:DP:26:VAL:CG1	37:DP:28:VAL:HG23	2.40	0.51
44:DW:64:ASP:N	44:DW:64:ASP:OD2	2.44	0.51
50:D2:10:LEU:HD12	50:D2:10:LEU:O	2.11	0.51
1:AA:73:C:O2'	1:AA:74:A:H5"	2.10	0.51
1:AA:451:A:C2	1:AA:480:U:C2	2.98	0.51
1:AA:542:G:N3	1:AA:543:U:C5	2.79	0.51
1:AA:582:C:C4	1:AA:583:A:N7	2.79	0.51
1:AA:650:G:N2	1:AA:651:C:H1'	2.26	0.51
1:AA:716:A:N3	11:AK:120:GLY:HA2	2.26	0.51
1:AA:944:G:N1	1:AA:1338:G:OP2	2.41	0.51
1:AA:1093:A:H5"	1:AA:1094:G:OP2	2.11	0.51
1:AA:1374:A:C4	1:AA:1375:A:C8	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.93	0.51
4:AD:29:ASP:O	4:AD:31:LYS:HD3	2.11	0.51
8:AH:95:VAL:O	8:AH:96:MET:C	2.49	0.51
19:AS:15:LEU:HD13	19:AS:33:THR:HG21	1.92	0.51
21:AU:25:LYS:O	21:AU:29:LEU:HB3	2.10	0.51
22:BA:323:C:H6	22:BA:1205:A:N1	2.08	0.51
22:BA:479:A:HO2'	22:BA:481:G:H8	1.56	0.51
22:BA:528:A:OP2	31:BJ:116:ARG:NH2	2.37	0.51
22:BA:700:G:O2'	22:BA:1632:A:N3	2.33	0.51
22:BA:992:C:H4'	39:BR:87:GLN:OE1	2.11	0.51
22:BA:1536:C:H4'	22:BA:1537:G:C5'	2.41	0.51
22:BA:1587:G:C4	22:BA:1588:G:C8	2.98	0.51
22:BA:1964:G:C2	22:BA:1967:C:C6	2.98	0.51
22:BA:2314:A:OP1	27:BF:88:LYS:NZ	2.39	0.51
22:BA:2749:A:OP1	28:BG:2:SER:N	2.43	0.51
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.11	0.51
24:BC:71:LYS:HE3	24:BC:96:TYR:CD2	2.45	0.51
24:BC:247:PRO:CD	24:BC:248:TRP:CZ3	2.93	0.51
26:BE:44:ARG:HG2	26:BE:45:ALA:N	2.24	0.51
28:BG:27:LYS:HB3	28:BG:32:GLU:HB2	1.92	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
33:BL:63:LYS:HA	51:B3:13:ARG:HB3	1.91	0.51
41:BT:67:VAL:CG2	41:BT:76:ARG:HG3	2.40	0.51
42:BU:71:ALA:HB3	42:BU:80:ALA:HB1	1.92	0.51
1:CA:77:A:H2'	1:CA:78:A:O4'	2.10	0.51
1:CA:262:A:C6	1:CA:263:A:C6	2.98	0.51
1:CA:938:A:N6	1:CA:939:G:C6	2.78	0.51
1:CA:1458:G:H5'	20:CT:27:MET:HB3	1.93	0.51
9:CI:57:MET:HB3	9:CI:61:LEU:HD23	1.93	0.51
17:CQ:46:VAL:CG2	17:CQ:61:ILE:HD11	2.38	0.51
20:CT:3:ASN:O	20:CT:5:LYS:N	2.43	0.51
22:DA:223:A:C4	22:DA:408:G:H1'	2.45	0.51
22:DA:400:G:N7	45:DX:57:ARG:NH1	2.59	0.51
22:DA:532:A:N1	22:DA:2020:A:H1'	2.26	0.51
22:DA:792:A:H3'	22:DA:793:A:H5'	1.92	0.51
22:DA:811:U:O2	22:DA:1251:C:C6	2.62	0.51
22:DA:1269:A:OP2	57:DA:3380:HOH:O	2.19	0.51
22:DA:1343:G:C5	22:DA:1344:U:C4	2.99	0.51
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.46	0.51
25:DD:60:VAL:HG13	25:DD:60:VAL:O	2.11	0.51
28:DG:2:SER:OG	28:DG:3:ARG:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.10	0.51
33:DL:63:LYS:CA	51:D3:13:ARG:HG3	2.41	0.51
35:DN:118:ARG:O	35:DN:119:SER:HB3	2.11	0.51
44:DW:45:PHE:O	44:DW:59:LEU:HD11	2.11	0.51
1:AA:262:A:C2	1:AA:263:A:C4	2.98	0.51
1:AA:485:U:O2	1:AA:485:U:O4'	2.26	0.51
1:AA:897:C:H2'	1:AA:898:G:H8	1.75	0.51
1:AA:900:A:C6	1:AA:901:A:C2	2.98	0.51
1:AA:984:C:N3	1:AA:1222:G:C2	2.79	0.51
1:AA:1066:C:H2'	1:AA:1066:C:O2	2.10	0.51
1:AA:1219:A:N6	1:AA:1220:G:O6	2.43	0.51
1:AA:1317:C:H4'	14:AN:49:GLN:HG2	1.91	0.51
2:AB:154:MET:CE	2:AB:158:PRO:HG3	2.41	0.51
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.41	0.51
6:AF:79:ARG:NE	6:AF:79:ARG:HA	2.25	0.51
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.93	0.51
22:BA:508:A:H4'	22:BA:509:C:OP2	2.10	0.51
22:BA:1007:C:OP1	31:BJ:39:LYS:HD2	2.10	0.51
22:BA:1260:A:N6	22:BA:1261:C:N4	2.59	0.51
22:BA:1266:G:OP2	48:B0:17:ARG:NH2	2.43	0.51
22:BA:1452:G:C8	22:BA:1452:G:H5"	2.45	0.51
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.45	0.51
22:BA:2296:U:H4'	22:BA:2297:A:OP1	2.09	0.51
22:BA:2786:U:O2'	25:BD:66:GLY:HA3	2.11	0.51
25:BD:136:ASN:ND2	25:BD:140:HIS:NE2	2.58	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
36:BO:90:VAL:HG23	36:BO:91:SER:N	2.25	0.51
50:B2:44:VAL:O	50:B2:44:VAL:CG1	2.59	0.51
1:CA:463:U:H5'	1:CA:464:U:OP2	2.10	0.51
1:CA:577:G:C2	1:CA:578:C:C6	2.98	0.51
7:CG:151:PHE:O	7:CG:152:ALA:HB2	2.10	0.51
11:CK:20:VAL:HB	11:CK:35:THR:HG23	1.92	0.51
13:CM:5:ALA:HB2	13:CM:57:ARG:CG	2.40	0.51
17:CQ:14:SER:OG	17:CQ:17:MET:HE1	2.11	0.51
22:DA:193:U:C4	22:DA:194:G:N7	2.79	0.51
22:DA:306:U:O2	22:DA:312:G:N2	2.44	0.51
22:DA:1809:A:C5	22:DA:1810:A:C5	2.99	0.51
22:DA:2586:U:C2	22:DA:2587:A:C8	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:76:LYS:HE3	34:DM:80:VAL:HG11	1.93	0.51
3:AC:22:TRP:CG	3:AC:59:ARG:HG2	2.45	0.51
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.11	0.51
10:AJ:21:ALA:HA	10:AJ:24:GLU:HB3	1.92	0.51
13:AM:23:TYR:CD2	13:AM:69:LEU:HD23	2.46	0.51
15:AO:57:LEU:O	15:AO:58:ARG:C	2.49	0.51
21:AU:12:PHE:N	21:AU:12:PHE:HD2	2.09	0.51
22:BA:831:G:OP1	57:BA:3259:HOH:O	2.18	0.51
22:BA:996:A:C6	22:BA:1160:G:C2	2.99	0.51
22:BA:2223:G:H2'	22:BA:2224:G:H5'	1.93	0.51
37:BP:92:VAL:HG21	37:BP:97:LEU:HD21	1.91	0.51
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	2.10	0.51
38:BQ:57:PHE:O	38:BQ:60:LEU:HB3	2.11	0.51
40:BS:82:MET:HB2	40:BS:98:LYS:HB2	1.92	0.51
48:B0:15:MET:O	48:B0:18:SER:HB3	2.11	0.51
1:CA:15:G:O4'	5:CE:29:ARG:NH2	2.43	0.51
1:CA:285:C:H2'	1:CA:286:C:C6	2.46	0.51
1:CA:293:G:O2'	1:CA:294:U:H5'	2.10	0.51
1:CA:319:G:O6	57:CA:1734:HOH:O	2.19	0.51
1:CA:328:C:O2	1:CA:328:C:C2'	2.58	0.51
1:CA:573:A:H2'	1:CA:574:A:C8	2.46	0.51
1:CA:683:G:H2'	1:CA:684:U:O4'	2.10	0.51
1:CA:1072:G:C5	1:CA:1073:U:C4	2.98	0.51
1:CA:1516:G:C2	1:CA:1520:C:O2	2.64	0.51
6:CF:97:THR:O	6:CF:98:GLU:CB	2.58	0.51
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.10	0.51
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.93	0.51
12:CL:22:PRO:C	12:CL:24:LEU:H	2.12	0.51
15:CO:16:GLY:O	15:CO:18:ASP:N	2.44	0.51
16:CP:19:VAL:HG12	16:CP:37:GLY:C	2.30	0.51
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.92	0.51
22:DA:295:G:H2'	22:DA:295:G:N3	2.26	0.51
22:DA:321:U:H4'	26:DE:159:LEU:O	2.11	0.51
22:DA:381:G:C6	22:DA:382:A:N7	2.79	0.51
22:DA:1027:A:N7	22:DA:1126:A:C2	2.79	0.51
22:DA:1317:G:N2	22:DA:1336:A:C4	2.78	0.51
22:DA:1831:G:C5	22:DA:1832:C:C4	2.99	0.51
22:DA:1833:C:C4	22:DA:1834:U:C4	2.99	0.51
22:DA:2061:G:C4	22:DA:2063:C:N4	2.79	0.51
25:DD:106:LYS:HB2	25:DD:206:ALA:HB2	1.92	0.51
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:89:ARG:O	37:DP:112:GLU:HG3	2.11	0.51
50:D2:18:PHE:O	50:D2:21:ARG:N	2.44	0.51
1:AA:502:A:H2'	1:AA:503:C:C6	2.46	0.51
1:AA:639:G:N2	1:AA:640:A:C4	2.78	0.51
1:AA:670:G:N2	1:AA:671:G:C4	2.78	0.51
1:AA:1058:G:C5	1:AA:1059:C:C5	2.99	0.51
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.43	0.51
13:AM:68:ASP:OD2	13:AM:68:ASP:N	2.42	0.51
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.93	0.51
18:AR:32:TYR:CG	18:AR:55:LEU:HD11	2.46	0.51
22:BA:869:G:C5	22:BA:870:U:C5	2.99	0.51
22:BA:969:G:C5	22:BA:970:U:C5	2.98	0.51
22:BA:1343:G:C4	22:BA:1344:U:C5	2.99	0.51
22:BA:1366:A:C5	22:BA:1367:A:C8	2.99	0.51
22:BA:2317:A:H2'	22:BA:2318:G:H5'	1.92	0.51
22:BA:2507:C:O2	22:BA:2507:C:H2'	2.10	0.51
24:BC:17:VAL:N	24:BC:204:VAL:HG22	2.25	0.51
25:BD:136:ASN:HD21	25:BD:140:HIS:CD2	2.29	0.51
29:BH:123:ARG:NH2	1:CA:367:U:P	2.81	0.51
30:BI:57:VAL:CG2	30:BI:58:VAL:N	2.74	0.51
39:BR:62:GLU:O	39:BR:64:VAL:CG1	2.58	0.51
46:BY:13:GLU:O	46:BY:15:ASN:N	2.44	0.51
1:CA:681:A:C2	1:CA:710:G:C2	2.99	0.51
1:CA:756:C:O2'	1:CA:757:U:H5'	2.11	0.51
1:CA:1066:C:H3'	1:CA:1067:A:C8	2.46	0.51
4:CD:9:LEU:HD21	4:CD:22:LYS:HD2	1.92	0.51
11:CK:101:ASN:C	11:CK:101:ASN:OD1	2.50	0.51
11:CK:112:ASP:HB3	21:CU:4:ILE:CG2	2.41	0.51
21:CU:4:ILE:N	21:CU:19:PHE:CE1	2.78	0.51
22:DA:53:A:N7	22:DA:54:G:C8	2.79	0.51
22:DA:305:C:H1'	22:DA:313:G:N2	2.25	0.51
22:DA:347:A:N1	22:DA:348:A:C6	2.79	0.51
22:DA:447:A:H5'	22:DA:449:A:C5	2.45	0.51
22:DA:515:A:C8	22:DA:516:C:C5	2.99	0.51
22:DA:811:U:C2	22:DA:1251:C:C5	2.98	0.51
22:DA:1040:A:H2'	22:DA:1041:G:O4'	2.11	0.51
23:DB:81:G:C6	23:DB:82:U:C4	2.99	0.51
24:DC:62:TYR:CE1	24:DC:63:ARG:O	2.63	0.51
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	1.93	0.51
26:DE:61:ARG:HD2	26:DE:63:LYS:O	2.11	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:14:LYS:HD3	43:DV:18:ARG:NH2	2.26	0.51
1:AA:230:G:C5	1:AA:231:U:C5	2.99	0.51
1:AA:999:C:H2'	1:AA:1000:A:C8	2.45	0.51
1:AA:1234:C:H5'	1:AA:1365:G:OP1	2.10	0.51
3:AC:2:GLY:C	3:AC:3:GLN:HG3	2.31	0.51
8:AH:36:ILE:HG22	8:AH:37:ALA:N	2.25	0.51
14:AN:36:ALA:CB	14:AN:41:ARG:HB3	2.40	0.51
22:BA:88:G:C2	22:BA:89:A:C8	2.99	0.51
22:BA:215:G:H4'	22:BA:216:A:OP1	2.10	0.51
22:BA:322:A:OP1	26:BE:162:ARG:NH1	2.43	0.51
22:BA:695:G:N3	22:BA:696:G:C8	2.79	0.51
22:BA:811:U:O2	22:BA:1250:G:O5'	2.28	0.51
22:BA:1071:G:P	22:BA:1071:G:H8	2.33	0.51
22:BA:1247:A:C4	22:BA:1249:U:C5	2.99	0.51
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.11	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
39:BR:21:ARG:HD3	39:BR:93:PHE:CG	2.46	0.51
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.24	0.51
41:BT:17:SER:O	41:BT:18:GLU:C	2.48	0.51
45:BX:64:ILE:HG23	45:BX:65:ASP:N	2.26	0.51
49:B1:12:VAL:HG12	49:B1:13:SER:N	2.26	0.51
1:CA:33:A:H2'	1:CA:34:C:H6	1.76	0.51
1:CA:457:G:N2	1:CA:476:U:C2	2.79	0.51
1:CA:511:C:C2	1:CA:512:U:C6	2.98	0.51
1:CA:792:A:H1'	1:CA:794:A:N7	2.26	0.51
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.11	0.51
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.11	0.51
4:CD:69:GLU:O	4:CD:70:ARG:C	2.49	0.51
5:CE:80:THR:HA	5:CE:120:VAL:HG12	1.92	0.51
8:CH:83:LEU:HD23	17:CQ:36:LYS:HA	1.91	0.51
9:CI:78:ALA:O	9:CI:82:GLY:N	2.44	0.51
10:CJ:6:ILE:HD12	10:CJ:76:ILE:HB	1.93	0.51
15:CO:78:TYR:OH	15:CO:88:ARG:HG2	2.11	0.51
22:DA:599:A:N6	22:DA:600:G:O6	2.44	0.51
22:DA:617:G:O6	57:DA:3285:HOH:O	2.19	0.51
22:DA:1229:C:H2'	22:DA:1230:A:O4'	2.11	0.51
22:DA:2258:C:H4'	22:DA:2259:U:OP2	2.10	0.51
22:DA:2314:A:C4'	27:DF:155:THR:HG21	2.41	0.51
22:DA:2334:U:C5	36:DO:16:ARG:HD3	2.46	0.51
22:DA:2702:G:C6	22:DA:2703:C:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2811:G:H2'	22:DA:2812:G:O4'	2.10	0.51
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.78	0.51
35:DN:90:ARG:NH2	35:DN:116:VAL:HG21	2.26	0.51
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.24	0.51
1:AA:68:G:C6	1:AA:69:G:H1'	2.46	0.51
1:AA:345:C:N3	32:BK:117:SER:OG	2.44	0.51
1:AA:693:G:P	11:AK:127:ARG:HH22	2.34	0.51
1:AA:706:A:C5	1:AA:707:U:C5	2.98	0.51
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.46	0.51
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.34	0.51
1:AA:1359:C:H2'	1:AA:1361:G:OP2	2.10	0.51
2:AB:20:THR:HG22	2:AB:38:VAL:HB	1.93	0.51
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.25	0.51
11:AK:89:PRO:HG3	21:AU:29:LEU:HD22	1.92	0.51
12:AL:83:ARG:NH1	12:AL:96:HIS:HB2	2.26	0.51
13:AM:18:ALA:O	13:AM:21:SER:HB2	2.11	0.51
14:AN:21:PHE:O	14:AN:22:ALA:HB3	2.10	0.51
14:AN:64:CYS:O	14:AN:66:GLN:N	2.44	0.51
22:BA:256:A:C2	22:BA:257:C:C6	2.99	0.51
22:BA:1072:C:OP2	22:BA:1075:C:N4	2.44	0.51
22:BA:1794:A:C4	22:BA:1795:C:C5	2.99	0.51
22:BA:2394:C:OP2	51:B3:30:ARG:HD3	2.11	0.51
22:BA:2579:C:O2'	22:BA:2580:U:H5'	2.11	0.51
40:BS:84:ARG:O	40:BS:96:ILE:HG13	2.10	0.51
43:BV:2:PHE:HB3	43:BV:50:MET:HE1	1.93	0.51
1:CA:8:A:C5	4:CD:206:LYS:HB3	2.46	0.51
1:CA:72:A:C5	1:CA:73:C:N4	2.78	0.51
1:CA:160:A:H2'	1:CA:161:A:O4'	2.11	0.51
1:CA:414:A:H2'	1:CA:415:A:O4'	2.11	0.51
1:CA:607:A:H2'	1:CA:608:A:C8	2.46	0.51
6:CF:13:ASP:O	6:CF:15:SER:N	2.43	0.51
6:CF:14:GLN:O	6:CF:16:GLU:N	2.42	0.51
9:CI:120:LYS:HG2	9:CI:123:ARG:HB3	1.92	0.51
10:CJ:25:ILE:CG2	10:CJ:74:VAL:HG21	2.41	0.51
18:CR:65:LEU:HB2	18:CR:67:LEU:HG	1.93	0.51
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.46	0.51
22:DA:407:G:N2	22:DA:421:C:C2	2.79	0.51
22:DA:565:C:H4'	22:DA:1253:A:N6	2.26	0.51
22:DA:677:A:C2	22:DA:802:A:C2	2.99	0.51
22:DA:686:U:H2'	22:DA:788:A:N1	2.27	0.51
22:DA:1177:G:H2'	22:DA:1178:C:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1334:G:H2'	22:DA:1335:C:O4'	2.10	0.51
22:DA:1387:A:O4'	22:DA:1469:A:H1'	2.10	0.51
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.44	0.51
22:DA:2821:A:C2	22:DA:2822:G:C4	2.99	0.51
23:DB:76:G:H2'	23:DB:77:U:O4'	2.11	0.51
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.46	0.51
30:DI:32:GLY:HA3	30:DI:61:VAL:HG11	1.92	0.51
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.10	0.51
39:DR:6:GLN:HG3	39:DR:7:SER:N	2.25	0.51
48:D0:13:ARG:HG3	48:D0:16:ARG:NH1	2.25	0.51
50:D2:10:LEU:HD11	50:D2:14:ARG:CZ	2.41	0.51
51:D3:47:LYS:HD3	51:D3:47:LYS:N	2.26	0.51
1:AA:233:C:H2'	1:AA:234:C:H6	1.75	0.50
1:AA:281:G:HO2'	1:AA:282:A:P	2.33	0.50
1:AA:1298:U:H4'	1:AA:1299:A:O5'	2.12	0.50
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.46	0.50
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.44	0.50
4:AD:197:GLU:O	4:AD:200:ILE:N	2.44	0.50
5:AE:111:MET:HA	5:AE:114:VAL:HG13	1.92	0.50
8:AH:51:VAL:O	8:AH:51:VAL:HG22	2.12	0.50
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.11	0.50
16:AP:46:LYS:HD3	16:AP:46:LYS:C	2.32	0.50
22:BA:27:G:C4	22:BA:512:G:C2	2.98	0.50
22:BA:198:C:P	57:BA:3761:HOH:O	2.69	0.50
22:BA:207:A:C2'	22:BA:208:C:O5'	2.59	0.50
22:BA:734:A:C5	22:BA:735:A:C8	3.00	0.50
22:BA:1073:A:C2'	22:BA:1074:G:H5"	2.41	0.50
22:BA:1132:U:H4'	31:BJ:75:TYR:CE1	2.45	0.50
22:BA:1709:U:C2	22:BA:1750:G:N2	2.78	0.50
22:BA:2901:C:N4	22:BA:2902:C:N4	2.59	0.50
25:BD:132:ALA:HA	25:BD:140:HIS:ND1	2.26	0.50
27:BF:71:ARG:HG2	27:BF:71:ARG:O	2.10	0.50
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.50
32:BK:99:ILE:HB	32:BK:119:ALA:HB2	1.93	0.50
38:BQ:21:ALA:HA	38:BQ:24:TYR:CD1	2.47	0.50
46:BY:49:ASP:O	46:BY:52:ARG:N	2.44	0.50
1:CA:206:C:H2'	1:CA:207:C:C4'	2.40	0.50
1:CA:216:U:H2'	1:CA:217:C:C6	2.46	0.50
1:CA:736:C:H2'	1:CA:737:C:C6	2.46	0.50
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.47	0.50
2:CB:206:ALA:O	2:CB:207:ILE:C	2.49	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:44:ARG:NE	4:CD:44:ARG:HA	2.25	0.50
7:CG:25:LYS:O	7:CG:29:ILE:HG12	2.11	0.50
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.11	0.50
8:CH:11:LEU:N	8:CH:11:LEU:HD23	2.24	0.50
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.77	0.50
11:CK:100:LEU:O	11:CK:102:ALA:N	2.44	0.50
12:CL:44:LYS:H	12:CL:44:LYS:HD3	1.75	0.50
22:DA:245:G:O6	51:D3:8:ARG:HD3	2.11	0.50
22:DA:1206:G:C6	22:DA:1207:C:C4	2.99	0.50
22:DA:1712:U:H3'	22:DA:1713:A:H2'	1.93	0.50
22:DA:2330:G:N2	22:DA:2386:A:C2	2.79	0.50
22:DA:2376:A:H2'	22:DA:2377:A:O4'	2.11	0.50
22:DA:2591:C:C4	22:DA:2592:G:N7	2.80	0.50
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.35	0.50
25:DD:177:VAL:HG23	25:DD:187:LEU:HD11	1.93	0.50
28:DG:17:VAL:HG12	28:DG:19:ILE:HD11	1.91	0.50
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.50
33:DL:77:ILE:HG23	33:DL:81:ASP:OD2	2.10	0.50
41:DT:49:LYS:O	41:DT:51:PHE:N	2.44	0.50
1:AA:286:C:C2	1:AA:287:U:C6	2.99	0.50
1:AA:957:U:O2	1:AA:957:U:H2'	2.12	0.50
1:AA:1082:A:H2'	1:AA:1083:U:O4'	2.11	0.50
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.25	0.50
1:AA:1134:G:C6	1:AA:1141:C:N4	2.79	0.50
4:AD:19:LEU:HD22	4:AD:64:ILE:CG1	2.42	0.50
9:AI:11:ARG:CB	9:AI:15:SER:O	2.59	0.50
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.40	0.50
19:AS:51:VAL:HG11	19:AS:72:GLY:HA2	1.93	0.50
21:AU:6:VAL:O	21:AU:6:VAL:HG23	2.12	0.50
22:BA:531:C:C5	22:BA:2035:G:C2	2.99	0.50
22:BA:729:G:OP2	24:BC:207:LYS:NZ	2.37	0.50
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.59	0.50
22:BA:1259:G:H2'	22:BA:1260:A:C8	2.46	0.50
22:BA:1361:G:C5	22:BA:1371:G:N2	2.79	0.50
22:BA:1400:U:C2'	22:BA:1401:G:H5'	2.41	0.50
22:BA:1406:U:H2'	22:BA:1407:G:O5'	2.12	0.50
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.11	0.50
22:BA:1832:C:N4	22:BA:1833:C:C4	2.79	0.50
22:BA:1869:G:C2	22:BA:1873:G:C6	2.99	0.50
22:BA:2198:A:N3	29:BH:29:PHE:HB2	2.25	0.50
22:BA:2461:A:H1'	22:BA:2492:U:C2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	1.93	0.50
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.11	0.50
35:BN:55:ALA:HB1	35:BN:80:PHE:H	1.76	0.50
49:B1:40:ASP:C	49:B1:40:ASP:OD1	2.49	0.50
53:B5:43:GLU:O	53:B5:213:VAL:HA	2.11	0.50
1:CA:40:C:H2'	1:CA:41:G:C8	2.47	0.50
1:CA:128:G:N1	1:CA:129:A:C6	2.79	0.50
1:CA:774:G:C5	1:CA:775:G:N7	2.79	0.50
1:CA:1060:U:O2'	10:CJ:54:SER:HB2	2.10	0.50
5:CE:85:VAL:HG22	5:CE:86:LYS:N	2.27	0.50
22:DA:279:A:C2	22:DA:362:A:H4'	2.46	0.50
22:DA:856:G:C2	22:DA:922:C:N3	2.79	0.50
22:DA:1885:A:C6	22:DA:1886:U:C2	2.99	0.50
22:DA:2070:A:C2	22:DA:2442:C:C2	3.00	0.50
22:DA:2133:G:N2	22:DA:2158:A:C6	2.80	0.50
22:DA:2205:A:C2	22:DA:2220:U:O2	2.64	0.50
22:DA:2676:C:P	32:DK:31:ARG:HH22	2.33	0.50
23:DB:78:A:C6	23:DB:99:A:C8	2.99	0.50
30:DI:18:ALA:O	30:DI:19:ASN:HB3	2.11	0.50
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.93	0.50
40:DS:46:LEU:O	40:DS:50:VAL:HG23	2.11	0.50
44:DW:68:LYS:HE3	44:DW:70:GLU:HG3	1.93	0.50
1:AA:689:C:C2	1:AA:690:G:C8	2.99	0.50
1:AA:692:U:H5"	11:AK:127:ARG:NH2	2.25	0.50
1:AA:756:C:H2'	1:AA:757:U:O4'	2.10	0.50
1:AA:795:C:H5"	1:AA:796:C:OP2	2.12	0.50
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.46	0.50
4:AD:54:GLN:NE2	4:AD:202:GLU:HB3	2.27	0.50
4:AD:115:ARG:O	4:AD:118:VAL:N	2.44	0.50
9:AI:120:LYS:HG3	9:AI:123:ARG:CB	2.41	0.50
10:AJ:92:LEU:O	10:AJ:93:ALA:HB3	2.12	0.50
14:AN:10:GLU:HA	14:AN:13:ARG:HG3	1.93	0.50
22:BA:71:A:OP2	22:BA:71:A:H3'	2.11	0.50
22:BA:558:U:OP1	31:BJ:113:PRO:HD2	2.11	0.50
22:BA:1043:C:N4	22:BA:1044:C:N4	2.59	0.50
22:BA:1059:G:H1'	30:BI:128:SER:O	2.11	0.50
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.12	0.50
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.23	0.50
22:BA:1985:C:O2	22:BA:1985:C:C2'	2.56	0.50
22:BA:2192:U:C2	22:BA:2193:G:C8	2.99	0.50
22:BA:2552:U:C2	22:BA:2554:U:H5'	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:109:A:N7	23:BB:110:C:C5	2.79	0.50
24:BC:171:TYR:HA	24:BC:185:GLU:HA	1.92	0.50
28:BG:94:TYR:HA	28:BG:106:SER:O	2.11	0.50
28:BG:111:HIS:O	28:BG:111:HIS:CG	2.63	0.50
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	1.93	0.50
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.94	0.50
52:B4:25:VAL:CG2	52:B4:35:GLN:HB2	2.42	0.50
1:CA:188:C:N4	1:CA:189:A:C6	2.80	0.50
1:CA:248:C:C4	1:CA:249:U:C4	2.98	0.50
1:CA:406:G:C6	1:CA:495:A:C8	3.00	0.50
1:CA:851:G:C2	1:CA:852:G:N7	2.80	0.50
1:CA:1253:G:N1	1:CA:1285:A:N6	2.59	0.50
1:CA:1530:G:O2'	1:CA:1531:A:OP2	2.22	0.50
3:CC:42:TYR:CZ	3:CC:46:GLU:HG3	2.46	0.50
4:CD:58:LYS:HB2	4:CD:200:ILE:HD12	1.94	0.50
22:DA:205:G:HO2'	22:DA:206:U:P	2.34	0.50
22:DA:704:G:H1'	22:DA:726:G:N2	2.26	0.50
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.28	0.50
22:DA:1827:U:O2'	22:DA:1970:A:N3	2.36	0.50
22:DA:1838:C:C6	22:DA:1899:A:C6	3.00	0.50
22:DA:1865:U:C5	22:DA:1875:G:C2	2.99	0.50
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.11	0.50
27:DF:46:ASP:HB3	27:DF:49:LEU:HB2	1.93	0.50
28:DG:67:THR:O	28:DG:71:LEU:N	2.41	0.50
35:DN:65:LEU:HD11	35:DN:69:ARG:NH2	2.27	0.50
37:DP:113:ARG:O	37:DP:114:LEU:HD23	2.12	0.50
44:DW:23:VAL:HG22	44:DW:38:VAL:HG13	1.93	0.50
44:DW:34:GLY:O	44:DW:35:SER:C	2.50	0.50
45:DX:52:SER:OG	45:DX:55:GLY:N	2.40	0.50
45:DX:54:LYS:O	45:DX:57:ARG:N	2.44	0.50
1:AA:935:A:C2	1:AA:936:C:C2	2.98	0.50
1:AA:1166:G:O2'	1:AA:1169:A:N6	2.44	0.50
6:AF:86:ARG:HH11	6:AF:86:ARG:CG	2.25	0.50
7:AG:95:ARG:O	7:AG:98:ALA:N	2.44	0.50
9:AI:13:LYS:HG2	9:AI:13:LYS:O	2.11	0.50
14:AN:25:ALA:O	14:AN:28:LYS:HG2	2.11	0.50
22:BA:359:G:C6	22:BA:360:U:C4	3.00	0.50
22:BA:1338:G:C2'	22:BA:1339:G:H5'	2.42	0.50
25:BD:35:THR:OG1	25:BD:49:GLN:HG2	2.11	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
31:BJ:7:LYS:O	31:BJ:11:VAL:HG23	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:36:LYS:O	33:BL:40:SER:HB3	2.11	0.50
33:BL:114:GLY:O	33:BL:115:GLU:O	2.27	0.50
36:BO:53:THR:HG23	36:BO:74:VAL:HG21	1.92	0.50
49:B1:48:ILE:N	49:B1:48:ILE:HD12	2.26	0.50
1:CA:33:A:H2'	1:CA:34:C:C6	2.47	0.50
1:CA:116:A:C8	1:CA:116:A:OP2	2.64	0.50
1:CA:577:G:C8	1:CA:816:A:C2	2.98	0.50
1:CA:1212:U:H4'	1:CA:1213:A:C8	2.47	0.50
6:CF:90:MET:O	6:CF:91:ARG:O	2.30	0.50
9:CI:120:LYS:O	9:CI:121:ALA:HB3	2.12	0.50
22:DA:83:A:H5"	22:DA:84:A:P	2.52	0.50
22:DA:118:A:H1'	22:DA:178:G:C1'	2.41	0.50
22:DA:699:A:H2'	22:DA:700:G:O4'	2.12	0.50
22:DA:1336:A:H2'	22:DA:1337:G:C8	2.45	0.50
22:DA:1779:U:H5	22:DA:1784:A:N7	2.09	0.50
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.26	0.50
31:DJ:109:LEU:HD23	31:DJ:110:PRO:HD2	1.92	0.50
34:DM:56:ALA:C	34:DM:58:LYS:H	2.13	0.50
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.45	0.50
49:D1:10:LYS:O	49:D1:51:GLU:HG2	2.12	0.50
1:AA:110:C:O2'	16:AP:25:ARG:O	2.29	0.50
1:AA:591:U:OP1	8:AH:31:LYS:HD2	2.10	0.50
1:AA:1264:U:O2	1:AA:1272:G:C2	2.65	0.50
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	1.93	0.50
6:AF:41:ASP:O	6:AF:43:GLY:N	2.44	0.50
13:AM:34:LEU:HD22	13:AM:41:GLU:HA	1.92	0.50
22:BA:192:C:P	57:BA:3742:HOH:O	2.70	0.50
22:BA:308:G:H2'	22:BA:309:A:O4'	2.11	0.50
22:BA:714:U:O2	22:BA:717:C:H5	1.95	0.50
22:BA:833:A:H2'	22:BA:834:G:C8	2.47	0.50
22:BA:1027:A:H2'	22:BA:1126:A:N6	2.26	0.50
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.10	0.50
22:BA:1972:G:C2	22:BA:1973:G:C5	3.00	0.50
22:BA:2027:G:C5	22:BA:2028:U:C5	3.00	0.50
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.47	0.50
22:BA:2502:G:H5'	22:BA:2503:A:H5"	1.92	0.50
22:BA:2534:A:H2'	22:BA:2535:G:O5'	2.11	0.50
22:BA:2716:C:H2'	22:BA:2717:C:H6	1.75	0.50
22:BA:2845:U:H5"	37:BP:52:ASN:O	2.11	0.50
24:BC:67:PHE:CE2	24:BC:156:ARG:CZ	2.95	0.50
25:BD:84:LEU:HD22	25:BD:88:GLU:CB	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.52	0.50
39:BR:68:ARG:HD3	39:BR:92:TRP:CE2	2.46	0.50
41:BT:2:ILE:HG23	41:BT:4:GLU:HA	1.94	0.50
49:B1:36:LEU:O	49:B1:49:TYR:N	2.41	0.50
1:CA:115:G:C2	1:CA:289:G:N7	2.80	0.50
1:CA:660:C:C2	1:CA:661:G:C8	3.00	0.50
1:CA:1426:G:C4	1:CA:1475:G:C2	3.00	0.50
2:CB:83:ALA:O	2:CB:86:SER:OG	2.29	0.50
22:DA:228:C:H5"	22:DA:229:C:C6	2.47	0.50
22:DA:308:G:N1	22:DA:309:A:C2	2.80	0.50
22:DA:1153:C:H3'	22:DA:1154:G:C8	2.47	0.50
22:DA:1694:C:H4'	22:DA:1695:G:O5'	2.12	0.50
23:DB:29:A:H2'	23:DB:30:C:C6	2.47	0.50
57:DB:307:HOH:O	43:DV:14:LYS:HD2	2.10	0.50
35:DN:25:ALA:HA	35:DN:44:LEU:HD11	1.93	0.50
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.25	0.50
1:AA:2:A:C6	1:AA:3:A:N1	2.80	0.50
1:AA:89:U:O2'	1:AA:90:C:H5'	2.11	0.50
1:AA:188:C:N3	1:AA:189:A:C2	2.80	0.50
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.59	0.50
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	1.94	0.50
10:AJ:50:THR:HB	10:AJ:64:GLN:HG2	1.92	0.50
22:BA:181:A:H2'	22:BA:182:A:C8	2.45	0.50
22:BA:764:A:H3'	22:BA:765:C:H5'	1.92	0.50
22:BA:1818:U:OP2	24:BC:156:ARG:NH1	2.44	0.50
22:BA:2063:C:O2	22:BA:2450:A:N1	2.44	0.50
22:BA:2593:U:C4	22:BA:2594:C:C5	2.99	0.50
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.11	0.50
24:BC:143:ASN:OD1	24:BC:143:ASN:O	2.30	0.50
25:BD:175:LEU:N	25:BD:175:LEU:HD23	2.27	0.50
27:BF:107:ALA:C	27:BF:109:PRO:HD2	2.32	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
29:BH:97:ARG:NH1	1:CA:369:G:H2'	2.26	0.50
38:BQ:92:ARG:HA	38:BQ:95:LEU:HB2	1.94	0.50
53:B5:41:THR:O	53:B5:215:VAL:CB	2.60	0.50
53:B5:64:SER:O	53:B5:65:LEU:CB	2.58	0.50
1:CA:563:A:C8	1:CA:567:G:C1'	2.94	0.50
4:CD:22:LYS:O	4:CD:23:SER:C	2.50	0.50
13:CM:54:ASP:HA	13:CM:57:ARG:CB	2.41	0.50
14:CN:18:ASP:HA	14:CN:22:ALA:HB3	1.92	0.50
22:DA:160:A:N3	22:DA:2208:C:O2'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:479:A:H4'	22:DA:480:A:OP1	2.10	0.50
22:DA:799:G:OP2	22:DA:800:A:C2'	2.59	0.50
22:DA:1288:G:C8	22:DA:1327:A:C6	2.99	0.50
22:DA:1353:A:H2'	22:DA:1354:A:O4'	2.12	0.50
22:DA:1638:C:H5"	22:DA:2710:C:O2'	2.12	0.50
26:DE:131:THR:HG22	26:DE:160:ALA:O	2.11	0.50
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.50
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.92	0.50
36:DO:94:ARG:HD2	36:DO:97:PHE:O	2.12	0.50
38:DQ:49:ASP:O	38:DQ:53:ARG:HB2	2.12	0.50
40:DS:28:LYS:O	40:DS:30:SER:N	2.44	0.50
45:DX:13:VAL:HG23	45:DX:13:VAL:O	2.11	0.50
1:AA:299:G:C6	1:AA:300:A:C6	2.99	0.50
1:AA:579:A:H2'	1:AA:580:C:C6	2.47	0.50
1:AA:1025:U:H5"	1:AA:1026:G:O5'	2.11	0.50
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.46	0.50
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.27	0.50
2:AB:187:VAL:HG11	2:AB:196:VAL:HG21	1.94	0.50
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.11	0.50
13:AM:107:ARG:HG2	13:AM:107:ARG:HH11	1.77	0.50
17:AQ:14:SER:HB3	17:AQ:22:VAL:HG12	1.93	0.50
22:BA:614:A:O2'	22:BA:615:U:P	2.69	0.50
22:BA:948:C:O2	22:BA:984:A:O2'	2.26	0.50
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.27	0.50
22:BA:1469:A:C2	22:BA:1470:A:C4	2.99	0.50
22:BA:1688:U:O2	22:BA:1700:A:H5"	2.11	0.50
22:BA:1833:C:C5	22:BA:1834:U:C5	3.00	0.50
24:BC:167:ARG:O	24:BC:168:ASP:CB	2.59	0.50
33:BL:79:LEU:HD11	33:BL:112:LEU:CD1	2.42	0.50
36:BO:10:ARG:NH2	36:BO:96:GLY:O	2.42	0.50
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.47	0.50
1:CA:295:C:C4	1:CA:296:U:C4	2.99	0.50
1:CA:794:A:C6	1:CA:795:C:C4	3.00	0.50
1:CA:978:A:C5	1:CA:1318:A:N6	2.80	0.50
4:CD:196:ASN:HB3	4:CD:198:HIS:CE1	2.47	0.50
5:CE:149:SER:HB2	5:CE:152:MET:CG	2.41	0.50
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	1.93	0.50
11:CK:100:LEU:C	11:CK:102:ALA:N	2.63	0.50
14:CN:10:GLU:O	14:CN:13:ARG:N	2.45	0.50
22:DA:109:C:C2	22:DA:110:G:C8	3.00	0.50
22:DA:183:C:H1'	22:DA:433:C:H1'	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:674:G:H1'	26:DE:69:ARG:HD3	1.94	0.50
22:DA:813:U:H1'	22:DA:1226:A:N3	2.27	0.50
22:DA:936:A:C2	22:DA:937:C:C2	3.00	0.50
22:DA:1265:A:N1	22:DA:2013:A:H5"	2.26	0.50
22:DA:2286:G:H5"	22:DA:2287:A:OP1	2.11	0.50
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.11	0.50
26:DE:197:GLU:O	26:DE:201:ALA:HB2	2.12	0.50
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.47	0.50
31:DJ:6:ALA:O	31:DJ:7:LYS:HG3	2.12	0.50
33:DL:79:LEU:HB3	33:DL:114:GLY:O	2.12	0.50
33:DL:110:VAL:HG12	33:DL:131:ALA:HB1	1.93	0.50
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.47	0.50
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.12	0.50
1:AA:54:C:H2'	1:AA:352:C:N4	2.27	0.50
1:AA:130:A:C8	17:AQ:65:ARG:HB2	2.47	0.50
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.26	0.50
1:AA:198:G:C5	1:AA:220:G:C2	2.99	0.50
1:AA:234:C:O2'	1:AA:235:C:H5'	2.12	0.50
1:AA:411:A:C6	1:AA:429:U:C5	2.99	0.50
1:AA:642:A:C5	8:AH:107:SER:HA	2.46	0.50
1:AA:901:A:N7	1:AA:902:G:H1'	2.27	0.50
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.12	0.50
3:AC:175:LEU:HD12	3:AC:175:LEU:O	2.12	0.50
6:AF:90:MET:HG2	18:AR:61:ARG:NH2	2.27	0.50
9:AI:83:ILE:O	9:AI:87:LEU:HD13	2.12	0.50
17:AQ:69:LYS:O	17:AQ:69:LYS:HG2	2.11	0.50
22:BA:859:G:N3	22:BA:916:G:C6	2.79	0.50
22:BA:983:A:C6	22:BA:984:A:C2	3.00	0.50
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.75	0.50
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.12	0.50
22:BA:1912:A:C2	22:BA:1919:A:C4	3.00	0.50
22:BA:2051:A:N6	22:BA:2614:A:C8	2.80	0.50
22:BA:2527:C:H2'	22:BA:2528:U:H5'	1.93	0.50
22:BA:2591:C:P	24:BC:238:ARG:HG3	2.52	0.50
22:BA:2887:A:N3	22:BA:2888:C:C6	2.80	0.50
23:BB:53:A:H2'	23:BB:53:A:N3	2.27	0.50
28:BG:64:GLN:OE1	28:BG:64:GLN:HA	2.11	0.50
43:BV:65:VAL:HG22	43:BV:65:VAL:O	2.12	0.50
50:B2:1:MET:O	50:B2:2:LYS:C	2.49	0.50
1:CA:39:G:H2'	1:CA:40:C:C6	2.45	0.50
1:CA:327:A:C6	1:CA:329:A:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:376:G:H5'	16:CP:5:ARG:HB2	1.94	0.50
1:CA:623:C:C4	1:CA:624:C:C5	2.99	0.50
1:CA:1124:G:N2	1:CA:1127:G:N2	2.60	0.50
4:CD:76:TYR:O	4:CD:77:LYS:C	2.50	0.50
7:CG:23:LEU:HD22	7:CG:27:VAL:HG13	1.93	0.50
9:CI:26:GLY:HA2	9:CI:61:LEU:O	2.12	0.50
22:DA:406:G:H2'	22:DA:407:G:O4'	2.12	0.50
22:DA:460:A:C2	22:DA:470:A:C5	3.00	0.50
22:DA:618:G:N3	22:DA:618:G:H2'	2.26	0.50
22:DA:764:A:C2	22:DA:781:A:C6	3.00	0.50
22:DA:1097:U:O2	30:DI:9:VAL:HG11	2.11	0.50
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.11	0.50
22:DA:1655:A:C6	22:DA:1656:C:C2	2.99	0.50
22:DA:1907:G:C2	22:DA:1924:C:C2	2.99	0.50
22:DA:2109:U:H2'	22:DA:2110:G:C8	2.47	0.50
22:DA:2262:U:C2	22:DA:2279:G:N2	2.79	0.50
22:DA:2308:G:H5"	22:DA:2309:A:OP2	2.12	0.50
22:DA:2802:G:C2	22:DA:2803:G:C4	3.00	0.50
24:DC:36:LYS:O	24:DC:36:LYS:HG3	2.12	0.50
28:DG:7:ALA:O	28:DG:69:ARG:NE	2.44	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.12	0.50
30:DI:113:LYS:O	30:DI:117:MET:HB2	2.12	0.50
36:DO:26:LEU:CD2	36:DO:117:PHE:CE2	2.95	0.50
52:D4:1:MET:SD	52:D4:34:LYS:HG2	2.52	0.50
52:D4:3:VAL:O	52:D4:3:VAL:CG2	2.60	0.50
1:AA:22:G:H4'	1:AA:885:G:C8	2.47	0.50
1:AA:96:U:O2'	1:AA:97:G:OP2	2.29	0.50
1:AA:695:A:N1	1:AA:696:A:C2	2.80	0.50
1:AA:927:G:C6	1:AA:1391:U:O2	2.65	0.50
1:AA:951:G:N2	1:AA:952:U:C2	2.80	0.50
1:AA:1059:C:C2	1:AA:1060:U:C5	3.00	0.50
1:AA:1106:G:C6	1:AA:1107:C:N4	2.79	0.50
2:AB:164:ILE:HG23	2:AB:165:ASP:H	1.77	0.50
5:AE:41:ASP:OD1	5:AE:44:GLY:O	2.30	0.50
11:AK:74:VAL:O	11:AK:79:ILE:HG13	2.11	0.50
11:AK:112:ASP:OD2	11:AK:114:THR:HG23	2.12	0.50
13:AM:33:ILE:O	13:AM:36:ALA:N	2.45	0.50
16:AP:51:ARG:HH11	16:AP:51:ARG:CG	2.24	0.50
21:AU:37:PHE:HD1	21:AU:40:LYS:HE3	1.76	0.50
22:BA:780:G:H21	22:BA:783:A:H62	1.60	0.50
22:BA:1197:G:H2'	22:BA:1198:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1232:G:C4	22:BA:1233:C:C6	3.00	0.50
22:BA:2611:C:H2'	22:BA:2612:C:O4'	2.12	0.50
22:BA:2861:U:O2	22:BA:2861:U:H2'	2.12	0.50
24:BC:167:ARG:O	24:BC:168:ASP:HB3	2.12	0.50
36:BO:87:ILE:HG22	36:BO:88:LYS:N	2.27	0.50
38:BQ:74:ILE:HG23	38:BQ:74:ILE:O	2.12	0.50
40:BS:25:ARG:NH2	40:BS:74:ILE:O	2.45	0.50
42:BU:44:LYS:N	42:BU:59:VAL:O	2.44	0.50
46:BY:39:GLN:HB2	46:BY:41:HIS:CE1	2.47	0.50
1:CA:66:A:O4'	1:CA:173:U:C4	2.64	0.50
1:CA:502:A:H2'	1:CA:503:C:O4'	2.12	0.50
1:CA:910:C:H2'	1:CA:911:U:O4'	2.12	0.50
1:CA:1226:C:N4	13:CM:103:LYS:HE2	2.27	0.50
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.74	0.50
12:CL:44:LYS:HB2	12:CL:45:PRO:HD3	1.93	0.50
16:CP:75:ILE:O	16:CP:78:VAL:HG12	2.11	0.50
22:DA:161:A:P	22:DA:162:U:H3'	2.52	0.50
22:DA:222:A:H3'	22:DA:421:C:C5'	2.41	0.50
22:DA:602:A:N3	22:DA:655:A:C2	2.80	0.50
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.60	0.50
22:DA:1682:G:N2	22:DA:1757:A:O4'	2.45	0.50
22:DA:2031:A:O2'	22:DA:2454:G:N2	2.45	0.50
22:DA:2322:A:N7	22:DA:2323:G:N7	2.59	0.50
27:DF:50:LEU:CD2	27:DF:84:PRO:HB2	2.42	0.50
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.93	0.50
42:DU:74:ASN:C	42:DU:76:ALA:H	2.14	0.50
50:D2:44:VAL:O	50:D2:45:SER:CB	2.59	0.50
1:AA:89:U:O2'	1:AA:90:C:C5'	2.60	0.49
1:AA:251:G:C6	1:AA:266:G:O6	2.65	0.49
1:AA:525:C:H2'	1:AA:526:C:C6	2.46	0.49
1:AA:588:G:C6	1:AA:589:U:N3	2.80	0.49
4:AD:11:LEU:HD21	4:AD:63:ARG:HD3	1.92	0.49
4:AD:151:LYS:HB2	4:AD:156:LYS:CE	2.41	0.49
5:AE:80:THR:CB	5:AE:122:ASN:HD21	2.25	0.49
9:AI:30:ILE:HD12	9:AI:79:ILE:CD1	2.41	0.49
10:AJ:25:ILE:HG22	10:AJ:26:VAL:N	2.27	0.49
22:BA:848:C:H2'	22:BA:849:A:C8	2.47	0.49
22:BA:1712:U:H3'	22:BA:1713:A:H2'	1.92	0.49
22:BA:1965:C:OP1	22:BA:1966:A:O2'	2.14	0.49
22:BA:1971:U:OP2	22:BA:1971:U:H4'	2.12	0.49
26:BE:193:VAL:O	26:BE:197:GLU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:122:PHE:HB3	27:BF:163:ASP:OD2	2.13	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
32:BK:47:ILE:HB	32:BK:48:PRO:HD3	1.94	0.49
33:BL:9:ALA:O	33:BL:10:GLU:C	2.49	0.49
53:B5:42:VAL:HG12	53:B5:214:TYR:HA	1.93	0.49
53:B5:47:LYS:HB2	53:B5:210:LEU:CB	2.42	0.49
53:B5:48:LEU:HD12	53:B5:57:GLN:HG2	1.94	0.49
1:CA:38:G:C2	1:CA:397:A:N3	2.79	0.49
1:CA:62:U:O2'	1:CA:379:C:O2	2.29	0.49
1:CA:421:U:O5'	1:CA:422:C:H5	1.96	0.49
1:CA:435:A:C5	1:CA:436:C:C6	3.00	0.49
1:CA:745:G:C6	1:CA:746:A:C6	3.00	0.49
1:CA:747:A:N6	1:CA:748:G:O6	2.44	0.49
1:CA:852:G:C5	1:CA:853:C:C5	2.99	0.49
1:CA:926:G:C6	1:CA:1505:G:C6	2.99	0.49
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.47	0.49
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.47	0.49
4:CD:3:ARG:O	4:CD:5:LEU:HD13	2.11	0.49
4:CD:4:TYR:O	4:CD:5:LEU:HB2	2.12	0.49
4:CD:46:PRO:O	4:CD:47:ARG:O	2.30	0.49
20:CT:24:ARG:O	20:CT:27:MET:HG3	2.12	0.49
22:DA:616:A:C2	22:DA:617:G:C1'	2.95	0.49
22:DA:662:G:O3'	33:DL:16:GLY:HA2	2.12	0.49
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.47	0.49
22:DA:2212:A:C2	22:DA:2214:C:C4	3.00	0.49
22:DA:2688:G:N1	22:DA:2720:U:OP2	2.31	0.49
24:DC:9:THR:O	24:DC:10:SER:CB	2.61	0.49
35:DN:106:ASP:C	35:DN:106:ASP:OD1	2.50	0.49
37:DP:89:ARG:HD3	37:DP:113:ARG:NH2	2.26	0.49
40:DS:41:LYS:O	40:DS:42:LYS:C	2.49	0.49
42:DU:95:PHE:HA	42:DU:101:GLU:O	2.12	0.49
43:DV:51:GLN:HA	43:DV:56:PHE:HB2	1.94	0.49
1:AA:204:G:H2'	1:AA:205:A:O4'	2.11	0.49
1:AA:263:A:P	20:AT:74:ARG:HH12	2.35	0.49
1:AA:723:U:O2'	1:AA:855:U:H4'	2.11	0.49
1:AA:858:G:O2'	1:AA:859:G:H5'	2.11	0.49
1:AA:907:A:C4	1:AA:908:A:C8	3.00	0.49
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.48	0.49
1:AA:1032:G:H3'	1:AA:1033:G:O4'	2.12	0.49
1:AA:1088:G:C6	1:AA:1089:G:C5	3.01	0.49
2:AB:206:ALA:O	2:AB:208:ARG:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:26:THR:O	6:AF:30:THR:HG23	2.12	0.49
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.11	0.49
13:AM:34:LEU:HD23	13:AM:39:ILE:CG2	2.42	0.49
22:BA:1449:G:O2'	22:BA:1450:G:H5'	2.12	0.49
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.35	0.49
22:BA:1754:A:H2'	22:BA:1755:A:C8	2.47	0.49
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.12	0.49
22:BA:2198:A:N1	29:BH:25:TYR:HD1	2.09	0.49
22:BA:2592:G:C6	22:BA:2593:U:C4	3.00	0.49
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.48	0.49
24:BC:130:LEU:HG	24:BC:135:ILE:HD11	1.95	0.49
24:BC:160:THR:O	24:BC:195:VAL:HG12	2.12	0.49
28:BG:32:GLU:C	28:BG:33:LEU:HD12	2.32	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
30:BI:97:LYS:CG	30:BI:139:VAL:HG22	2.42	0.49
35:BN:32:GLU:CD	35:BN:86:ARG:HH22	2.15	0.49
35:BN:103:ARG:CB	35:BN:110:MET:HE3	2.34	0.49
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.42	0.49
37:BP:34:GLU:O	37:BP:36:SER:N	2.46	0.49
1:CA:200:G:C2	1:CA:218:U:O2	2.65	0.49
1:CA:216:U:C5'	1:CA:464:U:H4'	2.42	0.49
1:CA:360:G:O2'	1:CA:361:G:H5'	2.12	0.49
1:CA:418:C:H1'	1:CA:540:G:O2'	2.11	0.49
1:CA:572:A:N3	1:CA:917:G:H1'	2.27	0.49
1:CA:945:G:H2'	1:CA:945:G:N3	2.26	0.49
1:CA:992:U:O4'	1:CA:993:G:C2	2.65	0.49
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.46	0.49
1:CA:1112:C:C4	3:CC:178:LEU:HD23	2.46	0.49
1:CA:1491:G:C6	1:CA:1492:A:N1	2.80	0.49
2:CB:102:THR:HA	2:CB:179:LEU:HD21	1.94	0.49
4:CD:105:MET:O	4:CD:173:VAL:HG21	2.12	0.49
5:CE:105:ILE:H	5:CE:122:ASN:HA	1.77	0.49
9:CI:121:ALA:O	9:CI:122:ARG:HG2	2.12	0.49
10:CJ:26:VAL:HG21	10:CJ:39:PRO:HD3	1.94	0.49
16:CP:52:LEU:HD21	16:CP:57:ILE:HD12	1.93	0.49
22:DA:71:A:C2	22:DA:73:A:C2	3.00	0.49
22:DA:230:G:N1	22:DA:231:A:C5	2.80	0.49
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.43	0.49
22:DA:1085:A:N7	22:DA:1086:A:N6	2.59	0.49
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.30	0.49
22:DA:1918:A:O2'	22:DA:1920:C:C4	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2100:G:C6	22:DA:2190:G:C5	3.01	0.49
22:DA:2272:U:H5"	22:DA:2273:A:OP1	2.12	0.49
22:DA:2322:A:C5	22:DA:2323:G:C8	3.00	0.49
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.12	0.49
22:DA:2709:G:OP1	35:DN:18:GLN:NE2	2.46	0.49
22:DA:2808:G:N2	22:DA:2891:U:C6	2.81	0.49
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.12	0.49
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.49
31:DJ:39:LYS:NZ	31:DJ:44:TYR:CE1	2.80	0.49
33:DL:41:ARG:O	33:DL:44:GLY:N	2.45	0.49
37:DP:88:ARG:NH2	37:DP:110:ILE:O	2.39	0.49
42:DU:72:ILE:CD1	42:DU:83:VAL:HG23	2.42	0.49
45:DX:33:LEU:O	45:DX:34:HIS:ND1	2.45	0.49
50:D2:43:THR:OG1	50:D2:44:VAL:O	2.30	0.49
1:AA:358:U:H2'	1:AA:359:G:H8	1.77	0.49
1:AA:423:G:N2	1:AA:424:G:C8	2.80	0.49
1:AA:542:G:C2	1:AA:543:U:C6	3.00	0.49
1:AA:974:A:H4'	1:AA:975:A:O5'	2.11	0.49
1:AA:1157:A:C4	1:AA:1181:G:C6	3.00	0.49
1:AA:1537:U:C4	1:AA:1538:C:C4	3.00	0.49
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.45	0.49
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.75	0.49
22:BA:288:U:N3	22:BA:289:G:N7	2.60	0.49
22:BA:368:A:C5	22:BA:369:U:C4	3.00	0.49
22:BA:716:A:C6	22:BA:717:C:C4	2.99	0.49
22:BA:1347:A:C2'	22:BA:1348:C:O5'	2.59	0.49
22:BA:1869:G:C3'	22:BA:1870:C:H5'	2.42	0.49
22:BA:2218:G:C2'	22:BA:2219:U:H5'	2.42	0.49
22:BA:2415:G:C4	22:BA:2416:C:C6	3.00	0.49
23:BB:30:C:H2'	23:BB:31:C:H5'	1.94	0.49
24:BC:266:PHE:N	24:BC:266:PHE:CD1	2.78	0.49
25:BD:101:PHE:CE2	25:BD:107:VAL:HG11	2.47	0.49
26:BE:155:GLU:OE1	26:BE:155:GLU:HA	2.11	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
38:BQ:19:LYS:O	38:BQ:22:LYS:HG3	2.12	0.49
38:BQ:24:TYR:HB3	38:BQ:28:ARG:HB3	1.94	0.49
40:BS:14:ALA:O	40:BS:18:ARG:HG3	2.10	0.49
42:BU:99:ASN:OD1	42:BU:101:GLU:HB3	2.11	0.49
45:BX:37:ARG:HG2	45:BX:46:PHE:HB3	1.94	0.49
50:B2:33:ARG:O	50:B2:36:ALA:N	2.46	0.49
53:B5:64:SER:O	53:B5:65:LEU:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:8:A:N6	4:CD:206:LYS:HB3	2.27	0.49
1:CA:435:A:C5	1:CA:436:C:C5	3.01	0.49
1:CA:541:G:H2'	1:CA:542:G:O4'	2.12	0.49
1:CA:1491:G:H2'	1:CA:1492:A:C8	2.48	0.49
2:CB:23:TRP:O	2:CB:23:TRP:CG	2.65	0.49
2:CB:222:ARG:NE	2:CB:223:GLU:HB2	2.27	0.49
6:CF:11:HIS:CG	6:CF:12:PRO:HD2	2.48	0.49
9:CI:90:TYR:O	9:CI:91:ASP:CG	2.51	0.49
16:CP:55:ASP:O	16:CP:58:ALA:HB3	2.11	0.49
22:DA:615:U:N3	26:DE:35:TYR:CE1	2.80	0.49
22:DA:1317:G:N2	22:DA:1336:A:N3	2.60	0.49
22:DA:1805:A:H1'	24:DC:50:THR:O	2.13	0.49
22:DA:1826:G:C5	22:DA:1827:U:C4	3.00	0.49
22:DA:2257:U:C4	22:DA:2258:C:N4	2.80	0.49
22:DA:2327:A:H2'	22:DA:2328:A:C8	2.47	0.49
22:DA:2521:C:C2	22:DA:2545:G:N2	2.80	0.49
23:DB:42:C:N4	23:DB:43:C:N3	2.60	0.49
27:DF:5:HIS:HB2	27:DF:97:TRP:CG	2.48	0.49
28:DG:85:LYS:HG3	28:DG:141:ILE:HD12	1.94	0.49
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.49
32:DK:121:GLU:O	32:DK:122:VAL:O	2.31	0.49
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.12	0.49
43:DV:20:LEU:HD23	43:DV:25:LYS:HB2	1.94	0.49
45:DX:36:HIS:ND1	45:DX:37:ARG:O	2.45	0.49
46:DY:31:GLN:HG2	46:DY:37:LEU:H	1.78	0.49
1:AA:215:C:C4	1:AA:216:U:C4	3.01	0.49
1:AA:236:A:H2'	1:AA:237:G:C8	2.48	0.49
1:AA:452:A:C8	1:AA:453:G:O4'	2.64	0.49
1:AA:690:G:H2'	1:AA:691:G:C8	2.48	0.49
1:AA:807:A:H2'	1:AA:808:C:H6	1.77	0.49
1:AA:908:A:C2	1:AA:909:A:C5	3.01	0.49
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.12	0.49
1:AA:1044:A:C5	1:AA:1045:C:H1'	2.47	0.49
1:AA:1058:G:C6	1:AA:1059:C:C4	3.00	0.49
1:AA:1114:C:H2'	1:AA:1115:U:O4'	2.12	0.49
1:AA:1327:C:C2'	1:AA:1328:C:H5'	2.41	0.49
2:AB:102:THR:HA	2:AB:179:LEU:HD11	1.95	0.49
2:AB:202:GLY:O	2:AB:203:ASN:O	2.29	0.49
3:AC:79:LYS:O	3:AC:82:GLU:HB2	2.11	0.49
4:AD:76:TYR:CD1	4:AD:76:TYR:C	2.85	0.49
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:43:THR:O	9:AI:44:ALA:CB	2.60	0.49
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.30	0.49
16:AP:51:ARG:NH1	16:AP:51:ARG:HB3	2.27	0.49
19:AS:51:VAL:HB	19:AS:75:ALA:HB2	1.92	0.49
20:AT:27:MET:HG3	20:AT:28:MET:N	2.26	0.49
22:BA:528:A:C8	22:BA:528:A:C3'	2.95	0.49
22:BA:1306:C:O2	22:BA:1306:C:H2'	2.12	0.49
22:BA:1638:C:H1'	22:BA:2698:U:O2'	2.12	0.49
22:BA:1768:C:H2'	22:BA:1769:U:H6	1.76	0.49
22:BA:1794:A:H1'	22:BA:1900:A:C2	2.47	0.49
22:BA:2357:G:N2	22:BA:2360:G:OP2	2.37	0.49
23:BB:109:A:C5	23:BB:110:C:C4	3.00	0.49
24:BC:232:HIS:HA	24:BC:242:LYS:HG3	1.95	0.49
25:BD:101:PHE:CE2	25:BD:203:VAL:CG1	2.95	0.49
1:CA:158:G:C4	1:CA:159:G:C8	3.01	0.49
1:CA:779:C:C2'	1:CA:780:A:H5'	2.42	0.49
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.45	0.49
1:CA:1345:U:C4	1:CA:1377:A:C2	3.00	0.49
1:CA:1507:A:N7	1:CA:1530:G:C6	2.80	0.49
4:CD:3:ARG:HD2	4:CD:115:ARG:HD3	1.95	0.49
6:CF:51:ILE:O	6:CF:51:ILE:HG12	2.12	0.49
22:DA:158:U:H2'	22:DA:159:G:H5'	1.95	0.49
22:DA:396:G:C1'	45:DX:29:PHE:HB3	2.42	0.49
22:DA:667:U:C4	22:DA:668:A:N7	2.80	0.49
22:DA:682:G:N3	22:DA:682:G:H2'	2.26	0.49
22:DA:684:G:OP1	50:D2:16:HIS:CE1	2.65	0.49
22:DA:745:G:O2'	22:DA:748:G:H1'	2.13	0.49
22:DA:803:U:C4	22:DA:804:A:N7	2.80	0.49
22:DA:1323:C:C4	22:DA:1324:G:N7	2.81	0.49
22:DA:1599:U:C4	22:DA:1600:C:N4	2.79	0.49
22:DA:1654:A:OP1	35:DN:1:MET:HA	2.13	0.49
22:DA:1799:G:C8	24:DC:176:LEU:HD13	2.46	0.49
22:DA:1831:G:C6	22:DA:1832:C:C4	2.99	0.49
22:DA:2437:G:O4'	22:DA:2598:A:C2	2.65	0.49
23:DB:41:G:H8	27:DF:66:LEU:HD11	1.76	0.49
28:DG:113:VAL:HG11	28:DG:151:TYR:CE2	2.47	0.49
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD2	2.38	0.49
32:DK:120:PRO:HG2	37:DP:66:ASN:ND2	2.27	0.49
33:DL:58:TYR:CE1	33:DL:59:ARG:HG2	2.48	0.49
40:DS:15:GLN:O	40:DS:19:LEU:HD13	2.12	0.49
45:DX:66:THR:O	45:DX:70:GLU:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:370:C:O2'	1:AA:371:A:H5'	2.13	0.49
1:AA:452:A:N6	1:AA:480:U:C2	2.78	0.49
1:AA:582:C:C2	1:AA:583:A:C8	3.00	0.49
1:AA:855:U:OP2	1:AA:871:U:N3	2.42	0.49
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.12	0.49
1:AA:1343:G:H4'	9:AI:124:ARG:O	2.11	0.49
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.47	0.49
1:AA:1401:G:N2	1:AA:1402:C:H1'	2.27	0.49
5:AE:81:LEU:HD22	5:AE:81:LEU:N	2.28	0.49
10:AJ:52:LEU:CB	14:AN:81:ARG:HE	2.25	0.49
11:AK:51:GLY:O	11:AK:52:PHE:CD2	2.65	0.49
11:AK:122:ARG:NH1	21:AU:36:GLU:HG3	2.26	0.49
22:BA:20:C:H2'	22:BA:21:A:C8	2.46	0.49
22:BA:2466:C:C2'	22:BA:2467:C:H5'	2.42	0.49
22:BA:2517:C:C5	22:BA:2542:A:C5	3.01	0.49
22:BA:2559:C:O2'	22:BA:2560:A:H5'	2.11	0.49
22:BA:2805:C:C4	22:BA:2806:C:C4	3.01	0.49
25:BD:139:SER:HA	25:BD:142:VAL:CG1	2.43	0.49
32:BK:4:GLU:O	32:BK:5:GLN:HG2	2.12	0.49
37:BP:91:ALA:HB2	37:BP:113:ARG:HA	1.94	0.49
1:CA:406:G:C2	1:CA:407:U:C6	3.01	0.49
1:CA:748:G:H2'	1:CA:749:A:H8	1.76	0.49
1:CA:805:C:N3	1:CA:806:C:C5	2.80	0.49
1:CA:939:G:P	7:CG:95:ARG:HH22	2.36	0.49
1:CA:1521:C:C4	1:CA:1522:U:C4	3.00	0.49
4:CD:58:LYS:HG3	4:CD:59:GLN:N	2.27	0.49
8:CH:30:SER:OG	8:CH:33:LYS:HG3	2.13	0.49
13:CM:39:ILE:HG13	13:CM:56:LEU:HD21	1.93	0.49
22:DA:36:G:C2	22:DA:445:C:N3	2.80	0.49
22:DA:413:C:N4	57:DA:3559:HOH:O	2.45	0.49
22:DA:508:A:H3'	22:DA:509:C:H5'	1.94	0.49
22:DA:515:A:C8	22:DA:516:C:C6	3.00	0.49
22:DA:1359:A:C6	22:DA:1360:G:C4	3.00	0.49
22:DA:2348:U:P	51:D3:38:THR:HG21	2.52	0.49
22:DA:2410:G:C6	22:DA:2411:A:C4	3.00	0.49
26:DE:146:VAL:CG2	26:DE:148:ILE:HD11	2.42	0.49
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	1.94	0.49
34:DM:54:THR:HA	34:DM:57:VAL:HG22	1.94	0.49
1:AA:57:G:H2'	1:AA:58:C:C6	2.47	0.49
1:AA:64:G:C2	1:AA:67:C:N4	2.81	0.49
1:AA:115:G:C6	1:AA:313:A:C2	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:451:A:N1	1:AA:480:U:H2'	2.27	0.49
1:AA:979:C:H1'	1:AA:1317:C:N4	2.27	0.49
1:AA:1151:A:HO2'	1:AA:1152:A:C5'	2.23	0.49
2:AB:85:LEU:HG	2:AB:86:SER:N	2.26	0.49
3:AC:42:TYR:CE2	3:AC:46:GLU:HG3	2.47	0.49
10:AJ:7:ARG:O	10:AJ:100:ILE:O	2.30	0.49
10:AJ:40:ILE:HB	10:AJ:73:LEU:HB2	1.93	0.49
11:AK:34:ILE:HG13	11:AK:70:CYS:SG	2.53	0.49
22:BA:116:C:N4	22:BA:117:G:C6	2.81	0.49
22:BA:653:U:H2'	22:BA:654:A:OP1	2.12	0.49
22:BA:747:U:N3	22:BA:2613:U:C4	2.80	0.49
22:BA:857:G:H5"	44:BW:69:PHE:CD1	2.48	0.49
22:BA:971:G:H2'	22:BA:972:A:O5'	2.12	0.49
22:BA:1237:A:H4'	22:BA:1238:G:OP1	2.13	0.49
22:BA:1334:G:C6	22:BA:1335:C:C4	3.01	0.49
22:BA:1418:G:H5"	22:BA:1419:A:OP2	2.13	0.49
22:BA:1562:U:C4	22:BA:1563:U:C5	3.00	0.49
22:BA:1811:G:C5	22:BA:1812:U:C5	3.01	0.49
22:BA:1924:C:O2	22:BA:1924:C:H2'	2.12	0.49
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.43	0.49
27:BF:40:VAL:O	27:BF:41:GLY:C	2.51	0.49
32:BK:90:ASN:O	32:BK:91:SER:HB3	2.13	0.49
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.27	0.49
44:BW:47:ALA:HB2	44:BW:59:LEU:HD22	1.95	0.49
1:CA:425:G:H2'	1:CA:426:U:O4'	2.12	0.49
1:CA:1149:C:N4	1:CA:1150:A:N6	2.61	0.49
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.13	0.49
3:CC:145:GLY:O	3:CC:146:ALA:O	2.31	0.49
5:CE:154:ALA:O	5:CE:156:LYS:N	2.45	0.49
22:DA:450:G:N1	22:DA:454:A:OP2	2.35	0.49
22:DA:597:G:C2	22:DA:661:A:C2	3.00	0.49
22:DA:636:G:N1	33:DL:76:GLU:OE2	2.42	0.49
22:DA:1205:A:H5"	22:DA:1206:G:C8	2.48	0.49
22:DA:1422:G:H2'	22:DA:1423:G:O4'	2.12	0.49
22:DA:1801:A:C4	22:DA:2203:U:C5	3.00	0.49
22:DA:1846:G:H3'	22:DA:1847:A:C8	2.47	0.49
22:DA:2352:A:N3	22:DA:2366:A:C2	2.81	0.49
22:DA:2886:A:C2	48:D0:29:SER:HB3	2.48	0.49
25:DD:62:LYS:HB2	25:DD:63:PRO:HD3	1.93	0.49
26:DE:112:LEU:HD11	26:DE:180:LEU:HB3	1.95	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.61	0.49
42:DU:7:ARG:HG3	42:DU:8:ASP:H	1.76	0.49
42:DU:11:VAL:HG12	42:DU:72:ILE:HA	1.93	0.49
48:D0:54:VAL:O	48:D0:56:ALA:N	2.46	0.49
1:AA:74:A:C2	1:AA:97:G:C5	3.01	0.49
1:AA:929:G:C6	1:AA:930:C:C4	3.01	0.49
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.13	0.49
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.78	0.49
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.47	0.49
1:AA:1469:C:C5	1:AA:1470:U:C6	3.00	0.49
4:AD:63:ARG:HA	4:AD:63:ARG:HE	1.78	0.49
11:AK:110:ILE:HG22	21:AU:17:ARG:NH2	2.28	0.49
17:AQ:46:VAL:HG21	17:AQ:61:ILE:HG12	1.94	0.49
21:AU:25:LYS:HD2	21:AU:26:ALA:N	2.28	0.49
22:BA:25:U:H2'	22:BA:26:G:H5'	1.95	0.49
22:BA:55:G:C2	22:BA:56:A:C8	3.00	0.49
22:BA:811:U:C2	22:BA:1251:C:C5	3.00	0.49
22:BA:861:A:C2	22:BA:917:A:C4	3.00	0.49
22:BA:1157:G:C2	22:BA:1158:C:C2	3.00	0.49
22:BA:1467:U:C4	22:BA:1546:G:C2	3.00	0.49
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.35	0.49
22:BA:1906:G:H2'	22:BA:1907:G:O5'	2.13	0.49
22:BA:1910:G:O2'	22:BA:1911:U:H5'	2.13	0.49
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.42	0.49
22:BA:2190:G:H3'	22:BA:2191:A:H8	1.77	0.49
22:BA:2346:A:C5	22:BA:2383:G:C2	3.01	0.49
22:BA:2525:G:C2	22:BA:2539:C:C2	3.00	0.49
22:BA:2627:G:H2'	22:BA:2628:C:C6	2.48	0.49
24:BC:63:ARG:NH1	24:BC:85:PRO:CD	2.76	0.49
25:BD:84:LEU:HD22	25:BD:88:GLU:HB3	1.94	0.49
26:BE:189:THR:HG22	26:BE:191:ASP:H	1.78	0.49
31:BJ:59:ALA:O	31:BJ:62:VAL:HG12	2.13	0.49
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.75	0.49
43:BV:1:MET:SD	43:BV:1:MET:C	2.90	0.49
1:CA:451:A:H4'	1:CA:452:A:O5'	2.12	0.49
1:CA:560:A:OP2	1:CA:566:G:N1	2.45	0.49
1:CA:919:A:C2	1:CA:920:U:C5	3.01	0.49
1:CA:1102:A:C5	1:CA:1103:C:C5	3.01	0.49
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.48	0.49
10:CJ:22:THR:HA	10:CJ:25:ILE:CG2	2.43	0.49
19:CS:69:HIS:ND1	19:CS:73:GLU:OE2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:90:U:C4	22:DA:91:A:C5	3.00	0.49
22:DA:109:C:N3	22:DA:110:G:C8	2.81	0.49
22:DA:151:C:H2'	22:DA:152:A:C8	2.48	0.49
22:DA:567:U:C4	22:DA:568:U:C4	3.00	0.49
22:DA:621:A:C5	22:DA:622:G:H1'	2.48	0.49
22:DA:1093:G:C2'	22:DA:1098:A:H61	2.26	0.49
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.66	0.49
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.47	0.49
22:DA:1474:U:C4	22:DA:1475:G:C2	3.01	0.49
22:DA:1871:A:O2'	22:DA:1872:A:N7	2.46	0.49
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.12	0.49
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.48	0.49
22:DA:2420:C:OP1	51:D3:34:THR:CB	2.57	0.49
22:DA:2532:G:C6	22:DA:2533:U:C4	3.01	0.49
22:DA:2751:G:H3'	22:DA:2752:C:C6	2.48	0.49
32:DK:6:THR:O	32:DK:8:LEU:CD1	2.61	0.49
40:DS:49:LYS:O	40:DS:53:SER:HB2	2.13	0.49
44:DW:21:LEU:HA	44:DW:39:ARG:HB2	1.93	0.49
1:AA:71:A:N1	1:AA:99:C:O2'	2.45	0.49
1:AA:107:G:H2'	1:AA:108:G:H5"	1.94	0.49
1:AA:364:A:C2	1:AA:365:U:O4	2.66	0.49
1:AA:373:A:C8	1:AA:482:A:C8	3.00	0.49
1:AA:466:A:H5'	1:AA:467:U:OP2	2.13	0.49
1:AA:598:U:H4'	8:AH:86:TYR:HD1	1.77	0.49
1:AA:790:A:C6	1:AA:791:G:C6	3.01	0.49
1:AA:992:U:O2	1:AA:1043:G:N7	2.45	0.49
1:AA:1244:G:H2'	1:AA:1245:C:O4'	2.12	0.49
1:AA:1406:U:C5	1:AA:1407:C:C4	3.01	0.49
1:AA:1442:G:C6	1:AA:1443:C:N3	2.80	0.49
3:AC:54:ARG:O	3:AC:69:HIS:HB2	2.12	0.49
3:AC:121:THR:HG22	3:AC:122:SER:N	2.26	0.49
4:AD:53:VAL:HG22	4:AD:54:GLN:N	2.28	0.49
4:AD:174:ASP:O	4:AD:175:ALA:HB2	2.13	0.49
5:AE:15:LEU:HB3	5:AE:37:THR:HG22	1.95	0.49
10:AJ:12:ALA:HB2	10:AJ:96:VAL:HA	1.95	0.49
13:AM:68:ASP:O	13:AM:72:GLU:HB2	2.12	0.49
22:BA:182:A:H2'	22:BA:183:C:C6	2.48	0.49
22:BA:414:C:H2'	22:BA:415:A:C8	2.48	0.49
22:BA:482:A:O2'	22:BA:497:A:N1	2.36	0.49
22:BA:767:U:O2'	22:BA:768:G:H5'	2.13	0.49
22:BA:976:G:N3	22:BA:976:G:H2'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.94	0.49
22:BA:1431:A:H2'	22:BA:1432:G:C8	2.47	0.49
22:BA:1816:C:C5	24:BC:62:TYR:CE1	3.01	0.49
22:BA:1833:C:H2'	22:BA:1834:U:O4'	2.12	0.49
22:BA:2669:G:C2'	22:BA:2670:A:H5'	2.43	0.49
22:BA:2800:A:H4'	22:BA:2801:G:OP2	2.13	0.49
23:BB:42:C:OP1	27:BF:64:LYS:HE2	2.13	0.49
24:BC:148:PRO:CD	24:BC:185:GLU:OE2	2.61	0.49
38:BQ:76:TYR:CZ	38:BQ:80:ILE:HG13	2.48	0.49
41:BT:1:MET:C	41:BT:2:ILE:HD12	2.32	0.49
41:BT:11:LEU:HD13	41:BT:32:LEU:HD13	1.94	0.49
42:BU:89:ASP:CG	42:BU:90:GLY:N	2.65	0.49
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.43	0.49
51:B3:22:PHE:O	51:B3:49:MET:HE3	2.11	0.49
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.60	0.49
1:CA:252:U:O4	1:CA:253:A:N6	2.46	0.49
1:CA:509:A:C2	1:CA:510:A:C2	3.00	0.49
1:CA:620:C:H2'	1:CA:621:A:O4'	2.13	0.49
1:CA:1033:G:H3'	1:CA:1034:G:H5"	1.95	0.49
1:CA:1322:C:OP1	19:CS:78:ARG:NH2	2.46	0.49
4:CD:172:GLU:HG2	4:CD:183:LYS:HD3	1.95	0.49
5:CE:100:SER:O	5:CE:101:GLU:C	2.50	0.49
6:CF:25:TYR:N	6:CF:25:TYR:CD2	2.79	0.49
11:CK:51:GLY:O	11:CK:52:PHE:O	2.31	0.49
15:CO:45:GLU:O	15:CO:46:HIS:HB2	2.13	0.49
20:CT:84:ASN:HA	20:CT:87:ALA:HB3	1.95	0.49
22:DA:39:G:C6	22:DA:40:U:C4	3.01	0.49
22:DA:398:C:OP1	45:DX:32:ASN:ND2	2.46	0.49
22:DA:449:A:C5	22:DA:450:G:C8	3.01	0.49
22:DA:873:C:N3	22:DA:905:A:C2	2.81	0.49
22:DA:1529:G:C6	22:DA:1543:G:N2	2.81	0.49
22:DA:1773:A:H2'	22:DA:1774:C:O4'	2.13	0.49
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.80	0.49
22:DA:1965:C:H3'	22:DA:1966:A:C8	2.48	0.49
22:DA:2051:A:H5'	22:DA:2578:G:O4'	2.12	0.49
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.46	0.49
22:DA:2687:U:H2'	22:DA:2688:G:O4'	2.13	0.49
22:DA:2707:U:O2	35:DN:71:ARG:NH1	2.46	0.49
22:DA:2740:A:N6	22:DA:2764:A:C8	2.80	0.49
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	1.94	0.49
41:DT:32:LEU:HD12	41:DT:32:LEU:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:604:G:C2	1:AA:635:A:C2	3.01	0.49
1:AA:824:G:C2	1:AA:877:G:C2	3.01	0.49
1:AA:944:G:O2'	1:AA:1339:A:N6	2.45	0.49
1:AA:1108:G:H5'	3:AC:176:HIS:CD2	2.48	0.49
1:AA:1211:U:O2'	1:AA:1212:U:P	2.71	0.49
1:AA:1399:C:C2	1:AA:1401:G:C5	3.01	0.49
1:AA:1442:G:C2	1:AA:1443:C:C2	3.01	0.49
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.12	0.49
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.43	0.49
6:AF:53:LYS:O	6:AF:54:LEU:HB3	2.13	0.49
9:AI:52:LEU:HB3	9:AI:57:MET:CG	2.43	0.49
12:AL:85:GLY:O	12:AL:96:HIS:CE1	2.65	0.49
14:AN:79:LEU:HB2	14:AN:84:VAL:HG23	1.95	0.49
22:BA:36:G:C5	22:BA:37:C:C5	3.01	0.49
22:BA:55:G:N3	22:BA:56:A:C8	2.81	0.49
22:BA:341:C:C4	22:BA:342:A:N7	2.81	0.49
22:BA:447:A:C4	22:BA:473:G:C8	3.00	0.49
22:BA:500:G:H22	22:BA:502:A:H3'	1.75	0.49
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.41	0.49
22:BA:1359:A:C8	22:BA:1373:A:N1	2.81	0.49
22:BA:1863:G:N2	22:BA:1880:U:H1'	2.28	0.49
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.13	0.49
32:BK:2:ILE:HD12	32:BK:6:THR:HG21	1.94	0.49
39:BR:1:MET:HA	39:BR:42:ALA:O	2.12	0.49
42:BU:73:PHE:CZ	42:BU:78:GLY:HA2	2.48	0.49
1:CA:248:C:C4	1:CA:249:U:C5	3.00	0.49
1:CA:295:C:C4	1:CA:296:U:C5	3.01	0.49
1:CA:426:U:O4	57:CA:1752:HOH:O	2.19	0.49
1:CA:743:A:C6	1:CA:744:C:C4	3.01	0.49
1:CA:976:G:N2	1:CA:1363:A:C2	2.81	0.49
1:CA:1350:A:H2'	1:CA:1351:U:O4'	2.13	0.49
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.12	0.49
4:CD:9:LEU:O	4:CD:10:LYS:C	2.50	0.49
4:CD:58:LYS:HE2	4:CD:69:GLU:OE1	2.13	0.49
6:CF:22:ILE:O	6:CF:22:ILE:HG22	2.13	0.49
6:CF:93:LYS:C	6:CF:94:HIS:CG	2.86	0.49
22:DA:89:A:C6	22:DA:90:U:C4	3.01	0.49
22:DA:404:A:H1'	22:DA:405:U:OP2	2.13	0.49
22:DA:668:A:C2	22:DA:670:A:C6	3.01	0.49
22:DA:1596:A:C6	22:DA:1597:A:C6	3.01	0.49
22:DA:1731:G:H2'	22:DA:1732:C:H3'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.43	0.49
22:DA:2415:G:C6	22:DA:2416:C:N3	2.81	0.49
22:DA:2506:U:O2	22:DA:2506:U:H2'	2.13	0.49
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.48	0.49
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.47	0.49
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.77	0.49
24:DC:176:LEU:HD12	24:DC:180:GLU:HB3	1.95	0.49
25:DD:39:ASP:OD1	25:DD:40:LEU:N	2.46	0.49
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.49
31:DJ:15:TRP:O	31:DJ:137:PRO:HA	2.13	0.49
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.95	0.49
1:AA:672:U:H2'	1:AA:673:A:H8	1.76	0.49
1:AA:761:G:H2'	1:AA:762:U:C6	2.48	0.49
1:AA:828:U:C4	1:AA:859:G:C4	3.01	0.49
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.43	0.49
20:AT:5:LYS:O	20:AT:6:SER:C	2.52	0.49
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.12	0.49
22:BA:612:G:H4'	22:BA:613:A:C2	2.47	0.49
22:BA:616:A:C2	22:BA:617:G:H1'	2.48	0.49
22:BA:1794:A:H1'	22:BA:1900:A:N3	2.28	0.49
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.49
31:BJ:14:ASP:O	31:BJ:52:ASP:HB3	2.12	0.49
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.95	0.49
36:BO:4:LYS:O	36:BO:5:SER:C	2.50	0.49
39:BR:51:VAL:O	39:BR:52:PRO:O	2.30	0.49
39:BR:71:LYS:HG3	39:BR:72:VAL:N	2.28	0.49
48:B0:33:THR:O	48:B0:33:THR:CG2	2.61	0.49
49:B1:29:THR:C	49:B1:31:PRO:HD3	2.33	0.49
1:CA:38:G:N1	1:CA:397:A:C2	2.81	0.49
1:CA:582:C:C2	1:CA:760:G:N1	2.81	0.49
1:CA:978:A:O2'	1:CA:1322:C:H5	1.94	0.49
1:CA:1078:U:C4	1:CA:1079:G:C6	3.01	0.49
1:CA:1105:A:C2	1:CA:1106:G:C8	3.01	0.49
1:CA:1423:G:C2	1:CA:1424:U:C2	3.00	0.49
2:CB:164:ILE:HG23	2:CB:169:GLU:OE2	2.13	0.49
4:CD:150:LYS:O	4:CD:151:LYS:HG2	2.13	0.49
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.94	0.49
11:CK:14:LYS:NZ	11:CK:15:GLN:O	2.45	0.49
11:CK:99:ALA:HA	11:CK:102:ALA:HB3	1.94	0.49
11:CK:123:PRO:HB2	11:CK:124:PRO:HD2	1.95	0.49
15:CO:45:GLU:HG2	15:CO:46:HIS:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:9:G:C6	22:DA:2629:U:C6	3.01	0.49
22:DA:893:C:H2'	22:DA:894:U:O4'	2.13	0.49
22:DA:1300:G:H5"	22:DA:1301:A:H5'	1.95	0.49
22:DA:1394:U:C4	22:DA:1395:A:C5	3.01	0.49
22:DA:1738:G:O2'	22:DA:1739:A:P	2.68	0.49
22:DA:2307:G:H4'	22:DA:2308:G:O5'	2.13	0.49
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.33	0.49
24:DC:158:ALA:HB1	24:DC:197:ASN:O	2.13	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
32:DK:47:ILE:HB	32:DK:48:PRO:HD2	1.95	0.49
39:DR:68:ARG:HD3	39:DR:92:TRP:CZ2	2.46	0.49
40:DS:9:HIS:O	40:DS:11:ARG:NH1	2.46	0.49
41:DT:39:THR:HG23	41:DT:42:GLU:H	1.78	0.49
46:DY:1:MET:N	46:DY:4:LYS:HD3	2.28	0.49
1:AA:111:G:O6	1:AA:330:C:N3	2.45	0.48
1:AA:541:G:C4	1:AA:542:G:C8	3.00	0.48
1:AA:956:U:C5	1:AA:957:U:C5	3.01	0.48
1:AA:1145:A:O2'	1:AA:1146:A:P	2.70	0.48
4:AD:126:ASN:HA	4:AD:142:VAL:HG23	1.94	0.48
6:AF:97:THR:O	6:AF:98:GLU:HG2	2.12	0.48
7:AG:97:ASN:OD1	7:AG:97:ASN:N	2.45	0.48
8:AH:96:MET:HB2	8:AH:99:LEU:O	2.13	0.48
10:AJ:56:HIS:O	10:AJ:57:VAL:O	2.30	0.48
13:AM:90:ARG:HD2	13:AM:96:PRO:O	2.13	0.48
16:AP:22:ALA:HB2	16:AP:32:PHE:CB	2.43	0.48
22:BA:282:A:H2'	22:BA:283:G:C8	2.47	0.48
22:BA:301:G:H1'	22:BA:302:C:C6	2.48	0.48
22:BA:686:U:H4'	22:BA:687:C:OP2	2.13	0.48
22:BA:1014:A:H2'	22:BA:1015:U:H6	1.78	0.48
22:BA:1915:U:O2'	22:BA:1916:A:H5'	2.13	0.48
22:BA:2190:G:C6	22:BA:2191:A:C6	3.00	0.48
22:BA:2282:G:H5"	22:BA:2283:C:O4'	2.12	0.48
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.13	0.48
28:BG:109:PHE:CE2	28:BG:152:ARG:CZ	2.95	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.48
39:BR:11:GLN:C	39:BR:12:HIS:ND1	2.66	0.48
39:BR:14:VAL:HG13	39:BR:98:ILE:HG13	1.94	0.48
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	1.95	0.48
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.60	0.48
1:CA:320:A:H5"	1:CA:321:A:OP2	2.13	0.48
1:CA:756:C:C4	1:CA:757:U:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:872:A:C4	1:CA:874:G:C8	3.01	0.48
1:CA:1130:A:C8	1:CA:1146:A:N1	2.81	0.48
1:CA:1343:G:O2'	9:CI:123:ARG:HD2	2.13	0.48
1:CA:1525:G:OP1	11:CK:122:ARG:NH2	2.39	0.48
2:CB:117:LEU:O	2:CB:121:SER:HB2	2.13	0.48
5:CE:105:ILE:N	5:CE:122:ASN:O	2.46	0.48
11:CK:25:ALA:HB3	11:CK:87:LYS:O	2.13	0.48
22:DA:49:A:C8	22:DA:51:G:C2	3.01	0.48
22:DA:92:U:H2'	22:DA:93:G:O4'	2.12	0.48
22:DA:508:A:C3'	22:DA:509:C:H5'	2.42	0.48
22:DA:579:G:C2	22:DA:1262:A:C4	3.01	0.48
22:DA:758:C:O2'	22:DA:1981:A:N3	2.42	0.48
22:DA:1045:C:C3'	22:DA:1046:A:H5'	2.43	0.48
22:DA:1431:A:C6	22:DA:1432:G:C5	3.01	0.48
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.48	0.48
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.48	0.48
22:DA:2261:C:C5	44:DW:16:SER:HB3	2.48	0.48
22:DA:2502:G:H5'	22:DA:2503:A:C5'	2.42	0.48
22:DA:2575:C:O2'	22:DA:2578:G:N7	2.34	0.48
22:DA:2824:C:N4	22:DA:2825:G:N7	2.60	0.48
33:DL:128:THR:OG1	33:DL:131:ALA:CB	2.60	0.48
35:DN:69:ARG:C	35:DN:70:THR:HG23	2.33	0.48
40:DS:20:VAL:O	40:DS:23:LEU:HB2	2.11	0.48
1:AA:33:A:H2'	1:AA:34:C:C6	2.48	0.48
1:AA:543:U:H2'	1:AA:544:G:O5'	2.13	0.48
1:AA:864:A:N1	1:AA:865:A:C2	2.82	0.48
1:AA:1179:A:N6	1:AA:1180:A:C2	2.81	0.48
1:AA:1306:A:C2	1:AA:1307:U:H1'	2.48	0.48
1:AA:1346:A:N7	7:AG:10:ARG:NH2	2.61	0.48
1:AA:1521:C:C2	1:AA:1522:U:C6	3.00	0.48
2:AB:164:ILE:HG23	2:AB:165:ASP:N	2.28	0.48
3:AC:119:SER:OG	3:AC:120:ILE:N	2.46	0.48
7:AG:76:LYS:HB3	7:AG:89:VAL:HG11	1.95	0.48
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.78	0.48
13:AM:75:MET:SD	27:BF:112:ARG:HB2	2.53	0.48
15:AO:71:LYS:O	15:AO:75:VAL:HG13	2.13	0.48
22:BA:622:G:H2'	22:BA:623:C:C6	2.48	0.48
22:BA:691:C:O5'	22:BA:691:C:H6	1.96	0.48
22:BA:2345:G:C5	22:BA:2381:A:C2	3.01	0.48
24:BC:168:ASP:O	24:BC:169:GLY:O	2.31	0.48
25:BD:172:VAL:HG12	25:BD:175:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:81:ASP:O	33:BL:83:ALA:N	2.41	0.48
35:BN:100:CYS:HB3	48:B0:43:ILE:HG12	1.94	0.48
38:BQ:69:ALA:HB1	38:BQ:74:ILE:O	2.13	0.48
42:BU:99:ASN:OD1	42:BU:99:ASN:C	2.51	0.48
53:B5:65:LEU:HD11	53:B5:191:ARG:CA	2.43	0.48
1:CA:6:G:O2'	1:CA:298:A:H1'	2.14	0.48
1:CA:429:U:H4'	1:CA:430:A:OP1	2.12	0.48
1:CA:586:C:O2'	1:CA:878:A:H4'	2.12	0.48
1:CA:794:A:C5	1:CA:795:C:C4	3.01	0.48
1:CA:815:A:C2	1:CA:1529:G:C4	3.01	0.48
2:CB:211:THR:HA	2:CB:214:LEU:HB2	1.95	0.48
4:CD:9:LEU:HD11	4:CD:29:ASP:OD1	2.13	0.48
8:CH:27:MET:HB2	8:CH:28:PRO:HD2	1.95	0.48
8:CH:34:VAL:O	8:CH:36:ILE:N	2.46	0.48
10:CJ:84:VAL:O	10:CJ:88:MET:HG2	2.13	0.48
22:DA:30:G:C5	22:DA:31:C:C4	3.01	0.48
22:DA:363:G:H2'	22:DA:364:C:C6	2.48	0.48
22:DA:396:G:H1'	45:DX:29:PHE:HB3	1.95	0.48
22:DA:412:A:H2'	22:DA:413:C:H5'	1.96	0.48
22:DA:485:C:C2	22:DA:496:G:N2	2.80	0.48
22:DA:523:C:H2'	22:DA:524:G:H8	1.78	0.48
22:DA:572:A:OP2	39:DR:80:ARG:NH2	2.46	0.48
22:DA:1073:A:H2'	22:DA:1074:G:H5'	1.94	0.48
22:DA:1221:C:C4	22:DA:1222:U:C4	3.01	0.48
22:DA:1248:G:O2'	38:DQ:3:ARG:HA	2.13	0.48
22:DA:1401:G:C5	22:DA:1402:U:C5	3.01	0.48
22:DA:1826:G:C4	22:DA:1827:U:C5	3.01	0.48
22:DA:2077:A:OP1	22:DA:2238:G:N2	2.46	0.48
22:DA:2136:G:H5'	22:DA:2137:U:P	2.53	0.48
22:DA:2314:A:C2	22:DA:2315:G:C4	3.00	0.48
22:DA:2345:G:C5	22:DA:2381:A:N1	2.82	0.48
22:DA:2540:C:H2'	22:DA:2541:A:C8	2.48	0.48
22:DA:2720:U:H5"	37:DP:53:ARG:NH2	2.28	0.48
24:DC:53:HIS:NE2	24:DC:219:THR:HG23	2.28	0.48
25:DD:13:ARG:HD3	25:DD:21:SER:OG	2.13	0.48
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.29	0.48
25:DD:121:THR:HG21	25:DD:143:PRO:HB3	1.95	0.48
25:DD:140:HIS:NE2	57:DD:303:HOH:O	2.33	0.48
28:DG:116:GLN:NE2	28:DG:117:LEU:O	2.46	0.48
32:DK:91:SER:O	32:DK:92:GLU:O	2.31	0.48
38:DQ:9:ILE:HG13	38:DQ:10:ALA:N	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:17:SER:O	41:DT:18:GLU:C	2.51	0.48
47:DZ:24:LEU:HD22	47:DZ:29:LEU:HD12	1.95	0.48
51:D3:6:THR:O	51:D3:8:ARG:HG2	2.13	0.48
1:AA:57:G:H2'	1:AA:58:C:O4'	2.13	0.48
1:AA:202:G:O2'	1:AA:468:A:C8	2.63	0.48
1:AA:723:U:H5'	1:AA:724:G:P	2.53	0.48
1:AA:862:C:O2'	1:AA:863:U:H5'	2.12	0.48
1:AA:928:G:C2	1:AA:1390:U:O2	2.65	0.48
1:AA:955:U:O4'	1:AA:1227:A:N6	2.47	0.48
1:AA:1052:U:C2	1:AA:1207:G:N2	2.81	0.48
1:AA:1074:G:C2	1:AA:1102:A:C2	3.00	0.48
1:AA:1379:G:C6	1:AA:1380:U:O4	2.66	0.48
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.14	0.48
7:AG:92:ARG:O	7:AG:96:ARG:HB2	2.14	0.48
7:AG:146:GLU:CG	7:AG:149:LYS:HE2	2.42	0.48
11:AK:35:THR:OG1	11:AK:40:ASN:N	2.46	0.48
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.43	0.48
22:BA:14:A:N6	22:BA:15:G:C2	2.81	0.48
22:BA:142:A:C5	22:BA:143:C:C4	3.01	0.48
22:BA:199:A:C8	22:BA:2433:A:N6	2.82	0.48
22:BA:372:G:O2'	22:BA:400:G:O6	2.29	0.48
22:BA:550:C:O2	22:BA:550:C:H2'	2.12	0.48
22:BA:630:G:H5"	22:BA:631:A:OP2	2.13	0.48
22:BA:963:U:H2'	22:BA:964:C:C6	2.49	0.48
22:BA:1012:U:O4	31:BJ:30:THR:HG21	2.13	0.48
22:BA:1094:U:N3	22:BA:1097:U:OP2	2.42	0.48
22:BA:1216:G:C5	22:BA:1217:U:C5	3.01	0.48
22:BA:1247:A:C2	22:BA:1249:U:C6	3.00	0.48
22:BA:1286:A:C6	22:BA:1329:U:C2	3.01	0.48
22:BA:1483:G:C6	22:BA:1484:U:C4	3.01	0.48
22:BA:1494:A:O2'	22:BA:1495:A:O5'	2.31	0.48
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.13	0.48
22:BA:1925:C:C4'	22:BA:1926:U:C4	2.94	0.48
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.13	0.48
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.95	0.48
26:BE:41:GLN:HB3	26:BE:43:THR:HG23	1.95	0.48
28:BG:87:LEU:N	28:BG:87:LEU:HD12	2.27	0.48
40:BS:59:GLU:OE2	40:BS:66:ILE:HD11	2.13	0.48
52:B4:36:ARG:CG	52:B4:37:GLN:N	2.76	0.48
1:CA:435:A:C4	1:CA:436:C:C6	3.01	0.48
2:CB:206:ALA:C	2:CB:208:ARG:N	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:34:ALA:O	10:CJ:78:GLU:HB3	2.13	0.48
13:CM:10:PRO:O	13:CM:11:ASP:CB	2.61	0.48
13:CM:11:ASP:OD1	13:CM:12:HIS:N	2.46	0.48
17:CQ:16:LYS:O	17:CQ:17:MET:SD	2.72	0.48
22:DA:97:C:O2'	22:DA:103:A:O2'	2.26	0.48
22:DA:150:U:H2'	22:DA:151:C:C6	2.48	0.48
22:DA:173:A:H2'	22:DA:174:U:C6	2.48	0.48
22:DA:310:A:H5"	42:DU:15:THR:CG2	2.43	0.48
22:DA:374:A:N6	22:DA:400:G:O2'	2.47	0.48
22:DA:994:C:H1'	39:DR:10:LYS:HE3	1.95	0.48
22:DA:1799:G:N1	22:DA:1819:A:OP2	2.37	0.48
22:DA:1806:C:O3'	24:DC:48:ARG:NH1	2.47	0.48
22:DA:1993:U:H4'	25:DD:133:THR:HG21	1.94	0.48
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.13	0.48
22:DA:2093:G:N7	22:DA:2225:A:H2'	2.28	0.48
22:DA:2511:U:C5	22:DA:2512:C:C5	3.01	0.48
22:DA:2550:G:N7	22:DA:2551:C:C5	2.81	0.48
22:DA:2715:C:C4	22:DA:2716:C:C5	3.01	0.48
23:DB:39:A:H2'	23:DB:40:U:C6	2.48	0.48
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.28	0.48
42:DU:34:VAL:O	42:DU:64:ALA:HA	2.12	0.48
46:DY:41:HIS:O	46:DY:45:GLN:HG2	2.13	0.48
1:AA:45:G:C2'	1:AA:46:G:H5'	2.43	0.48
1:AA:109:A:H2'	1:AA:326:G:H21	1.78	0.48
1:AA:684:U:H2'	1:AA:685:G:O4'	2.14	0.48
1:AA:824:G:H1'	8:AH:2:SER:HA	1.95	0.48
1:AA:828:U:H2'	1:AA:829:G:O5'	2.13	0.48
1:AA:1026:G:C6	1:AA:1027:C:N3	2.82	0.48
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.13	0.48
1:AA:1306:A:C5	1:AA:1307:U:C5	3.01	0.48
1:AA:1429:A:C4	1:AA:1430:A:C8	3.01	0.48
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.13	0.48
2:AB:103:ASN:OD1	2:AB:106:THR:HB	2.12	0.48
3:AC:97:VAL:HB	3:AC:98:PRO:CD	2.44	0.48
5:AE:32:SER:C	5:AE:33:PHE:CD2	2.87	0.48
15:AO:41:GLY:HA2	15:AO:44:ALA:HB2	1.96	0.48
22:BA:86:G:C2	22:BA:87:U:C5	3.02	0.48
22:BA:1269:A:C8	57:BA:3384:HOH:O	2.65	0.48
22:BA:1501:G:H5"	24:BC:95:LEU:HD21	1.95	0.48
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.13	0.48
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.49	0.48
25:BD:85:ALA:O	25:BD:86:GLU:C	2.51	0.48
34:BM:41:LEU:CD2	34:BM:125:PRO:HD2	2.43	0.48
37:BP:26:VAL:HG12	37:BP:47:VAL:HG23	1.94	0.48
38:BQ:21:ALA:O	38:BQ:24:TYR:CD1	2.66	0.48
42:BU:44:LYS:O	42:BU:58:ILE:HA	2.14	0.48
46:BY:9:LYS:O	46:BY:12:GLU:N	2.47	0.48
1:CA:110:C:O2	1:CA:110:C:H2'	2.13	0.48
1:CA:155:A:H2'	1:CA:156:C:O4'	2.13	0.48
1:CA:376:G:H5"	16:CP:5:ARG:HB2	1.96	0.48
1:CA:577:G:C1'	1:CA:816:A:H2'	2.42	0.48
1:CA:977:A:O2'	1:CA:981:U:O4	2.31	0.48
2:CB:54:LEU:HD11	2:CB:217:VAL:HG22	1.94	0.48
3:CC:154:SER:HB3	3:CC:165:THR:HG22	1.94	0.48
8:CH:7:ILE:HB	8:CH:77:ARG:NH1	2.27	0.48
12:CL:21:VAL:HB	12:CL:95:TYR:HE1	1.78	0.48
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.12	0.48
17:CQ:23:VAL:O	17:CQ:43:LYS:HA	2.13	0.48
22:DA:350:G:C2	22:DA:351:C:C2	3.01	0.48
22:DA:404:A:C1'	22:DA:405:U:OP2	2.61	0.48
22:DA:464:U:H5'	50:D2:5:PHE:CE2	2.49	0.48
22:DA:600:G:C6	22:DA:601:C:C4	3.02	0.48
22:DA:745:G:O2'	22:DA:748:G:O2'	2.29	0.48
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	1.95	0.48
22:DA:1097:U:C2'	30:DI:9:VAL:HG11	2.43	0.48
22:DA:1415:U:H2'	22:DA:1416:G:H4'	1.96	0.48
22:DA:2064:C:O3'	22:DA:2251:G:N2	2.45	0.48
22:DA:2334:U:H5'	36:DO:12:THR:HB	1.94	0.48
22:DA:2420:C:N4	51:D3:30:ARG:O	2.38	0.48
22:DA:2585:U:O2'	22:DA:2586:U:H5'	2.13	0.48
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.28	0.48
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.48	0.48
40:DS:31:GLN:O	40:DS:34:ASP:HB2	2.14	0.48
50:D2:34:ARG:HB2	50:D2:42:LEU:HD13	1.96	0.48
1:AA:74:A:C2	1:AA:97:G:C4	3.01	0.48
1:AA:299:G:H2'	1:AA:300:A:C8	2.48	0.48
1:AA:448:A:C4	1:AA:487:A:C2	3.01	0.48
1:AA:751:U:H4'	15:AO:24:SER:HA	1.95	0.48
1:AA:1034:G:H2'	1:AA:1035:A:O4'	2.13	0.48
1:AA:1293:C:C5	1:AA:1294:G:N7	2.81	0.48
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1353:G:C2	1:AA:1354:U:C6	3.01	0.48
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.61	0.48
6:AF:46:GLN:HB2	6:AF:56:LYS:HE3	1.96	0.48
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.76	0.48
22:BA:877:A:C2	22:BA:899:A:C2	3.02	0.48
22:BA:1272:A:N7	22:BA:1618:A:C1'	2.75	0.48
22:BA:1286:A:N6	22:BA:1329:U:C2	2.81	0.48
22:BA:1477:A:N6	22:BA:1514:G:O2'	2.47	0.48
22:BA:2539:C:C2'	22:BA:2540:C:H5'	2.44	0.48
22:BA:2555:U:C5	22:BA:2556:C:N1	2.82	0.48
22:BA:2682:A:O3'	37:BP:56:HIS:CD2	2.66	0.48
22:BA:2730:C:O2'	25:BD:173:GLN:O	2.29	0.48
22:BA:2772:C:H2'	22:BA:2773:C:C6	2.48	0.48
25:BD:39:ASP:OD2	25:BD:41:ALA:N	2.47	0.48
28:BG:174:ALA:O	28:BG:175:LYS:HB3	2.14	0.48
34:BM:69:PRO:O	34:BM:70:ASP:CB	2.61	0.48
35:BN:106:ASP:O	35:BN:107:ASN:CB	2.61	0.48
37:BP:52:ASN:O	37:BP:53:ARG:HG2	2.14	0.48
38:BQ:41:LYS:HG3	38:BQ:45:TYR:CE1	2.48	0.48
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.48	0.48
40:BS:2:GLU:HA	40:BS:108:SER:HB2	1.95	0.48
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.48	0.48
1:CA:1394:A:C6	1:CA:1501:C:H4'	2.49	0.48
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.49	0.48
3:CC:32:ASN:OD1	3:CC:59:ARG:NH1	2.46	0.48
11:CK:18:ASP:HB3	11:CK:81:ASN:OD1	2.14	0.48
11:CK:25:ALA:HA	11:CK:30:THR:HG22	1.95	0.48
22:DA:189:G:C5	22:DA:205:G:C2	3.02	0.48
22:DA:341:C:H2'	22:DA:342:A:C8	2.48	0.48
22:DA:547:A:H3'	22:DA:548:G:C5'	2.42	0.48
22:DA:1203:U:C4	22:DA:1204:A:C5	3.00	0.48
22:DA:1476:U:C5	22:DA:1514:G:C2	3.02	0.48
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.13	0.48
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.12	0.48
22:DA:2856:A:C6	22:DA:2857:G:C5	3.02	0.48
35:DN:36:THR:CG2	35:DN:41:ALA:HB2	2.43	0.48
37:DP:39:ARG:HA	37:DP:39:ARG:HE	1.78	0.48
41:DT:2:ILE:HG23	41:DT:3:ARG:C	2.33	0.48
42:DU:96:PHE:CE1	42:DU:103:ILE:CG1	2.96	0.48
1:AA:232:G:H2'	1:AA:233:C:O4'	2.14	0.48
1:AA:428:G:O4'	1:AA:430:A:C8	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:581:G:C5	1:AA:758:C:C5	3.02	0.48
1:AA:698:G:N2	1:AA:699:C:C2	2.82	0.48
1:AA:791:G:C5	1:AA:792:A:N7	2.81	0.48
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.49	0.48
1:AA:1048:G:O6	1:AA:1210:C:N4	2.47	0.48
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.28	0.48
1:AA:1141:C:O2'	1:AA:1142:G:P	2.71	0.48
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.48	0.48
1:AA:1439:G:H2'	1:AA:1440:U:O4'	2.14	0.48
2:AB:169:GLU:O	2:AB:170:HIS:C	2.52	0.48
8:AH:41:LYS:HD2	8:AH:48:ASP:HA	1.95	0.48
12:AL:73:ASN:O	12:AL:74:LEU:CD2	2.61	0.48
12:AL:94:ARG:HB2	12:AL:95:TYR:CE2	2.49	0.48
13:AM:4:ILE:HD11	13:AM:10:PRO:CG	2.43	0.48
13:AM:52:GLN:O	13:AM:55:THR:HG23	2.13	0.48
22:BA:189:G:P	45:BX:26:LYS:HD2	2.53	0.48
22:BA:468:G:C6	22:BA:469:G:C4	3.02	0.48
22:BA:933:A:H5'	22:BA:934:U:OP2	2.14	0.48
22:BA:1136:G:HO2'	22:BA:2038:G:HO2'	1.56	0.48
22:BA:1492:G:C2	22:BA:1496:A:N6	2.81	0.48
22:BA:1502:A:C2	22:BA:1503:A:C4	3.01	0.48
22:BA:2190:G:C6	22:BA:2191:A:C5	3.02	0.48
22:BA:2496:C:O2'	22:BA:2497:A:H5'	2.14	0.48
22:BA:2636:C:H4'	25:BD:81:GLU:OE2	2.13	0.48
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.47	0.48
22:BA:2754:U:O2'	52:B4:17:VAL:HG11	2.14	0.48
25:BD:112:THR:O	25:BD:195:GLY:HA2	2.13	0.48
26:BE:128:ALA:HB1	26:BE:129:PRO:HD2	1.95	0.48
30:BI:6:GLN:O	30:BI:7:ALA:HB3	2.14	0.48
31:BJ:64:VAL:HG22	31:BJ:65:THR:N	2.28	0.48
31:BJ:93:ILE:CD1	31:BJ:100:VAL:HG21	2.43	0.48
33:BL:112:LEU:HD22	33:BL:130:GLY:HA3	1.96	0.48
34:BM:105:MET:HG2	34:BM:106:ASP:N	2.29	0.48
36:BO:24:THR:HG22	36:BO:42:PRO:CD	2.43	0.48
42:BU:99:ASN:O	42:BU:101:GLU:N	2.47	0.48
1:CA:32:A:C2	1:CA:33:A:C4	3.01	0.48
1:CA:207:C:O2	1:CA:207:C:H2'	2.12	0.48
1:CA:346:G:H3'	1:CA:346:G:N3	2.27	0.48
1:CA:374:A:H5"	1:CA:452:A:N1	2.28	0.48
1:CA:485:U:O2	1:CA:485:U:O4'	2.30	0.48
1:CA:518:C:H2'	1:CA:530:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.76	0.48
1:CA:1205:U:H5'	3:CC:190:HIS:NE2	2.28	0.48
1:CA:1231:G:H4'	9:CI:128:SER:HB2	1.94	0.48
1:CA:1241:G:C2	1:CA:1242:G:N7	2.81	0.48
1:CA:1383:C:N4	1:CA:1384:C:N4	2.61	0.48
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.13	0.48
2:CB:21:ARG:HA	2:CB:21:ARG:NH1	2.29	0.48
2:CB:185:ALA:O	2:CB:200:ILE:HB	2.14	0.48
4:CD:4:TYR:CD1	4:CD:4:TYR:C	2.86	0.48
6:CF:66:ALA:HB3	6:CF:71:ILE:HD13	1.96	0.48
22:DA:205:G:O2'	22:DA:206:U:P	2.71	0.48
22:DA:451:U:O5'	26:DE:47:LYS:HE2	2.13	0.48
22:DA:453:A:OP1	57:DA:3243:HOH:O	2.20	0.48
22:DA:569:U:H5"	22:DA:821:A:C2	2.48	0.48
22:DA:845:A:H3'	22:DA:845:A:N3	2.28	0.48
22:DA:1286:A:H4'	22:DA:1287:A:OP1	2.12	0.48
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.48	0.48
22:DA:2289:G:C6	22:DA:2290:G:N7	2.82	0.48
22:DA:2516:A:C6	22:DA:2517:C:N4	2.82	0.48
24:DC:171:TYR:CD2	24:DC:185:GLU:HA	2.49	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
30:DI:89:GLY:CA	30:DI:136:MET:HE3	2.44	0.48
33:DL:91:ASP:CB	33:DL:94:THR:HB	2.43	0.48
42:DU:9:ASP:OD2	42:DU:10:GLU:N	2.47	0.48
1:AA:108:G:O6	20:AT:10:ARG:HG3	2.14	0.48
1:AA:209:U:C4'	1:AA:210:C:OP2	2.62	0.48
1:AA:338:A:N1	1:AA:351:G:O6	2.47	0.48
1:AA:616:G:N2	1:AA:617:G:C4	2.82	0.48
1:AA:671:G:C2	1:AA:736:C:C2	3.02	0.48
1:AA:900:A:N6	1:AA:901:A:N1	2.61	0.48
1:AA:1348:U:H4'	9:AI:122:ARG:HG3	1.94	0.48
6:AF:24:ARG:HH11	6:AF:24:ARG:HG2	1.78	0.48
9:AI:26:GLY:N	9:AI:59:GLU:HA	2.29	0.48
11:AK:76:GLU:O	22:BA:2141:G:OP1	2.31	0.48
14:AN:83:LYS:HD2	14:AN:86:GLU:OE1	2.13	0.48
18:AR:48:ARG:N	18:AR:48:ARG:HD2	2.29	0.48
19:AS:5:LEU:CD2	19:AS:9:PRO:HA	2.43	0.48
22:BA:295:G:C6	22:BA:344:A:C6	3.02	0.48
22:BA:495:G:C1'	40:BS:57:ASN:HD21	2.26	0.48
22:BA:597:G:H2'	22:BA:598:U:H6	1.79	0.48
22:BA:1016:G:C5	22:BA:1017:G:N7	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1686:C:H2'	22:BA:1687:G:O4'	2.14	0.48
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.31	0.48
22:BA:2779:U:C6	22:BA:2781:A:C2	3.02	0.48
22:BA:2812:G:C2	22:BA:2813:A:H1'	2.49	0.48
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.29	0.48
28:BG:35:ARG:HD3	28:BG:71:LEU:HD13	1.95	0.48
28:BG:40:ALA:HB2	28:BG:58:TYR:CG	2.49	0.48
30:BI:18:ALA:O	30:BI:19:ASN:CB	2.61	0.48
34:BM:118:LYS:O	34:BM:121:ALA:N	2.47	0.48
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.13	0.48
42:BU:18:ASP:O	42:BU:19:LYS:C	2.50	0.48
1:CA:545:C:O2'	1:CA:549:C:H5"	2.14	0.48
1:CA:583:A:C2	1:CA:759:A:C5	3.01	0.48
1:CA:656:G:N2	1:CA:751:U:C2	2.82	0.48
1:CA:716:A:N3	11:CK:119:ASN:O	2.47	0.48
1:CA:862:C:C4	1:CA:863:U:H5	2.31	0.48
1:CA:888:G:N2	1:CA:908:A:N7	2.61	0.48
2:CB:72:THR:HG22	2:CB:73:LYS:N	2.29	0.48
4:CD:148:LYS:CD	4:CD:148:LYS:H	2.26	0.48
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD1	2.13	0.48
12:CL:59:ASN:N	12:CL:59:ASN:HD22	2.12	0.48
18:CR:25:ASP:C	18:CR:27:ALA:N	2.61	0.48
19:CS:6:LYS:HB2	19:CS:7:LYS:HG2	1.94	0.48
22:DA:651:G:P	51:D3:19:LYS:HG3	2.53	0.48
22:DA:1243:C:H2'	22:DA:1244:A:O4'	2.14	0.48
22:DA:1259:G:H2'	22:DA:1260:A:H8	1.77	0.48
22:DA:1361:G:C5	22:DA:1371:G:N2	2.81	0.48
22:DA:2211:A:H1'	22:DA:2212:A:OP1	2.14	0.48
22:DA:2354:C:O2'	44:DW:36:ILE:N	2.44	0.48
22:DA:2392:A:OP2	51:D3:31:HIS:HE1	1.96	0.48
22:DA:2507:C:N4	22:DA:2508:G:C6	2.82	0.48
22:DA:2539:C:N4	22:DA:2540:C:N4	2.62	0.48
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	1.96	0.48
34:DM:2:LEU:O	34:DM:3:GLN:CB	2.61	0.48
39:DR:49:ILE:O	39:DR:50:GLY:O	2.32	0.48
40:DS:47:VAL:HB	40:DS:103:ILE:HD13	1.96	0.48
47:DZ:47:MET:O	47:DZ:51:VAL:HG22	2.14	0.48
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.12	0.48
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.14	0.48
1:AA:946:A:C2	1:AA:1236:A:C2	3.02	0.48
1:AA:990:C:N4	1:AA:991:U:O4	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1210:C:O4'	1:AA:1214:C:C5	2.66	0.48
1:AA:1350:A:C5	1:AA:1351:U:C4	3.01	0.48
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.48	0.48
2:AB:96:TRP:CZ3	2:AB:175:GLU:OE2	2.67	0.48
3:AC:40:ARG:HD3	3:AC:55:ILE:HG13	1.95	0.48
4:AD:30:THR:HG22	4:AD:31:LYS:H	1.78	0.48
9:AI:7:TYR:CG	9:AI:8:GLY:N	2.81	0.48
11:AK:67:ALA:HB1	11:AK:100:LEU:HD22	1.95	0.48
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.96	0.48
21:AU:40:LYS:HA	21:AU:43:THR:HG23	1.95	0.48
22:BA:322:A:OP1	26:BE:162:ARG:NE	2.46	0.48
22:BA:878:A:H5'	22:BA:879:G:OP2	2.14	0.48
22:BA:910:A:C4	34:BM:13:HIS:CE1	3.02	0.48
22:BA:974:G:H8	22:BA:990:A:H62	1.62	0.48
22:BA:998:C:OP1	38:BQ:92:ARG:NH2	2.47	0.48
22:BA:1004:U:C2'	22:BA:1005:C:OP2	2.61	0.48
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.62	0.48
22:BA:1808:A:H5'	22:BA:1809:A:C8	2.49	0.48
22:BA:2405:G:HO2'	22:BA:2406:A:P	2.37	0.48
22:BA:2600:A:C6	22:BA:2601:C:N4	2.82	0.48
26:BE:58:LYS:NZ	26:BE:60:TRP:O	2.44	0.48
26:BE:134:LEU:HD23	26:BE:160:ALA:O	2.14	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
32:BK:91:SER:O	32:BK:92:GLU:C	2.52	0.48
37:BP:34:GLU:N	37:BP:37:LYS:O	2.46	0.48
1:CA:158:G:C6	1:CA:164:G:C6	3.02	0.48
1:CA:268:U:N3	1:CA:269:C:C4	2.82	0.48
1:CA:562:U:H1'	12:CL:12:ARG:HG3	1.95	0.48
1:CA:769:G:O2'	1:CA:770:C:H5'	2.14	0.48
1:CA:1055:A:C5	1:CA:1206:G:C6	3.02	0.48
1:CA:1179:A:C2'	1:CA:1180:A:H5'	2.44	0.48
1:CA:1328:C:H5"	13:CM:28:THR:CG2	2.44	0.48
2:CB:21:ARG:HA	2:CB:21:ARG:NE	2.23	0.48
2:CB:28:LYS:N	2:CB:29:PRO:CD	2.77	0.48
3:CC:111:LEU:N	3:CC:111:LEU:CD2	2.77	0.48
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.14	0.48
15:CO:57:LEU:O	15:CO:58:ARG:C	2.52	0.48
16:CP:60:TRP:O	16:CP:61:VAL:C	2.52	0.48
17:CQ:47:HIS:HB2	17:CQ:67:LEU:CD1	2.42	0.48
18:CR:32:TYR:CG	18:CR:55:LEU:HD21	2.48	0.48
20:CT:44:LYS:HD3	20:CT:87:ALA:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:593:U:N3	22:DA:594:U:C4	2.82	0.48
22:DA:1779:U:C5	22:DA:1784:A:N7	2.82	0.48
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.43	0.48
22:DA:2591:C:N3	22:DA:2592:G:N7	2.61	0.48
22:DA:2634:A:H2'	22:DA:2635:A:O4'	2.13	0.48
22:DA:2819:G:H2'	22:DA:2821:A:N7	2.29	0.48
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	1.95	0.48
33:DL:100:ILE:HG12	33:DL:101:ILE:HG23	1.96	0.48
42:DU:38:GLY:HA2	42:DU:41:LEU:HD21	1.94	0.48
1:AA:8:A:H1'	5:AE:108:GLY:HA2	1.95	0.48
1:AA:390:U:H2'	1:AA:391:G:C8	2.48	0.48
1:AA:524:G:C6	1:AA:525:C:N4	2.81	0.48
2:AB:54:LEU:HA	2:AB:57:LEU:HB3	1.96	0.48
2:AB:96:TRP:HZ3	2:AB:175:GLU:OE2	1.97	0.48
3:AC:56:VAL:HB	3:AC:67:THR:HB	1.96	0.48
7:AG:146:GLU:HG3	7:AG:149:LYS:HE2	1.95	0.48
9:AI:44:ALA:H	9:AI:46:MET:HE1	1.79	0.48
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.14	0.48
15:AO:2:SER:O	15:AO:3:LEU:CB	2.61	0.48
15:AO:27:VAL:O	15:AO:31:LEU:HG	2.13	0.48
16:AP:72:ALA:HA	16:AP:75:ILE:CD1	2.44	0.48
22:BA:443:A:C8	26:BE:40:ARG:HD3	2.49	0.48
22:BA:713:G:C6	22:BA:714:U:C4	3.01	0.48
22:BA:729:G:H4'	22:BA:763:G:H5'	1.96	0.48
22:BA:1354:A:C8	22:BA:1355:G:C8	3.02	0.48
22:BA:1717:A:H2'	22:BA:1718:G:O5'	2.13	0.48
22:BA:1871:A:C8	22:BA:1872:A:C6	3.02	0.48
22:BA:1930:G:C4	22:BA:1968:G:C6	3.02	0.48
22:BA:1954:G:H1'	22:BA:1956:U:O4	2.14	0.48
22:BA:1956:U:H2'	22:BA:1957:C:C5'	2.44	0.48
22:BA:1983:G:C6	22:BA:1984:G:N7	2.82	0.48
23:BB:24:G:N2	23:BB:28:C:C2	2.82	0.48
23:BB:112:G:H2'	23:BB:113:C:C6	2.48	0.48
25:BD:27:ILE:HG12	25:BD:201:LEU:HD12	1.94	0.48
25:BD:33:ARG:NH1	25:BD:53:GLY:O	2.47	0.48
25:BD:84:LEU:HD23	25:BD:84:LEU:HA	1.65	0.48
26:BE:91:ASP:OD1	26:BE:93:SER:OG	2.26	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
32:BK:102:PRO:HB3	32:BK:121:GLU:HB2	1.95	0.48
49:B1:35:GLU:O	49:B1:36:LEU:HG	2.14	0.48
1:CA:273:U:C2'	1:CA:274:A:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:476:U:C2'	1:CA:477:C:H5'	2.44	0.48
1:CA:495:A:N3	1:CA:496:A:C5	2.82	0.48
1:CA:552:U:H4'	12:CL:84:GLY:O	2.13	0.48
1:CA:844:G:H2'	1:CA:844:G:N3	2.29	0.48
1:CA:996:A:H2'	1:CA:997:U:C6	2.49	0.48
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.14	0.48
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.13	0.48
1:CA:1342:C:O2'	9:CI:126:GLN:HG3	2.13	0.48
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.48	0.48
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.29	0.48
2:CB:222:ARG:HE	2:CB:223:GLU:HB2	1.78	0.48
5:CE:99:ALA:O	5:CE:100:SER:C	2.50	0.48
5:CE:101:GLU:O	5:CE:101:GLU:OE2	2.32	0.48
9:CI:95:ARG:O	9:CI:99:ARG:HB2	2.14	0.48
20:CT:54:MET:CE	20:CT:58:VAL:HG21	2.44	0.48
22:DA:7:G:H4'	31:DJ:15:TRP:CZ2	2.49	0.48
22:DA:40:U:C4	22:DA:41:C:N4	2.82	0.48
22:DA:190:A:N6	22:DA:191:A:N1	2.61	0.48
22:DA:324:A:H2'	22:DA:325:G:O4'	2.13	0.48
22:DA:328:U:O3'	42:DU:66:GLN:HG3	2.14	0.48
22:DA:783:A:H2'	22:DA:784:G:O5'	2.14	0.48
22:DA:830:G:C2	22:DA:2448:A:N7	2.82	0.48
22:DA:1338:G:O6	41:DT:66:LYS:NZ	2.31	0.48
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.96	0.48
22:DA:2291:U:H2'	22:DA:2292:U:H6	1.79	0.48
22:DA:2311:A:O2'	22:DA:2312:U:OP1	2.32	0.48
22:DA:2349:G:C6	22:DA:2369:A:C6	3.02	0.48
22:DA:2780:G:P	31:DJ:120:ARG:HE	2.36	0.48
26:DE:5:LEU:HD11	26:DE:12:LEU:HB2	1.95	0.48
27:DF:108:VAL:N	27:DF:109:PRO:HD2	2.29	0.48
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.48
33:DL:92:LEU:HD21	33:DL:124:GLY:HA3	1.96	0.48
34:DM:20:LEU:N	34:DM:20:LEU:HD22	2.28	0.48
36:DO:7:ARG:HD2	36:DO:97:PHE:CZ	2.49	0.48
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.29	0.48
45:DX:65:ASP:O	45:DX:66:THR:C	2.51	0.48
50:D2:12:ARG:HG2	50:D2:13:ASN:N	2.29	0.48
1:AA:254:G:O2'	17:AQ:18:GLU:O	2.31	0.48
1:AA:567:G:C6	1:AA:568:G:C5	3.02	0.48
1:AA:568:G:C6	1:AA:569:C:N4	2.82	0.48
1:AA:600:A:H2'	1:AA:601:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:643:C:H2'	1:AA:644:U:C6	2.49	0.48
1:AA:652:U:O2'	1:AA:653:U:P	2.72	0.48
1:AA:1321:U:C5	1:AA:1322:C:C5	3.02	0.48
1:AA:1343:G:N2	1:AA:1349:A:O2'	2.47	0.48
3:AC:22:TRP:HB3	3:AC:59:ARG:HG2	1.95	0.48
6:AF:17:GLN:C	6:AF:19:PRO:HD2	2.33	0.48
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.14	0.48
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.44	0.48
20:AT:83:ILE:O	20:AT:87:ALA:HB3	2.14	0.48
22:BA:323:C:C4	22:BA:333:G:C8	3.02	0.48
22:BA:381:G:OP1	45:BX:16:ASN:ND2	2.40	0.48
22:BA:430:A:H5"	22:BA:431:U:OP2	2.13	0.48
22:BA:599:A:O2'	22:BA:600:G:H5'	2.14	0.48
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.94	0.48
22:BA:1314:C:P	57:BA:3763:HOH:O	2.72	0.48
22:BA:1342:A:N7	22:BA:1397:U:C2	2.82	0.48
22:BA:1542:U:H2'	22:BA:1543:G:O4'	2.13	0.48
22:BA:1924:C:O2	22:BA:1924:C:C2'	2.61	0.48
22:BA:1936:A:H2	22:BA:1943:U:N3	2.11	0.48
22:BA:2467:C:OP1	52:B4:8:LYS:NZ	2.47	0.48
24:BC:40:SER:C	24:BC:42:GLY:H	2.18	0.48
30:BI:67:PHE:CD2	30:BI:67:PHE:N	2.81	0.48
31:BJ:77:HIS:HD2	31:BJ:79:GLY:H	1.62	0.48
32:BK:43:ILE:HD13	32:BK:52:VAL:CG2	2.44	0.48
33:BL:79:LEU:HB3	33:BL:116:VAL:HB	1.95	0.48
40:BS:90:LYS:HD3	40:BS:92:ARG:NH2	2.29	0.48
44:BW:19:LYS:O	44:BW:21:LEU:N	2.46	0.48
1:CA:71:A:C2	1:CA:72:A:C4	3.02	0.48
1:CA:265:G:O3'	17:CQ:68:SER:HA	2.14	0.48
1:CA:340:U:C2	1:CA:350:G:N2	2.82	0.48
1:CA:664:G:N2	1:CA:666:G:C8	2.82	0.48
1:CA:715:A:C6	1:CA:716:A:C6	3.02	0.48
1:CA:828:U:C5	1:CA:829:G:C8	3.02	0.48
1:CA:936:C:O2'	1:CA:1382:C:N3	2.35	0.48
1:CA:1101:A:N3	1:CA:1102:A:H1'	2.28	0.48
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.14	0.48
3:CC:47:LEU:HB3	3:CC:50:ALA:HB3	1.95	0.48
5:CE:143:GLY:O	5:CE:146:ASN:OD1	2.31	0.48
9:CI:57:MET:HB3	9:CI:61:LEU:CD2	2.43	0.48
10:CJ:14:ASP:HB3	10:CJ:17:LEU:HB3	1.95	0.48
11:CK:14:LYS:O	11:CK:15:GLN:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:63:ALA:HB3	11:CK:92:GLY:HA2	1.96	0.48
22:DA:305:C:C2	22:DA:313:G:N1	2.81	0.48
22:DA:425:G:C6	22:DA:426:C:C4	3.02	0.48
22:DA:500:G:N2	22:DA:502:A:C8	2.82	0.48
22:DA:651:G:OP1	51:D3:19:LYS:HB2	2.12	0.48
22:DA:669:G:H2'	22:DA:670:A:N7	2.29	0.48
22:DA:685:A:H5"	22:DA:774:G:O6	2.14	0.48
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.14	0.48
22:DA:1788:C:O2'	22:DA:1789:A:H5'	2.14	0.48
24:DC:129:THR:HA	24:DC:190:ALA:O	2.14	0.48
26:DE:22:ASP:OD2	26:DE:22:ASP:N	2.47	0.48
27:DF:43:ALA:HB2	27:DF:50:LEU:HB2	1.96	0.48
32:DK:108:ARG:NH1	37:DP:34:GLU:O	2.46	0.48
37:DP:103:ARG:HG2	37:DP:107:ALA:CB	2.44	0.48
39:DR:68:ARG:HD3	39:DR:92:TRP:CE2	2.49	0.48
1:AA:172:A:C5	1:AA:174:A:C8	3.02	0.47
1:AA:411:A:C6	1:AA:429:U:C4	3.02	0.47
1:AA:436:C:H2'	1:AA:437:U:C6	2.49	0.47
1:AA:570:G:C6	1:AA:873:A:C2	3.01	0.47
1:AA:673:A:C2	1:AA:674:G:C2	3.02	0.47
1:AA:737:C:C2	1:AA:738:C:C5	3.02	0.47
1:AA:858:G:O2'	1:AA:859:G:C5'	2.62	0.47
1:AA:918:A:H2'	1:AA:919:A:C8	2.49	0.47
2:AB:184:PHE:CD2	2:AB:184:PHE:N	2.82	0.47
4:AD:197:GLU:N	4:AD:197:GLU:OE2	2.47	0.47
10:AJ:52:LEU:HB3	14:AN:81:ARG:CZ	2.44	0.47
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.62	0.47
13:AM:48:LEU:HD23	13:AM:52:GLN:HB2	1.96	0.47
14:AN:31:ILE:HG23	14:AN:45:VAL:HB	1.96	0.47
22:BA:480:A:H2'	22:BA:481:G:OP1	2.14	0.47
22:BA:999:U:C2'	22:BA:1000:A:H5'	2.43	0.47
22:BA:1340:U:C5	22:BA:1603:A:C8	3.02	0.47
22:BA:1344:U:HO2'	22:BA:1345:C:P	2.32	0.47
22:BA:1385:A:C4	22:BA:1386:C:C5	3.01	0.47
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.13	0.47
22:BA:1866:A:H2'	22:BA:1867:G:H5'	1.95	0.47
22:BA:1920:C:H6	22:BA:1920:C:O5'	1.96	0.47
22:BA:2297:A:C2	22:BA:2321:U:H5	2.32	0.47
22:BA:2371:G:C2	22:BA:2372:U:C6	3.02	0.47
22:BA:2595:G:C6	22:BA:2599:G:O6	2.67	0.47
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B3:32:ILE:O	51:B3:32:ILE:HG22	2.14	0.47
1:CA:4:U:O2	1:CA:4:U:H2'	2.13	0.47
1:CA:150:U:H2'	1:CA:151:A:H8	1.79	0.47
1:CA:207:C:O2	1:CA:207:C:C2'	2.61	0.47
1:CA:723:U:H5'	1:CA:724:G:OP1	2.14	0.47
1:CA:971:G:OP1	1:CA:972:C:H5"	2.14	0.47
1:CA:1154:G:N2	1:CA:1155:A:H1'	2.28	0.47
1:CA:1159:U:H5'	1:CA:1159:U:O2	2.13	0.47
1:CA:1514:G:C2	1:CA:1515:G:C4	3.02	0.47
2:CB:81:LYS:HG3	2:CB:85:LEU:HD22	1.96	0.47
3:CC:50:ALA:HB1	3:CC:76:VAL:HG22	1.95	0.47
4:CD:11:LEU:HD23	4:CD:11:LEU:N	2.30	0.47
4:CD:73:ARG:O	4:CD:76:TYR:N	2.46	0.47
9:CI:12:ARG:HG3	9:CI:12:ARG:O	2.13	0.47
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.49	0.47
13:CM:91:HIS:HA	13:CM:109:ARG:NH2	2.29	0.47
22:DA:24:G:C5	22:DA:25:U:C5	3.02	0.47
22:DA:627:A:O2'	33:DL:76:GLU:OE1	2.31	0.47
22:DA:920:A:C6	22:DA:921:C:C4	3.02	0.47
22:DA:1809:A:N6	22:DA:1810:A:C6	2.82	0.47
22:DA:2067:G:C4	22:DA:2444:G:N2	2.82	0.47
22:DA:2570:G:C2'	22:DA:2571:U:H5'	2.44	0.47
22:DA:2806:C:C4	22:DA:2807:U:C4	3.02	0.47
23:DB:64:G:H2'	23:DB:65:U:C6	2.49	0.47
57:DB:307:HOH:O	43:DV:14:LYS:NZ	2.46	0.47
26:DE:145:ASP:HB3	26:DE:184:ASP:HB2	1.95	0.47
27:DF:178:ARG:CZ	27:DF:178:ARG:O	2.61	0.47
41:DT:38:ALA:O	41:DT:39:THR:HB	2.14	0.47
1:AA:406:G:C6	1:AA:495:A:C8	3.02	0.47
1:AA:575:G:C5	1:AA:881:G:C2	3.02	0.47
1:AA:849:G:C6	1:AA:850:U:C2	3.02	0.47
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.49	0.47
1:AA:1074:G:C6	1:AA:1075:U:N3	2.82	0.47
1:AA:1157:A:C5	1:AA:1180:A:C6	3.02	0.47
1:AA:1366:C:O2'	10:AJ:62:ARG:NH2	2.47	0.47
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.48	0.47
3:AC:60:PRO:O	3:AC:63:SER:HB3	2.14	0.47
9:AI:50:GLN:O	9:AI:52:LEU:N	2.40	0.47
10:AJ:80:THR:HB	10:AJ:83:THR:HB	1.96	0.47
18:AR:62:ALA:HB3	18:AR:68:LEU:HD12	1.94	0.47
22:BA:20:C:H2'	22:BA:21:A:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:310:A:H5'	42:BU:15:THR:HG22	1.96	0.47
22:BA:831:G:C6	22:BA:832:U:C4	3.02	0.47
22:BA:1001:A:OP2	57:BA:3736:HOH:O	2.20	0.47
22:BA:1346:G:O2'	22:BA:1347:A:H5'	2.14	0.47
22:BA:1495:A:C2	22:BA:1496:A:C2	3.02	0.47
22:BA:2331:G:N2	22:BA:2385:C:C2	2.83	0.47
22:BA:2776:A:H4'	22:BA:2778:A:OP1	2.14	0.47
23:BB:7:G:H4'	36:BO:29:HIS:ND1	2.30	0.47
24:BC:33:LEU:HD12	24:BC:103:TYR:CD2	2.49	0.47
24:BC:83:TYR:CD1	24:BC:84:ASP:N	2.82	0.47
25:BD:25:THR:HG22	25:BD:27:ILE:HG13	1.96	0.47
26:BE:150:THR:OG1	26:BE:151:GLY:N	2.47	0.47
34:BM:31:PHE:O	34:BM:104:GLU:HA	2.14	0.47
1:CA:211:G:N3	1:CA:211:G:H2'	2.29	0.47
1:CA:216:U:H5"	1:CA:464:U:H4'	1.95	0.47
1:CA:313:A:H2'	1:CA:314:C:C6	2.49	0.47
1:CA:703:G:H4'	1:CA:704:A:H5'	1.96	0.47
1:CA:1180:A:OP1	9:CI:105:THR:OG1	2.32	0.47
1:CA:1250:A:C2	1:CA:1251:A:C4	3.02	0.47
1:CA:1300:G:C6	1:CA:1335:U:C6	3.02	0.47
1:CA:1375:A:C6	1:CA:1376:U:C4	3.03	0.47
2:CB:167:ASP:OD2	2:CB:191:SER:HA	2.15	0.47
17:CQ:13:VAL:HG12	17:CQ:22:VAL:HG13	1.95	0.47
22:DA:36:G:C5	22:DA:37:C:C5	3.02	0.47
22:DA:142:A:C6	22:DA:143:C:N4	2.82	0.47
22:DA:185:G:N1	22:DA:212:G:N3	2.62	0.47
22:DA:1060:U:OP2	30:DI:75:PRO:HA	2.14	0.47
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.14	0.47
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.14	0.47
22:DA:1377:G:OP2	57:DA:3391:HOH:O	2.20	0.47
22:DA:1401:G:C6	22:DA:1402:U:C4	3.02	0.47
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.14	0.47
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.48	0.47
22:DA:2131:U:H4'	22:DA:2133:G:O4'	2.14	0.47
22:DA:2725:A:C4	22:DA:2727:A:N7	2.82	0.47
31:DJ:5:THR:HG22	31:DJ:6:ALA:O	2.14	0.47
33:DL:116:VAL:HG11	33:DL:134:ALA:HB1	1.96	0.47
37:DP:5:ILE:O	37:DP:9:GLU:N	2.45	0.47
38:DQ:86:ALA:HB3	38:DQ:88:VAL:HG23	1.95	0.47
40:DS:86:MET:CE	40:DS:87:PRO:HD2	2.44	0.47
44:DW:49:ALA:O	44:DW:50:ASN:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:104:G:N2	1:AA:105:G:C4	2.82	0.47
1:AA:202:G:N2	1:AA:216:U:O2	2.47	0.47
1:AA:727:G:N2	1:AA:731:G:C4	2.82	0.47
1:AA:821:G:H2'	1:AA:822:U:C6	2.50	0.47
1:AA:1418:A:C2	1:AA:1483:A:C2	3.02	0.47
2:AB:80:VAL:O	2:AB:84:ALA:HB3	2.13	0.47
2:AB:135:LEU:HG	2:AB:138:THR:OG1	2.14	0.47
3:AC:71:ALA:O	3:AC:72:ARG:HG2	2.14	0.47
3:AC:147:LYS:O	3:AC:172:ARG:HB2	2.14	0.47
4:AD:118:VAL:HA	4:AD:123:ILE:CD1	2.43	0.47
8:AH:59:LEU:CD1	8:AH:61:LEU:HG	2.45	0.47
10:AJ:21:ALA:HA	10:AJ:24:GLU:CB	2.45	0.47
11:AK:16:VAL:HG13	11:AK:17:SER:N	2.30	0.47
12:AL:22:PRO:C	12:AL:24:LEU:N	2.67	0.47
22:BA:205:G:O2'	22:BA:206:U:OP2	2.32	0.47
22:BA:411:G:OP2	22:BA:2406:A:O2'	2.29	0.47
22:BA:510:C:H2'	22:BA:511:U:O4'	2.14	0.47
22:BA:583:G:OP1	38:BQ:7:GLY:HA2	2.13	0.47
22:BA:778:G:C5	22:BA:779:U:C5	3.01	0.47
22:BA:1016:G:C4	22:BA:1017:G:C8	3.02	0.47
22:BA:1359:A:C8	22:BA:1373:A:C2	3.03	0.47
22:BA:1789:A:P	24:BC:221:ARG:HH11	2.37	0.47
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.29	0.47
22:BA:2097:A:C2	22:BA:2098:U:C4	3.03	0.47
22:BA:2190:G:OP2	22:BA:2190:G:H8	1.96	0.47
22:BA:2447:G:C5	22:BA:2500:U:C5	3.02	0.47
22:BA:2585:U:O2'	22:BA:2586:U:C5'	2.61	0.47
22:BA:2831:G:P	25:BD:56:LYS:NZ	2.87	0.47
24:BC:209:GLY:O	24:BC:210:ALA:C	2.52	0.47
30:BI:24:VAL:HG23	30:BI:25:GLY:N	2.29	0.47
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	1.96	0.47
32:BK:53:LYS:HG3	32:BK:56:ASP:OD2	2.14	0.47
41:BT:1:MET:HB2	41:BT:2:ILE:HD12	1.96	0.47
49:B1:34:LEU:H	49:B1:52:ALA:HB3	1.79	0.47
1:CA:430:A:OP1	4:CD:9:LEU:HD23	2.14	0.47
1:CA:689:C:OP2	11:CK:53:ARG:NH2	2.47	0.47
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.97	0.47
1:CA:1107:C:C4	1:CA:1108:G:N7	2.82	0.47
1:CA:1460:C:C4	1:CA:1461:G:C5	3.02	0.47
9:CI:6:TYR:HB2	9:CI:21:ILE:HB	1.97	0.47
19:CS:80:TYR:O	19:CS:81:ARG:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:82:U:H5'	22:DA:296:U:C5'	2.45	0.47
22:DA:304:U:H2'	22:DA:305:C:C6	2.49	0.47
22:DA:320:A:H4'	22:DA:322:A:N7	2.29	0.47
22:DA:324:A:N6	22:DA:338:G:O2'	2.44	0.47
22:DA:329:G:O4'	22:DA:477:A:H1'	2.14	0.47
22:DA:370:G:O2'	22:DA:423:A:H3'	2.15	0.47
22:DA:674:G:H1'	26:DE:69:ARG:CD	2.44	0.47
22:DA:813:U:H2'	22:DA:814:C:C6	2.49	0.47
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.33	0.47
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.14	0.47
32:DK:107:LEU:O	32:DK:109:SER:N	2.47	0.47
34:DM:59:ARG:O	34:DM:59:ARG:HD3	2.13	0.47
37:DP:106:LYS:O	37:DP:109:ARG:HD3	2.15	0.47
39:DR:78:ARG:HB3	39:DR:83:TYR:HD1	1.80	0.47
1:AA:228:A:H2'	1:AA:229:U:C6	2.49	0.47
1:AA:427:U:H3'	1:AA:428:G:H2'	1.95	0.47
1:AA:612:C:H2'	1:AA:613:C:C6	2.48	0.47
1:AA:901:A:N7	1:AA:902:G:C1'	2.78	0.47
2:AB:35:ARG:HA	2:AB:35:ARG:NE	2.29	0.47
4:AD:58:LYS:HB3	4:AD:200:ILE:HB	1.96	0.47
6:AF:38:ARG:NE	6:AF:63:ASN:OD1	2.47	0.47
8:AH:115:ALA:O	8:AH:118:GLN:N	2.48	0.47
9:AI:85:ARG:O	9:AI:88:MET:HB2	2.14	0.47
14:AN:47:LYS:HD3	19:AS:13:LEU:HD21	1.96	0.47
15:AO:49:ASP:OD1	15:AO:52:SER:OG	2.31	0.47
19:AS:64:ASP:HB3	27:BF:115:ARG:CZ	2.45	0.47
20:AT:44:LYS:NZ	20:AT:86:LEU:O	2.40	0.47
22:BA:228:C:H4'	22:BA:229:C:H5"	1.97	0.47
22:BA:235:U:O2	22:BA:430:A:C2	2.67	0.47
22:BA:869:G:C6	22:BA:870:U:C4	3.02	0.47
22:BA:1011:G:C2	22:BA:1151:A:C4	3.02	0.47
22:BA:1300:G:N9	22:BA:1626:A:C2	2.83	0.47
22:BA:2294:G:H5"	36:BO:10:ARG:HD3	1.96	0.47
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.49	0.47
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.15	0.47
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.49	0.47
24:BC:108:LYS:HD2	24:BC:194:GLU:OE1	2.15	0.47
24:BC:266:PHE:N	24:BC:266:PHE:HD1	2.11	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
33:BL:68:SER:O	33:BL:69:ARG:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.29	0.47
36:BO:24:THR:HG22	36:BO:42:PRO:CG	2.43	0.47
36:BO:31:THR:CG2	36:BO:34:HIS:H	2.27	0.47
39:BR:46:GLU:OE1	39:BR:46:GLU:CA	2.61	0.47
40:BS:57:ASN:O	40:BS:61:ASN:CB	2.61	0.47
41:BT:4:GLU:O	41:BT:5:GLU:C	2.52	0.47
42:BU:14:LEU:HD12	42:BU:70:VAL:CA	2.45	0.47
1:CA:36:C:OP1	12:CL:120:LYS:HE3	2.14	0.47
1:CA:110:C:N4	1:CA:111:G:C6	2.82	0.47
1:CA:756:C:N3	1:CA:757:U:C6	2.82	0.47
1:CA:794:A:C5	1:CA:795:C:C5	3.02	0.47
1:CA:1386:G:N3	1:CA:1387:G:C8	2.83	0.47
1:CA:1467:C:H2'	1:CA:1468:A:H8	1.79	0.47
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.14	0.47
3:CC:7:PRO:O	3:CC:11:ARG:HG3	2.14	0.47
5:CE:52:LYS:O	5:CE:53:ALA:HB2	2.14	0.47
9:CI:17:ALA:HB2	9:CI:67:VAL:HB	1.97	0.47
11:CK:88:GLY:H	11:CK:114:THR:HG22	1.77	0.47
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.35	0.47
13:CM:48:LEU:HD22	13:CM:53:ILE:HG13	1.96	0.47
21:CU:32:VAL:O	21:CU:33:ARG:C	2.53	0.47
22:DA:210:C:OP1	50:D2:29:GLN:OE1	2.31	0.47
22:DA:271:G:H1'	22:DA:272:A:O5'	2.14	0.47
22:DA:585:G:H2'	22:DA:586:A:N7	2.29	0.47
22:DA:747:U:O2	22:DA:2014:A:H1'	2.13	0.47
22:DA:747:U:C5	22:DA:2613:U:C5	3.03	0.47
22:DA:825:A:H2'	22:DA:826:U:C6	2.49	0.47
22:DA:848:C:H2'	22:DA:849:A:C8	2.50	0.47
22:DA:1352:U:C5	22:DA:1377:G:C6	3.02	0.47
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.15	0.47
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.29	0.47
22:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.95	0.47
22:DA:2684:U:C4	22:DA:2685:G:C8	3.03	0.47
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.49	0.47
22:DA:2882:A:OP1	35:DN:96:ARG:HD3	2.14	0.47
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	1.96	0.47
31:DJ:81:ILE:HG12	31:DJ:82:GLY:N	2.29	0.47
32:DK:114:LYS:O	32:DK:117:SER:HB2	2.14	0.47
42:DU:6:ARG:O	42:DU:7:ARG:O	2.31	0.47
42:DU:28:VAL:HB	42:DU:34:VAL:HG12	1.95	0.47
46:DY:45:GLN:C	46:DY:47:ARG:H	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:66:A:C2	1:AA:104:G:H1'	2.49	0.47
1:AA:357:G:C2	1:AA:358:U:C5	3.02	0.47
1:AA:457:G:C6	1:AA:458:U:C2	3.02	0.47
1:AA:643:C:H5"	8:AH:32:LEU:HD22	1.97	0.47
1:AA:654:G:H2'	1:AA:655:A:H5'	1.96	0.47
1:AA:670:G:C2	1:AA:671:G:C4	3.03	0.47
1:AA:1373:G:O6	9:AI:13:LYS:NZ	2.47	0.47
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.49	0.47
1:AA:1539:C:H5"	21:AU:18:ARG:HG3	1.95	0.47
2:AB:70:VAL:HG12	2:AB:163:VAL:HB	1.96	0.47
4:AD:30:THR:O	4:AD:31:LYS:HE2	2.14	0.47
4:AD:157:ALA:O	4:AD:160:GLU:HB3	2.15	0.47
7:AG:95:ARG:O	7:AG:97:ASN:N	2.48	0.47
11:AK:20:VAL:N	11:AK:35:THR:O	2.45	0.47
16:AP:79:ASN:O	16:AP:80:LYS:HE3	2.15	0.47
21:AU:37:PHE:O	21:AU:38:TYR:CB	2.63	0.47
22:BA:197:A:N6	22:BA:2430:A:H2'	2.29	0.47
22:BA:280:U:H2'	22:BA:281:C:O4'	2.13	0.47
22:BA:485:C:O2	22:BA:485:C:H2'	2.13	0.47
22:BA:515:A:C8	22:BA:516:C:C6	3.03	0.47
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.97	0.47
22:BA:783:A:H8	22:BA:784:G:H4'	1.76	0.47
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.49	0.47
22:BA:1916:A:N3	22:BA:1917:U:H1'	2.29	0.47
22:BA:2182:U:H2'	22:BA:2183:A:C8	2.49	0.47
22:BA:2271:G:C5	22:BA:2272:U:C5	3.02	0.47
22:BA:2328:A:H2'	22:BA:2329:U:H6	1.79	0.47
22:BA:2376:A:N3	36:BO:111:ARG:NH1	2.63	0.47
22:BA:2449:U:H4'	22:BA:2450:A:OP1	2.13	0.47
22:BA:2502:G:H5"	22:BA:2503:A:H5"	1.95	0.47
22:BA:2617:U:C4	22:BA:2618:G:C5	3.03	0.47
22:BA:2805:C:C4	22:BA:2806:C:C5	3.03	0.47
23:BB:50:A:OP1	36:BO:67:ASN:HB2	2.14	0.47
24:BC:121:ASP:OD1	24:BC:121:ASP:N	2.45	0.47
24:BC:246:THR:HB	24:BC:248:TRP:CE3	2.49	0.47
28:BG:118:PRO:O	28:BG:119:ALA:C	2.53	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.47	0.47
32:BK:64:ARG:NH1	32:BK:101:GLY:HA3	2.29	0.47
33:BL:68:SER:HB3	33:BL:71:ALA:CB	2.44	0.47
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:60:LEU:O	38:BQ:61:TRP:C	2.53	0.47
40:BS:56:ALA:O	40:BS:58:ALA:N	2.47	0.47
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.63	0.47
1:CA:860:A:N7	1:CA:861:G:C5	2.82	0.47
1:CA:952:U:OP1	1:CA:972:C:N4	2.48	0.47
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.78	0.47
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.50	0.47
1:CA:1358:U:C5	1:CA:1359:C:C4	3.02	0.47
3:CC:174:PRO:O	3:CC:176:HIS:N	2.48	0.47
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.14	0.47
17:CQ:55:ILE:HG12	17:CQ:56:GLY:N	2.28	0.47
22:DA:181:A:H1'	22:DA:435:C:O4'	2.15	0.47
22:DA:224:U:C4	22:DA:225:C:C5	3.03	0.47
22:DA:699:A:O4'	22:DA:734:A:C2	2.67	0.47
22:DA:818:G:O2'	22:DA:819:A:O4'	2.30	0.47
22:DA:933:A:H5'	22:DA:934:U:OP2	2.13	0.47
22:DA:1203:U:O4	22:DA:1204:A:C6	2.67	0.47
22:DA:1301:A:C2	22:DA:1303:G:C6	3.02	0.47
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.30	0.47
22:DA:1464:G:C4	22:DA:1465:G:C8	3.03	0.47
22:DA:1866:A:C4	22:DA:1876:A:C6	3.03	0.47
22:DA:1914:C:H3'	22:DA:1915:U:C6	2.50	0.47
22:DA:2261:C:H5"	44:DW:19:LYS:HZ3	1.80	0.47
22:DA:2331:G:N2	22:DA:2385:C:C2	2.82	0.47
22:DA:2410:G:C2	22:DA:2411:A:H1'	2.49	0.47
22:DA:2731:G:C6	22:DA:2732:G:O6	2.67	0.47
24:DC:162:VAL:HG13	24:DC:175:ARG:O	2.15	0.47
26:DE:111:GLU:O	26:DE:115:GLN:HG2	2.14	0.47
26:DE:119:ILE:HB	26:DE:187:VAL:HG23	1.97	0.47
26:DE:138:LEU:O	26:DE:141:MET:N	2.47	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
32:DK:22:ILE:O	32:DK:23:LYS:HB2	2.15	0.47
1:AA:502:A:H2'	1:AA:503:C:H6	1.79	0.47
1:AA:510:A:H5"	1:AA:511:C:P	2.55	0.47
1:AA:532:A:N6	3:AC:192:THR:OG1	2.46	0.47
1:AA:737:C:C4	1:AA:738:C:C5	3.02	0.47
1:AA:929:G:C2	1:AA:1389:C:N3	2.83	0.47
1:AA:1089:G:H2'	1:AA:1090:U:O4'	2.15	0.47
1:AA:1301:U:C5	1:AA:1303:C:C5	3.03	0.47
1:AA:1539:C:H5"	21:AU:18:ARG:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:200:ILE:O	2:AB:201:PRO:O	2.33	0.47
11:AK:110:ILE:HG22	21:AU:17:ARG:NE	2.30	0.47
16:AP:4:ILE:O	16:AP:68:SER:OG	2.29	0.47
18:AR:58:ALA:HA	18:AR:61:ARG:HB2	1.96	0.47
22:BA:21:A:H2'	22:BA:22:C:C6	2.50	0.47
22:BA:136:G:C6	22:BA:137:U:O4	2.67	0.47
22:BA:915:C:H2'	22:BA:916:G:H5'	1.95	0.47
22:BA:1240:U:C2'	22:BA:1241:A:OP2	2.63	0.47
22:BA:1343:G:C6	22:BA:1344:U:C4	3.03	0.47
22:BA:1589:U:C2	22:BA:1590:A:C8	3.02	0.47
22:BA:2117:A:N1	22:BA:2170:A:N1	2.62	0.47
22:BA:2241:A:N7	57:BA:3505:HOH:O	2.36	0.47
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.49	0.47
22:BA:2572:A:N7	25:BD:150:GLN:HG3	2.30	0.47
22:BA:2716:C:H2'	22:BA:2717:C:C6	2.49	0.47
22:BA:2887:A:N3	22:BA:2887:A:H2'	2.30	0.47
25:BD:13:ARG:C	25:BD:14:ILE:HD13	2.33	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.14	0.47
30:BI:55:ILE:HG12	30:BI:74:PRO:HB3	1.96	0.47
40:BS:4:ILE:HG23	40:BS:106:VAL:HG22	1.96	0.47
40:BS:36:LEU:CD1	40:BS:47:VAL:HG22	2.44	0.47
51:B3:64:TYR:CD2	51:B3:64:TYR:N	2.81	0.47
1:CA:451:A:H61	1:CA:481:G:H5'	1.80	0.47
1:CA:1202:U:C2'	1:CA:1203:C:H5'	2.45	0.47
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.14	0.47
2:CB:45:LYS:HG3	2:CB:45:LYS:O	2.14	0.47
4:CD:116:GLN:O	4:CD:120:HIS:HB2	2.15	0.47
5:CE:149:SER:HB2	5:CE:152:MET:HG2	1.96	0.47
9:CI:61:LEU:HD23	9:CI:61:LEU:N	2.29	0.47
13:CM:110:LYS:HG2	13:CM:110:LYS:O	2.15	0.47
17:CQ:51:ASN:O	17:CQ:52:GLU:O	2.33	0.47
22:DA:147:C:N4	22:DA:148:U:O4	2.48	0.47
22:DA:371:A:N6	22:DA:402:A:OP2	2.37	0.47
22:DA:483:A:C8	22:DA:484:C:C5	3.03	0.47
22:DA:642:U:O2'	22:DA:644:A:N7	2.33	0.47
22:DA:897:C:H2'	22:DA:898:C:C6	2.49	0.47
22:DA:945:A:C5	22:DA:2448:A:C2	3.03	0.47
22:DA:1096:A:C6	22:DA:1097:U:C5	3.03	0.47
22:DA:1264:A:N7	22:DA:1265:A:C5	2.83	0.47
22:DA:1652:A:OP1	35:DN:8:ARG:NH2	2.47	0.47
22:DA:1864:U:H2'	22:DA:1865:U:H5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1957:C:O2'	22:DA:1985:C:H1'	2.15	0.47
22:DA:2050:C:C4	22:DA:2051:A:C6	3.03	0.47
22:DA:2199:A:N7	22:DA:2225:A:C6	2.82	0.47
26:DE:193:VAL:O	26:DE:193:VAL:HG12	2.14	0.47
32:DK:34:GLY:O	32:DK:36:GLY:N	2.48	0.47
37:DP:88:ARG:HG2	37:DP:89:ARG:N	2.29	0.47
42:DU:40:ASN:HB3	42:DU:63:ALA:HB3	1.96	0.47
1:AA:35:G:H2'	1:AA:36:C:C6	2.50	0.47
1:AA:54:C:H2'	1:AA:352:C:H41	1.79	0.47
1:AA:71:A:H3'	1:AA:71:A:OP2	2.15	0.47
1:AA:554:A:H5'	12:AL:26:ALA:HB1	1.97	0.47
1:AA:760:G:N7	1:AA:761:G:C8	2.82	0.47
1:AA:854:U:C6	1:AA:871:U:O4	2.68	0.47
1:AA:900:A:N1	1:AA:901:A:C2	2.82	0.47
1:AA:976:G:C2	1:AA:1363:A:N7	2.83	0.47
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.80	0.47
1:AA:1296:C:H5"	1:AA:1297:G:OP2	2.15	0.47
1:AA:1501:C:N3	1:AA:1504:G:C6	2.83	0.47
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.49	0.47
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.47	0.47
7:AG:51:ALA:HB2	7:AG:58:GLU:OE1	2.15	0.47
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.63	0.47
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.78	0.47
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.14	0.47
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.30	0.47
13:AM:6:GLY:C	13:AM:8:ASN:N	2.68	0.47
14:AN:7:LYS:O	14:AN:10:GLU:N	2.47	0.47
15:AO:87:LEU:C	15:AO:89:ARG:H	2.17	0.47
16:AP:3:THR:HG22	16:AP:4:ILE:N	2.29	0.47
16:AP:72:ALA:HA	16:AP:75:ILE:HD12	1.96	0.47
17:AQ:4:LYS:HG3	17:AQ:7:THR:CG2	2.45	0.47
22:BA:4:U:O2	22:BA:2900:A:C2	2.68	0.47
22:BA:36:G:C6	22:BA:37:C:C5	3.02	0.47
22:BA:294:A:N6	22:BA:345:A:C4	2.83	0.47
22:BA:534:U:H5'	38:BQ:42:ALA:HB1	1.95	0.47
22:BA:741:U:P	57:BA:3695:HOH:O	2.72	0.47
22:BA:744:U:O4	22:BA:745:G:C6	2.68	0.47
22:BA:756:A:N6	57:BA:3298:HOH:O	2.46	0.47
22:BA:959:A:C6	22:BA:960:A:C2	3.03	0.47
22:BA:973:A:H5'	22:BA:1188:U:C1'	2.44	0.47
22:BA:975:A:H1'	22:BA:990:A:C2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1026:G:N7	22:BA:1134:A:C8	2.83	0.47
22:BA:1038:G:C2	22:BA:1118:C:C2	3.02	0.47
22:BA:1047:G:N2	22:BA:1110:G:C4	2.83	0.47
22:BA:1085:A:C5	22:BA:1086:A:N6	2.83	0.47
22:BA:1169:A:N1	22:BA:1180:U:O4	2.48	0.47
22:BA:1445:G:C2	22:BA:1446:C:C2	3.03	0.47
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.15	0.47
22:BA:1687:G:N2	22:BA:1688:U:C2	2.82	0.47
22:BA:1799:G:H4'	22:BA:1800:C:O5'	2.14	0.47
22:BA:1943:U:C2	22:BA:1945:G:O4'	2.68	0.47
22:BA:2070:A:C2	22:BA:2442:C:C2	3.02	0.47
22:BA:2206:C:O2'	22:BA:2207:C:H5'	2.14	0.47
22:BA:2351:G:O2'	22:BA:2366:A:N6	2.45	0.47
22:BA:2531:A:C5	22:BA:2532:G:N7	2.83	0.47
22:BA:2591:C:OP2	24:BC:237:GLY:O	2.33	0.47
22:BA:2667:C:N3	28:BG:110:SER:OG	2.46	0.47
22:BA:2740:A:C6	22:BA:2741:A:C6	3.02	0.47
22:BA:2811:G:OP1	25:BD:62:LYS:HB2	2.15	0.47
25:BD:177:VAL:O	25:BD:177:VAL:CG2	2.61	0.47
27:BF:72:LYS:HD3	27:BF:73:SER:H	1.78	0.47
27:BF:85:ILE:HG13	27:BF:85:ILE:O	2.15	0.47
30:BI:58:VAL:HG12	30:BI:59:ILE:N	2.30	0.47
30:BI:83:ALA:HB1	30:BI:109:ILE:HD13	1.96	0.47
30:BI:122:ILE:O	30:BI:122:ILE:HG22	2.15	0.47
36:BO:48:LEU:N	36:BO:48:LEU:HD23	2.29	0.47
39:BR:37:GLU:HB3	39:BR:53:PHE:CD1	2.49	0.47
40:BS:56:ALA:O	40:BS:59:GLU:N	2.42	0.47
41:BT:2:ILE:HG23	41:BT:4:GLU:CA	2.45	0.47
46:BY:35:GLY:O	46:BY:36:GLN:O	2.31	0.47
1:CA:369:G:OP2	1:CA:388:G:C2	2.68	0.47
1:CA:570:G:N1	1:CA:571:U:C4	2.82	0.47
1:CA:583:A:C8	1:CA:584:G:C8	3.02	0.47
1:CA:779:C:H2'	1:CA:780:A:H5'	1.95	0.47
1:CA:1004:A:C6	1:CA:1005:A:C6	3.02	0.47
1:CA:1160:G:O6	1:CA:1181:G:C6	2.68	0.47
1:CA:1182:G:H4'	1:CA:1183:U:C5'	2.44	0.47
1:CA:1397:C:O2	1:CA:1397:C:O4'	2.32	0.47
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.79	0.47
4:CD:52:GLY:O	4:CD:53:VAL:C	2.53	0.47
5:CE:121:HIS:O	5:CE:122:ASN:HB3	2.15	0.47
9:CI:87:LEU:C	9:CI:89:GLU:H	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:77:ILE:O	13:CM:81:MET:HG3	2.15	0.47
14:CN:10:GLU:O	14:CN:11:VAL:C	2.53	0.47
14:CN:16:LEU:HD22	14:CN:55:SER:HB3	1.97	0.47
17:CQ:29:VAL:HG22	17:CQ:29:VAL:O	2.13	0.47
22:DA:13:A:N1	22:DA:525:U:H2'	2.29	0.47
22:DA:60:G:HO2'	22:DA:62:U:P	2.29	0.47
22:DA:204:A:C8	22:DA:206:U:C4	3.03	0.47
22:DA:300:A:O2'	22:DA:318:C:O2'	2.08	0.47
22:DA:310:A:HO2'	22:DA:311:A:P	2.29	0.47
22:DA:510:C:OP1	57:DA:3764:HOH:O	2.21	0.47
22:DA:599:A:N3	22:DA:659:G:C2	2.82	0.47
22:DA:1262:A:C6	22:DA:1263:U:N3	2.83	0.47
22:DA:1320:C:N3	22:DA:1333:G:C2	2.83	0.47
22:DA:1432:G:C2	22:DA:1433:A:C4	3.03	0.47
22:DA:1474:U:C4	22:DA:1475:G:N1	2.83	0.47
22:DA:1613:G:C2	22:DA:1617:C:C2	3.03	0.47
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.96	0.47
22:DA:1663:G:H5'	22:DA:2687:U:OP1	2.14	0.47
22:DA:1708:C:H2'	22:DA:1709:U:H6	1.79	0.47
22:DA:2020:A:C2	22:DA:2022:U:O4'	2.67	0.47
22:DA:2310:C:C4	27:DF:77:PHE:CE1	3.02	0.47
22:DA:2334:U:O3'	36:DO:13:ARG:HD2	2.15	0.47
22:DA:2409:G:H2'	22:DA:2410:G:O4'	2.15	0.47
22:DA:2532:G:N2	22:DA:2662:A:N1	2.62	0.47
22:DA:2684:U:N3	22:DA:2685:G:C8	2.83	0.47
22:DA:2831:G:OP1	25:DD:56:LYS:HE2	2.14	0.47
24:DC:10:SER:O	24:DC:13:ARG:HB3	2.14	0.47
27:DF:108:VAL:HG11	27:DF:176:PRO:HG2	1.96	0.47
30:DI:97:LYS:N	30:DI:97:LYS:HD2	2.28	0.47
30:DI:117:MET:SD	30:DI:125:MET:HG2	2.55	0.47
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	2.14	0.47
31:DJ:71:ASP:O	31:DJ:72:LYS:C	2.52	0.47
31:DJ:142:ILE:OXT	31:DJ:142:ILE:HG23	2.13	0.47
32:DK:92:GLU:O	32:DK:93:GLN:CB	2.62	0.47
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.35	0.47
36:DO:14:ALA:O	36:DO:18:LEU:HD23	2.14	0.47
38:DQ:94:ILE:CD1	39:DR:11:GLN:HB2	2.45	0.47
49:D1:8:LYS:HG3	49:D1:24:THR:HG22	1.97	0.47
52:D4:17:VAL:HG21	52:D4:26:ILE:HD11	1.97	0.47
1:AA:134:G:H2'	1:AA:135:C:O4'	2.13	0.47
1:AA:410:G:C5'	1:AA:411:A:OP1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:922:G:H1'	5:AE:24:THR:HG22	1.96	0.47
1:AA:1157:A:C6	1:AA:1180:A:N7	2.83	0.47
1:AA:1241:G:C2	1:AA:1242:G:C8	3.02	0.47
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.50	0.47
1:AA:1442:G:H2'	1:AA:1443:C:O4'	2.14	0.47
2:AB:20:THR:HB	2:AB:37:LYS:O	2.15	0.47
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.45	0.47
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.30	0.47
5:AE:16:ILE:HD12	5:AE:36:LEU:HG	1.96	0.47
8:AH:85:ILE:O	8:AH:86:TYR:CD2	2.68	0.47
19:AS:32:ARG:HD3	19:AS:57:HIS:CG	2.50	0.47
22:BA:523:C:O2'	22:BA:524:G:H5'	2.15	0.47
22:BA:580:U:O3'	38:BQ:31:VAL:HG13	2.14	0.47
22:BA:826:U:H2'	22:BA:828:U:O4'	2.15	0.47
22:BA:1467:U:C4	22:BA:1546:G:N2	2.82	0.47
22:BA:1648:U:C4	22:BA:1649:G:N7	2.83	0.47
22:BA:1820:U:O2'	24:BC:158:ALA:O	2.22	0.47
22:BA:1820:U:O2	24:BC:200:HIS:HB3	2.15	0.47
22:BA:1855:U:C5	22:BA:1856:U:C5	3.03	0.47
26:BE:119:ILE:HB	26:BE:187:VAL:CG2	2.45	0.47
27:BF:34:ILE:HG12	27:BF:96:MET:SD	2.54	0.47
34:BM:68:PHE:O	34:BM:69:PRO:O	2.33	0.47
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.80	0.47
1:CA:75:G:C6	1:CA:76:G:C5	3.03	0.47
1:CA:158:G:C5	1:CA:159:G:N7	2.83	0.47
1:CA:248:C:N4	1:CA:249:U:O4	2.48	0.47
1:CA:438:U:N3	1:CA:494:G:C6	2.83	0.47
1:CA:439:U:H5"	4:CD:121:LYS:HD2	1.96	0.47
1:CA:546:A:P	4:CD:69:GLU:HB2	2.54	0.47
1:CA:1169:A:C6	1:CA:1170:A:C6	3.03	0.47
1:CA:1253:G:C2	1:CA:1285:A:N6	2.83	0.47
1:CA:1491:G:C5	1:CA:1492:A:C6	3.03	0.47
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.14	0.47
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.14	0.47
9:CI:21:ILE:HA	9:CI:62:ASP:O	2.14	0.47
10:CJ:26:VAL:HG12	10:CJ:27:GLU:N	2.29	0.47
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.15	0.47
22:DA:223:A:O2'	22:DA:420:C:O2	2.32	0.47
22:DA:294:A:C5	22:DA:345:A:C2	3.02	0.47
22:DA:594:U:H2'	22:DA:595:C:C6	2.49	0.47
22:DA:1082:U:OP1	30:DI:124:ALA:HB1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1827:U:O2'	22:DA:1828:G:H5'	2.15	0.47
22:DA:2615:U:H1'	48:D0:4:GLN:HB3	1.97	0.47
22:DA:2824:C:C4	22:DA:2825:G:C5	3.03	0.47
23:DB:31:C:O2'	23:DB:53:A:N1	2.34	0.47
24:DC:246:THR:C	24:DC:248:TRP:H	2.18	0.47
27:DF:16:LEU:HD11	27:DF:169:LEU:CD1	2.45	0.47
30:DI:80:LEU:HD11	30:DI:133:ALA:CB	2.45	0.47
35:DN:69:ARG:O	35:DN:70:THR:HG23	2.15	0.47
36:DO:79:ALA:HB1	36:DO:113:ALA:HB3	1.97	0.47
49:D1:15:ALA:O	49:D1:17:THR:N	2.48	0.47
1:AA:52:C:H2'	1:AA:53:A:C8	2.49	0.47
1:AA:316:C:C2	1:AA:317:U:H5	2.33	0.47
1:AA:666:G:C6	1:AA:741:G:C6	3.03	0.47
1:AA:771:G:H2'	1:AA:772:U:C6	2.49	0.47
1:AA:791:G:C6	1:AA:792:A:N7	2.83	0.47
1:AA:815:A:N7	1:AA:1509:C:O2'	2.45	0.47
1:AA:934:C:H4'	1:AA:935:A:OP1	2.15	0.47
1:AA:1074:G:N1	1:AA:1075:U:C2	2.83	0.47
1:AA:1107:C:C4	1:AA:1108:G:N7	2.83	0.47
1:AA:1151:A:O2'	1:AA:1152:A:P	2.73	0.47
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.50	0.47
2:AB:68:LEU:CD2	2:AB:92:VAL:HG23	2.45	0.47
3:AC:22:TRP:CZ2	3:AC:32:ASN:HB3	2.50	0.47
6:AF:35:LYS:HD3	6:AF:35:LYS:N	2.30	0.47
12:AL:24:LEU:CB	12:AL:59:ASN:HD22	2.28	0.47
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.92	0.47
18:AR:62:ALA:HB1	18:AR:67:LEU:HB2	1.96	0.47
18:AR:63:ARG:HB3	18:AR:70:TYR:CZ	2.49	0.47
22:BA:74:A:H5'	22:BA:75:G:O4'	2.15	0.47
22:BA:391:A:H1'	22:BA:411:G:O4'	2.15	0.47
22:BA:1073:A:H2'	22:BA:1074:G:H5"	1.95	0.47
22:BA:1997:C:O2'	22:BA:1998:A:H5'	2.15	0.47
22:BA:2310:C:C5	27:BF:77:PHE:CZ	3.02	0.47
22:BA:2544:G:O2'	22:BA:2545:G:H5'	2.15	0.47
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.45	0.47
22:BA:2880:C:C2	22:BA:2881:U:C5	3.03	0.47
22:BA:2884:U:O2	48:B0:50:ARG:HD2	2.15	0.47
27:BF:7:TYR:CE1	27:BF:11:GLU:HB2	2.50	0.47
34:BM:72:PRO:HB3	34:BM:92:TRP:CZ3	2.50	0.47
35:BN:108:ALA:HB3	35:BN:110:MET:HE2	1.97	0.47
36:BO:26:LEU:C	36:BO:26:LEU:HD12	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:32:A:H3'	1:CA:33:A:H8	1.78	0.47
1:CA:108:G:N3	1:CA:108:G:H5'	2.29	0.47
1:CA:212:G:N2	1:CA:213:G:C4	2.83	0.47
1:CA:570:G:C4	1:CA:571:U:C5	3.03	0.47
1:CA:805:C:C2	1:CA:806:C:H5	2.30	0.47
1:CA:815:A:H4'	1:CA:817:C:C4	2.50	0.47
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.80	0.47
2:CB:165:ASP:O	2:CB:169:GLU:HG2	2.14	0.47
3:CC:16:LYS:HA	3:CC:16:LYS:HE3	1.97	0.47
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.34	0.47
5:CE:42:GLY:O	5:CE:119:GLY:HA3	2.15	0.47
19:CS:40:ILE:HB	19:CS:66:MET:O	2.14	0.47
20:CT:36:TYR:CG	20:CT:37:ALA:N	2.83	0.47
22:DA:334:C:OP1	22:DA:335:C:N4	2.34	0.47
22:DA:448:U:H5"	57:DA:3242:HOH:O	2.14	0.47
22:DA:582:A:OP1	38:DQ:14:HIS:ND1	2.40	0.47
22:DA:661:A:H1'	33:DL:12:SER:O	2.15	0.47
22:DA:993:G:H1'	39:DR:91:GLN:OE1	2.14	0.47
22:DA:1373:A:C5	22:DA:1374:G:H1'	2.49	0.47
22:DA:1677:A:N7	57:DA:3762:HOH:O	2.35	0.47
22:DA:1790:C:C5	22:DA:1828:G:C2	3.03	0.47
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.49	0.47
22:DA:1956:U:O2	22:DA:1985:C:H4'	2.15	0.47
22:DA:2343:U:O2	22:DA:2343:U:H2'	2.15	0.47
22:DA:2470:G:C2	22:DA:2471:A:C8	3.02	0.47
22:DA:2756:U:C4	22:DA:2759:G:O6	2.67	0.47
25:DD:12:THR:HB	37:DP:9:GLU:OE2	2.15	0.47
34:DM:49:ALA:HB2	34:DM:123:LYS:HB2	1.97	0.47
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.45	0.47
39:DR:42:ALA:HA	39:DR:46:GLU:HA	1.96	0.47
42:DU:41:LEU:HB3	42:DU:60:GLU:HG2	1.97	0.47
1:AA:715:A:OP1	1:AA:805:C:H1'	2.15	0.47
1:AA:807:A:C5	1:AA:808:C:C5	3.03	0.47
1:AA:906:A:N1	57:AA:1761:HOH:O	2.36	0.47
1:AA:1315:U:O4	1:AA:1316:G:C6	2.67	0.47
1:AA:1489:G:C6	1:AA:1490:U:C4	3.03	0.47
2:AB:118:GLU:HA	2:AB:121:SER:HB2	1.97	0.47
2:AB:161:LEU:HD12	2:AB:181:ILE:HG21	1.96	0.47
4:AD:160:GLU:O	4:AD:162:ALA:N	2.48	0.47
6:AF:16:GLU:OE2	4:CD:188:ARG:CZ	2.63	0.47
6:AF:97:THR:O	6:AF:98:GLU:CG	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:36:ILE:HD11	8:AH:126:ILE:HG21	1.97	0.47
21:AU:14:VAL:HG13	21:AU:16:LEU:HD21	1.96	0.47
22:BA:15:G:C4	22:BA:16:C:C5	3.03	0.47
22:BA:681:G:C2'	22:BA:682:G:O5'	2.63	0.47
22:BA:1056:G:N2	22:BA:1102:C:C4	2.83	0.47
22:BA:1850:G:C6	22:BA:1851:U:C4	3.03	0.47
22:BA:2725:A:C4	22:BA:2727:A:C8	3.03	0.47
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.15	0.47
22:BA:2862:G:H2'	22:BA:2863:C:C6	2.50	0.47
24:BC:212:ARG:HD2	24:BC:216:VAL:O	2.15	0.47
30:BI:84:ALA:HB1	30:BI:101:ILE:HD12	1.97	0.47
38:BQ:24:TYR:O	38:BQ:25:TYR:HB3	2.12	0.47
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD12	1.97	0.47
53:B5:19:LYS:HG2	53:B5:23:ILE:HD11	1.97	0.47
1:CA:3:A:C6	1:CA:629:A:H4'	2.50	0.47
1:CA:38:G:C2	1:CA:397:A:C4	3.03	0.47
1:CA:261:U:OP2	20:CT:71:LYS:HD2	2.15	0.47
1:CA:459:A:H2'	1:CA:460:A:O4'	2.15	0.47
1:CA:535:A:OP1	1:CA:535:A:H3'	2.15	0.47
1:CA:543:U:P	4:CD:14:ARG:HH21	2.38	0.47
1:CA:898:G:O2'	1:CA:900:A:N7	2.37	0.47
1:CA:1309:G:C6	1:CA:1329:A:N1	2.83	0.47
2:CB:60:ILE:O	2:CB:65:GLY:N	2.48	0.47
2:CB:68:LEU:HB3	2:CB:161:LEU:HD12	1.97	0.47
2:CB:163:VAL:HG23	2:CB:185:ALA:HB2	1.96	0.47
18:CR:62:ALA:HB3	18:CR:68:LEU:HD12	1.96	0.47
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.87	0.47
22:DA:570:G:C4	22:DA:2030:A:N7	2.83	0.47
22:DA:674:G:C1'	26:DE:69:ARG:HD3	2.45	0.47
22:DA:750:A:N3	22:DA:750:A:H2'	2.30	0.47
22:DA:1121:C:C2	22:DA:1122:G:C8	3.03	0.47
22:DA:1334:G:C6	22:DA:1335:C:N3	2.83	0.47
22:DA:1428:C:C4	22:DA:1569:A:H5"	2.50	0.47
22:DA:1613:G:O2'	50:D2:3:ARG:HD2	2.15	0.47
22:DA:2077:A:H1'	22:DA:2435:A:C1'	2.45	0.47
22:DA:2186:G:C6	22:DA:2187:U:C4	3.03	0.47
22:DA:2189:U:H2'	22:DA:2190:G:C5'	2.46	0.47
22:DA:2346:A:H4'	22:DA:2347:C:OP2	2.15	0.47
22:DA:2803:G:H2'	22:DA:2804:U:C6	2.50	0.47
23:DB:38:C:H2'	23:DB:39:A:O4'	2.15	0.47
27:DF:60:ILE:O	27:DF:102:ARG:NH2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:104:ALA:O	31:DJ:108:MET:HG3	2.15	0.47
31:DJ:139:VAL:CG1	31:DJ:140:LEU:N	2.78	0.47
32:DK:77:ILE:HG12	37:DP:72:ARG:HG2	1.96	0.47
33:DL:74:THR:O	33:DL:74:THR:OG1	2.26	0.47
34:DM:67:VAL:HG12	34:DM:100:LYS:HE2	1.96	0.47
46:DY:45:GLN:C	46:DY:47:ARG:N	2.69	0.47
1:AA:110:C:H2'	1:AA:111:G:O4'	2.15	0.46
1:AA:184:G:C6	1:AA:185:U:C4	3.02	0.46
1:AA:429:U:H4'	1:AA:430:A:OP1	2.13	0.46
1:AA:452:A:N7	1:AA:453:G:C4	2.82	0.46
1:AA:559:A:H2'	1:AA:559:A:N3	2.30	0.46
1:AA:648:A:H2'	1:AA:649:A:O4'	2.15	0.46
1:AA:892:A:C2	1:AA:907:A:C4	3.02	0.46
1:AA:1014:A:N7	1:AA:1015:G:C5	2.83	0.46
1:AA:1309:G:OP1	13:AM:87:ARG:NH2	2.48	0.46
7:AG:26:PHE:HB2	7:AG:101:MET:SD	2.55	0.46
7:AG:70:ARG:HG3	7:AG:96:ARG:HG2	1.97	0.46
9:AI:40:GLY:HA2	9:AI:45:ARG:HB2	1.97	0.46
10:AJ:100:ILE:HG13	10:AJ:101:SER:N	2.31	0.46
22:BA:25:U:C2'	22:BA:26:G:H5'	2.44	0.46
22:BA:498:G:C4	22:BA:499:U:C5	3.03	0.46
22:BA:1247:A:C5	22:BA:1249:U:C5	3.04	0.46
22:BA:1435:G:O2'	22:BA:1436:G:H5'	2.16	0.46
22:BA:1439:A:C2	22:BA:1553:A:C5	3.03	0.46
22:BA:1713:A:C6	22:BA:1716:U:H1'	2.50	0.46
22:BA:1824:G:H2'	22:BA:1825:U:O5'	2.15	0.46
22:BA:2065:C:H2'	22:BA:2066:C:C6	2.50	0.46
22:BA:2180:U:H5"	22:BA:2181:U:OP2	2.15	0.46
22:BA:2211:A:O2'	22:BA:2212:A:P	2.73	0.46
22:BA:2214:C:H2'	22:BA:2215:C:O4'	2.14	0.46
22:BA:2340:A:O2'	22:BA:2341:G:H5'	2.15	0.46
22:BA:2560:A:C6	22:BA:2561:U:C4	3.03	0.46
22:BA:2586:U:C2	54:B6:2:THR:HA	2.50	0.46
23:BB:45:A:C6	23:BB:46:A:C5	3.03	0.46
24:BC:182:ARG:NH2	24:BC:266:PHE:HB3	2.30	0.46
26:BE:7:ASP:O	26:BE:9:GLN:N	2.49	0.46
28:BG:10:VAL:HG13	28:BG:10:VAL:O	2.15	0.46
28:BG:176:LYS:O	28:BG:177:LYS:HB2	2.15	0.46
32:BK:99:ILE:CG2	32:BK:119:ALA:HB2	2.44	0.46
34:BM:72:PRO:O	34:BM:73:ILE:HD13	2.15	0.46
47:BZ:8:THR:HG23	47:BZ:34:HIS:O	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:122:GLY:CA	53:B5:146:VAL:CB	2.94	0.46
1:CA:121:U:O2'	1:CA:122:G:OP1	2.27	0.46
1:CA:441:A:H2'	1:CA:441:A:N3	2.29	0.46
1:CA:549:C:H2'	1:CA:550:G:O4'	2.16	0.46
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.98	0.46
2:CB:15:HIS:O	2:CB:16:PHE:C	2.52	0.46
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.97	0.46
3:CC:150:LYS:HE3	3:CC:201:TRP:CZ3	2.50	0.46
4:CD:48:LEU:CD2	4:CD:53:VAL:N	2.76	0.46
5:CE:156:LYS:HA	5:CE:159:LYS:NZ	2.29	0.46
9:CI:35:LEU:HD11	9:CI:48:VAL:HG21	1.96	0.46
10:CJ:11:LYS:HE3	10:CJ:71:LEU:HD11	1.97	0.46
22:DA:273:G:H2'	22:DA:274:C:O4'	2.15	0.46
22:DA:607:U:H5	22:DA:619:G:C5	2.33	0.46
22:DA:786:C:H5"	22:DA:1780:A:N7	2.30	0.46
22:DA:1011:G:OP1	38:DQ:75:SER:HB2	2.15	0.46
22:DA:1652:A:C2	22:DA:2006:C:C2	3.03	0.46
22:DA:1720:U:H2'	22:DA:1721:G:O4'	2.15	0.46
22:DA:1799:G:O2'	24:DC:180:GLU:OE2	2.18	0.46
22:DA:2063:C:O2	22:DA:2063:C:H2'	2.14	0.46
22:DA:2095:A:C2	22:DA:2195:U:C2	3.03	0.46
22:DA:2543:G:C2	22:DA:2765:A:C8	3.03	0.46
22:DA:2749:A:OP1	28:DG:2:SER:HB3	2.15	0.46
22:DA:2799:A:O2'	22:DA:2800:A:H5"	2.14	0.46
25:DD:25:THR:HG21	25:DD:193:VAL:HG22	1.97	0.46
26:DE:129:PRO:HB3	26:DE:159:LEU:HB2	1.97	0.46
26:DE:176:ASP:OD1	26:DE:179:SER:OG	2.31	0.46
26:DE:196:VAL:O	26:DE:196:VAL:CG1	2.63	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
31:DJ:5:THR:HG23	31:DJ:45:THR:HG21	1.96	0.46
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.49	0.46
37:DP:103:ARG:HG2	37:DP:107:ALA:HB1	1.97	0.46
45:DX:40:VAL:HG23	45:DX:45:ARG:O	2.16	0.46
1:AA:22:G:H2'	1:AA:23:C:H6	1.79	0.46
1:AA:149:A:H1'	1:AA:1446:A:C2	2.50	0.46
1:AA:190:A:C8	1:AA:191:G:C8	3.04	0.46
1:AA:380:G:N2	1:AA:384:G:C5	2.83	0.46
1:AA:420:U:C2'	1:AA:421:U:H5"	2.45	0.46
1:AA:652:U:C5	1:AA:752:G:C4	3.03	0.46
1:AA:880:C:C2'	1:AA:881:G:H5'	2.45	0.46
1:AA:902:G:O2'	1:AA:903:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:923:A:O4'	1:AA:1398:A:C2	2.68	0.46
1:AA:1088:G:C6	1:AA:1089:G:N7	2.83	0.46
1:AA:1164:G:C2	1:AA:1173:U:O2	2.69	0.46
1:AA:1406:U:C6	1:AA:1407:C:C6	3.03	0.46
1:AA:1444:U:H2'	1:AA:1445:U:C6	2.50	0.46
2:AB:15:HIS:O	2:AB:16:PHE:C	2.54	0.46
2:AB:19:GLN:C	2:AB:38:VAL:HG23	2.36	0.46
3:AC:20:SER:HB3	14:AN:94:PRO:HG3	1.98	0.46
9:AI:50:GLN:C	9:AI:52:LEU:H	2.18	0.46
13:AM:98:ARG:HB2	13:AM:100:GLN:OE1	2.15	0.46
17:AQ:31:HIS:O	17:AQ:33:ILE:N	2.47	0.46
21:AU:14:VAL:HG13	21:AU:16:LEU:CD2	2.46	0.46
22:BA:116:C:H2'	22:BA:117:G:O4'	2.15	0.46
22:BA:198:C:O5'	22:BA:198:C:H6	1.98	0.46
22:BA:447:A:C2	22:BA:473:G:C8	3.04	0.46
22:BA:498:G:C2	22:BA:499:U:C5	3.03	0.46
22:BA:694:U:N3	22:BA:695:G:N7	2.62	0.46
22:BA:697:G:H2'	22:BA:698:C:H6	1.79	0.46
22:BA:699:A:C8	22:BA:734:A:C5	3.03	0.46
22:BA:839:U:O2'	22:BA:1191:G:H1'	2.14	0.46
22:BA:858:G:N3	22:BA:2268:A:N3	2.64	0.46
22:BA:1482:G:H1'	22:BA:1509:A:H61	1.80	0.46
22:BA:1579:A:H2'	22:BA:1580:A:C8	2.50	0.46
22:BA:1833:C:C4	22:BA:1834:U:C5	3.03	0.46
22:BA:1941:C:C6	22:BA:1965:C:C2	3.03	0.46
22:BA:2190:G:C2	22:BA:2191:A:C4	3.03	0.46
22:BA:2547:A:C8	22:BA:2566:A:C5	3.02	0.46
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.63	0.46
22:BA:2673:G:C2	22:BA:2674:G:C8	3.03	0.46
24:BC:237:GLY:O	24:BC:238:ARG:HB2	2.14	0.46
27:BF:72:LYS:HD3	27:BF:73:SER:N	2.30	0.46
30:BI:116:ASP:O	30:BI:117:MET:CB	2.62	0.46
31:BJ:62:VAL:HG22	31:BJ:63:ALA:N	2.31	0.46
31:BJ:77:HIS:HA	31:BJ:83:GLY:O	2.15	0.46
31:BJ:114:LEU:O	31:BJ:118:MET:HG3	2.14	0.46
32:BK:2:ILE:HG23	32:BK:6:THR:CG2	2.44	0.46
33:BL:14:LYS:O	33:BL:15:ALA:C	2.53	0.46
38:BQ:21:ALA:O	38:BQ:24:TYR:HB2	2.15	0.46
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.96	0.46
1:CA:106:C:C2'	1:CA:107:G:H5'	2.45	0.46
1:CA:222:C:O2	1:CA:223:A:C8	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:577:G:N3	1:CA:578:C:C6	2.83	0.46
1:CA:644:U:H2'	1:CA:645:G:O4'	2.15	0.46
1:CA:829:G:C6	1:CA:858:G:N2	2.82	0.46
1:CA:1255:G:C6	1:CA:1279:G:N7	2.83	0.46
1:CA:1299:A:O2'	1:CA:1301:U:O4'	2.31	0.46
1:CA:1302:C:C4	13:CM:17:ILE:HD13	2.50	0.46
5:CE:76:LEU:H	5:CE:76:LEU:HD12	1.80	0.46
12:CL:102:LEU:N	12:CL:102:LEU:HD12	2.30	0.46
19:CS:15:LEU:HA	19:CS:18:LYS:HD2	1.97	0.46
22:DA:21:A:C2	22:DA:520:G:C2	3.03	0.46
22:DA:36:G:C2'	22:DA:450:G:HO2'	2.27	0.46
22:DA:289:G:H2'	22:DA:290:U:O4'	2.14	0.46
22:DA:498:G:C6	22:DA:499:U:C4	3.04	0.46
22:DA:1509:A:HO2'	22:DA:1510:G:P	2.38	0.46
22:DA:1609:A:O2'	22:DA:1610:A:H5'	2.15	0.46
22:DA:2715:C:N4	22:DA:2716:C:N4	2.63	0.46
22:DA:2865:U:H3'	22:DA:2866:U:H2'	1.97	0.46
23:DB:4:C:C2	23:DB:117:G:C2	3.03	0.46
23:DB:66:A:H4'	23:DB:67:G:OP1	2.14	0.46
24:DC:25:HIS:N	24:DC:81:LEU:O	2.46	0.46
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.97	0.46
31:DJ:75:TYR:HB3	31:DJ:84:ILE:HD11	1.98	0.46
41:DT:23:ALA:O	41:DT:27:SER:N	2.46	0.46
41:DT:29:THR:HG23	41:DT:85:VAL:C	2.35	0.46
1:AA:394:G:C6	1:AA:395:C:C4	3.03	0.46
1:AA:417:G:N2	1:AA:540:G:O2'	2.48	0.46
1:AA:568:G:C4	1:AA:569:C:H5	2.33	0.46
1:AA:898:G:N2	1:AA:901:A:OP2	2.49	0.46
1:AA:972:C:OP2	1:AA:1366:C:H5"	2.15	0.46
1:AA:1079:G:N2	1:AA:1080:A:N1	2.64	0.46
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.15	0.46
2:AB:51:ASN:O	2:AB:52:GLU:CB	2.64	0.46
2:AB:72:THR:O	2:AB:73:LYS:CB	2.63	0.46
3:AC:59:ARG:HA	3:AC:63:SER:O	2.15	0.46
4:AD:23:SER:HB2	4:AD:110:THR:HB	1.96	0.46
8:AH:80:ARG:HB2	8:AH:81:PRO:HD2	1.96	0.46
14:AN:46:LEU:O	14:AN:48:LEU:N	2.49	0.46
22:BA:37:C:H4'	22:BA:451:U:OP1	2.15	0.46
22:BA:468:G:O6	22:BA:469:G:C2	2.68	0.46
22:BA:630:G:C3'	22:BA:631:A:H5"	2.46	0.46
22:BA:954:G:C5	22:BA:955:U:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:970:U:O2'	22:BA:971:G:H5'	2.15	0.46
22:BA:1059:G:H3'	22:BA:1060:U:H2'	1.97	0.46
22:BA:1074:G:H2'	22:BA:1075:C:H5'	1.96	0.46
22:BA:1153:C:OP1	38:BQ:92:ARG:NH1	2.48	0.46
22:BA:1289:C:H2'	22:BA:1290:C:H6	1.80	0.46
22:BA:1344:U:H1'	22:BA:1384:A:H2'	1.97	0.46
22:BA:1489:C:N3	22:BA:1501:G:C2	2.83	0.46
22:BA:1798:U:H5'	24:BC:257:THR:OG1	2.16	0.46
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.15	0.46
22:BA:2547:A:H4'	32:BK:29:HIS:CE1	2.51	0.46
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.78	0.46
29:BH:132:PHE:CD2	29:BH:142:VAL:CG2	2.99	0.46
30:BI:64:ASP:O	30:BI:66:SER:N	2.48	0.46
32:BK:43:ILE:HG22	32:BK:54:LYS:HA	1.96	0.46
33:BL:77:ILE:HG22	33:BL:78:ARG:N	2.31	0.46
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	1.97	0.46
48:B0:34:SER:OG	48:B0:36:GLU:HG2	2.14	0.46
1:CA:756:C:C2'	1:CA:757:U:H5'	2.45	0.46
1:CA:949:A:C2	1:CA:1233:G:N3	2.84	0.46
1:CA:1007:U:H2'	1:CA:1008:U:C5'	2.45	0.46
1:CA:1108:G:H5"	3:CC:176:HIS:CD2	2.50	0.46
4:CD:61:VAL:HG12	4:CD:62:ARG:N	2.29	0.46
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.30	0.46
14:CN:31:ILE:HG22	14:CN:32:SER:N	2.30	0.46
22:DA:24:G:N2	22:DA:516:C:O2	2.47	0.46
22:DA:82:U:O2	22:DA:83:A:C8	2.69	0.46
22:DA:208:C:H2'	22:DA:209:C:C6	2.50	0.46
22:DA:306:U:C5	22:DA:307:G:N7	2.84	0.46
22:DA:327:G:N2	42:DU:68:SER:HB2	2.29	0.46
22:DA:491:G:C6	22:DA:492:A:C6	3.03	0.46
22:DA:527:C:OP1	57:DA:3245:HOH:O	2.20	0.46
22:DA:600:G:H2'	22:DA:601:C:C6	2.49	0.46
22:DA:770:G:H1'	22:DA:1379:U:C4	2.51	0.46
22:DA:1410:G:H2'	22:DA:1411:U:C6	2.50	0.46
22:DA:1438:U:C5	22:DA:1552:A:C2	3.03	0.46
22:DA:2087:G:C2	22:DA:2233:U:O2	2.68	0.46
22:DA:2842:G:C2	22:DA:2843:G:H1'	2.51	0.46
26:DE:52:VAL:HG11	26:DE:81:GLY:HA3	1.97	0.46
28:DG:149:ARG:HD3	28:DG:164:TYR:CZ	2.51	0.46
31:DJ:74:TYR:CD1	31:DJ:92:MET:HG3	2.50	0.46
1:AA:13:U:N3	1:AA:916:U:O4	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:90:C:O2'	1:AA:91:U:P	2.73	0.46
1:AA:109:A:H3'	1:AA:110:C:H5'	1.98	0.46
1:AA:213:G:N7	1:AA:214:C:C4	2.84	0.46
1:AA:635:A:H2'	1:AA:636:U:C6	2.50	0.46
1:AA:900:A:C6	1:AA:901:A:N1	2.84	0.46
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.51	0.46
2:AB:41:ILE:HG12	2:AB:42:ASN:N	2.29	0.46
2:AB:147:SER:O	2:AB:148:LEU:HG	2.16	0.46
3:AC:7:PRO:O	3:AC:10:ILE:HG22	2.16	0.46
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.48	0.46
9:AI:125:PRO:O	9:AI:126:GLN:C	2.52	0.46
12:AL:57:LEU:HB2	12:AL:61:PHE:O	2.16	0.46
22:BA:27:G:N3	22:BA:512:G:N2	2.63	0.46
22:BA:94:A:H2'	22:BA:95:A:C8	2.50	0.46
22:BA:224:U:C2'	22:BA:225:C:O5'	2.64	0.46
22:BA:368:A:C5	22:BA:369:U:C5	3.04	0.46
22:BA:915:C:C2'	22:BA:916:G:H5'	2.45	0.46
22:BA:1073:A:N7	22:BA:1074:G:C8	2.82	0.46
22:BA:1075:C:H2'	22:BA:1076:C:C2	2.51	0.46
22:BA:1660:G:H2'	22:BA:1661:G:H8	1.81	0.46
22:BA:1742:U:C2'	22:BA:1743:G:O5'	2.63	0.46
22:BA:1796:U:H2'	22:BA:1797:G:C8	2.50	0.46
22:BA:1917:U:O2	22:BA:1918:A:O4'	2.33	0.46
22:BA:1985:C:N3	22:BA:1986:C:C5	2.83	0.46
22:BA:2139:U:C2	22:BA:2140:G:C8	3.03	0.46
22:BA:2540:C:O2'	22:BA:2541:A:H5'	2.16	0.46
22:BA:2618:G:C6	22:BA:2619:C:C4	3.03	0.46
22:BA:2665:A:C2	22:BA:2666:C:C2	3.04	0.46
23:BB:37:C:C6	23:BB:38:C:C5	3.03	0.46
24:BC:130:LEU:HD23	24:BC:130:LEU:N	2.30	0.46
26:BE:147:LEU:HG	26:BE:149:ILE:HG22	1.97	0.46
29:BH:80:ILE:HG21	29:BH:94:ILE:CG1	2.45	0.46
32:BK:110:GLU:HA	32:BK:110:GLU:OE2	2.14	0.46
39:BR:51:VAL:HG23	39:BR:52:PRO:CD	2.42	0.46
43:BV:48:MET:SD	43:BV:85:LYS:HA	2.56	0.46
53:B5:24:ASP:CB	53:B5:185:LYS:O	2.63	0.46
1:CA:68:G:C6	1:CA:69:G:H1'	2.49	0.46
1:CA:456:A:C2	1:CA:477:C:C2	3.03	0.46
1:CA:627:G:H2'	1:CA:628:G:O4'	2.15	0.46
1:CA:1101:A:N6	2:CB:102:THR:HG21	2.26	0.46
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1417:G:N2	1:CA:1484:C:C4	2.84	0.46
3:CC:39:VAL:HG12	3:CC:94:ILE:HD12	1.98	0.46
4:CD:34:ILE:O	4:CD:35:GLU:CB	2.64	0.46
4:CD:196:ASN:O	4:CD:197:GLU:C	2.53	0.46
5:CE:150:PRO:C	5:CE:152:MET:H	2.18	0.46
6:CF:64:VAL:CG1	6:CF:65:GLU:N	2.79	0.46
7:CG:33:ASP:HB3	7:CG:35:LYS:HE3	1.98	0.46
7:CG:42:ILE:HG21	7:CG:116:MET:CG	2.46	0.46
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	1.96	0.46
19:CS:36:ARG:HA	19:CS:71:LEU:HB2	1.97	0.46
22:DA:190:A:C6	22:DA:191:A:C2	3.04	0.46
22:DA:235:U:C4	22:DA:236:C:C5	3.03	0.46
22:DA:300:A:O5'	42:DU:82:ARG:NH1	2.48	0.46
22:DA:496:G:C6	22:DA:497:A:C4	3.04	0.46
22:DA:1644:C:O2	22:DA:1644:C:C2'	2.63	0.46
22:DA:1816:C:H5"	24:DC:62:TYR:CE2	2.50	0.46
22:DA:1819:A:N3	24:DC:178:SER:HB2	2.31	0.46
22:DA:2547:A:C8	22:DA:2566:A:C8	3.03	0.46
22:DA:2780:G:O6	31:DJ:102:GLU:OE2	2.33	0.46
25:DD:121:THR:HB	25:DD:127:PHE:CD1	2.51	0.46
25:DD:166:GLY:O	25:DD:167:ASN:HB3	2.16	0.46
30:DI:62:TYR:HB3	30:DI:64:ASP:H	1.80	0.46
35:DN:54:LEU:HD23	35:DN:66:ALA:HB2	1.98	0.46
35:DN:82:GLU:O	35:DN:86:ARG:HB2	2.16	0.46
35:DN:87:PHE:HD1	35:DN:90:ARG:HD2	1.80	0.46
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.69	0.46
1:AA:154:U:C2	1:AA:168:G:N2	2.84	0.46
1:AA:159:G:H5'	1:AA:160:A:OP2	2.16	0.46
1:AA:513:C:N3	1:AA:539:A:C2	2.83	0.46
1:AA:542:G:N1	1:AA:543:U:C4	2.84	0.46
1:AA:626:G:O2'	1:AA:627:G:H5'	2.15	0.46
1:AA:836:G:C5	1:AA:851:G:C6	3.04	0.46
1:AA:889:A:O3'	1:AA:890:G:H4'	2.15	0.46
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.45	0.46
1:AA:1337:G:H5"	1:AA:1338:G:OP1	2.16	0.46
1:AA:1385:G:H2'	1:AA:1386:G:C5'	2.45	0.46
2:AB:64:LYS:C	2:AB:64:LYS:HD3	2.35	0.46
6:AF:25:TYR:O	6:AF:28:ALA:HB3	2.15	0.46
16:AP:43:ALA:O	16:AP:44:SER:OG	2.21	0.46
20:AT:80:THR:O	20:AT:83:ILE:HG13	2.16	0.46
21:AU:40:LYS:N	21:AU:41:PRO:HD2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:120:U:OP2	57:BA:3214:HOH:O	2.21	0.46
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.50	0.46
22:BA:1507:C:C4	22:BA:1508:A:C2	3.04	0.46
22:BA:1650:A:N6	57:BA:3800:HOH:O	2.48	0.46
22:BA:1651:G:C2	22:BA:1652:A:C4	3.04	0.46
22:BA:1889:A:H2'	22:BA:1890:A:H8	1.81	0.46
22:BA:2409:G:H2'	22:BA:2410:G:O4'	2.15	0.46
22:BA:2887:A:C8	22:BA:2887:A:OP2	2.68	0.46
26:BE:97:ASN:O	26:BE:98:LYS:C	2.54	0.46
26:BE:158:PHE:O	26:BE:161:ALA:HB3	2.16	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
33:BL:74:THR:HA	33:BL:107:PHE:O	2.16	0.46
35:BN:66:ALA:O	35:BN:69:ARG:O	2.34	0.46
49:B1:11:LEU:N	49:B1:11:LEU:CD2	2.79	0.46
52:B4:30:GLU:HG3	52:B4:33:HIS:CD2	2.49	0.46
1:CA:13:U:O2'	1:CA:14:U:H5'	2.16	0.46
1:CA:76:G:C2	1:CA:95:C:N3	2.82	0.46
1:CA:179:A:H2'	1:CA:180:U:C6	2.51	0.46
1:CA:391:G:C2	1:CA:392:C:H1'	2.51	0.46
1:CA:411:A:OP1	4:CD:26:ARG:NH2	2.49	0.46
4:CD:117:LEU:HB3	4:CD:123:ILE:HD11	1.98	0.46
6:CF:13:ASP:C	6:CF:15:SER:H	2.18	0.46
12:CL:114:ARG:HB3	12:CL:119:VAL:HB	1.97	0.46
13:CM:85:CYS:HB3	19:CS:74:PHE:CZ	2.50	0.46
15:CO:3:LEU:HD13	15:CO:35:GLN:HG2	1.96	0.46
21:CU:9:ASN:N	21:CU:12:PHE:HE2	2.13	0.46
22:DA:104:A:O5'	22:DA:104:A:H8	1.98	0.46
22:DA:199:A:N6	22:DA:2434:A:C5	2.84	0.46
22:DA:281:C:H2'	22:DA:282:A:H8	1.80	0.46
22:DA:526:A:OP1	57:DA:3246:HOH:O	2.21	0.46
22:DA:692:C:O2	22:DA:693:A:C8	2.69	0.46
22:DA:1606:C:O2'	22:DA:1607:C:P	2.73	0.46
22:DA:1651:G:C2	22:DA:2007:U:O2	2.68	0.46
22:DA:2020:A:C6	22:DA:2022:U:C2	3.04	0.46
22:DA:2201:G:H2'	22:DA:2202:U:H6	1.79	0.46
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.50	0.46
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.15	0.46
22:DA:2690:U:C4	22:DA:2873:A:N1	2.83	0.46
24:DC:75:PRO:HB2	24:DC:97:LYS:CG	2.45	0.46
40:DS:26:GLY:N	40:DS:71:VAL:O	2.48	0.46
50:D2:34:ARG:CB	50:D2:42:LEU:HD13	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:205:A:H2'	1:AA:205:A:N3	2.31	0.46
1:AA:277:C:C2'	1:AA:278:G:H5'	2.44	0.46
1:AA:927:G:C6	1:AA:1391:U:C2	3.04	0.46
1:AA:949:A:O2'	1:AA:950:U:H5'	2.16	0.46
1:AA:1152:A:H5'	10:AJ:15:HIS:CD2	2.50	0.46
3:AC:184:TYR:O	3:AC:185:ASN:ND2	2.49	0.46
4:AD:58:LYS:HG2	4:AD:203:LEU:CD2	2.45	0.46
7:AG:95:ARG:O	7:AG:96:ARG:C	2.54	0.46
13:AM:77:ILE:HA	13:AM:80:LEU:HD12	1.97	0.46
15:AO:39:LEU:HD23	15:AO:56:LEU:HD13	1.97	0.46
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.15	0.46
22:BA:429:A:C5	22:BA:430:A:C6	3.04	0.46
22:BA:640:C:H2'	22:BA:641:U:C6	2.50	0.46
22:BA:997:G:H2'	22:BA:998:C:H6	1.81	0.46
22:BA:1107:G:C4	22:BA:1108:U:C6	3.03	0.46
22:BA:1126:A:H4'	22:BA:1127:A:O5'	2.16	0.46
22:BA:1754:A:N6	22:BA:1755:A:N6	2.63	0.46
22:BA:1873:G:N2	22:BA:1874:C:C2	2.84	0.46
22:BA:1906:G:C2'	22:BA:1907:G:O5'	2.64	0.46
22:BA:1967:C:C2'	22:BA:1968:G:H5'	2.46	0.46
22:BA:2156:G:N7	22:BA:2157:G:C6	2.84	0.46
22:BA:2187:U:H2'	22:BA:2188:U:C6	2.51	0.46
22:BA:2305:U:H2'	22:BA:2306:C:C6	2.50	0.46
22:BA:2383:G:C5	22:BA:2384:U:C5	3.03	0.46
22:BA:2395:C:H2'	22:BA:2396:G:O4'	2.14	0.46
22:BA:2563:U:C1'	22:BA:2566:A:N6	2.79	0.46
22:BA:2852:G:H2'	22:BA:2853:C:O4'	2.16	0.46
23:BB:78:A:C2	23:BB:99:A:C4	3.03	0.46
25:BD:142:VAL:HB	25:BD:143:PRO:HD3	1.96	0.46
27:BF:16:LEU:HA	27:BF:19:GLU:HB2	1.97	0.46
28:BG:91:GLY:HA3	28:BG:160:LYS:HG2	1.97	0.46
32:BK:79:PHE:CE2	37:BP:70:VAL:HG22	2.51	0.46
35:BN:10:LEU:O	35:BN:12:ARG:HG3	2.16	0.46
50:B2:43:THR:O	50:B2:44:VAL:CG1	2.64	0.46
1:CA:73:C:HO2'	1:CA:74:A:C5'	2.28	0.46
1:CA:422:C:H1'	1:CA:423:G:N2	2.30	0.46
1:CA:437:U:C4	1:CA:438:U:H5	2.32	0.46
1:CA:442:G:C2	1:CA:443:C:C2	3.03	0.46
1:CA:464:U:C2	1:CA:466:A:OP2	2.69	0.46
1:CA:476:U:O2'	1:CA:477:C:H5'	2.16	0.46
1:CA:502:A:C2	1:CA:544:G:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:970:C:OP1	10:CJ:59:LYS:NZ	2.40	0.46
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.15	0.46
2:CB:50:PHE:HB2	2:CB:213:TYR:OH	2.14	0.46
8:CH:31:LYS:HA	8:CH:31:LYS:HE3	1.97	0.46
18:CR:54:GLN:O	18:CR:57:ARG:HB3	2.16	0.46
22:DA:160:A:C6	22:DA:161:A:C6	3.03	0.46
22:DA:583:G:C5	22:DA:584:C:C5	3.04	0.46
22:DA:646:U:H3'	22:DA:647:G:C4'	2.46	0.46
22:DA:676:A:H5"	22:DA:677:A:OP2	2.15	0.46
22:DA:1070:A:O2'	22:DA:1098:A:OP2	2.33	0.46
22:DA:1071:G:O2'	22:DA:1072:C:O4'	2.31	0.46
22:DA:1490:A:H2'	22:DA:1490:A:N3	2.31	0.46
22:DA:1847:A:C2'	22:DA:1848:A:OP2	2.63	0.46
22:DA:1980:G:C2	22:DA:1982:U:C4	3.04	0.46
22:DA:2131:U:H1'	22:DA:2158:A:H61	1.80	0.46
22:DA:2282:G:C4	22:DA:2425:A:N6	2.84	0.46
22:DA:2345:G:C6	22:DA:2381:A:C6	3.03	0.46
22:DA:2665:A:N3	22:DA:2665:A:H2'	2.31	0.46
22:DA:2721:A:H2'	22:DA:2722:G:C8	2.50	0.46
22:DA:2807:U:O2	22:DA:2892:G:C2	2.69	0.46
26:DE:49:ARG:O	26:DE:74:LYS:HD2	2.15	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
45:DX:30:LEU:HD13	45:DX:31:PRO:HD2	1.98	0.46
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.15	0.46
1:AA:91:U:C4	1:AA:92:U:C2	3.03	0.46
1:AA:131:A:H2'	1:AA:132:C:H6	1.80	0.46
1:AA:858:G:O6	1:AA:869:G:C8	2.69	0.46
1:AA:953:G:H2'	1:AA:954:G:O4'	2.16	0.46
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.50	0.46
1:AA:1368:A:OP2	9:AI:114:LYS:CD	2.64	0.46
2:AB:56:GLU:HA	2:AB:59:LYS:CB	2.46	0.46
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.63	0.46
3:AC:123:GLN:O	3:AC:126:ARG:HB2	2.15	0.46
8:AH:11:LEU:HD12	8:AH:77:ARG:HG2	1.97	0.46
8:AH:20:ALA:O	8:AH:21:ASN:C	2.54	0.46
8:AH:93:PRO:HG3	8:AH:125:ILE:HD12	1.98	0.46
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	1.96	0.46
10:AJ:51:VAL:HB	14:AN:81:ARG:HB3	1.98	0.46
11:AK:51:GLY:O	11:AK:52:PHE:O	2.34	0.46
11:AK:110:ILE:HG22	21:AU:17:ARG:CZ	2.45	0.46
15:AO:85:LEU:HD13	15:AO:85:LEU:HA	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:61:ILE:CG2	17:AQ:73:TRP:CE3	2.99	0.46
18:AR:47:THR:OG1	18:AR:48:ARG:N	2.49	0.46
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.46	0.46
21:AU:20:LYS:HB3	21:AU:21:ARG:NH1	2.31	0.46
22:BA:481:G:C2	22:BA:507:A:C4	3.04	0.46
22:BA:744:U:C4	22:BA:745:G:C5	3.03	0.46
22:BA:760:G:H2'	22:BA:761:A:O4'	2.15	0.46
22:BA:819:A:H2'	22:BA:820:A:H5'	1.97	0.46
22:BA:1169:A:C2	22:BA:1181:U:O2	2.69	0.46
22:BA:1624:U:H2'	22:BA:1625:C:H6	1.81	0.46
22:BA:1717:A:C5	22:BA:1718:G:C8	3.04	0.46
22:BA:1850:G:C5	22:BA:1851:U:C4	3.04	0.46
22:BA:2204:G:H4'	24:BC:150:LYS:HG3	1.97	0.46
22:BA:2243:U:OP1	57:BA:3743:HOH:O	2.21	0.46
22:BA:2262:U:P	44:BW:19:LYS:HE2	2.55	0.46
22:BA:2470:G:C2	22:BA:2471:A:C5	3.03	0.46
22:BA:2880:C:N3	22:BA:2881:U:C5	2.84	0.46
23:BB:54:G:H21	27:BF:26:MET:CE	2.28	0.46
23:BB:66:A:C2	23:BB:108:A:C6	3.03	0.46
24:BC:251:GLN:HG3	24:BC:252:THR:O	2.16	0.46
28:BG:9:VAL:HG13	28:BG:50:LEU:HB2	1.98	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
32:BK:20:MET:HG3	32:BK:21:CYS:N	2.31	0.46
38:BQ:6:ARG:O	38:BQ:8:VAL:N	2.48	0.46
42:BU:65:ILE:HG12	42:BU:66:GLN:N	2.31	0.46
43:BV:4:ILE:HB	43:BV:63:ILE:HG12	1.98	0.46
48:B0:53:LYS:HE2	48:B0:56:ALA:HA	1.97	0.46
53:B5:102:GLN:HA	53:B5:105:LEU:CB	2.45	0.46
1:CA:92:U:C4	1:CA:93:U:O4	2.68	0.46
1:CA:505:G:H4'	1:CA:534:U:N3	2.31	0.46
1:CA:734:G:C6	1:CA:735:C:C4	3.04	0.46
1:CA:747:A:C6	1:CA:748:G:C6	3.04	0.46
1:CA:774:G:C6	1:CA:775:G:C5	3.03	0.46
1:CA:862:C:N3	1:CA:863:U:C5	2.84	0.46
1:CA:972:C:O2	10:CJ:57:VAL:HG23	2.15	0.46
1:CA:1095:U:P	57:CA:1853:HOH:O	2.73	0.46
1:CA:1195:C:C2	1:CA:1197:A:C8	3.04	0.46
1:CA:1532:U:N3	1:CA:1533:C:C5	2.84	0.46
3:CC:56:VAL:C	3:CC:57:ILE:HD12	2.35	0.46
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.51	0.46
14:CN:64:CYS:SG	14:CN:79:LEU:HD23	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:46:G:N1	22:DA:47:C:C5	2.84	0.46
22:DA:53:A:N7	22:DA:54:G:N7	2.63	0.46
22:DA:591:U:HO2'	51:D3:2:PRO:N	2.12	0.46
22:DA:612:G:O2'	22:DA:613:A:C8	2.69	0.46
22:DA:621:A:H2'	22:DA:622:G:O4'	2.16	0.46
22:DA:708:G:C2	22:DA:724:U:H1'	2.51	0.46
22:DA:826:U:O2'	33:DL:53:GLY:HA3	2.16	0.46
22:DA:1118:C:N4	22:DA:1119:U:C4	2.84	0.46
22:DA:1180:U:H5'	22:DA:1181:U:OP2	2.16	0.46
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.77	0.46
22:DA:1409:U:H2'	22:DA:1410:G:O4'	2.16	0.46
22:DA:1479:G:H2'	22:DA:1480:C:O4'	2.15	0.46
22:DA:1566:A:C2	24:DC:213:TRP:CG	3.04	0.46
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.16	0.46
22:DA:2136:G:C2	22:DA:2156:G:H1'	2.51	0.46
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.45	0.46
22:DA:2609:U:C3'	22:DA:2610:C:H5'	2.46	0.46
22:DA:2706:A:C2	22:DA:2707:U:C2	3.04	0.46
27:DF:16:LEU:HD11	27:DF:169:LEU:HD13	1.98	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
30:DI:22:PRO:HD2	30:DI:23:PRO:HD2	1.97	0.46
30:DI:71:THR:C	30:DI:72:LYS:HD3	2.36	0.46
31:DJ:130:HIS:CE1	31:DJ:137:PRO:HG3	2.50	0.46
40:DS:47:VAL:HB	40:DS:103:ILE:HG21	1.97	0.46
1:AA:148:G:O2'	1:AA:149:A:OP1	2.28	0.46
1:AA:246:A:H4'	1:AA:247:G:OP1	2.16	0.46
1:AA:291:U:H2'	1:AA:292:G:O4'	2.15	0.46
1:AA:570:G:O6	1:AA:865:A:N6	2.49	0.46
1:AA:941:G:H2'	1:AA:942:G:O4'	2.15	0.46
1:AA:1152:A:OP1	10:AJ:72:ARG:NH2	2.48	0.46
2:AB:88:ASP:HB2	2:AB:221:VAL:CG1	2.45	0.46
4:AD:151:LYS:HA	4:AD:178:MET:HE1	1.98	0.46
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	2.15	0.46
11:AK:31:ILE:HB	11:AK:46:THR:CG2	2.45	0.46
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.80	0.46
13:AM:66:GLU:O	13:AM:69:LEU:N	2.48	0.46
14:AN:3:LYS:O	14:AN:4:GLN:C	2.54	0.46
15:AO:70:LEU:HD22	15:AO:74:ASP:O	2.16	0.46
17:AQ:4:LYS:HD2	17:AQ:4:LYS:C	2.35	0.46
17:AQ:81:LYS:N	17:AQ:81:LYS:HD3	2.31	0.46
20:AT:61:GLN:OE1	20:AT:66:LEU:HD21	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:15:G:C4	22:BA:16:C:C6	3.04	0.46
22:BA:60:G:C8	22:BA:62:U:C6	3.04	0.46
22:BA:242:G:N2	22:BA:255:A:OP2	2.36	0.46
22:BA:545:U:H1'	22:BA:548:G:OP2	2.16	0.46
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.50	0.46
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.51	0.46
22:BA:1106:G:C2	22:BA:1107:G:N9	2.84	0.46
22:BA:1124:G:H2'	22:BA:1125:G:O5'	2.15	0.46
22:BA:1599:U:OP1	41:BT:40:LYS:HG3	2.15	0.46
22:BA:1614:A:C6	40:BS:87:PRO:HB3	2.51	0.46
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.15	0.46
22:BA:2001:C:C2	22:BA:2002:G:C8	3.04	0.46
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.15	0.46
22:BA:2819:G:H2'	22:BA:2821:A:N7	2.30	0.46
22:BA:2839:G:H4'	35:BN:49:GLU:OE1	2.16	0.46
24:BC:40:SER:O	24:BC:42:GLY:N	2.49	0.46
24:BC:55:GLY:HA3	24:BC:217:ARG:HD2	1.97	0.46
27:BF:43:ALA:HB1	27:BF:46:ASP:O	2.14	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
32:BK:76:VAL:HB	37:BP:73:VAL:CG1	2.46	0.46
33:BL:81:ASP:CG	33:BL:100:ILE:HD13	2.35	0.46
34:BM:135:VAL:O	34:BM:136:MET:HB3	2.15	0.46
35:BN:113:ILE:HG13	35:BN:114:GLU:N	2.31	0.46
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.79	0.46
43:BV:35:GLU:HB2	43:BV:93:ARG:CZ	2.46	0.46
1:CA:799:G:C2	1:CA:800:G:H1'	2.51	0.46
1:CA:1215:G:C5	1:CA:1216:A:N7	2.84	0.46
2:CB:174:LYS:O	2:CB:178:ASN:N	2.49	0.46
4:CD:90:LEU:HD21	4:CD:200:ILE:HD11	1.97	0.46
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.15	0.46
7:CG:9:GLN:O	7:CG:9:GLN:HG3	2.16	0.46
7:CG:125:SER:C	7:CG:127:ALA:H	2.19	0.46
14:CN:23:LYS:HG3	14:CN:24:ARG:HG3	1.97	0.46
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.15	0.46
20:CT:21:ASN:HB3	20:CT:25:ARG:NH2	2.31	0.46
22:DA:27:G:O2'	22:DA:28:A:P	2.72	0.46
22:DA:204:A:O4'	22:DA:206:U:C6	2.69	0.46
22:DA:629:G:H4'	22:DA:650:C:O2	2.16	0.46
22:DA:659:G:C5'	26:DE:95:LYS:HD2	2.45	0.46
22:DA:706:A:C4	22:DA:707:G:C8	3.03	0.46
22:DA:957:C:C4	22:DA:2459:A:H1'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1056:G:C2	22:DA:1102:C:C5	3.03	0.46
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.51	0.46
22:DA:1829:A:C8	22:DA:1830:C:C5	3.04	0.46
22:DA:1965:C:OP1	22:DA:1966:A:C2'	2.64	0.46
22:DA:2189:U:H2'	22:DA:2190:G:H5'	1.97	0.46
22:DA:2249:U:C5	22:DA:2252:G:OP1	2.68	0.46
22:DA:2272:U:H5"	22:DA:2273:A:P	2.56	0.46
22:DA:2609:U:H3'	22:DA:2610:C:H5'	1.97	0.46
22:DA:2663:G:H2'	22:DA:2664:G:O4'	2.16	0.46
22:DA:2700:A:C6	22:DA:2701:U:C4	3.04	0.46
22:DA:2838:G:C6	22:DA:2839:G:C5	3.04	0.46
22:DA:2873:A:H4'	57:DA:3801:HOH:O	2.16	0.46
23:DB:116:G:H5'	36:DO:55:GLU:HG3	1.98	0.46
24:DC:159:GLY:N	24:DC:195:VAL:HG22	2.31	0.46
26:DE:134:LEU:O	26:DE:138:LEU:HG	2.16	0.46
30:DI:57:VAL:HG22	30:DI:58:VAL:H	1.79	0.46
38:DQ:90:ILE:HB	38:DQ:95:LEU:HD21	1.98	0.46
40:DS:7:HIS:HB2	40:DS:50:VAL:HG21	1.97	0.46
1:AA:15:G:C6	1:AA:16:A:C5	3.04	0.46
1:AA:32:A:OP1	1:AA:398:U:H1'	2.16	0.46
1:AA:230:G:C6	1:AA:231:U:C4	3.03	0.46
1:AA:359:G:H2'	1:AA:360:G:O4'	2.16	0.46
1:AA:587:G:C2	1:AA:755:G:C5	3.03	0.46
1:AA:599:C:C2	1:AA:600:A:C8	3.04	0.46
1:AA:1304:G:C6	1:AA:1305:G:C2	3.04	0.46
1:AA:1442:G:C5	1:AA:1443:C:C4	3.03	0.46
2:AB:141:LEU:O	2:AB:145:GLU:N	2.45	0.46
2:AB:175:GLU:O	2:AB:178:ASN:HB3	2.16	0.46
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.49	0.46
5:AE:122:ASN:C	5:AE:122:ASN:HD22	2.18	0.46
5:AE:144:LEU:O	5:AE:147:MET:HB3	2.16	0.46
14:AN:41:ARG:HB2	14:AN:42:TRP:CE3	2.51	0.46
15:AO:89:ARG:NH1	22:BA:714:U:C6	2.84	0.46
17:AQ:4:LYS:N	17:AQ:4:LYS:HE3	2.31	0.46
21:AU:21:ARG:NH1	21:AU:25:LYS:HG3	2.31	0.46
22:BA:494:G:H4'	40:BS:6:LYS:HB2	1.97	0.46
22:BA:503:A:H5'	22:BA:505:A:OP1	2.15	0.46
22:BA:597:G:C4	22:BA:598:U:C5	3.03	0.46
22:BA:1401:G:C5	22:BA:1402:U:C4	3.03	0.46
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.15	0.46
22:BA:1599:U:C4	22:BA:1600:C:N4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1681:G:N3	22:BA:1762:A:H2'	2.31	0.46
22:BA:2333:A:H5'	22:BA:2335:A:H1'	1.98	0.46
22:BA:2627:G:H2'	22:BA:2628:C:H6	1.80	0.46
24:BC:135:ILE:CD1	24:BC:192:LEU:HD21	2.46	0.46
25:BD:133:THR:HG23	25:BD:134:HIS:CG	2.51	0.46
28:BG:33:LEU:HD12	28:BG:33:LEU:N	2.31	0.46
28:BG:168:VAL:O	28:BG:168:VAL:HG13	2.16	0.46
32:BK:71:ARG:HD3	32:BK:72:PRO:HD2	1.98	0.46
36:BO:60:GLU:C	36:BO:62:LEU:H	2.19	0.46
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.98	0.46
42:BU:46:GLN:HB3	42:BU:57:GLY:O	2.16	0.46
48:B0:30:VAL:HG12	48:B0:35:GLY:HA2	1.97	0.46
1:CA:31:G:H5'	1:CA:306:A:C2	2.51	0.46
1:CA:811:C:H4'	1:CA:900:A:N6	2.31	0.46
1:CA:978:A:OP2	1:CA:1362:A:N6	2.49	0.46
1:CA:1018:G:O6	1:CA:1019:A:N6	2.49	0.46
4:CD:5:LEU:CD1	4:CD:5:LEU:N	2.79	0.46
4:CD:181:THR:O	4:CD:183:LYS:N	2.49	0.46
13:CM:39:ILE:HG13	13:CM:56:LEU:HD11	1.97	0.46
14:CN:25:ALA:O	14:CN:28:LYS:HG3	2.15	0.46
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.45	0.46
19:CS:66:MET:SD	19:CS:74:PHE:CZ	3.09	0.46
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.16	0.46
22:DA:310:A:OP1	42:DU:15:THR:HG22	2.15	0.46
22:DA:319:G:H2'	22:DA:320:A:O4'	2.15	0.46
22:DA:371:A:H61	22:DA:401:A:H3'	1.81	0.46
22:DA:498:G:H2'	22:DA:499:U:C6	2.51	0.46
22:DA:1265:A:O4'	22:DA:1267:U:C6	2.69	0.46
22:DA:1857:G:O2'	22:DA:1884:G:N2	2.49	0.46
22:DA:2074:U:C2	22:DA:2436:G:N2	2.84	0.46
22:DA:2637:U:O4	22:DA:2638:G:C6	2.69	0.46
22:DA:2637:U:C4	22:DA:2638:G:C6	3.04	0.46
22:DA:2721:A:H2'	22:DA:2722:G:O4'	2.15	0.46
22:DA:2780:G:C6	31:DJ:102:GLU:OE2	2.69	0.46
25:DD:46:ARG:NH1	25:DD:86:GLU:HA	2.31	0.46
25:DD:90:PHE:CE2	25:DD:96:ILE:HD11	2.51	0.46
31:DJ:80:HIS:HB3	31:DJ:81:ILE:HG22	1.97	0.46
33:DL:91:ASP:O	33:DL:125:LEU:HD11	2.16	0.46
35:DN:12:ARG:CZ	35:DN:20:MET:HE3	2.46	0.46
35:DN:85:PRO:O	35:DN:87:PHE:N	2.49	0.46
35:DN:98:LEU:N	35:DN:112:TYR:O	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.31	0.46
42:DU:18:ASP:HB3	42:DU:21:LYS:HG3	1.97	0.46
42:DU:99:ASN:O	42:DU:101:GLU:N	2.48	0.46
1:AA:254:G:N2	1:AA:273:U:C2	2.84	0.46
1:AA:1520:C:C2	1:AA:1521:C:C5	3.04	0.46
2:AB:97:LEU:O	2:AB:100:MET:HB3	2.16	0.46
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.16	0.46
7:AG:80:VAL:O	7:AG:82:GLY:N	2.49	0.46
20:AT:75:HIS:O	20:AT:76:LYS:C	2.54	0.46
22:BA:7:G:C6	22:BA:8:C:C4	3.04	0.46
22:BA:26:G:H1'	22:BA:514:A:H61	1.81	0.46
22:BA:160:A:C8	22:BA:166:U:O4	2.69	0.46
22:BA:269:C:C2	22:BA:424:G:N2	2.84	0.46
22:BA:443:A:H2	22:BA:1245:G:N3	2.14	0.46
22:BA:530:G:H1'	22:BA:2035:G:H4'	1.98	0.46
22:BA:541:A:C5	22:BA:542:C:C5	3.04	0.46
22:BA:547:A:C8	22:BA:548:G:N3	2.85	0.46
22:BA:647:G:OP1	22:BA:647:G:H4'	2.16	0.46
22:BA:845:A:H3'	22:BA:845:A:N3	2.31	0.46
22:BA:1053:C:N3	22:BA:1054:A:C8	2.84	0.46
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.15	0.46
22:BA:1281:G:C2	22:BA:1290:C:C2	3.04	0.46
22:BA:1438:U:C2	22:BA:1555:G:N2	2.84	0.46
22:BA:2298:A:C6	22:BA:2321:U:O4	2.69	0.46
22:BA:2563:U:H2'	22:BA:2565:A:OP2	2.16	0.46
24:BC:77:VAL:HG23	24:BC:114:ASP:O	2.16	0.46
24:BC:107:PRO:HB3	24:BC:142:HIS:HE1	1.81	0.46
26:BE:48:THR:O	26:BE:50:ALA:N	2.49	0.46
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.46
32:BK:68:GLY:HA3	32:BK:77:ILE:O	2.16	0.46
40:BS:47:VAL:HA	40:BS:50:VAL:HG23	1.97	0.46
44:BW:40:GLN:OE1	44:BW:44:LYS:N	2.45	0.46
1:CA:55:A:C8	1:CA:56:U:C5	3.04	0.46
1:CA:990:C:C5	1:CA:991:U:O4	2.68	0.46
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.16	0.46
1:CA:1313:U:OP1	19:CS:6:LYS:HB3	2.15	0.46
4:CD:191:LEU:O	4:CD:192:SER:HB3	2.15	0.46
6:CF:39:LEU:HD12	6:CF:40:GLU:H	1.80	0.46
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.30	0.46
22:DA:146:A:C2	22:DA:147:C:C2	3.04	0.46
22:DA:410:G:N2	22:DA:418:C:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:912:C:N4	22:DA:913:U:O4	2.49	0.46
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.15	0.46
22:DA:1566:A:N3	24:DC:213:TRP:CG	2.84	0.46
22:DA:1619:G:H8	22:DA:1619:G:O5'	1.99	0.46
22:DA:1802:A:C6	22:DA:1803:A:C6	3.03	0.46
22:DA:2078:C:N4	22:DA:2079:U:O4	2.49	0.46
22:DA:2324:U:O2	22:DA:2385:C:C5	2.69	0.46
22:DA:2620:C:O4'	25:DD:161:MET:HB2	2.16	0.46
23:DB:52:A:C4	36:DO:33:ARG:NH2	2.84	0.46
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.46	0.46
24:DC:160:THR:N	24:DC:195:VAL:HG13	2.30	0.46
25:DD:140:HIS:CE1	57:DD:303:HOH:O	2.69	0.46
35:DN:79:LEU:O	35:DN:80:PHE:HB2	2.15	0.46
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.84	0.46
38:DQ:27:ALA:HB1	38:DQ:31:VAL:HB	1.98	0.46
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.16	0.46
1:AA:235:C:H2'	1:AA:236:A:H8	1.80	0.45
1:AA:364:A:C2	1:AA:365:U:C4	3.04	0.45
1:AA:373:A:C2	1:AA:374:A:C8	3.04	0.45
1:AA:409:U:OP1	4:AD:24:GLY:HA3	2.16	0.45
1:AA:482:A:H2'	1:AA:483:C:O4'	2.16	0.45
1:AA:695:A:C6	1:AA:696:A:C2	3.04	0.45
1:AA:828:U:O4	1:AA:859:G:C8	2.69	0.45
1:AA:1317:C:H2'	1:AA:1318:A:H5'	1.96	0.45
1:AA:1377:A:O2'	7:AG:2:PRO:HB3	2.17	0.45
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.16	0.45
1:AA:1449:C:C2'	1:AA:1450:U:H5'	2.47	0.45
4:AD:101:VAL:O	4:AD:101:VAL:HG12	2.15	0.45
18:AR:55:LEU:O	18:AR:59:ILE:HG13	2.16	0.45
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.47	0.45
20:AT:83:ILE:O	20:AT:87:ALA:CB	2.64	0.45
22:BA:1475:G:O2'	22:BA:1476:U:OP2	2.30	0.45
22:BA:1687:G:N1	22:BA:1688:U:C4	2.84	0.45
22:BA:2064:C:H1'	22:BA:2450:A:C6	2.51	0.45
22:BA:2308:G:C5	27:BF:77:PHE:CZ	3.05	0.45
22:BA:2552:U:C2	22:BA:2554:U:C5'	2.99	0.45
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.51	0.45
24:BC:69:ARG:HB2	24:BC:129:THR:HG21	1.98	0.45
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.45
30:BI:21:SER:HA	30:BI:25:GLY:CA	2.46	0.45
32:BK:8:LEU:HD12	32:BK:8:LEU:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:28:SER:C	32:BK:30:ARG:H	2.19	0.45
35:BN:55:ALA:HB1	35:BN:80:PHE:N	2.31	0.45
35:BN:71:ARG:HH21	35:BN:71:ARG:CG	2.29	0.45
46:BY:21:LEU:O	46:BY:22:LEU:O	2.34	0.45
1:CA:34:C:H2'	1:CA:35:G:C8	2.51	0.45
1:CA:455:G:C2	1:CA:478:A:N1	2.84	0.45
1:CA:532:A:N6	3:CC:193:TYR:CD2	2.84	0.45
1:CA:794:A:H2'	1:CA:795:C:C6	2.51	0.45
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.52	0.45
3:CC:50:ALA:O	3:CC:51:SER:C	2.53	0.45
9:CI:105:THR:O	9:CI:105:THR:HG22	2.15	0.45
10:CJ:9:ARG:HG3	10:CJ:73:LEU:HG	1.98	0.45
11:CK:59:THR:C	11:CK:91:PRO:HB3	2.36	0.45
15:CO:33:THR:HA	15:CO:63:ARG:HH11	1.82	0.45
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.31	0.45
22:DA:459:U:C5	22:DA:469:G:N2	2.84	0.45
22:DA:590:A:C6	22:DA:591:U:C4	3.04	0.45
22:DA:753:A:H2'	22:DA:754:U:C6	2.51	0.45
22:DA:1286:A:N6	22:DA:1329:U:C2	2.84	0.45
22:DA:1343:G:N2	22:DA:1405:U:C2	2.84	0.45
22:DA:1823:G:O6	57:DA:3653:HOH:O	2.19	0.45
22:DA:2226:C:H2'	22:DA:2227:A:O4'	2.16	0.45
22:DA:2415:G:N1	22:DA:2416:C:N3	2.63	0.45
26:DE:75:SER:O	26:DE:77:ILE:N	2.49	0.45
26:DE:149:ILE:HG23	26:DE:188:MET:HG2	1.98	0.45
28:DG:91:GLY:O	28:DG:92:VAL:C	2.54	0.45
31:DJ:40:HIS:O	38:DQ:67:ALA:HB1	2.15	0.45
33:DL:79:LEU:HD21	33:DL:135:ILE:HG13	1.98	0.45
34:DM:2:LEU:O	34:DM:3:GLN:HB2	2.17	0.45
35:DN:62:ASN:OD1	35:DN:62:ASN:N	2.49	0.45
37:DP:52:ASN:N	37:DP:52:ASN:OD1	2.49	0.45
50:D2:15:SER:OG	50:D2:16:HIS:CE1	2.69	0.45
1:AA:10:A:OP2	5:AE:131:THR:OG1	2.35	0.45
1:AA:76:G:C2	1:AA:95:C:N3	2.84	0.45
1:AA:184:G:H2'	1:AA:185:U:C6	2.52	0.45
1:AA:394:G:C4	1:AA:395:C:C5	3.04	0.45
1:AA:559:A:H4'	1:AA:560:A:H5"	1.98	0.45
1:AA:579:A:C4	1:AA:580:C:H5	2.34	0.45
1:AA:745:G:H2'	1:AA:746:A:C8	2.51	0.45
1:AA:991:U:H4'	1:AA:992:U:H5"	1.98	0.45
1:AA:994:A:N3	1:AA:994:A:H2'	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1089:G:O2'	1:AA:1090:U:H5'	2.16	0.45
2:AB:33:GLY:HA3	2:AB:40:ILE:CB	2.45	0.45
3:AC:12:LEU:O	3:AC:16:LYS:O	2.33	0.45
4:AD:138:SER:N	4:AD:141:ASP:OD2	2.49	0.45
12:AL:32:GLY:HA3	12:AL:55:VAL:CG1	2.47	0.45
20:AT:7:ALA:HB1	20:AT:10:ARG:HB2	1.98	0.45
21:AU:29:LEU:O	21:AU:33:ARG:HB2	2.17	0.45
22:BA:10:A:C5	22:BA:11:C:C5	3.04	0.45
22:BA:618:G:C5	57:BA:3286:HOH:O	2.61	0.45
22:BA:1063:G:N2	30:BI:90:SER:HG	2.14	0.45
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.51	0.45
22:BA:1361:G:C6	22:BA:1371:G:N2	2.84	0.45
22:BA:1735:A:C2'	22:BA:1736:U:O5'	2.64	0.45
22:BA:2627:G:C5	22:BA:2628:C:C5	3.04	0.45
22:BA:2686:G:H2'	22:BA:2687:U:C6	2.51	0.45
22:BA:2820:A:H8	22:BA:2820:A:H3'	1.80	0.45
26:BE:3:LEU:HD12	26:BE:14:VAL:HG11	1.98	0.45
27:BF:67:ILE:HD11	27:BF:69:LYS:HE3	1.98	0.45
27:BF:109:PRO:O	27:BF:111:ILE:N	2.48	0.45
28:BG:60:ASP:OD1	28:BG:60:ASP:N	2.48	0.45
28:BG:109:PHE:HE2	28:BG:152:ARG:NH1	2.15	0.45
36:BO:31:THR:OG1	36:BO:32:PRO:HD2	2.16	0.45
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.89	0.45
41:BT:2:ILE:CA	41:BT:3:ARG:HB2	2.46	0.45
46:BY:59:GLU:O	46:BY:59:GLU:HG2	2.17	0.45
47:BZ:30:ARG:HB2	47:BZ:34:HIS:ND1	2.31	0.45
1:CA:169:C:H2'	1:CA:170:U:C6	2.50	0.45
1:CA:222:C:C2	1:CA:223:A:C8	3.04	0.45
1:CA:407:U:C2	1:CA:408:A:N7	2.84	0.45
1:CA:692:U:H2'	1:CA:694:A:OP2	2.16	0.45
1:CA:836:G:C6	1:CA:851:G:C5	3.04	0.45
1:CA:946:A:H2'	1:CA:947:G:C8	2.51	0.45
1:CA:1070:U:C2	1:CA:1071:C:C5	3.05	0.45
4:CD:41:HIS:C	4:CD:43:ALA:N	2.66	0.45
5:CE:38:VAL:O	5:CE:39:VAL:HG12	2.17	0.45
6:CF:3:HIS:ND1	6:CF:65:GLU:HG3	2.32	0.45
7:CG:12:ILE:HD12	7:CG:24:ALA:HB1	1.98	0.45
14:CN:69:ARG:HD3	14:CN:80:SER:OG	2.16	0.45
22:DA:46:G:N3	22:DA:47:C:C6	2.84	0.45
22:DA:53:A:C8	22:DA:54:G:N7	2.84	0.45
22:DA:350:G:H2'	22:DA:351:C:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:598:U:O2'	33:DL:9:ALA:HB3	2.16	0.45
22:DA:1712:U:H2'	22:DA:1713:A:C8	2.52	0.45
22:DA:1819:A:H4'	22:DA:1820:U:H5"	1.97	0.45
22:DA:2069:G:N2	22:DA:2443:C:C2	2.84	0.45
22:DA:2147:A:H2'	22:DA:2148:G:O4'	2.16	0.45
22:DA:2246:G:H2'	22:DA:2247:A:O4'	2.16	0.45
22:DA:2502:G:C5'	22:DA:2503:A:H5"	2.45	0.45
22:DA:2539:C:C4	22:DA:2540:C:C5	3.04	0.45
23:DB:66:A:N6	23:DB:107:G:H2'	2.30	0.45
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.63	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
34:DM:11:LYS:HE3	34:DM:87:GLY:O	2.15	0.45
36:DO:115:LEU:O	36:DO:117:PHE:N	2.49	0.45
39:DR:58:VAL:O	39:DR:102:SER:HB2	2.16	0.45
42:DU:96:PHE:CE1	42:DU:103:ILE:HG12	2.51	0.45
1:AA:811:C:C5	1:AA:812:G:C6	3.05	0.45
1:AA:855:U:H2'	1:AA:856:C:H6	1.82	0.45
1:AA:880:C:OP1	12:AL:9:ARG:NH2	2.50	0.45
1:AA:951:G:C6	1:AA:952:U:C4	3.05	0.45
1:AA:1059:C:C4	1:AA:1060:U:C5	3.05	0.45
1:AA:1244:G:C6	1:AA:1245:C:N3	2.85	0.45
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.57	0.45
1:AA:1409:C:H2'	1:AA:1410:A:C8	2.51	0.45
2:AB:33:GLY:HA3	2:AB:40:ILE:HB	1.99	0.45
3:AC:191:THR:OG1	3:AC:194:GLY:O	2.32	0.45
5:AE:83:HIS:HB2	5:AE:84:PRO:CD	2.46	0.45
8:AH:92:LEU:HD11	8:AH:121:LEU:O	2.16	0.45
12:AL:8:VAL:HG22	17:AQ:31:HIS:CD2	2.51	0.45
12:AL:72:HIS:C	12:AL:72:HIS:ND1	2.70	0.45
13:AM:6:GLY:CA	13:AM:66:GLU:HG3	2.46	0.45
14:AN:43:ASN:C	14:AN:45:VAL:H	2.19	0.45
15:AO:3:LEU:HD22	15:AO:35:GLN:HG2	1.98	0.45
16:AP:4:ILE:HD12	16:AP:67:ILE:HD11	1.98	0.45
22:BA:728:G:H4'	24:BC:13:ARG:HD3	1.97	0.45
22:BA:778:G:C5	22:BA:779:U:C4	3.05	0.45
22:BA:884:U:O4	22:BA:892:A:N6	2.49	0.45
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.51	0.45
22:BA:1562:U:C4	22:BA:1563:U:C4	3.04	0.45
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.80	0.45
22:BA:1866:A:C6	22:BA:1876:A:C8	3.04	0.45
22:BA:2080:A:OP1	45:BX:20:HIS:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2156:G:N7	22:BA:2157:G:O6	2.50	0.45
22:BA:2312:U:OP1	27:BF:71:ARG:N	2.49	0.45
22:BA:2440:C:OP2	57:BA:3315:HOH:O	2.21	0.45
22:BA:2555:U:C5	22:BA:2556:C:C6	3.04	0.45
22:BA:2808:G:N1	22:BA:2891:U:C5	2.83	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
32:BK:21:CYS:HB2	32:BK:39:ILE:HD12	1.98	0.45
40:BS:37:THR:CG2	40:BS:38:TYR:CD1	2.96	0.45
40:BS:69:LEU:HG	40:BS:107:VAL:HG22	1.98	0.45
49:B1:25:LYS:CD	49:B1:52:ALA:O	2.65	0.45
1:CA:184:G:N2	1:CA:185:U:C2	2.84	0.45
1:CA:203:G:N2	1:CA:215:C:N3	2.65	0.45
1:CA:375:U:OP1	16:CP:70:ARG:HD3	2.17	0.45
1:CA:495:A:O4'	1:CA:496:A:C8	2.69	0.45
1:CA:577:G:C8	1:CA:816:A:C6	3.04	0.45
1:CA:734:G:C4	1:CA:735:C:C5	3.05	0.45
1:CA:790:A:N6	1:CA:791:G:C6	2.84	0.45
1:CA:1066:C:H3'	1:CA:1067:A:H8	1.82	0.45
1:CA:1416:G:N2	1:CA:1485:U:O2	2.49	0.45
2:CB:52:GLU:HG3	2:CB:56:GLU:HG2	1.97	0.45
2:CB:134:ALA:O	2:CB:138:THR:N	2.48	0.45
2:CB:211:THR:HA	2:CB:214:LEU:CB	2.47	0.45
8:CH:32:LEU:HD12	8:CH:32:LEU:O	2.16	0.45
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.31	0.45
17:CQ:8:LEU:HB2	17:CQ:61:ILE:HG22	1.97	0.45
22:DA:510:C:C4	22:DA:511:U:C4	3.05	0.45
22:DA:581:C:P	38:DQ:33:ARG:HE	2.39	0.45
22:DA:828:U:O2'	22:DA:829:A:H5'	2.17	0.45
22:DA:1247:A:O3'	38:DQ:2:ALA:HB3	2.15	0.45
22:DA:1343:G:O6	22:DA:1403:A:N6	2.48	0.45
22:DA:1651:G:C2	22:DA:2007:U:C2	3.05	0.45
22:DA:1708:C:H2'	22:DA:1709:U:C6	2.52	0.45
22:DA:1835:G:H2'	22:DA:1836:C:H6	1.82	0.45
22:DA:1953:A:H1'	22:DA:2560:A:O4'	2.15	0.45
22:DA:2845:U:O3'	37:DP:53:ARG:NH1	2.49	0.45
24:DC:145:GLU:CA	24:DC:152:GLY:HA2	2.45	0.45
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.32	0.45
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.45
41:DT:74:ILE:HD12	41:DT:75:GLY:N	2.31	0.45
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	1.99	0.45
44:DW:52:GLY:HA3	44:DW:60:PHE:CZ	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:2:SER:O	45:DX:4:VAL:N	2.50	0.45
46:DY:13:GLU:O	46:DY:17:GLU:HB2	2.16	0.45
1:AA:137:U:H1'	1:AA:227:G:N2	2.31	0.45
1:AA:310:G:H5"	16:AP:31:ARG:HB2	1.98	0.45
1:AA:761:G:C2	1:AA:762:U:C2	3.04	0.45
1:AA:903:G:C5	1:AA:904:U:C5	3.05	0.45
1:AA:929:G:C2	1:AA:1389:C:C2	3.05	0.45
1:AA:965:U:O4'	1:AA:969:A:N9	2.50	0.45
1:AA:1031:C:H3'	1:AA:1031:C:H6	1.81	0.45
1:AA:1379:G:N1	1:AA:1380:U:C4	2.85	0.45
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.98	0.45
2:AB:218:ALA:O	2:AB:222:ARG:HB2	2.17	0.45
3:AC:129:MET:HE3	3:AC:132:ARG:HD2	1.98	0.45
10:AJ:36:VAL:HG23	10:AJ:76:ILE:HG23	1.97	0.45
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.16	0.45
16:AP:48:GLU:OE1	16:AP:48:GLU:HA	2.16	0.45
16:AP:77:GLU:C	16:AP:79:ASN:H	2.20	0.45
22:BA:368:A:N7	22:BA:369:U:C5	2.85	0.45
22:BA:528:A:H2	22:BA:2043:C:H4'	1.76	0.45
22:BA:635:C:O2	22:BA:639:U:H4'	2.17	0.45
22:BA:1012:U:O2	31:BJ:27:ARG:NH1	2.45	0.45
22:BA:1315:C:C2	22:BA:1338:G:N2	2.84	0.45
22:BA:1354:A:H2'	22:BA:1355:G:O5'	2.16	0.45
22:BA:1376:C:N4	22:BA:1377:G:C6	2.85	0.45
22:BA:1444:G:C2	22:BA:1548:A:C2	3.05	0.45
22:BA:1482:G:C2	22:BA:1483:G:C8	3.05	0.45
22:BA:1544:A:N6	22:BA:1545:A:N1	2.64	0.45
22:BA:1651:G:C2	22:BA:2007:U:N3	2.84	0.45
22:BA:1754:A:C8	37:BP:94:LYS:NZ	2.83	0.45
22:BA:1826:G:N3	22:BA:1827:U:C6	2.85	0.45
22:BA:1842:G:C6	22:BA:1843:C:C4	3.05	0.45
23:BB:40:U:O2	23:BB:43:C:C6	2.69	0.45
23:BB:66:A:C2	23:BB:108:A:C2	3.04	0.45
24:BC:79:GLU:O	24:BC:80:ARG:HB3	2.17	0.45
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.29	0.45
31:BJ:93:ILE:O	31:BJ:97:PRO:HG3	2.16	0.45
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.81	0.45
33:BL:77:ILE:HD11	33:BL:101:ILE:CG2	2.46	0.45
39:BR:67:GLY:HA3	39:BR:93:PHE:CZ	2.51	0.45
40:BS:37:THR:CG2	40:BS:38:TYR:CE1	2.99	0.45
44:BW:51:VAL:HG23	44:BW:81:SER:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:27:LYS:C	49:B1:29:THR:H	2.20	0.45
50:B2:22:MET:O	50:B2:28:ARG:NH1	2.50	0.45
52:B4:1:MET:HB3	52:B4:34:LYS:HB3	1.98	0.45
1:CA:73:C:O2'	1:CA:74:A:P	2.74	0.45
1:CA:85:U:C2	1:CA:86:G:C6	3.04	0.45
1:CA:485:U:O2'	1:CA:486:U:P	2.74	0.45
2:CB:68:LEU:HB3	2:CB:161:LEU:CD1	2.47	0.45
2:CB:81:LYS:HG3	2:CB:85:LEU:CD2	2.47	0.45
4:CD:107:PHE:CD1	4:CD:107:PHE:N	2.81	0.45
5:CE:13:GLU:HB3	5:CE:39:VAL:HB	1.99	0.45
7:CG:51:ALA:HB1	7:CG:57:SER:O	2.16	0.45
9:CI:19:VAL:C	9:CI:20:PHE:CD2	2.90	0.45
11:CK:71:ALA:O	11:CK:74:VAL:HG22	2.16	0.45
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.16	0.45
13:CM:34:LEU:N	13:CM:34:LEU:HD23	2.31	0.45
21:CU:10:GLU:HG3	21:CU:11:PRO:HD3	1.98	0.45
22:DA:548:G:H4'	22:DA:549:G:C2	2.52	0.45
22:DA:1359:A:N7	22:DA:1373:A:C2	2.84	0.45
22:DA:1606:C:H4'	22:DA:1607:C:H5'	1.97	0.45
22:DA:1788:C:H2'	22:DA:1789:A:O4'	2.15	0.45
22:DA:1835:G:C4	22:DA:1836:C:C6	3.05	0.45
22:DA:2014:A:H5'	40:DS:94:ASP:OD1	2.15	0.45
22:DA:2148:G:C2	22:DA:2149:U:C4	3.05	0.45
22:DA:2254:C:C5	22:DA:2255:G:N7	2.84	0.45
22:DA:2361:G:H2'	22:DA:2362:C:O4'	2.17	0.45
22:DA:2444:G:P	26:DE:63:LYS:HD2	2.57	0.45
26:DE:149:ILE:CD1	26:DE:172:ALA:HA	2.46	0.45
33:DL:23:ILE:HD13	39:DR:84:ARG:HG2	1.97	0.45
33:DL:63:LYS:HA	51:D3:13:ARG:HG3	1.98	0.45
38:DQ:72:ASN:OD1	38:DQ:107:THR:HG23	2.15	0.45
40:DS:70:LYS:N	40:DS:70:LYS:HD2	2.30	0.45
42:DU:82:ARG:O	42:DU:97:LYS:HG2	2.16	0.45
43:DV:9:ARG:CG	43:DV:41:GLU:HB3	2.46	0.45
43:DV:9:ARG:HG3	43:DV:41:GLU:HB3	1.97	0.45
45:DX:37:ARG:HA	45:DX:48:THR:HA	1.98	0.45
46:DY:9:LYS:HB3	46:DY:12:GLU:CG	2.47	0.45
51:D3:16:LYS:HE3	51:D3:20:GLY:O	2.16	0.45
1:AA:55:A:N1	1:AA:56:U:C2	2.84	0.45
1:AA:575:G:C4	1:AA:881:G:C2	3.04	0.45
1:AA:702:A:N6	22:BA:1846:G:O3'	2.50	0.45
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:953:G:C2'	1:AA:954:G:H5'	2.47	0.45
1:AA:1050:G:N3	1:AA:1050:G:H2'	2.30	0.45
1:AA:1537:U:H2'	1:AA:1538:C:O4'	2.17	0.45
1:AA:1539:C:H5"	21:AU:18:ARG:CG	2.46	0.45
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.82	0.45
3:AC:69:HIS:HA	3:AC:104:ALA:O	2.16	0.45
5:AE:10:GLU:C	5:AE:12:GLN:N	2.69	0.45
7:AG:135:VAL:O	7:AG:139:GLU:HG2	2.16	0.45
9:AI:51:PRO:HB3	9:AI:84:THR:HG23	1.97	0.45
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	2.16	0.45
16:AP:19:VAL:CG2	16:AP:36:VAL:HG13	2.47	0.45
16:AP:46:LYS:CD	16:AP:47:GLU:N	2.79	0.45
17:AQ:45:HIS:CB	17:AQ:70:THR:HG23	2.47	0.45
20:AT:5:LYS:O	20:AT:7:ALA:N	2.49	0.45
21:AU:36:GLU:O	21:AU:37:PHE:HB2	2.17	0.45
22:BA:49:A:H2'	22:BA:49:A:N3	2.31	0.45
22:BA:859:G:C2	22:BA:916:G:C5	3.05	0.45
22:BA:1051:G:C6	22:BA:1052:C:N3	2.85	0.45
22:BA:1103:A:H2'	22:BA:1104:C:O5'	2.16	0.45
22:BA:1819:A:H4'	22:BA:1820:U:H5"	1.98	0.45
22:BA:1842:G:C5	22:BA:1843:C:C4	3.05	0.45
22:BA:2441:U:OP1	22:BA:2441:U:H4'	2.16	0.45
22:BA:2694:G:H2'	22:BA:2695:U:C6	2.52	0.45
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.98	0.45
26:BE:46:GLN:HB3	26:BE:83:VAL:HG21	1.97	0.45
28:BG:33:LEU:HD11	28:BG:136:ALA:HB1	1.98	0.45
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.55	0.45
34:BM:111:GLU:O	34:BM:114:ARG:N	2.49	0.45
34:BM:126:ILE:O	34:BM:128:THR:HG23	2.16	0.45
40:BS:59:GLU:HA	40:BS:64:ALA:HA	1.98	0.45
41:BT:6:ARG:O	41:BT:10:VAL:HG23	2.16	0.45
1:CA:350:G:C6	1:CA:351:G:O6	2.69	0.45
1:CA:371:A:H2'	1:CA:372:C:O4'	2.16	0.45
1:CA:622:A:H5"	1:CA:623:C:OP2	2.16	0.45
1:CA:649:A:H2'	1:CA:650:G:O4'	2.17	0.45
1:CA:667:G:N1	1:CA:740:U:C2	2.85	0.45
4:CD:16:GLY:O	4:CD:17:THR:CB	2.65	0.45
5:CE:38:VAL:HG11	5:CE:114:VAL:HA	1.97	0.45
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.17	0.45
8:CH:49:PHE:C	8:CH:49:PHE:CD1	2.88	0.45
10:CJ:19:ASP:HA	10:CJ:22:THR:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.46	0.45
22:DA:158:U:C2'	22:DA:159:G:H5'	2.46	0.45
22:DA:287:G:C2	22:DA:354:A:C2	3.04	0.45
22:DA:705:A:N3	22:DA:727:A:H1'	2.31	0.45
22:DA:828:U:H4'	22:DA:831:G:N1	2.31	0.45
22:DA:852:U:H2'	22:DA:853:C:C6	2.50	0.45
22:DA:1055:G:O2'	22:DA:1085:A:N1	2.32	0.45
22:DA:1824:G:O6	57:DA:3650:HOH:O	2.20	0.45
22:DA:1834:U:H1'	22:DA:1972:G:N2	2.31	0.45
22:DA:2271:G:C5	22:DA:2272:U:C4	3.05	0.45
22:DA:2378:A:N7	22:DA:2379:G:H1'	2.31	0.45
26:DE:5:LEU:HD23	26:DE:122:GLU:HG2	1.98	0.45
26:DE:181:ILE:HG23	33:DL:2:ARG:CZ	2.46	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
30:DI:92:LYS:HB3	30:DI:95:LYS:HE3	1.97	0.45
32:DK:77:ILE:HG23	37:DP:72:ARG:HG3	1.97	0.45
40:DS:20:VAL:HG21	40:DS:43:ALA:HB3	1.99	0.45
42:DU:83:VAL:HG12	42:DU:84:GLY:N	2.31	0.45
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.46	0.45
46:DY:42:LEU:O	46:DY:46:VAL:HG23	2.17	0.45
1:AA:115:G:H4'	1:AA:116:A:O5'	2.16	0.45
1:AA:251:G:C6	1:AA:266:G:C6	3.04	0.45
1:AA:531:U:H5"	3:AC:161:GLU:OE2	2.17	0.45
1:AA:825:A:C2	1:AA:876:C:O2	2.69	0.45
1:AA:1078:U:O4'	5:AE:89:HIS:HE1	2.00	0.45
1:AA:1091:U:C2	1:AA:1095:U:C2	3.05	0.45
3:AC:14:ILE:O	3:AC:15:VAL:HG22	2.16	0.45
4:AD:22:LYS:O	4:AD:23:SER:C	2.55	0.45
5:AE:96:MET:HB3	5:AE:125:ALA:CB	2.46	0.45
8:AH:49:PHE:HB3	8:AH:61:LEU:HD23	1.98	0.45
8:AH:64:LYS:O	8:AH:65:TYR:CD2	2.70	0.45
9:AI:47:VAL:O	9:AI:50:GLN:HB2	2.17	0.45
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.98	0.45
17:AQ:48:ASP:OD1	17:AQ:52:GLU:OE1	2.35	0.45
18:AR:70:TYR:HB2	18:AR:71:THR:HG22	1.99	0.45
22:BA:301:G:C4	22:BA:302:C:C5	3.04	0.45
22:BA:1058:U:N3	22:BA:1059:G:N7	2.64	0.45
22:BA:1319:C:O2	22:BA:1334:G:C2	2.69	0.45
22:BA:1456:G:C6	22:BA:1457:U:C4	3.04	0.45
22:BA:1625:C:O2	22:BA:1625:C:H2'	2.16	0.45
22:BA:2804:U:C2	22:BA:2805:C:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:70:ASN:O	24:BC:72:ASP:N	2.48	0.45
27:BF:70:ALA:O	27:BF:72:LYS:N	2.49	0.45
34:BM:18:ARG:HB3	34:BM:18:ARG:HH21	1.81	0.45
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.47	0.45
41:BT:12:ARG:HD2	41:BT:12:ARG:N	2.31	0.45
53:B5:209:PHE:O	53:B5:210:LEU:CB	2.64	0.45
1:CA:116:A:H8	1:CA:116:A:O5'	1.99	0.45
1:CA:402:G:H4'	1:CA:620:C:O2	2.17	0.45
1:CA:409:U:H2'	1:CA:410:G:O4'	2.17	0.45
1:CA:421:U:O5'	1:CA:422:C:C5	2.69	0.45
1:CA:458:U:H2'	1:CA:459:A:C8	2.51	0.45
1:CA:1036:A:H3'	1:CA:1037:C:C6	2.52	0.45
1:CA:1095:U:H5'	1:CA:1109:C:O2	2.17	0.45
1:CA:1282:C:N3	1:CA:1283:U:C4	2.85	0.45
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.52	0.45
2:CB:166:ALA:HB2	2:CB:187:VAL:HG12	1.99	0.45
4:CD:188:ARG:O	4:CD:191:LEU:HD12	2.16	0.45
5:CE:101:GLU:HA	5:CE:122:ASN:HB2	1.99	0.45
6:CF:18:VAL:HA	6:CF:21:MET:CE	2.46	0.45
12:CL:75:GLN:O	12:CL:76:GLU:C	2.54	0.45
14:CN:48:LEU:HD22	14:CN:51:LEU:HD21	1.99	0.45
14:CN:64:CYS:SG	14:CN:83:LYS:HG3	2.57	0.45
16:CP:60:TRP:O	16:CP:63:GLN:N	2.50	0.45
22:DA:142:A:H2'	22:DA:143:C:C6	2.52	0.45
22:DA:404:A:C4'	22:DA:405:U:OP2	2.65	0.45
22:DA:533:G:C5	22:DA:534:U:C4	3.04	0.45
22:DA:566:U:O4	39:DR:80:ARG:HD3	2.17	0.45
22:DA:729:G:H5"	22:DA:730:A:H5"	1.98	0.45
22:DA:764:A:H5'	24:DC:209:GLY:HA2	1.98	0.45
22:DA:1053:C:C2	22:DA:1107:G:C2	3.04	0.45
22:DA:1843:C:H4'	24:DC:251:GLN:CD	2.37	0.45
22:DA:2070:A:H2'	22:DA:2071:A:O4'	2.17	0.45
22:DA:2092:U:H4'	22:DA:2093:G:H5"	1.99	0.45
22:DA:2548:U:H2'	22:DA:2549:G:O4'	2.16	0.45
22:DA:2586:U:C5	22:DA:2608:G:N2	2.85	0.45
22:DA:2636:C:H2'	22:DA:2637:U:H6	1.80	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
30:DI:75:PRO:HG2	30:DI:78:VAL:CG2	2.46	0.45
31:DJ:21:THR:HG23	31:DJ:61:LYS:HB3	1.97	0.45
33:DL:9:ALA:HB3	33:DL:12:SER:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:17:SER:O	41:DT:20:ALA:N	2.47	0.45
1:AA:216:U:H2'	1:AA:217:C:C6	2.51	0.45
1:AA:259:G:C2	1:AA:260:G:H1'	2.51	0.45
1:AA:342:C:C2	1:AA:348:G:N2	2.85	0.45
1:AA:730:G:C5	1:AA:731:G:H1'	2.52	0.45
1:AA:964:A:N3	1:AA:969:A:O2'	2.36	0.45
1:AA:1047:G:H2'	1:AA:1047:G:N3	2.32	0.45
1:AA:1261:A:C2	1:AA:1262:C:H1'	2.52	0.45
1:AA:1446:A:O2'	1:AA:1447:A:H5'	2.16	0.45
2:AB:33:GLY:O	2:AB:39:HIS:HB3	2.17	0.45
2:AB:53:ALA:O	2:AB:57:LEU:HB2	2.17	0.45
2:AB:70:VAL:CG1	2:AB:163:VAL:HB	2.47	0.45
2:AB:210:VAL:HG23	2:AB:211:THR:H	1.81	0.45
4:AD:105:MET:HE3	4:AD:171:LEU:HD22	1.98	0.45
5:AE:85:VAL:HG22	5:AE:86:LYS:N	2.32	0.45
7:AG:97:ASN:HA	7:AG:100:ALA:HB3	1.99	0.45
9:AI:115:LYS:HD2	9:AI:121:ALA:O	2.17	0.45
17:AQ:5:ILE:C	17:AQ:6:ARG:HG3	2.36	0.45
20:AT:56:PRO:O	20:AT:60:ARG:HB3	2.17	0.45
22:BA:821:A:C8	22:BA:946:C:C5	3.04	0.45
22:BA:1922:G:N2	22:BA:1923:U:C1'	2.79	0.45
22:BA:1952:A:C5	32:BK:22:ILE:HG21	2.52	0.45
22:BA:2531:A:C4	22:BA:2532:G:C8	3.05	0.45
25:BD:62:LYS:CB	25:BD:63:PRO:HD3	2.47	0.45
25:BD:89:GLU:C	25:BD:90:PHE:CD1	2.90	0.45
28:BG:146:ALA:O	28:BG:149:ARG:HB3	2.17	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
35:BN:12:ARG:NH1	35:BN:20:MET:CE	2.78	0.45
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.52	0.45
40:BS:29:VAL:HG11	40:BS:55:ILE:CD1	2.46	0.45
45:BX:18:ARG:NE	45:BX:24:ALA:HB2	2.32	0.45
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.64	0.45
1:CA:202:G:H2'	1:CA:203:G:O4'	2.17	0.45
1:CA:599:C:H5"	8:CH:88:ARG:HA	1.98	0.45
1:CA:774:G:C5	1:CA:775:G:C8	3.05	0.45
1:CA:1298:U:H6	1:CA:1299:A:N1	2.15	0.45
3:CC:130:PHE:CE2	3:CC:131:ARG:HD3	2.52	0.45
4:CD:150:LYS:HG2	4:CD:151:LYS:N	2.32	0.45
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.98	0.45
11:CK:19:GLY:O	11:CK:82:LEU:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:30:LYS:O	12:CL:81:LEU:HD12	2.17	0.45
15:CO:27:VAL:O	15:CO:31:LEU:HD12	2.16	0.45
20:CT:30:THR:O	20:CT:34:LYS:HG2	2.16	0.45
22:DA:1:G:H2'	22:DA:2:G:C8	2.52	0.45
22:DA:290:U:N3	22:DA:291:G:N7	2.65	0.45
22:DA:397:U:H2'	22:DA:398:C:C6	2.52	0.45
22:DA:411:G:OP1	22:DA:2407:A:OP2	2.35	0.45
22:DA:443:A:N6	26:DE:36:ALA:O	2.48	0.45
22:DA:483:A:H1'	42:DU:45:HIS:HB2	1.98	0.45
22:DA:659:G:H2'	22:DA:660:C:C6	2.51	0.45
22:DA:784:G:C6	22:DA:792:A:C4	3.04	0.45
22:DA:956:G:HO2'	22:DA:959:A:H62	1.65	0.45
22:DA:957:C:C4	22:DA:2459:A:C1'	3.00	0.45
22:DA:980:A:C4	22:DA:1136:G:O4'	2.70	0.45
22:DA:1069:A:N1	22:DA:1073:A:N7	2.65	0.45
22:DA:1353:A:C8	22:DA:1378:A:N6	2.84	0.45
22:DA:1359:A:N7	22:DA:1360:G:N7	2.63	0.45
22:DA:1445:G:C6	22:DA:1446:C:C4	3.05	0.45
22:DA:1813:G:H2'	22:DA:1814:G:O4'	2.17	0.45
22:DA:1990:C:H2'	22:DA:1991:U:O4'	2.15	0.45
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.32	0.45
22:DA:2226:C:N4	22:DA:2227:A:C6	2.85	0.45
24:DC:53:HIS:HB3	24:DC:217:ARG:O	2.17	0.45
28:DG:8:PRO:HG3	28:DG:51:THR:HG22	1.98	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
30:DI:75:PRO:HG2	30:DI:78:VAL:HG22	1.98	0.45
33:DL:77:ILE:HB	33:DL:109:LYS:O	2.16	0.45
34:DM:21:ALA:HB2	34:DM:97:GLN:HB2	1.99	0.45
41:DT:14:PRO:HA	41:DT:32:LEU:HB3	1.98	0.45
1:AA:113:G:C4	1:AA:114:U:C5	3.05	0.45
1:AA:468:A:H5'	1:AA:469:C:OP2	2.17	0.45
1:AA:1106:G:N1	1:AA:1107:C:C4	2.85	0.45
1:AA:1187:G:O2'	14:AN:100:SER:HB2	2.17	0.45
1:AA:1371:G:P	9:AI:13:LYS:HD3	2.56	0.45
3:AC:53:SER:CB	3:AC:115:LEU:HG	2.47	0.45
4:AD:35:GLU:O	4:AD:38:PRO:HD3	2.17	0.45
4:AD:114:ALA:O	4:AD:118:VAL:HG23	2.17	0.45
6:AF:40:GLU:HB3	6:AF:42:TRP:NE1	2.32	0.45
7:AG:26:PHE:CE1	7:AG:105:VAL:HG23	2.52	0.45
9:AI:86:ALA:C	9:AI:88:MET:N	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.48	0.45
10:AJ:71:LEU:O	10:AJ:72:ARG:CD	2.65	0.45
11:AK:76:GLU:HA	22:BA:2141:G:OP1	2.17	0.45
11:AK:76:GLU:CA	22:BA:2141:G:OP1	2.65	0.45
11:AK:111:THR:HG23	21:AU:5:LYS:HB3	1.98	0.45
22:BA:110:G:C2	22:BA:111:A:C8	3.05	0.45
22:BA:140:C:O2	22:BA:140:C:O4'	2.33	0.45
22:BA:182:A:O2'	22:BA:183:C:H5'	2.15	0.45
22:BA:359:G:C5	22:BA:360:U:C5	3.04	0.45
22:BA:686:U:OP2	57:BA:3719:HOH:O	2.21	0.45
22:BA:768:G:C5	22:BA:769:U:C5	3.05	0.45
22:BA:790:U:HO2'	22:BA:791:C:P	2.31	0.45
22:BA:1088:A:H3'	22:BA:1088:A:N3	2.32	0.45
22:BA:1245:G:H4'	26:BE:33:VAL:HG13	1.98	0.45
22:BA:1358:G:O6	22:BA:1371:G:C8	2.69	0.45
22:BA:1419:A:C4	22:BA:1421:G:N7	2.85	0.45
22:BA:1889:A:H2'	22:BA:1890:A:C8	2.52	0.45
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.31	0.45
22:BA:2310:C:H2'	22:BA:2311:A:C5'	2.46	0.45
22:BA:2372:U:H1'	49:B1:46:HIS:CE1	2.52	0.45
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.47	0.45
23:BB:57:A:C4	27:BF:26:MET:HB3	2.52	0.45
26:BE:115:GLN:HB3	26:BE:117:ARG:HD3	1.99	0.45
27:BF:171:ALA:O	27:BF:174:ASP:N	2.43	0.45
28:BG:176:LYS:O	28:BG:177:LYS:CB	2.65	0.45
30:BI:24:VAL:HG23	30:BI:25:GLY:H	1.80	0.45
30:BI:58:VAL:HG12	30:BI:59:ILE:H	1.81	0.45
32:BK:12:ASP:C	32:BK:12:ASP:OD1	2.54	0.45
32:BK:34:GLY:O	32:BK:36:GLY:N	2.50	0.45
32:BK:43:ILE:HD12	32:BK:56:ASP:HB2	1.98	0.45
54:B6:4:PRO:HB2	54:B6:7:004:CD2	2.47	0.45
1:CA:161:A:H2'	1:CA:162:A:O4'	2.16	0.45
1:CA:247:G:C5	1:CA:278:G:C2	3.05	0.45
1:CA:436:C:O2	1:CA:436:C:H2'	2.15	0.45
1:CA:456:A:H2'	1:CA:457:G:O4'	2.17	0.45
1:CA:676:A:N3	1:CA:677:U:C6	2.85	0.45
1:CA:862:C:H2'	1:CA:863:U:H6	1.82	0.45
1:CA:889:A:H5'	1:CA:891:U:H1'	1.99	0.45
1:CA:1289:A:C8	1:CA:1290:G:C8	3.04	0.45
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.52	0.45
1:CA:1428:A:C6	1:CA:1473:G:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:68:LEU:HD21	2:CB:92:VAL:HG23	1.99	0.45
2:CB:103:ASN:OD1	2:CB:106:THR:OG1	2.24	0.45
2:CB:142:GLU:HA	2:CB:145:GLU:HB2	1.99	0.45
3:CC:72:ARG:HB3	3:CC:75:ILE:HG22	1.98	0.45
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.16	0.45
9:CI:114:LYS:HG3	9:CI:120:LYS:HA	1.98	0.45
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.64	0.45
16:CP:9:HIS:O	16:CP:10:GLY:O	2.35	0.45
16:CP:38:PHE:CZ	16:CP:51:ARG:HB3	2.52	0.45
22:DA:53:A:N3	22:DA:179:C:H4'	2.30	0.45
22:DA:262:A:H5'	22:DA:610:C:O2'	2.16	0.45
22:DA:311:A:H5'	22:DA:332:A:N3	2.32	0.45
22:DA:460:A:C2	22:DA:470:A:C4	3.05	0.45
22:DA:640:C:H2'	22:DA:641:U:O4'	2.17	0.45
22:DA:668:A:C5	22:DA:670:A:C8	3.04	0.45
22:DA:698:C:O2'	22:DA:734:A:N6	2.50	0.45
22:DA:927:A:H2'	22:DA:928:A:C8	2.52	0.45
22:DA:1218:G:C5	22:DA:1232:G:C6	3.05	0.45
22:DA:1808:A:H3'	22:DA:1809:A:C8	2.52	0.45
22:DA:2111:U:H5	22:DA:2145:C:H2'	1.80	0.45
22:DA:2332:C:H4'	22:DA:2336:A:C6	2.51	0.45
22:DA:2525:G:N2	22:DA:2539:C:C2	2.85	0.45
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.47	0.45
22:DA:2603:G:C5	22:DA:2604:U:C5	3.05	0.45
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.51	0.45
23:DB:25:U:H2'	23:DB:26:C:O4'	2.17	0.45
24:DC:147:LYS:O	24:DC:150:LYS:HB3	2.17	0.45
24:DC:181:MET:O	24:DC:268:VAL:HG23	2.16	0.45
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.32	0.45
25:DD:106:LYS:HA	25:DD:175:LEU:O	2.16	0.45
26:DE:179:SER:HA	26:DE:182:ALA:HB3	1.99	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
31:DJ:109:LEU:HD22	31:DJ:118:MET:HG3	1.98	0.45
46:DY:20:ASN:CB	46:DY:50:VAL:HG22	2.46	0.45
1:AA:28:A:C6	1:AA:29:U:N3	2.84	0.45
1:AA:194:C:H4'	20:AT:60:ARG:HB2	1.99	0.45
1:AA:358:U:H2'	1:AA:359:G:C8	2.52	0.45
1:AA:465:A:C2	1:AA:466:A:C2	3.04	0.45
1:AA:481:G:O2'	1:AA:483:C:C5	2.70	0.45
1:AA:694:A:C6	1:AA:695:A:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:920:U:O4'	1:AA:1080:A:C2	2.70	0.45
1:AA:923:A:C6	1:AA:924:C:C4	3.05	0.45
1:AA:951:G:OP2	13:AM:101:ARG:NH2	2.50	0.45
1:AA:1151:A:H5"	10:AJ:44:THR:HG23	1.99	0.45
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.16	0.45
2:AB:28:LYS:HB3	2:AB:29:PRO:HD3	1.99	0.45
2:AB:70:VAL:O	2:AB:163:VAL:HA	2.17	0.45
7:AG:146:GLU:O	7:AG:149:LYS:HB3	2.17	0.45
22:BA:27:G:O2'	22:BA:28:A:OP2	2.29	0.45
22:BA:635:C:H3'	33:BL:109:LYS:HZ1	1.82	0.45
22:BA:776:G:C8	22:BA:793:A:N3	2.84	0.45
22:BA:858:G:O2'	22:BA:2268:A:H1'	2.17	0.45
22:BA:1545:A:H2'	22:BA:1546:G:O4'	2.16	0.45
22:BA:1649:G:C2	22:BA:1650:A:C8	3.05	0.45
22:BA:1775:U:H2'	22:BA:1776:G:O5'	2.17	0.45
22:BA:2198:A:C4	29:BH:29:PHE:HB2	2.51	0.45
22:BA:2394:C:O2'	22:BA:2395:C:H5'	2.17	0.45
22:BA:2491:U:H5"	22:BA:2570:G:H5"	1.98	0.45
22:BA:2844:G:H2'	22:BA:2845:U:O4'	2.17	0.45
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.46	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
30:BI:50:GLU:C	30:BI:51:LYS:HD3	2.37	0.45
33:BL:76:GLU:HG3	33:BL:111:ILE:HD13	1.98	0.45
37:BP:48:ILE:HG22	37:BP:97:LEU:HB2	1.99	0.45
39:BR:48:LYS:O	39:BR:48:LYS:HG2	2.14	0.45
39:BR:53:PHE:N	39:BR:53:PHE:CD1	2.82	0.45
46:BY:16:THR:HA	46:BY:19:LEU:HD12	1.98	0.45
1:CA:35:G:O2'	12:CL:118:GLY:HA2	2.16	0.45
1:CA:127:G:N2	1:CA:128:G:H1'	2.31	0.45
1:CA:266:G:H4'	1:CA:267:C:OP1	2.16	0.45
1:CA:715:A:N6	1:CA:716:A:N6	2.65	0.45
1:CA:745:G:O6	1:CA:746:A:N6	2.49	0.45
1:CA:783:C:N4	1:CA:800:G:N2	2.65	0.45
1:CA:851:G:N1	1:CA:852:G:N7	2.65	0.45
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.51	0.45
1:CA:1537:U:C5	1:CA:1538:C:N4	2.85	0.45
57:CA:1844:HOH:O	14:CN:3:LYS:HA	2.16	0.45
2:CB:23:TRP:O	2:CB:23:TRP:CD1	2.70	0.45
3:CC:102:ASN:N	3:CC:102:ASN:OD1	2.50	0.45
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:116:GLN:NE2	4:CD:120:HIS:CE1	2.84	0.45
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.32	0.45
6:CF:70:VAL:HG23	6:CF:71:ILE:N	2.32	0.45
7:CG:84:THR:HG22	7:CG:86:GLN:OE1	2.17	0.45
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.31	0.45
20:CT:67:ILE:HD11	20:CT:71:LYS:CD	2.45	0.45
21:CU:15:ALA:O	21:CU:16:LEU:C	2.54	0.45
22:DA:194:G:C6	22:DA:202:U:C2	3.05	0.45
22:DA:281:C:H2'	22:DA:282:A:C8	2.52	0.45
22:DA:822:G:H5'	57:DA:3344:HOH:O	2.17	0.45
22:DA:1087:G:N1	22:DA:1089:A:C2	2.85	0.45
22:DA:1097:U:O2'	30:DI:9:VAL:HG11	2.16	0.45
22:DA:1266:G:OP1	48:D0:16:ARG:NE	2.49	0.45
22:DA:1355:G:C5	22:DA:1377:G:N2	2.85	0.45
22:DA:1745:A:C4	22:DA:1746:A:C8	3.05	0.45
22:DA:1808:A:H3'	22:DA:1809:A:H8	1.81	0.45
22:DA:1863:G:H2'	22:DA:1864:U:O4'	2.16	0.45
22:DA:1869:G:H2'	22:DA:1870:C:H5'	1.98	0.45
22:DA:2435:A:H2'	22:DA:2436:G:O4'	2.17	0.45
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.79	0.45
22:DA:2676:C:OP1	32:DK:31:ARG:NH2	2.50	0.45
22:DA:2699:C:O2	22:DA:2709:G:C2	2.69	0.45
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.16	0.45
23:DB:99:A:N6	23:DB:100:G:C6	2.85	0.45
24:DC:66:ASP:OD2	24:DC:102:ARG:HD3	2.17	0.45
26:DE:130:LYS:O	26:DE:133:LEU:HB2	2.16	0.45
27:DF:106:ILE:CD1	27:DF:139:PRO:HG2	2.47	0.45
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.45
35:DN:29:VAL:HG13	35:DN:83:LEU:CD1	2.47	0.45
43:DV:8:VAL:HA	43:DV:39:ALA:O	2.17	0.45
1:AA:21:G:H1'	1:AA:915:A:N6	2.32	0.45
1:AA:587:G:C2	1:AA:755:G:C6	3.04	0.45
1:AA:772:U:C6	1:AA:772:U:H3'	2.51	0.45
1:AA:836:G:C6	1:AA:851:G:C5	3.05	0.45
1:AA:957:U:H1'	1:AA:960:U:C4	2.51	0.45
1:AA:1100:C:OP2	2:AB:95:ARG:HD2	2.16	0.45
1:AA:1126:U:O2	1:AA:1280:A:H5"	2.16	0.45
1:AA:1202:U:O2	1:AA:1202:U:C2'	2.65	0.45
1:AA:1422:G:O2'	32:BK:49:ARG:NH2	2.50	0.45
2:AB:82:ASP:C	2:AB:84:ALA:N	2.67	0.45
5:AE:155:ALA:O	8:AH:66:PHE:CE1	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:47:GLU:O	8:AH:48:ASP:HB2	2.17	0.45
8:AH:64:LYS:HB2	8:AH:71:VAL:CG2	2.46	0.45
10:AJ:8:ILE:HG23	10:AJ:100:ILE:HA	2.00	0.45
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.99	0.45
12:AL:3:THR:HB	12:AL:6:GLN:H	1.82	0.45
19:AS:75:ALA:N	19:AS:76:PRO:CD	2.80	0.45
22:BA:675:A:OP1	26:BE:58:LYS:HE2	2.17	0.45
22:BA:1012:U:C2	31:BJ:27:ARG:NH1	2.85	0.45
22:BA:1026:G:C5	22:BA:1134:A:C5	3.05	0.45
22:BA:1171:G:C2	22:BA:1178:C:O2	2.69	0.45
22:BA:1570:A:H2'	22:BA:1571:A:C8	2.51	0.45
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.17	0.45
22:BA:1917:U:O4	22:BA:1918:A:C6	2.69	0.45
22:BA:2308:G:O6	22:BA:2311:A:N7	2.50	0.45
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.17	0.45
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.17	0.45
22:BA:2619:C:H2'	22:BA:2620:C:H6	1.82	0.45
22:BA:2686:G:H2'	22:BA:2687:U:O4'	2.17	0.45
22:BA:2862:G:H2'	22:BA:2863:C:O4'	2.16	0.45
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.31	0.45
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.31	0.45
30:BI:47:ASP:HA	30:BI:51:LYS:CD	2.47	0.45
38:BQ:91:ASP:O	38:BQ:95:LEU:HD12	2.17	0.45
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.29	0.45
42:BU:45:HIS:N	42:BU:45:HIS:CD2	2.85	0.45
43:BV:51:GLN:HB2	43:BV:57:TYR:OH	2.17	0.45
1:CA:211:G:H21	1:CA:212:G:H1'	1.82	0.45
1:CA:317:U:N3	1:CA:337:G:C2	2.85	0.45
1:CA:456:A:N6	1:CA:457:G:C6	2.85	0.45
1:CA:459:A:C2	1:CA:460:A:C4	3.04	0.45
1:CA:572:A:H5'	1:CA:573:A:P	2.57	0.45
1:CA:583:A:C8	1:CA:584:G:N7	2.85	0.45
1:CA:585:G:C6	1:CA:586:C:C4	3.05	0.45
1:CA:604:G:C6	1:CA:605:U:C2	3.05	0.45
1:CA:608:A:N7	57:CA:1798:HOH:O	2.49	0.45
1:CA:662:U:C2	1:CA:663:A:N7	2.85	0.45
1:CA:1304:G:H2'	1:CA:1305:G:C1'	2.47	0.45
1:CA:1345:U:C2	1:CA:1377:A:N1	2.85	0.45
1:CA:1503:A:C8	1:CA:1531:A:N3	2.85	0.45
1:CA:1521:C:N4	1:CA:1522:U:O4	2.50	0.45
2:CB:210:VAL:CG2	2:CB:211:THR:N	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:236:C:O2'	22:DA:431:U:H4'	2.17	0.45
22:DA:420:C:H2'	22:DA:421:C:H6	1.82	0.45
22:DA:535:G:O2'	38:DQ:53:ARG:HG3	2.17	0.45
22:DA:549:G:N3	22:DA:549:G:O4'	2.49	0.45
22:DA:1649:G:C6	22:DA:2009:A:N6	2.85	0.45
22:DA:1877:A:C6	22:DA:1878:G:C5	3.05	0.45
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.16	0.45
22:DA:2199:A:C4	22:DA:2225:A:C2	3.04	0.45
22:DA:2208:C:C2	22:DA:2217:G:N2	2.85	0.45
22:DA:2216:G:H2'	22:DA:2217:G:H8	1.81	0.45
22:DA:2330:G:C2	22:DA:2386:A:N1	2.85	0.45
22:DA:2354:C:O2'	44:DW:35:SER:HA	2.17	0.45
26:DE:146:VAL:HG21	26:DE:148:ILE:HD11	1.98	0.45
43:DV:21:ARG:HA	43:DV:25:LYS:O	2.17	0.45
47:DZ:44:ILE:HD13	47:DZ:44:ILE:N	2.31	0.45
51:D3:30:ARG:O	51:D3:31:HIS:HB3	2.16	0.45
1:AA:193:C:O2'	20:AT:56:PRO:HA	2.17	0.44
1:AA:202:G:C2	1:AA:216:U:O2	2.70	0.44
1:AA:260:G:H2'	1:AA:261:U:C6	2.52	0.44
1:AA:462:G:N7	1:AA:463:U:C5	2.85	0.44
1:AA:577:G:C8	1:AA:816:A:C6	3.05	0.44
1:AA:914:A:C5	1:AA:915:A:N7	2.85	0.44
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.52	0.44
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.52	0.44
1:AA:1290:G:H2'	1:AA:1290:G:N3	2.33	0.44
1:AA:1296:C:H4'	1:AA:1302:C:C5	2.52	0.44
1:AA:1301:U:C5	1:AA:1303:C:C4	3.05	0.44
1:AA:1302:C:C4	13:AM:17:ILE:HD11	2.52	0.44
1:AA:1460:C:H2'	1:AA:1461:G:O4'	2.17	0.44
1:AA:1517:G:H1'	22:BA:1919:A:O3'	2.17	0.44
3:AC:47:LEU:HB3	3:AC:50:ALA:HB3	1.99	0.44
4:AD:172:GLU:O	4:AD:180:GLY:HA2	2.17	0.44
4:AD:190:ASP:O	4:AD:191:LEU:O	2.35	0.44
5:AE:16:ILE:HD13	5:AE:137:VAL:HG11	1.99	0.44
5:AE:155:ALA:O	5:AE:156:LYS:C	2.53	0.44
6:AF:12:PRO:O	6:AF:13:ASP:C	2.56	0.44
7:AG:126:ASP:OD2	7:AG:131:LYS:HE3	2.18	0.44
13:AM:11:ASP:OD1	13:AM:45:ILE:HD13	2.17	0.44
17:AQ:68:SER:O	17:AQ:70:THR:N	2.50	0.44
21:AU:6:VAL:CG2	21:AU:17:ARG:HD3	2.46	0.44
22:BA:27:G:N9	22:BA:512:G:N2	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:141:G:H5"	22:BA:142:A:C5	2.52	0.44
22:BA:324:A:C2'	22:BA:325:G:O5'	2.65	0.44
22:BA:623:C:H2'	22:BA:624:C:C6	2.51	0.44
22:BA:769:U:H2'	22:BA:770:G:C8	2.52	0.44
22:BA:976:G:C2	22:BA:977:G:C8	3.05	0.44
22:BA:997:G:O2'	22:BA:998:C:H5'	2.16	0.44
22:BA:1004:U:H2'	22:BA:1005:C:OP2	2.16	0.44
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.81	0.44
22:BA:1196:C:C2'	22:BA:1197:G:O5'	2.65	0.44
22:BA:1301:A:C2	22:BA:1303:G:C5	3.05	0.44
22:BA:1565:C:C5	22:BA:1567:G:C5	3.05	0.44
22:BA:1682:G:C8	22:BA:1757:A:C2	3.05	0.44
22:BA:1840:G:C2	22:BA:1841:U:C2	3.05	0.44
22:BA:1935:G:N1	22:BA:1962:C:C6	2.84	0.44
22:BA:2511:U:O4	22:BA:2575:C:N3	2.50	0.44
22:BA:2550:G:P	57:BA:3722:HOH:O	2.73	0.44
22:BA:2820:A:H3'	22:BA:2820:A:C8	2.52	0.44
22:BA:2861:U:O2	22:BA:2862:G:C8	2.70	0.44
23:BB:48:U:H2'	23:BB:49:C:C6	2.52	0.44
24:BC:101:ARG:O	24:BC:102:ARG:CG	2.65	0.44
24:BC:247:PRO:HG2	24:BC:248:TRP:CH2	2.53	0.44
26:BE:171:ASP:C	26:BE:171:ASP:OD1	2.56	0.44
26:BE:191:ASP:O	26:BE:195:GLN:HG3	2.17	0.44
27:BF:14:LYS:O	27:BF:18:THR:HG23	2.16	0.44
30:BI:100:LYS:O	30:BI:101:ILE:HD13	2.17	0.44
32:BK:71:ARG:O	32:BK:73:ASP:N	2.50	0.44
37:BP:28:VAL:HG12	37:BP:30:VAL:HG23	1.99	0.44
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.47	0.44
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	1.99	0.44
46:BY:15:ASN:O	46:BY:19:LEU:HG	2.16	0.44
1:CA:637:C:H2'	1:CA:638:U:C6	2.53	0.44
1:CA:722:G:H3'	1:CA:722:G:N3	2.32	0.44
1:CA:786:G:C2	1:CA:787:A:H1'	2.52	0.44
1:CA:1041:G:C6	1:CA:1042:A:N6	2.85	0.44
1:CA:1086:U:H4'	1:CA:1086:U:OP1	2.17	0.44
1:CA:1276:G:H2'	1:CA:1277:C:C6	2.52	0.44
1:CA:1345:U:H4'	1:CA:1346:A:H5"	1.98	0.44
1:CA:1388:C:C2	1:CA:1389:C:C5	3.05	0.44
2:CB:18:HIS:O	2:CB:19:GLN:HB2	2.15	0.44
2:CB:222:ARG:HG2	2:CB:223:GLU:N	2.31	0.44
5:CE:137:VAL:O	5:CE:138:ARG:HB2	2.14	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:75:VAL:HG11	7:CG:144:MET:HG3	1.99	0.44
10:CJ:11:LYS:HB2	10:CJ:97:ASP:HB3	2.00	0.44
11:CK:82:LEU:HD23	11:CK:82:LEU:O	2.17	0.44
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.17	0.44
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	1.98	0.44
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.55	0.44
22:DA:503:A:C4	22:DA:506:G:N7	2.85	0.44
22:DA:917:A:H2'	22:DA:917:A:N3	2.32	0.44
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.98	0.44
22:DA:1133:A:N6	22:DA:2025:C:O2'	2.49	0.44
22:DA:1184:U:OP1	47:DZ:30:ARG:HD3	2.17	0.44
22:DA:1380:G:OP2	57:DA:3748:HOH:O	2.21	0.44
22:DA:1480:C:H2'	22:DA:1481:U:C6	2.52	0.44
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.82	0.44
22:DA:1866:A:C2	22:DA:1876:A:C4	3.05	0.44
22:DA:2048:G:C6	22:DA:2049:G:C5	3.05	0.44
22:DA:2480:C:N4	22:DA:2481:G:C6	2.85	0.44
22:DA:2885:G:O6	48:D0:29:SER:HB2	2.17	0.44
24:DC:148:PRO:HD3	24:DC:185:GLU:CD	2.38	0.44
25:DD:38:LYS:NZ	25:DD:81:GLU:OE1	2.41	0.44
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.32	0.44
26:DE:42:GLY:HA3	26:DE:90:GLN:O	2.16	0.44
27:DF:106:ILE:HG12	27:DF:107:ALA:N	2.33	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
31:DJ:70:THR:HG22	31:DJ:90:GLU:OE1	2.17	0.44
31:DJ:139:VAL:HG13	31:DJ:140:LEU:N	2.32	0.44
33:DL:43:GLY:O	33:DL:44:GLY:C	2.55	0.44
33:DL:68:SER:O	33:DL:69:ARG:CB	2.65	0.44
43:DV:9:ARG:NH2	43:DV:12:GLN:HA	2.32	0.44
1:AA:220:G:C5	1:AA:221:C:C5	3.05	0.44
1:AA:222:C:H2'	1:AA:223:A:C8	2.53	0.44
1:AA:451:A:H5"	16:AP:70:ARG:HH22	1.83	0.44
1:AA:615:G:C6	1:AA:616:G:N7	2.85	0.44
1:AA:760:G:H2'	1:AA:761:G:C5'	2.46	0.44
1:AA:774:G:C6	1:AA:775:G:C5	3.06	0.44
1:AA:1000:A:C2	1:AA:1041:G:N2	2.85	0.44
1:AA:1374:A:C2	1:AA:1375:A:C8	3.05	0.44
5:AE:76:LEU:HB3	5:AE:77:ASN:H	1.61	0.44
7:AG:139:GLU:O	7:AG:143:ARG:CG	2.66	0.44
8:AH:14:ILE:O	8:AH:15:ARG:C	2.55	0.44
14:AN:64:CYS:O	14:AN:67:THR:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.18	0.44
22:BA:637:A:P	33:BL:112:LEU:HB3	2.57	0.44
22:BA:659:G:C5	22:BA:660:C:C5	3.05	0.44
22:BA:827:U:H2'	22:BA:2068:U:O2	2.16	0.44
22:BA:1002:G:C6	57:BA:3739:HOH:O	2.56	0.44
22:BA:1059:G:O2'	30:BI:129:ILE:HA	2.17	0.44
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.39	0.44
22:BA:1832:C:H2'	22:BA:1833:C:O5'	2.17	0.44
23:BB:15:A:O2'	23:BB:16:G:H5'	2.16	0.44
26:BE:48:THR:C	26:BE:50:ALA:N	2.68	0.44
26:BE:76:PRO:C	26:BE:78:TRP:H	2.20	0.44
27:BF:108:VAL:HG22	27:BF:111:ILE:HD11	1.98	0.44
32:BK:43:ILE:HD13	32:BK:52:VAL:HG21	1.98	0.44
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.70	0.44
53:B5:23:ILE:O	53:B5:26:ALA:HB3	2.17	0.44
1:CA:674:G:H4'	18:CR:70:TYR:CD1	2.52	0.44
1:CA:1244:G:C6	1:CA:1245:C:C4	3.05	0.44
1:CA:1421:G:N2	1:CA:1422:G:C4	2.85	0.44
2:CB:24:ASN:C	2:CB:26:LYS:H	2.19	0.44
3:CC:28:GLU:O	3:CC:32:ASN:HB2	2.18	0.44
3:CC:156:ARG:O	3:CC:159:GLY:N	2.47	0.44
5:CE:112:ARG:O	5:CE:113:ALA:C	2.55	0.44
9:CI:19:VAL:HG12	9:CI:86:ALA:HB2	1.99	0.44
12:CL:90:LEU:CB	12:CL:93:VAL:CG2	2.94	0.44
17:CQ:81:LYS:O	17:CQ:83:VAL:N	2.50	0.44
22:DA:282:A:H2'	22:DA:283:G:C8	2.52	0.44
22:DA:651:G:O5'	51:D3:19:LYS:HG3	2.18	0.44
22:DA:686:U:H1'	50:D2:6:GLN:O	2.16	0.44
22:DA:993:G:C6	22:DA:1162:G:C6	3.05	0.44
22:DA:1392:A:C6	22:DA:1393:A:C6	3.05	0.44
22:DA:1812:U:H1'	24:DC:45:ASN:ND2	2.32	0.44
22:DA:1952:A:N3	32:DK:22:ILE:HD12	2.32	0.44
22:DA:2016:U:O2	48:D0:4:GLN:HG2	2.17	0.44
22:DA:2261:C:C2	22:DA:2280:G:N2	2.85	0.44
22:DA:2413:G:C4	22:DA:2414:G:C8	3.05	0.44
22:DA:2482:A:C8	22:DA:2483:C:C5	3.05	0.44
22:DA:2742:G:C6	22:DA:2763:G:N2	2.85	0.44
22:DA:2836:U:C2	22:DA:2837:A:N7	2.85	0.44
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.32	0.44
28:DG:93:GLY:HA2	28:DG:95:ARG:NH2	2.31	0.44
28:DG:94:TYR:HA	28:DG:106:SER:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:11:LEU:HD13	30:DI:24:VAL:HG11	1.99	0.44
30:DI:24:VAL:CG2	30:DI:28:LEU:HD23	2.48	0.44
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.32	0.44
35:DN:24:MET:CE	35:DN:44:LEU:HB2	2.47	0.44
37:DP:79:PRO:O	37:DP:81:VAL:N	2.51	0.44
41:DT:72:GLN:O	41:DT:73:ARG:C	2.56	0.44
42:DU:7:ARG:HG3	42:DU:8:ASP:N	2.32	0.44
51:D3:52:LYS:O	51:D3:54:ASP:N	2.50	0.44
1:AA:262:A:C6	1:AA:263:A:C6	3.06	0.44
1:AA:268:U:H2'	1:AA:269:C:C6	2.52	0.44
1:AA:429:U:H1'	1:AA:430:A:H5"	1.98	0.44
1:AA:522:C:N4	1:AA:523:A:C6	2.85	0.44
1:AA:739:C:C4	1:AA:740:U:C5	3.05	0.44
1:AA:958:A:N3	1:AA:985:C:O2'	2.47	0.44
1:AA:1329:A:H2'	1:AA:1330:U:H5'	2.00	0.44
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.17	0.44
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.17	0.44
4:AD:62:ARG:NE	4:AD:67:VAL:O	2.45	0.44
5:AE:76:LEU:O	5:AE:77:ASN:HB2	2.16	0.44
8:AH:88:ARG:O	8:AH:122:GLY:HA3	2.17	0.44
22:BA:310:A:C5'	42:BU:15:THR:HG22	2.47	0.44
22:BA:480:A:C2'	22:BA:481:G:OP1	2.65	0.44
22:BA:591:U:HO2'	51:B3:2:PRO:N	2.16	0.44
22:BA:622:G:H5"	57:BA:3292:HOH:O	2.15	0.44
22:BA:776:G:H4'	22:BA:777:G:O5'	2.17	0.44
22:BA:947:A:O2'	22:BA:984:A:H2	2.01	0.44
22:BA:1185:G:H5"	22:BA:1186:G:P	2.58	0.44
22:BA:1770:G:C5	22:BA:1983:G:C6	3.06	0.44
22:BA:1890:A:C2	22:BA:1891:G:H1'	2.52	0.44
22:BA:2042:A:C2'	22:BA:2043:C:H5'	2.48	0.44
22:BA:2460:U:O2'	22:BA:2461:A:H5'	2.17	0.44
22:BA:2706:A:C2	22:BA:2707:U:C2	3.05	0.44
25:BD:113:SER:O	25:BD:167:ASN:HA	2.16	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
30:BI:45:LYS:HE2	30:BI:45:LYS:HB2	1.84	0.44
36:BO:19:GLN:O	36:BO:20:GLU:C	2.56	0.44
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.18	0.44
41:BT:17:SER:O	41:BT:20:ALA:N	2.51	0.44
1:CA:560:A:C8	1:CA:566:G:C4	3.06	0.44
1:CA:765:G:C6	1:CA:812:G:C4	3.05	0.44
1:CA:865:A:C2	1:CA:918:A:H4'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1225:A:N3	1:CA:1225:A:C2'	2.81	0.44
2:CB:16:PHE:O	2:CB:41:ILE:HG13	2.18	0.44
3:CC:152:GLU:OE2	3:CC:154:SER:HB3	2.18	0.44
5:CE:105:ILE:C	5:CE:105:ILE:HD12	2.38	0.44
5:CE:109:GLY:O	5:CE:110:ALA:C	2.55	0.44
5:CE:154:ALA:O	5:CE:155:ALA:C	2.55	0.44
7:CG:69:VAL:HG12	7:CG:134:ALA:O	2.16	0.44
20:CT:69:LYS:HB2	20:CT:69:LYS:NZ	2.33	0.44
21:CU:12:PHE:HD1	21:CU:13:ASP:N	2.15	0.44
22:DA:67:U:H2'	22:DA:68:G:O4'	2.17	0.44
22:DA:250:G:C6	22:DA:251:A:C6	3.05	0.44
22:DA:305:C:H1'	22:DA:313:G:C2	2.52	0.44
22:DA:321:U:OP2	26:DE:130:LYS:HA	2.17	0.44
22:DA:396:G:O2'	22:DA:397:U:H5'	2.17	0.44
22:DA:616:A:H4'	26:DE:101:TYR:CE2	2.52	0.44
22:DA:990:A:OP1	22:DA:1157:G:H5"	2.17	0.44
22:DA:1085:A:C5	22:DA:1086:A:N6	2.85	0.44
22:DA:1087:G:C4	22:DA:1089:A:H1'	2.52	0.44
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.32	0.44
22:DA:1469:A:C2	22:DA:1470:A:C5	3.05	0.44
22:DA:1707:G:C4	22:DA:1756:G:C6	3.06	0.44
22:DA:2199:A:H2'	22:DA:2200:C:O4'	2.18	0.44
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.17	0.44
41:DT:34:VAL:HG21	41:DT:43:ILE:CD1	2.47	0.44
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.18	0.44
42:DU:13:VAL:CG2	42:DU:39:ILE:HD12	2.47	0.44
43:DV:30:ILE:HD12	43:DV:40:ILE:HD11	1.99	0.44
1:AA:149:A:C6	1:AA:150:U:C4	3.06	0.44
1:AA:172:A:C5	1:AA:174:A:N7	2.86	0.44
1:AA:829:G:C2	1:AA:830:G:C8	3.05	0.44
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.52	0.44
1:AA:1124:G:OP1	10:AJ:37:ARG:C	2.56	0.44
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.78	0.44
1:AA:1301:U:C6	1:AA:1303:C:C5	3.05	0.44
2:AB:217:VAL:O	2:AB:220:THR:HG23	2.18	0.44
5:AE:56:VAL:N	5:AE:57:PRO:CD	2.80	0.44
6:AF:10:VAL:HG21	6:AF:18:VAL:HG22	1.99	0.44
9:AI:22:LYS:HD2	9:AI:22:LYS:O	2.17	0.44
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.48	0.44
14:AN:53:ARG:HG3	14:AN:59:ARG:NH1	2.33	0.44
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:71:A:N1	22:BA:114:U:H1'	2.32	0.44
22:BA:336:C:O2'	22:BA:337:C:H5'	2.18	0.44
22:BA:509:C:O3'	57:BA:3770:HOH:O	2.21	0.44
22:BA:655:A:H4'	22:BA:656:G:OP1	2.17	0.44
22:BA:1206:G:C6	22:BA:1207:C:C4	3.05	0.44
22:BA:1305:C:C5'	22:BA:1306:C:OP2	2.65	0.44
22:BA:1424:G:C2	22:BA:1425:G:H1'	2.53	0.44
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.52	0.44
22:BA:1669:A:H5"	22:BA:2550:G:OP1	2.17	0.44
22:BA:1750:G:O2'	22:BA:1751:U:H5'	2.17	0.44
22:BA:1983:G:C4	22:BA:1984:G:C8	3.05	0.44
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.16	0.44
22:BA:2418:A:C5	22:BA:2419:U:C5	3.06	0.44
23:BB:112:G:N2	36:BO:45:SER:O	2.46	0.44
27:BF:73:SER:HB2	27:BF:81:GLN:N	2.33	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
33:BL:57:LEU:C	33:BL:59:ARG:H	2.20	0.44
38:BQ:32:TYR:CD2	38:BQ:32:TYR:C	2.90	0.44
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.90	0.44
49:B1:6:ARG:HG2	49:B1:24:THR:HB	1.99	0.44
1:CA:109:A:N3	1:CA:327:A:C2	2.85	0.44
1:CA:437:U:HO2'	4:CD:120:HIS:HD1	1.65	0.44
1:CA:463:U:O2	1:CA:463:U:H2'	2.17	0.44
1:CA:636:U:H2'	1:CA:637:C:C6	2.53	0.44
1:CA:782:A:C8	1:CA:783:C:C5	3.06	0.44
1:CA:1095:U:C4	1:CA:1096:C:N4	2.86	0.44
1:CA:1163:A:C2	1:CA:1174:G:C2	3.05	0.44
1:CA:1306:A:H2'	1:CA:1307:U:O4'	2.18	0.44
1:CA:1400:C:H4'	1:CA:1401:G:OP2	2.18	0.44
1:CA:1521:C:N3	1:CA:1522:U:C5	2.86	0.44
5:CE:44:GLY:O	5:CE:45:ARG:C	2.55	0.44
6:CF:25:TYR:O	6:CF:26:THR:C	2.55	0.44
6:CF:43:GLY:HA2	6:CF:58:HIS:NE2	2.33	0.44
8:CH:18:GLN:HG2	8:CH:63:LEU:HD13	1.97	0.44
8:CH:45:PHE:CE1	8:CH:129:VAL:HG12	2.52	0.44
11:CK:108:THR:HG22	11:CK:109:ASN:OD1	2.17	0.44
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.46	0.44
19:CS:53:ASN:HB3	19:CS:75:ALA:HB1	1.98	0.44
20:CT:57:ILE:O	20:CT:61:GLN:HG2	2.17	0.44
22:DA:185:G:C6	22:DA:212:G:N2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:453:A:O3'	22:DA:472:A:N6	2.50	0.44
22:DA:635:C:O2'	22:DA:639:U:H5"	2.17	0.44
22:DA:708:G:N2	22:DA:724:U:H1'	2.33	0.44
22:DA:740:C:C5'	22:DA:1784:A:OP1	2.65	0.44
22:DA:798:G:OP2	26:DE:56:GLY:N	2.49	0.44
22:DA:861:A:H2'	22:DA:862:G:O4'	2.17	0.44
22:DA:1445:G:N2	22:DA:1547:C:C2	2.85	0.44
22:DA:1526:C:N4	22:DA:1527:G:C6	2.86	0.44
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.47	0.44
22:DA:2428:G:H5"	22:DA:2429:G:P	2.57	0.44
22:DA:2550:G:C6	22:DA:2551:C:N4	2.85	0.44
22:DA:2803:G:H2'	22:DA:2804:U:H6	1.83	0.44
24:DC:108:LYS:HA	24:DC:196:GLY:HA2	1.98	0.44
24:DC:160:THR:HG22	24:DC:177:ARG:HG2	1.98	0.44
27:DF:10:ASP:OD2	27:DF:11:GLU:HG3	2.17	0.44
27:DF:46:ASP:HB3	27:DF:49:LEU:CB	2.47	0.44
28:DG:98:VAL:HG21	28:DG:124:GLU:HA	1.98	0.44
28:DG:140:VAL:O	28:DG:144:VAL:HG23	2.17	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
30:DI:53:LEU:HD11	30:DI:82:LYS:HE2	1.99	0.44
32:DK:35:VAL:HG13	32:DK:69:VAL:HG11	1.99	0.44
34:DM:58:LYS:O	34:DM:60:GLN:N	2.48	0.44
38:DQ:32:TYR:CD2	38:DQ:32:TYR:C	2.91	0.44
41:DT:4:GLU:HA	41:DT:7:LEU:HB2	1.99	0.44
42:DU:7:ARG:CG	42:DU:8:ASP:N	2.81	0.44
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.17	0.44
1:AA:1533:C:H5'	1:AA:1534:A:OP1	2.17	0.44
2:AB:64:LYS:HE2	2:AB:64:LYS:HA	2.00	0.44
4:AD:135:TYR:C	4:AD:135:TYR:CD2	2.90	0.44
12:AL:22:PRO:C	12:AL:24:LEU:H	2.20	0.44
13:AM:78:LYS:HA	13:AM:81:MET:CE	2.47	0.44
17:AQ:4:LYS:HG2	17:AQ:6:ARG:N	2.32	0.44
19:AS:32:ARG:HD3	19:AS:57:HIS:CD2	2.52	0.44
22:BA:84:A:N1	22:BA:98:G:O2'	2.31	0.44
22:BA:613:A:H2'	22:BA:614:A:C5'	2.48	0.44
22:BA:811:U:C4	33:BL:21:ARG:NH1	2.86	0.44
22:BA:959:A:N1	22:BA:960:A:C2	2.86	0.44
22:BA:1061:U:C4	30:BI:10:LYS:O	2.70	0.44
22:BA:1064:C:H4'	30:BI:90:SER:HB2	1.99	0.44
22:BA:1292:G:H2'	22:BA:1293:C:H6	1.81	0.44
22:BA:1624:U:C2	22:BA:1625:C:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1808:A:H3'	22:BA:1809:A:O4'	2.17	0.44
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.33	0.44
22:BA:1857:G:C2	22:BA:1884:G:N3	2.86	0.44
22:BA:2230:G:C4	22:BA:2231:U:C5	3.06	0.44
22:BA:2262:U:OP1	44:BW:41:ARG:NH2	2.51	0.44
22:BA:2324:U:H3'	22:BA:2325:G:H5"	1.99	0.44
22:BA:2554:U:C5	22:BA:2555:U:C5	3.05	0.44
22:BA:2694:G:C6	22:BA:2695:U:C4	3.05	0.44
25:BD:4:LEU:HD22	25:BD:100:LEU:HD23	1.99	0.44
27:BF:4:LEU:HD22	27:BF:173:PHE:CE2	2.52	0.44
27:BF:96:MET:CG	27:BF:97:TRP:N	2.80	0.44
30:BI:101:ILE:HG22	30:BI:105:GLN:HB2	1.99	0.44
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.83	0.44
37:BP:6:LYS:HA	37:BP:6:LYS:HD2	1.70	0.44
40:BS:29:VAL:HG11	40:BS:55:ILE:HD11	1.99	0.44
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.80	0.44
43:BV:89:ILE:HG22	43:BV:90:ASP:N	2.32	0.44
1:CA:53:A:C2	1:CA:359:G:C6	3.06	0.44
1:CA:445:G:C2	1:CA:446:G:C4	3.05	0.44
1:CA:991:U:C4	1:CA:1212:U:H1'	2.53	0.44
1:CA:1052:U:H2'	1:CA:1055:A:OP2	2.17	0.44
1:CA:1084:G:C8	1:CA:1085:U:C6	3.05	0.44
1:CA:1093:A:O2'	1:CA:1095:U:OP1	2.20	0.44
2:CB:50:PHE:CD1	2:CB:54:LEU:HD23	2.53	0.44
3:CC:29:PHE:O	3:CC:33:LEU:HB2	2.18	0.44
3:CC:177:THR:CG2	3:CC:179:ARG:HG3	2.48	0.44
10:CJ:46:LYS:HG2	10:CJ:68:ARG:HG2	1.98	0.44
12:CL:80:ILE:HD12	12:CL:97:THR:CG2	2.47	0.44
13:CM:5:ALA:HB2	13:CM:57:ARG:HG2	1.99	0.44
21:CU:35:ARG:CG	21:CU:36:GLU:N	2.81	0.44
22:DA:230:G:C2	22:DA:231:A:C4	3.05	0.44
22:DA:306:U:C5	22:DA:307:G:C5	3.05	0.44
22:DA:310:A:C5	22:DA:330:A:C6	3.06	0.44
22:DA:581:C:OP2	38:DQ:33:ARG:NE	2.49	0.44
22:DA:729:G:N3	22:DA:1775:U:H1'	2.32	0.44
22:DA:931:U:O4	22:DA:1184:U:O4'	2.35	0.44
22:DA:1129:A:O2'	22:DA:2515:C:O2'	2.33	0.44
22:DA:1491:G:C2	22:DA:1492:G:C5	3.05	0.44
22:DA:1530:G:C2	22:DA:1542:U:O2	2.71	0.44
22:DA:1855:U:C5	22:DA:1856:U:C5	3.06	0.44
22:DA:1993:U:H2'	22:DA:1994:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2199:A:C5	22:DA:2200:C:C2	3.05	0.44
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.17	0.44
22:DA:2603:G:C6	22:DA:2604:U:C5	3.06	0.44
22:DA:2666:C:C5	22:DA:2667:C:C5	3.06	0.44
23:DB:109:A:C2	23:DB:110:C:C2	3.05	0.44
25:DD:148:GLN:N	25:DD:148:GLN:CD	2.71	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
30:DI:101:ILE:HG13	30:DI:138:LEU:HD13	1.99	0.44
43:DV:28:ALA:HB3	43:DV:42:LEU:HD21	1.99	0.44
45:DX:12:PRO:HB3	45:DX:28:ARG:HH21	1.82	0.44
54:D6:6:04X:H33	54:D6:6:04X:H44	1.98	0.44
1:AA:148:G:C2'	1:AA:149:A:O5'	2.65	0.44
1:AA:149:A:C2	1:AA:150:U:C2	3.06	0.44
1:AA:258:G:C2	1:AA:259:G:H1'	2.53	0.44
1:AA:377:G:H2'	1:AA:378:G:H8	1.82	0.44
1:AA:858:G:C2'	1:AA:859:G:H5'	2.47	0.44
1:AA:944:G:C2	1:AA:1340:A:C6	3.05	0.44
1:AA:1469:C:C5	1:AA:1470:U:C5	3.05	0.44
2:AB:210:VAL:O	2:AB:214:LEU:HB3	2.17	0.44
3:AC:39:VAL:O	3:AC:43:LEU:HB2	2.17	0.44
4:AD:153:SER:O	4:AD:154:ARG:C	2.56	0.44
4:AD:163:GLU:OE2	4:AD:164:GLN:HB2	2.17	0.44
5:AE:22:SER:HB2	5:AE:31:PHE:CE2	2.53	0.44
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.18	0.44
10:AJ:65:TYR:HB2	14:AN:96:LEU:HD11	1.98	0.44
17:AQ:49:GLU:O	17:AQ:52:GLU:OE2	2.36	0.44
22:BA:2:G:C6	22:BA:3:U:C4	3.06	0.44
22:BA:27:G:C2	22:BA:512:G:N3	2.86	0.44
22:BA:286:U:C4	22:BA:287:G:N7	2.85	0.44
22:BA:323:C:N4	22:BA:333:G:N7	2.66	0.44
22:BA:858:G:C4	22:BA:2268:A:C2	3.05	0.44
22:BA:1078:U:H5"	22:BA:1079:C:OP1	2.17	0.44
22:BA:1195:G:H2'	22:BA:1196:C:H5'	1.98	0.44
22:BA:1257:C:H4'	26:BE:78:TRP:NE1	2.33	0.44
22:BA:1277:G:H5'	35:BN:20:MET:HE2	2.00	0.44
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.53	0.44
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.32	0.44
22:BA:2064:C:H1'	22:BA:2450:A:C5	2.52	0.44
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.53	0.44
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.53	0.44
22:BA:2813:A:H2	22:BA:2887:A:N1	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2839:G:C5	22:BA:2840:C:C5	3.06	0.44
25:BD:159:LYS:HG3	25:BD:160:LYS:N	2.33	0.44
27:BF:40:VAL:CG1	27:BF:50:LEU:HD13	2.47	0.44
27:BF:99:PHE:C	27:BF:99:PHE:CD2	2.91	0.44
28:BG:24:ILE:HD12	28:BG:72:LEU:HD21	1.99	0.44
30:BI:75:PRO:C	30:BI:78:VAL:HG22	2.37	0.44
39:BR:24:LYS:HA	39:BR:94:THR:CG2	2.48	0.44
42:BU:88:GLU:O	42:BU:89:ASP:HB3	2.18	0.44
47:BZ:23:THR:C	47:BZ:25:LEU:N	2.68	0.44
1:CA:109:A:C2	1:CA:327:A:C2	3.06	0.44
1:CA:328:C:H4'	1:CA:329:A:H5"	1.99	0.44
1:CA:512:U:C2	1:CA:513:C:C5	3.06	0.44
1:CA:659:U:O2'	1:CA:660:C:H5'	2.17	0.44
1:CA:723:U:O2	1:CA:855:U:O3'	2.35	0.44
1:CA:919:A:N1	1:CA:920:U:C4	2.86	0.44
1:CA:1006:G:C6	1:CA:1024:G:N2	2.86	0.44
1:CA:1039:G:C6	1:CA:1040:U:N3	2.86	0.44
1:CA:1208:C:C4	1:CA:1209:C:C4	3.06	0.44
1:CA:1430:A:N6	1:CA:1431:A:C2	2.85	0.44
3:CC:42:TYR:CE1	3:CC:90:VAL:HG21	2.52	0.44
3:CC:77:ILE:HG22	3:CC:78:GLY:O	2.18	0.44
3:CC:83:ASP:C	3:CC:85:GLU:N	2.70	0.44
3:CC:97:VAL:HB	3:CC:98:PRO:HD2	2.00	0.44
4:CD:9:LEU:HD13	4:CD:9:LEU:HA	1.85	0.44
7:CG:95:ARG:HA	7:CG:98:ALA:HB3	1.98	0.44
12:CL:102:LEU:N	12:CL:102:LEU:CD1	2.80	0.44
19:CS:11:ILE:HA	19:CS:38:SER:HA	2.00	0.44
22:DA:30:G:H2'	22:DA:31:C:C6	2.53	0.44
22:DA:249:C:P	22:DA:2394:C:HO2'	2.40	0.44
22:DA:528:A:N1	22:DA:2043:C:O5'	2.51	0.44
22:DA:647:G:N2	22:DA:2350:C:O2'	2.38	0.44
22:DA:748:G:O6	22:DA:751:A:H5'	2.17	0.44
22:DA:1255:U:H2'	22:DA:1256:G:OP1	2.18	0.44
22:DA:1277:G:C5'	35:DN:20:MET:HE1	2.45	0.44
22:DA:1332:G:C6	22:DA:1609:A:N7	2.86	0.44
22:DA:1361:G:N1	22:DA:1362:C:C5	2.85	0.44
22:DA:1593:A:N1	22:DA:1594:U:C2	2.86	0.44
22:DA:1665:A:C6	22:DA:1666:G:C5	3.06	0.44
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.52	0.44
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.18	0.44
22:DA:2248:C:H2'	22:DA:2249:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2314:A:C2	22:DA:2315:G:C5	3.05	0.44
22:DA:2352:A:C2	22:DA:2366:A:N3	2.86	0.44
22:DA:2389:G:H5"	22:DA:2390:U:O4'	2.17	0.44
22:DA:2619:C:OP1	25:DD:157:LYS:HE3	2.18	0.44
25:DD:13:ARG:HD2	25:DD:15:PHE:CE1	2.53	0.44
25:DD:39:ASP:CG	25:DD:40:LEU:N	2.71	0.44
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.50	0.44
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.50	0.44
33:DL:70:LYS:O	33:DL:74:THR:HG23	2.18	0.44
38:DQ:94:ILE:HD13	39:DR:11:GLN:HB2	1.99	0.44
41:DT:2:ILE:CG2	41:DT:4:GLU:CG	2.95	0.44
42:DU:18:ASP:OD2	42:DU:18:ASP:N	2.51	0.44
50:D2:11:LYS:HA	50:D2:14:ARG:HB2	1.99	0.44
1:AA:417:G:C5	1:AA:418:C:C4	3.06	0.44
1:AA:529:G:C4'	1:AA:533:A:C2	3.01	0.44
1:AA:675:A:N1	1:AA:716:A:C2	2.86	0.44
1:AA:681:A:N3	1:AA:710:G:C2	2.86	0.44
1:AA:763:G:N2	1:AA:764:C:H1'	2.32	0.44
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.47	0.44
1:AA:1207:G:C2'	1:AA:1208:C:H5'	2.48	0.44
1:AA:1270:G:O3'	1:AA:1314:C:H5'	2.18	0.44
2:AB:154:MET:O	2:AB:156:GLY:N	2.48	0.44
3:AC:55:ILE:HG13	3:AC:55:ILE:O	2.18	0.44
6:AF:12:PRO:HG2	6:AF:54:LEU:HD21	2.00	0.44
6:AF:38:ARG:HB3	6:AF:63:ASN:CB	2.48	0.44
10:AJ:54:SER:OG	10:AJ:55:PRO:HD2	2.18	0.44
12:AL:72:HIS:CE1	12:AL:74:LEU:HB2	2.53	0.44
13:AM:19:LEU:O	13:AM:25:VAL:HG21	2.18	0.44
22:BA:12:U:O2	22:BA:12:U:H2'	2.17	0.44
22:BA:484:C:H2'	22:BA:485:C:H6	1.81	0.44
22:BA:826:U:O2'	33:BL:53:GLY:HA3	2.18	0.44
22:BA:990:A:N6	22:BA:1186:G:H1'	2.33	0.44
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.53	0.44
22:BA:1122:G:H2'	22:BA:1122:G:N3	2.33	0.44
22:BA:1491:G:O2'	24:BC:100:GLU:HB2	2.17	0.44
22:BA:1492:G:C2	22:BA:1496:A:C6	3.05	0.44
22:BA:1734:G:C4	22:BA:1735:A:C8	3.05	0.44
22:BA:1923:U:O2'	22:BA:1924:C:H5'	2.17	0.44
22:BA:2223:G:C2'	22:BA:2224:G:H5'	2.48	0.44
22:BA:2531:A:N6	22:BA:2532:G:C6	2.86	0.44
22:BA:2574:G:C2	22:BA:2575:C:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2674:G:C2	22:BA:2675:A:C4	3.06	0.44
22:BA:2828:G:C2	22:BA:2829:A:C8	3.05	0.44
23:BB:7:G:C5'	36:BO:29:HIS:CE1	3.01	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
36:BO:67:ASN:O	36:BO:69:ASP:N	2.50	0.44
37:BP:27:GLU:O	37:BP:27:GLU:HG3	2.18	0.44
43:BV:80:HIS:CE1	43:BV:83:LYS:H	2.35	0.44
1:CA:569:C:H1'	1:CA:574:A:C4	2.52	0.44
1:CA:957:U:O2	1:CA:959:A:C8	2.71	0.44
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.52	0.44
1:CA:1262:C:C4	1:CA:1263:C:C4	3.05	0.44
2:CB:115:LYS:HA	2:CB:118:GLU:CG	2.48	0.44
2:CB:133:GLU:HG2	2:CB:137:ARG:HE	1.83	0.44
4:CD:9:LEU:CD2	4:CD:22:LYS:HD2	2.48	0.44
4:CD:203:LEU:HD12	4:CD:203:LEU:O	2.16	0.44
8:CH:111:MET:HB3	8:CH:115:ALA:HB3	2.00	0.44
10:CJ:35:GLN:HG2	10:CJ:77:VAL:CB	2.48	0.44
22:DA:29:U:H5"	38:DQ:7:GLY:HA3	1.99	0.44
22:DA:511:U:O4	22:DA:512:G:C2	2.70	0.44
22:DA:844:A:N3	22:DA:845:A:N7	2.66	0.44
22:DA:1097:U:H3'	22:DA:1098:A:O4'	2.18	0.44
22:DA:1176:U:H2'	22:DA:1177:G:N9	2.33	0.44
22:DA:1693:U:O2	24:DC:14:ARG:CZ	2.66	0.44
22:DA:2026:U:H2'	22:DA:2027:G:C8	2.52	0.44
22:DA:2094:A:O4'	22:DA:2198:A:N6	2.50	0.44
22:DA:2133:G:C2	22:DA:2158:A:C6	3.05	0.44
22:DA:2478:A:C8	22:DA:2529:G:N7	2.85	0.44
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.33	0.44
23:DB:81:G:C4	23:DB:82:U:C6	3.06	0.44
24:DC:15:HIS:O	24:DC:204:VAL:CG2	2.66	0.44
24:DC:138:GLY:N	24:DC:164:ILE:O	2.51	0.44
24:DC:147:LYS:HG3	24:DC:150:LYS:CD	2.48	0.44
24:DC:246:THR:C	24:DC:248:TRP:N	2.71	0.44
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.81	0.44
30:DI:8:TYR:HB3	30:DI:59:ILE:O	2.17	0.44
31:DJ:36:LEU:HG	31:DJ:54:ILE:HD12	2.00	0.44
34:DM:67:VAL:HG11	34:DM:96:ILE:CD1	2.48	0.44
36:DO:36:TYR:HA	36:DO:52:SER:HB2	2.00	0.44
41:DT:29:THR:OG1	41:DT:86:THR:CG2	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:71:VAL:HG13	44:DW:76:ASN:O	2.18	0.44
45:DX:40:VAL:CG2	45:DX:43:GLU:HB2	2.48	0.44
1:AA:215:C:O2'	1:AA:465:A:N7	2.50	0.44
1:AA:397:A:C5	1:AA:548:G:N7	2.85	0.44
1:AA:604:G:C5	1:AA:605:U:C5	3.06	0.44
1:AA:773:G:C6	1:AA:774:G:N7	2.86	0.44
1:AA:802:A:H5"	1:AA:803:G:OP2	2.17	0.44
1:AA:817:C:C2	1:AA:819:A:O4'	2.71	0.44
1:AA:827:U:H2'	1:AA:870:U:O4	2.18	0.44
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.17	0.44
1:AA:1130:A:C2	1:AA:1146:A:C5	3.06	0.44
2:AB:103:ASN:O	2:AB:104:TRP:C	2.55	0.44
2:AB:160:ALA:O	2:AB:183:VAL:N	2.50	0.44
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.32	0.44
4:AD:171:LEU:HD12	4:AD:171:LEU:O	2.17	0.44
5:AE:99:ALA:HB3	5:AE:122:ASN:O	2.18	0.44
5:AE:115:LEU:CG	5:AE:123:VAL:HG21	2.47	0.44
7:AG:113:ASP:HB2	7:AG:119:ARG:HG3	1.99	0.44
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.48	0.44
13:AM:83:LEU:HD11	19:AS:65:GLU:HG2	1.99	0.44
22:BA:224:U:H2'	22:BA:225:C:O5'	2.18	0.44
22:BA:607:U:O4	22:BA:620:G:O4'	2.35	0.44
22:BA:674:G:O2'	26:BE:69:ARG:HB3	2.18	0.44
22:BA:699:A:N7	22:BA:734:A:C5	2.86	0.44
22:BA:781:A:H2	22:BA:1776:G:N3	2.16	0.44
22:BA:959:A:N6	22:BA:960:A:N1	2.65	0.44
22:BA:1467:U:O4	22:BA:1546:G:C2	2.70	0.44
22:BA:1474:U:C3'	22:BA:1475:G:H5'	2.46	0.44
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.32	0.44
22:BA:1816:C:C6	24:BC:62:TYR:CE1	3.06	0.44
22:BA:2281:A:C2	22:BA:2282:G:C5	3.06	0.44
22:BA:2498:C:H2'	22:BA:2499:C:H5'	2.00	0.44
22:BA:2520:C:C2'	22:BA:2521:C:O5'	2.66	0.44
22:BA:2550:G:C5	22:BA:2551:C:C5	3.06	0.44
22:BA:2557:G:O2'	22:BA:2558:C:H5'	2.18	0.44
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.83	0.44
25:BD:105:LYS:O	25:BD:177:VAL:CG1	2.66	0.44
28:BG:40:ALA:CB	28:BG:58:TYR:CG	3.01	0.44
29:BH:97:ARG:HH11	1:CA:369:G:H2'	1.83	0.44
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.50	0.44
36:BO:88:LYS:HA	36:BO:115:LEU:HD12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:21:ARG:HD3	39:BR:93:PHE:CB	2.48	0.44
40:BS:36:LEU:HD11	40:BS:47:VAL:HG22	2.00	0.44
42:BU:26:LYS:HA	42:BU:26:LYS:NZ	2.33	0.44
45:BX:39:TRP:CZ2	45:BX:44:LYS:HA	2.52	0.44
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.99	0.44
1:CA:59:A:C4	1:CA:331:G:N2	2.86	0.44
1:CA:214:C:H2'	1:CA:215:C:C6	2.53	0.44
1:CA:298:A:H2'	1:CA:299:G:O4'	2.18	0.44
1:CA:651:C:N4	1:CA:652:U:O4	2.51	0.44
1:CA:676:A:N1	1:CA:677:U:C4	2.86	0.44
1:CA:798:U:N3	1:CA:799:G:C8	2.86	0.44
1:CA:852:G:C4	1:CA:853:C:C6	3.05	0.44
1:CA:861:G:C6	1:CA:862:C:C4	3.06	0.44
1:CA:1084:G:C6	1:CA:1085:U:C4	3.06	0.44
1:CA:1238:A:N3	1:CA:1241:G:O2'	2.35	0.44
1:CA:1422:G:C6	1:CA:1423:G:N7	2.86	0.44
5:CE:90:THR:HG22	5:CE:91:GLY:H	1.81	0.44
5:CE:122:ASN:O	5:CE:123:VAL:O	2.36	0.44
6:CF:92:THR:O	6:CF:93:LYS:C	2.56	0.44
8:CH:6:PRO:O	8:CH:9:ASP:HB3	2.18	0.44
12:CL:37:VAL:HA	12:CL:53:CYS:HA	1.99	0.44
22:DA:13:A:N1	22:DA:525:U:C2	2.86	0.44
22:DA:397:U:H2'	22:DA:398:C:H6	1.83	0.44
22:DA:537:G:N1	22:DA:555:G:C2	2.85	0.44
22:DA:547:A:H3'	22:DA:548:G:H5'	2.00	0.44
22:DA:687:C:C5	22:DA:688:U:C4	3.06	0.44
22:DA:1352:U:C6	22:DA:1377:G:O6	2.71	0.44
22:DA:1357:C:H2'	22:DA:1358:G:O4'	2.18	0.44
22:DA:1358:G:H2'	22:DA:1359:A:OP2	2.18	0.44
22:DA:1385:A:C2	22:DA:1386:C:C2	3.06	0.44
22:DA:1776:G:C2	22:DA:1789:A:N3	2.85	0.44
22:DA:2204:G:C6	22:DA:2221:G:C2	3.06	0.44
22:DA:2532:G:O2'	22:DA:2657:A:N6	2.49	0.44
22:DA:2884:U:O2	22:DA:2884:U:O4'	2.35	0.44
24:DC:260:ASN:OD1	24:DC:262:ARG:HB3	2.17	0.44
25:DD:98:VAL:O	25:DD:98:VAL:HG22	2.16	0.44
27:DF:38:MET:SD	27:DF:57:LEU:HG	2.57	0.44
27:DF:43:ALA:HA	27:DF:46:ASP:O	2.17	0.44
30:DI:10:LYS:CB	30:DI:56:PRO:HB2	2.47	0.44
31:DJ:5:THR:C	31:DJ:6:ALA:O	2.55	0.44
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:74:VAL:O	36:DO:78:VAL:HG23	2.18	0.44
41:DT:14:PRO:HD2	46:DY:33:ALA:CB	2.48	0.44
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.18	0.44
1:AA:373:A:N3	1:AA:374:A:C8	2.86	0.44
1:AA:441:A:C2	1:AA:497:G:C6	3.06	0.44
1:AA:448:A:C8	1:AA:487:A:N1	2.86	0.44
1:AA:454:G:N2	1:AA:479:U:O2	2.51	0.44
1:AA:457:G:O6	1:AA:458:U:N3	2.51	0.44
1:AA:573:A:C6	1:AA:574:A:N1	2.86	0.44
1:AA:670:G:C2'	1:AA:671:G:O5'	2.65	0.44
1:AA:1059:C:H2'	1:AA:1060:U:H6	1.82	0.44
1:AA:1223:C:H3'	1:AA:1224:U:H5"	2.00	0.44
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.50	0.44
1:AA:1315:U:C4	1:AA:1316:G:C5	3.06	0.44
2:AB:166:ALA:HA	2:AB:173:ILE:HD11	1.99	0.44
4:AD:23:SER:O	4:AD:24:GLY:O	2.36	0.44
4:AD:123:ILE:N	4:AD:146:ARG:HG3	2.32	0.44
4:AD:167:LYS:HA	4:AD:168:PRO:HD3	1.70	0.44
5:AE:133:PRO:HA	5:AE:136:VAL:HG12	1.99	0.44
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.65	0.44
17:AQ:4:LYS:HD2	17:AQ:4:LYS:O	2.18	0.44
17:AQ:5:ILE:O	17:AQ:6:ARG:CB	2.65	0.44
22:BA:161:A:H2	22:BA:2217:G:HO2'	1.62	0.44
22:BA:255:A:C2	22:BA:256:A:H1'	2.53	0.44
22:BA:465:G:H2'	22:BA:466:A:C8	2.53	0.44
22:BA:478:A:C6	22:BA:480:A:C6	3.05	0.44
22:BA:597:G:C6	22:BA:598:U:C4	3.06	0.44
22:BA:699:A:C8	22:BA:734:A:C6	3.06	0.44
22:BA:1087:G:N2	22:BA:1090:A:C8	2.86	0.44
22:BA:1088:A:N7	30:BI:135:SER:OG	2.51	0.44
22:BA:1278:C:H2'	22:BA:1279:G:H8	1.83	0.44
22:BA:1569:A:C2	22:BA:1570:A:C4	3.06	0.44
22:BA:1992:G:C4'	22:BA:1993:U:OP1	2.66	0.44
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.48	0.44
22:BA:2109:U:H2'	22:BA:2110:G:C8	2.53	0.44
22:BA:2142:A:H2'	22:BA:2143:C:C6	2.53	0.44
22:BA:2601:C:O2	22:BA:2603:G:N7	2.51	0.44
22:BA:2617:U:C2'	22:BA:2618:G:H5'	2.48	0.44
22:BA:2673:G:N3	22:BA:2674:G:C8	2.86	0.44
22:BA:2851:A:H2'	22:BA:2852:G:O4'	2.18	0.44
22:BA:2888:C:O2	22:BA:2888:C:C2'	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:7:G:H5'	36:BO:29:HIS:CE1	2.53	0.44
27:BF:40:VAL:CG1	27:BF:43:ALA:HB3	2.48	0.44
28:BG:124:GLU:CD	28:BG:125:CYS:H	2.21	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
31:BJ:33:ALA:O	31:BJ:34:ARG:C	2.57	0.44
33:BL:100:ILE:HD12	33:BL:100:ILE:O	2.18	0.44
40:BS:39:THR:O	40:BS:44:ALA:CB	2.65	0.44
41:BT:30:ILE:HD11	41:BT:32:LEU:HD21	2.00	0.44
42:BU:67:VAL:O	42:BU:67:VAL:HG22	2.18	0.44
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	1.99	0.44
49:B1:12:VAL:CG1	49:B1:13:SER:N	2.81	0.44
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.18	0.44
1:CA:48:C:H2'	1:CA:365:U:O4	2.17	0.44
1:CA:70:U:C2	1:CA:94:G:N7	2.86	0.44
1:CA:355:C:H2'	1:CA:356:A:O4'	2.18	0.44
1:CA:485:U:HO2'	1:CA:486:U:P	2.39	0.44
1:CA:963:G:C2'	1:CA:964:A:H5'	2.47	0.44
1:CA:1221:G:H5"	19:CS:36:ARG:NH1	2.33	0.44
1:CA:1403:C:H2'	1:CA:1404:C:H6	1.79	0.44
2:CB:83:ALA:O	2:CB:218:ALA:HB1	2.18	0.44
4:CD:129:VAL:O	4:CD:129:VAL:HG13	2.17	0.44
6:CF:9:MET:O	6:CF:84:VAL:HG23	2.17	0.44
6:CF:16:GLU:O	6:CF:18:VAL:N	2.50	0.44
7:CG:66:LEU:HG	7:CG:66:LEU:O	2.18	0.44
9:CI:57:MET:HA	9:CI:60:LYS:HB3	2.00	0.44
19:CS:17:LYS:O	19:CS:21:LYS:HB2	2.18	0.44
22:DA:562:U:H2'	22:DA:572:A:O4'	2.17	0.44
22:DA:776:G:C8	22:DA:793:A:C5	3.06	0.44
22:DA:846:U:HO2'	22:DA:847:U:P	2.41	0.44
22:DA:1358:G:OP2	57:DA:3398:HOH:O	2.21	0.44
22:DA:1392:A:N6	22:DA:1393:A:N6	2.66	0.44
22:DA:1545:A:N7	22:DA:1546:G:C5	2.86	0.44
22:DA:1649:G:O6	22:DA:2009:A:N6	2.51	0.44
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.32	0.44
22:DA:1807:G:C2	22:DA:1809:A:OP2	2.71	0.44
22:DA:2221:G:C5	22:DA:2222:C:C5	3.06	0.44
22:DA:2262:U:C4	22:DA:2279:G:N1	2.85	0.44
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.45	0.44
23:DB:99:A:C6	23:DB:100:G:C5	3.05	0.44
24:DC:131:PRO:HB2	24:DC:133:ARG:HG2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:28:VAL:O	26:DE:32:VAL:HG22	2.18	0.44
26:DE:181:ILE:HB	33:DL:3:LEU:HD13	2.00	0.44
27:DF:12:VAL:O	27:DF:16:LEU:HG	2.18	0.44
28:DG:89:LEU:CD1	28:DG:162:VAL:HG22	2.47	0.44
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.44
33:DL:56:PRO:O	33:DL:60:ARG:HB3	2.18	0.44
34:DM:135:VAL:O	34:DM:136:MET:HB3	2.18	0.44
36:DO:71:ALA:HB1	36:DO:106:LEU:HB2	2.00	0.44
37:DP:59:PHE:CE2	37:DP:74:PHE:HB2	2.52	0.44
39:DR:84:ARG:O	39:DR:84:ARG:HG3	2.17	0.44
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.16	0.44
41:DT:14:PRO:HD2	46:DY:33:ALA:HB1	1.98	0.44
46:DY:21:LEU:HA	46:DY:25:GLN:CB	2.48	0.44
1:AA:118:U:O4	1:AA:288:A:H2'	2.18	0.43
1:AA:502:A:H4'	1:AA:550:G:H4'	2.00	0.43
1:AA:520:A:N1	1:AA:536:C:H1'	2.32	0.43
1:AA:642:A:C4	8:AH:106:THR:O	2.71	0.43
1:AA:914:A:C2	1:AA:915:A:N9	2.86	0.43
1:AA:957:U:C2	1:AA:959:A:OP2	2.71	0.43
1:AA:1060:U:H4'	10:AJ:53:ILE:HG23	1.99	0.43
1:AA:1068:G:C2	1:AA:1069:C:C6	3.06	0.43
1:AA:1130:A:H5'	9:AI:20:PHE:CE2	2.53	0.43
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.17	0.43
1:AA:1328:C:C2	1:AA:1329:A:C8	3.06	0.43
1:AA:1366:C:O2'	1:AA:1367:C:H5'	2.18	0.43
2:AB:117:LEU:HA	2:AB:120:GLN:OE1	2.17	0.43
2:AB:154:MET:HE2	2:AB:158:PRO:HG3	2.00	0.43
2:AB:208:ARG:C	2:AB:212:LEU:HD13	2.38	0.43
4:AD:88:GLU:O	4:AD:91:LEU:N	2.51	0.43
5:AE:151:GLU:C	5:AE:153:VAL:H	2.21	0.43
6:AF:37:HIS:O	6:AF:38:ARG:HB2	2.18	0.43
11:AK:56:ARG:NE	11:AK:56:ARG:HA	2.32	0.43
13:AM:45:ILE:O	13:AM:45:ILE:CG2	2.66	0.43
13:AM:103:LYS:O	13:AM:104:THR:HG23	2.18	0.43
15:AO:88:ARG:O	15:AO:89:ARG:OXT	2.36	0.43
20:AT:3:ASN:OD1	20:AT:3:ASN:C	2.57	0.43
22:BA:659:G:C5	22:BA:660:C:C4	3.05	0.43
22:BA:800:A:H4'	22:BA:801:G:OP1	2.15	0.43
22:BA:973:A:C5'	22:BA:1188:U:O4'	2.66	0.43
22:BA:1363:C:H2'	22:BA:1364:G:O4'	2.18	0.43
22:BA:1477:A:C8	22:BA:1478:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1544:A:C6	22:BA:1545:A:C6	3.06	0.43
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.33	0.43
22:BA:1866:A:C6	22:BA:1876:A:N7	2.86	0.43
22:BA:2287:A:N3	22:BA:2287:A:H2'	2.33	0.43
22:BA:2468:A:C4	22:BA:2481:G:N2	2.86	0.43
22:BA:2727:A:C6	22:BA:2728:U:O4	2.71	0.43
22:BA:2800:A:N1	22:BA:2895:G:H1'	2.33	0.43
23:BB:37:C:C5	23:BB:38:C:C5	3.05	0.43
27:BF:2:ALA:N	27:BF:94:GLU:OE1	2.51	0.43
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	2.00	0.43
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.43
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.43
33:BL:82:LEU:O	33:BL:85:VAL:HG22	2.18	0.43
34:BM:20:LEU:CD1	43:BV:81:PRO:HG2	2.48	0.43
36:BO:34:HIS:NE2	36:BO:54:VAL:HG23	2.33	0.43
40:BS:1:MET:HG2	40:BS:2:GLU:N	2.33	0.43
40:BS:26:GLY:HA2	40:BS:71:VAL:O	2.18	0.43
40:BS:53:SER:O	40:BS:57:ASN:HB2	2.18	0.43
43:BV:31:TYR:HB3	43:BV:37:PRO:HB3	2.00	0.43
1:CA:29:U:N3	1:CA:30:U:C5	2.86	0.43
1:CA:106:C:H2'	1:CA:107:G:H5'	2.00	0.43
1:CA:327:A:N6	1:CA:329:A:C6	2.86	0.43
1:CA:1005:A:H4'	1:CA:1037:C:O2'	2.18	0.43
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.18	0.43
1:CA:1068:G:C6	1:CA:1069:C:C4	3.06	0.43
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.48	0.43
1:CA:1122:U:C4	1:CA:1123:U:C4	3.06	0.43
2:CB:119:THR:O	2:CB:120:GLN:HB3	2.17	0.43
3:CC:179:ARG:O	3:CC:206:GLU:O	2.36	0.43
4:CD:53:VAL:HG23	4:CD:54:GLN:N	2.33	0.43
4:CD:58:LYS:NZ	4:CD:59:GLN:OE1	2.50	0.43
4:CD:169:THR:O	4:CD:169:THR:HG22	2.18	0.43
4:CD:192:SER:O	4:CD:193:ALA:CB	2.66	0.43
5:CE:16:ILE:N	5:CE:16:ILE:HD12	2.33	0.43
9:CI:90:TYR:O	9:CI:91:ASP:CB	2.66	0.43
11:CK:84:VAL:HG11	11:CK:97:ILE:HG22	1.99	0.43
19:CS:32:ARG:HA	19:CS:50:ALA:HB3	2.00	0.43
19:CS:36:ARG:NH2	19:CS:75:ALA:O	2.51	0.43
22:DA:142:A:C5	22:DA:143:C:N4	2.87	0.43
22:DA:201:C:C4	22:DA:202:U:C5	3.06	0.43
22:DA:223:A:C6	22:DA:408:G:O4'	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:297:G:OP1	42:DU:92:LYS:HD3	2.18	0.43
22:DA:453:A:H4'	22:DA:472:A:H62	1.81	0.43
22:DA:693:A:H2'	22:DA:694:U:O4'	2.18	0.43
22:DA:976:G:O6	22:DA:988:A:C2	2.71	0.43
22:DA:1007:C:O2'	31:DJ:110:PRO:HA	2.18	0.43
22:DA:1343:G:C5	22:DA:1344:U:O4	2.71	0.43
22:DA:1549:A:C6	22:DA:1550:C:N3	2.85	0.43
22:DA:1667:G:O2'	22:DA:1991:U:O4	2.27	0.43
22:DA:1731:G:C6	22:DA:1733:G:C5	3.05	0.43
22:DA:1969:A:O2'	22:DA:1972:G:N3	2.36	0.43
26:DE:19:PHE:HB3	26:DE:113:VAL:HG21	2.00	0.43
26:DE:77:ILE:O	26:DE:77:ILE:CG1	2.66	0.43
27:DF:73:SER:HB2	27:DF:81:GLN:HB3	2.00	0.43
28:DG:90:VAL:HG21	28:DG:163:ARG:NE	2.33	0.43
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.81	0.43
32:DK:99:ILE:HD13	32:DK:118:LEU:HD12	1.99	0.43
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.33	0.43
1:AA:10:A:N3	1:AA:11:G:C8	2.86	0.43
1:AA:93:U:C2'	1:AA:94:G:H5"	2.48	0.43
1:AA:340:U:C2	1:AA:341:C:C5	3.06	0.43
1:AA:512:U:OP1	4:AD:41:HIS:CD2	2.72	0.43
1:AA:562:U:C4	1:AA:884:U:C6	3.06	0.43
1:AA:1256:A:N6	1:AA:1277:C:C2	2.85	0.43
1:AA:1399:C:O2	1:AA:1401:G:C5	2.71	0.43
1:AA:1415:G:N2	1:AA:1486:G:C4	2.86	0.43
2:AB:23:TRP:HB3	2:AB:39:HIS:CE1	2.53	0.43
5:AE:15:LEU:O	5:AE:15:LEU:CD1	2.66	0.43
5:AE:18:VAL:CG2	5:AE:19:ASN:N	2.81	0.43
12:AL:99:ARG:NE	12:AL:105:SER:O	2.47	0.43
14:AN:11:VAL:O	14:AN:14:VAL:HG12	2.17	0.43
15:AO:87:LEU:C	15:AO:87:LEU:HD23	2.38	0.43
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.66	0.43
18:AR:26:ILE:O	18:AR:30:LYS:HG3	2.18	0.43
22:BA:388:G:C8	22:BA:390:U:C6	3.05	0.43
22:BA:859:G:H8	22:BA:859:G:O5'	2.00	0.43
22:BA:999:U:O2	22:BA:1157:G:C2	2.71	0.43
22:BA:1157:G:N2	22:BA:1158:C:O2	2.51	0.43
22:BA:1827:U:H2'	22:BA:1828:G:O4'	2.18	0.43
22:BA:1915:U:H2'	22:BA:1916:A:O4'	2.18	0.43
22:BA:2839:G:H2'	22:BA:2840:C:O5'	2.19	0.43
23:BB:49:C:OP1	36:BO:102:ARG:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:164:ILE:H	24:BC:164:ILE:HG12	1.67	0.43
24:BC:183:LYS:O	24:BC:184:VAL:HG23	2.18	0.43
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	2.35	0.43
34:BM:6:ARG:HG2	34:BM:7:THR:N	2.33	0.43
39:BR:71:LYS:HA	39:BR:90:ARG:HG2	2.00	0.43
48:B0:36:GLU:CD	48:B0:44:THR:HB	2.39	0.43
49:B1:32:GLU:HG2	49:B1:32:GLU:O	2.18	0.43
49:B1:40:ASP:HB2	49:B1:49:TYR:OH	2.18	0.43
54:B6:4:PRO:HA	54:B6:5:MHU:HM1	1.82	0.43
1:CA:162:A:H2'	1:CA:163:C:O4'	2.18	0.43
1:CA:467:U:H3'	1:CA:468:A:H5"	1.99	0.43
1:CA:1377:A:C5	7:CG:7:ILE:CD1	3.01	0.43
3:CC:16:LYS:CE	3:CC:17:PRO:HD2	2.48	0.43
3:CC:45:LYS:CG	3:CC:46:GLU:N	2.81	0.43
5:CE:81:LEU:CD1	5:CE:120:VAL:HG11	2.48	0.43
9:CI:76:ALA:HA	9:CI:79:ILE:HD12	1.98	0.43
12:CL:114:ARG:NH2	12:CL:121:ARG:HA	2.32	0.43
13:CM:96:PRO:HB2	13:CM:100:GLN:OE1	2.18	0.43
15:CO:89:ARG:NH1	22:DA:716:A:OP1	2.52	0.43
16:CP:61:VAL:HG21	16:CP:67:ILE:HD11	2.00	0.43
20:CT:48:GLN:O	20:CT:52:ASN:OD1	2.36	0.43
22:DA:129:C:H2'	22:DA:130:C:C6	2.54	0.43
22:DA:381:G:C6	22:DA:382:A:C5	3.06	0.43
22:DA:527:C:H4'	22:DA:528:A:O5'	2.17	0.43
22:DA:534:U:H2'	22:DA:535:G:C8	2.53	0.43
22:DA:570:G:N2	22:DA:2030:A:O4'	2.50	0.43
22:DA:621:A:C4	22:DA:622:G:H1'	2.53	0.43
22:DA:658:U:N3	22:DA:659:G:C8	2.86	0.43
22:DA:815:C:H2'	22:DA:816:C:C6	2.52	0.43
22:DA:858:G:C4	22:DA:2268:A:C2	3.06	0.43
22:DA:1222:U:H2'	22:DA:1223:G:C8	2.53	0.43
22:DA:1351:C:O2	22:DA:1381:G:C2	2.71	0.43
22:DA:1423:G:O2'	22:DA:1499:C:H1'	2.18	0.43
22:DA:2016:U:H1'	48:D0:3:VAL:HG22	2.01	0.43
22:DA:2186:G:C5	22:DA:2187:U:C5	3.06	0.43
22:DA:2217:G:C4	22:DA:2218:G:C8	3.06	0.43
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.18	0.43
22:DA:2626:C:H2'	22:DA:2627:G:O4'	2.17	0.43
22:DA:2635:A:H5"	25:DD:79:LEU:O	2.18	0.43
22:DA:2812:G:N2	22:DA:2889:C:O2	2.52	0.43
23:DB:55:U:H5'	27:DF:25:VAL:CG1	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:80:ARG:NH1	24:DC:82:GLU:OE2	2.51	0.43
27:DF:36:LEU:N	27:DF:89:VAL:O	2.50	0.43
27:DF:122:PHE:O	27:DF:123:ASP:C	2.57	0.43
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.43
33:DL:91:ASP:HB3	33:DL:94:THR:HB	2.00	0.43
34:DM:35:ALA:HB1	34:DM:126:ILE:HD11	1.98	0.43
35:DN:24:MET:HE3	35:DN:44:LEU:HD22	2.00	0.43
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.66	0.43
42:DU:59:VAL:CG1	42:DU:61:LYS:HD3	2.47	0.43
46:DY:23:ARG:NE	46:DY:23:ARG:CA	2.81	0.43
47:DZ:4:THR:HG23	47:DZ:5:ILE:N	2.33	0.43
49:D1:4:GLY:O	49:D1:6:ARG:N	2.51	0.43
49:D1:29:THR:O	49:D1:30:LYS:HD3	2.18	0.43
50:D2:26:ASN:O	50:D2:30:VAL:HG23	2.18	0.43
51:D3:50:VAL:HG11	51:D3:58:VAL:HG21	2.00	0.43
1:AA:10:A:C2	1:AA:11:G:C5	3.06	0.43
1:AA:21:G:H2'	1:AA:22:G:C8	2.53	0.43
1:AA:572:A:N3	1:AA:917:G:H1'	2.33	0.43
1:AA:601:G:C2	1:AA:602:A:C4	3.06	0.43
1:AA:635:A:H2'	1:AA:636:U:H6	1.82	0.43
1:AA:1141:C:HO2'	1:AA:1142:G:C5'	2.30	0.43
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.18	0.43
1:AA:1468:A:H2'	1:AA:1469:C:O4'	2.18	0.43
8:AH:96:MET:O	8:AH:99:LEU:HG	2.18	0.43
9:AI:6:TYR:HB3	9:AI:89:GLU:HG2	1.99	0.43
9:AI:97:GLU:CD	9:AI:97:GLU:N	2.71	0.43
11:AK:25:ALA:O	11:AK:89:PRO:O	2.36	0.43
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	2.18	0.43
21:AU:18:ARG:N	21:AU:18:ARG:HD2	2.33	0.43
22:BA:440:C:C2'	22:BA:441:U:H5'	2.48	0.43
22:BA:528:A:C2	22:BA:2043:C:C5'	3.00	0.43
22:BA:998:C:OP2	38:BQ:58:ARG:NH2	2.51	0.43
22:BA:1219:U:H2'	22:BA:1220:G:H8	1.81	0.43
22:BA:1454:C:H1'	35:BN:60:VAL:HG13	1.99	0.43
22:BA:2286:G:C4'	22:BA:2287:A:O5'	2.65	0.43
22:BA:2307:G:O4'	22:BA:2308:G:C2	2.71	0.43
26:BE:125:SER:OG	26:BE:126:VAL:N	2.51	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
30:BI:5:VAL:O	30:BI:6:GLN:HB2	2.18	0.43
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:64:VAL:HG21	31:BJ:68:LYS:HD2	1.99	0.43
35:BN:8:ARG:HB3	35:BN:10:LEU:HG	1.99	0.43
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.86	0.43
38:BQ:81:ASN:O	38:BQ:84:LYS:HB3	2.18	0.43
1:CA:4:U:OP1	1:CA:5:U:O4	2.35	0.43
1:CA:38:G:N2	1:CA:397:A:N3	2.66	0.43
1:CA:436:C:N3	1:CA:437:U:C4	2.86	0.43
1:CA:483:C:H2'	1:CA:484:G:N7	2.32	0.43
1:CA:803:G:C5	1:CA:804:U:C4	3.07	0.43
1:CA:934:C:C6	1:CA:1344:C:C5	3.07	0.43
1:CA:1031:C:H4'	1:CA:1032:G:C2	2.53	0.43
1:CA:1079:G:O2'	1:CA:1080:A:O5'	2.36	0.43
1:CA:1263:C:H2'	1:CA:1264:U:C6	2.53	0.43
1:CA:1416:G:C2	1:CA:1485:U:O2	2.71	0.43
4:CD:17:THR:CG2	4:CD:18:ASP:N	2.81	0.43
5:CE:34:THR:CB	5:CE:50:TYR:OH	2.67	0.43
13:CM:13:LYS:O	13:CM:44:LYS:HG2	2.18	0.43
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.32	0.43
15:CO:35:GLN:NE2	15:CO:39:LEU:HD22	2.34	0.43
15:CO:37:ASN:O	15:CO:40:GLN:HB2	2.18	0.43
17:CQ:14:SER:OG	17:CQ:22:VAL:HG12	2.18	0.43
22:DA:60:G:C6	22:DA:74:A:C6	3.06	0.43
22:DA:291:G:H2'	22:DA:292:U:C6	2.53	0.43
22:DA:500:G:C2	22:DA:503:A:C8	3.06	0.43
22:DA:704:G:H1'	22:DA:726:G:H22	1.84	0.43
22:DA:836:G:H2'	22:DA:837:C:C6	2.53	0.43
22:DA:857:G:N2	22:DA:921:C:O2	2.50	0.43
22:DA:987:C:N4	22:DA:988:A:C6	2.85	0.43
22:DA:1187:G:H5"	39:DR:83:TYR:CE2	2.53	0.43
22:DA:1525:A:C6	22:DA:1526:C:C4	3.06	0.43
22:DA:1767:G:C6	22:DA:1986:C:N3	2.86	0.43
22:DA:1857:G:C4	22:DA:1884:G:C2	3.06	0.43
22:DA:2371:G:C2	22:DA:2372:U:C6	3.06	0.43
22:DA:2615:U:O2	22:DA:2615:U:H2'	2.19	0.43
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	1.98	0.43
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	2.01	0.43
34:DM:67:VAL:CG1	34:DM:100:LYS:HD2	2.48	0.43
36:DO:2:ASP:O	36:DO:6:ALA:HB2	2.18	0.43
38:DQ:65:ILE:HD11	38:DQ:95:LEU:HB2	2.00	0.43
43:DV:20:LEU:HD23	43:DV:25:LYS:CB	2.47	0.43
51:D3:34:THR:HG23	51:D3:35:LYS:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:71:A:O2'	1:AA:72:A:O5'	2.36	0.43
1:AA:322:C:H4'	20:AT:18:ARG:HD3	2.01	0.43
1:AA:371:A:C2	1:AA:372:C:C4	3.06	0.43
1:AA:562:U:C4	1:AA:884:U:C5	3.07	0.43
1:AA:575:G:H4'	1:AA:576:C:OP1	2.18	0.43
1:AA:623:C:N3	1:AA:624:C:C5	2.86	0.43
1:AA:687:A:N3	1:AA:688:G:H1'	2.32	0.43
1:AA:1211:U:C2'	1:AA:1212:U:OP2	2.65	0.43
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.53	0.43
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.52	0.43
2:AB:68:LEU:HD21	2:AB:92:VAL:CG2	2.48	0.43
4:AD:68:LEU:O	4:AD:69:GLU:C	2.56	0.43
6:AF:84:VAL:HG22	6:AF:84:VAL:O	2.18	0.43
7:AG:95:ARG:NH2	7:AG:99:LEU:HD21	2.33	0.43
8:AH:10:MET:O	8:AH:11:LEU:C	2.57	0.43
13:AM:67:GLY:HA2	13:AM:70:ARG:HD2	1.99	0.43
14:AN:3:LYS:HD3	14:AN:6:MET:HG2	2.00	0.43
17:AQ:53:CYS:SG	17:AQ:75:LEU:HD23	2.58	0.43
21:AU:12:PHE:CE1	21:AU:16:LEU:HD11	2.53	0.43
22:BA:999:U:C5	22:BA:1154:G:C5	3.06	0.43
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.53	0.43
22:BA:1249:U:O2	22:BA:1249:U:H2'	2.18	0.43
22:BA:1563:U:O2'	22:BA:1564:C:H5'	2.18	0.43
22:BA:1624:U:C2	22:BA:1625:C:H5	2.35	0.43
22:BA:1662:U:O2'	22:BA:2687:U:H5"	2.19	0.43
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.54	0.43
22:BA:1733:G:C2	22:BA:1734:G:C5	3.06	0.43
22:BA:1820:U:C2	24:BC:201:MET:HG2	2.53	0.43
22:BA:1964:G:C2	22:BA:1967:C:C5	3.06	0.43
22:BA:2694:G:H2'	22:BA:2695:U:H6	1.83	0.43
24:BC:43:ARG:HG2	24:BC:49:ILE:HA	2.00	0.43
26:BE:149:ILE:HD12	26:BE:150:THR:O	2.19	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
30:BI:123:GLU:O	30:BI:126:THR:HB	2.17	0.43
31:BJ:114:LEU:HG	31:BJ:118:MET:CE	2.45	0.43
45:BX:78:TYR:CG	45:BX:78:TYR:OXT	2.71	0.43
1:CA:198:G:O2'	1:CA:199:A:H5'	2.18	0.43
1:CA:445:G:N1	1:CA:446:G:C5	2.87	0.43
1:CA:455:G:C6	1:CA:456:A:C6	3.06	0.43
1:CA:532:A:N6	3:CC:192:THR:OG1	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:642:A:C5	8:CH:107:SER:HA	2.53	0.43
1:CA:841:C:H3'	1:CA:843:U:H5"	2.00	0.43
1:CA:867:G:C5	1:CA:868:C:C5	3.06	0.43
1:CA:961:U:N3	1:CA:983:A:C6	2.86	0.43
1:CA:1239:A:N7	1:CA:1298:U:H5	2.16	0.43
1:CA:1317:C:N4	14:CN:53:ARG:NH1	2.66	0.43
1:CA:1492:A:H3'	1:CA:1493:A:C8	2.53	0.43
3:CC:67:THR:HG23	3:CC:102:ASN:HB2	2.00	0.43
4:CD:33:LYS:O	4:CD:33:LYS:HG3	2.19	0.43
5:CE:107:ALA:HA	5:CE:125:ALA:HB3	2.01	0.43
5:CE:144:LEU:O	5:CE:147:MET:HB3	2.18	0.43
6:CF:23:GLU:HA	6:CF:26:THR:OG1	2.18	0.43
8:CH:86:TYR:C	8:CH:87:LYS:HD2	2.39	0.43
9:CI:91:ASP:OD2	9:CI:91:ASP:C	2.55	0.43
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	2.01	0.43
12:CL:77:HIS:O	12:CL:78:SER:O	2.37	0.43
22:DA:77:G:N1	22:DA:78:U:C2	2.86	0.43
22:DA:480:A:H5"	42:DU:44:LYS:HD2	2.00	0.43
22:DA:546:U:O2	22:DA:546:U:H3'	2.18	0.43
22:DA:581:C:OP1	38:DQ:33:ARG:HB2	2.17	0.43
22:DA:586:A:N1	22:DA:809:G:O2'	2.33	0.43
22:DA:673:C:H4'	26:DE:75:SER:OG	2.18	0.43
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.19	0.43
22:DA:971:G:C2	22:DA:972:A:H1'	2.53	0.43
22:DA:1096:A:H2'	22:DA:1097:U:C4'	2.47	0.43
22:DA:1754:A:N1	22:DA:2716:C:O2'	2.50	0.43
22:DA:2111:U:C4	22:DA:2147:A:H2	2.36	0.43
22:DA:2635:A:C2	22:DA:2636:C:H1'	2.54	0.43
23:DB:43:C:H1'	27:DF:90:THR:HB	1.99	0.43
23:DB:53:A:H2'	23:DB:54:G:O4'	2.18	0.43
26:DE:5:LEU:O	26:DE:6:LYS:C	2.56	0.43
32:DK:103:VAL:O	32:DK:122:VAL:HB	2.19	0.43
37:DP:4:ILE:O	37:DP:8:LEU:HB2	2.19	0.43
43:DV:48:MET:O	43:DV:51:GLN:NE2	2.51	0.43
1:AA:65:A:C5	1:AA:381:C:C4	3.07	0.43
1:AA:119:A:C4	1:AA:240:G:N7	2.86	0.43
1:AA:567:G:C4	1:AA:568:G:C8	3.06	0.43
1:AA:682:G:H2'	1:AA:683:G:H8	1.84	0.43
1:AA:731:G:O2'	1:AA:732:C:H5'	2.19	0.43
1:AA:868:C:H2'	1:AA:869:G:O4'	2.16	0.43
1:AA:946:A:H2'	1:AA:947:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:957:U:H1'	1:AA:960:U:N3	2.34	0.43
1:AA:1425:U:O2	1:AA:1476:A:C2	2.72	0.43
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.33	0.43
10:AJ:13:PHE:CE2	10:AJ:69:THR:HG23	2.53	0.43
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.49	0.43
13:AM:3:ARG:HB2	13:AM:9:ILE:HG12	1.99	0.43
13:AM:66:GLU:O	13:AM:67:GLY:C	2.57	0.43
16:AP:48:GLU:HG3	16:AP:49:GLY:N	2.33	0.43
22:BA:5:A:H2'	22:BA:6:A:C8	2.54	0.43
22:BA:39:G:C4	22:BA:40:U:C5	3.07	0.43
22:BA:237:C:N3	22:BA:261:G:C2	2.87	0.43
22:BA:973:A:C4'	22:BA:1188:U:O4'	2.67	0.43
22:BA:1489:C:C2	22:BA:1501:G:N2	2.86	0.43
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.18	0.43
22:BA:1754:A:C8	37:BP:94:LYS:CE	3.02	0.43
22:BA:1875:G:O2'	22:BA:1876:A:O5'	2.32	0.43
22:BA:1879:C:C4	22:BA:1880:U:C4	3.06	0.43
22:BA:2310:C:C2	27:BF:77:PHE:CE1	3.06	0.43
22:BA:2356:U:O3'	44:BW:20:ARG:HD3	2.18	0.43
22:BA:2457:U:C5	22:BA:2458:G:C5	3.07	0.43
22:BA:2887:A:C5'	22:BA:2888:C:OP2	2.66	0.43
24:BC:40:SER:C	24:BC:42:GLY:N	2.71	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
33:BL:96:LYS:HE2	33:BL:103:ILE:O	2.18	0.43
39:BR:68:ARG:HG2	39:BR:92:TRP:CE3	2.54	0.43
53:B5:43:GLU:HA	53:B5:178:LYS:HA	2.00	0.43
1:CA:32:A:C3'	1:CA:33:A:H8	2.31	0.43
1:CA:130:A:OP1	17:CQ:65:ARG:HD2	2.19	0.43
1:CA:135:C:C2	16:CP:1:MET:HB2	2.52	0.43
1:CA:235:C:H2'	1:CA:236:A:C8	2.54	0.43
1:CA:304:U:H2'	1:CA:305:G:C8	2.53	0.43
1:CA:484:G:C4'	1:CA:485:U:O5'	2.59	0.43
1:CA:546:A:OP2	4:CD:69:GLU:HB2	2.18	0.43
1:CA:1210:C:O4'	1:CA:1214:C:C4	2.72	0.43
1:CA:1422:G:O2'	32:DK:49:ARG:NH2	2.52	0.43
4:CD:69:GLU:O	4:CD:72:PHE:N	2.52	0.43
5:CE:77:ASN:O	5:CE:80:THR:HG22	2.19	0.43
5:CE:110:ALA:O	5:CE:111:MET:HB2	2.17	0.43
8:CH:64:LYS:HB3	8:CH:71:VAL:HG21	2.00	0.43
9:CI:12:ARG:HD2	9:CI:107:ASP:CB	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:60:LYS:HB3	9:CI:61:LEU:HD23	1.99	0.43
9:CI:95:ARG:HA	9:CI:98:LEU:HB3	2.00	0.43
11:CK:45:ALA:CB	11:CK:70:CYS:HB2	2.48	0.43
17:CQ:28:PHE:CE2	17:CQ:39:LYS:HG3	2.53	0.43
19:CS:34:TRP:HA	19:CS:52:HIS:CB	2.49	0.43
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.18	0.43
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.87	0.43
22:DA:26:G:C2	22:DA:27:G:N2	2.86	0.43
22:DA:60:G:C5	22:DA:74:A:N1	2.86	0.43
22:DA:204:A:N7	22:DA:206:U:N3	2.66	0.43
22:DA:216:A:C8	22:DA:432:A:C6	3.07	0.43
22:DA:282:A:C6	22:DA:359:G:N1	2.87	0.43
22:DA:302:C:C2	22:DA:303:G:C8	3.07	0.43
22:DA:320:A:OP2	26:DE:132:LYS:HD2	2.18	0.43
22:DA:633:A:C5	22:DA:634:C:H1'	2.53	0.43
22:DA:1047:G:N2	22:DA:1110:G:O2'	2.51	0.43
22:DA:1184:U:OP1	47:DZ:30:ARG:NH2	2.51	0.43
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.54	0.43
22:DA:1314:C:O2	22:DA:1314:C:H2'	2.18	0.43
22:DA:1603:A:P	22:DA:1604:C:OP2	2.77	0.43
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.51	0.43
22:DA:2345:G:C8	22:DA:2381:A:C2	3.07	0.43
22:DA:2392:A:C2	33:DL:55:MET:HE3	2.54	0.43
22:DA:2760:C:O2'	22:DA:2761:A:H5'	2.19	0.43
24:DC:68:LYS:HD3	24:DC:149:GLY:O	2.19	0.43
25:DD:16:THR:CG2	25:DD:22:ILE:HD11	2.48	0.43
25:DD:97:SER:C	25:DD:99:GLU:H	2.22	0.43
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.18	0.43
30:DI:38:PHE:C	30:DI:42:PHE:HB2	2.39	0.43
30:DI:123:GLU:HG3	30:DI:123:GLU:O	2.19	0.43
41:DT:47:VAL:O	41:DT:47:VAL:HG12	2.17	0.43
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.38	0.43
45:DX:30:LEU:HD22	45:DX:31:PRO:HD3	1.99	0.43
45:DX:33:LEU:O	45:DX:34:HIS:CG	2.71	0.43
48:D0:12:LYS:HA	48:D0:15:MET:HB2	2.01	0.43
1:AA:491:G:C5	1:AA:492:C:C5	3.06	0.43
1:AA:692:U:O4	11:AK:54:GLY:HA2	2.18	0.43
1:AA:827:U:N3	1:AA:870:U:C5	2.87	0.43
1:AA:990:C:N3	1:AA:991:U:C4	2.87	0.43
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.81	0.43
1:AA:1515:G:H2'	1:AA:1516:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:47:VAL:HB	2:AB:48:PRO:HD3	2.00	0.43
4:AD:191:LEU:HD12	4:AD:191:LEU:C	2.37	0.43
6:AF:29:ILE:HG23	6:AF:66:ALA:HB2	2.00	0.43
7:AG:108:ALA:HB2	7:AG:123:GLU:HG3	1.99	0.43
9:AI:91:ASP:OD2	9:AI:93:SER:N	2.49	0.43
11:AK:76:GLU:O	11:AK:77:TYR:HD1	2.01	0.43
12:AL:107:VAL:CG2	12:AL:117:TYR:HB3	2.48	0.43
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.19	0.43
22:BA:694:U:C2	22:BA:695:G:C8	3.07	0.43
22:BA:912:C:N4	22:BA:913:U:O4	2.52	0.43
22:BA:1043:C:C4	22:BA:1044:C:C4	3.07	0.43
22:BA:1064:C:N4	22:BA:1070:A:OP2	2.52	0.43
22:BA:1067:A:N3	22:BA:1067:A:H2'	2.32	0.43
22:BA:1262:A:OP2	40:BS:99:ARG:NH2	2.51	0.43
22:BA:1554:U:H3'	22:BA:1555:G:C8	2.54	0.43
22:BA:1651:G:C6	22:BA:1652:A:C5	3.06	0.43
22:BA:1735:A:H2'	22:BA:1736:U:O5'	2.19	0.43
22:BA:1826:G:C5	22:BA:1827:U:C5	3.07	0.43
22:BA:2335:A:C8	22:BA:2337:G:C5	3.06	0.43
22:BA:2460:U:H2'	22:BA:2461:A:C8	2.53	0.43
22:BA:2555:U:C6	22:BA:2556:C:C6	3.06	0.43
22:BA:2671:G:C6	22:BA:2672:U:C4	3.06	0.43
22:BA:2821:A:OP2	25:BD:115:GLY:N	2.48	0.43
24:BC:60:GLN:HG2	24:BC:85:PRO:HB2	1.99	0.43
24:BC:118:SER:HA	24:BC:129:THR:O	2.17	0.43
25:BD:104:VAL:CG2	25:BD:105:LYS:N	2.82	0.43
26:BE:103:GLY:O	26:BE:107:SER:HB2	2.19	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
31:BJ:41:LYS:O	31:BJ:43:GLU:N	2.52	0.43
32:BK:35:VAL:HG13	32:BK:69:VAL:HG12	2.01	0.43
34:BM:114:ARG:HG2	34:BM:130:PHE:CE1	2.53	0.43
46:BY:31:GLN:HG2	46:BY:37:LEU:HB2	2.01	0.43
1:CA:464:U:N3	1:CA:467:U:OP2	2.48	0.43
1:CA:570:G:C6	1:CA:571:U:O4	2.71	0.43
1:CA:718:A:C8	1:CA:719:C:H5	2.36	0.43
1:CA:1022:A:C6	1:CA:1023:U:N3	2.87	0.43
1:CA:1309:G:C6	1:CA:1329:A:C2	3.06	0.43
4:CD:42:GLY:C	4:CD:44:ARG:H	2.21	0.43
5:CE:18:VAL:HG23	5:CE:56:VAL:HG13	2.00	0.43
5:CE:150:PRO:C	5:CE:152:MET:N	2.71	0.43
7:CG:116:MET:O	7:CG:120:LEU:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:83:LEU:HD13	8:CH:83:LEU:C	2.39	0.43
8:CH:104:VAL:HG23	8:CH:124:GLU:O	2.18	0.43
9:CI:25:ASN:ND2	9:CI:59:GLU:OE1	2.51	0.43
9:CI:99:ARG:NH1	9:CI:104:VAL:HG23	2.33	0.43
10:CJ:26:VAL:CG1	10:CJ:27:GLU:N	2.81	0.43
12:CL:82:ILE:HG12	12:CL:95:TYR:HB3	1.99	0.43
20:CT:83:ILE:O	20:CT:87:ALA:HB3	2.19	0.43
22:DA:84:A:C2	22:DA:98:G:N3	2.86	0.43
22:DA:186:G:O2'	22:DA:187:G:H5'	2.19	0.43
22:DA:195:A:C6	22:DA:198:C:C5	3.06	0.43
22:DA:537:G:N1	22:DA:555:G:N3	2.67	0.43
22:DA:785:G:H4'	22:DA:1779:U:H4'	2.00	0.43
22:DA:1663:G:C6	22:DA:1992:G:N7	2.86	0.43
22:DA:1713:A:C6	22:DA:1716:U:H1'	2.53	0.43
22:DA:1798:U:C4	22:DA:1819:A:C2	3.07	0.43
22:DA:2051:A:C2	22:DA:2052:A:N6	2.86	0.43
22:DA:2067:G:C6	22:DA:2444:G:C2	3.06	0.43
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.54	0.43
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.53	0.43
22:DA:2311:A:C2	27:DF:79:ILE:HG21	2.53	0.43
22:DA:2371:G:C5	22:DA:2372:U:C5	3.07	0.43
22:DA:2839:G:N2	22:DA:2880:C:C2	2.87	0.43
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.54	0.43
23:DB:14:U:H3'	23:DB:15:A:C5'	2.49	0.43
30:DI:101:ILE:O	30:DI:102:SER:CB	2.66	0.43
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.18	0.43
36:DO:40:ILE:HG22	36:DO:41:ALA:N	2.33	0.43
39:DR:63:VAL:HG11	39:DR:66:HIS:NE2	2.34	0.43
45:DX:54:LYS:HA	45:DX:57:ARG:HB2	1.99	0.43
1:AA:100:G:C5	1:AA:101:A:C5	3.07	0.43
1:AA:448:A:C8	1:AA:487:A:C6	3.07	0.43
1:AA:451:A:OP2	16:AP:70:ARG:NH2	2.50	0.43
1:AA:577:G:O4'	1:AA:816:A:H2'	2.19	0.43
1:AA:974:A:OP1	14:AN:71:HIS:HB3	2.18	0.43
1:AA:1346:A:C5	7:AG:10:ARG:CZ	3.01	0.43
1:AA:1358:U:C5	1:AA:1359:C:C4	3.07	0.43
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.84	0.43
1:AA:1429:A:N3	1:AA:1430:A:C8	2.87	0.43
1:AA:1454:G:C4	1:AA:1455:G:C8	3.06	0.43
2:AB:135:LEU:HA	2:AB:138:THR:HG23	2.01	0.43
4:AD:78:GLU:O	4:AD:79:ALA:C	2.55	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:202:GLU:OE1	5:AE:112:ARG:NH1	2.52	0.43
6:AF:41:ASP:HA	6:AF:60:VAL:HG22	2.01	0.43
8:AH:36:ILE:HG12	8:AH:103:VAL:HG11	1.99	0.43
14:AN:61:ARG:O	14:AN:62:ASN:HB2	2.18	0.43
15:AO:43:PHE:CE1	15:AO:56:LEU:HD22	2.53	0.43
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.49	0.43
21:AU:10:GLU:CD	21:AU:11:PRO:HD3	2.39	0.43
22:BA:31:C:O3'	22:BA:1238:G:H5"	2.18	0.43
22:BA:271:G:C4	22:BA:367:G:N2	2.87	0.43
22:BA:960:A:C8	22:BA:962:G:C8	3.07	0.43
22:BA:979:A:H2'	22:BA:982:C:H42	1.84	0.43
22:BA:1204:A:O4'	22:BA:1206:G:C8	2.71	0.43
22:BA:1350:C:N3	22:BA:1382:G:C2	2.86	0.43
22:BA:1400:U:O2'	22:BA:1401:G:H5'	2.18	0.43
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.19	0.43
22:BA:1526:C:O2'	22:BA:1527:G:H5'	2.19	0.43
22:BA:1868:C:H2'	22:BA:1869:G:O4'	2.19	0.43
22:BA:1916:A:O5'	22:BA:1917:U:OP2	2.37	0.43
22:BA:2205:A:C6	22:BA:2206:C:C4	3.07	0.43
22:BA:2615:U:H2'	22:BA:2616:C:O5'	2.18	0.43
22:BA:2811:G:H2'	22:BA:2812:G:O4'	2.18	0.43
27:BF:4:LEU:HD22	27:BF:173:PHE:CD2	2.54	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
35:BN:14:SER:HA	35:BN:17:ARG:NH1	2.34	0.43
36:BO:17:LYS:O	36:BO:17:LYS:HD3	2.19	0.43
47:BZ:48:ILE:O	47:BZ:49:ASN:C	2.55	0.43
53:B5:50:ILE:CG2	53:B5:51:ASP:H	2.31	0.43
53:B5:66:PRO:CG	53:B5:194:ILE:CB	2.95	0.43
1:CA:109:A:N1	1:CA:327:A:C6	2.86	0.43
1:CA:271:C:H2'	1:CA:272:C:C6	2.54	0.43
1:CA:327:A:N1	1:CA:329:A:C2	2.87	0.43
1:CA:538:G:H2'	1:CA:539:A:O4'	2.19	0.43
1:CA:598:U:H4'	8:CH:86:TYR:CD1	2.54	0.43
1:CA:938:A:C2	1:CA:1345:U:O4	2.72	0.43
1:CA:1053:G:H4'	1:CA:1054:C:H5'	2.01	0.43
1:CA:1190:G:C5'	3:CC:176:HIS:CE1	3.01	0.43
1:CA:1279:G:O2'	1:CA:1281:C:OP2	2.27	0.43
2:CB:165:ASP:OD2	2:CB:168:HIS:HB2	2.19	0.43
3:CC:79:LYS:O	3:CC:81:GLY:N	2.52	0.43
7:CG:22:LEU:HA	7:CG:25:LYS:NZ	2.33	0.43
7:CG:70:ARG:HG3	7:CG:96:ARG:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:97:ILE:HD13	11:CK:110:ILE:HD11	2.00	0.43
11:CK:111:THR:HG22	21:CU:5:LYS:HB2	2.00	0.43
17:CQ:45:HIS:ND1	17:CQ:70:THR:HG21	2.34	0.43
19:CS:11:ILE:CG1	19:CS:12:ASP:N	2.79	0.43
21:CU:53:VAL:HG22	21:CU:54:LYS:H	1.83	0.43
22:DA:40:U:H2'	22:DA:41:C:C6	2.54	0.43
22:DA:238:C:H2'	22:DA:239:C:O4'	2.18	0.43
22:DA:425:G:C6	22:DA:426:C:N4	2.86	0.43
22:DA:1045:C:O2	22:DA:1047:G:N1	2.52	0.43
22:DA:1352:U:C5	22:DA:1377:G:O6	2.71	0.43
22:DA:1476:U:C5	22:DA:1514:G:N2	2.87	0.43
22:DA:1803:A:N1	22:DA:1822:C:O2'	2.44	0.43
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.53	0.43
22:DA:2114:A:C4	22:DA:2167:U:H4'	2.53	0.43
22:DA:2558:C:H2'	22:DA:2559:C:O4'	2.18	0.43
22:DA:2838:G:O6	22:DA:2839:G:C6	2.72	0.43
24:DC:45:ASN:C	24:DC:47:GLY:H	2.22	0.43
26:DE:84:THR:O	26:DE:85:PHE:CG	2.72	0.43
26:DE:177:PRO:O	26:DE:181:ILE:HG13	2.19	0.43
30:DI:57:VAL:CG1	30:DI:69:PHE:HB2	2.48	0.43
31:DJ:42:ALA:C	31:DJ:44:TYR:H	2.22	0.43
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.56	0.43
37:DP:31:TRP:C	37:DP:32:VAL:HG12	2.39	0.43
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	2.01	0.43
38:DQ:47:TYR:CD2	38:DQ:47:TYR:C	2.91	0.43
45:DX:64:ILE:O	45:DX:64:ILE:HD12	2.18	0.43
48:D0:55:ILE:O	48:D0:56:ALA:CB	2.66	0.43
1:AA:15:G:C5	1:AA:16:A:N7	2.87	0.43
1:AA:65:A:C5	1:AA:381:C:C5	3.07	0.43
1:AA:108:G:C5'	1:AA:108:G:N3	2.81	0.43
1:AA:146:G:C2	1:AA:147:G:C4	3.06	0.43
1:AA:463:U:H3'	1:AA:464:U:C6	2.54	0.43
1:AA:549:C:C2	1:AA:550:G:C8	3.07	0.43
1:AA:568:G:H2'	1:AA:569:C:H6	1.84	0.43
1:AA:670:G:N2	1:AA:671:G:N3	2.67	0.43
1:AA:683:G:C6	1:AA:708:C:N3	2.86	0.43
1:AA:786:G:C2	1:AA:797:C:C2	3.07	0.43
1:AA:1042:A:H2'	1:AA:1043:G:C1'	2.48	0.43
1:AA:1270:G:C2	1:AA:1271:A:C4	3.07	0.43
1:AA:1295:U:O4	1:AA:1296:C:N4	2.52	0.43
1:AA:1408:A:H2'	1:AA:1409:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.82	0.43
3:AC:7:PRO:HD2	3:AC:184:TYR:CD2	2.53	0.43
5:AE:18:VAL:HG22	5:AE:19:ASN:N	2.34	0.43
6:AF:6:ILE:HD11	6:AF:71:ILE:CD1	2.48	0.43
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.33	0.43
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.34	0.43
11:AK:23:ILE:HG22	11:AK:32:VAL:HG22	2.00	0.43
13:AM:3:ARG:HA	13:AM:9:ILE:HA	1.99	0.43
13:AM:15:ALA:O	13:AM:19:LEU:HD23	2.18	0.43
14:AN:43:ASN:C	14:AN:45:VAL:N	2.72	0.43
16:AP:52:LEU:O	16:AP:53:ASP:C	2.56	0.43
17:AQ:66:PRO:C	17:AQ:67:LEU:HD12	2.38	0.43
19:AS:11:ILE:HG13	19:AS:38:SER:HB3	2.01	0.43
20:AT:70:ASN:OD1	20:AT:70:ASN:N	2.50	0.43
22:BA:309:A:C5	22:BA:330:A:N1	2.86	0.43
22:BA:500:G:C2	22:BA:502:A:H3'	2.53	0.43
22:BA:546:U:O2'	22:BA:547:A:H4'	2.19	0.43
22:BA:963:U:H2'	22:BA:964:C:H6	1.84	0.43
22:BA:969:G:C6	22:BA:970:U:C4	3.07	0.43
22:BA:1061:U:C2'	22:BA:1062:G:C5'	2.96	0.43
22:BA:1115:G:N3	22:BA:1116:G:C8	2.87	0.43
22:BA:1257:C:C4'	26:BE:78:TRP:CD1	3.02	0.43
22:BA:1635:A:N3	22:BA:1635:A:H2'	2.32	0.43
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.61	0.43
22:BA:1866:A:N7	22:BA:1867:G:C8	2.86	0.43
22:BA:1921:G:C2	22:BA:1922:G:C8	3.07	0.43
22:BA:2074:U:H4'	22:BA:2598:A:O4'	2.19	0.43
22:BA:2146:C:H5"	22:BA:2147:A:OP1	2.18	0.43
22:BA:2478:A:C8	22:BA:2479:U:C5	3.07	0.43
22:BA:2545:G:H2'	22:BA:2546:U:C5'	2.49	0.43
22:BA:2694:G:C5	22:BA:2695:U:C4	3.06	0.43
22:BA:2820:A:C8	22:BA:2820:A:C3'	3.02	0.43
22:BA:2841:C:H2'	22:BA:2842:G:C8	2.54	0.43
22:BA:2887:A:C4	22:BA:2888:C:C5	3.07	0.43
23:BB:55:U:O2'	27:BF:24:SER:OG	2.31	0.43
24:BC:31:ALA:N	24:BC:32:PRO:CD	2.81	0.43
25:BD:32:ASN:HD22	25:BD:32:ASN:N	2.16	0.43
27:BF:17:MET:HE2	27:BF:17:MET:HB3	1.83	0.43
30:BI:21:SER:HA	30:BI:25:GLY:HA2	2.00	0.43
32:BK:76:VAL:HB	37:BP:73:VAL:HG13	2.00	0.43
38:BQ:21:ALA:HA	38:BQ:24:TYR:CE1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:82:GLY:HA2	38:BQ:117:LEU:HD13	2.00	0.43
50:B2:16:HIS:HB3	50:B2:21:ARG:NH1	2.34	0.43
1:CA:223:A:H2'	1:CA:224:U:C6	2.54	0.43
1:CA:296:U:C2	1:CA:297:G:C8	3.06	0.43
1:CA:334:C:N4	1:CA:335:C:N4	2.67	0.43
1:CA:453:G:H2'	1:CA:454:G:O4'	2.18	0.43
1:CA:629:A:H2'	1:CA:630:A:O4'	2.18	0.43
1:CA:1118:U:H1'	1:CA:1179:A:C4	2.52	0.43
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.19	0.43
4:CD:174:ASP:OD1	4:CD:176:GLY:N	2.51	0.43
8:CH:31:LYS:HA	8:CH:31:LYS:CE	2.48	0.43
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.85	0.43
15:CO:3:LEU:HD12	15:CO:3:LEU:HA	1.86	0.43
15:CO:46:HIS:C	15:CO:48:LYS:H	2.21	0.43
22:DA:176:A:N7	22:DA:177:G:N1	2.66	0.43
22:DA:487:C:H1'	40:DS:53:SER:HG	1.84	0.43
22:DA:861:A:N3	23:DB:79:G:O2'	2.48	0.43
22:DA:1096:A:H2'	22:DA:1097:U:H5"	2.01	0.43
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.19	0.43
22:DA:2037:A:C6	22:DA:2038:G:C6	3.06	0.43
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.54	0.43
22:DA:2296:U:H4'	22:DA:2297:A:OP1	2.17	0.43
22:DA:2552:U:N3	22:DA:2554:U:H5'	2.33	0.43
23:DB:11:C:C5	23:DB:12:C:C5	3.07	0.43
25:DD:4:LEU:HG	25:DD:32:ASN:OD1	2.19	0.43
30:DI:80:LEU:HD11	30:DI:133:ALA:HA	1.99	0.43
30:DI:105:GLN:O	30:DI:106:LEU:CG	2.67	0.43
31:DJ:39:LYS:NZ	31:DJ:44:TYR:CZ	2.85	0.43
32:DK:76:VAL:HG22	32:DK:77:ILE:N	2.34	0.43
43:DV:14:LYS:HG3	43:DV:15:GLY:N	2.34	0.43
45:DX:66:THR:O	45:DX:69:ALA:HB3	2.19	0.43
49:D1:13:SER:HA	49:D1:49:TYR:CD1	2.53	0.43
1:AA:21:G:C2	1:AA:22:G:C6	3.06	0.43
1:AA:161:A:C2'	1:AA:162:A:O5'	2.66	0.43
1:AA:377:G:C2	1:AA:378:G:C5	3.07	0.43
1:AA:545:C:O2	1:AA:545:C:H2'	2.18	0.43
1:AA:581:G:OP1	15:AO:65:LYS:NZ	2.47	0.43
1:AA:614:C:H2'	1:AA:615:G:O4'	2.19	0.43
1:AA:619:U:H3	4:AD:132:ILE:HG23	1.84	0.43
1:AA:697:U:C5	1:AA:698:G:C8	3.07	0.43
1:AA:1213:A:N1	1:AA:1215:G:H1'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1306:A:C2	1:AA:1307:U:C1'	3.02	0.43
1:AA:1446:A:N6	1:AA:1447:A:H62	2.16	0.43
1:AA:1528:U:O3'	1:AA:1529:G:H3'	2.19	0.43
2:AB:133:GLU:O	2:AB:137:ARG:N	2.52	0.43
6:AF:46:GLN:HA	6:AF:56:LYS:HA	2.01	0.43
11:AK:20:VAL:O	11:AK:34:ILE:HA	2.19	0.43
12:AL:21:VAL:O	12:AL:21:VAL:CG2	2.67	0.43
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	2.01	0.43
22:BA:321:U:H4'	22:BA:322:A:OP2	2.19	0.43
22:BA:589:U:H2'	22:BA:590:A:C8	2.53	0.43
22:BA:665:U:H2'	22:BA:666:A:C8	2.54	0.43
22:BA:1056:G:C2	22:BA:1102:C:C4	3.07	0.43
22:BA:1489:C:C2	22:BA:1501:G:C2	3.07	0.43
22:BA:1825:U:H2'	22:BA:1826:G:H8	1.78	0.43
22:BA:1903:G:O2'	22:BA:1904:G:H5'	2.18	0.43
22:BA:2199:A:H1'	29:BH:28:ASN:ND2	2.34	0.43
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.53	0.43
22:BA:2655:G:O2'	22:BA:2664:G:O6	2.29	0.43
22:BA:2671:G:C5	22:BA:2672:U:C5	3.07	0.43
23:BB:57:A:C5	27:BF:26:MET:HG3	2.54	0.43
23:BB:63:C:C2	23:BB:64:G:C8	3.06	0.43
24:BC:123:ALA:O	24:BC:128:ASN:ND2	2.52	0.43
24:BC:162:VAL:CG1	24:BC:174:LEU:HB3	2.49	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
35:BN:1:MET:O	35:BN:2:ARG:HB3	2.18	0.43
38:BQ:74:ILE:O	38:BQ:74:ILE:CG2	2.65	0.43
39:BR:68:ARG:CZ	39:BR:90:ARG:HD3	2.49	0.43
39:BR:68:ARG:NH1	39:BR:90:ARG:HD3	2.34	0.43
42:BU:44:LYS:O	42:BU:59:VAL:N	2.48	0.43
49:B1:9:ILE:O	49:B1:9:ILE:HG12	2.16	0.43
1:CA:18:C:C2	1:CA:19:A:C8	3.07	0.43
1:CA:22:G:O2'	1:CA:913:A:N1	2.44	0.43
1:CA:50:A:H1'	1:CA:52:C:O4'	2.19	0.43
1:CA:456:A:C6	1:CA:457:G:C5	3.06	0.43
1:CA:618:C:H5"	1:CA:619:U:H5"	1.99	0.43
1:CA:676:A:C2	1:CA:677:U:C5	3.07	0.43
1:CA:749:A:O2'	1:CA:750:C:H5'	2.18	0.43
1:CA:784:A:H2'	1:CA:785:G:C8	2.54	0.43
1:CA:1265:C:N3	1:CA:1266:G:N7	2.67	0.43
1:CA:1503:A:H5'	1:CA:1531:A:H1'	2.00	0.43
2:CB:33:GLY:HA2	2:CB:40:ILE:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:112:ASP:O	3:CC:116:VAL:HG23	2.19	0.43
11:CK:21:ALA:HB3	11:CK:84:VAL:HG22	2.00	0.43
11:CK:36:ASP:OD2	11:CK:38:GLN:HB2	2.18	0.43
15:CO:67:LEU:O	15:CO:68:ASP:C	2.56	0.43
22:DA:142:A:C5	22:DA:143:C:C4	3.07	0.43
22:DA:321:U:N1	26:DE:159:LEU:HD23	2.34	0.43
22:DA:492:A:H2'	22:DA:493:G:O4'	2.19	0.43
22:DA:565:C:H2'	22:DA:566:U:O4'	2.19	0.43
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.45	0.43
22:DA:788:A:OP1	22:DA:791:C:N4	2.51	0.43
22:DA:1308:A:N7	22:DA:1309:G:C5	2.87	0.43
22:DA:1408:G:N2	22:DA:1595:C:H1'	2.33	0.43
22:DA:1588:G:H2'	22:DA:1589:U:C6	2.54	0.43
22:DA:2428:G:H5"	22:DA:2429:G:OP1	2.18	0.43
22:DA:2637:U:H2'	22:DA:2638:G:H5'	2.01	0.43
23:DB:42:C:C4	23:DB:43:C:C4	3.07	0.43
23:DB:48:U:H2'	23:DB:49:C:C6	2.53	0.43
23:DB:78:A:H61	23:DB:98:G:C2'	2.32	0.43
23:DB:96:G:O2'	23:DB:97:C:H5'	2.18	0.43
23:DB:115:A:H2'	23:DB:116:G:C8	2.54	0.43
26:DE:109:LEU:O	26:DE:112:LEU:HB2	2.19	0.43
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.43
30:DI:8:TYR:HA	30:DI:59:ILE:HB	2.01	0.43
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.99	0.43
33:DL:86:GLU:O	33:DL:86:GLU:HG2	2.18	0.43
33:DL:121:THR:HA	33:DL:141:LYS:HB3	2.00	0.43
35:DN:22:ARG:HG3	35:DN:70:THR:HA	2.01	0.43
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.72	0.43
37:DP:53:ARG:HB2	37:DP:56:HIS:HB2	2.01	0.43
45:DX:17:ASN:HB3	45:DX:25:THR:HB	1.99	0.43
50:D2:17:GLY:O	50:D2:20:ALA:HB3	2.18	0.43
1:AA:39:G:H2'	1:AA:40:C:H6	1.82	0.43
1:AA:204:G:C2	1:AA:465:A:C5	3.07	0.43
1:AA:282:A:C6	1:AA:283:U:C2	3.07	0.43
1:AA:462:G:N2	1:AA:471:U:C2	2.86	0.43
1:AA:491:G:C6	1:AA:492:C:C5	3.06	0.43
1:AA:771:G:H2'	1:AA:772:U:H6	1.82	0.43
1:AA:1141:C:HO2'	1:AA:1142:G:P	2.42	0.43
1:AA:1256:A:N6	1:AA:1277:C:N3	2.67	0.43
1:AA:1359:C:H4'	1:AA:1362:A:N6	2.33	0.43
1:AA:1493:A:C8	1:AA:1493:A:OP2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:42:TYR:CE2	3:AC:46:GLU:CG	3.01	0.43
4:AD:93:LEU:HD13	4:AD:136:GLN:NE2	2.34	0.43
8:AH:34:VAL:HG12	8:AH:35:ALA:N	2.34	0.43
9:AI:63:LEU:N	9:AI:63:LEU:HD22	2.34	0.43
10:AJ:80:THR:O	10:AJ:84:VAL:N	2.46	0.43
11:AK:125:LYS:CG	11:AK:126:LYS:N	2.79	0.43
12:AL:59:ASN:OD1	12:AL:59:ASN:C	2.57	0.43
22:BA:467:G:H2'	22:BA:468:G:O4'	2.19	0.43
22:BA:1697:G:H3'	22:BA:1698:A:H2'	2.01	0.43
22:BA:1717:A:C2	22:BA:1718:G:H1'	2.54	0.43
22:BA:2337:G:C6	22:BA:2338:C:C4	3.07	0.43
22:BA:2545:G:H2'	22:BA:2546:U:O5'	2.19	0.43
22:BA:2597:G:O2'	22:BA:2598:A:H5'	2.19	0.43
22:BA:2643:G:H2'	22:BA:2644:G:O4'	2.19	0.43
22:BA:2836:U:C2	22:BA:2883:A:C2	3.07	0.43
23:BB:104:A:H2'	23:BB:105:G:O4'	2.19	0.43
25:BD:89:GLU:O	25:BD:90:PHE:CD1	2.72	0.43
25:BD:108:ASP:OD1	25:BD:207:VAL:HG12	2.19	0.43
31:BJ:35:ARG:HG2	31:BJ:40:HIS:CD2	2.53	0.43
34:BM:30:SER:HB2	34:BM:31:PHE:CE1	2.54	0.43
39:BR:10:LYS:NZ	39:BR:23:GLU:HG3	2.34	0.43
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	3.02	0.43
42:BU:98:SER:OG	42:BU:98:SER:O	2.37	0.43
48:B0:10:ARG:O	48:B0:13:ARG:HB3	2.18	0.43
53:B5:125:GLY:O	53:B5:126:SER:CB	2.66	0.43
1:CA:55:A:N6	1:CA:56:U:O2	2.51	0.43
1:CA:96:U:O2'	1:CA:97:G:O5'	2.37	0.43
1:CA:389:A:H2'	1:CA:389:A:N3	2.34	0.43
1:CA:428:G:H4'	1:CA:429:U:OP1	2.19	0.43
1:CA:772:U:O2'	1:CA:773:G:H5'	2.19	0.43
1:CA:1103:C:N3	1:CA:1104:G:C8	2.86	0.43
1:CA:1314:C:OP2	19:CS:6:LYS:HG2	2.19	0.43
3:CC:77:ILE:HA	3:CC:84:VAL:CG2	2.49	0.43
4:CD:37:ALA:C	4:CD:39:GLY:H	2.22	0.43
5:CE:66:LYS:O	5:CE:69:ARG:O	2.37	0.43
7:CG:78:ARG:CB	7:CG:85:TYR:HB2	2.49	0.43
7:CG:101:MET:HA	7:CG:104:ILE:HD12	2.01	0.43
9:CI:57:MET:HA	9:CI:60:LYS:CB	2.49	0.43
10:CJ:27:GLU:O	10:CJ:27:GLU:HG2	2.18	0.43
14:CN:47:LYS:HE3	19:CS:16:LEU:CD2	2.48	0.43
17:CQ:8:LEU:N	17:CQ:8:LEU:HD12	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:479:A:H1'	22:DA:481:G:H5'	2.01	0.43
22:DA:487:C:H1'	40:DS:53:SER:OG	2.19	0.43
22:DA:858:G:N2	22:DA:919:U:O4	2.48	0.43
22:DA:1301:A:H2'	22:DA:1301:A:N3	2.34	0.43
22:DA:1565:C:N4	22:DA:1567:G:C2	2.86	0.43
22:DA:1666:G:O2'	22:DA:1667:G:H5'	2.19	0.43
22:DA:1688:U:C4	22:DA:1698:A:C2	3.07	0.43
22:DA:1794:A:C2	22:DA:1795:C:C2	3.07	0.43
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.18	0.43
22:DA:1973:G:C5	22:DA:1974:C:C5	3.07	0.43
22:DA:2393:U:H2'	22:DA:2394:C:O4'	2.19	0.43
22:DA:2403:C:C2	22:DA:2404:U:C6	3.06	0.43
22:DA:2507:C:C4	22:DA:2508:G:C5	3.07	0.43
22:DA:2574:G:O2'	25:DD:148:GLN:HB3	2.18	0.43
25:DD:112:THR:O	25:DD:112:THR:HG22	2.19	0.43
27:DF:40:VAL:HG13	27:DF:41:GLY:N	2.33	0.43
37:DP:31:TRP:CE2	37:DP:40:LEU:HD12	2.53	0.43
45:DX:71:LEU:HB2	45:DX:76:GLU:HB2	2.01	0.43
1:AA:11:G:C4	1:AA:12:U:C5	3.07	0.42
1:AA:113:G:C5	1:AA:114:U:C5	3.07	0.42
1:AA:212:G:C2	1:AA:213:G:C4	3.07	0.42
1:AA:541:G:O2'	1:AA:542:G:H5'	2.19	0.42
1:AA:651:C:N4	1:AA:652:U:O4	2.52	0.42
1:AA:671:G:N2	1:AA:736:C:C2	2.86	0.42
1:AA:810:C:O2	1:AA:810:C:H2'	2.19	0.42
1:AA:956:U:C4	1:AA:957:U:C5	3.07	0.42
1:AA:1094:G:H1'	57:AA:1860:HOH:O	2.19	0.42
1:AA:1181:G:O2'	1:AA:1182:G:C8	2.72	0.42
1:AA:1413:A:H2'	1:AA:1414:U:O4'	2.19	0.42
3:AC:144:LEU:HD13	3:AC:144:LEU:N	2.34	0.42
5:AE:46:VAL:CG1	5:AE:118:ALA:HB2	2.49	0.42
14:AN:67:THR:H	14:AN:67:THR:HG1	1.59	0.42
17:AQ:12:VAL:HG11	17:AQ:55:ILE:HA	2.00	0.42
21:AU:37:PHE:HA	21:AU:40:LYS:HE2	1.99	0.42
22:BA:31:C:H2'	22:BA:32:C:O5'	2.18	0.42
22:BA:167:A:H2'	22:BA:168:G:O4'	2.19	0.42
22:BA:980:A:C6	22:BA:981:A:N1	2.87	0.42
22:BA:1064:C:H4'	30:BI:90:SER:CB	2.49	0.42
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.41	0.42
22:BA:1551:A:N6	22:BA:1552:A:C6	2.87	0.42
22:BA:1594:U:H2'	22:BA:1595:C:C6	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1821:A:H8	22:BA:1821:A:O5'	2.02	0.42
22:BA:1883:U:C4	22:BA:1884:G:C6	3.07	0.42
22:BA:2209:G:C6	22:BA:2210:U:C4	3.07	0.42
22:BA:2392:A:C8	22:BA:2429:G:C2	3.08	0.42
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.49	0.42
22:BA:2648:G:C4	22:BA:2673:G:C2	3.07	0.42
22:BA:2669:G:O2'	22:BA:2670:A:H5'	2.19	0.42
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.53	0.42
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.19	0.42
27:BF:33:LYS:HG2	27:BF:157:THR:HB	2.01	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
30:BI:140:VAL:HG22	30:BI:142:ASP:HB2	2.00	0.42
31:BJ:81:ILE:HG12	31:BJ:82:GLY:H	1.83	0.42
31:BJ:118:MET:C	31:BJ:120:ARG:H	2.22	0.42
33:BL:76:GLU:O	33:BL:77:ILE:HD13	2.19	0.42
37:BP:81:VAL:O	37:BP:81:VAL:HG12	2.19	0.42
42:BU:6:ARG:O	42:BU:7:ARG:C	2.57	0.42
42:BU:14:LEU:HD11	42:BU:71:ALA:N	2.34	0.42
44:BW:69:PHE:CE1	44:BW:80:ILE:HD11	2.54	0.42
47:BZ:51:VAL:O	47:BZ:53:PHE:N	2.51	0.42
49:B1:30:LYS:N	49:B1:31:PRO:HD3	2.33	0.42
1:CA:55:A:C6	1:CA:56:U:O2	2.71	0.42
1:CA:369:G:C6	1:CA:370:C:C5	3.07	0.42
1:CA:700:G:O4'	1:CA:704:A:H1'	2.18	0.42
1:CA:1073:U:H5'	1:CA:1074:G:OP2	2.18	0.42
1:CA:1144:G:H5"	1:CA:1145:A:OP2	2.19	0.42
1:CA:1280:A:C8	10:CJ:42:LEU:HD23	2.54	0.42
1:CA:1305:G:O2'	1:CA:1332:A:N6	2.52	0.42
2:CB:90:PHE:CD2	2:CB:150:GLY:O	2.72	0.42
2:CB:192:ASP:O	2:CB:193:PRO:O	2.37	0.42
9:CI:114:LYS:HA	9:CI:121:ALA:HB2	2.00	0.42
12:CL:14:ARG:NH1	12:CL:15:LYS:HG3	2.33	0.42
12:CL:33:VAL:O	12:CL:34:CYS:O	2.37	0.42
19:CS:12:ASP:O	19:CS:16:LEU:HB2	2.19	0.42
21:CU:5:LYS:HD2	21:CU:5:LYS:C	2.40	0.42
22:DA:45:G:N2	22:DA:434:U:C2	2.87	0.42
22:DA:185:G:C6	22:DA:212:G:N1	2.87	0.42
22:DA:217:A:H2'	22:DA:218:A:O4'	2.19	0.42
22:DA:310:A:C6	22:DA:330:A:C5	3.07	0.42
22:DA:396:G:O3'	45:DX:30:LEU:O	2.38	0.42
22:DA:983:A:OP1	57:DA:3565:HOH:O	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1230:A:C2	22:DA:1231:U:C2	3.07	0.42
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.49	0.42
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.33	0.42
22:DA:1357:C:N4	22:DA:1358:G:N1	2.67	0.42
22:DA:1401:G:C5	22:DA:1402:U:C4	3.07	0.42
22:DA:1686:C:C2	22:DA:1703:G:C2	3.07	0.42
22:DA:1721:G:H2'	22:DA:1738:G:H22	1.84	0.42
22:DA:1728:C:H6	22:DA:1728:C:O5'	2.02	0.42
22:DA:1805:A:N3	22:DA:1813:G:N2	2.67	0.42
22:DA:2114:A:H2'	22:DA:2114:A:N3	2.34	0.42
22:DA:2264:C:C2	22:DA:2277:G:N2	2.86	0.42
22:DA:2341:G:C2	22:DA:2342:C:C2	3.07	0.42
22:DA:2577:A:H5"	22:DA:2578:G:H5'	2.00	0.42
25:DD:42:ASN:CG	25:DD:42:ASN:O	2.58	0.42
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.49	0.42
27:DF:17:MET:O	27:DF:21:ASN:HA	2.19	0.42
28:DG:77:ILE:HG23	28:DG:81:GLU:OE1	2.19	0.42
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.42
36:DO:97:PHE:CB	36:DO:103:VAL:HG11	2.49	0.42
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	2.01	0.42
44:DW:23:VAL:HA	44:DW:38:VAL:HG13	2.01	0.42
1:AA:29:U:C2'	1:AA:30:U:H5'	2.50	0.42
1:AA:184:G:C6	1:AA:185:U:O4	2.73	0.42
1:AA:201:G:H2'	1:AA:202:G:C8	2.54	0.42
1:AA:554:A:C5'	12:AL:26:ALA:HB1	2.49	0.42
1:AA:601:G:H2'	1:AA:602:A:O4'	2.19	0.42
1:AA:1048:G:H5"	14:AN:3:LYS:HG3	2.00	0.42
1:AA:1303:C:H2'	1:AA:1304:G:O5'	2.19	0.42
1:AA:1322:C:P	19:AS:78:ARG:HH22	2.42	0.42
1:AA:1505:G:H5'	1:AA:1506:U:O5'	2.18	0.42
2:AB:19:GLN:HB3	2:AB:189:THR:OG1	2.19	0.42
2:AB:45:LYS:HG3	2:AB:45:LYS:O	2.19	0.42
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	2.01	0.42
3:AC:165:THR:O	3:AC:166:GLU:CB	2.67	0.42
4:AD:17:THR:CG2	4:AD:18:ASP:H	2.32	0.42
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.83	0.42
10:AJ:53:ILE:HG22	10:AJ:54:SER:N	2.33	0.42
12:AL:114:ARG:NH2	12:AL:121:ARG:HA	2.34	0.42
17:AQ:4:LYS:N	17:AQ:4:LYS:CE	2.82	0.42
20:AT:44:LYS:CG	20:AT:87:ALA:HA	2.49	0.42
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:78:ASN:ND2	57:AT:101:HOH:O	2.48	0.42
22:BA:28:A:H2'	22:BA:29:U:H5'	2.00	0.42
22:BA:262:A:H2'	22:BA:263:G:O4'	2.19	0.42
22:BA:375:G:H2'	22:BA:376:G:O4'	2.19	0.42
22:BA:987:C:N4	22:BA:988:A:C5	2.87	0.42
22:BA:1054:A:C6	22:BA:1055:G:C5	3.08	0.42
22:BA:1132:U:H3'	22:BA:1133:A:H5"	2.00	0.42
22:BA:1168:G:C2	22:BA:1182:G:C4	3.07	0.42
22:BA:1353:A:C8	22:BA:1378:A:N6	2.87	0.42
22:BA:1848:A:H2'	22:BA:1849:G:O4'	2.19	0.42
22:BA:1866:A:C2	22:BA:1876:A:C5	3.07	0.42
22:BA:1959:G:H2'	22:BA:1960:A:O4'	2.18	0.42
22:BA:2056:G:H2'	22:BA:2056:G:N3	2.34	0.42
22:BA:2372:U:O2	22:BA:2372:U:H2'	2.18	0.42
22:BA:2464:G:C2	22:BA:2465:C:C2	3.07	0.42
22:BA:2478:A:H5'	52:B4:32:LYS:CD	2.50	0.42
26:BE:153:LEU:HG	26:BE:154:ASP:N	2.33	0.42
28:BG:38:ASN:O	28:BG:39:ASP:CB	2.67	0.42
28:BG:153:ARG:O	28:BG:154:PRO:C	2.56	0.42
30:BI:10:LYS:HB3	30:BI:56:PRO:HB2	2.01	0.42
32:BK:12:ASP:HB3	32:BK:99:ILE:HD13	2.00	0.42
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.39	0.42
42:BU:13:VAL:HG12	42:BU:19:LYS:HA	2.01	0.42
42:BU:87:PHE:CE1	42:BU:92:LYS:HB2	2.54	0.42
44:BW:70:GLU:HB3	44:BW:72:LYS:HE2	2.01	0.42
46:BY:53:VAL:O	46:BY:56:LEU:O	2.38	0.42
53:B5:191:ARG:O	53:B5:195:ARG:CB	2.67	0.42
1:CA:254:G:O2'	17:CQ:18:GLU:O	2.35	0.42
1:CA:317:U:C4	1:CA:337:G:N1	2.87	0.42
1:CA:376:G:C2	1:CA:389:A:C2	3.07	0.42
1:CA:437:U:C4	1:CA:438:U:C5	3.07	0.42
1:CA:468:A:N3	1:CA:468:A:O4'	2.52	0.42
1:CA:518:C:H2'	1:CA:530:G:H8	1.85	0.42
1:CA:1092:A:N6	1:CA:1093:A:C6	2.87	0.42
1:CA:1123:U:O3'	10:CJ:38:GLY:HA3	2.19	0.42
1:CA:1286:U:C5'	1:CA:1287:A:OP2	2.66	0.42
1:CA:1304:G:H2'	1:CA:1305:G:H1'	2.00	0.42
2:CB:50:PHE:HD1	2:CB:54:LEU:HD23	1.84	0.42
3:CC:173:VAL:O	3:CC:175:LEU:N	2.49	0.42
5:CE:16:ILE:HG23	5:CE:110:ALA:HB2	1.99	0.42
6:CF:86:ARG:CG	6:CF:86:ARG:NH1	2.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:33:ASP:O	7:CG:35:LYS:HG3	2.18	0.42
7:CG:78:ARG:O	7:CG:79:ARG:C	2.58	0.42
7:CG:137:LYS:O	7:CG:141:VAL:HG23	2.19	0.42
14:CN:3:LYS:HB3	14:CN:6:MET:CG	2.49	0.42
17:CQ:62:ARG:C	17:CQ:73:TRP:CE3	2.93	0.42
19:CS:74:PHE:C	19:CS:76:PRO:HD3	2.39	0.42
21:CU:20:LYS:C	21:CU:22:SER:H	2.22	0.42
22:DA:45:G:H5"	22:DA:46:G:H4'	2.01	0.42
22:DA:464:U:H2'	22:DA:465:G:O4'	2.19	0.42
22:DA:728:G:N2	22:DA:730:A:C4	2.87	0.42
22:DA:1035:U:H2'	22:DA:1036:G:C8	2.53	0.42
22:DA:1444:G:C2	22:DA:1548:A:C2	3.07	0.42
22:DA:1846:G:H5"	22:DA:1847:A:OP2	2.19	0.42
22:DA:2199:A:C6	22:DA:2200:C:N3	2.87	0.42
22:DA:2457:U:C4	22:DA:2458:G:C6	3.07	0.42
22:DA:2845:U:H5"	37:DP:52:ASN:O	2.18	0.42
23:DB:15:A:H1'	23:DB:109:A:C8	2.55	0.42
24:DC:80:ARG:CZ	24:DC:82:GLU:OE2	2.68	0.42
24:DC:82:GLU:OE1	24:DC:103:TYR:OH	2.21	0.42
25:DD:186:LEU:HD21	37:DP:4:ILE:HG21	2.00	0.42
27:DF:28:VAL:HG22	27:DF:29:PRO:HD2	2.00	0.42
27:DF:106:ILE:C	27:DF:109:PRO:HD2	2.39	0.42
30:DI:50:GLU:OE2	30:DI:53:LEU:HD13	2.19	0.42
33:DL:141:LYS:HG3	33:DL:143:GLU:OE1	2.19	0.42
34:DM:124:LEU:N	34:DM:124:LEU:CD2	2.83	0.42
40:DS:47:VAL:O	40:DS:47:VAL:HG22	2.18	0.42
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.19	0.42
1:AA:266:G:H4'	1:AA:267:C:OP1	2.19	0.42
1:AA:529:G:H4'	1:AA:533:A:C2	2.54	0.42
1:AA:567:G:H2'	1:AA:568:G:O5'	2.19	0.42
1:AA:584:G:O6	1:AA:758:C:O2	2.37	0.42
1:AA:588:G:C6	1:AA:589:U:C4	3.07	0.42
1:AA:829:G:N3	1:AA:830:G:C8	2.88	0.42
1:AA:901:A:C5	1:AA:902:G:H1'	2.54	0.42
1:AA:1106:G:C6	1:AA:1107:C:C4	3.07	0.42
1:AA:1159:U:O2	1:AA:1182:G:N1	2.52	0.42
1:AA:1373:G:C5'	7:AG:36:LYS:HB2	2.49	0.42
1:AA:1374:A:N3	1:AA:1375:A:C8	2.87	0.42
1:AA:1442:G:N1	1:AA:1443:C:C2	2.87	0.42
2:AB:149:GLY:O	2:AB:152:LYS:HG2	2.19	0.42
4:AD:57:GLU:O	4:AD:60:LYS:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:9:MET:HE1	18:AR:65:LEU:HB3	2.00	0.42
6:AF:46:GLN:NE2	6:AF:56:LYS:HE3	2.35	0.42
6:AF:67:PRO:O	6:AF:69:GLU:N	2.52	0.42
8:AH:75:ILE:O	8:AH:75:ILE:HG23	2.18	0.42
9:AI:51:PRO:HB3	9:AI:84:THR:CG2	2.49	0.42
13:AM:99:GLY:O	13:AM:100:GLN:O	2.37	0.42
21:AU:28:VAL:HG12	21:AU:31:GLU:OE1	2.19	0.42
22:BA:49:A:C8	22:BA:51:G:C2	3.07	0.42
22:BA:65:U:N3	22:BA:66:C:C5	2.88	0.42
22:BA:66:C:H2'	22:BA:67:U:C6	2.53	0.42
22:BA:825:A:H2'	22:BA:826:U:O4'	2.20	0.42
22:BA:864:G:C6	22:BA:865:C:N4	2.87	0.42
22:BA:999:U:C5	22:BA:1154:G:C6	3.07	0.42
22:BA:1060:U:H4'	22:BA:1061:U:H3'	2.00	0.42
22:BA:1195:G:O2'	22:BA:1196:C:H5'	2.19	0.42
22:BA:1525:A:C5	22:BA:1526:C:C5	3.07	0.42
22:BA:1734:G:N3	22:BA:1735:A:C8	2.88	0.42
22:BA:1801:A:N7	24:BC:262:ARG:NH2	2.67	0.42
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.49	0.42
22:BA:1927:A:C6	22:BA:1928:A:C6	3.08	0.42
22:BA:2078:C:H2'	22:BA:2079:U:C6	2.54	0.42
22:BA:2548:U:C5	22:BA:2549:G:N7	2.87	0.42
22:BA:2552:U:O2	22:BA:2554:U:H5'	2.19	0.42
31:BJ:64:VAL:HG22	31:BJ:68:LYS:HD2	2.00	0.42
34:BM:32:GLY:CA	34:BM:131:VAL:HG23	2.49	0.42
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.35	0.42
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.34	0.42
37:BP:16:ASP:O	37:BP:18:PRO:N	2.53	0.42
37:BP:31:TRP:CE3	37:BP:40:LEU:HD12	2.54	0.42
53:B5:65:LEU:HD11	53:B5:191:ARG:CB	2.49	0.42
53:B5:75:VAL:HA	53:B5:120:VAL:O	2.19	0.42
1:CA:78:A:C6	1:CA:79:G:C5	3.07	0.42
1:CA:674:G:OP1	6:CF:86:ARG:NH2	2.42	0.42
1:CA:1105:A:N1	1:CA:1106:G:C5	2.87	0.42
1:CA:1178:G:N2	1:CA:1181:G:OP2	2.51	0.42
1:CA:1317:C:OP1	14:CN:57:PRO:HD2	2.19	0.42
1:CA:1323:G:H1'	1:CA:1362:A:C2	2.54	0.42
1:CA:1371:G:O3'	9:CI:71:GLY:HA3	2.19	0.42
1:CA:1426:G:C4	1:CA:1475:G:N2	2.87	0.42
2:CB:66:LYS:HB2	2:CB:158:PRO:HA	2.01	0.42
6:CF:62:MET:HG3	6:CF:64:VAL:HG23	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:45:ARG:HG3	9:CI:46:MET:SD	2.59	0.42
13:CM:27:LYS:O	13:CM:27:LYS:CD	2.67	0.42
14:CN:36:ALA:HB2	14:CN:42:TRP:CH2	2.54	0.42
15:CO:33:THR:HA	15:CO:63:ARG:NH1	2.34	0.42
21:CU:40:LYS:H	21:CU:41:PRO:CD	2.32	0.42
22:DA:13:A:C2	22:DA:525:U:C2	3.07	0.42
22:DA:77:G:H2'	22:DA:78:U:O4'	2.18	0.42
22:DA:182:A:H2'	22:DA:183:C:C6	2.54	0.42
22:DA:373:U:C2	22:DA:374:A:C8	3.07	0.42
22:DA:481:G:C5	22:DA:507:A:C2	3.08	0.42
22:DA:664:G:H4'	22:DA:941:A:OP1	2.19	0.42
22:DA:1046:A:O2'	22:DA:1047:G:OP1	2.26	0.42
22:DA:1205:A:H5"	22:DA:1206:G:N7	2.35	0.42
22:DA:1211:C:H3'	22:DA:1212:G:H5'	2.02	0.42
22:DA:1343:G:C6	22:DA:1344:U:C4	3.07	0.42
22:DA:1352:U:C5	57:DA:3392:HOH:O	2.57	0.42
22:DA:1444:G:C4	22:DA:1445:G:C8	3.07	0.42
22:DA:2027:G:C6	57:DA:3475:HOH:O	2.57	0.42
22:DA:2142:A:C2	22:DA:2150:C:C2	3.07	0.42
22:DA:2355:G:C6	22:DA:2356:U:N3	2.88	0.42
22:DA:2571:U:H2'	22:DA:2572:A:OP1	2.19	0.42
22:DA:2630:G:O4'	22:DA:2894:G:H1'	2.20	0.42
31:DJ:98:GLU:O	31:DJ:102:GLU:HG3	2.20	0.42
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	2.00	0.42
33:DL:62:PRO:HD2	51:D3:25:LYS:O	2.19	0.42
33:DL:136:GLU:HA	33:DL:140:GLY:HA3	2.01	0.42
34:DM:57:VAL:HG23	34:DM:58:LYS:O	2.19	0.42
40:DS:42:LYS:O	40:DS:43:ALA:C	2.57	0.42
44:DW:57:HIS:CD2	44:DW:57:HIS:N	2.87	0.42
1:AA:154:U:C2	1:AA:168:G:C2	3.07	0.42
1:AA:252:U:O4	1:AA:253:A:N6	2.53	0.42
1:AA:542:G:N3	1:AA:543:U:C6	2.87	0.42
1:AA:714:G:H21	1:AA:777:A:H1'	1.84	0.42
1:AA:858:G:C6	1:AA:869:G:N7	2.87	0.42
1:AA:939:G:C6	1:AA:940:C:N4	2.88	0.42
1:AA:1088:G:C5	1:AA:1089:G:N7	2.87	0.42
1:AA:1112:C:O2	3:AC:179:ARG:HG3	2.20	0.42
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.18	0.42
1:AA:1343:G:O3'	9:AI:124:ARG:HB3	2.19	0.42
4:AD:145:ILE:HG22	4:AD:146:ARG:O	2.19	0.42
4:AD:197:GLU:N	4:AD:197:GLU:CD	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:100:SER:O	5:AE:101:GLU:C	2.57	0.42
10:AJ:74:VAL:O	10:AJ:75:ASP:HB2	2.19	0.42
13:AM:14:HIS:HB2	13:AM:17:ILE:CD1	2.49	0.42
13:AM:44:LYS:HE2	13:AM:44:LYS:HB3	1.90	0.42
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	2.02	0.42
22:BA:30:G:O2'	22:BA:31:C:H5'	2.19	0.42
22:BA:475:C:O5'	22:BA:475:C:H6	2.03	0.42
22:BA:547:A:H8	22:BA:548:G:N3	2.17	0.42
22:BA:627:A:OP1	33:BL:78:ARG:NH1	2.40	0.42
22:BA:811:U:C4	22:BA:1251:C:N4	2.87	0.42
22:BA:864:G:O2'	22:BA:865:C:H5'	2.19	0.42
22:BA:905:A:N6	22:BA:906:U:C4	2.88	0.42
22:BA:976:G:C2	22:BA:977:G:C5	3.07	0.42
22:BA:1142:A:C4	22:BA:1144:A:C8	3.08	0.42
22:BA:1624:U:N3	22:BA:1625:C:H5	2.15	0.42
22:BA:1808:A:H4'	22:BA:1808:A:OP2	2.20	0.42
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.53	0.42
22:BA:1846:G:C2	22:BA:1895:C:C2	3.07	0.42
22:BA:2186:G:H2'	22:BA:2187:U:C6	2.53	0.42
22:BA:2371:G:C6	22:BA:2372:U:C5	3.08	0.42
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.54	0.42
22:BA:2741:A:C8	22:BA:2742:G:C8	3.07	0.42
22:BA:2886:A:H3'	22:BA:2887:A:H8	1.83	0.42
24:BC:15:HIS:O	24:BC:204:VAL:CG2	2.65	0.42
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	2.00	0.42
24:BC:17:VAL:HB	24:BC:204:VAL:HG22	2.01	0.42
25:BD:82:PHE:N	25:BD:82:PHE:CD2	2.86	0.42
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.42
30:BI:9:VAL:HG23	30:BI:59:ILE:HG13	2.00	0.42
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.82	0.42
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.20	0.42
38:BQ:14:HIS:CD2	38:BQ:32:TYR:CE1	3.07	0.42
46:BY:13:GLU:C	46:BY:15:ASN:H	2.23	0.42
1:CA:29:U:H4'	1:CA:295:C:O3'	2.18	0.42
1:CA:84:U:O2'	1:CA:85:U:H5'	2.19	0.42
1:CA:632:U:H3'	1:CA:633:G:H5'	2.02	0.42
1:CA:688:G:C8	1:CA:700:G:N2	2.87	0.42
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.54	0.42
1:CA:1534:A:H4'	1:CA:1535:C:H2'	2.01	0.42
3:CC:117:ALA:HB2	3:CC:200:VAL:CG1	2.49	0.42
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:34:ILE:O	4:CD:34:ILE:HG23	2.19	0.42
12:CL:42:PRO:HD3	12:CL:48:ALA:O	2.20	0.42
13:CM:85:CYS:O	13:CM:89:LEU:HG	2.19	0.42
13:CM:114:LYS:CB	13:CM:115:PRO:HD3	2.46	0.42
17:CQ:75:LEU:HD12	17:CQ:75:LEU:O	2.19	0.42
18:CR:46:GLY:O	18:CR:47:THR:O	2.36	0.42
22:DA:170:U:N3	22:DA:171:U:C5	2.87	0.42
22:DA:825:A:H4'	22:DA:2428:G:C5	2.54	0.42
22:DA:972:A:C6	22:DA:973:A:C6	3.07	0.42
22:DA:975:A:C2	22:DA:1156:A:N3	2.88	0.42
22:DA:1372:U:O4'	22:DA:2214:C:H1'	2.19	0.42
22:DA:1588:G:H3'	22:DA:1589:U:C6	2.55	0.42
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.19	0.42
22:DA:1914:C:O2	22:DA:1914:C:O4'	2.35	0.42
22:DA:2018:G:H2'	22:DA:2019:A:C8	2.53	0.42
22:DA:2208:C:O2	22:DA:2217:G:C2	2.71	0.42
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.19	0.42
23:DB:96:G:C6	23:DB:97:C:C4	3.07	0.42
28:DG:46:ALA:O	28:DG:47:ASP:HB2	2.19	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
35:DN:69:ARG:O	35:DN:71:ARG:N	2.40	0.42
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	3.03	0.42
41:DT:51:PHE:O	41:DT:53:VAL:HG22	2.20	0.42
44:DW:37:ILE:HG22	44:DW:38:VAL:HG22	2.01	0.42
46:DY:9:LYS:CA	46:DY:12:GLU:HG3	2.50	0.42
47:DZ:51:VAL:HG23	47:DZ:55:VAL:HG11	2.02	0.42
50:D2:10:LEU:HD11	50:D2:14:ARG:NH1	2.35	0.42
1:AA:108:G:C6	20:AT:10:ARG:HG2	2.54	0.42
1:AA:381:C:C4	1:AA:382:A:C5	3.07	0.42
1:AA:543:U:H2'	1:AA:544:G:C5'	2.50	0.42
1:AA:633:G:H2'	1:AA:634:C:H6	1.84	0.42
1:AA:680:C:N3	1:AA:711:G:C2	2.87	0.42
1:AA:1053:G:H4'	1:AA:1054:C:H5'	2.00	0.42
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.42
1:AA:1210:C:O2'	1:AA:1211:U:H5'	2.19	0.42
1:AA:1303:C:C2'	1:AA:1304:G:O5'	2.67	0.42
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.55	0.42
1:AA:1470:U:H2'	1:AA:1471:U:H6	1.83	0.42
2:AB:58:ASN:HB2	2:AB:220:THR:OG1	2.20	0.42
5:AE:46:VAL:HG11	5:AE:118:ALA:HB2	2.01	0.42
8:AH:26:THR:HG22	8:AH:60:GLU:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:71:ARG:HA	27:BF:143:TYR:CE2	2.55	0.42
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.99	0.42
22:BA:55:G:C2	22:BA:56:A:C5	3.08	0.42
22:BA:735:A:H3'	22:BA:736:C:H6	1.83	0.42
22:BA:846:U:O2'	22:BA:847:U:P	2.77	0.42
22:BA:847:U:O2	22:BA:847:U:H2'	2.19	0.42
22:BA:1232:G:C4	22:BA:1233:C:C5	3.07	0.42
22:BA:1688:U:H2'	22:BA:1698:A:N6	2.34	0.42
22:BA:1760:C:H3'	22:BA:1761:C:H6	1.83	0.42
22:BA:1768:C:C2	22:BA:1769:U:C6	3.08	0.42
22:BA:1910:G:H2'	22:BA:1911:U:C6	2.55	0.42
22:BA:1930:G:N2	22:BA:1968:G:H2'	2.34	0.42
22:BA:1951:U:H2'	22:BA:1953:A:OP2	2.20	0.42
22:BA:2065:C:H2'	22:BA:2066:C:H6	1.83	0.42
22:BA:2124:G:O2'	53:B5:41:THR:HA	2.19	0.42
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.81	0.42
22:BA:2412:A:H5"	22:BA:2413:G:OP2	2.18	0.42
22:BA:2544:G:H2'	22:BA:2545:G:H5'	2.02	0.42
22:BA:2637:U:H2'	22:BA:2638:G:H5'	2.01	0.42
22:BA:2729:G:H5'	25:BD:190:LYS:HE2	2.01	0.42
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.37	0.42
27:BF:28:VAL:O	27:BF:28:VAL:CG1	2.67	0.42
27:BF:49:LEU:HD12	27:BF:49:LEU:HA	1.94	0.42
30:BI:33:VAL:HG21	30:BI:59:ILE:HG23	2.01	0.42
30:BI:33:VAL:HG22	30:BI:67:PHE:CG	2.54	0.42
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.67	0.42
33:BL:110:VAL:O	33:BL:128:THR:HG23	2.20	0.42
35:BN:1:MET:SD	35:BN:1:MET:N	2.90	0.42
35:BN:77:ALA:O	35:BN:81:ASN:HB2	2.19	0.42
39:BR:10:LYS:NZ	39:BR:23:GLU:CG	2.82	0.42
39:BR:33:VAL:HG13	39:BR:63:VAL:HG23	2.01	0.42
40:BS:69:LEU:HD12	40:BS:69:LEU:HA	1.85	0.42
40:BS:74:ILE:O	40:BS:74:ILE:HG23	2.18	0.42
41:BT:34:VAL:O	41:BT:35:ALA:C	2.56	0.42
47:BZ:2:ALA:O	47:BZ:3:LYS:C	2.58	0.42
53:B5:24:ASP:HB2	53:B5:185:LYS:O	2.19	0.42
1:CA:15:G:C4	1:CA:16:A:C8	3.08	0.42
1:CA:22:G:H2'	1:CA:23:C:C6	2.55	0.42
1:CA:76:G:N2	1:CA:95:C:C2	2.88	0.42
1:CA:96:U:H2'	1:CA:97:G:O5'	2.19	0.42
1:CA:369:G:C5	1:CA:370:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:580:C:H2'	1:CA:581:G:O4'	2.20	0.42
1:CA:828:U:O2	2:CB:25:PRO:HG2	2.20	0.42
1:CA:867:G:H2'	1:CA:868:C:H6	1.84	0.42
1:CA:1068:G:N2	1:CA:1191:A:N3	2.56	0.42
1:CA:1195:C:N3	1:CA:1197:A:C8	2.87	0.42
1:CA:1250:A:C2	1:CA:1251:A:N3	2.87	0.42
1:CA:1363:A:O2'	1:CA:1365:G:N7	2.44	0.42
1:CA:1492:A:H8	1:CA:1492:A:OP2	2.02	0.42
2:CB:27:MET:HE1	2:CB:187:VAL:HG21	2.00	0.42
3:CC:22:TRP:HZ3	3:CC:24:ALA:HB3	1.84	0.42
7:CG:69:VAL:HG21	7:CG:104:ILE:HD11	2.01	0.42
12:CL:21:VAL:O	12:CL:23:ALA:N	2.53	0.42
13:CM:83:LEU:CD2	13:CM:83:LEU:N	2.82	0.42
15:CO:78:TYR:CD2	15:CO:78:TYR:C	2.92	0.42
22:DA:655:A:H4'	22:DA:656:G:OP1	2.19	0.42
22:DA:687:C:C2	22:DA:788:A:O4'	2.72	0.42
22:DA:971:G:H2'	22:DA:972:A:O4'	2.18	0.42
22:DA:1340:U:C5	22:DA:1603:A:C8	3.07	0.42
22:DA:1490:A:O2'	24:DC:98:ASP:HB3	2.18	0.42
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.33	0.42
22:DA:1593:A:H2'	22:DA:1594:U:O4'	2.19	0.42
22:DA:1904:G:C2'	22:DA:1905:C:H5'	2.49	0.42
22:DA:2286:G:H4'	22:DA:2287:A:O5'	2.19	0.42
22:DA:2345:G:N3	22:DA:2381:A:H2'	2.33	0.42
22:DA:2658:C:OP1	28:DG:158:LYS:NZ	2.52	0.42
23:DB:7:G:C5'	36:DO:29:HIS:CE1	3.03	0.42
23:DB:58:A:H2'	23:DB:59:A:C8	2.55	0.42
24:DC:147:LYS:HG3	24:DC:150:LYS:HD3	2.02	0.42
25:DD:78:GLY:C	25:DD:79:LEU:HG	2.39	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
30:DI:125:MET:HA	30:DI:128:SER:OG	2.19	0.42
31:DJ:84:ILE:HG23	31:DJ:84:ILE:O	2.19	0.42
33:DL:89:VAL:HG23	33:DL:121:THR:HG22	2.01	0.42
1:AA:337:G:O2'	1:AA:338:A:H5'	2.20	0.42
1:AA:392:C:C2	1:AA:393:A:C8	3.07	0.42
1:AA:452:A:H2'	1:AA:453:G:O5'	2.20	0.42
1:AA:575:G:O2'	1:AA:821:G:OP2	2.27	0.42
1:AA:971:G:C8	1:AA:1365:G:H4'	2.54	0.42
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.41	0.42
1:AA:1271:A:H2'	1:AA:1272:G:H8	1.85	0.42
1:AA:1308:U:P	13:AM:98:ARG:HG2	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1438:G:C2'	1:AA:1439:G:H5'	2.49	0.42
1:AA:1455:G:H2'	1:AA:1455:G:N3	2.35	0.42
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.39	0.42
3:AC:25:ASN:O	3:AC:26:THR:C	2.57	0.42
4:AD:130:VAL:CG1	4:AD:135:TYR:CD1	3.00	0.42
9:AI:22:LYS:HE3	9:AI:22:LYS:HB3	1.89	0.42
13:AM:16:VAL:HG13	13:AM:34:LEU:HD13	2.01	0.42
17:AQ:46:VAL:HG12	17:AQ:47:HIS:N	2.35	0.42
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.37	0.42
18:AR:40:VAL:HG13	18:AR:41:PRO:HD2	2.01	0.42
20:AT:35:VAL:CG1	20:AT:79:LEU:HD22	2.49	0.42
20:AT:69:LYS:HB2	20:AT:70:ASN:OD1	2.19	0.42
21:AU:6:VAL:HG21	21:AU:17:ARG:HD3	2.01	0.42
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.49	0.42
22:BA:182:A:H2'	22:BA:183:C:O4'	2.19	0.42
22:BA:190:A:C4	22:BA:207:A:C2	3.07	0.42
22:BA:264:C:O2'	22:BA:265:A:H2'	2.20	0.42
22:BA:770:G:H2'	22:BA:771:G:O5'	2.19	0.42
22:BA:1220:G:H2'	22:BA:1221:C:O4'	2.20	0.42
22:BA:1875:G:HO2'	22:BA:1876:A:P	2.41	0.42
22:BA:2472:G:C5	22:BA:2475:C:C4	3.07	0.42
22:BA:2518:A:H5'	22:BA:2518:A:N3	2.35	0.42
22:BA:2520:C:H2'	22:BA:2521:C:O5'	2.20	0.42
22:BA:2535:G:N2	22:BA:2536:G:H1'	2.35	0.42
22:BA:2615:U:C2'	22:BA:2616:C:O5'	2.67	0.42
23:BB:1:U:O2	23:BB:1:U:H2'	2.20	0.42
26:BE:48:THR:O	26:BE:51:GLU:N	2.44	0.42
26:BE:48:THR:OG1	26:BE:50:ALA:HB3	2.19	0.42
26:BE:57:LYS:HG3	26:BE:58:LYS:N	2.33	0.42
26:BE:79:ARG:O	26:BE:80:SER:HB2	2.19	0.42
27:BF:80:ARG:HG2	27:BF:81:GLN:N	2.35	0.42
28:BG:127:THR:HG22	28:BG:128:GLN:H	1.83	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
37:BP:104:THR:O	37:BP:105:GLY:C	2.58	0.42
42:BU:39:ILE:O	42:BU:40:ASN:C	2.58	0.42
43:BV:35:GLU:HB2	43:BV:93:ARG:NH2	2.35	0.42
1:CA:258:G:H2'	1:CA:259:G:O4'	2.20	0.42
1:CA:373:A:C8	1:CA:482:A:C8	3.08	0.42
1:CA:577:G:N2	1:CA:578:C:C2	2.88	0.42
1:CA:667:G:C6	1:CA:740:U:O2	2.73	0.42
1:CA:851:G:N1	1:CA:852:G:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.55	0.42
1:CA:1452:C:H4'	1:CA:1453:G:C5'	2.50	0.42
10:CJ:26:VAL:CG2	10:CJ:36:VAL:HG11	2.49	0.42
12:CL:25:GLU:O	12:CL:26:ALA:HB3	2.19	0.42
18:CR:61:ARG:O	18:CR:64:TYR:HB3	2.19	0.42
22:DA:60:G:OP1	22:DA:60:G:H3'	2.19	0.42
22:DA:140:C:O2	22:DA:140:C:O4'	2.37	0.42
22:DA:155:A:C2	22:DA:172:A:C2	3.07	0.42
22:DA:184:C:H2'	22:DA:185:G:C8	2.55	0.42
22:DA:295:G:C2	22:DA:296:U:C5	3.08	0.42
22:DA:417:C:H2'	22:DA:418:C:C6	2.54	0.42
22:DA:500:G:C2	22:DA:502:A:C8	3.07	0.42
22:DA:589:U:N3	22:DA:590:A:N7	2.68	0.42
22:DA:681:G:N3	22:DA:682:G:C8	2.88	0.42
22:DA:727:A:C6	22:DA:728:G:C6	3.07	0.42
22:DA:1078:U:H5"	22:DA:1079:C:OP1	2.19	0.42
22:DA:1102:C:H2'	22:DA:1103:A:C8	2.55	0.42
22:DA:1255:U:C2'	22:DA:1256:G:OP1	2.67	0.42
22:DA:1304:A:N6	22:DA:1305:C:N4	2.68	0.42
22:DA:1332:G:H2'	22:DA:1332:G:N3	2.35	0.42
22:DA:1399:C:H2'	22:DA:1400:U:C6	2.55	0.42
22:DA:1588:G:C6	22:DA:1589:U:C4	3.08	0.42
22:DA:1654:A:P	35:DN:1:MET:HA	2.60	0.42
22:DA:1805:A:C2	22:DA:1813:G:C6	3.07	0.42
22:DA:1824:G:OP1	24:DC:53:HIS:CE1	2.72	0.42
22:DA:1842:G:O4'	24:DC:243:HIS:CE1	2.73	0.42
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.55	0.42
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.20	0.42
22:DA:2528:U:O2'	22:DA:2529:G:H3'	2.19	0.42
22:DA:2802:G:N2	22:DA:2803:G:N3	2.68	0.42
22:DA:2819:G:N2	22:DA:2828:G:C4	2.88	0.42
26:DE:75:SER:C	26:DE:77:ILE:H	2.23	0.42
26:DE:137:LYS:O	26:DE:137:LYS:HG2	2.20	0.42
27:DF:64:LYS:H	27:DF:64:LYS:HE2	1.83	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
32:DK:61:VAL:O	32:DK:61:VAL:HG13	2.20	0.42
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	2.02	0.42
37:DP:113:ARG:O	37:DP:114:LEU:C	2.58	0.42
39:DR:78:ARG:CB	39:DR:83:TYR:HD1	2.33	0.42
42:DU:4:LYS:HG2	42:DU:85:PHE:CZ	2.55	0.42
45:DX:40:VAL:O	45:DX:44:LYS:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:250:A:H4'	1:AA:251:G:O5'	2.19	0.42
1:AA:339:C:OP2	32:BK:98:ARG:NH1	2.53	0.42
1:AA:342:C:C2	1:AA:348:G:C2	3.08	0.42
1:AA:408:A:C6	1:AA:435:A:C6	3.08	0.42
1:AA:482:A:C2	1:AA:483:C:H1'	2.55	0.42
1:AA:698:G:C2	1:AA:699:C:C2	3.08	0.42
1:AA:747:A:C6	1:AA:748:G:C6	3.08	0.42
1:AA:862:C:C4	1:AA:863:U:C5	3.08	0.42
1:AA:926:G:H5'	1:AA:927:G:O5'	2.19	0.42
1:AA:1149:C:H2'	1:AA:1150:A:O4'	2.20	0.42
1:AA:1154:G:H2'	1:AA:1155:A:C8	2.55	0.42
1:AA:1289:A:O3'	7:AG:35:LYS:NZ	2.52	0.42
1:AA:1444:U:H2'	1:AA:1445:U:H6	1.84	0.42
2:AB:20:THR:OG1	2:AB:21:ARG:N	2.52	0.42
2:AB:50:PHE:HA	2:AB:53:ALA:HB3	2.00	0.42
3:AC:22:TRP:CD1	3:AC:59:ARG:CG	3.03	0.42
3:AC:68:ILE:O	3:AC:68:ILE:HG22	2.19	0.42
3:AC:73:PRO:HG3	3:AC:105:GLU:HG3	2.00	0.42
3:AC:142:MET:HE1	3:AC:148:GLY:HA2	2.00	0.42
4:AD:26:ARG:HD3	4:AD:31:LYS:HE3	2.00	0.42
9:AI:25:ASN:CB	9:AI:27:LYS:HE3	2.50	0.42
10:AJ:56:HIS:C	10:AJ:57:VAL:HG12	2.40	0.42
14:AN:43:ASN:ND2	14:AN:43:ASN:O	2.53	0.42
17:AQ:12:VAL:O	17:AQ:22:VAL:O	2.37	0.42
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.58	0.42
22:BA:77:G:H2'	22:BA:78:U:O4'	2.20	0.42
22:BA:103:A:H2'	22:BA:104:A:O4'	2.20	0.42
22:BA:210:C:H2'	22:BA:211:C:H6	1.85	0.42
22:BA:210:C:H2'	22:BA:211:C:C6	2.55	0.42
22:BA:659:G:C4	22:BA:660:C:C5	3.08	0.42
22:BA:827:U:O4	22:BA:2430:A:C2	2.72	0.42
22:BA:845:A:C6	22:BA:847:U:C6	3.08	0.42
22:BA:1178:C:O3'	22:BA:1179:G:C8	2.73	0.42
22:BA:1460:U:H3'	22:BA:1461:C:C5'	2.48	0.42
22:BA:1719:G:H2'	22:BA:1720:U:O4'	2.19	0.42
22:BA:1791:A:O3'	24:BC:204:VAL:O	2.36	0.42
22:BA:1961:C:H2'	22:BA:1962:C:H5'	2.02	0.42
22:BA:2007:U:H2'	22:BA:2008:C:H6	1.84	0.42
22:BA:2077:A:C5	22:BA:2435:A:C5	3.07	0.42
22:BA:2113:U:N3	22:BA:2114:A:N7	2.68	0.42
22:BA:2293:G:OP1	36:BO:94:ARG:NH1	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2364:C:C2'	22:BA:2365:G:H5'	2.50	0.42
22:BA:2585:U:O2'	22:BA:2586:U:H5'	2.18	0.42
22:BA:2774:C:H2'	22:BA:2775:G:O4'	2.20	0.42
25:BD:101:PHE:C	25:BD:103:ASP:N	2.73	0.42
25:BD:140:HIS:CD2	25:BD:140:HIS:N	2.88	0.42
27:BF:33:LYS:HD3	27:BF:92:ARG:NH1	2.35	0.42
27:BF:52:ASN:C	27:BF:54:ALA:N	2.73	0.42
31:BJ:112:GLY:O	31:BJ:116:ARG:HB2	2.20	0.42
32:BK:58:LEU:H	32:BK:58:LEU:HD22	1.84	0.42
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	2.01	0.42
44:BW:31:VAL:HG21	44:BW:82:ILE:HD11	2.02	0.42
46:BY:5:GLU:C	46:BY:7:ARG:N	2.71	0.42
51:B3:49:MET:HE3	51:B3:49:MET:HA	2.02	0.42
51:B3:63:PRO:HG2	51:B3:64:TYR:CD2	2.55	0.42
1:CA:39:G:N3	1:CA:40:C:C6	2.88	0.42
1:CA:86:G:HO2'	1:CA:87:C:P	2.42	0.42
1:CA:411:A:C5	1:CA:429:U:C5	3.08	0.42
1:CA:455:G:O6	1:CA:456:A:N6	2.53	0.42
1:CA:681:A:N1	1:CA:710:G:C4	2.88	0.42
1:CA:774:G:C4	1:CA:775:G:C8	3.07	0.42
1:CA:1006:G:P	1:CA:1038:C:H5'	2.60	0.42
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.34	0.42
1:CA:1147:C:O2	9:CI:18:ARG:NH2	2.52	0.42
1:CA:1415:G:C6	1:CA:1486:G:C6	3.08	0.42
3:CC:92:ALA:O	3:CC:96:GLY:N	2.53	0.42
4:CD:107:PHE:CG	4:CD:145:ILE:HD11	2.55	0.42
5:CE:18:VAL:HG21	5:CE:56:VAL:HG13	2.02	0.42
5:CE:155:ALA:HB1	8:CH:66:PHE:CE2	2.55	0.42
7:CG:4:ARG:HG3	7:CG:5:ARG:N	2.35	0.42
10:CJ:44:THR:HG22	10:CJ:46:LYS:HG2	2.01	0.42
14:CN:64:CYS:SG	14:CN:79:LEU:CD2	3.07	0.42
15:CO:18:ASP:OD1	15:CO:18:ASP:C	2.58	0.42
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.55	0.42
22:DA:271:G:H4'	22:DA:272:A:OP1	2.20	0.42
22:DA:568:U:H2'	22:DA:570:G:OP2	2.19	0.42
22:DA:666:A:C5'	33:DL:48:ARG:HD2	2.50	0.42
22:DA:717:C:N4	22:DA:718:A:C2	2.88	0.42
22:DA:799:G:OP2	22:DA:800:A:O2'	2.33	0.42
22:DA:920:A:C5	22:DA:921:C:C5	3.07	0.42
22:DA:1045:C:C4'	22:DA:1046:A:H5'	2.50	0.42
22:DA:1223:G:N1	22:DA:1227:G:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1319:C:O2'	22:DA:1320:C:H5'	2.20	0.42
22:DA:1635:A:C8	22:DA:1636:U:C5	3.07	0.42
22:DA:1664:A:C8	22:DA:1664:A:OP2	2.73	0.42
22:DA:1880:U:H2'	22:DA:1881:C:C6	2.54	0.42
22:DA:2032:G:C2	25:DD:150:GLN:HG2	2.55	0.42
22:DA:2359:C:O2'	51:D3:54:ASP:OD2	2.27	0.42
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.19	0.42
23:DB:68:C:H2'	23:DB:69:G:O4'	2.20	0.42
24:DC:35:GLU:O	24:DC:36:LYS:C	2.58	0.42
26:DE:85:PHE:O	26:DE:86:ALA:O	2.36	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	2.01	0.42
35:DN:85:PRO:O	35:DN:88:ALA:HB2	2.20	0.42
40:DS:107:VAL:HG13	40:DS:107:VAL:O	2.20	0.42
1:AA:10:A:H2'	1:AA:11:G:H8	1.84	0.42
1:AA:19:A:C4	1:AA:917:G:C2	3.08	0.42
1:AA:77:A:N1	1:AA:91:U:O4	2.52	0.42
1:AA:648:A:C2	1:AA:649:A:C4	3.08	0.42
1:AA:785:G:N2	1:AA:798:U:C2	2.88	0.42
1:AA:1329:A:OP1	13:AM:29:ARG:HB2	2.20	0.42
1:AA:1368:A:H5"	9:AI:114:LYS:HB3	2.02	0.42
1:AA:1476:A:C6	1:AA:1477:U:C4	3.07	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.20	0.42
2:AB:15:HIS:HB2	2:AB:209:ALA:HB2	2.01	0.42
2:AB:132:LYS:O	2:AB:136:MET:HB2	2.20	0.42
2:AB:166:ALA:HB3	2:AB:191:SER:HB3	2.02	0.42
3:AC:57:ILE:HG12	3:AC:66:VAL:HG22	2.01	0.42
4:AD:9:LEU:HD21	4:AD:22:LYS:CB	2.49	0.42
4:AD:161:LEU:HD23	4:AD:161:LEU:C	2.40	0.42
9:AI:99:ARG:HA	9:AI:104:VAL:HG22	2.02	0.42
10:AJ:42:LEU:HA	10:AJ:43:PRO:HD2	1.82	0.42
11:AK:91:PRO:C	11:AK:93:ARG:N	2.71	0.42
14:AN:28:LYS:N	14:AN:31:ILE:HB	2.34	0.42
19:AS:7:LYS:HD2	19:AS:7:LYS:HA	1.93	0.42
22:BA:36:G:O2'	22:BA:450:G:H2'	2.19	0.42
22:BA:323:C:N4	22:BA:333:G:C5	2.88	0.42
22:BA:366:C:H2'	22:BA:367:G:O4'	2.20	0.42
22:BA:528:A:C2	22:BA:2043:C:H5'	2.53	0.42
22:BA:659:G:P	26:BE:95:LYS:HZ2	2.43	0.42
22:BA:662:G:O3'	33:BL:16:GLY:HA2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:716:A:N6	22:BA:717:C:N4	2.68	0.42
22:BA:770:G:C2'	22:BA:771:G:O5'	2.68	0.42
22:BA:877:A:C6	22:BA:899:A:N1	2.87	0.42
22:BA:1005:C:H2'	22:BA:1006:C:H6	1.85	0.42
22:BA:1073:A:C8	22:BA:1074:G:C5'	3.03	0.42
22:BA:1088:A:N3	22:BA:1088:A:H5"	2.34	0.42
22:BA:1212:G:N2	22:BA:1236:G:C4	2.87	0.42
22:BA:1243:C:H1'	33:BL:4:ASN:O	2.20	0.42
22:BA:1429:G:C6	22:BA:1568:G:C6	3.08	0.42
22:BA:1430:G:C4	22:BA:1431:A:C8	3.08	0.42
22:BA:2244:U:C4	22:BA:2245:U:C5	3.08	0.42
22:BA:2312:U:OP1	27:BF:71:ARG:HB3	2.19	0.42
24:BC:79:GLU:OE1	24:BC:101:ARG:NE	2.48	0.42
26:BE:128:ALA:O	26:BE:130:LYS:N	2.53	0.42
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.42
29:BH:116:ARG:HB3	29:BH:131:SER:O	2.20	0.42
29:BH:118:PRO:O	29:BH:119:ASN:CB	2.68	0.42
30:BI:18:ALA:O	30:BI:19:ASN:HB3	2.19	0.42
30:BI:140:VAL:O	30:BI:140:VAL:HG13	2.20	0.42
32:BK:110:GLU:O	32:BK:112:PHE:N	2.53	0.42
38:BQ:72:ASN:HD22	38:BQ:72:ASN:N	2.17	0.42
38:BQ:79:PHE:CE1	38:BQ:83:LEU:HD11	2.54	0.42
39:BR:14:VAL:HG13	39:BR:15:SER:N	2.35	0.42
40:BS:23:LEU:HD11	48:B0:22:LEU:HB2	2.02	0.42
53:B5:74:ARG:HA	53:B5:93:ASP:OD1	2.20	0.42
1:CA:308:C:H2'	1:CA:309:A:C8	2.54	0.42
1:CA:595:A:C2	1:CA:641:U:C2	3.07	0.42
1:CA:599:C:C2	1:CA:640:A:C2	3.08	0.42
1:CA:728:A:H2'	1:CA:729:A:H8	1.82	0.42
1:CA:956:U:C5	1:CA:957:U:C5	3.08	0.42
1:CA:963:G:H2'	1:CA:964:A:H5'	2.01	0.42
1:CA:1075:U:H4'	1:CA:1101:A:N6	2.35	0.42
1:CA:1133:G:H2'	1:CA:1133:G:N3	2.34	0.42
1:CA:1250:A:C8	1:CA:1287:A:N7	2.88	0.42
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.20	0.42
1:CA:1484:C:H2'	1:CA:1485:U:O4'	2.19	0.42
6:CF:3:HIS:O	6:CF:92:THR:HA	2.20	0.42
8:CH:10:MET:HE2	8:CH:33:LYS:CD	2.50	0.42
8:CH:78:VAL:HG23	8:CH:127:CYS:HA	2.02	0.42
12:CL:23:ALA:HA	12:CL:61:PHE:CD2	2.55	0.42
14:CN:22:ALA:N	14:CN:25:ALA:HB2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:20:SER:N	17:CQ:48:ASP:OD1	2.52	0.42
19:CS:18:LYS:HB3	19:CS:31:LEU:HD23	2.01	0.42
20:CT:37:ALA:O	20:CT:40:GLU:HB3	2.20	0.42
22:DA:250:G:H2'	22:DA:251:A:C8	2.54	0.42
22:DA:579:G:C2	22:DA:1262:A:C5	3.08	0.42
22:DA:691:C:O2'	22:DA:692:C:H5'	2.19	0.42
22:DA:836:G:C8	22:DA:837:C:C5	3.07	0.42
22:DA:858:G:OP1	44:DW:78:LYS:HD3	2.20	0.42
22:DA:898:C:C4	22:DA:899:A:C8	3.08	0.42
22:DA:973:A:O4'	22:DA:1188:U:C6	2.72	0.42
22:DA:1193:G:N1	22:DA:1194:A:C5	2.88	0.42
22:DA:1428:C:C5	22:DA:1569:A:C5'	3.02	0.42
22:DA:1464:G:N1	22:DA:1465:G:C5	2.88	0.42
22:DA:1590:A:H2'	22:DA:1591:A:C8	2.55	0.42
22:DA:1616:A:C2	22:DA:1647:U:C5	3.08	0.42
22:DA:1718:G:C6	22:DA:1743:G:N3	2.88	0.42
22:DA:2074:U:H5'	24:DC:227:PRO:HB3	2.02	0.42
22:DA:2108:A:H4'	22:DA:2150:C:H4'	2.01	0.42
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.50	0.42
22:DA:2655:G:O2'	22:DA:2656:U:P	2.77	0.42
23:DB:77:U:H2'	23:DB:78:A:H5'	2.01	0.42
24:DC:93:LEU:HD13	24:DC:103:TYR:CE1	2.55	0.42
34:DM:10:ARG:O	34:DM:89:VAL:HG21	2.19	0.42
36:DO:9:ARG:NH1	36:DO:9:ARG:HG3	2.34	0.42
36:DO:58:ILE:HG22	36:DO:58:ILE:O	2.20	0.42
49:D1:51:GLU:O	49:D1:52:ALA:HB2	2.19	0.42
51:D3:52:LYS:O	51:D3:55:LEU:N	2.48	0.42
1:AA:64:G:C2	1:AA:67:C:C4	3.07	0.42
1:AA:167:A:H2'	1:AA:168:G:O4'	2.19	0.42
1:AA:286:C:N3	1:AA:287:U:C5	2.87	0.42
1:AA:307:C:H5"	1:AA:308:C:OP2	2.20	0.42
1:AA:344:A:H4'	1:AA:345:C:OP2	2.20	0.42
1:AA:528:C:C5'	1:AA:529:G:OP2	2.68	0.42
1:AA:723:U:H5"	21:AU:49:LYS:HG2	2.01	0.42
1:AA:854:U:H3'	1:AA:871:U:O4	2.20	0.42
1:AA:1105:A:C2	1:AA:1106:G:C5	3.08	0.42
1:AA:1144:G:C6	1:AA:1145:A:C2	3.08	0.42
1:AA:1246:A:H2'	1:AA:1247:U:O4'	2.20	0.42
1:AA:1293:C:C4	1:AA:1294:G:N7	2.88	0.42
1:AA:1438:G:C6	1:AA:1439:G:C5	3.08	0.42
1:AA:1454:G:N3	1:AA:1455:G:C8	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1479:C:H2'	1:AA:1480:A:O4'	2.20	0.42
6:AF:37:HIS:O	6:AF:38:ARG:CB	2.66	0.42
6:AF:40:GLU:O	6:AF:42:TRP:N	2.53	0.42
8:AH:100:GLY:HA3	8:AH:130:ALA:HB2	2.02	0.42
10:AJ:32:THR:O	10:AJ:33:GLY:C	2.58	0.42
10:AJ:35:GLN:HB2	10:AJ:78:GLU:HB3	2.02	0.42
10:AJ:35:GLN:HB3	10:AJ:36:VAL:H	1.71	0.42
13:AM:45:ILE:HG13	13:AM:48:LEU:HD13	2.02	0.42
14:AN:3:LYS:N	57:AN:205:HOH:O	2.53	0.42
16:AP:22:ALA:CB	16:AP:32:PHE:HA	2.50	0.42
17:AQ:65:ARG:O	17:AQ:67:LEU:HD12	2.20	0.42
20:AT:72:ALA:O	20:AT:75:HIS:HB2	2.20	0.42
22:BA:31:C:P	57:BA:3702:HOH:O	2.78	0.42
22:BA:150:U:H2'	22:BA:151:C:H6	1.85	0.42
22:BA:216:A:C8	22:BA:432:A:C6	3.08	0.42
22:BA:319:G:C5	22:BA:333:G:C2	3.08	0.42
22:BA:497:A:N6	22:BA:498:G:C6	2.88	0.42
22:BA:503:A:C5'	22:BA:505:A:OP1	2.68	0.42
22:BA:554:U:C2'	22:BA:555:G:H5'	2.50	0.42
22:BA:830:G:C4	22:BA:2448:A:C5	3.08	0.42
22:BA:919:U:H2'	22:BA:920:A:H5'	2.02	0.42
22:BA:983:A:N6	22:BA:984:A:C2	2.87	0.42
22:BA:1018:U:O3'	22:BA:1120:G:N2	2.53	0.42
22:BA:1115:G:HO2'	22:BA:1116:G:H8	1.68	0.42
22:BA:1445:G:C6	22:BA:1446:C:N3	2.87	0.42
22:BA:1613:G:H4'	50:B2:3:ARG:HD3	2.02	0.42
22:BA:1638:C:H4'	22:BA:2710:C:O2	2.19	0.42
22:BA:1842:G:N2	22:BA:1901:A:C4	2.88	0.42
22:BA:2009:A:OP1	40:BS:41:LYS:HE2	2.20	0.42
22:BA:2511:U:O2'	22:BA:2512:C:H5'	2.20	0.42
22:BA:2514:U:H2'	22:BA:2515:C:H6	1.85	0.42
22:BA:2592:G:C5	22:BA:2593:U:C4	3.08	0.42
22:BA:2768:U:H2'	22:BA:2769:U:O4'	2.20	0.42
22:BA:2838:G:C6	22:BA:2839:G:C5	3.08	0.42
24:BC:166:ALA:HB3	24:BC:173:THR:HB	2.01	0.42
25:BD:101:PHE:HE2	25:BD:203:VAL:HG12	1.81	0.42
26:BE:48:THR:O	26:BE:49:ARG:C	2.58	0.42
27:BF:111:ILE:O	27:BF:114:PHE:HB2	2.19	0.42
30:BI:55:ILE:HG12	30:BI:74:PRO:CA	2.50	0.42
30:BI:127:ARG:CA	30:BI:130:GLU:HG3	2.47	0.42
32:BK:92:GLU:O	32:BK:93:GLN:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:42:THR:O	34:BM:43:ALA:C	2.58	0.42
34:BM:102:LEU:HB2	34:BM:103:TYR:HD1	1.85	0.42
36:BO:87:ILE:O	36:BO:88:LYS:O	2.37	0.42
45:BX:77:LYS:HD2	45:BX:77:LYS:HA	1.88	0.42
47:BZ:49:ASN:O	47:BZ:52:SER:HB3	2.20	0.42
1:CA:106:C:O2	1:CA:379:C:C5'	2.68	0.42
1:CA:236:A:H5'	17:CQ:44:LEU:HD21	2.02	0.42
1:CA:1202:U:H2'	1:CA:1203:C:H5'	2.01	0.42
1:CA:1277:C:H2'	1:CA:1278:G:H5"	2.02	0.42
1:CA:1370:G:O5'	9:CI:111:VAL:CG2	2.68	0.42
3:CC:140:ASN:HA	3:CC:143:ARG:HB3	2.01	0.42
5:CE:103:THR:O	5:CE:122:ASN:HA	2.20	0.42
9:CI:51:PRO:HB3	9:CI:84:THR:HG23	2.01	0.42
11:CK:31:ILE:O	11:CK:31:ILE:HD13	2.20	0.42
12:CL:40:THR:HG22	12:CL:41:THR:N	2.34	0.42
17:CQ:70:THR:HG22	17:CQ:71:LYS:H	1.84	0.42
22:DA:37:C:H2'	22:DA:38:A:C8	2.54	0.42
22:DA:118:A:N7	22:DA:119:A:N7	2.67	0.42
22:DA:299:A:C4	22:DA:322:A:C6	3.08	0.42
22:DA:420:C:H2'	22:DA:421:C:C6	2.54	0.42
22:DA:1566:A:H5'	24:DC:214:ARG:CZ	2.49	0.42
22:DA:1643:G:C5	22:DA:1644:C:C5	3.08	0.42
22:DA:1668:A:C4'	22:DA:1669:A:C2	3.03	0.42
22:DA:1827:U:C4'	22:DA:1970:A:HO2'	2.33	0.42
22:DA:1835:G:C5	22:DA:1836:C:C5	3.07	0.42
22:DA:2027:G:C5	57:DA:3475:HOH:O	2.73	0.42
22:DA:2127:G:N3	22:DA:2162:G:N7	2.68	0.42
22:DA:2278:A:N6	44:DW:14:ARG:O	2.53	0.42
22:DA:2464:G:N2	22:DA:2465:C:H1'	2.34	0.42
22:DA:2574:G:C2	22:DA:2575:C:C2	3.08	0.42
22:DA:2689:U:H4'	22:DA:2690:U:OP2	2.18	0.42
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.36	0.42
22:DA:2831:G:N2	22:DA:2884:U:OP2	2.53	0.42
22:DA:2857:G:N2	22:DA:2859:G:H3'	2.35	0.42
25:DD:151:THR:C	25:DD:153:GLY:N	2.74	0.42
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.42
30:DI:20:PRO:HG2	30:DI:24:VAL:HG23	2.02	0.42
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.40	0.42
41:DT:6:ARG:NH2	41:DT:38:ALA:HA	2.35	0.42
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.20	0.42
50:D2:18:PHE:O	50:D2:20:ALA:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:40:C:C2	1:AA:41:G:C8	3.08	0.42
1:AA:270:A:H2'	1:AA:271:C:C6	2.55	0.42
1:AA:494:G:O2'	1:AA:496:A:H1'	2.20	0.42
1:AA:619:U:N3	4:AD:131:ASN:OD1	2.52	0.42
1:AA:632:U:H5"	1:AA:633:G:C8	2.55	0.42
1:AA:647:C:H6	1:AA:647:C:O5'	2.02	0.42
1:AA:855:U:H2'	1:AA:856:C:C6	2.55	0.42
1:AA:897:C:H2'	1:AA:898:G:C8	2.54	0.42
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.54	0.42
1:AA:1240:U:H3'	1:AA:1241:G:H5'	2.01	0.42
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.35	0.42
1:AA:1354:U:C2	1:AA:1355:G:C8	3.08	0.42
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.55	0.42
1:AA:1472:U:O2'	1:AA:1473:G:H5'	2.19	0.42
2:AB:24:ASN:HA	2:AB:25:PRO:HD3	1.88	0.42
2:AB:66:LYS:HG2	2:AB:156:GLY:HA3	2.01	0.42
6:AF:5:GLU:HB3	6:AF:90:MET:HB2	2.00	0.42
7:AG:115:SER:OG	7:AG:118:LEU:HG	2.20	0.42
11:AK:20:VAL:HG23	11:AK:36:ASP:O	2.20	0.42
11:AK:55:SER:O	11:AK:56:ARG:C	2.58	0.42
17:AQ:60:GLU:C	17:AQ:61:ILE:HD12	2.40	0.42
20:AT:5:LYS:C	20:AT:5:LYS:HE2	2.40	0.42
22:BA:84:A:H4'	22:BA:85:G:O5'	2.18	0.42
22:BA:226:A:N6	22:BA:227:A:C6	2.88	0.42
22:BA:375:G:C4	22:BA:376:G:C8	3.08	0.42
22:BA:518:G:N2	22:BA:519:U:C2	2.88	0.42
22:BA:588:U:H2'	22:BA:589:U:H6	1.81	0.42
22:BA:653:U:C2'	22:BA:654:A:OP1	2.68	0.42
22:BA:860:U:C2'	22:BA:861:A:O5'	2.68	0.42
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.20	0.42
22:BA:2077:A:C6	22:BA:2435:A:N6	2.88	0.42
22:BA:2210:U:H4'	22:BA:2211:A:H5'	2.01	0.42
22:BA:2393:U:H5"	33:BL:62:PRO:HB3	2.01	0.42
22:BA:2540:C:C2'	22:BA:2541:A:H5'	2.49	0.42
22:BA:2788:C:O2'	22:BA:2809:A:N3	2.46	0.42
24:BC:252:THR:HG22	24:BC:253:LYS:N	2.35	0.42
25:BD:125:TRP:O	25:BD:126:ASN:HB2	2.19	0.42
27:BF:138:PHE:HA	27:BF:139:PRO:HD3	1.82	0.42
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.42
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.50	0.42
33:BL:17:LYS:HD3	33:BL:27:LEU:CD1	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:30:SER:HB2	34:BM:31:PHE:CD1	2.55	0.42
36:BO:53:THR:CG2	36:BO:74:VAL:HG21	2.50	0.42
40:BS:31:GLN:O	40:BS:32:ALA:C	2.59	0.42
41:BT:65:GLY:HA3	41:BT:77:ARG:O	2.19	0.42
49:B1:21:TYR:CD2	49:B1:21:TYR:N	2.88	0.42
1:CA:64:G:C2	1:CA:67:C:N4	2.88	0.42
1:CA:228:A:H4'	16:CP:63:GLN:HG2	2.02	0.42
1:CA:707:U:OP1	11:CK:87:LYS:HD2	2.20	0.42
1:CA:805:C:H2'	1:CA:806:C:H6	1.85	0.42
1:CA:978:A:C5	1:CA:1318:A:C6	3.08	0.42
1:CA:1137:C:O2	1:CA:1137:C:O4'	2.36	0.42
1:CA:1382:C:H2'	1:CA:1383:C:C6	2.54	0.42
1:CA:1512:U:O2'	1:CA:1513:A:H5'	2.19	0.42
3:CC:40:ARG:CG	3:CC:55:ILE:HD11	2.49	0.42
3:CC:101:ILE:HG23	3:CC:101:ILE:O	2.19	0.42
4:CD:60:LYS:O	4:CD:61:VAL:C	2.58	0.42
5:CE:105:ILE:H	5:CE:122:ASN:C	2.23	0.42
6:CF:18:VAL:HA	6:CF:21:MET:HE2	2.02	0.42
6:CF:38:ARG:NH1	6:CF:61:LEU:HD21	2.35	0.42
16:CP:19:VAL:HG13	16:CP:36:VAL:HG12	2.02	0.42
22:DA:323:C:N4	22:DA:333:G:N7	2.67	0.42
22:DA:784:G:OP1	22:DA:2588:G:H5"	2.20	0.42
22:DA:973:A:OP2	39:DR:81:LYS:NZ	2.43	0.42
22:DA:1127:A:H1'	22:DA:2518:A:OP1	2.19	0.42
22:DA:1166:G:N2	22:DA:1184:U:H1'	2.35	0.42
22:DA:1317:G:N7	22:DA:1318:U:C4	2.88	0.42
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.34	0.42
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.50	0.42
22:DA:1454:C:H1'	35:DN:60:VAL:HG13	2.02	0.42
22:DA:1622:G:H2'	22:DA:1623:G:O4'	2.20	0.42
22:DA:1682:G:OP2	22:DA:1699:G:N1	2.52	0.42
22:DA:1773:A:C2'	22:DA:1774:C:H5'	2.49	0.42
22:DA:1784:A:H4'	22:DA:1785:A:O5'	2.20	0.42
22:DA:1847:A:O2'	22:DA:1848:A:H8	2.01	0.42
22:DA:1885:A:H2'	22:DA:1886:U:O4'	2.20	0.42
22:DA:1926:U:C2'	22:DA:1928:A:N7	2.83	0.42
22:DA:2093:G:C2	22:DA:2094:A:C5	3.08	0.42
22:DA:2233:U:H2'	22:DA:2234:G:C8	2.55	0.42
22:DA:2351:G:O2'	22:DA:2366:A:N6	2.39	0.42
22:DA:2663:G:C2	22:DA:2664:G:H1'	2.55	0.42
23:DB:29:A:OP2	36:DO:31:THR:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:119:GLY:O	24:DC:130:LEU:HB3	2.20	0.42
25:DD:105:LYS:HG2	25:DD:106:LYS:HG3	2.01	0.42
30:DI:4:LYS:HD2	30:DI:5:VAL:HG23	2.01	0.42
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	2.02	0.42
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	2.02	0.42
34:DM:70:ASP:OD1	34:DM:70:ASP:C	2.58	0.42
37:DP:51:ARG:O	37:DP:57:SER:HA	2.20	0.42
40:DS:86:MET:HG3	40:DS:87:PRO:HD2	2.01	0.42
41:DT:8:LEU:HD23	41:DT:50:LEU:HD21	2.01	0.42
41:DT:54:GLU:CB	41:DT:88:LYS:HG3	2.48	0.42
42:DU:51:ALA:O	42:DU:52:LEU:HB2	2.20	0.42
42:DU:83:VAL:CG1	42:DU:84:GLY:N	2.82	0.42
46:DY:60:LYS:O	46:DY:61:ALA:C	2.57	0.42
49:D1:33:LYS:HA	49:D1:52:ALA:HB3	2.02	0.42
49:D1:38:LYS:HB2	49:D1:49:TYR:CD2	2.55	0.42
1:AA:451:A:C2	1:AA:480:U:N3	2.87	0.41
1:AA:586:C:O2'	8:AH:4:GLN:NE2	2.50	0.41
1:AA:724:G:C4	1:AA:725:G:C8	3.07	0.41
1:AA:920:U:H2'	1:AA:921:U:C6	2.55	0.41
1:AA:950:U:H2'	1:AA:951:G:H8	1.85	0.41
1:AA:1115:U:H2'	1:AA:1116:U:H6	1.84	0.41
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.35	0.41
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.20	0.41
1:AA:1268:G:C6	1:AA:1269:A:N6	2.87	0.41
1:AA:1322:C:P	19:AS:78:ARG:NH2	2.93	0.41
1:AA:1417:G:O6	1:AA:1482:G:C6	2.73	0.41
6:AF:74:LEU:HD23	6:AF:78:PHE:CE1	2.55	0.41
7:AG:62:PHE:CZ	7:AG:66:LEU:HD22	2.55	0.41
10:AJ:34:ALA:O	10:AJ:35:GLN:HB2	2.19	0.41
13:AM:6:GLY:HA3	13:AM:66:GLU:HG3	2.02	0.41
13:AM:110:LYS:O	13:AM:110:LYS:HG2	2.19	0.41
14:AN:10:GLU:OE2	14:AN:61:ARG:N	2.53	0.41
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.20	0.41
20:AT:38:ALA:O	20:AT:41:ALA:HB3	2.19	0.41
20:AT:71:LYS:O	20:AT:72:ALA:C	2.57	0.41
22:BA:15:G:C2	22:BA:16:C:C6	3.08	0.41
22:BA:139:U:C4	41:BT:2:ILE:HD13	2.55	0.41
22:BA:447:A:C5	22:BA:473:G:C5	3.08	0.41
22:BA:549:G:OP2	22:BA:550:C:OP1	2.38	0.41
22:BA:971:G:C6	22:BA:972:A:C4	3.08	0.41
22:BA:986:C:C2'	22:BA:987:C:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1240:U:H2'	22:BA:1241:A:OP2	2.20	0.41
22:BA:1759:A:C2	22:BA:1760:C:C2	3.08	0.41
22:BA:2020:A:C2	22:BA:2022:U:O4'	2.73	0.41
22:BA:2032:G:H4'	57:BA:3478:HOH:O	2.19	0.41
22:BA:2129:C:C4	22:BA:2130:U:O4	2.73	0.41
22:BA:2592:G:C6	22:BA:2593:U:N3	2.88	0.41
22:BA:2694:G:H2'	22:BA:2695:U:O4'	2.20	0.41
22:BA:2765:A:N3	22:BA:2765:A:C2'	2.83	0.41
23:BB:41:G:H5"	27:BF:66:LEU:HD13	2.02	0.41
24:BC:101:ARG:O	24:BC:102:ARG:HG3	2.20	0.41
24:BC:230:HIS:NE2	24:BC:247:PRO:HA	2.34	0.41
25:BD:12:THR:O	25:BD:24:VAL:HG22	2.20	0.41
27:BF:119:ALA:HB1	27:BF:167:ARG:CD	2.50	0.41
28:BG:87:LEU:HD13	28:BG:131:ILE:HB	2.02	0.41
28:BG:95:ARG:O	28:BG:96:ALA:HB2	2.20	0.41
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.85	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
37:BP:26:VAL:HG21	37:BP:84:ILE:HG23	2.01	0.41
38:BQ:108:ALA:O	38:BQ:111:GLU:N	2.53	0.41
41:BT:1:MET:CB	41:BT:2:ILE:HD12	2.50	0.41
42:BU:14:LEU:CD1	42:BU:70:VAL:C	2.88	0.41
43:BV:26:PHE:CD1	43:BV:26:PHE:C	2.93	0.41
45:BX:35:SER:HA	45:BX:50:ARG:HA	2.01	0.41
52:B4:10:LEU:HD12	52:B4:33:HIS:CG	2.55	0.41
1:CA:7:A:H4'	1:CA:8:A:OP2	2.20	0.41
1:CA:86:G:O2'	1:CA:87:C:P	2.78	0.41
1:CA:155:A:C2	1:CA:167:A:C2	3.08	0.41
1:CA:159:G:N2	1:CA:161:A:H3'	2.35	0.41
1:CA:375:U:O4	57:CA:1889:HOH:O	2.19	0.41
1:CA:543:U:OP1	4:CD:14:ARG:NE	2.49	0.41
1:CA:563:A:C2'	1:CA:567:G:C8	3.00	0.41
1:CA:581:G:H8	1:CA:581:G:OP2	2.03	0.41
1:CA:707:U:H2'	1:CA:708:C:C6	2.54	0.41
1:CA:865:A:H1'	1:CA:918:A:O2'	2.19	0.41
1:CA:892:A:C4	1:CA:893:C:C6	3.08	0.41
1:CA:1036:A:N3	1:CA:1036:A:H2'	2.34	0.41
1:CA:1271:A:H2'	1:CA:1272:G:C8	2.55	0.41
9:CI:54:LEU:O	9:CI:55:VAL:HG13	2.20	0.41
10:CJ:10:LEU:HD23	10:CJ:96:VAL:HG11	2.02	0.41
15:CO:78:TYR:CZ	15:CO:82:ILE:HG21	2.55	0.41
22:DA:45:G:O3'	22:DA:46:G:O4'	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:188:G:C6	22:DA:189:G:C4	3.08	0.41
22:DA:364:C:H2'	22:DA:365:U:O4'	2.20	0.41
22:DA:537:G:C6	22:DA:555:G:N2	2.88	0.41
22:DA:949:G:C6	22:DA:950:G:N7	2.88	0.41
22:DA:1028:A:N6	22:DA:1126:A:OP1	2.53	0.41
22:DA:1357:C:N4	22:DA:1358:G:C2	2.88	0.41
22:DA:1519:G:H3'	22:DA:1520:U:C6	2.55	0.41
22:DA:1607:C:O2	22:DA:1621:U:C5	2.73	0.41
22:DA:1819:A:H4'	22:DA:1820:U:C5'	2.49	0.41
22:DA:1911:U:C2	22:DA:1918:A:C2	3.08	0.41
22:DA:1936:A:OP1	22:DA:1937:A:H5'	2.20	0.41
22:DA:2127:G:H4'	22:DA:2128:G:OP1	2.19	0.41
22:DA:2520:C:O2'	22:DA:2565:A:O2'	2.37	0.41
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.20	0.41
22:DA:2786:U:H2'	22:DA:2787:C:C6	2.55	0.41
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.34	0.41
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.41
32:DK:61:VAL:HB	32:DK:87:LEU:HD11	2.02	0.41
35:DN:52:ILE:O	35:DN:55:ALA:N	2.53	0.41
36:DO:7:ARG:NH1	36:DO:95:SER:O	2.47	0.41
52:D4:16:ILE:HG22	52:D4:17:VAL:N	2.34	0.41
1:AA:656:G:N2	15:AO:23:GLY:HA3	2.35	0.41
1:AA:833:G:N2	1:AA:834:U:H1'	2.36	0.41
1:AA:1245:C:H2'	1:AA:1246:A:C8	2.55	0.41
1:AA:1342:C:O2'	9:AI:126:GLN:HA	2.20	0.41
1:AA:1378:C:C5	1:AA:1379:G:C8	3.07	0.41
2:AB:21:ARG:HA	2:AB:21:ARG:CZ	2.50	0.41
2:AB:73:LYS:HE2	2:AB:75:ALA:O	2.20	0.41
2:AB:99:GLY:O	2:AB:103:ASN:CB	2.68	0.41
3:AC:130:PHE:O	3:AC:134:MET:HG3	2.20	0.41
6:AF:95:ALA:O	6:AF:96:VAL:HG13	2.21	0.41
8:AH:47:GLU:HG2	8:AH:64:LYS:HG2	2.01	0.41
9:AI:91:ASP:CG	9:AI:93:SER:HB3	2.41	0.41
11:AK:23:ILE:HG13	11:AK:23:ILE:O	2.21	0.41
11:AK:111:THR:HA	21:AU:4:ILE:O	2.20	0.41
14:AN:17:ALA:HA	14:AN:55:SER:O	2.20	0.41
14:AN:28:LYS:CA	14:AN:31:ILE:HB	2.50	0.41
14:AN:47:LYS:O	14:AN:49:GLN:N	2.52	0.41
14:AN:68:GLY:O	14:AN:69:ARG:C	2.59	0.41
15:AO:3:LEU:HD12	15:AO:3:LEU:HA	1.91	0.41
16:AP:16:PHE:CD2	16:AP:40:ASN:HB2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:68:SER:HB2	16:AP:71:VAL:HB	2.02	0.41
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	2.02	0.41
20:AT:54:MET:HE3	20:AT:58:VAL:CG2	2.50	0.41
22:BA:69:C:O2'	22:BA:70:G:H5'	2.19	0.41
22:BA:77:G:N2	22:BA:110:G:H1'	2.34	0.41
22:BA:189:G:H2'	22:BA:205:G:N2	2.35	0.41
22:BA:276:U:O2	22:BA:276:U:C2'	2.64	0.41
22:BA:522:A:C2	22:BA:523:C:C2	3.09	0.41
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.55	0.41
22:BA:1224:U:C4	22:BA:1225:G:C6	3.08	0.41
22:BA:1317:G:H2'	22:BA:1318:U:O4'	2.19	0.41
22:BA:1422:G:C6	22:BA:1423:G:C5	3.08	0.41
22:BA:1501:G:H2'	22:BA:1502:A:H8	1.85	0.41
22:BA:1505:A:H2'	22:BA:1506:U:O4'	2.20	0.41
22:BA:1765:U:H2'	22:BA:1766:G:O5'	2.21	0.41
22:BA:1795:C:C2	22:BA:1796:U:C5	3.09	0.41
22:BA:2345:G:H4'	22:BA:2346:A:O5'	2.21	0.41
27:BF:23:ASN:OD1	27:BF:23:ASN:N	2.52	0.41
28:BG:150:ALA:O	28:BG:152:ARG:N	2.53	0.41
30:BI:5:VAL:HG22	30:BI:8:TYR:OH	2.19	0.41
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	2.01	0.41
31:BJ:41:LYS:C	31:BJ:43:GLU:N	2.72	0.41
35:BN:32:GLU:HG3	35:BN:120:GLU:HG2	2.02	0.41
35:BN:72:ASP:CG	35:BN:75:ILE:HD13	2.40	0.41
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.21	0.41
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.20	0.41
48:B0:55:ILE:O	48:B0:56:ALA:HB2	2.17	0.41
1:CA:27:G:C4	1:CA:557:G:N2	2.88	0.41
1:CA:115:G:H4'	1:CA:116:A:O5'	2.20	0.41
1:CA:827:U:H2'	1:CA:870:U:O4	2.20	0.41
1:CA:978:A:C6	1:CA:1318:A:N6	2.88	0.41
1:CA:983:A:N3	1:CA:983:A:C2'	2.83	0.41
1:CA:1377:A:C6	7:CG:7:ILE:HD12	2.55	0.41
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.55	0.41
3:CC:123:GLN:O	3:CC:128:VAL:HG13	2.20	0.41
4:CD:31:LYS:N	4:CD:31:LYS:CD	2.82	0.41
4:CD:198:HIS:CE1	4:CD:199:LEU:CD2	3.01	0.41
5:CE:68:ARG:O	5:CE:71:MET:HE3	2.21	0.41
5:CE:125:ALA:O	5:CE:126:LYS:CB	2.67	0.41
7:CG:42:ILE:O	7:CG:42:ILE:HG22	2.20	0.41
7:CG:125:SER:O	7:CG:127:ALA:N	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:83:LEU:HD12	19:CS:66:MET:SD	2.61	0.41
14:CN:21:PHE:CD2	14:CN:25:ALA:HB2	2.55	0.41
16:CP:52:LEU:HD21	16:CP:57:ILE:CD1	2.51	0.41
19:CS:16:LEU:O	19:CS:20:GLU:HG2	2.20	0.41
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.35	0.41
22:DA:271:G:C2	22:DA:367:G:N3	2.88	0.41
22:DA:306:U:O4	22:DA:307:G:C6	2.72	0.41
22:DA:466:A:C2	22:DA:796:C:O4'	2.73	0.41
22:DA:630:G:H3'	22:DA:631:A:C5'	2.50	0.41
22:DA:819:A:C8	22:DA:1188:U:O4	2.74	0.41
22:DA:856:G:N2	22:DA:922:C:N3	2.69	0.41
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.68	0.41
22:DA:1198:U:O2	38:DQ:4:VAL:HG11	2.20	0.41
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.56	0.41
22:DA:1309:G:H2'	22:DA:1310:G:O4'	2.21	0.41
22:DA:1343:G:C6	22:DA:1344:U:O4	2.74	0.41
22:DA:1441:G:C2	22:DA:1551:A:C2	3.08	0.41
22:DA:1464:G:C2	22:DA:1465:G:C5	3.08	0.41
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.68	0.41
22:DA:1663:G:C2	22:DA:1998:A:C5	3.08	0.41
22:DA:1673:G:N1	22:DA:1675:C:O4'	2.53	0.41
22:DA:1838:C:H4'	22:DA:1839:G:H8	1.84	0.41
22:DA:1867:G:O6	22:DA:1875:G:C2	2.73	0.41
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.38	0.41
22:DA:2464:G:C2	22:DA:2465:C:H1'	2.55	0.41
26:DE:108:ILE:HD11	26:DE:180:LEU:HB3	2.02	0.41
26:DE:149:ILE:O	26:DE:188:MET:HA	2.20	0.41
27:DF:42:GLU:HB2	27:DF:49:LEU:HD23	2.02	0.41
28:DG:80:THR:HG22	28:DG:81:GLU:N	2.34	0.41
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.41
30:DI:103:ARG:HB3	30:DI:142:ASP:OD2	2.21	0.41
31:DJ:42:ALA:O	31:DJ:44:TYR:N	2.53	0.41
38:DQ:86:ALA:O	38:DQ:87:SER:HB2	2.19	0.41
42:DU:73:PHE:CE1	42:DU:78:GLY:O	2.72	0.41
49:D1:26:ASN:CG	49:D1:29:THR:OG1	2.59	0.41
54:D6:4:PRO:O	54:D6:5:MHU:O	2.37	0.41
1:AA:30:U:C4	1:AA:554:A:C2	3.08	0.41
1:AA:66:A:O4'	1:AA:173:U:C4	2.73	0.41
1:AA:142:G:H3'	1:AA:143:A:H8	1.84	0.41
1:AA:200:G:N3	1:AA:200:G:H2'	2.34	0.41
1:AA:280:C:H4'	1:AA:281:G:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:330:C:O2'	1:AA:331:G:H5'	2.20	0.41
1:AA:410:G:H5"	1:AA:411:A:P	2.60	0.41
1:AA:907:A:C6	1:AA:908:A:C5	3.09	0.41
1:AA:980:C:O2'	14:AN:59:ARG:O	2.26	0.41
1:AA:1109:C:P	3:AC:176:HIS:CE1	3.13	0.41
1:AA:1124:G:C2'	1:AA:1145:A:N6	2.84	0.41
1:AA:1239:A:H62	1:AA:1299:A:H62	1.68	0.41
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.73	0.41
1:AA:1320:C:C2	19:AS:36:ARG:NH1	2.88	0.41
1:AA:1371:G:C5	1:AA:1372:U:C4	3.08	0.41
2:AB:128:LYS:O	2:AB:129:LEU:O	2.39	0.41
3:AC:152:GLU:HA	3:AC:167:TRP:HA	2.01	0.41
5:AE:89:HIS:CG	5:AE:138:ARG:HD3	2.55	0.41
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.36	0.41
9:AI:30:ILE:CD1	9:AI:38:TYR:CD2	3.04	0.41
10:AJ:52:LEU:HD22	10:AJ:52:LEU:HA	1.87	0.41
11:AK:21:ALA:HB2	11:AK:34:ILE:CD1	2.50	0.41
13:AM:78:LYS:HB3	27:BF:112:ARG:CZ	2.49	0.41
13:AM:79:ARG:HE	13:AM:79:ARG:HB2	1.61	0.41
14:AN:36:ALA:HB2	14:AN:41:ARG:NE	2.35	0.41
16:AP:56:ARG:O	16:AP:57:ILE:C	2.59	0.41
17:AQ:12:VAL:HG21	17:AQ:54:GLY:O	2.20	0.41
18:AR:41:PRO:HB2	18:AR:43:ARG:HH11	1.86	0.41
20:AT:43:ASP:O	20:AT:44:LYS:C	2.58	0.41
21:AU:35:ARG:NH2	57:AU:101:HOH:O	2.52	0.41
22:BA:91:A:H1'	22:BA:92:U:C6	2.55	0.41
22:BA:287:G:C2	22:BA:354:A:C2	3.08	0.41
22:BA:295:G:N1	22:BA:344:A:C5	2.88	0.41
22:BA:332:A:C2	22:BA:335:C:C5	3.08	0.41
22:BA:497:A:H2'	22:BA:498:G:H8	1.85	0.41
22:BA:914:G:C8	22:BA:914:G:H3'	2.54	0.41
22:BA:1350:C:N3	22:BA:1381:G:N1	2.64	0.41
22:BA:1387:A:H2'	22:BA:1388:G:O4'	2.21	0.41
22:BA:1566:A:O2'	22:BA:1567:G:H5'	2.19	0.41
22:BA:1984:G:C5	22:BA:1985:C:C5	3.08	0.41
22:BA:2209:G:C2	22:BA:2216:G:C2	3.09	0.41
22:BA:2513:A:H2'	22:BA:2513:A:N3	2.35	0.41
22:BA:2824:C:C5	22:BA:2825:G:C5	3.09	0.41
31:BJ:56:VAL:HB	31:BJ:124:VAL:HB	2.01	0.41
34:BM:12:MET:CE	34:BM:72:PRO:HD2	2.50	0.41
35:BN:1:MET:O	35:BN:2:ARG:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:101:ARG:C	37:BP:103:ARG:H	2.23	0.41
39:BR:25:LEU:N	39:BR:94:THR:CG2	2.83	0.41
43:BV:1:MET:SD	43:BV:1:MET:O	2.79	0.41
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.55	0.41
53:B5:59:VAL:HG21	53:B5:168:LYS:N	2.35	0.41
1:CA:25:C:H2'	1:CA:26:A:C8	2.55	0.41
1:CA:32:A:N1	1:CA:33:A:C6	2.89	0.41
1:CA:168:G:C6	1:CA:169:C:C4	3.08	0.41
1:CA:183:C:O2	1:CA:183:C:O4'	2.38	0.41
1:CA:216:U:C4'	1:CA:464:U:H4'	2.49	0.41
1:CA:674:G:H4'	18:CR:70:TYR:CE1	2.55	0.41
1:CA:821:G:C6	1:CA:822:U:C4	3.09	0.41
1:CA:834:U:C2	1:CA:835:U:C5	3.08	0.41
1:CA:869:G:H4'	1:CA:872:A:C8	2.55	0.41
1:CA:1080:A:OP1	5:CE:52:LYS:CE	2.67	0.41
1:CA:1179:A:H2'	1:CA:1180:A:H5'	2.02	0.41
1:CA:1182:G:H4'	1:CA:1183:U:H5'	2.01	0.41
1:CA:1241:G:N2	1:CA:1242:G:C5	2.88	0.41
1:CA:1296:C:H5"	1:CA:1297:G:OP2	2.20	0.41
1:CA:1491:G:O6	1:CA:1492:A:C6	2.72	0.41
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.51	0.41
4:CD:130:VAL:O	4:CD:130:VAL:HG12	2.20	0.41
7:CG:23:LEU:HD23	7:CG:26:PHE:HB3	2.03	0.41
8:CH:34:VAL:O	8:CH:37:ALA:N	2.53	0.41
15:CO:45:GLU:O	15:CO:46:HIS:CB	2.68	0.41
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.21	0.41
22:DA:36:G:N1	22:DA:445:C:C4	2.88	0.41
22:DA:391:A:C5	22:DA:392:U:C5	3.08	0.41
22:DA:404:A:C6	22:DA:406:G:N2	2.88	0.41
22:DA:503:A:C2	22:DA:506:G:C5	3.08	0.41
22:DA:1211:C:H5"	22:DA:1212:G:C8	2.56	0.41
22:DA:1238:G:N2	22:DA:1239:G:H1'	2.35	0.41
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.50	0.41
22:DA:1383:A:C2	22:DA:1384:A:C4	3.08	0.41
22:DA:1448:G:C6	22:DA:1449:G:C5	3.08	0.41
22:DA:1469:A:N1	22:DA:1470:A:C6	2.89	0.41
22:DA:1545:A:C8	22:DA:1546:G:C8	3.09	0.41
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.20	0.41
22:DA:1641:A:H3'	22:DA:1642:G:H8	1.85	0.41
22:DA:1747:U:H2'	22:DA:1748:C:C6	2.55	0.41
22:DA:1890:A:C5	22:DA:1891:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2127:G:C2	22:DA:2162:G:C8	3.08	0.41
22:DA:2261:C:C2	22:DA:2280:G:C2	3.08	0.41
22:DA:2304:G:N2	22:DA:2313:C:C2	2.88	0.41
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.85	0.41
22:DA:2694:G:C5	22:DA:2695:U:C5	3.08	0.41
23:DB:14:U:O2	23:DB:14:U:O2'	2.35	0.41
23:DB:80:U:O4	43:DV:14:LYS:NZ	2.34	0.41
26:DE:127:GLU:OE1	26:DE:127:GLU:HA	2.20	0.41
27:DF:64:LYS:HA	27:DF:65:PRO:HD3	1.89	0.41
27:DF:134:GLU:HG3	27:DF:136:ILE:HD12	2.01	0.41
28:DG:158:LYS:O	28:DG:159:GLY:C	2.58	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
35:DN:25:ALA:CB	35:DN:48:VAL:HG22	2.50	0.41
39:DR:47:VAL:O	39:DR:47:VAL:CG1	2.68	0.41
44:DW:37:ILE:HG21	44:DW:80:ILE:HG21	2.01	0.41
45:DX:58:VAL:C	45:DX:60:ASP:N	2.72	0.41
1:AA:55:A:C5	1:AA:56:U:C5	3.09	0.41
1:AA:105:G:H2'	1:AA:106:C:C6	2.55	0.41
1:AA:189:A:N6	1:AA:190:A:C2	2.88	0.41
1:AA:222:C:H2'	1:AA:223:A:H8	1.86	0.41
1:AA:518:C:H5	1:AA:530:G:OP2	2.03	0.41
1:AA:865:A:H2'	1:AA:866:C:C6	2.56	0.41
1:AA:946:A:N1	1:AA:947:G:C6	2.88	0.41
1:AA:1314:C:H41	19:AS:4:SER:HA	1.84	0.41
1:AA:1371:G:C6	1:AA:1372:U:C4	3.08	0.41
3:AC:90:VAL:O	3:AC:94:ILE:HD12	2.20	0.41
5:AE:101:GLU:HB3	5:AE:122:ASN:HB3	2.01	0.41
5:AE:131:THR:OG1	5:AE:131:THR:O	2.38	0.41
6:AF:3:HIS:HA	6:AF:64:VAL:O	2.20	0.41
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.34	0.41
16:AP:39:PHE:CG	16:AP:74:LEU:HD11	2.54	0.41
16:AP:71:VAL:O	16:AP:74:LEU:N	2.53	0.41
17:AQ:5:ILE:O	17:AQ:6:ARG:HB2	2.20	0.41
22:BA:115:C:O2'	22:BA:127:A:O2'	2.24	0.41
22:BA:286:U:N3	22:BA:287:G:N7	2.68	0.41
22:BA:442:G:C2	22:BA:444:C:C5	3.08	0.41
22:BA:521:U:H2'	22:BA:522:A:H8	1.82	0.41
22:BA:636:G:N7	33:BL:109:LYS:NZ	2.51	0.41
22:BA:962:G:H2'	22:BA:963:U:C6	2.55	0.41
22:BA:996:A:C5	22:BA:1160:G:C2	3.09	0.41
22:BA:1066:U:O2	22:BA:1069:A:N7	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1171:G:C8	22:BA:1171:G:OP2	2.73	0.41
22:BA:1171:G:H2'	22:BA:1172:C:C6	2.55	0.41
22:BA:1249:U:O2	22:BA:1249:U:C2'	2.68	0.41
22:BA:1433:A:N1	22:BA:1434:A:N6	2.68	0.41
22:BA:1544:A:N6	22:BA:1545:A:C6	2.88	0.41
22:BA:1846:G:N2	22:BA:1895:C:C2	2.88	0.41
22:BA:1965:C:C4	22:BA:1966:A:C5	3.08	0.41
22:BA:1996:C:OP1	32:BK:31:ARG:NH2	2.53	0.41
22:BA:2226:C:O2	22:BA:2226:C:H2'	2.20	0.41
22:BA:2376:A:C4	36:BO:99:TYR:CE1	3.08	0.41
22:BA:2520:C:O2'	22:BA:2521:C:H5'	2.21	0.41
22:BA:2593:U:H2'	22:BA:2594:C:H6	1.86	0.41
22:BA:2599:G:C2	22:BA:2600:A:C4	3.08	0.41
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.34	0.41
22:BA:2827:C:O2	22:BA:2827:C:H2'	2.19	0.41
23:BB:78:A:OP2	43:BV:18:ARG:NH1	2.52	0.41
24:BC:77:VAL:HA	24:BC:114:ASP:O	2.20	0.41
24:BC:83:TYR:HE1	24:BC:85:PRO:HA	1.84	0.41
24:BC:115:GLN:O	24:BC:125:LYS:NZ	2.51	0.41
25:BD:131:ASP:HB3	25:BD:133:THR:O	2.20	0.41
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.56	0.41
28:BG:40:ALA:HA	28:BG:58:TYR:CD1	2.55	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
32:BK:110:GLU:C	32:BK:112:PHE:H	2.22	0.41
35:BN:22:ARG:CG	35:BN:70:THR:H	2.32	0.41
35:BN:117:ASP:O	35:BN:119:SER:N	2.53	0.41
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	2.02	0.41
40:BS:29:VAL:CG1	40:BS:55:ILE:CD1	2.95	0.41
48:B0:15:MET:O	48:B0:18:SER:CB	2.68	0.41
1:CA:145:G:N1	1:CA:146:G:C5	2.88	0.41
1:CA:258:G:C6	1:CA:259:G:C5	3.07	0.41
1:CA:431:A:H2'	1:CA:432:A:O4'	2.20	0.41
1:CA:465:A:C6	1:CA:466:A:C6	3.08	0.41
1:CA:542:G:N3	1:CA:543:U:C6	2.88	0.41
1:CA:559:A:H4'	1:CA:560:A:O5'	2.21	0.41
1:CA:608:A:H2'	1:CA:609:A:O4'	2.20	0.41
1:CA:867:G:C6	1:CA:868:C:C4	3.08	0.41
1:CA:1055:A:N6	1:CA:1206:G:C6	2.89	0.41
1:CA:1206:G:H4'	3:CC:192:THR:O	2.21	0.41
1:CA:1355:G:N2	1:CA:1356:G:H1'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1493:A:H8	1:CA:1493:A:OP2	2.03	0.41
5:CE:11:LEU:O	5:CE:40:GLY:O	2.38	0.41
6:CF:3:HIS:CD2	6:CF:94:HIS:HA	2.55	0.41
6:CF:18:VAL:O	6:CF:21:MET:HB2	2.20	0.41
8:CH:65:TYR:CD1	8:CH:65:TYR:N	2.88	0.41
9:CI:46:MET:HB2	9:CI:49:ARG:HB3	2.01	0.41
10:CJ:83:THR:O	10:CJ:87:LEU:HB3	2.20	0.41
12:CL:86:ARG:O	12:CL:86:ARG:HG3	2.19	0.41
15:CO:67:LEU:HD22	15:CO:88:ARG:NH2	2.35	0.41
16:CP:19:VAL:HG13	16:CP:37:GLY:N	2.35	0.41
20:CT:33:LYS:O	20:CT:36:TYR:CD2	2.73	0.41
22:DA:30:G:C2	22:DA:31:C:C2	3.08	0.41
22:DA:49:A:C8	22:DA:51:G:N1	2.89	0.41
22:DA:320:A:H2'	26:DE:131:THR:CG2	2.50	0.41
22:DA:426:C:H2'	22:DA:427:U:O4'	2.20	0.41
22:DA:672:C:H4'	26:DE:84:THR:HG22	2.01	0.41
22:DA:673:C:H5"	26:DE:76:PRO:HD2	2.01	0.41
22:DA:914:G:H5'	22:DA:915:C:OP2	2.20	0.41
22:DA:1299:G:O6	22:DA:1639:C:H5"	2.20	0.41
22:DA:1301:A:C6	22:DA:1303:G:C4	3.08	0.41
22:DA:1351:C:N3	22:DA:1381:G:N1	2.68	0.41
22:DA:1608:A:C8	22:DA:1611:C:N4	2.88	0.41
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.21	0.41
22:DA:1784:A:H4'	22:DA:1785:A:C5'	2.50	0.41
22:DA:2080:A:OP1	45:DX:20:HIS:HB2	2.20	0.41
22:DA:2142:A:C6	22:DA:2143:C:C4	3.08	0.41
22:DA:2208:C:C2	22:DA:2217:G:C2	3.08	0.41
22:DA:2357:G:H5'	22:DA:2358:A:OP2	2.20	0.41
22:DA:2786:U:O2'	25:DD:63:PRO:O	2.34	0.41
23:DB:6:G:H2'	23:DB:7:G:O4'	2.20	0.41
24:DC:200:HIS:C	24:DC:202:LEU:H	2.24	0.41
24:DC:200:HIS:O	24:DC:203:ARG:HG2	2.21	0.41
33:DL:103:ILE:H	33:DL:103:ILE:HG12	1.71	0.41
33:DL:128:THR:OG1	33:DL:131:ALA:HB2	2.21	0.41
36:DO:71:ALA:HB2	36:DO:102:ARG:HB2	2.02	0.41
37:DP:40:LEU:HD23	37:DP:40:LEU:C	2.41	0.41
39:DR:43:ASN:HB3	39:DR:44:GLY:H	1.73	0.41
41:DT:82:LYS:HG2	41:DT:83:ALA:H	1.85	0.41
44:DW:68:LYS:CE	44:DW:70:GLU:HG3	2.51	0.41
1:AA:8:A:H5'	5:AE:125:ALA:O	2.20	0.41
1:AA:254:G:C2	1:AA:273:U:O2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:469:C:C4	1:AA:470:C:C4	3.09	0.41
1:AA:668:G:H2'	1:AA:669:G:H8	1.84	0.41
1:AA:766:A:H2'	1:AA:767:A:O4'	2.20	0.41
1:AA:961:U:OP2	1:AA:1223:C:C1'	2.69	0.41
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.55	0.41
1:AA:1077:G:N2	1:AA:1081:A:C4	2.89	0.41
1:AA:1157:A:C4	1:AA:1181:G:N1	2.89	0.41
1:AA:1190:G:OP2	3:AC:5:VAL:HB	2.20	0.41
1:AA:1233:G:N2	1:AA:1234:C:C2	2.89	0.41
2:AB:21:ARG:HA	2:AB:21:ARG:NH1	2.35	0.41
2:AB:70:VAL:CG1	2:AB:70:VAL:O	2.68	0.41
3:AC:157:LEU:HD11	3:AC:164:ARG:C	2.41	0.41
4:AD:170:TRP:CZ3	4:AD:190:ASP:HB3	2.55	0.41
9:AI:56:ASP:O	9:AI:60:LYS:NZ	2.34	0.41
13:AM:40:ALA:O	13:AM:43:VAL:HG22	2.20	0.41
16:AP:16:PHE:CE2	16:AP:40:ASN:HB2	2.55	0.41
17:AQ:26:GLU:OE2	17:AQ:39:LYS:HD2	2.20	0.41
22:BA:17:G:C5	22:BA:18:U:C5	3.08	0.41
22:BA:28:A:C6	22:BA:29:U:C4	3.08	0.41
22:BA:29:U:O2'	22:BA:30:G:H5'	2.21	0.41
22:BA:526:A:O2'	22:BA:2043:C:O2	2.30	0.41
22:BA:605:G:H1'	22:BA:657:U:H1'	2.02	0.41
22:BA:1079:C:C5	22:BA:1088:A:N1	2.88	0.41
22:BA:1306:C:C2	22:BA:1307:A:C8	3.08	0.41
22:BA:1635:A:C6	22:BA:1636:U:C2	3.08	0.41
22:BA:1855:U:C4	22:BA:1856:U:C4	3.08	0.41
22:BA:1932:A:C5'	22:BA:1933:G:OP2	2.66	0.41
22:BA:1937:A:C8	22:BA:1939:U:C2'	3.03	0.41
22:BA:2321:U:C5'	22:BA:2322:A:OP2	2.66	0.41
22:BA:2694:G:C5	22:BA:2695:U:C5	3.08	0.41
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.19	0.41
22:BA:2779:U:C5	22:BA:2781:A:C2	3.09	0.41
23:BB:93:C:C2	23:BB:94:A:C8	3.08	0.41
24:BC:24:LEU:HD12	24:BC:24:LEU:HA	1.87	0.41
24:BC:72:ASP:O	24:BC:74:ILE:N	2.52	0.41
24:BC:153:GLN:C	24:BC:156:ARG:HD2	2.40	0.41
24:BC:171:TYR:HD2	24:BC:185:GLU:N	2.19	0.41
30:BI:105:GLN:O	30:BI:106:LEU:CB	2.68	0.41
31:BJ:41:LYS:O	31:BJ:42:ALA:C	2.58	0.41
31:BJ:81:ILE:HG12	31:BJ:82:GLY:N	2.35	0.41
39:BR:80:ARG:O	39:BR:80:ARG:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:5:ILE:C	42:BU:6:ARG:HG2	2.40	0.41
44:BW:65:GLY:HA3	44:BW:83:GLU:O	2.21	0.41
49:B1:26:ASN:OD1	49:B1:28:ARG:HB2	2.21	0.41
51:B3:10:ALA:C	51:B3:12:LYS:N	2.74	0.41
1:CA:117:G:O6	1:CA:289:G:H1'	2.21	0.41
1:CA:262:A:N6	1:CA:263:A:N6	2.69	0.41
1:CA:346:G:C2'	1:CA:347:G:H5'	2.50	0.41
1:CA:406:G:C5	1:CA:495:A:C8	3.09	0.41
1:CA:503:C:C2	1:CA:504:C:C5	3.09	0.41
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.73	0.41
1:CA:1329:A:H5"	13:CM:25:VAL:HA	2.03	0.41
3:CC:16:LYS:HE3	3:CC:17:PRO:HD2	2.01	0.41
3:CC:64:ILE:HG22	3:CC:97:VAL:HG23	2.02	0.41
4:CD:55:LEU:C	4:CD:55:LEU:HD22	2.41	0.41
4:CD:168:PRO:HB3	4:CD:170:TRP:CH2	2.55	0.41
5:CE:96:MET:HE3	5:CE:96:MET:HB3	1.87	0.41
6:CF:93:LYS:O	6:CF:93:LYS:HG2	2.20	0.41
8:CH:125:ILE:HD11	8:CH:128:TYR:CE1	2.56	0.41
9:CI:26:GLY:H	9:CI:59:GLU:HA	1.83	0.41
15:CO:67:LEU:O	15:CO:70:LEU:N	2.54	0.41
17:CQ:69:LYS:O	17:CQ:70:THR:CB	2.68	0.41
21:CU:43:THR:O	21:CU:46:LYS:HB3	2.20	0.41
22:DA:308:G:H4'	42:DU:17:LYS:NZ	2.36	0.41
22:DA:491:G:C6	22:DA:492:A:C5	3.09	0.41
22:DA:666:A:H5"	33:DL:48:ARG:CD	2.51	0.41
22:DA:911:A:O4'	22:DA:2264:C:H4'	2.21	0.41
22:DA:1154:G:P	38:DQ:58:ARG:HH11	2.44	0.41
22:DA:1267:U:OP2	22:DA:2012:G:N1	2.38	0.41
22:DA:1359:A:N7	22:DA:1360:G:C8	2.88	0.41
22:DA:1364:G:C8	45:DX:2:SER:CA	3.03	0.41
22:DA:1465:G:H2'	22:DA:1466:U:C6	2.56	0.41
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.29	0.41
22:DA:1719:G:N2	22:DA:1742:U:H1'	2.35	0.41
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.20	0.41
22:DA:1855:U:C5	22:DA:1856:U:C4	3.09	0.41
22:DA:1897:G:H2'	22:DA:1897:G:N3	2.36	0.41
22:DA:1965:C:H5"	22:DA:1966:A:H2'	2.03	0.41
22:DA:2204:G:C5	22:DA:2221:G:C2	3.09	0.41
22:DA:2281:A:O2'	22:DA:2282:G:H5'	2.20	0.41
22:DA:2650:U:H2'	22:DA:2651:C:C6	2.56	0.41
23:DB:42:C:C4	27:DF:88:LYS:HE3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:114:C:C2	23:DB:115:A:C8	3.08	0.41
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.20	0.41
28:DG:98:VAL:HG21	28:DG:124:GLU:HG3	2.01	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
32:DK:99:ILE:HG21	32:DK:119:ALA:HB2	2.02	0.41
33:DL:109:LYS:HG3	33:DL:126:ARG:HB3	2.02	0.41
33:DL:132:ARG:O	33:DL:136:GLU:N	2.50	0.41
34:DM:76:LYS:HE2	34:DM:83:GLY:O	2.21	0.41
36:DO:80:GLU:HA	36:DO:83:LEU:HD12	2.02	0.41
40:DS:16:LYS:HA	40:DS:19:LEU:HD22	2.02	0.41
41:DT:38:ALA:O	41:DT:39:THR:CB	2.68	0.41
45:DX:69:ALA:O	45:DX:72:ARG:N	2.54	0.41
49:D1:8:LYS:HB2	49:D1:8:LYS:HE2	1.80	0.41
49:D1:50:LYS:O	49:D1:51:GLU:HB3	2.19	0.41
1:AA:4:U:O2	1:AA:4:U:C2'	2.69	0.41
1:AA:291:U:O2'	1:AA:292:G:H5'	2.19	0.41
1:AA:566:G:O6	57:AA:1840:HOH:O	2.22	0.41
1:AA:722:G:H4'	21:AU:49:LYS:HZ3	1.85	0.41
1:AA:1081:A:C2	1:AA:1082:A:C4	3.08	0.41
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.21	0.41
3:AC:174:PRO:C	3:AC:176:HIS:H	2.24	0.41
7:AG:15:ASP:CG	7:AG:18:PHE:HB2	2.40	0.41
8:AH:39:VAL:O	8:AH:43:GLU:HG2	2.21	0.41
9:AI:22:LYS:O	9:AI:24:GLY:N	2.53	0.41
11:AK:110:ILE:CG2	21:AU:17:ARG:HE	2.33	0.41
11:AK:113:VAL:HG12	18:AR:73:ARG:NH2	2.36	0.41
12:AL:28:PRO:HB2	12:AL:29:GLN:OE1	2.20	0.41
13:AM:3:ARG:O	13:AM:4:ILE:O	2.39	0.41
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.20	0.41
22:BA:417:C:H2'	22:BA:418:C:C6	2.55	0.41
22:BA:852:U:H2'	22:BA:853:C:C6	2.55	0.41
22:BA:1084:A:N7	22:BA:1085:A:N6	2.68	0.41
22:BA:1098:A:C6	22:BA:1099:G:N1	2.88	0.41
22:BA:1375:U:N3	22:BA:1376:C:C5	2.88	0.41
22:BA:1415:U:H2'	22:BA:1416:G:H4'	2.03	0.41
22:BA:1447:C:H2'	22:BA:1448:G:C8	2.55	0.41
22:BA:1912:A:C2	22:BA:1919:A:C5	3.09	0.41
22:BA:1934:C:C2'	22:BA:1935:G:O5'	2.68	0.41
22:BA:2266:A:H5'	22:BA:2267:A:C5	2.55	0.41
22:BA:2415:G:C5	22:BA:2416:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2516:A:C2	22:BA:2569:G:C4	3.09	0.41
22:BA:2600:A:N7	24:BC:236:GLU:HG2	2.35	0.41
22:BA:2702:G:H2'	22:BA:2703:C:C6	2.55	0.41
22:BA:2706:A:N1	22:BA:2707:U:C2	2.89	0.41
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.81	0.41
22:BA:2880:C:H5"	22:BA:2881:U:OP2	2.20	0.41
23:BB:41:G:C6	27:BF:69:LYS:NZ	2.84	0.41
25:BD:136:ASN:HD21	25:BD:139:SER:H	1.69	0.41
26:BE:73:ILE:HG13	26:BE:78:TRP:HZ3	1.86	0.41
26:BE:91:ASP:OD1	26:BE:91:ASP:C	2.58	0.41
26:BE:180:LEU:HD23	26:BE:180:LEU:HA	1.86	0.41
26:BE:196:VAL:O	26:BE:196:VAL:HG12	2.21	0.41
27:BF:48:LYS:O	27:BF:51:ASP:HB2	2.20	0.41
28:BG:54:PRO:HG3	28:BG:62:TRP:CE2	2.56	0.41
28:BG:71:LEU:O	28:BG:75:MET:HG3	2.20	0.41
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	2.02	0.41
30:BI:122:ILE:HA	30:BI:125:MET:SD	2.60	0.41
33:BL:17:LYS:HD3	33:BL:27:LEU:HD13	2.02	0.41
35:BN:25:ALA:CB	35:BN:48:VAL:HG22	2.50	0.41
35:BN:85:PRO:O	35:BN:86:ARG:C	2.59	0.41
44:BW:12:ASN:O	44:BW:14:ARG:NH1	2.53	0.41
53:B5:83:LYS:HD2	53:B5:153:ILE:CB	2.51	0.41
1:CA:273:U:H2'	1:CA:274:A:H5'	2.01	0.41
1:CA:296:U:C4	1:CA:297:G:N7	2.88	0.41
1:CA:374:A:C5	1:CA:375:U:C5	3.09	0.41
1:CA:501:C:H1'	1:CA:549:C:H1'	2.02	0.41
1:CA:833:G:C6	1:CA:834:U:C5	3.08	0.41
1:CA:843:U:H6	1:CA:843:U:H3'	1.86	0.41
1:CA:940:C:N4	1:CA:941:G:O6	2.54	0.41
1:CA:1027:C:N4	1:CA:1034:G:N1	2.68	0.41
1:CA:1140:C:O2'	1:CA:1141:C:P	2.79	0.41
2:CB:57:LEU:HD21	2:CB:67:ILE:HD11	2.03	0.41
3:CC:6:HIS:CG	14:CN:89:MET:HB3	2.54	0.41
5:CE:115:LEU:CD2	5:CE:123:VAL:HG21	2.51	0.41
6:CF:54:LEU:HA	6:CF:55:HIS:CD2	2.56	0.41
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	2.01	0.41
9:CI:32:GLN:N	9:CI:32:GLN:HE21	2.19	0.41
9:CI:113:ARG:O	9:CI:115:LYS:HG3	2.21	0.41
11:CK:33:THR:HA	11:CK:44:TRP:HB3	2.02	0.41
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	2.03	0.41
22:DA:416:U:N3	22:DA:417:C:C4	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:701:G:H2'	22:DA:702:U:H5"	2.02	0.41
22:DA:734:A:C8	22:DA:735:A:C8	3.08	0.41
22:DA:768:G:O2'	22:DA:769:U:H5'	2.21	0.41
22:DA:845:A:H5'	22:DA:846:U:OP2	2.21	0.41
22:DA:846:U:O2'	22:DA:847:U:P	2.78	0.41
22:DA:975:A:N3	22:DA:1156:A:C2	2.88	0.41
22:DA:1255:U:C5	26:DE:68:ALA:HA	2.55	0.41
22:DA:1441:G:H2'	22:DA:1442:U:H6	1.84	0.41
22:DA:1616:A:H2	22:DA:1647:U:C5	2.39	0.41
22:DA:1616:A:H4'	22:DA:1617:C:OP2	2.21	0.41
22:DA:1676:A:C2	22:DA:1993:U:H5'	2.56	0.41
22:DA:1877:A:N6	22:DA:1878:G:C6	2.88	0.41
22:DA:1926:U:H2'	22:DA:1928:A:C8	2.55	0.41
22:DA:1993:U:H4'	25:DD:133:THR:HG22	2.00	0.41
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.20	0.41
22:DA:2228:G:C5	22:DA:2229:U:C5	3.08	0.41
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	2.03	0.41
22:DA:2529:G:H4'	28:DG:175:LYS:HG3	2.02	0.41
22:DA:2536:G:C6	22:DA:2537:U:C4	3.09	0.41
22:DA:2843:G:N2	22:DA:2875:C:C2	2.89	0.41
23:DB:40:U:N3	23:DB:44:G:OP2	2.46	0.41
24:DC:56:GLY:O	24:DC:215:GLY:HA2	2.21	0.41
25:DD:62:LYS:N	25:DD:63:PRO:HD2	2.36	0.41
31:DJ:7:LYS:O	31:DJ:11:VAL:CG2	2.67	0.41
35:DN:25:ALA:HB1	35:DN:48:VAL:HG22	2.01	0.41
38:DQ:106:PHE:O	38:DQ:109:LEU:N	2.53	0.41
41:DT:2:ILE:HA	41:DT:3:ARG:CB	2.51	0.41
43:DV:30:ILE:HG13	43:DV:40:ILE:HG13	2.03	0.41
45:DX:54:LYS:O	45:DX:58:VAL:N	2.47	0.41
1:AA:152:A:H3'	1:AA:153:C:C6	2.55	0.41
1:AA:281:G:O2'	1:AA:282:A:P	2.79	0.41
1:AA:382:A:H2'	1:AA:383:A:C8	2.56	0.41
1:AA:500:G:C2	1:AA:501:C:C2	3.08	0.41
1:AA:528:C:H5'	1:AA:529:G:OP2	2.20	0.41
1:AA:651:C:C4	1:AA:652:U:O4	2.73	0.41
1:AA:864:A:C6	1:AA:865:A:N1	2.89	0.41
1:AA:992:U:H4'	1:AA:993:G:O5'	2.21	0.41
1:AA:1023:U:H2'	1:AA:1024:G:O4'	2.20	0.41
1:AA:1314:C:N4	19:AS:4:SER:HA	2.36	0.41
1:AA:1321:U:O3'	19:AS:78:ARG:NH2	2.54	0.41
2:AB:89:GLN:NE2	2:AB:218:ALA:HA	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.21	0.41
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.56	0.41
5:AE:74:VAL:O	5:AE:76:LEU:N	2.54	0.41
6:AF:10:VAL:HG12	6:AF:11:HIS:N	2.36	0.41
12:AL:7:LEU:HD13	17:AQ:34:TYR:CE2	2.56	0.41
12:AL:102:LEU:HB3	12:AL:103:ASP:H	1.67	0.41
13:AM:107:ARG:HG2	13:AM:107:ARG:NH1	2.36	0.41
17:AQ:22:VAL:HA	17:AQ:44:LEU:O	2.20	0.41
19:AS:15:LEU:CD1	19:AS:33:THR:HG21	2.49	0.41
22:BA:85:G:P	42:BU:28:VAL:HG11	2.60	0.41
22:BA:126:A:O2'	22:BA:127:A:H5'	2.20	0.41
22:BA:628:G:C6	22:BA:636:G:C2	3.09	0.41
22:BA:686:U:H6	22:BA:788:A:N1	2.18	0.41
22:BA:996:A:N6	22:BA:1160:G:N1	2.68	0.41
22:BA:999:U:H5	22:BA:1154:G:C5	2.38	0.41
22:BA:1045:C:H3'	22:BA:1046:A:H5'	2.02	0.41
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.39	0.41
22:BA:1278:C:H2'	22:BA:1279:G:C8	2.56	0.41
22:BA:1416:G:O2'	22:BA:1417:C:H6	2.03	0.41
22:BA:1789:A:H2'	22:BA:1790:C:O4'	2.21	0.41
22:BA:1828:G:H5"	57:BA:3452:HOH:O	2.20	0.41
22:BA:1941:C:O2	22:BA:1941:C:C2'	2.63	0.41
22:BA:2178:C:H2'	22:BA:2179:C:C6	2.55	0.41
22:BA:2492:U:O2'	22:BA:2493:U:H5'	2.21	0.41
22:BA:2526:G:N1	22:BA:2538:C:C2	2.88	0.41
23:BB:3:C:C4	23:BB:4:C:C5	3.09	0.41
24:BC:141:VAL:HA	24:BC:191:THR:O	2.19	0.41
24:BC:160:THR:H	24:BC:195:VAL:CG1	2.33	0.41
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.53	0.41
26:BE:130:LYS:O	26:BE:131:THR:C	2.58	0.41
28:BG:149:ARG:HG3	28:BG:149:ARG:HH11	1.85	0.41
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
30:BI:101:ILE:O	30:BI:102:SER:HB2	2.20	0.41
31:BJ:99:ARG:O	31:BJ:103:ILE:HG13	2.20	0.41
35:BN:58:ASP:OD2	35:BN:63:ARG:HD2	2.20	0.41
37:BP:70:VAL:O	37:BP:70:VAL:HG12	2.20	0.41
38:BQ:50:ARG:HH21	39:BR:74:ILE:HD12	1.86	0.41
40:BS:42:LYS:O	40:BS:46:LEU:HD12	2.20	0.41
41:BT:61:LEU:CD1	41:BT:82:LYS:HB3	2.51	0.41
43:BV:40:ILE:HA	43:BV:40:ILE:HD13	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BZ:7:ILE:HD11	47:BZ:48:ILE:HD11	2.02	0.41
51:B3:17:THR:HG23	51:B3:21:GLY:C	2.41	0.41
1:CA:571:U:O2'	1:CA:918:A:OP1	2.33	0.41
1:CA:583:A:N7	1:CA:584:G:N7	2.68	0.41
1:CA:620:C:H2'	1:CA:621:A:C8	2.55	0.41
1:CA:666:G:C2	1:CA:667:G:C8	3.09	0.41
1:CA:804:U:C5	1:CA:805:C:C5	3.08	0.41
1:CA:822:U:H2'	1:CA:823:C:H6	1.86	0.41
1:CA:927:G:O2'	1:CA:1532:U:H4'	2.21	0.41
1:CA:1004:A:O2'	1:CA:1036:A:N1	2.45	0.41
1:CA:1104:G:H2'	1:CA:1105:A:O4'	2.20	0.41
1:CA:1162:C:C2	1:CA:1175:G:N2	2.89	0.41
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.55	0.41
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.51	0.41
1:CA:1489:G:H2'	1:CA:1490:U:O4'	2.20	0.41
1:CA:1503:A:OP1	1:CA:1531:A:O2'	2.29	0.41
2:CB:16:PHE:CD1	2:CB:18:HIS:CE1	3.08	0.41
2:CB:35:ARG:C	2:CB:37:LYS:N	2.72	0.41
2:CB:68:LEU:HD13	2:CB:161:LEU:CD1	2.50	0.41
3:CC:130:PHE:CE2	3:CC:157:LEU:HD23	2.55	0.41
4:CD:174:ASP:OD1	4:CD:177:LYS:N	2.53	0.41
4:CD:188:ARG:HH12	4:CD:192:SER:HB3	1.86	0.41
6:CF:41:ASP:OD2	6:CF:43:GLY:N	2.51	0.41
9:CI:22:LYS:O	9:CI:24:GLY:N	2.52	0.41
9:CI:55:VAL:O	9:CI:55:VAL:CG2	2.69	0.41
11:CK:125:LYS:O	21:CU:35:ARG:HB2	2.20	0.41
12:CL:94:ARG:C	12:CL:95:TYR:CG	2.93	0.41
20:CT:58:VAL:HG13	20:CT:72:ALA:HB1	2.02	0.41
20:CT:70:ASN:O	20:CT:71:LYS:C	2.59	0.41
22:DA:260:G:C6	22:DA:261:G:N7	2.89	0.41
22:DA:302:C:N3	22:DA:303:G:N7	2.68	0.41
22:DA:347:A:C2	22:DA:348:A:C5	3.08	0.41
22:DA:616:A:N3	22:DA:616:A:H2'	2.36	0.41
22:DA:632:A:H5"	33:DL:68:SER:HB2	2.02	0.41
22:DA:668:A:C2	22:DA:670:A:C4	3.09	0.41
22:DA:753:A:C2	22:DA:754:U:C2	3.08	0.41
22:DA:1040:A:H4'	43:DV:49:ASN:ND2	2.36	0.41
22:DA:1164:C:C2	22:DA:1165:A:C8	3.09	0.41
22:DA:1178:C:H2'	22:DA:1179:G:N7	2.34	0.41
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.89	0.41
22:DA:1417:C:N4	22:DA:1418:G:C6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1526:C:H2'	22:DA:1527:G:C8	2.55	0.41
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.50	0.41
22:DA:1833:C:C4	22:DA:1834:U:C5	3.09	0.41
22:DA:2345:G:C5	22:DA:2347:C:N4	2.88	0.41
22:DA:2415:G:N1	22:DA:2416:C:C2	2.89	0.41
22:DA:2850:A:C6	22:DA:2869:G:H4'	2.54	0.41
23:DB:42:C:C6	27:DF:66:LEU:HD22	2.56	0.41
26:DE:109:LEU:O	26:DE:112:LEU:N	2.53	0.41
27:DF:161:LYS:HB2	27:DF:165:GLU:OE2	2.21	0.41
33:DL:82:LEU:O	33:DL:82:LEU:HG	2.20	0.41
35:DN:69:ARG:C	35:DN:70:THR:CG2	2.88	0.41
35:DN:108:ALA:O	35:DN:110:MET:HG2	2.21	0.41
1:AA:149:A:H1'	1:AA:1446:A:H2	1.86	0.41
1:AA:419:C:C4	1:AA:420:U:C5	3.09	0.41
1:AA:495:A:H4'	1:AA:496:A:O4'	2.21	0.41
1:AA:577:G:C8	1:AA:816:A:N1	2.89	0.41
1:AA:586:C:H2'	1:AA:587:G:O4'	2.20	0.41
1:AA:767:A:H2'	1:AA:768:A:O4'	2.21	0.41
1:AA:1160:G:O6	1:AA:1181:G:C6	2.74	0.41
1:AA:1187:G:H2'	1:AA:1187:G:N3	2.35	0.41
2:AB:61:ALA:HA	2:AB:65:GLY:CA	2.50	0.41
7:AG:69:VAL:HG21	7:AG:104:ILE:HG13	2.02	0.41
9:AI:29:VAL:HA	9:AI:33:ARG:O	2.21	0.41
9:AI:52:LEU:HB3	9:AI:57:MET:HG3	2.03	0.41
18:AR:40:VAL:CG1	18:AR:41:PRO:HD2	2.49	0.41
22:BA:28:A:C2'	22:BA:29:U:H5'	2.50	0.41
22:BA:256:A:N3	22:BA:257:C:C6	2.89	0.41
22:BA:301:G:C6	22:BA:317:G:C6	3.08	0.41
22:BA:804:A:H2'	22:BA:806:C:C4	2.56	0.41
22:BA:945:A:C8	57:BA:3258:HOH:O	2.59	0.41
22:BA:1068:G:H2'	22:BA:1069:A:H5'	2.03	0.41
22:BA:1094:U:O4	22:BA:1097:U:OP2	2.38	0.41
22:BA:1138:G:H5"	22:BA:1139:G:OP2	2.21	0.41
22:BA:1414:C:C4	22:BA:1415:U:H5	2.39	0.41
22:BA:1795:C:H2'	22:BA:1796:U:H6	1.86	0.41
22:BA:1824:G:C5	22:BA:1825:U:C5	3.08	0.41
22:BA:1855:U:C4	22:BA:1856:U:C5	3.08	0.41
22:BA:1967:C:H2'	22:BA:1967:C:O2	2.20	0.41
22:BA:2077:A:N6	22:BA:2435:A:N6	2.69	0.41
22:BA:2670:A:H2'	22:BA:2671:G:O4'	2.21	0.41
22:BA:2751:G:C4	28:BG:3:ARG:HD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2765:A:N3	22:BA:2765:A:H2'	2.34	0.41
22:BA:2873:A:H4'	35:BN:6:SER:OG	2.20	0.41
23:BB:109:A:C8	23:BB:110:C:C5	3.08	0.41
24:BC:8:PRO:CB	24:BC:14:ARG:HB2	2.50	0.41
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	2.02	0.41
24:BC:211:ALA:O	24:BC:216:VAL:HB	2.21	0.41
24:BC:212:ARG:C	24:BC:214:ARG:N	2.74	0.41
24:BC:246:THR:OG1	24:BC:250:VAL:HB	2.21	0.41
24:BC:260:ASN:C	24:BC:262:ARG:N	2.74	0.41
24:BC:264:ASP:O	24:BC:265:LYS:C	2.59	0.41
25:BD:104:VAL:CG2	25:BD:177:VAL:HG11	2.50	0.41
27:BF:6:ASP:O	27:BF:7:TYR:C	2.59	0.41
27:BF:55:ALA:HA	27:BF:58:ALA:HB3	2.03	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41
30:BI:21:SER:H	30:BI:22:PRO:CD	2.34	0.41
30:BI:101:ILE:HD11	30:BI:138:LEU:HD13	2.01	0.41
31:BJ:23:LYS:CE	31:BJ:142:ILE:OXT	2.69	0.41
42:BU:72:ILE:HD12	42:BU:96:PHE:CE2	2.56	0.41
43:BV:56:PHE:O	43:BV:61:LEU:HD11	2.19	0.41
1:CA:10:A:OP2	5:CE:131:THR:HG21	2.20	0.41
1:CA:40:C:H2'	1:CA:41:G:O4'	2.21	0.41
1:CA:104:G:O2'	1:CA:105:G:H5'	2.21	0.41
1:CA:206:C:H2'	1:CA:207:C:H4'	2.02	0.41
1:CA:348:G:N3	1:CA:348:G:H2'	2.36	0.41
1:CA:439:U:H2'	1:CA:440:C:H5'	2.03	0.41
1:CA:570:G:C2	1:CA:571:U:C5	3.08	0.41
1:CA:683:G:C2	1:CA:684:U:C2	3.08	0.41
1:CA:766:A:H2'	1:CA:767:A:O4'	2.20	0.41
2:CB:140:GLU:O	2:CB:141:LEU:C	2.59	0.41
4:CD:41:HIS:O	4:CD:42:GLY:C	2.57	0.41
4:CD:55:LEU:HD13	4:CD:56:ARG:NH1	2.36	0.41
4:CD:78:GLU:OE2	4:CD:82:LEU:HD21	2.21	0.41
5:CE:149:SER:O	5:CE:153:VAL:N	2.54	0.41
8:CH:21:ASN:O	8:CH:23:ALA:N	2.53	0.41
8:CH:86:TYR:O	8:CH:87:LYS:HD2	2.21	0.41
12:CL:7:LEU:O	12:CL:8:VAL:C	2.59	0.41
13:CM:13:LYS:HB3	13:CM:14:HIS:H	1.71	0.41
16:CP:14:ARG:N	16:CP:15:PRO:HD3	2.36	0.41
22:DA:279:A:N6	22:DA:361:G:H1'	2.36	0.41
22:DA:432:A:H2'	22:DA:433:C:C6	2.55	0.41
22:DA:449:A:C5	22:DA:450:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:629:G:OP1	51:D3:18:GLY:N	2.50	0.41
22:DA:647:G:N7	22:DA:648:G:N7	2.68	0.41
22:DA:1095:A:H2'	22:DA:1096:A:N9	2.36	0.41
22:DA:1305:C:N4	22:DA:1607:C:OP2	2.54	0.41
22:DA:1332:G:C2	22:DA:1609:A:N6	2.88	0.41
22:DA:1545:A:C2'	22:DA:1546:G:H5'	2.51	0.41
22:DA:1936:A:H2	22:DA:1943:U:H3	1.69	0.41
22:DA:2307:G:N2	22:DA:2311:A:C8	2.88	0.41
22:DA:2461:A:C2	22:DA:2490:G:N2	2.88	0.41
22:DA:2468:A:C2	22:DA:2481:G:C2	3.08	0.41
22:DA:2489:U:C4	22:DA:2490:G:C6	3.09	0.41
22:DA:2574:G:C6	22:DA:2575:C:N3	2.89	0.41
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.86	0.41
22:DA:2752:C:C5	22:DA:2753:A:N7	2.88	0.41
22:DA:2765:A:H3'	22:DA:2765:A:N3	2.36	0.41
23:DB:89:U:O2	23:DB:89:U:O4'	2.38	0.41
31:DJ:34:ARG:HG2	31:DJ:39:LYS:HB2	2.03	0.41
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	2.02	0.41
46:DY:20:ASN:CG	46:DY:50:VAL:HG22	2.41	0.41
1:AA:65:A:C4	1:AA:381:C:C5	3.08	0.41
1:AA:96:U:O2'	1:AA:97:G:O5'	2.38	0.41
1:AA:106:C:O2'	1:AA:379:C:H5"	2.21	0.41
1:AA:147:G:N2	1:AA:176:C:C2	2.89	0.41
1:AA:259:G:N2	1:AA:260:G:H1'	2.35	0.41
1:AA:278:G:O2'	1:AA:279:A:H5"	2.20	0.41
1:AA:335:C:H2'	1:AA:336:A:C8	2.55	0.41
1:AA:339:C:H2'	1:AA:340:U:H6	1.86	0.41
1:AA:376:G:H5"	16:AP:5:ARG:HB2	2.02	0.41
1:AA:412:A:H4'	1:AA:413:G:OP1	2.20	0.41
1:AA:502:A:H2'	1:AA:503:C:O4'	2.21	0.41
1:AA:594:U:C4	1:AA:595:A:C6	3.09	0.41
1:AA:655:A:C2	1:AA:656:G:C4	3.09	0.41
1:AA:668:G:O2'	1:AA:669:G:H5'	2.21	0.41
1:AA:724:G:C6	1:AA:725:G:N7	2.88	0.41
1:AA:807:A:C6	1:AA:808:C:C4	3.09	0.41
1:AA:819:A:N7	1:AA:1529:G:N1	2.68	0.41
1:AA:960:U:C5	1:AA:1225:A:C8	3.09	0.41
1:AA:1007:U:H3'	1:AA:1008:U:C6	2.56	0.41
1:AA:1163:A:C2	1:AA:1174:G:C2	3.09	0.41
1:AA:1198:G:C2	1:AA:1199:U:C2	3.09	0.41
1:AA:1296:C:H4'	1:AA:1302:C:H5	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1539:C:OP1	21:AU:18:ARG:CG	2.69	0.41
2:AB:50:PHE:CD1	2:AB:50:PHE:C	2.94	0.41
3:AC:17:PRO:O	3:AC:18:TRP:CE3	2.73	0.41
3:AC:46:GLU:C	3:AC:48:ALA:H	2.24	0.41
3:AC:47:LEU:O	3:AC:48:ALA:C	2.59	0.41
3:AC:172:ARG:O	3:AC:173:VAL:CG2	2.69	0.41
4:AD:4:TYR:O	4:AD:6:GLY:N	2.54	0.41
4:AD:51:TYR:CE2	4:AD:55:LEU:HD12	2.55	0.41
5:AE:14:LYS:NZ	5:AE:116:GLU:OE1	2.28	0.41
5:AE:77:ASN:O	5:AE:78:ASN:HB2	2.19	0.41
8:AH:14:ILE:HG22	8:AH:15:ARG:N	2.35	0.41
8:AH:54:ASP:O	8:AH:57:PRO:HD3	2.21	0.41
10:AJ:71:LEU:O	10:AJ:72:ARG:HD3	2.20	0.41
11:AK:36:ASP:OD1	11:AK:40:ASN:HB2	2.21	0.41
11:AK:81:ASN:HB3	11:AK:106:ARG:HB3	2.03	0.41
12:AL:36:ARG:HB3	12:AL:38:TYR:CE2	2.55	0.41
12:AL:57:LEU:C	12:AL:59:ASN:N	2.75	0.41
13:AM:29:ARG:NH1	13:AM:33:ILE:HD11	2.36	0.41
13:AM:60:VAL:C	13:AM:62:LYS:N	2.74	0.41
16:AP:30:GLY:O	16:AP:31:ARG:C	2.59	0.41
17:AQ:29:VAL:O	17:AQ:37:PHE:HA	2.21	0.41
17:AQ:79:VAL:HG12	17:AQ:80:GLU:HG3	2.03	0.41
19:AS:51:VAL:HG13	19:AS:71:LEU:CD1	2.51	0.41
22:BA:198:C:H5'	22:BA:2244:U:OP1	2.20	0.41
22:BA:223:A:O2'	22:BA:420:C:O2	2.36	0.41
22:BA:419:U:H2'	22:BA:420:C:C6	2.56	0.41
22:BA:496:G:C6	22:BA:497:A:C4	3.09	0.41
22:BA:573:U:N3	22:BA:2031:A:OP1	2.54	0.41
22:BA:613:A:C8	22:BA:616:A:N1	2.89	0.41
22:BA:659:G:C4	22:BA:660:C:C6	3.09	0.41
22:BA:763:G:O2'	22:BA:764:A:H3'	2.20	0.41
22:BA:778:G:C6	22:BA:779:U:C4	3.09	0.41
22:BA:972:A:N6	22:BA:973:A:C6	2.89	0.41
22:BA:1084:A:C5	22:BA:1085:A:N6	2.89	0.41
22:BA:1259:G:H2'	22:BA:1260:A:H8	1.85	0.41
22:BA:1272:A:C5	22:BA:1618:A:C4	3.08	0.41
22:BA:1385:A:N3	22:BA:1386:C:C5	2.88	0.41
22:BA:1431:A:H2'	22:BA:1432:G:H8	1.85	0.41
22:BA:1527:G:H8	22:BA:1527:G:O5'	2.03	0.41
22:BA:1760:C:H5"	22:BA:1761:C:OP2	2.21	0.41
22:BA:1790:C:C5	22:BA:1828:G:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1796:U:H2'	22:BA:1797:G:H8	1.84	0.41
22:BA:1856:U:H2'	22:BA:1857:G:O4'	2.21	0.41
22:BA:1866:A:C8	22:BA:1867:G:C8	3.09	0.41
22:BA:1883:U:C2'	22:BA:1884:G:H5'	2.50	0.41
22:BA:1934:C:H2'	22:BA:1935:G:O5'	2.21	0.41
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.20	0.41
22:BA:2078:C:H2'	22:BA:2079:U:H6	1.86	0.41
22:BA:2120:G:N2	22:BA:2179:C:C2	2.89	0.41
22:BA:2181:U:H2'	22:BA:2182:U:O4'	2.21	0.41
22:BA:2257:U:H2'	22:BA:2258:C:C6	2.55	0.41
22:BA:2310:C:C4	27:BF:77:PHE:CE1	3.09	0.41
22:BA:2333:A:P	44:BW:77:ARG:HH22	2.43	0.41
22:BA:2531:A:C5	22:BA:2532:G:C8	3.08	0.41
22:BA:2553:G:N1	22:BA:2554:U:O2	2.53	0.41
22:BA:2696:U:C2	22:BA:2697:G:C8	3.09	0.41
22:BA:2772:C:H2'	22:BA:2773:C:H6	1.86	0.41
22:BA:2808:G:C2	22:BA:2891:U:C5	3.09	0.41
23:BB:41:G:C6	27:BF:69:LYS:HE2	2.56	0.41
24:BC:3:VAL:HG12	24:BC:19:VAL:HG22	2.02	0.41
24:BC:108:LYS:N	24:BC:194:GLU:O	2.52	0.41
24:BC:168:ASP:CG	24:BC:169:GLY:H	2.24	0.41
24:BC:182:ARG:HG3	24:BC:182:ARG:HH21	1.86	0.41
24:BC:189:ARG:O	24:BC:190:ALA:HB2	2.21	0.41
25:BD:38:LYS:HD3	25:BD:43:ASP:OD1	2.20	0.41
26:BE:194:LYS:O	26:BE:197:GLU:HB3	2.20	0.41
27:BF:17:MET:HE1	27:BF:22:TYR:O	2.21	0.41
27:BF:77:PHE:C	27:BF:78:LYS:HG3	2.41	0.41
28:BG:147:ASP:O	28:BG:150:ALA:HB3	2.21	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.42	0.41
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.41
31:BJ:109:LEU:HD22	31:BJ:118:MET:HB2	2.03	0.41
32:BK:119:ALA:HA	32:BK:120:PRO:HD3	1.81	0.41
34:BM:45:GLN:O	34:BM:46:ILE:C	2.59	0.41
37:BP:26:VAL:HG23	37:BP:85:SER:O	2.21	0.41
37:BP:26:VAL:CG1	37:BP:47:VAL:HG23	2.51	0.41
37:BP:37:LYS:HE3	37:BP:39:ARG:HE	1.86	0.41
37:BP:93:ARG:O	37:BP:94:LYS:CB	2.64	0.41
38:BQ:68:ALA:O	38:BQ:71:GLN:HB3	2.21	0.41
39:BR:49:ILE:O	39:BR:50:GLY:C	2.58	0.41
39:BR:66:HIS:ND1	39:BR:94:THR:HB	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:54:ALA:O	40:BS:57:ASN:HB2	2.21	0.41
42:BU:96:PHE:CE1	42:BU:103:ILE:HG12	2.56	0.41
42:BU:99:ASN:O	42:BU:100:SER:C	2.58	0.41
47:BZ:3:LYS:CE	47:BZ:3:LYS:H	2.33	0.41
50:B2:16:HIS:HB3	50:B2:21:ARG:HH12	1.85	0.41
51:B3:50:VAL:HG12	51:B3:54:ASP:HB2	2.03	0.41
1:CA:66:A:C4'	1:CA:173:U:C5	3.04	0.41
1:CA:137:U:C2	1:CA:227:G:C2	3.09	0.41
1:CA:182:A:C5	1:CA:184:G:N7	2.88	0.41
1:CA:248:C:N4	1:CA:249:U:C4	2.88	0.41
1:CA:257:G:C5	57:CA:1718:HOH:O	2.72	0.41
1:CA:378:G:C2	1:CA:386:C:C2	3.09	0.41
1:CA:510:A:H8	57:CA:1760:HOH:O	2.03	0.41
1:CA:551:U:H2'	1:CA:552:U:H6	1.86	0.41
1:CA:711:G:C2	1:CA:712:A:C4	3.09	0.41
1:CA:801:U:H2'	1:CA:802:A:H8	1.86	0.41
1:CA:952:U:H2'	1:CA:953:G:C8	2.56	0.41
1:CA:983:A:N3	1:CA:983:A:H2'	2.36	0.41
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.56	0.41
1:CA:1234:C:H1'	1:CA:1364:U:H6	1.86	0.41
1:CA:1240:U:H5'	1:CA:1241:G:H8	1.83	0.41
1:CA:1318:A:O2'	19:CS:37:ARG:HD3	2.21	0.41
1:CA:1513:A:C4	1:CA:1514:G:C8	3.08	0.41
2:CB:16:PHE:HB2	2:CB:40:ILE:CG2	2.50	0.41
2:CB:89:GLN:CG	2:CB:221:VAL:HG11	2.51	0.41
4:CD:173:VAL:O	4:CD:174:ASP:CB	2.69	0.41
5:CE:150:PRO:O	5:CE:152:MET:N	2.54	0.41
7:CG:31:MET:O	7:CG:31:MET:HG2	2.20	0.41
7:CG:42:ILE:HD13	7:CG:116:MET:HB3	2.03	0.41
9:CI:116:VAL:HG21	10:CJ:62:ARG:HB2	2.03	0.41
13:CM:16:VAL:HG13	13:CM:34:LEU:HD12	2.02	0.41
14:CN:57:PRO:O	14:CN:59:ARG:N	2.54	0.41
16:CP:42:ILE:O	16:CP:44:SER:N	2.54	0.41
18:CR:23:TYR:HA	18:CR:58:ALA:HB1	2.02	0.41
19:CS:55:ARG:NE	19:CS:79:THR:HG22	2.36	0.41
22:DA:153:U:H2'	22:DA:154:U:C6	2.56	0.41
22:DA:189:G:N2	22:DA:208:C:N4	2.69	0.41
22:DA:224:U:P	22:DA:408:G:H21	2.43	0.41
22:DA:227:A:O4'	22:DA:229:C:N4	2.54	0.41
22:DA:295:G:C2	22:DA:296:U:C6	3.09	0.41
22:DA:321:U:O4'	26:DE:159:LEU:HD23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:374:A:C2	22:DA:401:A:N3	2.88	0.41
22:DA:392:U:H2'	22:DA:393:C:C6	2.56	0.41
22:DA:629:G:O6	22:DA:630:G:C6	2.74	0.41
22:DA:658:U:C4	22:DA:659:G:N7	2.89	0.41
22:DA:684:G:C6	22:DA:774:G:C4	3.08	0.41
22:DA:738:G:N1	22:DA:739:A:C2	2.88	0.41
22:DA:763:G:C5	22:DA:765:C:C5	3.09	0.41
22:DA:936:A:C6	22:DA:937:C:C4	3.09	0.41
22:DA:982:C:H5"	22:DA:983:A:P	2.61	0.41
22:DA:1001:A:H2'	22:DA:1002:G:O4'	2.21	0.41
22:DA:1034:G:C6	22:DA:1035:U:C2	3.09	0.41
22:DA:1269:A:C6	22:DA:1270:C:N4	2.89	0.41
22:DA:1285:A:N6	22:DA:1329:U:C5	2.89	0.41
22:DA:1285:A:C6	22:DA:1329:U:C5	3.08	0.41
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.53	0.41
22:DA:1593:A:C6	22:DA:1594:U:C2	3.08	0.41
22:DA:1831:G:C6	22:DA:1832:C:N4	2.89	0.41
22:DA:1895:C:H2'	22:DA:1896:G:H8	1.86	0.41
22:DA:1895:C:O2'	22:DA:1896:G:H5'	2.20	0.41
22:DA:1984:G:O6	22:DA:1985:C:N4	2.54	0.41
22:DA:2079:U:O2'	45:DX:23:ASN:OD1	2.39	0.41
22:DA:2113:U:C2	22:DA:2114:A:N7	2.89	0.41
22:DA:2125:G:C6	22:DA:2171:A:OP1	2.72	0.41
22:DA:2131:U:H4'	22:DA:2133:G:H1'	1.96	0.41
22:DA:2418:A:O2'	49:D1:20:PHE:CZ	2.67	0.41
22:DA:2491:U:H5"	22:DA:2570:G:H5"	2.00	0.41
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.35	0.41
22:DA:2570:G:O2'	22:DA:2571:U:H5'	2.19	0.41
22:DA:2591:C:H2'	22:DA:2592:G:H8	1.86	0.41
22:DA:2694:G:C6	22:DA:2695:U:C4	3.08	0.41
22:DA:2840:C:H4'	35:DN:94:TYR:OH	2.20	0.41
23:DB:84:G:C2	23:DB:93:C:O2	2.73	0.41
24:DC:61:ALA:O	24:DC:63:ARG:NH2	2.53	0.41
24:DC:162:VAL:HG12	24:DC:163:GLN:N	2.36	0.41
24:DC:212:ARG:HD2	24:DC:216:VAL:O	2.20	0.41
26:DE:75:SER:O	26:DE:78:TRP:HB2	2.21	0.41
27:DF:48:LYS:HA	27:DF:51:ASP:HB2	2.02	0.41
28:DG:40:ALA:HB1	28:DG:61:GLY:HA2	2.03	0.41
28:DG:77:ILE:CG2	28:DG:81:GLU:OE1	2.69	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
34:DM:38:ARG:NH1	34:DM:98:PRO:HD2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.20	0.41
36:DO:7:ARG:HD2	36:DO:97:PHE:CE1	2.56	0.41
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.36	0.41
39:DR:4:VAL:O	39:DR:39:LEU:N	2.43	0.41
40:DS:10:ALA:O	40:DS:100:THR:HA	2.21	0.41
40:DS:67:ASP:OD1	40:DS:67:ASP:N	2.41	0.41
42:DU:49:VAL:HA	42:DU:50:PRO:HD3	1.96	0.41
42:DU:49:VAL:HG13	42:DU:53:ASN:O	2.21	0.41
42:DU:83:VAL:HG12	42:DU:84:GLY:O	2.21	0.41
45:DX:31:PRO:HB2	45:DX:33:LEU:HD13	2.02	0.41
46:DY:9:LYS:HB3	46:DY:12:GLU:HG3	2.02	0.41
49:D1:4:GLY:C	49:D1:6:ARG:H	2.24	0.41
49:D1:43:VAL:O	49:D1:44:ARG:HB2	2.20	0.41
1:AA:64:G:N2	1:AA:67:C:C4	2.89	0.41
1:AA:274:A:H4'	1:AA:275:G:O5'	2.20	0.41
1:AA:774:G:C5	1:AA:775:G:N7	2.89	0.41
1:AA:991:U:H4'	1:AA:992:U:C5'	2.51	0.41
1:AA:1121:U:N3	1:AA:1122:U:C5	2.89	0.41
1:AA:1226:C:C5	13:AM:103:LYS:HA	2.56	0.41
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.21	0.41
1:AA:1406:U:H2'	1:AA:1407:C:O5'	2.21	0.41
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.56	0.41
1:AA:1491:G:H2'	1:AA:1492:A:O4'	2.20	0.41
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.69	0.41
6:AF:86:ARG:NH1	6:AF:86:ARG:HG3	2.36	0.41
7:AG:57:SER:HB3	7:AG:60:GLU:HG3	2.03	0.41
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.86	0.41
12:AL:66:TYR:O	12:AL:97:THR:N	2.48	0.41
13:AM:3:ARG:CG	13:AM:4:ILE:N	2.81	0.41
15:AO:26:GLU:HA	15:AO:81:LEU:HD22	2.03	0.41
16:AP:19:VAL:HG13	16:AP:38:PHE:N	2.36	0.41
19:AS:19:VAL:O	19:AS:23:VAL:HG23	2.21	0.41
20:AT:44:LYS:O	20:AT:47:ALA:HB3	2.21	0.41
21:AU:25:LYS:HD2	21:AU:26:ALA:H	1.86	0.41
22:BA:109:C:C2	22:BA:110:G:C8	3.09	0.41
22:BA:118:A:N3	22:BA:178:G:H1'	2.36	0.41
22:BA:323:C:N4	22:BA:333:G:C8	2.89	0.41
22:BA:449:A:C6	22:BA:450:G:C5	3.09	0.41
22:BA:563:A:C6	22:BA:2018:G:C5	3.09	0.41
22:BA:578:G:C5	22:BA:2018:G:H5'	2.56	0.41
22:BA:587:C:H3'	22:BA:588:U:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1036:G:H1'	22:BA:1120:G:N2	2.36	0.41
22:BA:1163:G:C2	22:BA:1164:C:C5	3.08	0.41
22:BA:1380:G:N2	22:BA:1570:A:N1	2.65	0.41
22:BA:1422:G:C2	22:BA:1423:G:C4	3.08	0.41
22:BA:1914:C:C2	22:BA:1915:U:C6	3.09	0.41
22:BA:2308:G:C6	22:BA:2311:A:N7	2.89	0.41
22:BA:2432:A:N1	45:BX:21:ALA:CB	2.84	0.41
22:BA:2507:C:C5	22:BA:2583:G:N1	2.88	0.41
23:BB:45:A:C5	23:BB:46:A:C8	3.09	0.41
25:BD:4:LEU:HD23	25:BD:101:PHE:CE1	2.56	0.41
25:BD:101:PHE:HE2	25:BD:107:VAL:HG11	1.84	0.41
27:BF:126:GLY:O	27:BF:158:THR:HG22	2.21	0.41
28:BG:124:GLU:OE1	28:BG:124:GLU:HA	2.21	0.41
29:BH:1:MET:HE3	29:BH:26:ALA:HB3	2.02	0.41
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.41
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.41
30:BI:97:LYS:HB3	30:BI:139:VAL:HG22	2.02	0.41
31:BJ:93:ILE:HD13	31:BJ:100:VAL:HG21	2.02	0.41
32:BK:28:SER:C	32:BK:30:ARG:N	2.74	0.41
32:BK:86:LEU:HB3	32:BK:95:ILE:HD12	2.03	0.41
32:BK:110:GLU:HA	32:BK:113:MET:HE2	2.02	0.41
33:BL:91:ASP:HB3	33:BL:94:THR:HB	2.02	0.41
38:BQ:74:ILE:HG23	38:BQ:79:PHE:HB2	2.03	0.41
41:BT:69:ARG:CB	41:BT:74:ILE:HG22	2.50	0.41
42:BU:47:LYS:HA	42:BU:48:PRO:HD2	1.89	0.41
45:BX:37:ARG:HG3	45:BX:48:THR:HB	2.02	0.41
47:BZ:23:THR:HG23	47:BZ:47:MET:HB3	2.02	0.41
48:B0:40:ARG:O	48:B0:41:HIS:CB	2.69	0.41
1:CA:23:C:H5	1:CA:561:U:O4	2.04	0.41
1:CA:104:G:C2'	1:CA:105:G:H5'	2.50	0.41
1:CA:270:A:H2'	1:CA:271:C:C6	2.56	0.41
1:CA:407:U:C2	1:CA:408:A:C8	3.09	0.41
1:CA:527:G:N1	1:CA:528:C:C5	2.89	0.41
1:CA:1077:G:C6	1:CA:1081:A:C6	3.09	0.41
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.56	0.41
1:CA:1361:G:C2	1:CA:1362:A:N7	2.89	0.41
1:CA:1515:G:H2'	1:CA:1516:G:H8	1.86	0.41
2:CB:36:ASN:O	2:CB:37:LYS:HB2	2.21	0.41
2:CB:62:SER:HA	2:CB:224:GLY:HA2	2.02	0.41
2:CB:108:ARG:O	2:CB:108:ARG:HG3	2.21	0.41
6:CF:19:PRO:HA	6:CF:22:ILE:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:3:ARG:C	13:CM:4:ILE:HG12	2.40	0.41
22:DA:60:G:H3'	22:DA:60:G:P	2.60	0.41
22:DA:78:U:OP2	46:DY:2:LYS:HD3	2.21	0.41
22:DA:124:G:H5"	22:DA:1376:C:O2'	2.21	0.41
22:DA:277:G:O2'	22:DA:361:G:N1	2.53	0.41
22:DA:448:U:H4'	22:DA:449:A:OP2	2.21	0.41
22:DA:478:A:C2	22:DA:480:A:C5	3.08	0.41
22:DA:484:C:O2	22:DA:484:C:H2'	2.21	0.41
22:DA:705:A:C2	22:DA:727:A:O4'	2.74	0.41
22:DA:784:G:C2	24:DC:228:VAL:HG21	2.56	0.41
22:DA:1002:G:H2'	22:DA:1003:G:O5'	2.21	0.41
22:DA:1370:C:C4	57:DA:3396:HOH:O	2.72	0.41
22:DA:1464:G:N3	22:DA:1465:G:C8	2.89	0.41
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.56	0.41
22:DA:1949:G:C6	22:DA:1950:G:C6	3.10	0.41
22:DA:2091:C:P	22:DA:2092:U:H3'	2.61	0.41
22:DA:2221:G:O2'	22:DA:2222:C:H5'	2.21	0.41
22:DA:2330:G:N2	22:DA:2386:A:C4	2.89	0.41
22:DA:2508:G:C2	22:DA:2582:G:C6	3.09	0.41
22:DA:2526:G:C2'	52:D4:1:MET:H3	2.34	0.41
22:DA:2552:U:C2	22:DA:2554:U:H5"	2.56	0.41
23:DB:70:C:H2'	23:DB:71:C:H6	1.86	0.41
24:DC:154:LEU:HD13	24:DC:176:LEU:CD2	2.51	0.41
25:DD:13:ARG:HD2	25:DD:15:PHE:CZ	2.56	0.41
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.51	0.41
26:DE:60:TRP:CH2	26:DE:67:ARG:HD3	2.56	0.41
26:DE:150:THR:C	26:DE:192:ALA:HB2	2.42	0.41
27:DF:43:ALA:HA	27:DF:46:ASP:C	2.41	0.41
28:DG:61:GLY:O	28:DG:64:GLN:HB2	2.20	0.41
28:DG:89:LEU:CD2	28:DG:129:THR:HA	2.51	0.41
28:DG:109:PHE:CE2	28:DG:152:ARG:CZ	3.03	0.41
28:DG:137:ASP:O	28:DG:141:ILE:HG23	2.21	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
30:DI:17:MET:SD	30:DI:20:PRO:HB3	2.61	0.41
36:DO:90:VAL:HG23	36:DO:117:PHE:HB3	2.02	0.41
37:DP:89:ARG:O	37:DP:112:GLU:HA	2.22	0.41
39:DR:29:THR:HG22	39:DR:29:THR:O	2.21	0.41
45:DX:5:CYS:O	45:DX:5:CYS:SG	2.79	0.41
1:AA:10:A:O2'	1:AA:11:G:H5'	2.21	0.40
1:AA:158:G:N2	1:AA:159:G:H1'	2.36	0.40
1:AA:163:C:H2'	1:AA:164:G:O5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:207:C:H2'	1:AA:208:U:C2	2.56	0.40
1:AA:258:G:C2	1:AA:259:G:C1'	3.04	0.40
1:AA:327:A:O3'	1:AA:328:C:H4'	2.20	0.40
1:AA:380:G:C2	1:AA:384:G:N1	2.90	0.40
1:AA:397:A:C6	1:AA:548:G:C8	3.08	0.40
1:AA:458:U:H2'	1:AA:459:A:C8	2.56	0.40
1:AA:469:C:C4	1:AA:470:C:N4	2.89	0.40
1:AA:559:A:H4'	1:AA:560:A:C5'	2.51	0.40
1:AA:633:G:H2'	1:AA:634:C:C6	2.56	0.40
1:AA:656:G:C5	1:AA:657:U:C5	3.09	0.40
1:AA:702:A:N6	22:BA:1846:G:HO2'	2.20	0.40
1:AA:815:A:H4'	1:AA:817:C:C4	2.55	0.40
1:AA:864:A:C2	1:AA:865:A:C2	3.09	0.40
1:AA:1058:G:C2'	1:AA:1059:C:H5'	2.52	0.40
1:AA:1221:G:H5"	1:AA:1321:U:O2	2.22	0.40
1:AA:1286:U:O2	1:AA:1286:U:C2'	2.69	0.40
2:AB:184:PHE:CZ	2:AB:198:PHE:HD2	2.38	0.40
3:AC:140:ASN:HA	3:AC:143:ARG:HB3	2.03	0.40
4:AD:100:ASN:O	4:AD:102:VAL:N	2.48	0.40
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.56	0.40
5:AE:111:MET:HE1	5:AE:125:ALA:HB1	2.04	0.40
6:AF:54:LEU:HD22	6:AF:55:HIS:O	2.21	0.40
6:AF:90:MET:O	6:AF:91:ARG:O	2.38	0.40
14:AN:61:ARG:O	14:AN:62:ASN:CB	2.68	0.40
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	2.03	0.40
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.36	0.40
17:AQ:59:VAL:HG23	17:AQ:77:ARG:O	2.20	0.40
22:BA:158:U:O2	22:BA:158:U:H2'	2.21	0.40
22:BA:323:C:OP2	22:BA:339:U:O2'	2.32	0.40
22:BA:368:A:C6	22:BA:369:U:O4	2.74	0.40
22:BA:603:A:C8	22:BA:655:A:C6	3.08	0.40
22:BA:779:U:H5"	24:BC:49:ILE:HD12	2.03	0.40
22:BA:1026:G:C8	22:BA:1134:A:C4	3.09	0.40
22:BA:1054:A:C4	22:BA:1055:G:C8	3.09	0.40
22:BA:1063:G:C2	30:BI:90:SER:OG	2.72	0.40
22:BA:1180:U:O2'	22:BA:1181:U:H5'	2.20	0.40
22:BA:1208:C:C4	22:BA:1209:U:C4	3.09	0.40
22:BA:1272:A:C6	22:BA:1618:A:N3	2.89	0.40
22:BA:1376:C:C4	22:BA:1377:G:C6	3.09	0.40
22:BA:1429:G:C5	22:BA:1568:G:C6	3.09	0.40
22:BA:1553:A:C8	22:BA:1555:G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.21	0.40
22:BA:1794:A:C1'	22:BA:1900:A:C2	3.03	0.40
22:BA:1795:C:C4	22:BA:1796:U:C4	3.08	0.40
22:BA:2457:U:O2	22:BA:2495:G:C2	2.74	0.40
24:BC:252:THR:HG22	24:BC:253:LYS:H	1.85	0.40
26:BE:75:SER:O	26:BE:78:TRP:HB2	2.22	0.40
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.40
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.18	0.40
31:BJ:80:HIS:O	31:BJ:83:GLY:N	2.44	0.40
32:BK:28:SER:O	32:BK:30:ARG:N	2.53	0.40
32:BK:66:LYS:HD2	32:BK:79:PHE:O	2.21	0.40
35:BN:106:ASP:O	35:BN:107:ASN:HB3	2.21	0.40
40:BS:38:TYR:CE2	48:B0:28:LEU:CD2	3.04	0.40
41:BT:11:LEU:HD22	41:BT:34:VAL:HG12	2.03	0.40
43:BV:25:LYS:CD	43:BV:41:GLU:HG3	2.51	0.40
46:BY:22:LEU:O	46:BY:23:ARG:C	2.59	0.40
49:B1:30:LYS:N	49:B1:31:PRO:CD	2.84	0.40
1:CA:21:G:H2'	1:CA:22:G:C8	2.56	0.40
1:CA:112:G:H5'	1:CA:389:A:O2'	2.22	0.40
1:CA:116:A:C6	1:CA:117:G:C5	3.10	0.40
1:CA:263:A:P	20:CT:74:ARG:NH1	2.94	0.40
1:CA:309:A:O2'	1:CA:310:G:H5'	2.21	0.40
1:CA:439:U:H4'	4:CD:121:LYS:CD	2.49	0.40
1:CA:570:G:N3	1:CA:571:U:C5	2.88	0.40
1:CA:716:A:N3	11:CK:120:GLY:HA2	2.36	0.40
1:CA:1250:A:H4'	9:CI:70:GLY:O	2.21	0.40
1:CA:1434:A:N6	1:CA:1435:G:N1	2.69	0.40
3:CC:95:ALA:HB1	3:CC:97:VAL:HG22	2.02	0.40
3:CC:199:LYS:CB	3:CC:201:TRP:CH2	3.04	0.40
8:CH:26:THR:HA	8:CH:59:LEU:O	2.20	0.40
8:CH:30:SER:O	8:CH:31:LYS:C	2.58	0.40
12:CL:4:VAL:HG13	12:CL:5:ASN:H	1.86	0.40
14:CN:90:ARG:HB3	14:CN:92:GLU:CG	2.51	0.40
15:CO:85:LEU:HD12	15:CO:85:LEU:HA	1.92	0.40
19:CS:67:VAL:O	19:CS:67:VAL:HG12	2.19	0.40
22:DA:7:G:H2'	22:DA:8:C:O4'	2.21	0.40
22:DA:16:C:H4'	48:D0:11:SER:OG	2.21	0.40
22:DA:134:G:C6	22:DA:135:U:C2	3.09	0.40
22:DA:161:A:OP2	22:DA:162:U:H3'	2.21	0.40
22:DA:310:A:O2'	22:DA:311:A:P	2.78	0.40
22:DA:347:A:N1	22:DA:348:A:C4	2.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:373:U:OP2	45:DX:54:LYS:NZ	2.44	0.40
22:DA:467:G:P	50:D2:33:ARG:HH11	2.45	0.40
22:DA:468:G:H5"	26:DE:55:SER:HB3	2.02	0.40
22:DA:503:A:C6	22:DA:506:G:C6	3.09	0.40
22:DA:538:A:C2	22:DA:556:A:C4	3.09	0.40
22:DA:574:A:H4'	22:DA:575:A:C5'	2.51	0.40
22:DA:1062:G:C2	22:DA:1063:G:N1	2.89	0.40
22:DA:1273:U:H4'	22:DA:1275:A:P	2.61	0.40
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.21	0.40
22:DA:1485:U:H2'	22:DA:1486:U:C6	2.56	0.40
22:DA:1513:U:C4	22:DA:1514:G:N7	2.89	0.40
22:DA:1717:A:H2'	22:DA:1718:G:O4'	2.21	0.40
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.35	0.40
22:DA:1809:A:C6	22:DA:1810:A:C5	3.09	0.40
22:DA:2086:U:H1'	22:DA:2234:G:N2	2.36	0.40
22:DA:2301:C:O2	22:DA:2316:G:C2	2.74	0.40
22:DA:2302:U:O2'	27:DF:123:ASP:O	2.39	0.40
22:DA:2838:G:C6	22:DA:2839:G:C6	3.09	0.40
24:DC:148:PRO:CD	24:DC:185:GLU:CD	2.90	0.40
26:DE:7:ASP:OD1	26:DE:7:ASP:N	2.50	0.40
26:DE:77:ILE:O	26:DE:77:ILE:HG13	2.22	0.40
28:DG:123:ALA:CB	28:DG:133:LEU:HA	2.50	0.40
30:DI:8:TYR:HD2	30:DI:58:VAL:HG13	1.86	0.40
30:DI:20:PRO:HG2	30:DI:24:VAL:CG2	2.52	0.40
30:DI:51:LYS:N	30:DI:51:LYS:CD	2.83	0.40
34:DM:105:MET:HB2	34:DM:105:MET:HE3	1.93	0.40
34:DM:114:ARG:O	34:DM:118:LYS:N	2.54	0.40
37:DP:79:PRO:O	37:DP:80:VAL:C	2.60	0.40
41:DT:61:LEU:HD12	41:DT:61:LEU:O	2.21	0.40
42:DU:47:LYS:HG2	42:DU:48:PRO:HD2	2.03	0.40
42:DU:74:ASN:OD1	42:DU:96:PHE:CG	2.74	0.40
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.70	0.40
45:DX:58:VAL:O	45:DX:61:LYS:N	2.54	0.40
49:D1:20:PHE:CD1	49:D1:20:PHE:N	2.89	0.40
1:AA:26:A:C3'	1:AA:27:G:H5'	2.52	0.40
1:AA:570:G:H1'	1:AA:820:U:C4	2.55	0.40
1:AA:638:U:C4	1:AA:639:G:N7	2.90	0.40
1:AA:645:G:N7	57:AA:1749:HOH:O	2.37	0.40
1:AA:687:A:C5	1:AA:701:U:C5	3.09	0.40
1:AA:858:G:C6	1:AA:869:G:C8	3.10	0.40
1:AA:858:G:C5	57:AA:1823:HOH:O	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:862:C:H2'	1:AA:863:U:H5'	2.01	0.40
1:AA:1119:C:P	9:AI:85:ARG:HH22	2.44	0.40
1:AA:1162:C:C2	1:AA:1175:G:C2	3.10	0.40
2:AB:27:MET:HE1	2:AB:193:PRO:HB3	2.02	0.40
2:AB:62:SER:HA	2:AB:225:ARG:HD3	2.03	0.40
2:AB:66:LYS:O	2:AB:159:ASP:HB2	2.21	0.40
2:AB:192:ASP:HA	2:AB:193:PRO:HD2	1.90	0.40
3:AC:36:ASP:O	3:AC:40:ARG:HG3	2.22	0.40
3:AC:130:PHE:CZ	3:AC:131:ARG:HD2	2.55	0.40
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.50	0.40
5:AE:98:PRO:O	5:AE:99:ALA:HB3	2.22	0.40
15:AO:62:GLN:O	15:AO:65:LYS:N	2.53	0.40
17:AQ:45:HIS:HB2	17:AQ:70:THR:HG23	2.03	0.40
19:AS:14:HIS:O	19:AS:18:LYS:HG3	2.22	0.40
20:AT:67:ILE:HG13	20:AT:71:LYS:HE3	2.03	0.40
21:AU:47:ARG:HE	21:AU:47:ARG:HA	1.86	0.40
22:BA:102:U:C4	46:BY:2:LYS:HD2	2.56	0.40
22:BA:193:U:H2'	22:BA:194:G:H5'	2.02	0.40
22:BA:255:A:C4	22:BA:256:A:C8	3.10	0.40
22:BA:271:G:C4	22:BA:272:A:C8	3.10	0.40
22:BA:301:G:HO2'	22:BA:302:C:H6	1.68	0.40
22:BA:539:G:C5	22:BA:540:C:C5	3.09	0.40
22:BA:753:A:C2'	22:BA:754:U:O5'	2.69	0.40
22:BA:859:G:C8	22:BA:859:G:O5'	2.74	0.40
22:BA:868:U:C2	22:BA:869:G:C8	3.09	0.40
22:BA:945:A:C4'	22:BA:946:C:OP2	2.67	0.40
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.86	0.40
22:BA:1115:G:C2	22:BA:1116:G:C5	3.08	0.40
22:BA:1321:A:C5	22:BA:1322:A:C5	3.09	0.40
22:BA:1487:U:O2	22:BA:1503:A:C2	2.74	0.40
22:BA:1553:A:N6	22:BA:1555:G:H1'	2.36	0.40
22:BA:1805:A:O2'	22:BA:1806:C:H5'	2.21	0.40
22:BA:1933:G:C6	22:BA:1934:C:C4	3.10	0.40
22:BA:2140:G:C2	22:BA:2152:G:N1	2.90	0.40
22:BA:2424:C:H5'	22:BA:2424:C:H6	1.87	0.40
23:BB:57:A:H4'	27:BF:27:GLN:NE2	2.36	0.40
24:BC:257:THR:O	24:BC:258:ARG:C	2.59	0.40
26:BE:136:GLN:O	26:BE:137:LYS:C	2.60	0.40
27:BF:41:GLY:HA2	27:BF:85:ILE:HG13	2.02	0.40
30:BI:77:ALA:HA	30:BI:80:LEU:HD12	2.04	0.40
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:25:LEU:HD21	32:BK:40:LYS:HB2	2.03	0.40
32:BK:103:VAL:HB	32:BK:107:LEU:CD1	2.51	0.40
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	2.03	0.40
39:BR:40:MET:HG3	39:BR:48:LYS:HB2	2.03	0.40
40:BS:34:ASP:O	40:BS:35:ILE:C	2.58	0.40
42:BU:49:VAL:O	42:BU:49:VAL:HG13	2.21	0.40
47:BZ:21:LYS:C	47:BZ:23:THR:N	2.75	0.40
47:BZ:47:MET:O	47:BZ:48:ILE:C	2.59	0.40
49:B1:27:LYS:C	49:B1:29:THR:N	2.74	0.40
1:CA:459:A:N1	1:CA:460:A:C6	2.89	0.40
1:CA:676:A:C2	1:CA:677:U:C2	3.09	0.40
1:CA:881:G:H2'	1:CA:882:C:O4'	2.20	0.40
1:CA:942:G:C2	1:CA:1342:C:C2	3.09	0.40
1:CA:996:A:H2'	1:CA:997:U:C5	2.56	0.40
1:CA:1004:A:H2'	1:CA:1005:A:C8	2.56	0.40
1:CA:1068:G:H2'	1:CA:1069:C:H5'	2.02	0.40
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.56	0.40
1:CA:1517:G:H1'	22:DA:1919:A:O3'	2.20	0.40
2:CB:54:LEU:HD21	2:CB:213:TYR:CE2	2.56	0.40
3:CC:174:PRO:C	3:CC:176:HIS:H	2.23	0.40
8:CH:114:ARG:O	8:CH:115:ALA:C	2.58	0.40
9:CI:92:GLU:OE1	9:CI:95:ARG:HD3	2.21	0.40
10:CJ:73:LEU:HD23	10:CJ:73:LEU:C	2.41	0.40
11:CK:17:SER:O	11:CK:79:ILE:HA	2.21	0.40
11:CK:26:SER:N	11:CK:29:ASN:O	2.54	0.40
11:CK:60:PRO:HA	11:CK:92:GLY:N	2.36	0.40
12:CL:74:LEU:HD21	12:CL:104:CYS:SG	2.61	0.40
15:CO:48:LYS:HD3	15:CO:48:LYS:HA	1.90	0.40
17:CQ:14:SER:OG	17:CQ:17:MET:CE	2.68	0.40
20:CT:27:MET:HG3	20:CT:28:MET:N	2.36	0.40
20:CT:39:ILE:HD11	20:CT:83:ILE:HG22	2.03	0.40
20:CT:54:MET:HG3	20:CT:55:GLN:N	2.35	0.40
22:DA:70:G:H5"	22:DA:112:U:O2	2.20	0.40
22:DA:189:G:C5	22:DA:205:G:N2	2.89	0.40
22:DA:192:C:C4	22:DA:193:U:C2	3.09	0.40
22:DA:580:U:H3'	22:DA:580:U:C6	2.56	0.40
22:DA:1091:G:N3	22:DA:1092:C:C5	2.90	0.40
22:DA:1096:A:C8	22:DA:1096:A:H3'	2.56	0.40
22:DA:1270:C:O2'	22:DA:1648:U:OP2	2.40	0.40
22:DA:1604:C:H5"	57:DA:3401:HOH:O	2.20	0.40
22:DA:1638:C:O2'	22:DA:2698:U:O2	2.38	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.21	0.40
22:DA:1684:G:C2	22:DA:1705:A:C2	3.09	0.40
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.56	0.40
22:DA:2127:G:O2'	22:DA:2173:A:C2	2.74	0.40
22:DA:2134:A:H62	22:DA:2157:G:H1'	1.87	0.40
22:DA:2206:C:O2'	22:DA:2207:C:H5'	2.21	0.40
22:DA:2220:U:H2'	22:DA:2221:G:C8	2.56	0.40
22:DA:2392:A:C8	22:DA:2429:G:C2	3.09	0.40
22:DA:2546:U:H4'	22:DA:2565:A:N1	2.36	0.40
24:DC:211:ALA:O	24:DC:216:VAL:HB	2.22	0.40
26:DE:48:THR:HG22	26:DE:86:ALA:HB3	2.03	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
39:DR:7:SER:HB3	39:DR:22:LEU:HD22	2.03	0.40
39:DR:37:GLU:O	39:DR:39:LEU:HD13	2.21	0.40
43:DV:47:VAL:O	43:DV:51:GLN:HG3	2.21	0.40
47:DZ:9:GLN:HB3	47:DZ:32:ILE:HA	2.03	0.40
1:AA:75:G:N3	1:AA:75:G:H2'	2.36	0.40
1:AA:369:G:C2	1:AA:370:C:C5	3.09	0.40
1:AA:484:G:N7	1:AA:486:U:C1'	2.83	0.40
1:AA:872:A:C8	1:AA:874:G:C8	3.10	0.40
1:AA:1226:C:N4	13:AM:103:LYS:HG3	2.36	0.40
1:AA:1539:C:H4'	21:AU:21:ARG:HB2	2.03	0.40
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.42	0.40
3:AC:53:SER:HB3	3:AC:115:LEU:HG	2.02	0.40
4:AD:68:LEU:O	4:AD:70:ARG:N	2.55	0.40
5:AE:32:SER:O	5:AE:33:PHE:CG	2.74	0.40
5:AE:136:VAL:HG13	5:AE:137:VAL:H	1.86	0.40
7:AG:68:ASN:C	7:AG:70:ARG:H	2.24	0.40
10:AJ:52:LEU:HA	10:AJ:62:ARG:HG2	2.02	0.40
10:AJ:92:LEU:O	10:AJ:93:ALA:CB	2.69	0.40
11:AK:52:PHE:HB3	11:AK:56:ARG:NH1	2.37	0.40
11:AK:127:ARG:N	21:AU:34:ARG:CZ	2.84	0.40
12:AL:94:ARG:C	12:AL:95:TYR:CD2	2.94	0.40
13:AM:16:VAL:CG1	13:AM:34:LEU:HD13	2.51	0.40
15:AO:55:GLY:O	15:AO:58:ARG:HB3	2.22	0.40
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.89	0.40
16:AP:36:VAL:HG23	16:AP:56:ARG:HB2	2.03	0.40
17:AQ:9:GLN:O	17:AQ:59:VAL:O	2.39	0.40
20:AT:54:MET:HE3	20:AT:58:VAL:HG21	2.04	0.40
20:AT:80:THR:O	20:AT:81:ALA:C	2.59	0.40
22:BA:287:G:N3	22:BA:354:A:C2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:580:U:O3'	38:BQ:31:VAL:CG1	2.70	0.40
22:BA:846:U:H1'	22:BA:847:U:C5	2.56	0.40
22:BA:1107:G:C6	22:BA:1108:U:C4	3.09	0.40
22:BA:1131:G:O2'	22:BA:2026:U:H5'	2.21	0.40
22:BA:1362:C:C2'	22:BA:1363:C:H5'	2.52	0.40
22:BA:1383:A:C2	22:BA:1384:A:C2	3.10	0.40
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.52	0.40
22:BA:1588:G:N3	22:BA:1589:U:C6	2.89	0.40
22:BA:1613:G:O2'	50:B2:3:ARG:HD2	2.22	0.40
22:BA:1637:A:H4'	22:BA:2711:A:O2'	2.22	0.40
22:BA:1687:G:C2	22:BA:1688:U:C4	3.10	0.40
22:BA:2038:G:N7	22:BA:2039:U:C5	2.89	0.40
22:BA:2295:C:H2'	22:BA:2296:U:C6	2.57	0.40
22:BA:2310:C:C2'	22:BA:2311:A:C5'	2.99	0.40
22:BA:2547:A:C8	22:BA:2566:A:C4	3.09	0.40
22:BA:2582:G:C2	22:BA:2583:G:C8	3.09	0.40
22:BA:2591:C:OP2	24:BC:238:ARG:HG3	2.21	0.40
22:BA:2723:C:H2'	22:BA:2724:U:O5'	2.22	0.40
22:BA:2796:U:O4	22:BA:2798:U:C4	2.73	0.40
23:BB:71:C:H2'	23:BB:72:G:O4'	2.20	0.40
24:BC:19:VAL:O	24:BC:19:VAL:HG12	2.22	0.40
27:BF:42:GLU:O	27:BF:44:ILE:HG12	2.20	0.40
27:BF:46:ASP:HB3	27:BF:49:LEU:HB2	2.03	0.40
27:BF:136:ILE:HD12	27:BF:136:ILE:H	1.86	0.40
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.22	0.40
36:BO:102:ARG:O	36:BO:105:ALA:HB3	2.21	0.40
41:BT:11:LEU:HD11	41:BT:47:VAL:HG22	2.04	0.40
54:B6:5:MHU:CD1	54:B6:5:MHU:C	3.00	0.40
1:CA:17:U:H2'	1:CA:18:C:H6	1.86	0.40
1:CA:66:A:N3	1:CA:66:A:H2'	2.36	0.40
1:CA:280:C:H4'	1:CA:281:G:OP2	2.20	0.40
1:CA:295:C:C2	1:CA:296:U:C6	3.09	0.40
1:CA:495:A:C4	1:CA:496:A:N7	2.89	0.40
1:CA:778:G:O2'	11:CK:121:CYS:HB3	2.22	0.40
1:CA:1169:A:N1	1:CA:1170:A:C6	2.90	0.40
1:CA:1217:C:OP1	14:CN:5:SER:OG	2.38	0.40
1:CA:1256:A:H5'	1:CA:1258:G:H1'	2.03	0.40
1:CA:1346:A:C8	1:CA:1348:U:C2	3.10	0.40
1:CA:1460:C:N4	1:CA:1461:G:C5	2.90	0.40
2:CB:213:TYR:O	2:CB:217:VAL:HG23	2.21	0.40
4:CD:41:HIS:C	4:CD:43:ALA:H	2.25	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.90	0.40
5:CE:72:ILE:HD13	5:CE:145:GLU:HG3	2.03	0.40
7:CG:27:VAL:HG23	7:CG:28:ASN:ND2	2.35	0.40
7:CG:33:ASP:CB	7:CG:35:LYS:HE3	2.52	0.40
10:CJ:89:ARG:HB2	10:CJ:89:ARG:NH1	2.36	0.40
11:CK:51:GLY:O	11:CK:52:PHE:CD2	2.75	0.40
11:CK:107:ILE:HD11	11:CK:110:ILE:HG13	2.04	0.40
12:CL:59:ASN:HD22	12:CL:59:ASN:H	1.69	0.40
22:DA:176:A:C5	22:DA:177:G:C6	3.09	0.40
22:DA:190:A:H2'	22:DA:191:A:O4'	2.21	0.40
22:DA:219:A:N3	22:DA:234:U:O2'	2.44	0.40
22:DA:363:G:H2'	22:DA:364:C:H6	1.85	0.40
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.21	0.40
22:DA:647:G:C6	22:DA:648:G:C5	3.09	0.40
22:DA:742:A:H2'	22:DA:743:A:C8	2.56	0.40
22:DA:806:C:H2'	22:DA:807:U:C6	2.56	0.40
22:DA:983:A:N6	22:DA:984:A:C2	2.90	0.40
22:DA:1045:C:H4'	22:DA:1046:A:H5'	2.03	0.40
22:DA:1166:G:C2	22:DA:1184:U:O2	2.73	0.40
22:DA:1364:G:N3	22:DA:1368:G:C2	2.89	0.40
22:DA:1365:A:N3	22:DA:1365:A:H2'	2.35	0.40
22:DA:1468:U:H2'	22:DA:1522:A:N6	2.36	0.40
22:DA:1585:C:C5	22:DA:1586:A:C5	3.10	0.40
22:DA:1838:C:C2	22:DA:1898:U:C4	3.09	0.40
22:DA:1945:G:C8	22:DA:1945:G:O5'	2.74	0.40
22:DA:2114:A:C2	22:DA:2115:G:O4'	2.75	0.40
22:DA:2536:G:C6	22:DA:2537:U:N3	2.89	0.40
22:DA:2543:G:N1	22:DA:2765:A:C8	2.89	0.40
22:DA:2600:A:H2'	22:DA:2601:C:C6	2.55	0.40
24:DC:2:ALA:HA	24:DC:199:GLU:OE2	2.21	0.40
24:DC:64:ILE:O	24:DC:103:TYR:HB2	2.21	0.40
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.21	0.40
27:DF:26:MET:O	27:DF:28:VAL:N	2.54	0.40
27:DF:100:PHE:O	27:DF:104:ILE:HG12	2.21	0.40
27:DF:106:ILE:CG1	27:DF:107:ALA:N	2.84	0.40
28:DG:105:LEU:HB2	28:DG:113:VAL:HB	2.03	0.40
28:DG:148:LEU:HA	28:DG:151:TYR:HD1	1.86	0.40
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.69	0.40
31:DJ:3:THR:HG23	31:DJ:4:PHE:N	2.36	0.40
32:DK:31:ARG:HB3	32:DK:32:TYR:CE2	2.57	0.40
40:DS:47:VAL:O	40:DS:47:VAL:CG2	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:58:ALA:O	40:DS:64:ALA:N	2.54	0.40
45:DX:68:LEU:HA	45:DX:68:LEU:HD23	1.81	0.40
46:DY:36:GLN:O	46:DY:37:LEU:C	2.59	0.40
1:AA:32:A:H2'	1:AA:33:A:C8	2.57	0.40
1:AA:448:A:C5	1:AA:487:A:C2	3.09	0.40
1:AA:545:C:H5'	4:AD:69:GLU:CG	2.51	0.40
1:AA:545:C:H5'	4:AD:69:GLU:HG3	2.03	0.40
1:AA:799:G:H2'	1:AA:800:G:O4'	2.21	0.40
1:AA:929:G:C6	1:AA:930:C:N4	2.90	0.40
1:AA:982:U:C2	1:AA:983:A:N1	2.89	0.40
1:AA:1050:G:C6	1:AA:1209:C:N3	2.90	0.40
1:AA:1118:U:H2'	1:AA:1119:C:C6	2.56	0.40
1:AA:1203:C:C4	1:AA:1204:A:N7	2.90	0.40
1:AA:1242:G:C6	1:AA:1243:C:C4	3.09	0.40
2:AB:49:MET:O	2:AB:53:ALA:CB	2.67	0.40
2:AB:173:ILE:HG23	2:AB:183:VAL:HG11	2.03	0.40
4:AD:53:VAL:CG2	4:AD:54:GLN:N	2.84	0.40
10:AJ:6:ILE:HD12	10:AJ:76:ILE:O	2.21	0.40
11:AK:75:LYS:HB3	22:BA:2140:G:OP1	2.22	0.40
14:AN:4:GLN:O	14:AN:7:LYS:HB2	2.20	0.40
17:AQ:4:LYS:HG3	17:AQ:7:THR:HG23	2.02	0.40
18:AR:36:SER:HA	18:AR:72:ASP:OD2	2.21	0.40
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	2.03	0.40
20:AT:81:ALA:O	20:AT:82:GLN:C	2.60	0.40
22:BA:28:A:H1'	22:BA:513:A:C2	2.56	0.40
22:BA:223:A:C5	22:BA:422:A:C8	3.10	0.40
22:BA:457:A:O4'	22:BA:459:U:C6	2.75	0.40
22:BA:857:G:C5'	44:BW:69:PHE:CD1	3.05	0.40
22:BA:869:G:C4	22:BA:870:U:C6	3.10	0.40
22:BA:1011:G:C2	22:BA:1151:A:C2	3.10	0.40
22:BA:1085:A:C5	22:BA:1086:A:C6	3.09	0.40
22:BA:1098:A:N7	22:BA:1099:G:O6	2.55	0.40
22:BA:1760:C:H3'	22:BA:1761:C:C6	2.56	0.40
22:BA:1846:G:H2'	22:BA:1847:A:N9	2.36	0.40
22:BA:2018:G:C2	22:BA:2019:A:C4	3.10	0.40
22:BA:2136:G:H2'	22:BA:2137:U:C6	2.56	0.40
22:BA:2644:G:N7	22:BA:2645:G:C6	2.89	0.40
23:BB:73:A:N3	23:BB:73:A:H2'	2.37	0.40
23:BB:78:A:H2'	23:BB:79:G:O4'	2.22	0.40
24:BC:17:VAL:H	24:BC:204:VAL:CG2	2.32	0.40
24:BC:79:GLU:HB2	24:BC:93:LEU:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:267:ILE:HG21	24:BC:270:ARG:HD2	2.04	0.40
26:BE:68:ALA:O	26:BE:69:ARG:C	2.60	0.40
28:BG:11:VAL:O	28:BG:11:VAL:HG23	2.21	0.40
33:BL:64:PHE:HB3	51:B3:25:LYS:HD2	2.03	0.40
34:BM:108:VAL:O	34:BM:109:PRO:C	2.59	0.40
36:BO:18:LEU:HD12	36:BO:23:ALA:HB3	2.04	0.40
41:BT:16:VAL:O	41:BT:17:SER:CB	2.70	0.40
49:B1:34:LEU:N	49:B1:52:ALA:CB	2.84	0.40
1:CA:212:G:C2	1:CA:213:G:C8	3.09	0.40
1:CA:396:C:H2'	1:CA:397:A:H5"	2.03	0.40
1:CA:435:A:C2	1:CA:436:C:H1'	2.56	0.40
1:CA:562:U:OP2	12:CL:14:ARG:CZ	2.69	0.40
1:CA:581:G:N2	1:CA:761:G:C6	2.89	0.40
1:CA:718:A:H5'	11:CK:119:ASN:CG	2.42	0.40
1:CA:782:A:N7	1:CA:783:C:C5	2.89	0.40
1:CA:815:A:N7	1:CA:1509:C:O2'	2.32	0.40
1:CA:976:G:P	1:CA:1358:U:O2'	2.79	0.40
1:CA:1089:G:N2	1:CA:1090:U:H1'	2.36	0.40
1:CA:1108:G:OP1	3:CC:176:HIS:CD2	2.74	0.40
1:CA:1186:G:N2	1:CA:1187:G:H1'	2.37	0.40
1:CA:1243:C:N4	1:CA:1244:G:O6	2.54	0.40
1:CA:1359:C:O2'	1:CA:1361:G:N7	2.46	0.40
1:CA:1360:A:C8	14:CN:58:SER:HB3	2.57	0.40
1:CA:1461:G:C6	1:CA:1462:C:C4	3.10	0.40
1:CA:1521:C:C2	1:CA:1522:U:C6	3.10	0.40
2:CB:68:LEU:HD12	2:CB:158:PRO:HG3	2.03	0.40
4:CD:150:LYS:O	4:CD:152:GLN:OE1	2.40	0.40
5:CE:15:LEU:HA	5:CE:37:THR:HA	2.03	0.40
5:CE:96:MET:HE2	5:CE:115:LEU:HD21	2.03	0.40
10:CJ:36:VAL:HG22	10:CJ:76:ILE:HG12	2.03	0.40
12:CL:39:THR:HA	12:CL:50:ARG:O	2.22	0.40
13:CM:94:GLY:O	13:CM:95:LEU:HG	2.21	0.40
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.20	0.40
22:DA:77:G:H4'	46:DY:56:LEU:CD2	2.49	0.40
22:DA:90:U:C4	22:DA:91:A:C6	3.10	0.40
22:DA:449:A:C6	22:DA:450:G:C5	3.09	0.40
22:DA:659:G:C5	22:DA:660:C:C4	3.09	0.40
22:DA:949:G:C2	22:DA:969:G:C2	3.10	0.40
22:DA:1088:A:N6	30:DI:135:SER:OG	2.54	0.40
22:DA:1200:C:H2'	22:DA:1201:U:C6	2.57	0.40
22:DA:1441:G:C2	22:DA:1442:U:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1596:A:N6	22:DA:1597:A:C6	2.89	0.40
22:DA:2046:G:N1	22:DA:2047:C:C2	2.90	0.40
22:DA:2147:A:N6	22:DA:2148:G:C2	2.89	0.40
22:DA:2151:U:O2'	22:DA:2152:G:H5'	2.21	0.40
22:DA:2305:U:O4'	27:DF:131:GLY:HA3	2.22	0.40
22:DA:2314:A:H4'	27:DF:155:THR:HG21	2.03	0.40
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.57	0.40
22:DA:2550:G:C5	22:DA:2551:C:C4	3.09	0.40
23:DB:23:G:O6	57:DB:304:HOH:O	2.22	0.40
24:DC:35:GLU:O	24:DC:35:GLU:HG3	2.21	0.40
24:DC:202:LEU:HD12	24:DC:202:LEU:HA	1.89	0.40
30:DI:33:VAL:HG22	30:DI:67:PHE:CE2	2.57	0.40
34:DM:53:MET:HE1	34:DM:103:TYR:CB	2.51	0.40
35:DN:85:PRO:C	35:DN:87:PHE:N	2.74	0.40
36:DO:52:SER:HA	36:DO:74:VAL:HG22	2.03	0.40
37:DP:8:LEU:O	37:DP:8:LEU:HD23	2.21	0.40
41:DT:39:THR:O	41:DT:41:ALA:N	2.55	0.40
45:DX:17:ASN:HB2	45:DX:25:THR:O	2.20	0.40
1:AA:52:C:O2'	1:AA:53:A:H5'	2.22	0.40
1:AA:173:U:C2	1:AA:197:A:C2	3.10	0.40
1:AA:402:G:C5	1:AA:403:C:C5	3.09	0.40
1:AA:652:U:C2	1:AA:752:G:N2	2.90	0.40
1:AA:1014:A:H4'	19:AS:14:HIS:ND1	2.37	0.40
1:AA:1048:G:N2	1:AA:1050:G:C5	2.89	0.40
1:AA:1085:U:H5'	1:AA:1094:G:C2	2.57	0.40
1:AA:1403:C:H2'	1:AA:1404:C:C6	2.56	0.40
2:AB:27:MET:HG2	2:AB:189:THR:HA	2.04	0.40
2:AB:54:LEU:H	2:AB:54:LEU:HD22	1.87	0.40
2:AB:96:TRP:CZ2	2:AB:100:MET:HG2	2.56	0.40
2:AB:120:GLN:N	2:AB:123:ASP:HB2	2.36	0.40
2:AB:151:ILE:HG23	2:AB:152:LYS:H	1.85	0.40
3:AC:42:TYR:CZ	3:AC:46:GLU:HG3	2.57	0.40
3:AC:206:GLU:O	3:AC:207:ILE:O	2.38	0.40
4:AD:30:THR:O	4:AD:31:LYS:C	2.58	0.40
9:AI:24:GLY:H	9:AI:61:LEU:HA	1.85	0.40
9:AI:97:GLU:N	9:AI:97:GLU:OE2	2.54	0.40
11:AK:21:ALA:HA	11:AK:34:ILE:HD13	2.03	0.40
13:AM:91:HIS:HA	13:AM:109:ARG:NH2	2.36	0.40
14:AN:28:LYS:HG3	14:AN:29:ALA:N	2.36	0.40
15:AO:63:ARG:CG	15:AO:67:LEU:HD12	2.51	0.40
16:AP:36:VAL:O	16:AP:36:VAL:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:69:LYS:C	20:AT:71:LYS:N	2.74	0.40
22:BA:496:G:O4'	40:BS:61:ASN:ND2	2.54	0.40
22:BA:907:G:C5	22:BA:908:C:C5	3.10	0.40
22:BA:997:G:C4	22:BA:998:C:C5	3.09	0.40
22:BA:1026:G:OP1	22:BA:1134:A:H1'	2.21	0.40
22:BA:1132:U:O2	31:BJ:75:TYR:HB2	2.22	0.40
22:BA:1140:C:O4'	22:BA:1143:A:C2	2.74	0.40
22:BA:1216:G:H2'	22:BA:1217:U:H6	1.86	0.40
22:BA:1301:A:C6	22:BA:1303:G:C4	3.09	0.40
22:BA:1765:U:H3'	22:BA:1765:U:C6	2.56	0.40
22:BA:1856:U:O2'	22:BA:1857:G:H5'	2.21	0.40
22:BA:1891:G:C5	22:BA:1892:C:C4	3.10	0.40
22:BA:1907:G:C8	22:BA:1908:C:C5	3.10	0.40
22:BA:1917:U:N3	22:BA:1918:A:C4	2.89	0.40
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.34	0.40
22:BA:2219:U:H2'	22:BA:2220:U:O4'	2.22	0.40
22:BA:2271:G:C5	22:BA:2272:U:C4	3.10	0.40
22:BA:2355:G:C6	22:BA:2356:U:C4	3.10	0.40
22:BA:2492:U:C2	22:BA:2493:U:C5	3.09	0.40
22:BA:2503:A:H4'	22:BA:2504:U:OP1	2.21	0.40
22:BA:2626:C:H2'	22:BA:2627:G:O5'	2.21	0.40
22:BA:2896:C:C2	22:BA:2897:U:C5	3.09	0.40
23:BB:116:G:C4'	36:BO:54:VAL:HG13	2.49	0.40
29:BH:91:PHE:CG	1:CA:55:A:H1'	2.57	0.40
29:BH:120:GLY:HA2	29:BH:122:LEU:HA	2.04	0.40
30:BI:76:ALA:HB1	30:BI:129:ILE:CG2	2.52	0.40
30:BI:101:ILE:HG21	30:BI:106:LEU:HD12	2.02	0.40
31:BJ:32:LEU:HD23	31:BJ:32:LEU:HA	1.81	0.40
34:BM:47:GLU:O	34:BM:48:ALA:C	2.60	0.40
39:BR:39:LEU:CA	39:BR:49:ILE:HG23	2.51	0.40
39:BR:50:GLY:C	39:BR:51:VAL:O	2.59	0.40
41:BT:2:ILE:CA	41:BT:3:ARG:C	2.89	0.40
1:CA:182:A:O2'	1:CA:183:C:H2'	2.21	0.40
1:CA:197:A:C6	1:CA:221:C:H4'	2.56	0.40
1:CA:243:A:C2	1:CA:245:U:C4	3.10	0.40
1:CA:356:A:H2'	1:CA:357:G:O4'	2.21	0.40
1:CA:499:A:N6	1:CA:547:A:C8	2.89	0.40
1:CA:747:A:C5	1:CA:748:G:N7	2.89	0.40
1:CA:811:C:N4	1:CA:812:G:C6	2.89	0.40
1:CA:836:G:C5	1:CA:837:U:C5	3.10	0.40
1:CA:1348:U:H4'	9:CI:122:ARG:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.57	0.40
1:CA:1421:G:C2	1:CA:1422:G:C5	3.10	0.40
2:CB:24:ASN:C	2:CB:26:LYS:N	2.75	0.40
2:CB:47:VAL:O	2:CB:50:PHE:HD2	2.05	0.40
3:CC:181:ASP:OD2	3:CC:204:LYS:HB2	2.22	0.40
4:CD:29:ASP:O	4:CD:31:LYS:CE	2.70	0.40
4:CD:29:ASP:C	4:CD:31:LYS:N	2.70	0.40
6:CF:6:ILE:CG2	6:CF:7:VAL:N	2.84	0.40
6:CF:74:LEU:O	6:CF:77:THR:N	2.51	0.40
7:CG:133:THR:HA	7:CG:136:LYS:HB3	2.04	0.40
10:CJ:28:THR:HG21	10:CJ:90:LEU:HD12	2.04	0.40
11:CK:125:LYS:HA	21:CU:35:ARG:HG3	2.02	0.40
13:CM:95:LEU:HD22	13:CM:102:THR:HG21	2.03	0.40
17:CQ:17:MET:HE2	17:CQ:20:SER:O	2.21	0.40
17:CQ:52:GLU:HG2	17:CQ:53:CYS:H	1.86	0.40
17:CQ:56:GLY:HA3	17:CQ:83:VAL:CG2	2.52	0.40
18:CR:20:GLU:O	18:CR:21:ILE:C	2.59	0.40
18:CR:26:ILE:HA	18:CR:29:LEU:HB2	2.04	0.40
19:CS:36:ARG:HB3	19:CS:72:GLY:CA	2.51	0.40
19:CS:40:ILE:HA	19:CS:44:MET:SD	2.61	0.40
20:CT:3:ASN:O	20:CT:4:ILE:C	2.59	0.40
20:CT:64:LYS:HE3	20:CT:64:LYS:O	2.22	0.40
22:DA:45:G:H2'	22:DA:215:G:N7	2.37	0.40
22:DA:46:G:N1	22:DA:47:C:C4	2.90	0.40
22:DA:402:A:H2'	22:DA:403:U:H5'	2.02	0.40
22:DA:686:U:H2'	22:DA:788:A:C2	2.56	0.40
22:DA:691:C:H2'	22:DA:692:C:H6	1.86	0.40
22:DA:777:G:N3	22:DA:778:G:C8	2.90	0.40
22:DA:792:A:N3	22:DA:2072:C:O2'	2.36	0.40
22:DA:875:G:N2	22:DA:903:C:C2	2.89	0.40
22:DA:921:C:H2'	22:DA:922:C:C6	2.57	0.40
22:DA:1062:G:N1	22:DA:1077:A:C2	2.90	0.40
22:DA:1359:A:C8	22:DA:1360:G:C8	3.09	0.40
22:DA:1710:G:O2'	22:DA:1711:A:H5'	2.21	0.40
22:DA:1965:C:H3'	22:DA:1966:A:H8	1.87	0.40
22:DA:2250:G:H8	22:DA:2250:G:O5'	2.04	0.40
22:DA:2304:G:C2	22:DA:2313:C:N3	2.89	0.40
22:DA:2400:G:H2'	22:DA:2401:U:O4'	2.21	0.40
22:DA:2502:G:H5"	22:DA:2503:A:O5'	2.21	0.40
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	3.04	0.40
22:DA:2856:A:N6	22:DA:2857:G:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:72:ASP:O	24:DC:74:ILE:N	2.54	0.40
26:DE:114:ARG:HE	26:DE:114:ARG:HB2	1.68	0.40
29:DH:77:THR:HA	29:DH:143:ILE:O	2.22	0.40
30:DI:103:ARG:O	30:DI:107:GLN:HB2	2.21	0.40
31:DJ:78:THR:OG1	31:DJ:83:GLY:HA3	2.22	0.40
31:DJ:111:LYS:O	31:DJ:111:LYS:HG3	2.22	0.40
32:DK:87:LEU:HD22	32:DK:92:GLU:HG3	2.04	0.40
33:DL:111:ILE:C	33:DL:131:ALA:HB2	2.42	0.40
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.37	0.40
37:DP:114:LEU:HG	37:DP:114:LEU:O	2.21	0.40
39:DR:49:ILE:O	39:DR:50:GLY:C	2.59	0.40
41:DT:23:ALA:O	41:DT:27:SER:HB3	2.21	0.40

All (4) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:368:U:OP2	29:DH:123:ARG:NE[4_455]	1.78	0.42
1:AA:368:U:OP1	29:DH:93:SER:OG[4_455]	1.93	0.27
1:AA:368:U:OP2	29:DH:123:ARG:NH2[4_455]	2.03	0.17
1:AA:368:U:OP2	29:DH:123:ARG:CZ[4_455]	2.07	0.13

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	135 (62%)	36 (17%)	45 (21%)	0	0
2	CB	216/218 (99%)	143 (66%)	36 (17%)	37 (17%)	0	0
3	AC	204/206 (99%)	142 (70%)	42 (21%)	20 (10%)	0	2
3	CC	204/206 (99%)	145 (71%)	41 (20%)	18 (9%)	1	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	AD	203/205 (99%)	133 (66%)	36 (18%)	34 (17%)	0	0
4	CD	203/205 (99%)	129 (64%)	48 (24%)	26 (13%)	0	1
5	AE	148/150 (99%)	98 (66%)	33 (22%)	17 (12%)	0	2
5	CE	148/150 (99%)	96 (65%)	29 (20%)	23 (16%)	0	1
6	AF	98/100 (98%)	61 (62%)	19 (19%)	18 (18%)	0	0
6	CF	98/100 (98%)	64 (65%)	18 (18%)	16 (16%)	0	1
7	AG	149/151 (99%)	110 (74%)	27 (18%)	12 (8%)	1	4
7	CG	149/151 (99%)	120 (80%)	21 (14%)	8 (5%)	2	11
8	AH	127/129 (98%)	80 (63%)	29 (23%)	18 (14%)	0	1
8	CH	127/129 (98%)	100 (79%)	19 (15%)	8 (6%)	1	7
9	AI	125/127 (98%)	90 (72%)	24 (19%)	11 (9%)	1	3
9	CI	125/127 (98%)	89 (71%)	27 (22%)	9 (7%)	1	5
10	AJ	96/98 (98%)	68 (71%)	7 (7%)	21 (22%)	0	0
10	CJ	96/98 (98%)	69 (72%)	18 (19%)	9 (9%)	0	3
11	AK	115/117 (98%)	83 (72%)	17 (15%)	15 (13%)	0	1
11	CK	115/117 (98%)	77 (67%)	28 (24%)	10 (9%)	1	3
12	AL	121/123 (98%)	92 (76%)	19 (16%)	10 (8%)	1	4
12	CL	121/123 (98%)	89 (74%)	17 (14%)	15 (12%)	0	1
13	AM	112/114 (98%)	79 (70%)	22 (20%)	11 (10%)	0	2
13	CM	112/114 (98%)	86 (77%)	15 (13%)	11 (10%)	0	2
14	AN	92/100 (92%)	57 (62%)	20 (22%)	15 (16%)	0	1
14	CN	92/100 (92%)	59 (64%)	20 (22%)	13 (14%)	0	1
15	AO	86/88 (98%)	60 (70%)	21 (24%)	5 (6%)	1	10
15	CO	86/88 (98%)	65 (76%)	18 (21%)	3 (4%)	3	20
16	AP	80/82 (98%)	52 (65%)	16 (20%)	12 (15%)	0	1
16	CP	80/82 (98%)	54 (68%)	20 (25%)	6 (8%)	1	5
17	AQ	78/80 (98%)	52 (67%)	16 (20%)	10 (13%)	0	1
17	CQ	78/80 (98%)	55 (70%)	13 (17%)	10 (13%)	0	1
18	AR	53/55 (96%)	40 (76%)	12 (23%)	1 (2%)	8	36
18	CR	53/55 (96%)	45 (85%)	4 (8%)	4 (8%)	1	5
19	AS	77/79 (98%)	52 (68%)	19 (25%)	6 (8%)	1	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
19	CS	77/79 (98%)	59 (77%)	14 (18%)	4 (5%)	2 12
20	AT	83/85 (98%)	51 (61%)	23 (28%)	9 (11%)	0 2
20	CT	83/85 (98%)	66 (80%)	11 (13%)	6 (7%)	1 5
21	AU	49/51 (96%)	23 (47%)	18 (37%)	8 (16%)	0 1
21	CU	49/51 (96%)	25 (51%)	10 (20%)	14 (29%)	0 0
24	BC	269/271 (99%)	208 (77%)	49 (18%)	12 (4%)	2 14
24	DC	269/271 (99%)	206 (77%)	42 (16%)	21 (8%)	1 4
25	BD	207/209 (99%)	176 (85%)	22 (11%)	9 (4%)	2 15
25	DD	207/209 (99%)	175 (84%)	24 (12%)	8 (4%)	3 17
26	BE	199/201 (99%)	164 (82%)	26 (13%)	9 (4%)	2 14
26	DE	199/201 (99%)	160 (80%)	27 (14%)	12 (6%)	1 9
27	BF	175/177 (99%)	136 (78%)	24 (14%)	15 (9%)	1 3
27	DF	175/177 (99%)	141 (81%)	23 (13%)	11 (6%)	1 7
28	BG	174/176 (99%)	146 (84%)	20 (12%)	8 (5%)	2 14
28	DG	174/176 (99%)	132 (76%)	33 (19%)	9 (5%)	2 12
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0 1
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	0 2
30	BI	139/141 (99%)	79 (57%)	34 (24%)	26 (19%)	0 0
30	DI	139/141 (99%)	79 (57%)	42 (30%)	18 (13%)	0 1
31	BJ	140/142 (99%)	120 (86%)	17 (12%)	3 (2%)	7 33
31	DJ	140/142 (99%)	116 (83%)	18 (13%)	6 (4%)	2 15
32	BK	120/122 (98%)	94 (78%)	15 (12%)	11 (9%)	1 3
32	DK	120/122 (98%)	96 (80%)	14 (12%)	10 (8%)	1 4
33	BL	141/143 (99%)	108 (77%)	23 (16%)	10 (7%)	1 5
33	DL	141/143 (99%)	104 (74%)	28 (20%)	9 (6%)	1 7
34	BM	134/136 (98%)	114 (85%)	16 (12%)	4 (3%)	4 24
34	DM	134/136 (98%)	115 (86%)	13 (10%)	6 (4%)	2 14
35	BN	118/120 (98%)	97 (82%)	18 (15%)	3 (2%)	5 28
35	DN	118/120 (98%)	94 (80%)	16 (14%)	8 (7%)	1 6
36	BO	114/116 (98%)	87 (76%)	22 (19%)	5 (4%)	2 15
36	DO	114/116 (98%)	97 (85%)	15 (13%)	2 (2%)	8 37

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
37	BP	112/114 (98%)	97 (87%)	10 (9%)	5 (4%)	2 14
37	DP	112/114 (98%)	86 (77%)	19 (17%)	7 (6%)	1 7
38	BQ	115/117 (98%)	96 (84%)	15 (13%)	4 (4%)	3 20
38	DQ	115/117 (98%)	105 (91%)	9 (8%)	1 (1%)	17 55
39	BR	101/103 (98%)	89 (88%)	5 (5%)	7 (7%)	1 6
39	DR	101/103 (98%)	77 (76%)	17 (17%)	7 (7%)	1 6
40	BS	108/110 (98%)	91 (84%)	11 (10%)	6 (6%)	2 10
40	DS	108/110 (98%)	87 (81%)	14 (13%)	7 (6%)	1 7
41	BT	91/93 (98%)	69 (76%)	13 (14%)	9 (10%)	0 2
41	DT	91/93 (98%)	62 (68%)	19 (21%)	10 (11%)	0 2
42	BU	100/102 (98%)	75 (75%)	17 (17%)	8 (8%)	1 4
42	DU	100/102 (98%)	72 (72%)	15 (15%)	13 (13%)	0 1
43	BV	92/94 (98%)	83 (90%)	9 (10%)	0	100 100
43	DV	92/94 (98%)	76 (83%)	12 (13%)	4 (4%)	2 15
44	BW	74/76 (97%)	65 (88%)	9 (12%)	0	100 100
44	DW	73/76 (96%)	58 (80%)	10 (14%)	5 (7%)	1 6
45	BX	75/77 (97%)	64 (85%)	7 (9%)	4 (5%)	2 11
45	DX	75/77 (97%)	56 (75%)	15 (20%)	4 (5%)	2 11
46	BY	61/63 (97%)	38 (62%)	13 (21%)	10 (16%)	0 1
46	DY	61/63 (97%)	44 (72%)	11 (18%)	6 (10%)	0 2
47	BZ	56/58 (97%)	49 (88%)	4 (7%)	3 (5%)	2 11
47	DZ	56/58 (97%)	48 (86%)	5 (9%)	3 (5%)	2 11
48	B0	54/56 (96%)	42 (78%)	7 (13%)	5 (9%)	0 3
48	D0	54/56 (96%)	42 (78%)	8 (15%)	4 (7%)	1 5
49	B1	48/50 (96%)	39 (81%)	4 (8%)	5 (10%)	0 2
49	D1	48/50 (96%)	39 (81%)	6 (12%)	3 (6%)	1 7
50	B2	44/46 (96%)	36 (82%)	6 (14%)	2 (4%)	2 14
50	D2	44/46 (96%)	37 (84%)	4 (9%)	3 (7%)	1 6
51	B3	62/64 (97%)	51 (82%)	9 (14%)	2 (3%)	4 22
51	D3	62/64 (97%)	50 (81%)	9 (14%)	3 (5%)	2 13
52	B4	36/38 (95%)	33 (92%)	3 (8%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
52	D4	36/38 (95%)	29 (81%)	6 (17%)	1 (3%)	5 25
53	B5	183/228 (80%)	100 (55%)	53 (29%)	30 (16%)	0 1
54	B6	2/7 (29%)	2 (100%)	0	0	100 100
54	D6	2/7 (29%)	1 (50%)	0	1 (50%)	0 0
All	All	11422/11686 (98%)	8514 (74%)	1907 (17%)	1001 (9%)	1 3

All (1001) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	22	TYR
2	AB	64	LYS
2	AB	68	LEU
2	AB	73	LYS
2	AB	75	ALA
2	AB	76	ALA
2	AB	107	VAL
2	AB	120	GLN
2	AB	129	LEU
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	170	HIS
2	AB	183	VAL
2	AB	188	ASP
2	AB	201	PRO
2	AB	203	ASN
2	AB	207	ILE
2	AB	212	LEU
3	AC	15	VAL
3	AC	18	TRP
3	AC	26	THR
3	AC	101	ILE
3	AC	140	ASN
4	AD	23	SER
4	AD	24	GLY
4	AD	29	ASP
4	AD	33	LYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	47	ARG
4	AD	85	ASN

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Mol	Chain	Res	Type
4	AD	126	ASN
4	AD	134	SER
4	AD	151	LYS
4	AD	153	SER
4	AD	160	GLU
4	AD	168	PRO
4	AD	169	THR
4	AD	191	LEU
4	AD	192	SER
5	AE	26	LYS
5	AE	75	ALA
5	AE	76	LEU
5	AE	77	ASN
5	AE	100	SER
5	AE	105	ILE
5	AE	122	ASN
5	AE	138	ARG
6	AF	7	VAL
6	AF	91	ARG
6	AF	92	THR
7	AG	15	ASP
7	AG	51	ALA
7	AG	56	LYS
7	AG	130	ASN
8	AH	3	MET
8	AH	54	ASP
8	AH	67	GLN
9	AI	72	ILE
9	AI	91	ASP
10	AJ	33	GLY
10	AJ	34	ALA
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	93	ALA
10	AJ	101	SER
11	AK	41	ALA
11	AK	52	PHE
11	AK	56	ARG
11	AK	73	ALA
11	AK	121	CYS
12	AL	24	LEU
12	AL	25	GLU

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Mol	Chain	Res	Type
12	AL	44	LYS
12	AL	58	THR
12	AL	89	ASP
12	AL	123	LYS
13	AM	4	ILE
13	AM	12	HIS
13	AM	100	GLN
14	AN	28	LYS
14	AN	34	VAL
14	AN	52	PRO
14	AN	61	ARG
14	AN	62	ASN
14	AN	64	CYS
14	AN	92	GLU
14	AN	98	LYS
16	AP	11	ALA
16	AP	53	ASP
17	AQ	18	GLU
17	AQ	51	ASN
19	AS	6	LYS
19	AS	29	LYS
19	AS	65	GLU
20	AT	5	LYS
20	AT	6	SER
20	AT	68	HIS
20	AT	70	ASN
21	AU	10	GLU
21	AU	24	GLU
21	AU	36	GLU
21	AU	40	LYS
24	BC	122	ALA
24	BC	169	GLY
24	BC	210	ALA
24	BC	236	GLU
24	BC	244	PRO
25	BD	40	LEU
25	BD	41	ALA
25	BD	86	GLU
25	BD	152	PRO
26	BE	62	GLN
26	BE	67	ARG
26	BE	86	ALA

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Mol	Chain	Res	Type
26	BE	161	ALA
27	BF	3	LYS
27	BF	41	GLY
27	BF	42	GLU
27	BF	53	ALA
27	BF	176	PRO
28	BG	119	ALA
29	BH	10	ALA
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	118	PRO
29	BH	121	VAL
29	BH	140	ALA
30	BI	19	ASN
30	BI	45	LYS
30	BI	58	VAL
30	BI	60	THR
30	BI	63	ALA
30	BI	117	MET
30	BI	134	ARG
32	BK	35	VAL
32	BK	91	SER
32	BK	109	SER
33	BL	15	ALA
33	BL	68	SER
33	BL	94	THR
33	BL	115	GLU
34	BM	69	PRO
34	BM	81	ARG
35	BN	2	ARG
36	BO	87	ILE
36	BO	88	LYS
36	BO	95	SER
37	BP	94	LYS
37	BP	111	LYS
38	BQ	25	TYR
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE
40	BS	19	LEU

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Mol	Chain	Res	Type
40	BS	57	ASN
40	BS	64	ALA
41	BT	72	GLN
41	BT	89	GLU
42	BU	17	LYS
42	BU	40	ASN
42	BU	100	SER
45	BX	60	ASP
45	BX	64	ILE
46	BY	22	LEU
46	BY	24	GLU
46	BY	36	GLN
47	BZ	52	SER
48	B0	9	THR
48	B0	18	SER
48	B0	56	ALA
49	B1	28	ARG
50	B2	44	VAL
51	B3	28	ASN
53	B5	53	ARG
53	B5	62	THR
53	B5	134	PRO
53	B5	141	PRO
53	B5	154	ILE
53	B5	174	ALA
53	B5	175	PRO
53	B5	185	LYS
53	B5	205	ALA
53	B5	210	LEU
53	B5	221	PRO
2	CB	16	PHE
2	CB	36	ASN
2	CB	73	LYS
2	CB	74	ARG
2	CB	76	ALA
2	CB	87	CYS
2	CB	103	ASN
2	CB	120	GLN
2	CB	124	GLY
2	CB	126	PHE
2	CB	170	HIS
2	CB	193	PRO

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Mol	Chain	Res	Type
2	CB	207	ILE
2	CB	220	THR
2	CB	222	ARG
3	CC	82	GLU
3	CC	127	ARG
3	CC	146	ALA
3	CC	166	GLU
4	CD	17	THR
4	CD	27	ALA
4	CD	34	ILE
4	CD	35	GLU
4	CD	42	GLY
4	CD	47	ARG
5	CE	45	ARG
5	CE	99	ALA
5	CE	101	GLU
5	CE	103	THR
5	CE	111	MET
5	CE	123	VAL
5	CE	138	ARG
5	CE	158	GLY
6	CF	15	SER
6	CF	55	HIS
6	CF	56	LYS
6	CF	86	ARG
6	CF	91	ARG
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
7	CG	56	LYS
7	CG	140	ASP
7	CG	146	GLU
9	CI	41	ARG
9	CI	120	LYS
10	CJ	17	LEU
10	CJ	35	GLN
10	CJ	57	VAL
10	CJ	92	LEU
11	CK	52	PHE
11	CK	91	PRO
11	CK	92	GLY
11	CK	127	ARG

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Mol	Chain	Res	Type
12	CL	17	ALA
12	CL	34	CYS
12	CL	76	GLU
12	CL	78	SER
12	CL	89	ASP
12	CL	117	TYR
13	CM	7	ILE
13	CM	11	ASP
13	CM	41	GLU
14	CN	11	VAL
14	CN	22	ALA
14	CN	52	PRO
16	CP	31	ARG
16	CP	44	SER
17	CQ	5	ILE
17	CQ	51	ASN
17	CQ	52	GLU
17	CQ	53	CYS
18	CR	21	ILE
18	CR	47	THR
19	CS	5	LEU
20	CT	4	ILE
20	CT	6	SER
21	CU	9	ASN
21	CU	12	PHE
21	CU	36	GLU
21	CU	40	LYS
24	DC	10	SER
24	DC	29	PRO
24	DC	35	GLU
24	DC	58	HIS
24	DC	71	LYS
25	DD	98	VAL
25	DD	104	VAL
25	DD	105	LYS
25	DD	152	PRO
26	DE	83	VAL
26	DE	86	ALA
27	DF	9	LYS
27	DF	123	ASP
27	DF	176	PRO
28	DG	61	GLY

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Mol	Chain	Res	Type
28	DG	159	GLY
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS
29	DH	53	GLU
29	DH	54	LEU
29	DH	83	LYS
29	DH	109	GLU
30	DI	7	ALA
30	DI	106	LEU
31	DJ	81	ILE
32	DK	35	VAL
32	DK	108	ARG
34	DM	3	GLN
34	DM	69	PRO
35	DN	104	ALA
35	DN	106	ASP
35	DN	118	ARG
35	DN	119	SER
36	DO	34	HIS
36	DO	116	GLN
37	DP	66	ASN
39	DR	102	SER
40	DS	62	ASP
41	DT	18	GLU
41	DT	39	THR
41	DT	77	ARG
41	DT	88	LYS
42	DU	7	ARG
42	DU	53	ASN
42	DU	89	ASP
44	DW	17	GLU
45	DX	62	LYS
46	DY	61	ALA
47	DZ	4	THR
47	DZ	14	ILE
50	D2	44	VAL
50	D2	45	SER
2	AB	16	PHE
2	AB	21	ARG

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Mol	Chain	Res	Type
2	AB	38	VAL
2	AB	53	ALA
2	AB	83	ALA
2	AB	87	CYS
2	AB	116	ASP
2	AB	117	LEU
2	AB	124	GLY
2	AB	126	PHE
2	AB	133	GLU
2	AB	202	GLY
2	AB	220	THR
3	AC	17	PRO
3	AC	61	ALA
3	AC	141	ALA
3	AC	206	GLU
4	AD	7	PRO
4	AD	32	CYS
4	AD	101	VAL
4	AD	167	LYS
4	AD	175	ALA
4	AD	193	ALA
4	AD	198	HIS
5	AE	12	GLN
5	AE	78	ASN
5	AE	90	THR
5	AE	110	ALA
5	AE	157	ARG
6	AF	6	ILE
6	AF	56	LYS
6	AF	68	GLN
6	AF	69	GLU
6	AF	85	ILE
7	AG	69	VAL
7	AG	81	GLY
7	AG	96	ARG
7	AG	100	ALA
8	AH	34	VAL
8	AH	48	ASP
8	AH	57	PRO
8	AH	96	MET
9	AI	41	ARG
9	AI	44	ALA

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Mol	Chain	Res	Type
9	AI	50	GLN
9	AI	116	VAL
10	AJ	35	GLN
10	AJ	38	GLY
10	AJ	74	VAL
11	AK	55	SER
11	AK	72	ASP
11	AK	92	GLY
11	AK	127	ARG
12	AL	85	GLY
13	AM	11	ASP
13	AM	67	GLY
13	AM	107	ARG
14	AN	4	GLN
14	AN	47	LYS
14	AN	53	ARG
16	AP	46	LYS
16	AP	68	SER
16	AP	77	GLU
17	AQ	13	VAL
17	AQ	69	LYS
17	AQ	70	THR
17	AQ	82	ALA
18	AR	66	SER
19	AS	76	PRO
20	AT	4	ILE
21	AU	37	PHE
24	BC	37	ASN
24	BC	261	LYS
26	BE	11	ALA
27	BF	21	ASN
27	BF	110	ARG
27	BF	175	PHE
28	BG	39	ASP
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	66	ASN
29	BH	119	ASN
30	BI	6	GLN
30	BI	24	VAL

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Mol	Chain	Res	Type
30	BI	65	ARG
30	BI	83	ALA
30	BI	84	ALA
30	BI	98	VAL
31	BJ	81	ILE
32	BK	110	GLU
33	BL	69	ARG
33	BL	114	GLY
34	BM	58	LYS
36	BO	61	GLN
36	BO	68	LYS
37	BP	35	GLY
37	BP	105	GLY
38	BQ	7	GLY
39	BR	52	PRO
39	BR	55	ASP
40	BS	65	ASP
41	BT	18	GLU
41	BT	25	GLU
41	BT	52	GLU
41	BT	71	GLY
41	BT	88	LYS
42	BU	7	ARG
42	BU	8	ASP
42	BU	98	SER
45	BX	3	ARG
45	BX	61	LYS
46	BY	14	LEU
46	BY	23	ARG
46	BY	35	GLY
46	BY	57	LEU
48	B0	55	ILE
49	B1	52	ALA
53	B5	36	ALA
53	B5	86	GLU
53	B5	90	ALA
53	B5	106	ASP
53	B5	126	SER
53	B5	136	GLY
53	B5	217	THR
2	CB	35	ARG
2	CB	96	TRP

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Mol	Chain	Res	Type
2	CB	98	GLY
2	CB	100	MET
2	CB	141	LEU
2	CB	194	ASP
3	CC	12	LEU
3	CC	84	VAL
3	CC	103	ILE
3	CC	175	LEU
4	CD	10	LYS
4	CD	26	ARG
4	CD	32	CYS
4	CD	33	LYS
4	CD	36	GLN
4	CD	43	ALA
4	CD	174	ASP
4	CD	175	ALA
5	CE	70	ASN
5	CE	98	PRO
5	CE	100	SER
5	CE	102	GLY
5	CE	122	ASN
5	CE	150	PRO
5	CE	151	GLU
5	CE	155	ALA
6	CF	14	GLN
6	CF	63	ASN
7	CG	12	ILE
7	CG	57	SER
7	CG	130	ASN
8	CH	67	GLN
8	CH	75	ILE
8	CH	89	LYS
9	CI	42	GLU
9	CI	91	ASP
9	CI	129	LYS
10	CJ	36	VAL
10	CJ	38	GLY
10	CJ	41	PRO
12	CL	77	HIS
12	CL	123	LYS
13	CM	114	LYS
14	CN	31	ILE

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Mol	Chain	Res	Type
14	CN	32	SER
14	CN	62	ASN
16	CP	10	GLY
16	CP	33	ILE
16	CP	80	LYS
17	CQ	17	MET
17	CQ	82	ALA
18	CR	26	ILE
20	CT	69	LYS
21	CU	13	ASP
21	CU	16	LEU
21	CU	24	GLU
24	DC	36	LYS
24	DC	218	PRO
24	DC	238	ARG
24	DC	239	ASN
24	DC	255	LYS
25	DD	43	ASP
26	DE	24	ASN
26	DE	61	ARG
26	DE	144	GLU
27	DF	21	ASN
28	DG	92	VAL
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	13	VAL
30	DI	72	LYS
30	DI	93	PRO
30	DI	101	ILE
30	DI	102	SER
30	DI	115	ALA
31	DJ	6	ALA
31	DJ	43	GLU
32	DK	92	GLU
32	DK	120	PRO
33	DL	42	SER
33	DL	44	GLY
33	DL	111	ILE
35	DN	2	ARG
35	DN	88	ALA
37	DP	80	VAL

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Mol	Chain	Res	Type
37	DP	105	GLY
39	DR	31	GLU
39	DR	50	GLY
40	DS	29	VAL
40	DS	63	GLY
40	DS	67	ASP
40	DS	74	ILE
41	DT	37	ASP
42	DU	19	LYS
42	DU	57	GLY
42	DU	98	SER
42	DU	100	SER
43	DV	93	ARG
44	DW	28	GLY
44	DW	35	SER
44	DW	49	ALA
45	DX	3	ARG
46	DY	37	LEU
46	DY	57	LEU
48	D0	55	ILE
49	D1	5	ILE
51	D3	51	SER
2	AB	13	GLY
2	AB	52	GLU
2	AB	97	LEU
2	AB	194	ASP
3	AC	139	GLN
3	AC	146	ALA
4	AD	26	ARG
4	AD	133	ALA
5	AE	45	ARG
6	AF	41	ASP
6	AF	42	TRP
6	AF	95	ALA
8	AH	31	LYS
8	AH	50	LYS
8	AH	88	ARG
8	AH	97	ALA
9	AI	88	MET
10	AJ	29	ALA
10	AJ	32	THR
10	AJ	41	PRO

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Mol	Chain	Res	Type
11	AK	14	LYS
11	AK	126	LYS
12	AL	86	ARG
12	AL	118	GLY
13	AM	47	GLU
13	AM	114	LYS
16	AP	49	GLY
16	AP	65	ALA
16	AP	80	LYS
19	AS	4	SER
20	AT	20	HIS
20	AT	44	LYS
20	AT	75	HIS
21	AU	11	PRO
21	AU	31	GLU
21	AU	38	TYR
24	BC	262	ARG
26	BE	44	ARG
27	BF	71	ARG
27	BF	73	SER
27	BF	134	GLU
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	72	LYS
30	BI	90	SER
31	BJ	39	LYS
32	BK	69	VAL
32	BK	72	PRO
32	BK	108	ARG
32	BK	119	ALA
35	BN	119	SER
37	BP	114	LEU
39	BR	31	GLU
40	BS	22	ASP
40	BS	56	ALA
41	BT	17	SER
46	BY	37	LEU
47	BZ	22	ALA
48	B0	38	HIS

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Mol	Chain	Res	Type
51	B3	31	HIS
53	B5	183	PRO
53	B5	215	VAL
2	CB	59	LYS
2	CB	75	ALA
2	CB	82	ASP
2	CB	86	SER
2	CB	129	LEU
3	CC	61	ALA
3	CC	80	LYS
3	CC	89	LYS
3	CC	101	ILE
3	CC	191	THR
4	CD	56	ARG
4	CD	165	ARG
4	CD	182	PHE
4	CD	189	SER
4	CD	192	SER
5	CE	143	GLY
6	CF	13	ASP
6	CF	17	GLN
7	CG	126	ASP
8	CH	22	LYS
8	CH	31	LYS
8	CH	35	ALA
13	CM	25	VAL
14	CN	34	VAL
14	CN	42	TRP
14	CN	53	ARG
15	CO	46	HIS
16	CP	77	GLU
17	CQ	20	SER
19	CS	6	LYS
21	CU	10	GLU
21	CU	37	PHE
21	CU	46	LYS
21	CU	52	ALA
21	CU	53	VAL
24	DC	25	HIS
25	DD	57	ALA
25	DD	114	LYS
26	DE	6	LYS

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Mol	Chain	Res	Type
26	DE	57	LYS
27	DF	27	GLN
27	DF	103	LEU
28	DG	8	PRO
29	DH	16	GLY
29	DH	40	THR
30	DI	84	ALA
30	DI	90	SER
32	DK	110	GLU
33	DL	4	ASN
34	DM	59	ARG
35	DN	3	HIS
37	DP	111	LYS
38	DQ	87	SER
39	DR	70	GLU
40	DS	65	ASP
41	DT	24	MET
41	DT	40	LYS
41	DT	50	LEU
41	DT	72	GLN
42	DU	9	ASP
42	DU	55	PRO
42	DU	56	GLY
45	DX	42	SER
48	D0	56	ALA
49	D1	52	ALA
52	D4	20	ASP
2	AB	96	TRP
2	AB	143	LYS
2	AB	193	PRO
3	AC	27	LYS
3	AC	80	LYS
3	AC	166	GLU
3	AC	168	TYR
4	AD	25	VAL
4	AD	49	SER
4	AD	156	LYS
6	AF	15	SER
6	AF	38	ARG
6	AF	54	LEU
6	AF	63	ASN
6	AF	88	MET

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Mol	Chain	Res	Type
7	AG	50	LEU
7	AG	113	ASP
9	AI	57	MET
10	AJ	17	LEU
10	AJ	36	VAL
10	AJ	42	LEU
10	AJ	58	ASN
10	AJ	75	ASP
10	AJ	91	ASP
10	AJ	92	LEU
11	AK	36	ASP
13	AM	65	VAL
14	AN	49	GLN
14	AN	65	ARG
14	AN	81	ARG
15	AO	3	LEU
15	AO	47	LYS
19	AS	30	PRO
20	AT	21	ASN
24	BC	71	LYS
25	BD	127	PHE
26	BE	6	LYS
26	BE	8	ALA
29	BH	83	LYS
30	BI	31	GLN
30	BI	75	PRO
30	BI	106	LEU
30	BI	126	THR
31	BJ	25	LEU
32	BK	93	GLN
33	BL	12	SER
35	BN	118	ARG
38	BQ	75	SER
38	BQ	102	ASP
47	BZ	14	ILE
49	B1	5	ILE
49	B1	51	GLU
53	B5	133	GLY
2	CB	17	GLY
2	CB	19	GLN
2	CB	34	ALA
2	CB	104	TRP

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Mol	Chain	Res	Type
2	CB	140	GLU
3	CC	17	PRO
4	CD	16	GLY
4	CD	69	GLU
5	CE	24	THR
5	CE	126	LYS
5	CE	133	PRO
6	CF	53	LYS
9	CI	10	GLY
9	CI	45	ARG
9	CI	55	VAL
9	CI	128	SER
11	CK	15	GLN
11	CK	41	ALA
11	CK	93	ARG
11	CK	99	ALA
12	CL	43	LYS
13	CM	10	PRO
13	CM	47	GLU
14	CN	21	PHE
14	CN	59	ARG
15	CO	18	ASP
15	CO	47	LYS
17	CQ	48	ASP
18	CR	25	ASP
20	CT	20	HIS
20	CT	41	ALA
21	CU	11	PRO
24	DC	46	ASN
24	DC	48	ARG
24	DC	205	LEU
24	DC	240	PHE
24	DC	253	LYS
24	DC	262	ARG
26	DE	7	ASP
26	DE	122	GLU
26	DE	139	LYS
26	DE	151	GLY
27	DF	174	ASP
28	DG	12	PRO
29	DH	9	VAL
30	DI	9	VAL

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Mol	Chain	Res	Type
30	DI	65	ARG
30	DI	86	ILE
32	DK	93	GLN
32	DK	118	LEU
33	DL	29	LYS
33	DL	69	ARG
35	DN	70	THR
37	DP	114	LEU
39	DR	53	PHE
41	DT	73	ARG
44	DW	29	GLU
46	DY	12	GLU
47	DZ	30	ARG
48	D0	45	ALA
51	D3	52	LYS
54	D6	4	PRO
2	AB	19	GLN
2	AB	147	SER
2	AB	210	VAL
2	AB	224	GLY
3	AC	66	VAL
3	AC	127	ARG
4	AD	69	GLU
4	AD	102	VAL
4	AD	116	GLN
4	AD	125	VAL
4	AD	197	GLU
5	AE	24	THR
5	AE	156	LYS
8	AH	14	ILE
8	AH	25	VAL
8	AH	104	VAL
9	AI	23	PRO
10	AJ	43	PRO
10	AJ	62	ARG
11	AK	119	ASN
11	AK	124	PRO
13	AM	10	PRO
15	AO	25	THR
15	AO	26	GLU
16	AP	10	GLY
16	AP	16	PHE

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Mol	Chain	Res	Type
16	AP	47	GLU
16	AP	57	ILE
17	AQ	12	VAL
24	BC	124	ILE
25	BD	142	VAL
26	BE	5	LEU
27	BF	43	ALA
27	BF	51	ASP
27	BF	164	GLU
28	BG	82	GLY
28	BG	152	ARG
30	BI	3	LYS
30	BI	7	ALA
30	BI	52	GLY
30	BI	102	SER
30	BI	113	LYS
32	BK	111	LYS
39	BR	50	GLY
42	BU	52	LEU
46	BY	17	GLU
49	B1	23	THR
50	B2	2	LYS
53	B5	51	ASP
53	B5	65	LEU
53	B5	73	VAL
53	B5	181	PHE
2	CB	72	THR
2	CB	136	MET
4	CD	74	ASN
4	CD	167	LYS
5	CE	12	GLN
5	CE	57	PRO
5	CE	113	ALA
6	CF	26	THR
6	CF	27	ALA
6	CF	94	HIS
12	CL	4	VAL
12	CL	15	LYS
14	CN	3	LYS
14	CN	92	GLU
17	CQ	59	VAL
19	CS	28	LYS

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Mol	Chain	Res	Type
19	CS	45	ILE
20	CT	25	ARG
21	CU	23	CYS
24	DC	66	ASP
25	DD	101	PHE
27	DF	149	VAL
27	DF	177	PHE
28	DG	111	HIS
28	DG	119	ALA
30	DI	15	ALA
33	DL	17	LYS
33	DL	115	GLU
37	DP	94	LYS
39	DR	7	SER
40	DS	64	ALA
42	DU	37	GLU
43	DV	81	PRO
46	DY	6	LEU
48	D0	27	SER
49	D1	16	GLY
51	D3	47	LYS
2	AB	128	LYS
3	AC	3	GLN
3	AC	47	LEU
6	AF	12	PRO
6	AF	60	VAL
8	AH	21	ASN
12	AL	121	ARG
15	AO	73	LYS
17	AQ	32	PRO
25	BD	102	ALA
28	BG	12	PRO
28	BG	175	LYS
29	BH	120	GLY
30	BI	21	SER
30	BI	101	ILE
32	BK	60	ALA
33	BL	86	GLU
53	B5	202	PRO
2	CB	64	LYS
3	CC	28	GLU
3	CC	66	VAL

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Mol	Chain	Res	Type
4	CD	14	ARG
4	CD	85	ASN
10	CJ	42	LEU
11	CK	101	ASN
12	CL	44	LYS
13	CM	5	ALA
13	CM	6	GLY
13	CM	94	GLY
26	DE	129	PRO
27	DF	175	PHE
30	DI	22	PRO
31	DJ	127	GLY
32	DK	48	PRO
33	DL	79	LEU
34	DM	58	LYS
42	DU	52	LEU
42	DU	58	ILE
43	DV	79	ARG
45	DX	66	THR
46	DY	46	VAL
7	AG	12	ILE
8	AH	75	ILE
9	AI	24	GLY
14	AN	69	ARG
28	BG	61	GLY
28	BG	154	PRO
53	B5	146	VAL
2	CB	149	GLY
4	CD	61	VAL
11	CK	104	GLY
2	AB	182	PRO
9	AI	51	PRO
24	BC	231	PRO
25	BD	104	VAL
34	BM	15	GLY
53	B5	104	ILE
53	B5	162	ILE
12	CL	8	VAL
12	CL	22	PRO
13	CM	24	GLY
27	DF	79	ILE
30	DI	74	PRO

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Mol	Chain	Res	Type
32	DK	72	PRO
34	DM	57	VAL
11	AK	91	PRO
13	AM	112	PRO
17	AQ	33	ILE
24	BC	196	GLY
27	BF	146	VAL
33	BL	130	GLY
41	BT	2	ILE
46	BY	46	VAL
53	B5	213	VAL
2	CB	13	GLY
3	CC	14	ILE
3	CC	64	ILE
7	CG	16	PRO
8	CH	34	VAL
24	DC	41	GLY
24	DC	228	VAL
28	DG	154	PRO
30	DI	19	ASN
31	DJ	8	PRO
43	DV	84	PRO
50	D2	38	GLY
5	AE	51	GLY
8	AH	78	VAL
8	AH	103	VAL
17	AQ	25	ILE
25	BD	2	ILE
33	BL	88	GLY
42	BU	50	PRO
2	CB	25	PRO
8	CH	78	VAL
12	CL	80	ILE
17	CQ	13	VAL
24	DC	172	VAL
31	DJ	46	PRO
34	DM	125	PRO
37	DP	84	ILE
3	AC	159	GLY
7	AG	14	PRO
10	CJ	79	PRO
28	DG	17	VAL

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Mol	Chain	Res	Type
30	DI	89	GLY
32	DK	101	GLY
39	DR	8	GLY

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	180/180 (100%)	125 (69%)	55 (31%)	0 1
2	CB	180/180 (100%)	126 (70%)	54 (30%)	0 1
3	AC	170/170 (100%)	137 (81%)	33 (19%)	1 7
3	CC	170/170 (100%)	130 (76%)	40 (24%)	1 3
4	AD	172/172 (100%)	128 (74%)	44 (26%)	0 3
4	CD	172/172 (100%)	140 (81%)	32 (19%)	1 8
5	AE	113/113 (100%)	85 (75%)	28 (25%)	0 3
5	CE	113/113 (100%)	83 (74%)	30 (26%)	0 2
6	AF	87/87 (100%)	63 (72%)	24 (28%)	0 2
6	CF	87/87 (100%)	58 (67%)	29 (33%)	0 1
7	AG	124/124 (100%)	88 (71%)	36 (29%)	0 2
7	CG	124/124 (100%)	92 (74%)	32 (26%)	0 2
8	AH	104/104 (100%)	80 (77%)	24 (23%)	1 4
8	CH	104/104 (100%)	79 (76%)	25 (24%)	0 3
9	AI	105/105 (100%)	73 (70%)	32 (30%)	0 1
9	CI	105/105 (100%)	73 (70%)	32 (30%)	0 1
10	AJ	86/86 (100%)	61 (71%)	25 (29%)	0 2
10	CJ	86/86 (100%)	70 (81%)	16 (19%)	1 8
11	AK	90/90 (100%)	70 (78%)	20 (22%)	1 4
11	CK	90/90 (100%)	67 (74%)	23 (26%)	0 3
12	AL	103/103 (100%)	78 (76%)	25 (24%)	0 3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
12	CL	103/103 (100%)	78 (76%)	25 (24%)	0 3
13	AM	92/92 (100%)	65 (71%)	27 (29%)	0 2
13	CM	92/92 (100%)	69 (75%)	23 (25%)	0 3
14	AN	79/83 (95%)	63 (80%)	16 (20%)	1 6
14	CN	79/83 (95%)	69 (87%)	10 (13%)	4 19
15	AO	75/76 (99%)	61 (81%)	14 (19%)	1 8
15	CO	75/76 (99%)	64 (85%)	11 (15%)	3 15
16	AP	65/65 (100%)	50 (77%)	15 (23%)	1 4
16	CP	65/65 (100%)	52 (80%)	13 (20%)	1 7
17	AQ	74/74 (100%)	50 (68%)	24 (32%)	0 1
17	CQ	74/74 (100%)	54 (73%)	20 (27%)	0 2
18	AR	48/48 (100%)	40 (83%)	8 (17%)	2 11
18	CR	48/48 (100%)	43 (90%)	5 (10%)	7 27
19	AS	70/70 (100%)	59 (84%)	11 (16%)	2 13
19	CS	70/70 (100%)	53 (76%)	17 (24%)	0 3
20	AT	65/65 (100%)	49 (75%)	16 (25%)	0 3
20	CT	65/65 (100%)	49 (75%)	16 (25%)	0 3
21	AU	44/44 (100%)	29 (66%)	15 (34%)	0 1
21	CU	44/44 (100%)	29 (66%)	15 (34%)	0 1
24	BC	216/216 (100%)	182 (84%)	34 (16%)	2 13
24	DC	216/216 (100%)	189 (88%)	27 (12%)	4 20
25	BD	164/164 (100%)	145 (88%)	19 (12%)	5 23
25	DD	164/164 (100%)	145 (88%)	19 (12%)	5 23
26	BE	165/165 (100%)	137 (83%)	28 (17%)	2 10
26	DE	165/165 (100%)	131 (79%)	34 (21%)	1 6
27	BF	148/148 (100%)	121 (82%)	27 (18%)	1 9
27	DF	148/148 (100%)	116 (78%)	32 (22%)	1 5
28	BG	137/137 (100%)	118 (86%)	19 (14%)	3 16
28	DG	137/137 (100%)	119 (87%)	18 (13%)	4 18
29	BH	114/114 (100%)	88 (77%)	26 (23%)	1 4
29	DH	114/114 (100%)	88 (77%)	26 (23%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	BI	109/109 (100%)	80 (73%)	29 (27%)	0 2
30	DI	109/109 (100%)	85 (78%)	24 (22%)	1 4
31	BJ	116/116 (100%)	106 (91%)	10 (9%)	10 37
31	DJ	116/116 (100%)	103 (89%)	13 (11%)	6 24
32	BK	103/103 (100%)	90 (87%)	13 (13%)	4 20
32	DK	103/103 (100%)	93 (90%)	10 (10%)	8 31
33	BL	102/102 (100%)	86 (84%)	16 (16%)	2 13
33	DL	102/102 (100%)	80 (78%)	22 (22%)	1 5
34	BM	109/109 (100%)	92 (84%)	17 (16%)	2 13
34	DM	109/109 (100%)	93 (85%)	16 (15%)	3 15
35	BN	100/100 (100%)	83 (83%)	17 (17%)	2 10
35	DN	100/100 (100%)	77 (77%)	23 (23%)	1 4
36	BO	86/86 (100%)	63 (73%)	23 (27%)	0 2
36	DO	86/86 (100%)	71 (83%)	15 (17%)	2 10
37	BP	99/99 (100%)	84 (85%)	15 (15%)	3 14
37	DP	99/99 (100%)	83 (84%)	16 (16%)	2 12
38	BQ	89/89 (100%)	75 (84%)	14 (16%)	2 13
38	DQ	89/89 (100%)	76 (85%)	13 (15%)	3 15
39	BR	84/84 (100%)	69 (82%)	15 (18%)	2 9
39	DR	84/84 (100%)	73 (87%)	11 (13%)	4 18
40	BS	93/93 (100%)	75 (81%)	18 (19%)	1 7
40	DS	93/93 (100%)	80 (86%)	13 (14%)	3 16
41	BT	80/80 (100%)	68 (85%)	12 (15%)	3 14
41	DT	80/80 (100%)	64 (80%)	16 (20%)	1 7
42	BU	83/83 (100%)	66 (80%)	17 (20%)	1 6
42	DU	83/83 (100%)	60 (72%)	23 (28%)	0 2
43	BV	78/78 (100%)	62 (80%)	16 (20%)	1 6
43	DV	78/78 (100%)	67 (86%)	11 (14%)	3 16
44	BW	57/58 (98%)	50 (88%)	7 (12%)	4 21
44	DW	56/58 (97%)	51 (91%)	5 (9%)	9 35
45	BX	67/67 (100%)	56 (84%)	11 (16%)	2 11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
45	DX	67/67 (100%)	57 (85%)	10 (15%)	3 14
46	BY	55/55 (100%)	47 (86%)	8 (14%)	3 15
46	DY	55/55 (100%)	45 (82%)	10 (18%)	1 9
47	BZ	48/48 (100%)	42 (88%)	6 (12%)	4 20
47	DZ	48/48 (100%)	35 (73%)	13 (27%)	0 2
48	B0	47/47 (100%)	40 (85%)	7 (15%)	3 14
48	D0	47/47 (100%)	43 (92%)	4 (8%)	10 38
49	B1	45/45 (100%)	37 (82%)	8 (18%)	2 9
49	D1	45/45 (100%)	39 (87%)	6 (13%)	4 17
50	B2	38/38 (100%)	33 (87%)	5 (13%)	4 18
50	D2	38/38 (100%)	32 (84%)	6 (16%)	2 12
51	B3	51/51 (100%)	40 (78%)	11 (22%)	1 5
51	D3	51/51 (100%)	47 (92%)	4 (8%)	12 42
52	B4	34/34 (100%)	29 (85%)	5 (15%)	3 15
52	D4	34/34 (100%)	29 (85%)	5 (15%)	3 15
53	B5	61/180 (34%)	47 (77%)	14 (23%)	1 4
54	B6	2/2 (100%)	2 (100%)	0	100 100
54	D6	2/2 (100%)	2 (100%)	0	100 100
All	All	9390/9522 (99%)	7518 (80%)	1872 (20%)	1 7

All (1872) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LEU
2	AB	14	VAL
2	AB	15	HIS
2	AB	19	GLN
2	AB	21	ARG
2	AB	27	MET
2	AB	31	ILE
2	AB	32	PHE
2	AB	39	HIS
2	AB	41	ILE
2	AB	43	LEU
2	AB	46	THR
2	AB	50	PHE

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Mol	Chain	Res	Type
2	AB	52	GLU
2	AB	56	GLU
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	70	VAL
2	AB	82	ASP
2	AB	85	LEU
2	AB	88	ASP
2	AB	89	GLN
2	AB	91	PHE
2	AB	93	ASN
2	AB	101	LEU
2	AB	102	THR
2	AB	108	ARG
2	AB	111	ILE
2	AB	112	LYS
2	AB	117	LEU
2	AB	121	SER
2	AB	126	PHE
2	AB	129	LEU
2	AB	130	THR
2	AB	132	LYS
2	AB	133	GLU
2	AB	136	MET
2	AB	137	ARG
2	AB	140	GLU
2	AB	143	LYS
2	AB	144	LEU
2	AB	151	ILE
2	AB	161	LEU
2	AB	163	VAL
2	AB	184	PHE
2	AB	186	ILE
2	AB	188	ASP
2	AB	199	VAL
2	AB	205	ASP
2	AB	207	ILE
2	AB	208	ARG
2	AB	220	THR
2	AB	225	ARG
2	AB	226	SER

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Mol	Chain	Res	Type
3	AC	3	GLN
3	AC	14	ILE
3	AC	15	VAL
3	AC	16	LYS
3	AC	18	TRP
3	AC	26	THR
3	AC	27	LYS
3	AC	33	LEU
3	AC	37	PHE
3	AC	38	LYS
3	AC	52	VAL
3	AC	55	ILE
3	AC	58	GLU
3	AC	59	ARG
3	AC	62	LYS
3	AC	69	HIS
3	AC	82	GLU
3	AC	86	LYS
3	AC	93	ASP
3	AC	103	ILE
3	AC	107	ARG
3	AC	119	SER
3	AC	121	THR
3	AC	127	ARG
3	AC	131	ARG
3	AC	140	ASN
3	AC	142	MET
3	AC	144	LEU
3	AC	157	LEU
3	AC	162	ILE
3	AC	167	TRP
3	AC	168	TYR
3	AC	185	ASN
4	AD	3	ARG
4	AD	5	LEU
4	AD	13	ARG
4	AD	23	SER
4	AD	31	LYS
4	AD	32	CYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG

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Mol	Chain	Res	Type
4	AD	48	LEU
4	AD	49	SER
4	AD	56	ARG
4	AD	58	LYS
4	AD	63	ARG
4	AD	70	ARG
4	AD	83	LYS
4	AD	90	LEU
4	AD	93	LEU
4	AD	98	LEU
4	AD	103	TYR
4	AD	104	ARG
4	AD	110	THR
4	AD	111	ARG
4	AD	116	GLN
4	AD	121	LYS
4	AD	123	ILE
4	AD	128	ARG
4	AD	132	ILE
4	AD	134	SER
4	AD	143	VAL
4	AD	144	SER
4	AD	145	ILE
4	AD	152	GLN
4	AD	161	LEU
4	AD	163	GLU
4	AD	164	GLN
4	AD	167	LYS
4	AD	177	LYS
4	AD	178	MET
4	AD	190	ASP
4	AD	195	ILE
4	AD	196	ASN
4	AD	197	GLU
4	AD	206	LYS
5	AE	10	GLU
5	AE	15	LEU
5	AE	19	ASN
5	AE	21	VAL
5	AE	26	LYS
5	AE	29	ARG
5	AE	32	SER

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Mol	Chain	Res	Type
5	AE	46	VAL
5	AE	60	ILE
5	AE	69	ARG
5	AE	72	ILE
5	AE	74	VAL
5	AE	83	HIS
5	AE	93	ARG
5	AE	101	GLU
5	AE	105	ILE
5	AE	114	VAL
5	AE	115	LEU
5	AE	116	GLU
5	AE	122	ASN
5	AE	123	VAL
5	AE	124	LEU
5	AE	131	THR
5	AE	134	ILE
5	AE	136	VAL
5	AE	137	VAL
5	AE	142	ASP
5	AE	149	SER
6	AF	5	GLU
6	AF	14	GLN
6	AF	15	SER
6	AF	16	GLU
6	AF	17	GLN
6	AF	24	ARG
6	AF	35	LYS
6	AF	39	LEU
6	AF	51	ILE
6	AF	52	ASN
6	AF	53	LYS
6	AF	54	LEU
6	AF	55	HIS
6	AF	62	MET
6	AF	63	ASN
6	AF	69	GLU
6	AF	77	THR
6	AF	82	ASP
6	AF	86	ARG
6	AF	87	SER
6	AF	90	MET

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Mol	Chain	Res	Type
6	AF	93	LYS
6	AF	96	VAL
6	AF	97	THR
7	AG	4	ARG
7	AG	6	VAL
7	AG	7	ILE
7	AG	9	GLN
7	AG	13	LEU
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	37	SER
7	AG	41	SER
7	AG	43	VAL
7	AG	47	LEU
7	AG	48	GLU
7	AG	49	THR
7	AG	52	GLN
7	AG	56	LYS
7	AG	59	LEU
7	AG	62	PHE
7	AG	63	GLU
7	AG	70	ARG
7	AG	75	VAL
7	AG	76	LYS
7	AG	78	ARG
7	AG	79	ARG
7	AG	80	VAL
7	AG	83	SER
7	AG	89	VAL
7	AG	95	ARG
7	AG	113	ASP
7	AG	120	LEU
7	AG	124	LEU
7	AG	135	VAL
7	AG	136	LYS
7	AG	141	VAL
7	AG	142	HIS
7	AG	144	MET
8	AH	13	ARG
8	AH	15	ARG
8	AH	22	LYS

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Mol	Chain	Res	Type
8	AH	26	THR
8	AH	31	LYS
8	AH	32	LEU
8	AH	36	ILE
8	AH	42	GLU
8	AH	47	GLU
8	AH	49	PHE
8	AH	59	LEU
8	AH	64	LYS
8	AH	74	SER
8	AH	80	ARG
8	AH	83	LEU
8	AH	89	LYS
8	AH	90	ASP
8	AH	99	LEU
8	AH	104	VAL
8	AH	108	LYS
8	AH	111	MET
8	AH	121	LEU
8	AH	125	ILE
8	AH	129	VAL
9	AI	7	TYR
9	AI	11	ARG
9	AI	12	ARG
9	AI	22	LYS
9	AI	30	ILE
9	AI	33	ARG
9	AI	36	GLU
9	AI	43	THR
9	AI	46	MET
9	AI	48	VAL
9	AI	49	ARG
9	AI	55	VAL
9	AI	57	MET
9	AI	61	LEU
9	AI	63	LEU
9	AI	65	ILE
9	AI	68	LYS
9	AI	85	ARG
9	AI	89	GLU
9	AI	90	TYR
9	AI	94	LEU

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Mol	Chain	Res	Type
9	AI	96	SER
9	AI	97	GLU
9	AI	99	ARG
9	AI	111	VAL
9	AI	114	LYS
9	AI	115	LYS
9	AI	119	ARG
9	AI	120	LYS
9	AI	127	PHE
9	AI	129	LYS
9	AI	130	ARG
10	AJ	5	ARG
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	11	LYS
10	AJ	15	HIS
10	AJ	25	ILE
10	AJ	27	GLU
10	AJ	28	THR
10	AJ	44	THR
10	AJ	52	LEU
10	AJ	53	ILE
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	66	GLU
10	AJ	69	THR
10	AJ	71	LEU
10	AJ	73	LEU
10	AJ	80	THR
10	AJ	83	THR
10	AJ	84	VAL
10	AJ	87	LEU
10	AJ	89	ARG
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	101	SER
11	AK	14	LYS
11	AK	17	SER
11	AK	23	ILE
11	AK	31	ILE
11	AK	32	VAL
11	AK	38	GLN

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Mol	Chain	Res	Type
11	AK	52	PHE
11	AK	65	VAL
11	AK	74	VAL
11	AK	76	GLU
11	AK	81	ASN
11	AK	82	LEU
11	AK	83	GLU
11	AK	97	ILE
11	AK	100	LEU
11	AK	107	ILE
11	AK	111	THR
11	AK	126	LYS
11	AK	127	ARG
11	AK	128	ARG
12	AL	4	VAL
12	AL	10	LYS
12	AL	16	VAL
12	AL	21	VAL
12	AL	25	GLU
12	AL	29	GLN
12	AL	41	THR
12	AL	44	LYS
12	AL	51	LYS
12	AL	54	ARG
12	AL	57	LEU
12	AL	58	THR
12	AL	62	GLU
12	AL	64	THR
12	AL	72	HIS
12	AL	74	LEU
12	AL	82	ILE
12	AL	86	ARG
12	AL	88	LYS
12	AL	89	ASP
12	AL	102	LEU
12	AL	104	CYS
12	AL	105	SER
12	AL	116	LYS
12	AL	121	ARG
13	AM	3	ARG
13	AM	4	ILE
13	AM	7	ILE

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Mol	Chain	Res	Type
13	AM	8	ASN
13	AM	11	ASP
13	AM	13	LYS
13	AM	16	VAL
13	AM	19	LEU
13	AM	21	SER
13	AM	25	VAL
13	AM	27	LYS
13	AM	29	ARG
13	AM	34	LEU
13	AM	48	LEU
13	AM	55	THR
13	AM	59	GLU
13	AM	63	PHE
13	AM	66	GLU
13	AM	68	ASP
13	AM	71	ARG
13	AM	72	GLU
13	AM	79	ARG
13	AM	87	ARG
13	AM	101	ARG
13	AM	104	THR
13	AM	107	ARG
13	AM	108	THR
14	AN	7	LYS
14	AN	26	GLU
14	AN	28	LYS
14	AN	41	ARG
14	AN	46	LEU
14	AN	49	GLN
14	AN	51	LEU
14	AN	59	ARG
14	AN	62	ASN
14	AN	63	ARG
14	AN	67	THR
14	AN	80	SER
14	AN	81	ARG
14	AN	84	VAL
14	AN	85	ARG
14	AN	89	MET
15	AO	11	ILE
15	AO	17	ARG

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Mol	Chain	Res	Type
15	AO	31	LEU
15	AO	35	GLN
15	AO	39	LEU
15	AO	40	GLN
15	AO	57	LEU
15	AO	67	LEU
15	AO	70	LEU
15	AO	75	VAL
15	AO	79	THR
15	AO	83	GLU
15	AO	85	LEU
15	AO	87	LEU
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	8	ARG
16	AP	18	GLN
16	AP	20	VAL
16	AP	31	ARG
16	AP	33	ILE
16	AP	46	LYS
16	AP	51	ARG
16	AP	67	ILE
16	AP	70	ARG
16	AP	75	ILE
16	AP	78	VAL
16	AP	80	LYS
17	AQ	4	LYS
17	AQ	11	ARG
17	AQ	13	VAL
17	AQ	16	LYS
17	AQ	17	MET
17	AQ	21	ILE
17	AQ	27	ARG
17	AQ	28	PHE
17	AQ	29	VAL
17	AQ	38	ILE
17	AQ	44	LEU
17	AQ	50	ASN
17	AQ	51	ASN
17	AQ	52	GLU
17	AQ	53	CYS

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Mol	Chain	Res	Type
17	AQ	55	ILE
17	AQ	57	ASP
17	AQ	63	GLU
17	AQ	69	LYS
17	AQ	71	LYS
17	AQ	75	LEU
17	AQ	76	VAL
17	AQ	81	LYS
17	AQ	83	VAL
18	AR	25	ASP
18	AR	29	LEU
18	AR	30	LYS
18	AR	34	THR
18	AR	43	ARG
18	AR	48	ARG
18	AR	55	LEU
18	AR	71	THR
19	AS	6	LYS
19	AS	15	LEU
19	AS	21	LYS
19	AS	33	THR
19	AS	41	PHE
19	AS	55	ARG
19	AS	56	GLN
19	AS	58	VAL
19	AS	63	THR
19	AS	65	GLU
19	AS	71	LEU
20	AT	5	LYS
20	AT	6	SER
20	AT	8	LYS
20	AT	10	ARG
20	AT	12	ILE
20	AT	15	GLU
20	AT	27	MET
20	AT	29	ARG
20	AT	30	THR
20	AT	34	LYS
20	AT	36	TYR
20	AT	54	MET
20	AT	69	LYS
20	AT	70	ASN

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Mol	Chain	Res	Type
20	AT	74	ARG
20	AT	76	LYS
21	AU	5	LYS
21	AU	9	ASN
21	AU	10	GLU
21	AU	12	PHE
21	AU	16	LEU
21	AU	18	ARG
21	AU	19	PHE
21	AU	20	LYS
21	AU	28	VAL
21	AU	33	ARG
21	AU	34	ARG
21	AU	37	PHE
21	AU	44	GLU
21	AU	53	VAL
21	AU	54	LYS
24	BC	3	VAL
24	BC	5	LYS
24	BC	14	ARG
24	BC	18	LYS
24	BC	24	LEU
24	BC	35	GLU
24	BC	38	SER
24	BC	39	LYS
24	BC	63	ARG
24	BC	64	ILE
24	BC	71	LYS
24	BC	86	ASN
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	121	ASP
24	BC	125	LYS
24	BC	135	ILE
24	BC	156	ARG
24	BC	164	ILE
24	BC	167	ARG
24	BC	174	LEU
24	BC	177	ARG
24	BC	181	MET
24	BC	182	ARG

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Mol	Chain	Res	Type
24	BC	187	ASP
24	BC	199	GLU
24	BC	200	HIS
24	BC	207	LYS
24	BC	213	TRP
24	BC	244	PRO
24	BC	245	VAL
24	BC	248	TRP
24	BC	265	LYS
25	BD	8	LYS
25	BD	12	THR
25	BD	16	THR
25	BD	28	GLU
25	BD	33	ARG
25	BD	43	ASP
25	BD	52	THR
25	BD	62	LYS
25	BD	73	VAL
25	BD	83	ARG
25	BD	89	GLU
25	BD	95	SER
25	BD	98	VAL
25	BD	112	THR
25	BD	121	THR
25	BD	145	SER
25	BD	177	VAL
25	BD	197	THR
25	BD	204	LYS
26	BE	4	VAL
26	BE	15	SER
26	BE	32	VAL
26	BE	40	ARG
26	BE	44	ARG
26	BE	48	THR
26	BE	49	ARG
26	BE	65	THR
26	BE	69	ARG
26	BE	77	ILE
26	BE	90	GLN
26	BE	93	SER
26	BE	95	LYS
26	BE	107	SER

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Mol	Chain	Res	Type
26	BE	108	ILE
26	BE	111	GLU
26	BE	115	GLN
26	BE	116	ASP
26	BE	120	VAL
26	BE	121	VAL
26	BE	126	VAL
26	BE	136	GLN
26	BE	149	ILE
26	BE	159	LEU
26	BE	170	ARG
26	BE	171	ASP
26	BE	176	ASP
26	BE	198	GLU
27	BF	3	LYS
27	BF	14	LYS
27	BF	17	MET
27	BF	23	ASN
27	BF	31	VAL
27	BF	34	ILE
27	BF	36	LEU
27	BF	44	ILE
27	BF	48	LYS
27	BF	50	LEU
27	BF	51	ASP
27	BF	57	LEU
27	BF	78	LYS
27	BF	83	TYR
27	BF	85	ILE
27	BF	89	VAL
27	BF	95	ARG
27	BF	96	MET
27	BF	105	THR
27	BF	125	ARG
27	BF	142	ASP
27	BF	150	ARG
27	BF	152	LEU
27	BF	155	THR
27	BF	158	THR
27	BF	164	GLU
27	BF	174	ASP
28	BG	9	VAL

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Mol	Chain	Res	Type
28	BG	11	VAL
28	BG	27	LYS
28	BG	29	LYS
28	BG	39	ASP
28	BG	43	VAL
28	BG	55	ARG
28	BG	67	THR
28	BG	69	ARG
28	BG	77	ILE
28	BG	87	LEU
28	BG	89	LEU
28	BG	116	GLN
28	BG	124	GLU
28	BG	125	CYS
28	BG	139	GLN
28	BG	152	ARG
28	BG	155	GLU
28	BG	171	THR
29	BH	1	MET
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	15	LEU
29	BH	27	ARG
29	BH	50	ARG
29	BH	60	GLU
29	BH	62	LEU
29	BH	66	ASN
29	BH	75	LEU
29	BH	77	THR
29	BH	79	THR
29	BH	86	ASP
29	BH	91	PHE
29	BH	112	LYS
29	BH	119	ASN
29	BH	122	LEU
29	BH	123	ARG
29	BH	125	THR
29	BH	129	GLU
29	BH	131	SER
29	BH	137	GLU
29	BH	142	VAL

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Mol	Chain	Res	Type
29	BH	145	ASN
29	BH	146	VAL
30	BI	3	LYS
30	BI	8	TYR
30	BI	9	VAL
30	BI	11	LEU
30	BI	12	GLN
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	45	LYS
30	BI	47	ASP
30	BI	50	GLU
30	BI	51	LYS
30	BI	60	THR
30	BI	62	TYR
30	BI	67	PHE
30	BI	68	THR
30	BI	69	PHE
30	BI	72	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	96	ASP
30	BI	97	LYS
30	BI	100	LYS
30	BI	103	ARG
30	BI	108	GLU
30	BI	111	GLN
30	BI	132	THR
30	BI	135	SER
30	BI	136	MET
31	BJ	17	VAL
31	BJ	30	THR
31	BJ	31	GLU
31	BJ	40	HIS
31	BJ	61	LYS
31	BJ	69	ARG
31	BJ	111	LYS
31	BJ	121	LYS
31	BJ	124	VAL
31	BJ	135	GLN
32	BK	20	MET

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Mol	Chain	Res	Type
32	BK	21	CYS
32	BK	45	GLU
32	BK	49	ARG
32	BK	58	LEU
32	BK	63	VAL
32	BK	66	LYS
32	BK	82	ASN
32	BK	88	ASN
32	BK	92	GLU
32	BK	105	ARG
32	BK	116	ILE
32	BK	117	SER
33	BL	13	LYS
33	BL	19	LEU
33	BL	23	ILE
33	BL	27	LEU
33	BL	40	SER
33	BL	63	LYS
33	BL	70	LYS
33	BL	82	LEU
33	BL	85	VAL
33	BL	86	GLU
33	BL	89	VAL
33	BL	93	ASN
33	BL	100	ILE
33	BL	109	LYS
33	BL	115	GLU
33	BL	144	GLU
34	BM	1	MET
34	BM	10	ARG
34	BM	12	MET
34	BM	16	ARG
34	BM	18	ARG
34	BM	20	LEU
34	BM	24	THR
34	BM	58	LYS
34	BM	69	PRO
34	BM	70	ASP
34	BM	106	ASP
34	BM	108	VAL
34	BM	110	GLU
34	BM	126	ILE

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Mol	Chain	Res	Type
34	BM	131	VAL
34	BM	134	THR
34	BM	135	VAL
35	BN	1	MET
35	BN	2	ARG
35	BN	4	ARG
35	BN	8	ARG
35	BN	15	SER
35	BN	18	GLN
35	BN	32	GLU
35	BN	69	ARG
35	BN	70	THR
35	BN	71	ARG
35	BN	79	LEU
35	BN	95	THR
35	BN	96	ARG
35	BN	113	ILE
35	BN	116	VAL
35	BN	118	ARG
35	BN	120	GLU
36	BO	2	ASP
36	BO	3	LYS
36	BO	4	LYS
36	BO	5	SER
36	BO	9	ARG
36	BO	18	LEU
36	BO	25	ARG
36	BO	26	LEU
36	BO	27	VAL
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	38	GLN
36	BO	45	SER
36	BO	49	VAL
36	BO	54	VAL
36	BO	58	ILE
36	BO	65	THR
36	BO	83	LEU
36	BO	88	LYS
36	BO	89	ASP
36	BO	90	VAL

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Mol	Chain	Res	Type
36	BO	102	ARG
37	BP	5	ILE
37	BP	6	LYS
37	BP	7	GLN
37	BP	19	SER
37	BP	26	VAL
37	BP	27	GLU
37	BP	29	LYS
37	BP	46	VAL
37	BP	63	LYS
37	BP	68	GLU
37	BP	93	ARG
37	BP	103	ARG
37	BP	109	ARG
37	BP	110	ILE
37	BP	114	LEU
38	BQ	9	ILE
38	BQ	18	LEU
38	BQ	19	LYS
38	BQ	30	ARG
38	BQ	40	ILE
38	BQ	51	ARG
38	BQ	58	ARG
38	BQ	74	ILE
38	BQ	75	SER
38	BQ	78	LYS
38	BQ	87	SER
38	BQ	94	ILE
38	BQ	95	LEU
38	BQ	112	LYS
39	BR	10	LYS
39	BR	16	GLU
39	BR	20	VAL
39	BR	26	ASP
39	BR	34	GLU
39	BR	41	ILE
39	BR	46	GLU
39	BR	48	LYS
39	BR	64	VAL
39	BR	81	LYS
39	BR	84	ARG
39	BR	85	LYS

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Mol	Chain	Res	Type
39	BR	87	GLN
39	BR	94	THR
39	BR	102	SER
40	BS	4	ILE
40	BS	7	HIS
40	BS	8	ARG
40	BS	23	LEU
40	BS	30	SER
40	BS	35	ILE
40	BS	46	LEU
40	BS	47	VAL
40	BS	48	LYS
40	BS	65	ASP
40	BS	69	LEU
40	BS	81	SER
40	BS	86	MET
40	BS	92	ARG
40	BS	95	ARG
40	BS	97	LEU
40	BS	108	SER
40	BS	109	ASP
41	BT	5	GLU
41	BT	11	LEU
41	BT	16	VAL
41	BT	17	SER
41	BT	30	ILE
41	BT	36	LYS
41	BT	49	LYS
41	BT	52	GLU
41	BT	60	THR
41	BT	73	ARG
41	BT	74	ILE
41	BT	89	GLU
42	BU	6	ARG
42	BU	9	ASP
42	BU	15	THR
42	BU	28	VAL
42	BU	29	LEU
42	BU	31	SER
42	BU	34	VAL
42	BU	42	VAL
42	BU	47	LYS

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Mol	Chain	Res	Type
42	BU	52	LEU
42	BU	61	LYS
42	BU	65	ILE
42	BU	68	SER
42	BU	77	THR
42	BU	86	ARG
42	BU	93	VAL
42	BU	99	ASN
43	BV	1	MET
43	BV	10	LYS
43	BV	17	SER
43	BV	18	ARG
43	BV	20	LEU
43	BV	29	ILE
43	BV	30	ILE
43	BV	40	ILE
43	BV	53	LYS
43	BV	61	LEU
43	BV	65	VAL
43	BV	66	ASP
43	BV	77	VAL
43	BV	85	LYS
43	BV	87	GLN
43	BV	93	ARG
44	BW	20	ARG
44	BW	24	LYS
44	BW	38	VAL
44	BW	55	ARG
44	BW	64	ASP
44	BW	72	LYS
44	BW	81	SER
45	BX	14	THR
45	BX	19	SER
45	BX	23	ASN
45	BX	28	ARG
45	BX	37	ARG
45	BX	40	VAL
45	BX	48	THR
45	BX	66	THR
45	BX	71	LEU
45	BX	76	GLU
45	BX	77	LYS

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Mol	Chain	Res	Type
46	BY	6	LEU
46	BY	13	GLU
46	BY	16	THR
46	BY	18	LEU
46	BY	44	LYS
46	BY	54	LYS
46	BY	57	LEU
46	BY	59	GLU
47	BZ	3	LYS
47	BZ	6	LYS
47	BZ	10	THR
47	BZ	32	ILE
47	BZ	37	GLU
47	BZ	52	SER
48	B0	6	ASN
48	B0	23	THR
48	B0	29	SER
48	B0	37	LYS
48	B0	39	LEU
48	B0	40	ARG
48	B0	43	ILE
49	B1	8	LYS
49	B1	9	ILE
49	B1	11	LEU
49	B1	22	THR
49	B1	29	THR
49	B1	46	HIS
49	B1	47	VAL
49	B1	51	GLU
50	B2	3	ARG
50	B2	11	LYS
50	B2	24	THR
50	B2	42	LEU
50	B2	45	SER
51	B3	6	THR
51	B3	8	ARG
51	B3	13	ARG
51	B3	17	THR
51	B3	30	ARG
51	B3	31	HIS
51	B3	45	ARG
51	B3	47	LYS

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Mol	Chain	Res	Type
51	B3	49	MET
51	B3	51	SER
51	B3	59	ILE
52	B4	1	MET
52	B4	6	SER
52	B4	12	ARG
52	B4	17	VAL
52	B4	34	LYS
53	B5	21	TYR
53	B5	23	ILE
53	B5	35	THR
53	B5	37	LYS
53	B5	38	PHE
53	B5	39	ASP
53	B5	41	THR
53	B5	47	LYS
53	B5	48	LEU
53	B5	59	VAL
53	B5	65	LEU
53	B5	73	VAL
53	B5	78	ILE
53	B5	80	LYS
2	CB	9	MET
2	CB	14	VAL
2	CB	15	HIS
2	CB	16	PHE
2	CB	19	GLN
2	CB	20	THR
2	CB	21	ARG
2	CB	24	ASN
2	CB	27	MET
2	CB	28	LYS
2	CB	40	ILE
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	62	SER
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	77	SER
2	CB	80	VAL

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Mol	Chain	Res	Type
2	CB	82	ASP
2	CB	88	ASP
2	CB	89	GLN
2	CB	94	HIS
2	CB	95	ARG
2	CB	96	TRP
2	CB	101	LEU
2	CB	103	ASN
2	CB	106	THR
2	CB	117	LEU
2	CB	121	SER
2	CB	122	GLN
2	CB	126	PHE
2	CB	129	LEU
2	CB	130	THR
2	CB	136	MET
2	CB	137	ARG
2	CB	143	LYS
2	CB	144	LEU
2	CB	148	LEU
2	CB	163	VAL
2	CB	164	ILE
2	CB	171	ILE
2	CB	174	LYS
2	CB	188	ASP
2	CB	194	ASP
2	CB	205	ASP
2	CB	207	ILE
2	CB	210	VAL
2	CB	213	TYR
2	CB	220	THR
2	CB	222	ARG
2	CB	223	GLU
2	CB	225	ARG
3	CC	3	GLN
3	CC	4	LYS
3	CC	11	ARG
3	CC	15	VAL
3	CC	16	LYS
3	CC	18	TRP
3	CC	26	THR
3	CC	27	LYS

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Mol	Chain	Res	Type
3	CC	29	PHE
3	CC	33	LEU
3	CC	36	ASP
3	CC	37	PHE
3	CC	43	LEU
3	CC	45	LYS
3	CC	46	GLU
3	CC	80	LYS
3	CC	94	ILE
3	CC	102	ASN
3	CC	103	ILE
3	CC	107	ARG
3	CC	111	LEU
3	CC	112	ASP
3	CC	119	SER
3	CC	121	THR
3	CC	122	SER
3	CC	128	VAL
3	CC	129	MET
3	CC	131	ARG
3	CC	144	LEU
3	CC	151	VAL
3	CC	153	VAL
3	CC	167	TRP
3	CC	168	TYR
3	CC	179	ARG
3	CC	185	ASN
3	CC	186	THR
3	CC	190	HIS
3	CC	192	THR
3	CC	193	TYR
3	CC	206	GLU
4	CD	8	LYS
4	CD	10	LYS
4	CD	32	CYS
4	CD	33	LYS
4	CD	47	ARG
4	CD	48	LEU
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS

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Mol	Chain	Res	Type
4	CD	60	LYS
4	CD	70	ARG
4	CD	81	ARG
4	CD	83	LYS
4	CD	95	GLU
4	CD	104	ARG
4	CD	115	ARG
4	CD	116	GLN
4	CD	125	VAL
4	CD	126	ASN
4	CD	142	VAL
4	CD	148	LYS
4	CD	152	GLN
4	CD	155	VAL
4	CD	161	LEU
4	CD	177	LYS
4	CD	191	LEU
4	CD	197	GLU
4	CD	199	LEU
4	CD	200	ILE
4	CD	203	LEU
4	CD	206	LYS
5	CE	15	LEU
5	CE	18	VAL
5	CE	26	LYS
5	CE	32	SER
5	CE	39	VAL
5	CE	46	VAL
5	CE	65	GLU
5	CE	69	ARG
5	CE	76	LEU
5	CE	77	ASN
5	CE	86	LYS
5	CE	88	VAL
5	CE	93	ARG
5	CE	101	GLU
5	CE	105	ILE
5	CE	106	ILE
5	CE	112	ARG
5	CE	114	VAL
5	CE	115	LEU
5	CE	120	VAL

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Mol	Chain	Res	Type
5	CE	124	LEU
5	CE	126	LYS
5	CE	131	THR
5	CE	136	VAL
5	CE	137	VAL
5	CE	140	THR
5	CE	151	GLU
5	CE	152	MET
5	CE	156	LYS
5	CE	157	ARG
6	CF	1	MET
6	CF	2	ARG
6	CF	9	MET
6	CF	15	SER
6	CF	17	GLN
6	CF	24	ARG
6	CF	26	THR
6	CF	30	THR
6	CF	35	LYS
6	CF	36	ILE
6	CF	38	ARG
6	CF	39	LEU
6	CF	51	ILE
6	CF	53	LYS
6	CF	54	LEU
6	CF	55	HIS
6	CF	63	ASN
6	CF	68	GLN
6	CF	69	GLU
6	CF	71	ILE
6	CF	79	ARG
6	CF	80	PHE
6	CF	82	ASP
6	CF	85	ILE
6	CF	87	SER
6	CF	89	VAL
6	CF	93	LYS
6	CF	94	HIS
6	CF	97	THR
7	CG	3	ARG
7	CG	4	ARG
7	CG	5	ARG

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Mol	Chain	Res	Type
7	CG	6	VAL
7	CG	10	ARG
7	CG	11	LYS
7	CG	12	ILE
7	CG	22	LEU
7	CG	23	LEU
7	CG	30	LEU
7	CG	36	LYS
7	CG	47	LEU
7	CG	48	GLU
7	CG	59	LEU
7	CG	60	GLU
7	CG	62	PHE
7	CG	66	LEU
7	CG	69	VAL
7	CG	72	THR
7	CG	75	VAL
7	CG	78	ARG
7	CG	84	THR
7	CG	87	VAL
7	CG	91	VAL
7	CG	92	ARG
7	CG	97	ASN
7	CG	120	LEU
7	CG	123	GLU
7	CG	129	GLU
7	CG	133	THR
7	CG	138	ARG
7	CG	140	ASP
8	CH	3	MET
8	CH	22	LYS
8	CH	31	LYS
8	CH	32	LEU
8	CH	36	ILE
8	CH	42	GLU
8	CH	46	ILE
8	CH	47	GLU
8	CH	49	PHE
8	CH	54	ASP
8	CH	55	THR
8	CH	59	LEU
8	CH	67	GLN

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Mol	Chain	Res	Type
8	CH	73	GLU
8	CH	75	ILE
8	CH	77	ARG
8	CH	80	ARG
8	CH	87	LYS
8	CH	89	LYS
8	CH	92	LEU
8	CH	94	LYS
8	CH	104	VAL
8	CH	112	THR
8	CH	121	LEU
8	CH	125	ILE
9	CI	9	THR
9	CI	13	LYS
9	CI	28	ILE
9	CI	32	GLN
9	CI	33	ARG
9	CI	36	GLU
9	CI	42	GLU
9	CI	43	THR
9	CI	45	ARG
9	CI	46	MET
9	CI	48	VAL
9	CI	49	ARG
9	CI	56	ASP
9	CI	57	MET
9	CI	61	LEU
9	CI	68	LYS
9	CI	73	SER
9	CI	85	ARG
9	CI	88	MET
9	CI	89	GLU
9	CI	90	TYR
9	CI	97	GLU
9	CI	99	ARG
9	CI	100	LYS
9	CI	105	THR
9	CI	106	ARG
9	CI	112	GLU
9	CI	116	VAL
9	CI	118	LEU
9	CI	126	GLN

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Mol	Chain	Res	Type
9	CI	127	PHE
9	CI	129	LYS
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	26	VAL
10	CJ	27	GLU
10	CJ	32	THR
10	CJ	40	ILE
10	CJ	59	LYS
10	CJ	63	ASP
10	CJ	66	GLU
10	CJ	80	THR
10	CJ	83	THR
10	CJ	84	VAL
10	CJ	87	LEU
10	CJ	89	ARG
10	CJ	92	LEU
10	CJ	100	ILE
11	CK	13	ARG
11	CK	14	LYS
11	CK	15	GLN
11	CK	17	SER
11	CK	31	ILE
11	CK	33	THR
11	CK	37	ARG
11	CK	46	THR
11	CK	64	GLN
11	CK	65	VAL
11	CK	72	ASP
11	CK	76	GLU
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	96	THR
11	CK	101	ASN
11	CK	106	ARG
11	CK	107	ILE
11	CK	109	ASN
11	CK	126	LYS
11	CK	127	ARG
11	CK	128	ARG
12	CL	3	THR

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Mol	Chain	Res	Type
12	CL	4	VAL
12	CL	5	ASN
12	CL	10	LYS
12	CL	16	VAL
12	CL	18	LYS
12	CL	20	ASN
12	CL	27	CYS
12	CL	29	GLN
12	CL	34	CYS
12	CL	38	TYR
12	CL	44	LYS
12	CL	47	SER
12	CL	52	VAL
12	CL	58	THR
12	CL	59	ASN
12	CL	78	SER
12	CL	81	LEU
12	CL	83	ARG
12	CL	89	ASP
12	CL	90	LEU
12	CL	93	VAL
12	CL	94	ARG
12	CL	110	ARG
12	CL	121	ARG
13	CM	3	ARG
13	CM	19	LEU
13	CM	25	VAL
13	CM	29	ARG
13	CM	31	LYS
13	CM	41	GLU
13	CM	42	ASP
13	CM	48	LEU
13	CM	53	ILE
13	CM	54	ASP
13	CM	58	ASP
13	CM	59	GLU
13	CM	60	VAL
13	CM	63	PHE
13	CM	68	ASP
13	CM	72	GLU
13	CM	76	SER
13	CM	80	LEU

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Mol	Chain	Res	Type
13	CM	83	LEU
13	CM	87	ARG
13	CM	90	ARG
13	CM	91	HIS
13	CM	101	ARG
14	CN	4	GLN
14	CN	18	ASP
14	CN	23	LYS
14	CN	26	GLU
14	CN	48	LEU
14	CN	53	ARG
14	CN	60	GLN
14	CN	67	THR
14	CN	80	SER
14	CN	82	ILE
15	CO	17	ARG
15	CO	18	ASP
15	CO	35	GLN
15	CO	48	LYS
15	CO	64	ARG
15	CO	70	LEU
15	CO	73	LYS
15	CO	79	THR
15	CO	85	LEU
15	CO	87	LEU
15	CO	88	ARG
16	CP	1	MET
16	CP	2	VAL
16	CP	3	THR
16	CP	14	ARG
16	CP	18	GLN
16	CP	20	VAL
16	CP	36	VAL
16	CP	46	LYS
16	CP	51	ARG
16	CP	63	GLN
16	CP	74	LEU
16	CP	77	GLU
16	CP	80	LYS
17	CQ	4	LYS
17	CQ	5	ILE
17	CQ	11	ARG

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Mol	Chain	Res	Type
17	CQ	14	SER
17	CQ	17	MET
17	CQ	18	GLU
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	29	VAL
17	CQ	40	ARG
17	CQ	48	ASP
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	57	ASP
17	CQ	65	ARG
17	CQ	75	LEU
17	CQ	76	VAL
17	CQ	78	VAL
17	CQ	79	VAL
17	CQ	81	LYS
18	CR	33	ILE
18	CR	47	THR
18	CR	48	ARG
18	CR	66	SER
18	CR	67	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	11	ILE
19	CS	12	ASP
19	CS	13	LEU
19	CS	14	HIS
19	CS	16	LEU
19	CS	21	LYS
19	CS	27	ASP
19	CS	28	LYS
19	CS	31	LEU
19	CS	33	THR
19	CS	39	THR
19	CS	49	ILE
19	CS	56	GLN
19	CS	66	MET
20	CT	6	SER
20	CT	10	ARG
20	CT	14	SER

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Mol	Chain	Res	Type
20	CT	15	GLU
20	CT	19	LYS
20	CT	24	ARG
20	CT	27	MET
20	CT	29	ARG
20	CT	36	TYR
20	CT	49	LYS
20	CT	64	LYS
20	CT	67	ILE
20	CT	69	LYS
20	CT	76	LYS
20	CT	78	ASN
20	CT	79	LEU
21	CU	5	LYS
21	CU	10	GLU
21	CU	12	PHE
21	CU	14	VAL
21	CU	16	LEU
21	CU	19	PHE
21	CU	22	SER
21	CU	28	VAL
21	CU	34	ARG
21	CU	36	GLU
21	CU	37	PHE
21	CU	38	TYR
21	CU	42	THR
21	CU	43	THR
21	CU	47	ARG
24	DC	6	CYS
24	DC	14	ARG
24	DC	20	VAL
24	DC	58	HIS
24	DC	80	ARG
24	DC	98	ASP
24	DC	103	TYR
24	DC	105	LEU
24	DC	111	LYS
24	DC	130	LEU
24	DC	160	THR
24	DC	164	ILE
24	DC	165	VAL
24	DC	175	ARG

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Mol	Chain	Res	Type
24	DC	178	SER
24	DC	185	GLU
24	DC	187	ASP
24	DC	192	LEU
24	DC	195	VAL
24	DC	202	LEU
24	DC	205	LEU
24	DC	221	ARG
24	DC	229	ASP
24	DC	250	VAL
24	DC	262	ARG
24	DC	266	PHE
24	DC	268	VAL
25	DD	1	MET
25	DD	4	LEU
25	DD	12	THR
25	DD	33	ARG
25	DD	39	ASP
25	DD	49	GLN
25	DD	77	ARG
25	DD	86	GLU
25	DD	104	VAL
25	DD	131	ASP
25	DD	138	LEU
25	DD	141	ARG
25	DD	150	GLN
25	DD	157	LYS
25	DD	170	VAL
25	DD	172	VAL
25	DD	175	LEU
25	DD	181	ASP
25	DD	189	VAL
26	DE	6	LYS
26	DE	22	ASP
26	DE	25	GLU
26	DE	32	VAL
26	DE	40	ARG
26	DE	41	GLN
26	DE	58	LYS
26	DE	69	ARG
26	DE	77	ILE
26	DE	78	TRP

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Mol	Chain	Res	Type
26	DE	83	VAL
26	DE	84	THR
26	DE	90	GLN
26	DE	91	ASP
26	DE	95	LYS
26	DE	105	LEU
26	DE	107	SER
26	DE	108	ILE
26	DE	113	VAL
26	DE	114	ARG
26	DE	126	VAL
26	DE	127	GLU
26	DE	132	LYS
26	DE	133	LEU
26	DE	145	ASP
26	DE	149	ILE
26	DE	163	ASN
26	DE	164	LEU
26	DE	170	ARG
26	DE	171	ASP
26	DE	173	THR
26	DE	181	ILE
26	DE	187	VAL
26	DE	200	LEU
27	DF	4	LEU
27	DF	6	ASP
27	DF	7	TYR
27	DF	10	ASP
27	DF	14	LYS
27	DF	21	ASN
27	DF	26	MET
27	DF	28	VAL
27	DF	32	GLU
27	DF	35	THR
27	DF	36	LEU
27	DF	46	ASP
27	DF	52	ASN
27	DF	63	GLN
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	78	LYS

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Mol	Chain	Res	Type
27	DF	81	GLN
27	DF	87	CYS
27	DF	95	ARG
27	DF	106	ILE
27	DF	110	ARG
27	DF	125	ARG
27	DF	134	GLU
27	DF	140	GLU
27	DF	147	ASP
27	DF	149	VAL
27	DF	150	ARG
27	DF	152	LEU
27	DF	174	ASP
27	DF	178	ARG
28	DG	11	VAL
28	DG	17	VAL
28	DG	29	LYS
28	DG	30	ASN
28	DG	44	LYS
28	DG	45	HIS
28	DG	84	THR
28	DG	89	LEU
28	DG	95	ARG
28	DG	98	VAL
28	DG	117	LEU
28	DG	121	ILE
28	DG	127	THR
28	DG	130	GLU
28	DG	152	ARG
28	DG	155	GLU
28	DG	158	LYS
28	DG	176	LYS
29	DH	7	ASP
29	DH	12	LEU
29	DH	41	LYS
29	DH	42	LYS
29	DH	48	GLU
29	DH	50	ARG
29	DH	53	GLU
29	DH	54	LEU
29	DH	57	LYS
29	DH	62	LEU

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Mol	Chain	Res	Type
29	DH	77	THR
29	DH	78	VAL
29	DH	87	GLU
29	DH	89	LYS
29	DH	94	ILE
29	DH	109	GLU
29	DH	114	GLU
29	DH	116	ARG
29	DH	117	LEU
29	DH	119	ASN
29	DH	121	VAL
29	DH	124	THR
29	DH	125	THR
29	DH	129	GLU
29	DH	142	VAL
29	DH	149	GLU
30	DI	4	LYS
30	DI	8	TYR
30	DI	10	LYS
30	DI	11	LEU
30	DI	12	GLN
30	DI	17	MET
30	DI	24	VAL
30	DI	31	GLN
30	DI	40	LYS
30	DI	49	ILE
30	DI	55	ILE
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS
30	DI	92	LYS
30	DI	95	LYS
30	DI	96	ASP
30	DI	105	GLN
30	DI	107	GLN
30	DI	117	MET
30	DI	118	THR
30	DI	125	MET
30	DI	127	ARG
30	DI	134	ARG
31	DJ	3	THR
31	DJ	14	ASP

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Mol	Chain	Res	Type
31	DJ	27	ARG
31	DJ	30	THR
31	DJ	34	ARG
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	43	GLU
31	DJ	73	VAL
31	DJ	86	GLN
31	DJ	123	LYS
31	DJ	129	GLU
31	DJ	131	ASN
32	DK	31	ARG
32	DK	49	ARG
32	DK	66	LYS
32	DK	67	LYS
32	DK	70	ARG
32	DK	87	LEU
32	DK	90	ASN
32	DK	95	ILE
32	DK	104	THR
32	DK	121	GLU
33	DL	21	ARG
33	DL	29	LYS
33	DL	33	ARG
33	DL	40	SER
33	DL	42	SER
33	DL	47	ARG
33	DL	48	ARG
33	DL	59	ARG
33	DL	60	ARG
33	DL	74	THR
33	DL	78	ARG
33	DL	81	ASP
33	DL	82	LEU
33	DL	85	VAL
33	DL	94	THR
33	DL	95	LEU
33	DL	100	ILE
33	DL	103	ILE
33	DL	118	THR
33	DL	121	THR
33	DL	126	ARG

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Mol	Chain	Res	Type
33	DL	143	GLU
34	DM	6	ARG
34	DM	10	ARG
34	DM	14	LYS
34	DM	59	ARG
34	DM	60	GLN
34	DM	70	ASP
34	DM	74	THR
34	DM	78	LEU
34	DM	100	LYS
34	DM	106	ASP
34	DM	108	VAL
34	DM	119	LEU
34	DM	124	LEU
34	DM	126	ILE
34	DM	127	LYS
34	DM	128	THR
35	DN	2	ARG
35	DN	8	ARG
35	DN	14	SER
35	DN	20	MET
35	DN	22	ARG
35	DN	33	ILE
35	DN	37	THR
35	DN	53	THR
35	DN	62	ASN
35	DN	63	ARG
35	DN	69	ARG
35	DN	70	THR
35	DN	71	ARG
35	DN	73	ASN
35	DN	76	VAL
35	DN	82	GLU
35	DN	95	THR
35	DN	96	ARG
35	DN	100	CYS
35	DN	106	ASP
35	DN	114	GLU
35	DN	115	LEU
35	DN	116	VAL
36	DO	4	LYS
36	DO	9	ARG

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Mol	Chain	Res	Type
36	DO	18	LEU
36	DO	31	THR
36	DO	38	GLN
36	DO	45	SER
36	DO	47	VAL
36	DO	48	LEU
36	DO	67	ASN
36	DO	74	VAL
36	DO	78	VAL
36	DO	89	ASP
36	DO	100	HIS
36	DO	103	VAL
36	DO	116	GLN
37	DP	7	GLN
37	DP	26	VAL
37	DP	32	VAL
37	DP	34	GLU
37	DP	36	SER
37	DP	37	LYS
37	DP	39	ARG
37	DP	52	ASN
37	DP	66	ASN
37	DP	81	VAL
37	DP	85	SER
37	DP	88	ARG
37	DP	89	ARG
37	DP	93	ARG
37	DP	109	ARG
37	DP	110	ILE
38	DQ	5	LYS
38	DQ	6	ARG
38	DQ	9	ILE
38	DQ	11	ARG
38	DQ	13	ARG
38	DQ	17	ILE
38	DQ	22	LYS
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	53	ARG
38	DQ	54	LYS
38	DQ	77	SER
38	DQ	87	SER

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Mol	Chain	Res	Type
39	DR	12	HIS
39	DR	25	LEU
39	DR	38	VAL
39	DR	46	GLU
39	DR	47	VAL
39	DR	48	LYS
39	DR	51	VAL
39	DR	58	VAL
39	DR	85	LYS
39	DR	86	GLN
39	DR	94	THR
40	DS	1	MET
40	DS	3	THR
40	DS	4	ILE
40	DS	6	LYS
40	DS	19	LEU
40	DS	22	ASP
40	DS	46	LEU
40	DS	67	ASP
40	DS	68	ASP
40	DS	86	MET
40	DS	96	ILE
40	DS	97	LEU
40	DS	109	ASP
41	DT	3	ARG
41	DT	7	LEU
41	DT	16	VAL
41	DT	22	THR
41	DT	30	ILE
41	DT	31	VAL
41	DT	32	LEU
41	DT	49	LYS
41	DT	52	GLU
41	DT	53	VAL
41	DT	57	VAL
41	DT	70	HIS
41	DT	77	ARG
41	DT	78	SER
41	DT	86	THR
41	DT	91	GLN
42	DU	7	ARG
42	DU	11	VAL

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Mol	Chain	Res	Type
42	DU	15	THR
42	DU	18	ASP
42	DU	21	LYS
42	DU	24	LYS
42	DU	29	LEU
42	DU	30	SER
42	DU	31	SER
42	DU	34	VAL
42	DU	40	ASN
42	DU	41	LEU
42	DU	45	HIS
42	DU	46	GLN
42	DU	47	LYS
42	DU	53	ASN
42	DU	54	GLN
42	DU	67	VAL
42	DU	68	SER
42	DU	72	ILE
42	DU	74	ASN
42	DU	81	ASP
42	DU	99	ASN
43	DV	1	MET
43	DV	3	THR
43	DV	8	VAL
43	DV	26	PHE
43	DV	29	ILE
43	DV	40	ILE
43	DV	42	LEU
43	DV	50	MET
43	DV	53	LYS
43	DV	61	LEU
43	DV	66	ASP
44	DW	20	ARG
44	DW	38	VAL
44	DW	41	ARG
44	DW	64	ASP
44	DW	77	ARG
45	DX	5	CYS
45	DX	11	ARG
45	DX	17	ASN
45	DX	30	LEU
45	DX	35	SER

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Mol	Chain	Res	Type
45	DX	40	VAL
45	DX	48	THR
45	DX	58	VAL
45	DX	64	ILE
45	DX	71	LEU
46	DY	2	LYS
46	DY	6	LEU
46	DY	13	GLU
46	DY	15	ASN
46	DY	16	THR
46	DY	39	GLN
46	DY	48	ARG
46	DY	49	ASP
46	DY	56	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	4	THR
47	DZ	6	LYS
47	DZ	10	THR
47	DZ	11	ARG
47	DZ	16	ARG
47	DZ	25	LEU
47	DZ	31	ARG
47	DZ	36	VAL
47	DZ	39	GLU
47	DZ	41	THR
47	DZ	45	ARG
47	DZ	57	VAL
48	D0	23	THR
48	D0	28	LEU
48	D0	46	ASP
48	D0	52	ARG
49	D1	12	VAL
49	D1	25	LYS
49	D1	26	ASN
49	D1	38	LYS
49	D1	46	HIS
49	D1	48	ILE
50	D2	4	THR
50	D2	10	LEU
50	D2	24	THR
50	D2	25	LYS

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Mol	Chain	Res	Type
50	D2	41	ARG
50	D2	44	VAL
51	D3	13	ARG
51	D3	23	LYS
51	D3	30	ARG
51	D3	47	LYS
52	D4	4	ARG
52	D4	11	CYS
52	D4	12	ARG
52	D4	26	ILE
52	D4	28	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (38) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	93	ASN
3	AC	6	HIS
3	AC	176	HIS
4	AD	54	GLN
5	AE	82	GLN
5	AE	89	HIS
5	AE	122	ASN
6	AF	3	HIS
8	AH	4	GLN
10	AJ	15	HIS
12	AL	5	ASN
24	BC	251	GLN
25	BD	136	ASN
29	BH	119	ASN
29	BH	135	HIS
31	BJ	47	HIS
31	BJ	77	HIS
37	BP	56	HIS
41	BT	28	ASN
48	B0	42	HIS
49	B1	19	HIS
51	B3	31	HIS
51	B3	43	HIS
3	CC	69	HIS
3	CC	176	HIS
6	CF	55	HIS
10	CJ	70	HIS

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Mol	Chain	Res	Type
15	CO	46	HIS
18	CR	52	GLN
20	CT	68	HIS
24	DC	53	HIS
24	DC	243	HIS
28	DG	115	HIS
29	DH	128	HIS
34	DM	60	GLN
37	DP	41	GLN
38	DQ	37	GLN
51	D3	31	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	361 (23%)	17 (1%)
1	CA	1538/1539 (99%)	335 (21%)	16 (1%)
22	BA	2895/2903 (99%)	672 (23%)	36 (1%)
22	DA	2895/2903 (99%)	609 (21%)	33 (1%)
23	BB	118/119 (99%)	27 (22%)	1 (0%)
23	DB	117/119 (98%)	25 (21%)	0
All	All	9100/9122 (99%)	2029 (22%)	103 (1%)

All (2029) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
1	AA	9	G
1	AA	13	U
1	AA	32	A
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

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Mol	Chain	Res	Type
1	AA	75	G
1	AA	76	G
1	AA	77	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	108	G
1	AA	111	G
1	AA	116	A
1	AA	117	G
1	AA	119	A
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	130	A
1	AA	131	A
1	AA	133	U
1	AA	136	C
1	AA	137	U
1	AA	141	G
1	AA	143	A
1	AA	144	G
1	AA	149	A
1	AA	158	G
1	AA	162	A
1	AA	168	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	188	C
1	AA	195	A

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Mol	Chain	Res	Type
1	AA	197	A
1	AA	205	A
1	AA	210	C
1	AA	226	G
1	AA	240	G
1	AA	243	A
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	263	A
1	AA	264	C
1	AA	266	G
1	AA	267	C
1	AA	274	A
1	AA	280	C
1	AA	289	G
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	331	G
1	AA	332	G
1	AA	341	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	384	G
1	AA	398	U
1	AA	406	G
1	AA	409	U
1	AA	410	G
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	424	G
1	AA	429	U

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Mol	Chain	Res	Type
1	AA	430	A
1	AA	435	A
1	AA	439	U
1	AA	452	A
1	AA	453	G
1	AA	454	G
1	AA	456	A
1	AA	457	G
1	AA	458	U
1	AA	459	A
1	AA	460	A
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	474	G
1	AA	479	U
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	491	G
1	AA	495	A
1	AA	498	A
1	AA	505	G
1	AA	511	C
1	AA	518	C
1	AA	520	A
1	AA	521	G
1	AA	527	G
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	547	A
1	AA	552	U
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	570	G
1	AA	572	A

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Mol	Chain	Res	Type
1	AA	573	A
1	AA	576	C
1	AA	615	G
1	AA	618	C
1	AA	650	G
1	AA	653	U
1	AA	656	G
1	AA	665	A
1	AA	674	G
1	AA	702	A
1	AA	703	G
1	AA	720	C
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	753	A
1	AA	755	G
1	AA	770	C
1	AA	772	U
1	AA	773	G
1	AA	778	G
1	AA	787	A
1	AA	792	A
1	AA	793	U
1	AA	796	C
1	AA	799	G
1	AA	800	G
1	AA	802	A
1	AA	803	G
1	AA	813	U
1	AA	815	A
1	AA	817	C
1	AA	821	G
1	AA	828	U
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	859	G

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Mol	Chain	Res	Type
1	AA	860	A
1	AA	870	U
1	AA	872	A
1	AA	874	G
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	938	A
1	AA	951	G
1	AA	954	G
1	AA	960	U
1	AA	963	G
1	AA	964	A
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	973	G
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	981	U
1	AA	983	A
1	AA	986	U
1	AA	989	U
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	995	C
1	AA	1002	G
1	AA	1003	G
1	AA	1004	A
1	AA	1007	U
1	AA	1008	U
1	AA	1009	U
1	AA	1013	G
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C

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Mol	Chain	Res	Type
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A
1	AA	1037	C
1	AA	1039	G
1	AA	1043	G
1	AA	1044	A
1	AA	1047	G
1	AA	1050	G
1	AA	1051	C
1	AA	1054	C
1	AA	1056	U
1	AA	1059	C
1	AA	1061	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1069	C
1	AA	1084	G
1	AA	1086	U
1	AA	1090	U
1	AA	1091	U
1	AA	1094	G
1	AA	1095	U
1	AA	1096	C
1	AA	1098	C
1	AA	1101	A
1	AA	1104	G
1	AA	1124	G
1	AA	1125	U
1	AA	1127	G
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G

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Mol	Chain	Res	Type
1	AA	1145	A
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1168	U
1	AA	1169	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1187	G
1	AA	1193	G
1	AA	1196	A
1	AA	1197	A
1	AA	1200	C
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1250	A
1	AA	1253	G
1	AA	1255	G
1	AA	1256	A
1	AA	1257	A
1	AA	1260	G
1	AA	1263	C
1	AA	1280	A
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1298	U
1	AA	1299	A
1	AA	1300	G
1	AA	1302	C

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Mol	Chain	Res	Type
1	AA	1303	C
1	AA	1304	G
1	AA	1305	G
1	AA	1319	A
1	AA	1320	C
1	AA	1323	G
1	AA	1328	C
1	AA	1329	A
1	AA	1332	A
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1346	A
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1378	C
1	AA	1379	G
1	AA	1391	U
1	AA	1396	A
1	AA	1397	C
1	AA	1398	A
1	AA	1401	G
1	AA	1412	C
1	AA	1414	U
1	AA	1429	A
1	AA	1437	A
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A
1	AA	1450	U
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1455	G
1	AA	1480	A
1	AA	1493	A
1	AA	1497	G
1	AA	1498	U
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G

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Mol	Chain	Res	Type
1	AA	1506	U
1	AA	1517	G
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
1	AA	1535	C
1	AA	1538	C
1	AA	1539	C
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	17	G
22	BA	27	G
22	BA	32	C
22	BA	34	U
22	BA	35	G
22	BA	39	G
22	BA	46	G
22	BA	49	A
22	BA	57	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	84	A
22	BA	87	U
22	BA	98	G
22	BA	101	A
22	BA	103	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	131	A
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	148	U
22	BA	158	U

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Mol	Chain	Res	Type
22	BA	159	G
22	BA	163	C
22	BA	181	A
22	BA	188	G
22	BA	194	G
22	BA	196	A
22	BA	199	A
22	BA	208	C
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	224	U
22	BA	227	A
22	BA	230	G
22	BA	248	G
22	BA	255	A
22	BA	256	A
22	BA	265	A
22	BA	266	G
22	BA	267	C
22	BA	271	G
22	BA	272	A
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	279	A
22	BA	299	A
22	BA	302	C
22	BA	310	A
22	BA	311	A
22	BA	316	C
22	BA	317	G
22	BA	322	A
22	BA	324	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	332	A
22	BA	335	C
22	BA	343	C
22	BA	344	A

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Mol	Chain	Res	Type
22	BA	348	A
22	BA	353	C
22	BA	355	U
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	378	C
22	BA	386	G
22	BA	403	U
22	BA	405	U
22	BA	411	G
22	BA	420	C
22	BA	424	G
22	BA	441	U
22	BA	451	U
22	BA	467	G
22	BA	476	G
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	483	A
22	BA	485	C
22	BA	489	G
22	BA	490	C
22	BA	491	G
22	BA	499	U
22	BA	501	A
22	BA	504	A
22	BA	505	A
22	BA	508	A
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	536	G
22	BA	543	G
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G

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Mol	Chain	Res	Type
22	BA	550	C
22	BA	555	G
22	BA	563	A
22	BA	564	C
22	BA	573	U
22	BA	574	A
22	BA	575	A
22	BA	586	A
22	BA	603	A
22	BA	607	U
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	645	C
22	BA	647	G
22	BA	648	G
22	BA	651	G
22	BA	654	A
22	BA	669	G
22	BA	686	U
22	BA	699	A
22	BA	713	G
22	BA	716	A
22	BA	722	A
22	BA	729	G
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	743	A
22	BA	747	U
22	BA	754	U
22	BA	757	G
22	BA	758	C
22	BA	759	G
22	BA	764	A
22	BA	765	C
22	BA	771	G
22	BA	775	G

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Mol	Chain	Res	Type
22	BA	776	G
22	BA	782	A
22	BA	783	A
22	BA	784	G
22	BA	785	G
22	BA	786	C
22	BA	789	A
22	BA	791	C
22	BA	792	A
22	BA	800	A
22	BA	802	A
22	BA	805	G
22	BA	806	C
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	831	G
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	855	G
22	BA	858	G
22	BA	859	G
22	BA	860	U
22	BA	861	A
22	BA	866	A
22	BA	868	U
22	BA	869	G
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	922	C
22	BA	931	U
22	BA	932	U
22	BA	940	G
22	BA	941	A
22	BA	946	C

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Mol	Chain	Res	Type
22	BA	961	C
22	BA	974	G
22	BA	978	G
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	990	A
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	1005	C
22	BA	1006	C
22	BA	1011	G
22	BA	1012	U
22	BA	1013	C
22	BA	1022	G
22	BA	1026	G
22	BA	1028	A
22	BA	1033	U
22	BA	1046	A
22	BA	1047	G
22	BA	1051	G
22	BA	1057	A
22	BA	1061	U
22	BA	1062	G
22	BA	1066	U
22	BA	1067	A
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1077	A
22	BA	1081	U
22	BA	1087	G
22	BA	1088	A
22	BA	1092	C
22	BA	1097	U
22	BA	1098	A
22	BA	1100	C
22	BA	1101	U

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Mol	Chain	Res	Type
22	BA	1104	C
22	BA	1106	G
22	BA	1111	A
22	BA	1112	G
22	BA	1119	U
22	BA	1122	G
22	BA	1125	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1137	G
22	BA	1138	G
22	BA	1139	G
22	BA	1142	A
22	BA	1155	A
22	BA	1165	A
22	BA	1168	G
22	BA	1170	C
22	BA	1171	G
22	BA	1172	C
22	BA	1173	U
22	BA	1174	U
22	BA	1175	A
22	BA	1176	U
22	BA	1179	G
22	BA	1180	U
22	BA	1181	U
22	BA	1197	G
22	BA	1218	G
22	BA	1221	C
22	BA	1230	A
22	BA	1238	G
22	BA	1241	A
22	BA	1247	A
22	BA	1248	G
22	BA	1250	G
22	BA	1251	C
22	BA	1253	A
22	BA	1256	G
22	BA	1257	C
22	BA	1266	G

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Mol	Chain	Res	Type
22	BA	1269	A
22	BA	1271	G
22	BA	1272	A
22	BA	1275	A
22	BA	1276	A
22	BA	1284	A
22	BA	1286	A
22	BA	1294	U
22	BA	1300	G
22	BA	1301	A
22	BA	1306	C
22	BA	1309	G
22	BA	1316	U
22	BA	1320	C
22	BA	1321	A
22	BA	1326	U
22	BA	1331	G
22	BA	1332	G
22	BA	1334	G
22	BA	1342	A
22	BA	1345	C
22	BA	1348	C
22	BA	1352	U
22	BA	1355	G
22	BA	1359	A
22	BA	1360	G
22	BA	1365	A
22	BA	1368	G
22	BA	1374	G
22	BA	1377	G
22	BA	1378	A
22	BA	1379	U
22	BA	1383	A
22	BA	1384	A
22	BA	1398	C
22	BA	1402	U
22	BA	1406	U
22	BA	1407	G
22	BA	1415	U
22	BA	1416	G
22	BA	1419	A
22	BA	1424	G

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Mol	Chain	Res	Type
22	BA	1427	A
22	BA	1428	C
22	BA	1435	G
22	BA	1440	U
22	BA	1451	C
22	BA	1452	G
22	BA	1453	A
22	BA	1455	G
22	BA	1458	U
22	BA	1460	U
22	BA	1461	C
22	BA	1475	G
22	BA	1482	G
22	BA	1483	G
22	BA	1494	A
22	BA	1495	A
22	BA	1504	A
22	BA	1508	A
22	BA	1510	G
22	BA	1515	A
22	BA	1516	G
22	BA	1523	U
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1547	C
22	BA	1554	U
22	BA	1555	G
22	BA	1558	C
22	BA	1565	C
22	BA	1569	A
22	BA	1576	U
22	BA	1578	U
22	BA	1581	G
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1587	G
22	BA	1601	G
22	BA	1607	C

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Mol	Chain	Res	Type
22	BA	1608	A
22	BA	1610	A
22	BA	1632	A
22	BA	1634	A
22	BA	1635	A
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1651	G
22	BA	1652	A
22	BA	1654	A
22	BA	1659	G
22	BA	1668	A
22	BA	1674	G
22	BA	1685	C
22	BA	1692	U
22	BA	1695	G
22	BA	1700	A
22	BA	1714	U
22	BA	1715	G
22	BA	1717	A
22	BA	1718	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1736	U
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1758	U
22	BA	1759	A
22	BA	1760	C
22	BA	1764	C
22	BA	1770	G
22	BA	1773	A
22	BA	1776	G
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1808	A
22	BA	1809	A
22	BA	1813	G

Continued on next page...

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Mol	Chain	Res	Type
22	BA	1816	C
22	BA	1820	U
22	BA	1825	U
22	BA	1829	A
22	BA	1840	G
22	BA	1841	U
22	BA	1842	G
22	BA	1849	G
22	BA	1858	A
22	BA	1859	U
22	BA	1864	U
22	BA	1870	C
22	BA	1872	A
22	BA	1873	G
22	BA	1876	A
22	BA	1884	G
22	BA	1885	A
22	BA	1890	A
22	BA	1900	A
22	BA	1906	G
22	BA	1909	C
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1920	C
22	BA	1925	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1935	G
22	BA	1937	A
22	BA	1938	A
22	BA	1940	U
22	BA	1955	U
22	BA	1967	C
22	BA	1970	A

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Mol	Chain	Res	Type
22	BA	1972	G
22	BA	1975	G
22	BA	1991	U
22	BA	1992	G
22	BA	1993	U
22	BA	1997	C
22	BA	2001	C
22	BA	2007	U
22	BA	2018	G
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2042	A
22	BA	2043	C
22	BA	2044	C
22	BA	2052	A
22	BA	2055	C
22	BA	2056	G
22	BA	2059	A
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2064	C
22	BA	2069	G
22	BA	2072	C
22	BA	2078	C
22	BA	2080	A
22	BA	2092	U
22	BA	2093	G
22	BA	2101	A
22	BA	2102	G
22	BA	2110	G
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U

Continued on next page...

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Mol	Chain	Res	Type
22	BA	2119	A
22	BA	2122	U
22	BA	2123	G
22	BA	2126	A
22	BA	2128	G
22	BA	2132	U
22	BA	2133	G
22	BA	2134	A
22	BA	2136	G
22	BA	2142	A
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2157	G
22	BA	2158	A
22	BA	2159	G
22	BA	2164	C
22	BA	2165	C
22	BA	2167	U
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U
22	BA	2173	A
22	BA	2178	C
22	BA	2179	C
22	BA	2183	A
22	BA	2187	U
22	BA	2188	U
22	BA	2189	U
22	BA	2190	G
22	BA	2195	U
22	BA	2198	A
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2224	G
22	BA	2225	A
22	BA	2226	C
22	BA	2234	G
22	BA	2238	G

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Mol	Chain	Res	Type
22	BA	2239	G
22	BA	2257	U
22	BA	2258	C
22	BA	2268	A
22	BA	2269	G
22	BA	2279	G
22	BA	2280	G
22	BA	2283	C
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2311	A
22	BA	2322	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2329	U
22	BA	2336	A
22	BA	2345	G
22	BA	2347	C
22	BA	2350	C
22	BA	2357	G
22	BA	2358	A
22	BA	2361	G
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2412	A
22	BA	2418	A
22	BA	2422	C
22	BA	2425	A
22	BA	2426	A
22	BA	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2435	A
22	BA	2437	G

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Mol	Chain	Res	Type
22	BA	2441	U
22	BA	2447	G
22	BA	2448	A
22	BA	2465	C
22	BA	2474	U
22	BA	2475	C
22	BA	2476	A
22	BA	2479	U
22	BA	2486	C
22	BA	2490	G
22	BA	2491	U
22	BA	2500	U
22	BA	2501	C
22	BA	2502	G
22	BA	2504	U
22	BA	2505	G
22	BA	2508	G
22	BA	2515	C
22	BA	2518	A
22	BA	2520	C
22	BA	2525	G
22	BA	2529	G
22	BA	2554	U
22	BA	2555	U
22	BA	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2574	G
22	BA	2575	C
22	BA	2582	G
22	BA	2585	U
22	BA	2586	U
22	BA	2599	G
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2610	C
22	BA	2613	U
22	BA	2615	U
22	BA	2616	C
22	BA	2621	G
22	BA	2627	G

Continued on next page...

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Mol	Chain	Res	Type
22	BA	2629	U
22	BA	2658	C
22	BA	2663	G
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2718	G
22	BA	2719	G
22	BA	2724	U
22	BA	2726	A
22	BA	2729	G
22	BA	2731	G
22	BA	2733	A
22	BA	2737	G
22	BA	2742	G
22	BA	2744	G
22	BA	2748	A
22	BA	2750	A
22	BA	2757	A
22	BA	2759	G
22	BA	2762	C
22	BA	2765	A
22	BA	2769	U
22	BA	2778	A
22	BA	2791	G
22	BA	2792	A
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2811	G
22	BA	2812	G
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2827	C
22	BA	2835	A
22	BA	2840	C
22	BA	2849	U
22	BA	2858	C
22	BA	2861	U
22	BA	2862	G
22	BA	2867	G

Continued on next page...

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Mol	Chain	Res	Type
22	BA	2873	A
22	BA	2874	C
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2885	G
22	BA	2886	A
22	BA	2887	A
22	BA	2891	U
22	BA	2903	U
23	BB	2	G
23	BB	4	C
23	BB	9	G
23	BB	12	C
23	BB	13	G
23	BB	15	A
23	BB	16	G
23	BB	24	G
23	BB	25	U
23	BB	35	C
23	BB	36	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	46	A
23	BB	56	G
23	BB	63	C
23	BB	66	A
23	BB	85	G
23	BB	89	U
23	BB	90	C
23	BB	98	G
23	BB	99	A
23	BB	105	G
23	BB	109	A
23	BB	112	G
23	BB	119	A
1	CA	5	U
1	CA	7	A
1	CA	8	A
1	CA	9	G
1	CA	19	A

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Mol	Chain	Res	Type
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	56	U
1	CA	67	C
1	CA	68	G
1	CA	70	U
1	CA	71	A
1	CA	74	A
1	CA	80	A
1	CA	81	A
1	CA	83	C
1	CA	84	U
1	CA	85	U
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	94	G
1	CA	95	C
1	CA	97	G
1	CA	108	G
1	CA	116	A
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	130	A
1	CA	131	A
1	CA	142	G
1	CA	144	G
1	CA	154	U
1	CA	155	A
1	CA	156	C
1	CA	159	G
1	CA	168	G
1	CA	169	C
1	CA	176	C
1	CA	179	A
1	CA	181	A
1	CA	182	A

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Mol	Chain	Res	Type
1	CA	183	C
1	CA	189	A
1	CA	195	A
1	CA	197	A
1	CA	200	G
1	CA	201	G
1	CA	204	G
1	CA	206	C
1	CA	207	C
1	CA	208	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	240	G
1	CA	241	G
1	CA	245	U
1	CA	247	G
1	CA	249	U
1	CA	251	G
1	CA	263	A
1	CA	266	G
1	CA	267	C
1	CA	279	A
1	CA	289	G
1	CA	298	A
1	CA	316	C
1	CA	320	A
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	333	U
1	CA	338	A
1	CA	345	C
1	CA	347	G
1	CA	351	G
1	CA	352	C
1	CA	354	G
1	CA	358	U
1	CA	359	G
1	CA	367	U

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Mol	Chain	Res	Type
1	CA	372	C
1	CA	376	G
1	CA	378	G
1	CA	382	A
1	CA	384	G
1	CA	388	G
1	CA	398	U
1	CA	399	G
1	CA	402	G
1	CA	406	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	429	U
1	CA	430	A
1	CA	446	G
1	CA	458	U
1	CA	459	A
1	CA	463	U
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	474	G
1	CA	477	C
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	482	A
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	495	A
1	CA	498	A
1	CA	499	A
1	CA	500	G
1	CA	505	G
1	CA	509	A
1	CA	511	C
1	CA	512	U

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Mol	Chain	Res	Type
1	CA	518	C
1	CA	519	C
1	CA	527	G
1	CA	532	A
1	CA	533	A
1	CA	536	C
1	CA	545	C
1	CA	547	A
1	CA	550	G
1	CA	559	A
1	CA	564	C
1	CA	567	G
1	CA	568	G
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	581	G
1	CA	582	C
1	CA	595	A
1	CA	596	A
1	CA	619	U
1	CA	622	A
1	CA	641	U
1	CA	650	G
1	CA	653	U
1	CA	665	A
1	CA	666	G
1	CA	675	A
1	CA	682	G
1	CA	687	A
1	CA	693	G
1	CA	695	A
1	CA	702	A
1	CA	703	G
1	CA	719	C
1	CA	720	C
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	729	A
1	CA	731	G
1	CA	733	G

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Mol	Chain	Res	Type
1	CA	734	G
1	CA	747	A
1	CA	754	C
1	CA	755	G
1	CA	776	G
1	CA	778	G
1	CA	793	U
1	CA	794	A
1	CA	799	G
1	CA	802	A
1	CA	803	G
1	CA	809	G
1	CA	810	C
1	CA	814	A
1	CA	815	A
1	CA	821	G
1	CA	827	U
1	CA	828	U
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	859	G
1	CA	874	G
1	CA	914	A
1	CA	922	G
1	CA	926	G
1	CA	931	C
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	966	G
1	CA	967	C
1	CA	969	A
1	CA	971	G
1	CA	973	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	983	A

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Mol	Chain	Res	Type
1	CA	986	U
1	CA	987	G
1	CA	989	U
1	CA	993	G
1	CA	995	C
1	CA	1004	A
1	CA	1008	U
1	CA	1009	U
1	CA	1018	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1042	A
1	CA	1043	G
1	CA	1044	A
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
1	CA	1072	G
1	CA	1073	U
1	CA	1080	A
1	CA	1086	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1124	G
1	CA	1125	U
1	CA	1133	G
1	CA	1134	G
1	CA	1136	C
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C

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Mol	Chain	Res	Type
1	CA	1142	G
1	CA	1145	A
1	CA	1154	G
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1180	A
1	CA	1183	U
1	CA	1184	G
1	CA	1192	C
1	CA	1196	A
1	CA	1197	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1227	A
1	CA	1230	C
1	CA	1232	U
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1253	G
1	CA	1275	A
1	CA	1280	A
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1292	G
1	CA	1293	C
1	CA	1299	A
1	CA	1302	C
1	CA	1304	G
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1322	C
1	CA	1324	A
1	CA	1331	G
1	CA	1337	G
1	CA	1338	G

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Mol	Chain	Res	Type
1	CA	1343	G
1	CA	1346	A
1	CA	1362	A
1	CA	1363	A
1	CA	1365	G
1	CA	1370	G
1	CA	1378	C
1	CA	1379	G
1	CA	1382	C
1	CA	1397	C
1	CA	1398	A
1	CA	1406	U
1	CA	1419	G
1	CA	1429	A
1	CA	1440	U
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1452	C
1	CA	1454	G
1	CA	1455	G
1	CA	1475	G
1	CA	1480	A
1	CA	1491	G
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1505	G
1	CA	1506	U
1	CA	1514	G
1	CA	1517	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
1	CA	1533	C
1	CA	1535	C
22	DA	10	A
22	DA	12	U
22	DA	15	G
22	DA	34	U
22	DA	39	G
22	DA	41	C

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Mol	Chain	Res	Type
22	DA	42	A
22	DA	46	G
22	DA	57	C
22	DA	58	G
22	DA	61	C
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	80	G
22	DA	82	U
22	DA	84	A
22	DA	98	G
22	DA	101	A
22	DA	102	U
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	146	A
22	DA	162	U
22	DA	163	C
22	DA	166	U
22	DA	172	A
22	DA	181	A
22	DA	196	A
22	DA	197	A
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	233	A
22	DA	248	G
22	DA	249	C
22	DA	250	G
22	DA	255	A
22	DA	265	A

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Mol	Chain	Res	Type
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	278	A
22	DA	281	C
22	DA	282	A
22	DA	284	U
22	DA	285	G
22	DA	286	U
22	DA	294	A
22	DA	311	A
22	DA	328	U
22	DA	329	G
22	DA	330	A
22	DA	335	C
22	DA	346	A
22	DA	350	G
22	DA	353	C
22	DA	354	A
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	374	A
22	DA	380	G
22	DA	383	C
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	396	G
22	DA	399	U
22	DA	405	U
22	DA	411	G
22	DA	417	C
22	DA	424	G
22	DA	425	G
22	DA	430	A
22	DA	451	U
22	DA	455	C
22	DA	478	A

Continued on next page...

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Mol	Chain	Res	Type
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	504	A
22	DA	505	A
22	DA	508	A
22	DA	509	C
22	DA	518	G
22	DA	526	A
22	DA	529	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	543	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	573	U
22	DA	575	A
22	DA	586	A
22	DA	588	U
22	DA	593	U
22	DA	603	A
22	DA	615	U
22	DA	627	A
22	DA	630	G
22	DA	631	A
22	DA	637	A
22	DA	642	U
22	DA	645	C
22	DA	646	U
22	DA	647	G
22	DA	648	G
22	DA	651	G
22	DA	654	A
22	DA	657	U

Continued on next page...

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Mol	Chain	Res	Type
22	DA	664	G
22	DA	672	C
22	DA	676	A
22	DA	677	A
22	DA	685	A
22	DA	686	U
22	DA	695	G
22	DA	702	U
22	DA	717	C
22	DA	726	G
22	DA	728	G
22	DA	730	A
22	DA	740	C
22	DA	747	U
22	DA	749	A
22	DA	751	A
22	DA	752	A
22	DA	753	A
22	DA	764	A
22	DA	775	G
22	DA	776	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	794	A
22	DA	799	G
22	DA	801	G
22	DA	805	G
22	DA	812	C
22	DA	815	C
22	DA	819	A
22	DA	827	U
22	DA	828	U
22	DA	829	A
22	DA	830	G
22	DA	844	A
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	878	A

Continued on next page...

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Mol	Chain	Res	Type
22	DA	880	G
22	DA	881	G
22	DA	885	C
22	DA	896	A
22	DA	897	C
22	DA	902	C
22	DA	910	A
22	DA	914	G
22	DA	915	C
22	DA	931	U
22	DA	932	U
22	DA	941	A
22	DA	945	A
22	DA	946	C
22	DA	961	C
22	DA	974	G
22	DA	983	A
22	DA	995	C
22	DA	996	A
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1023	U
22	DA	1025	G
22	DA	1026	G
22	DA	1033	U
22	DA	1046	A
22	DA	1047	G
22	DA	1053	C
22	DA	1058	U
22	DA	1060	U
22	DA	1061	U
22	DA	1062	G
22	DA	1065	U
22	DA	1066	U
22	DA	1068	G
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1074	G
22	DA	1075	C
22	DA	1077	A

Continued on next page...

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Mol	Chain	Res	Type
22	DA	1079	C
22	DA	1082	U
22	DA	1088	A
22	DA	1089	A
22	DA	1090	A
22	DA	1092	C
22	DA	1094	U
22	DA	1097	U
22	DA	1098	A
22	DA	1100	C
22	DA	1104	C
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1119	U
22	DA	1128	G
22	DA	1132	U
22	DA	1133	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1143	A
22	DA	1153	C
22	DA	1155	A
22	DA	1156	A
22	DA	1171	G
22	DA	1172	C
22	DA	1173	U
22	DA	1175	A
22	DA	1176	U
22	DA	1179	G
22	DA	1180	U
22	DA	1186	G
22	DA	1195	G
22	DA	1197	G
22	DA	1208	C
22	DA	1212	G
22	DA	1221	C
22	DA	1230	A
22	DA	1236	G
22	DA	1238	G

Continued on next page...

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Mol	Chain	Res	Type
22	DA	1241	A
22	DA	1246	A
22	DA	1247	A
22	DA	1250	G
22	DA	1253	A
22	DA	1256	G
22	DA	1264	A
22	DA	1266	G
22	DA	1269	A
22	DA	1271	G
22	DA	1272	A
22	DA	1274	A
22	DA	1276	A
22	DA	1288	G
22	DA	1300	G
22	DA	1301	A
22	DA	1305	C
22	DA	1312	U
22	DA	1321	A
22	DA	1325	U
22	DA	1341	G
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1363	C
22	DA	1365	A
22	DA	1368	G
22	DA	1376	C
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1386	C
22	DA	1387	A
22	DA	1390	U
22	DA	1395	A
22	DA	1411	U
22	DA	1414	C
22	DA	1416	G
22	DA	1420	A
22	DA	1423	G
22	DA	1428	C

Continued on next page...

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Mol	Chain	Res	Type
22	DA	1434	A
22	DA	1441	G
22	DA	1446	C
22	DA	1451	C
22	DA	1452	G
22	DA	1455	G
22	DA	1458	U
22	DA	1462	C
22	DA	1468	U
22	DA	1471	G
22	DA	1472	C
22	DA	1482	G
22	DA	1483	G
22	DA	1493	C
22	DA	1495	A
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1515	A
22	DA	1523	U
22	DA	1530	G
22	DA	1531	C
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1547	C
22	DA	1566	A
22	DA	1569	A
22	DA	1576	U
22	DA	1578	U
22	DA	1581	G
22	DA	1582	C
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A

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Mol	Chain	Res	Type
22	DA	1613	G
22	DA	1616	A
22	DA	1618	A
22	DA	1623	G
22	DA	1639	C
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1651	G
22	DA	1660	G
22	DA	1664	A
22	DA	1674	G
22	DA	1694	C
22	DA	1714	U
22	DA	1715	G
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1738	G
22	DA	1739	A
22	DA	1744	A
22	DA	1756	G
22	DA	1758	U
22	DA	1764	C
22	DA	1765	U
22	DA	1773	A
22	DA	1800	C
22	DA	1802	A
22	DA	1808	A
22	DA	1811	G
22	DA	1816	C
22	DA	1820	U
22	DA	1821	A
22	DA	1822	C
22	DA	1823	G
22	DA	1829	A
22	DA	1847	A
22	DA	1848	A
22	DA	1858	A
22	DA	1869	G

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Mol	Chain	Res	Type
22	DA	1870	C
22	DA	1871	A
22	DA	1872	A
22	DA	1874	C
22	DA	1876	A
22	DA	1880	U
22	DA	1884	G
22	DA	1887	C
22	DA	1893	C
22	DA	1903	G
22	DA	1905	C
22	DA	1906	G
22	DA	1914	C
22	DA	1924	C
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1934	C
22	DA	1939	U
22	DA	1945	G
22	DA	1947	C
22	DA	1955	U
22	DA	1963	U
22	DA	1966	A
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1991	U
22	DA	1992	G
22	DA	1993	U
22	DA	1997	C
22	DA	2005	A
22	DA	2022	U
22	DA	2023	C
22	DA	2030	A
22	DA	2031	A
22	DA	2033	A
22	DA	2043	C
22	DA	2055	C
22	DA	2056	G

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Mol	Chain	Res	Type
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2069	G
22	DA	2092	U
22	DA	2093	G
22	DA	2095	A
22	DA	2103	C
22	DA	2107	G
22	DA	2108	A
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A
22	DA	2137	U
22	DA	2144	G
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2173	A

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Mol	Chain	Res	Type
22	DA	2178	C
22	DA	2184	A
22	DA	2189	U
22	DA	2190	G
22	DA	2198	A
22	DA	2203	U
22	DA	2204	G
22	DA	2211	A
22	DA	2212	A
22	DA	2214	C
22	DA	2225	A
22	DA	2226	C
22	DA	2230	G
22	DA	2238	G
22	DA	2239	G
22	DA	2241	A
22	DA	2243	U
22	DA	2246	G
22	DA	2266	A
22	DA	2268	A
22	DA	2273	A
22	DA	2278	A
22	DA	2280	G
22	DA	2283	C
22	DA	2287	A
22	DA	2289	G
22	DA	2305	U
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2311	A
22	DA	2312	U
22	DA	2320	U
22	DA	2322	A
22	DA	2324	U
22	DA	2325	G
22	DA	2327	A
22	DA	2331	G
22	DA	2333	A
22	DA	2344	U
22	DA	2350	C
22	DA	2354	C

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Mol	Chain	Res	Type
22	DA	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2402	U
22	DA	2403	C
22	DA	2406	A
22	DA	2407	A
22	DA	2410	G
22	DA	2417	C
22	DA	2422	C
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2441	U
22	DA	2446	G
22	DA	2448	A
22	DA	2449	U
22	DA	2454	G
22	DA	2474	U
22	DA	2476	A
22	DA	2484	G
22	DA	2491	U
22	DA	2494	G
22	DA	2501	C
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2507	C
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G
22	DA	2535	G
22	DA	2547	A
22	DA	2554	U
22	DA	2566	A

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Mol	Chain	Res	Type
22	DA	2567	G
22	DA	2572	A
22	DA	2573	C
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2586	U
22	DA	2602	A
22	DA	2603	G
22	DA	2609	U
22	DA	2610	C
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2629	U
22	DA	2630	G
22	DA	2636	C
22	DA	2646	C
22	DA	2647	U
22	DA	2663	G
22	DA	2684	U
22	DA	2689	U
22	DA	2690	U
22	DA	2703	C
22	DA	2716	C
22	DA	2726	A
22	DA	2727	A
22	DA	2732	G
22	DA	2748	A
22	DA	2751	G
22	DA	2757	A
22	DA	2764	A
22	DA	2765	A
22	DA	2770	G
22	DA	2778	A
22	DA	2791	G
22	DA	2792	A
22	DA	2794	C
22	DA	2798	U
22	DA	2799	A
22	DA	2807	U
22	DA	2809	A

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Mol	Chain	Res	Type
22	DA	2820	A
22	DA	2822	G
22	DA	2823	A
22	DA	2835	A
22	DA	2861	U
22	DA	2867	G
22	DA	2875	C
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2886	A
22	DA	2891	U
22	DA	2894	G
22	DA	2901	C
22	DA	2903	U
23	DB	13	G
23	DB	15	A
23	DB	16	G
23	DB	22	U
23	DB	24	G
23	DB	25	U
23	DB	35	C
23	DB	36	C
23	DB	40	U
23	DB	44	G
23	DB	50	A
23	DB	51	G
23	DB	54	G
23	DB	56	G
23	DB	58	A
23	DB	64	G
23	DB	66	A
23	DB	73	A
23	DB	88	C
23	DB	89	U
23	DB	90	C
23	DB	91	C
23	DB	99	A
23	DB	105	G
23	DB	109	A

All (103) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	115	G
1	AA	148	G
1	AA	209	U
1	AA	243	A
1	AA	351	G
1	AA	429	U
1	AA	484	G
1	AA	772	U
1	AA	793	U
1	AA	1031	C
1	AA	1049	U
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U
1	AA	1286	U
1	AA	1378	C
1	AA	1533	C
22	BA	70	G
22	BA	199	A
22	BA	271	G
22	BA	310	A
22	BA	404	A
22	BA	479	A
22	BA	585	G
22	BA	620	G
22	BA	668	A
22	BA	764	A
22	BA	846	U
22	BA	984	A
22	BA	995	C
22	BA	1275	A
22	BA	1344	U
22	BA	1378	A
22	BA	1509	A
22	BA	1606	C
22	BA	1607	C
22	BA	1610	A
22	BA	1738	G
22	BA	1757	A
22	BA	1875	G
22	BA	2051	A
22	BA	2127	G
22	BA	2211	A

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Mol	Chain	Res	Type
22	BA	2286	G
22	BA	2326	C
22	BA	2425	A
22	BA	2428	G
22	BA	2430	A
22	BA	2756	U
22	BA	2779	U
22	BA	2849	U
22	BA	2866	U
22	BA	2873	A
23	BB	88	C
1	CA	7	A
1	CA	96	U
1	CA	115	G
1	CA	209	U
1	CA	266	G
1	CA	429	U
1	CA	510	A
1	CA	559	A
1	CA	561	U
1	CA	723	U
1	CA	733	G
1	CA	873	A
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
1	CA	1279	G
22	DA	60	G
22	DA	83	A
22	DA	162	U
22	DA	196	A
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	800	A
22	DA	846	U
22	DA	982	C
22	DA	1240	U
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1606	C

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Mol	Chain	Res	Type
22	DA	1738	G
22	DA	1786	A
22	DA	1847	A
22	DA	2109	U
22	DA	2127	G
22	DA	2146	C
22	DA	2162	G
22	DA	2211	A
22	DA	2225	A
22	DA	2272	U
22	DA	2286	G
22	DA	2308	G
22	DA	2311	A
22	DA	2326	C
22	DA	2501	C
22	DA	2602	A
22	DA	2756	U
22	DA	2873	A

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

10 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	$\#\|Z\| > 2$
54	MHU	D6	5	54	14,15,16	2.80	6 (42%)	18,19,21	2.69	4 (22%)
54	DBB	B6	3	54	4,5,6	0.86	0	1,5,7	0.96	0
54	04X	D6	6	54	14,16,17	1.14	2 (14%)	11,20,22	5.43	7 (63%)
54	MHW	D6	1	54	9,9,10	3.18	4 (44%)	10,11,13	2.22	7 (70%)
54	DBB	D6	3	54	4,5,6	0.76	0	1,5,7	0.74	0
54	MHU	B6	5	54	14,15,16	2.87	7 (50%)	18,19,21	2.71	5 (27%)
54	004	D6	7	54	9,10,11	3.28	7 (77%)	9,12,14	2.38	2 (22%)
54	MHW	B6	1	54	9,9,10	2.88	4 (44%)	10,11,13	3.44	8 (80%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
54	004	B6	7	54	9,10,11	3.36	6 (66%)	9,12,14	1.59	2 (22%)
54	04X	B6	6	54	14,16,17	1.22	1 (7%)	11,20,22	4.65	6 (54%)

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
54	MHU	D6	5	54	-	3/9/12/14	0/1/1/1
54	DBB	B6	3	54	-	1/3/4/6	-
54	04X	D6	6	54	-	3/4/24/26	0/2/2/2
54	MHW	D6	1	54	-	0/2/2/4	0/1/1/1
54	DBB	D6	3	54	-	2/3/4/6	-
54	MHU	B6	5	54	-	2/9/12/14	0/1/1/1
54	004	D6	7	54	-	2/4/6/8	0/1/1/1
54	MHW	B6	1	54	-	2/2/2/4	0/1/1/1
54	004	B6	7	54	-	3/4/6/8	0/1/1/1
54	04X	B6	6	54	-	2/4/24/26	0/2/2/2

All (37) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	B6	7	004	CB-CA	-6.34	1.45	1.52
54	D6	5	MHU	CE1-CD1	6.06	1.49	1.38
54	D6	7	004	CB-CA	-5.93	1.46	1.52
54	D6	1	MHW	CG2-CB	-5.61	1.29	1.39
54	B6	1	MHW	CG2-CB	-5.54	1.29	1.39
54	B6	5	MHU	CE1-CD1	5.54	1.48	1.38
54	D6	1	MHW	CA-N	-5.30	1.28	1.35
54	B6	5	MHU	CD2-CG	4.90	1.49	1.38
54	B6	5	MHU	CM-N	-4.43	1.35	1.46
54	D6	5	MHU	CD2-CG	4.29	1.48	1.38
54	B6	1	MHW	CA-N	-4.15	1.30	1.35
54	B6	5	MHU	CE2-CZ	4.10	1.47	1.39
54	D6	7	004	CG1-CB	-3.94	1.32	1.39
54	B6	7	004	CG1-CB	-3.93	1.32	1.39
54	D6	5	MHU	CM-N	-3.85	1.36	1.46
54	D6	7	004	CD2-CE	3.69	1.47	1.38
54	B6	1	MHW	OG1-CB	3.68	1.43	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	B6	7	004	CD2-CE	3.64	1.47	1.38
54	D6	5	MHU	CE2-CZ	3.56	1.46	1.39
54	D6	1	MHW	CA-C	-3.55	1.44	1.48
54	D6	1	MHW	OG1-CB	3.13	1.42	1.36
54	B6	7	004	CD2-CG2	-3.11	1.32	1.38
54	B6	6	04X	CE-N	-3.05	1.42	1.46
54	D6	7	004	CD1-CG1	3.00	1.45	1.38
54	B6	7	004	CD1-CG1	2.98	1.45	1.38
54	D6	7	004	CD2-CG2	-2.93	1.32	1.38
54	D6	5	MHU	CD2-CE2	-2.81	1.33	1.38
54	B6	5	MHU	CD2-CE2	-2.63	1.34	1.38
54	B6	7	004	CD1-CE	-2.58	1.31	1.38
54	D6	7	004	CD1-CE	-2.54	1.31	1.38
54	D6	6	04X	CE-N	-2.38	1.43	1.46
54	B6	5	MHU	CE1-CZ	-2.37	1.34	1.39
54	D6	5	MHU	CA-N	2.28	1.51	1.47
54	D6	7	004	CA-C	-2.21	1.46	1.51
54	B6	5	MHU	CZ1-NZ	-2.14	1.40	1.45
54	B6	1	MHW	CD-CE	-2.06	1.31	1.37
54	D6	6	04X	CE-CD	2.02	1.52	1.50

All (41) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	D6	6	04X	C0-N1-C1	15.71	135.46	111.09
54	B6	6	04X	C0-N1-C1	13.07	131.37	111.09
54	D6	5	MHU	CB-CA-N	7.71	122.60	110.65
54	B6	1	MHW	O-C-CA	-7.51	117.11	124.22
54	B6	5	MHU	CB-CA-N	7.43	122.16	110.65
54	D6	5	MHU	O-C-CA	-6.60	107.48	124.78
54	B6	5	MHU	O-C-CA	-6.15	108.66	124.78
54	D6	7	004	CB-CA-N	5.90	126.53	112.40
54	D6	6	04X	C2-C1-N1	-4.81	102.81	110.10
54	B6	6	04X	C4-N1-C1	4.70	119.41	108.83
54	B6	6	04X	C2-C1-N1	-4.00	104.03	110.10
54	B6	1	MHW	CD-CE-N	-3.63	117.49	123.43
54	B6	1	MHW	OG1-CB-CG2	3.56	129.00	119.33
54	D6	6	04X	C3-O1-C2	3.46	121.45	109.89
54	D6	5	MHU	CE2-CZ-NZ	-3.34	117.11	121.63
54	B6	1	MHW	CE-N-CA	3.34	122.44	116.69
54	D6	6	04X	C4-N1-C1	3.28	116.22	108.83
54	D6	1	MHW	O-C-CA	-3.23	121.16	124.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	B6	1	MHW	C-CA-N	3.20	120.60	115.41
54	B6	5	MHU	CB-CA-C	3.17	117.66	111.65
54	B6	6	04X	O1-C2-C1	-3.16	104.83	111.80
54	B6	5	MHU	CE1-CZ-NZ	-3.12	117.41	121.63
54	D6	1	MHW	CD-CE-N	-2.99	118.53	123.43
54	D6	6	04X	C3-C4-N1	-2.99	105.57	110.10
54	D6	6	04X	CB-CA-N	2.87	118.43	112.50
54	B6	7	004	CB-CA-N	2.83	119.17	112.40
54	D6	7	004	CG2-CB-CA	2.67	124.95	120.65
54	D6	1	MHW	CB-CA-N	2.57	124.73	121.20
54	B6	6	04X	C3-O1-C2	2.54	118.36	109.89
54	D6	6	04X	C0-N1-C4	-2.54	107.16	111.09
54	D6	1	MHW	OG1-CB-CG2	2.48	126.08	119.33
54	B6	6	04X	C3-C4-N1	-2.31	106.60	110.10
54	D6	1	MHW	CG2-CB-CA	-2.29	116.19	119.72
54	D6	5	MHU	CE1-CD1-CG	-2.29	117.88	121.03
54	B6	1	MHW	CG2-CB-CA	-2.28	116.22	119.72
54	D6	1	MHW	CG2-CD-CE	2.23	122.21	118.91
54	B6	1	MHW	OG1-CB-CA	-2.22	114.78	120.38
54	B6	1	MHW	CD-CG2-CB	2.12	122.73	120.05
54	B6	5	MHU	CE1-CD1-CG	-2.11	118.13	121.03
54	D6	1	MHW	C-CA-N	2.08	118.78	115.41
54	B6	7	004	CG2-CB-CA	2.07	123.98	120.65

There are no chirality outliers.

All (20) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
54	B6	1	MHW	O-C-CA-N
54	B6	3	DBB	C-CA-CB-CG
54	D6	3	DBB	O-C-CA-CB
54	D6	3	DBB	C-CA-CB-CG
54	D6	5	MHU	O-C-CA-CB
54	B6	6	04X	CD-C0-N1-C1
54	B6	1	MHW	O-C-CA-CB
54	D6	5	MHU	CA-CB-CG-CD2
54	D6	6	04X	CD-C0-N1-C1
54	D6	5	MHU	CA-CB-CG-CD1
54	D6	6	04X	O-C-CA-CB
54	B6	5	MHU	N-CA-CB-CG
54	B6	5	MHU	C-CA-CB-CG
54	B6	6	04X	N1-C0-CD-CG

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Mol	Chain	Res	Type	Atoms
54	D6	6	04X	N1-C0-CD-CG
54	B6	7	004	C-CA-CB-CG1
54	B6	7	004	C-CA-CB-CG2
54	D6	7	004	C-CA-CB-CG1
54	D6	7	004	C-CA-CB-CG2
54	B6	7	004	N-CA-CB-CG2

There are no ring outliers.

8 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	D6	5	MHU	5	0
54	B6	3	DBB	1	0
54	D6	6	04X	1	0
54	D6	1	MHW	4	0
54	D6	3	DBB	2	0
54	B6	5	MHU	2	0
54	D6	7	004	2	0
54	B6	7	004	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 500 ligands modelled in this entry, 500 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
54	B6	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B6	2:THR	C	3:DBB	N	1.61

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1538/1539 (99%)	-0.39	22 (1%) 75 49	14, 54, 137, 179	0
1	CA	1539/1539 (100%)	-0.19	35 (2%) 60 31	27, 72, 145, 177	0
2	AB	218/218 (100%)	1.16	53 (24%) 0 0	43, 76, 100, 125	0
2	CB	218/218 (100%)	1.54	69 (31%) 0 0	63, 86, 106, 126	0
3	AC	206/206 (100%)	0.10	5 (2%) 59 30	39, 61, 83, 96	0
3	CC	206/206 (100%)	1.24	44 (21%) 0 0	57, 79, 97, 109	0
4	AD	205/205 (100%)	0.04	3 (1%) 73 46	35, 58, 79, 106	0
4	CD	205/205 (100%)	-0.20	3 (1%) 73 46	21, 40, 71, 90	0
5	AE	150/150 (100%)	0.01	3 (2%) 65 36	27, 51, 82, 106	0
5	CE	150/150 (100%)	0.02	1 (0%) 87 69	34, 59, 87, 104	0
6	AF	100/100 (100%)	-0.31	0 100 100	38, 59, 76, 84	0
6	CF	100/100 (100%)	-0.14	1 (1%) 82 59	46, 74, 96, 104	0
7	AG	151/151 (100%)	0.82	25 (16%) 1 0	54, 78, 98, 108	0
7	CG	151/151 (100%)	1.77	61 (40%) 0 0	77, 97, 107, 113	0
8	AH	129/129 (100%)	-0.07	1 (0%) 86 65	30, 50, 73, 81	0
8	CH	129/129 (100%)	0.08	4 (3%) 49 21	45, 65, 81, 90	0
9	AI	127/127 (100%)	1.01	22 (17%) 1 0	51, 73, 97, 113	0
9	CI	127/127 (100%)	1.42	36 (28%) 0 0	71, 91, 109, 126	0
10	AJ	98/98 (100%)	0.44	7 (7%) 16 5	46, 68, 92, 122	0
10	CJ	98/98 (100%)	1.87	41 (41%) 0 0	71, 93, 110, 124	0
11	AK	117/117 (100%)	0.58	14 (11%) 4 1	32, 64, 91, 110	0
11	CK	117/117 (100%)	0.11	3 (2%) 56 27	44, 68, 82, 91	0
12	AL	123/123 (100%)	0.11	3 (2%) 59 30	23, 39, 68, 94	0
12	CL	123/123 (100%)	0.07	4 (3%) 46 20	39, 52, 79, 99	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/114 (100%)	0.42	7 (6%) 21 7	49, 71, 92, 105	0
13	CM	114/114 (100%)	1.96	55 (48%) 0 0	90, 103, 116, 120	0
14	AN	96/100 (96%)	0.83	16 (16%) 1 0	43, 63, 94, 106	0
14	CN	96/100 (96%)	1.89	36 (37%) 0 0	69, 91, 110, 118	0
15	AO	88/88 (100%)	-0.01	1 (1%) 80 56	31, 51, 68, 98	0
15	CO	88/88 (100%)	-0.02	2 (2%) 60 31	43, 63, 81, 105	0
16	AP	82/82 (100%)	0.48	4 (4%) 29 11	35, 49, 84, 100	0
16	CP	82/82 (100%)	0.66	12 (14%) 2 1	45, 62, 88, 106	0
17	AQ	80/80 (100%)	-0.03	3 (3%) 40 16	27, 54, 81, 124	0
17	CQ	80/80 (100%)	0.49	5 (6%) 20 6	44, 72, 96, 105	0
18	AR	55/55 (100%)	-0.14	3 (5%) 25 9	39, 53, 81, 112	0
18	CR	55/55 (100%)	0.01	1 (1%) 68 40	46, 56, 82, 111	0
19	AS	79/79 (100%)	1.00	14 (17%) 1 0	55, 72, 92, 101	0
19	CS	79/79 (100%)	3.08	55 (69%) 0 0	87, 103, 114, 123	0
20	AT	85/85 (100%)	0.10	3 (3%) 44 18	35, 51, 74, 111	0
20	CT	85/85 (100%)	1.25	20 (23%) 0 0	53, 72, 93, 96	0
21	AU	51/51 (100%)	1.69	21 (41%) 0 0	56, 76, 95, 108	0
21	CU	51/51 (100%)	0.40	6 (11%) 4 1	48, 72, 94, 108	0
22	BA	2897/2903 (99%)	-0.13	105 (3%) 42 17	0, 14, 130, 195	0
22	DA	2897/2903 (99%)	-0.07	71 (2%) 57 29	42, 83, 144, 183	0
23	BB	119/119 (100%)	-0.52	0 100 100	1, 24, 54, 90	0
23	DB	118/119 (99%)	-0.35	0 100 100	66, 111, 133, 141	0
24	BC	271/271 (100%)	-0.24	8 (2%) 50 22	3, 21, 43, 55	0
24	DC	271/271 (100%)	0.42	23 (8%) 10 3	42, 62, 76, 91	0
25	BD	209/209 (100%)	-0.45	0 100 100	0, 9, 38, 71	0
25	DD	209/209 (100%)	0.38	13 (6%) 20 7	46, 66, 81, 99	0
26	BE	201/201 (100%)	-0.43	0 100 100	0, 24, 56, 91	0
26	DE	201/201 (100%)	0.93	33 (16%) 1 0	45, 81, 98, 106	0
27	BF	177/177 (100%)	0.26	11 (6%) 20 7	15, 46, 88, 97	0
27	DF	177/177 (100%)	2.38	92 (51%) 0 0	85, 102, 117, 125	0
28	BG	176/176 (100%)	-0.16	0 100 100	15, 38, 64, 88	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	176/176 (100%)	1.19	39 (22%) 0 0	71, 90, 104, 117	0
29	BH	149/149 (100%)	2.29	65 (43%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.15	36 (24%) 0 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	2.43	66 (46%) 0 0	84, 108, 121, 136	0
30	DI	141/141 (100%)	3.62	97 (68%) 0 0	96, 114, 123, 127	0
31	BJ	142/142 (100%)	-0.46	0 100 100	1, 5, 23, 43	0
31	DJ	142/142 (100%)	0.41	12 (8%) 10 3	48, 64, 79, 96	0
32	BK	122/122 (100%)	-0.54	0 100 100	2, 11, 37, 67	0
32	DK	122/122 (100%)	0.64	14 (11%) 4 1	48, 61, 81, 96	0
33	BL	143/143 (100%)	-0.35	0 100 100	0, 21, 48, 76	0
33	DL	143/143 (100%)	1.25	36 (25%) 0 0	42, 77, 91, 113	0
34	BM	136/136 (100%)	-0.49	0 100 100	1, 9, 30, 87	0
34	DM	136/136 (100%)	0.80	18 (13%) 3 1	42, 67, 82, 108	0
35	BN	120/120 (100%)	-0.47	0 100 100	1, 6, 17, 62	0
35	DN	120/120 (100%)	0.58	17 (14%) 2 1	54, 74, 88, 110	0
36	BO	116/116 (100%)	-0.26	0 100 100	14, 27, 46, 52	0
36	DO	116/116 (100%)	1.68	45 (38%) 0 0	74, 91, 102, 114	0
37	BP	114/114 (100%)	-0.31	0 100 100	5, 19, 48, 70	0
37	DP	114/114 (100%)	0.58	13 (11%) 5 1	56, 68, 84, 93	0
38	BQ	117/117 (100%)	-0.45	0 100 100	0, 3, 11, 42	0
38	DQ	117/117 (100%)	0.40	9 (7%) 13 4	52, 66, 77, 84	0
39	BR	103/103 (100%)	-0.48	0 100 100	0, 9, 31, 63	0
39	DR	103/103 (100%)	0.87	18 (17%) 1 0	50, 75, 87, 97	0
40	BS	110/110 (100%)	-0.38	0 100 100	1, 3, 23, 84	0
40	DS	110/110 (100%)	1.07	25 (22%) 0 0	56, 73, 89, 96	0
41	BT	93/93 (100%)	-0.02	2 (2%) 62 33	10, 27, 80, 101	0
41	DT	93/93 (100%)	1.82	39 (41%) 0 0	63, 83, 103, 110	0
42	BU	102/102 (100%)	-0.10	3 (2%) 51 23	10, 30, 61, 92	0
42	DU	102/102 (100%)	2.61	53 (51%) 0 0	70, 88, 106, 112	0
43	BV	94/94 (100%)	-0.36	0 100 100	4, 22, 43, 54	0
43	DV	94/94 (100%)	0.46	9 (9%) 8 2	65, 82, 94, 99	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BW	76/76 (100%)	-0.42	0 100 100	3, 10, 27, 48	0
44	DW	75/76 (98%)	1.49	28 (37%) 0 0	54, 79, 88, 108	0
45	BX	77/77 (100%)	-0.36	0 100 100	6, 24, 52, 77	0
45	DX	77/77 (100%)	0.61	14 (18%) 1 0	49, 69, 86, 89	0
46	BY	63/63 (100%)	0.05	3 (4%) 30 11	22, 44, 74, 96	0
46	DY	63/63 (100%)	1.28	15 (23%) 0 0	71, 90, 99, 103	0
47	BZ	58/58 (100%)	-0.38	0 100 100	2, 7, 29, 41	0
47	DZ	58/58 (100%)	0.26	3 (5%) 27 10	52, 70, 84, 89	0
48	B0	56/56 (100%)	-0.53	0 100 100	0, 8, 35, 70	0
48	D0	56/56 (100%)	0.86	8 (14%) 2 1	53, 74, 91, 104	0
49	B1	50/50 (100%)	-0.28	2 (4%) 38 15	13, 31, 54, 87	0
49	D1	50/50 (100%)	1.17	11 (22%) 0 0	68, 84, 93, 105	0
50	B2	46/46 (100%)	-0.31	1 (2%) 62 33	3, 9, 17, 90	0
50	D2	46/46 (100%)	1.18	9 (19%) 1 0	53, 66, 79, 100	0
51	B3	64/64 (100%)	-0.32	0 100 100	4, 9, 18, 31	0
51	D3	64/64 (100%)	0.94	15 (23%) 0 0	58, 71, 79, 85	0
52	B4	38/38 (100%)	-0.08	0 100 100	11, 20, 35, 52	0
52	D4	38/38 (100%)	1.59	13 (34%) 0 0	63, 74, 85, 99	0
53	B5	191/228 (83%)	4.42	168 (87%) 0 0	85, 111, 123, 134	0
54	B6	2/7 (28%)	0.27	0 100 100	5, 5, 5, 9	0
54	D6	2/7 (28%)	0.74	0 100 100	53, 53, 53, 62	0
All	All	20738/20808 (99%)	0.28	1986 (9%) 8 2	0, 64, 119, 195	0

All (1986) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	DI	6	GLN	16.5
30	BI	53	LEU	16.3
22	BA	2100	G	15.9
30	DI	2	ALA	15.0
22	BA	2104	C	14.5
29	BH	113	SER	13.5
53	B5	110	ASP	13.0
30	DI	60	THR	12.8
22	BA	2144	G	12.7

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Mol	Chain	Res	Type	RSRZ
22	BA	2185	U	12.6
1	AA	1535	C	12.0
22	BA	2184	A	12.0
33	DL	92	LEU	11.9
30	DI	67	PHE	11.8
22	BA	2103	C	11.6
53	B5	207	GLY	11.4
53	B5	173	HIS	11.4
30	BI	14	ALA	11.2
29	BH	96	THR	10.9
22	BA	2102	G	10.9
53	B5	218	THR	10.7
22	BA	2101	A	10.7
53	B5	109	MET	10.7
22	BA	2147	A	10.6
53	B5	97	GLY	10.3
30	BI	3	LYS	10.1
30	BI	4	LYS	10.1
30	DI	69	PHE	10.1
30	DI	3	LYS	9.9
22	BA	2143	C	9.9
53	B5	48	LEU	9.8
22	BA	2158	A	9.7
53	B5	203	GLU	9.7
22	BA	2138	G	9.6
22	BA	2148	G	9.5
29	BH	98	ASP	9.4
1	AA	1534	A	9.4
30	DI	68	THR	9.3
22	BA	2145	C	9.2
22	BA	2135	A	9.2
42	DU	27	ASN	9.1
53	B5	212	SER	9.0
10	AJ	102	LEU	8.9
30	BI	54	PRO	8.8
53	B5	122	GLY	8.8
42	DU	26	LYS	8.7
42	DU	35	ILE	8.7
22	BA	2189	U	8.7
53	B5	202	PRO	8.7
53	B5	111	PHE	8.6
30	BI	2	ALA	8.6

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Mol	Chain	Res	Type	RSRZ
53	B5	183	PRO	8.5
30	DI	32	GLY	8.4
53	B5	77	ALA	8.4
29	DH	142	VAL	8.4
29	BH	110	VAL	8.4
22	BA	2177	C	8.3
29	BH	123	ARG	8.3
53	B5	192	ALA	8.3
29	BH	97	ARG	8.2
30	DI	66	SER	8.1
9	CI	128	SER	8.1
53	B5	174	ALA	8.0
53	B5	157	ILE	8.0
53	B5	156	GLU	7.9
42	DU	58	ILE	7.9
22	BA	2140	G	7.9
1	AA	1536	C	7.9
53	B5	143	ALA	7.9
29	BH	102	ALA	7.9
22	BA	2159	G	7.8
19	CS	71	LEU	7.8
22	BA	2182	U	7.8
13	CM	84	GLY	7.8
42	DU	60	GLU	7.8
1	CA	1536	C	7.8
22	BA	2112	G	7.8
29	BH	130	VAL	7.7
2	CB	151	ILE	7.6
53	B5	65	LEU	7.6
30	DI	16	GLY	7.6
30	DI	34	ASN	7.6
7	CG	62	PHE	7.6
30	BI	118	THR	7.5
14	CN	36	ALA	7.5
11	AK	19	GLY	7.4
22	BA	2178	C	7.4
42	DU	71	ALA	7.4
22	BA	2127	G	7.3
29	BH	146	VAL	7.3
53	B5	67	HIS	7.3
36	DO	40	ILE	7.3
19	CS	40	ILE	7.3

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Mol	Chain	Res	Type	RSRZ
22	BA	2136	G	7.3
53	B5	55	SER	7.2
27	DF	76	GLY	7.2
30	DI	61	VAL	7.2
22	BA	2163	A	7.2
53	B5	49	GLY	7.2
27	DF	67	ILE	7.1
53	B5	160	GLY	7.1
53	B5	76	LEU	7.1
1	AA	1538	C	7.1
22	BA	2142	A	7.1
14	CN	45	VAL	7.1
14	CN	44	ALA	7.0
19	CS	42	PRO	7.0
53	B5	188	ASP	6.9
53	B5	204	GLY	6.9
42	DU	36	VAL	6.9
53	B5	147	GLY	6.9
19	CS	24	GLU	6.8
30	BI	13	VAL	6.8
22	BA	2115	G	6.8
53	B5	141	PRO	6.8
53	B5	193	PHE	6.8
30	DI	54	PRO	6.8
30	DI	43	ASN	6.8
29	BH	148	ALA	6.8
27	DF	65	PRO	6.7
14	CN	51	LEU	6.7
53	B5	98	GLU	6.7
30	DI	5	VAL	6.7
22	BA	2183	A	6.7
22	BA	2161	C	6.7
40	DS	84	ARG	6.6
42	DU	12	ILE	6.6
22	BA	2099	U	6.6
22	BA	2139	U	6.6
2	CB	32	PHE	6.6
30	BI	12	GLN	6.6
53	B5	66	PRO	6.6
53	B5	132	LEU	6.6
10	CJ	76	ILE	6.6
53	B5	79	ALA	6.5

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Mol	Chain	Res	Type	RSRZ
29	BH	72	ILE	6.5
30	DI	58	VAL	6.5
13	CM	83	LEU	6.5
27	DF	128	TYR	6.4
53	B5	95	VAL	6.4
53	B5	93	ASP	6.4
2	AB	157	LEU	6.4
30	DI	35	ILE	6.4
7	CG	18	PHE	6.4
30	DI	15	ALA	6.4
30	DI	7	ALA	6.3
9	CI	38	TYR	6.3
53	B5	223	VAL	6.3
14	CN	50	THR	6.3
26	DE	119	ILE	6.3
29	BH	144	VAL	6.3
19	CS	30	PRO	6.2
29	BH	101	ASP	6.2
30	DI	4	LYS	6.2
53	B5	211	ARG	6.2
19	CS	39	THR	6.2
53	B5	78	ILE	6.2
7	AG	147	ALA	6.2
22	BA	2155	U	6.1
33	DL	101	ILE	6.1
22	BA	2157	G	6.1
22	BA	2179	C	6.1
19	CS	41	PHE	6.1
30	DI	17	MET	6.1
53	B5	133	GLY	6.1
19	CS	66	MET	6.1
1	CA	1032	G	6.1
22	BA	2156	G	6.1
53	B5	206	LYS	6.1
27	DF	86	GLY	6.1
9	CI	43	THR	6.1
53	B5	94	TYR	6.0
29	BH	44	ILE	6.0
53	B5	159	ALA	6.0
29	BH	112	LYS	6.0
22	BA	2162	G	6.0
53	B5	182	PRO	6.0

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Mol	Chain	Res	Type	RSRZ
17	AQ	83	VAL	6.0
19	CS	64	ASP	6.0
7	CG	133	THR	6.0
27	BF	73	SER	6.0
53	B5	225	ILE	6.0
30	DI	98	VAL	6.0
30	BI	79	LEU	6.0
53	B5	60	ARG	6.0
19	CS	29	LYS	5.9
27	DF	176	PRO	5.9
14	CN	48	LEU	5.9
22	BA	2114	A	5.9
1	CA	1539	C	5.9
53	B5	187	ALA	5.9
53	B5	161	ARG	5.9
42	DU	39	ILE	5.9
22	BA	2181	U	5.9
19	CS	49	ILE	5.8
1	CA	1535	C	5.8
48	D0	27	SER	5.8
29	BH	115	VAL	5.8
21	AU	32	VAL	5.8
14	CN	94	PRO	5.8
22	BA	2154	A	5.7
27	DF	130	MET	5.7
46	DY	10	SER	5.7
42	DU	79	LYS	5.7
22	BA	2172	U	5.7
29	BH	68	ARG	5.7
13	CM	80	LEU	5.7
44	DW	78	LYS	5.7
22	BA	2150	C	5.7
29	BH	136	SER	5.7
30	DI	64	ASP	5.7
27	DF	37	ASN	5.7
2	CB	136	MET	5.7
52	D4	10	LEU	5.7
50	D2	46	LYS	5.7
29	BH	55	GLU	5.7
22	DA	1175	A	5.7
53	B5	73	VAL	5.7
53	B5	144	GLY	5.7

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Mol	Chain	Res	Type	RSRZ
21	AU	4	ILE	5.6
22	BA	2113	U	5.6
22	BA	2118	U	5.6
1	AA	1539	C	5.6
1	AA	1030	U	5.6
53	B5	222	SER	5.6
2	CB	129	LEU	5.6
53	B5	106	ASP	5.6
38	DQ	29	SER	5.6
30	BI	41	ALA	5.6
22	BA	2120	G	5.6
30	DI	8	TYR	5.5
9	CI	130	ARG	5.5
19	CS	59	PRO	5.5
22	BA	2122	U	5.5
22	DA	1093	G	5.5
22	DA	1537	G	5.5
41	DT	15	HIS	5.5
30	DI	59	ILE	5.5
19	CS	10	PHE	5.5
53	B5	64	SER	5.5
29	BH	106	ALA	5.5
30	DI	63	ALA	5.4
42	DU	25	VAL	5.4
29	BH	124	THR	5.4
22	BA	2165	C	5.4
30	BI	114	ALA	5.4
33	DL	144	GLU	5.4
30	DI	56	PRO	5.4
30	BI	5	VAL	5.4
53	B5	194	ILE	5.4
30	DI	20	PRO	5.3
53	B5	20	VAL	5.3
30	DI	45	LYS	5.3
10	CJ	99	GLN	5.3
30	DI	25	GLY	5.3
16	AP	22	ALA	5.3
27	DF	155	THR	5.3
2	AB	155	GLY	5.3
22	BA	2160	C	5.3
22	BA	2121	G	5.3
29	DH	130	VAL	5.3

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Mol	Chain	Res	Type	RSRZ
53	B5	224	ARG	5.3
10	CJ	16	ARG	5.3
19	CS	37	ARG	5.3
22	BA	2117	A	5.3
30	BI	119	GLY	5.2
53	B5	68	GLY	5.2
22	BA	2175	C	5.2
29	BH	95	GLY	5.2
29	BH	120	GLY	5.2
42	DU	78	GLY	5.2
2	CB	135	LEU	5.2
42	DU	77	THR	5.2
30	DI	57	VAL	5.2
10	CJ	71	LEU	5.2
36	DO	51	ALA	5.2
22	BA	2166	U	5.2
42	DU	43	LYS	5.1
24	BC	240	PHE	5.1
14	CN	46	LEU	5.1
30	DI	47	ASP	5.1
10	CJ	74	VAL	5.1
53	B5	179	ALA	5.1
13	CM	75	MET	5.1
20	CT	38	ALA	5.1
53	B5	108	TRP	5.1
1	AA	1537	U	5.1
7	AG	80	VAL	5.1
22	BA	2186	G	5.1
53	B5	217	THR	5.1
49	D1	52	ALA	5.1
53	B5	53	ARG	5.1
27	DF	154	ILE	5.1
22	BA	2106	U	5.0
22	BA	2111	U	5.0
53	B5	84	ILE	5.0
53	B5	105	LEU	5.0
36	DO	24	THR	5.0
10	CJ	72	ARG	5.0
2	CB	40	ILE	5.0
20	CT	4	ILE	5.0
53	B5	149	ASN	5.0
22	BA	2110	G	5.0

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Mol	Chain	Res	Type	RSRZ
29	BH	69	ALA	5.0
7	CG	88	PRO	5.0
53	B5	38	PHE	5.0
27	DF	153	ASP	5.0
42	DU	33	LYS	5.0
30	DI	85	GLY	4.9
28	DG	105	LEU	4.9
22	BA	2149	U	4.9
41	DT	50	LEU	4.9
46	DY	36	GLN	4.9
22	BA	2153	C	4.9
10	CJ	10	LEU	4.9
29	BH	119	ASN	4.9
1	AA	78	A	4.9
1	CA	1537	U	4.9
9	AI	41	ARG	4.9
41	DT	10	VAL	4.9
30	DI	46	THR	4.9
53	B5	96	GLY	4.9
53	B5	170	GLY	4.9
28	DG	10	VAL	4.9
30	BI	140	VAL	4.9
11	AK	111	THR	4.9
27	DF	142	ASP	4.9
53	B5	39	ASP	4.9
30	DI	55	ILE	4.8
46	DY	16	THR	4.8
1	CA	1540	U	4.8
22	BA	2131	U	4.8
36	DO	25	ARG	4.8
30	DI	36	MET	4.8
53	B5	72	GLN	4.8
16	CP	80	LYS	4.8
42	DU	20	GLY	4.8
46	DY	33	ALA	4.8
27	DF	79	ILE	4.8
41	DT	36	LYS	4.8
41	DT	43	ILE	4.8
22	DA	1073	A	4.8
22	BA	2105	U	4.8
29	BH	132	PHE	4.8
30	DI	126	THR	4.8

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Mol	Chain	Res	Type	RSRZ
42	DU	80	ALA	4.8
4	CD	25	VAL	4.8
9	AI	130	ARG	4.7
30	DI	62	TYR	4.7
30	BI	22	PRO	4.7
19	CS	43	ASN	4.7
13	CM	94	GLY	4.7
29	BH	83	LYS	4.7
22	BA	2130	U	4.7
22	BA	2134	A	4.7
53	B5	221	PRO	4.7
53	B5	107	GLY	4.7
53	B5	42	VAL	4.7
14	CN	52	PRO	4.7
2	AB	9	MET	4.7
41	DT	83	ALA	4.7
7	CG	66	LEU	4.7
30	DI	22	PRO	4.7
53	B5	52	PRO	4.6
24	BC	236	GLU	4.6
53	B5	140	ASN	4.6
2	CB	164	ILE	4.6
30	DI	70	VAL	4.6
20	CT	34	LYS	4.6
53	B5	74	ARG	4.6
12	AL	25	GLU	4.6
53	B5	184	GLU	4.6
33	DL	70	LYS	4.6
27	DF	75	ALA	4.6
30	BI	39	CYS	4.6
10	CJ	8	ILE	4.6
53	B5	134	PRO	4.6
2	CB	9	MET	4.6
7	CG	54	SER	4.6
8	AH	2	SER	4.6
44	DW	52	GLY	4.6
2	CB	88	ASP	4.6
27	BF	71	ARG	4.6
44	DW	72	LYS	4.6
22	BA	2146	C	4.6
42	DU	31	SER	4.6
3	CC	159	GLY	4.6

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Mol	Chain	Res	Type	RSRZ
42	DU	48	PRO	4.6
19	AS	39	THR	4.5
53	B5	148	PHE	4.5
42	DU	47	LYS	4.5
29	DH	79	THR	4.5
30	DI	53	LEU	4.5
13	CM	45	ILE	4.5
30	BI	87	LYS	4.5
22	DA	2402	U	4.5
13	CM	95	LEU	4.5
30	BI	52	GLY	4.5
53	B5	62	THR	4.5
30	DI	48	SER	4.5
27	DF	117	LEU	4.5
27	DF	120	LYS	4.5
27	DF	118	SER	4.5
19	AS	3	ARG	4.5
53	B5	88	GLU	4.5
30	BI	40	LYS	4.5
48	D0	57	LYS	4.5
36	DO	117	PHE	4.5
30	DI	18	ALA	4.5
30	BI	67	PHE	4.5
53	B5	61	GLY	4.5
22	BA	2116	G	4.5
30	BI	115	ALA	4.5
22	BA	2124	G	4.5
27	DF	177	PHE	4.5
30	BI	99	GLY	4.5
22	BA	2164	C	4.5
19	CS	28	LYS	4.5
22	BA	2171	A	4.5
7	CG	83	SER	4.5
53	B5	200	HIS	4.5
2	CB	139	ARG	4.4
27	DF	112	ARG	4.4
21	AU	38	TYR	4.4
22	BA	2141	G	4.4
22	BA	2176	A	4.4
2	CB	67	ILE	4.4
22	BA	2152	G	4.4
27	DF	170	LEU	4.4

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Mol	Chain	Res	Type	RSRZ
30	DI	30	GLN	4.4
42	DU	63	ALA	4.4
1	CA	1031	C	4.4
34	DM	136	MET	4.4
19	CS	36	ARG	4.4
22	DA	2585	U	4.4
53	B5	208	THR	4.4
22	DA	1067	A	4.4
7	AG	81	GLY	4.4
22	BA	2132	U	4.4
7	CG	152	ALA	4.4
30	BI	8	TYR	4.4
42	DU	40	ASN	4.4
9	CI	108	ALA	4.4
9	CI	58	VAL	4.3
1	CA	1534	A	4.3
19	AS	74	PHE	4.3
16	CP	47	GLU	4.3
42	DU	28	VAL	4.3
19	CS	31	LEU	4.3
53	B5	50	ILE	4.3
53	B5	201	LYS	4.3
2	CB	148	LEU	4.3
30	BI	88	SER	4.3
41	DT	69	ARG	4.3
7	CG	57	SER	4.3
22	BA	2180	U	4.3
19	CS	11	ILE	4.3
36	DO	90	VAL	4.3
42	DU	38	GLY	4.3
53	B5	190	ILE	4.3
36	DO	107	ALA	4.3
22	DA	613	A	4.3
30	DI	37	GLU	4.3
9	CI	68	LYS	4.2
20	CT	3	ASN	4.2
30	DI	42	PHE	4.2
32	DK	111	LYS	4.2
29	DH	15	LEU	4.2
7	CG	73	VAL	4.2
16	AP	80	LYS	4.2
3	CC	102	ASN	4.2

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Mol	Chain	Res	Type	RSRZ
20	CT	71	LYS	4.2
24	DC	27	GLY	4.2
42	DU	89	ASP	4.2
27	DF	133	ARG	4.2
2	CB	114	LEU	4.2
19	CS	60	VAL	4.2
7	CG	16	PRO	4.2
22	DA	546	U	4.2
27	DF	111	ILE	4.2
49	D1	36	LEU	4.2
19	CS	72	GLY	4.2
21	AU	7	ARG	4.2
53	B5	54	ARG	4.2
13	CM	63	PHE	4.2
1	AA	1020	G	4.2
27	DF	95	ARG	4.2
8	CH	2	SER	4.2
24	DC	241	GLY	4.2
53	B5	123	ALA	4.2
53	B5	196	ALA	4.2
19	CS	25	SER	4.2
53	B5	126	SER	4.2
27	DF	23	ASN	4.2
9	AI	39	PHE	4.2
9	AI	43	THR	4.2
19	CS	67	VAL	4.1
19	CS	48	THR	4.1
10	CJ	94	ALA	4.1
7	CG	91	VAL	4.1
35	DN	73	ASN	4.1
53	B5	100	ILE	4.1
50	D2	1	MET	4.1
41	DT	34	VAL	4.1
53	B5	162	ILE	4.1
24	DC	242	LYS	4.1
30	BI	47	ASP	4.1
24	DC	239	ASN	4.1
10	CJ	9	ARG	4.1
14	CN	49	GLN	4.1
30	DI	39	CYS	4.1
12	CL	123	LYS	4.1
7	CG	64	VAL	4.1

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Mol	Chain	Res	Type	RSRZ
14	CN	54	ASP	4.1
27	DF	175	PHE	4.1
35	DN	25	ALA	4.1
13	CM	85	CYS	4.1
26	DE	104	ALA	4.1
36	DO	92	PHE	4.1
30	BI	21	SER	4.1
53	B5	56	ASP	4.1
22	BA	2174	C	4.1
3	CC	91	VAL	4.1
30	DI	27	ALA	4.1
22	DA	138	U	4.1
27	DF	122	PHE	4.1
29	BH	39	ALA	4.1
42	DU	32	GLY	4.1
53	B5	81	GLY	4.1
3	CC	37	PHE	4.0
14	CN	35	ASN	4.0
52	D4	19	ARG	4.0
1	AA	86	G	4.0
29	DH	117	LEU	4.0
30	DI	11	LEU	4.0
30	DI	31	GLN	4.0
27	DF	149	VAL	4.0
7	CG	15	ASP	4.0
13	AM	114	LYS	4.0
27	DF	156	ILE	4.0
22	DA	1171	G	4.0
19	CS	18	LYS	4.0
53	B5	131	ILE	4.0
27	DF	147	ASP	4.0
14	CN	95	GLY	4.0
53	B5	191	ARG	4.0
7	AG	151	PHE	4.0
22	BA	2168	G	4.0
30	BI	116	ASP	4.0
30	DI	96	ASP	4.0
43	DV	94	ALA	4.0
10	AJ	74	VAL	4.0
7	CG	75	VAL	4.0
33	DL	3	LEU	4.0
22	BA	2188	U	4.0

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Mol	Chain	Res	Type	RSRZ
41	DT	81	LYS	4.0
52	D4	8	LYS	4.0
11	CK	43	GLY	4.0
44	DW	42	GLY	4.0
28	DG	166	ASP	4.0
10	CJ	66	GLU	3.9
28	DG	32	GLU	3.9
30	DI	130	GLU	3.9
53	B5	152	GLU	3.9
3	CC	195	VAL	3.9
14	CN	47	LYS	3.9
2	AB	134	ALA	3.9
14	AN	21	PHE	3.9
3	AC	168	TYR	3.9
9	CI	37	GLN	3.9
26	DE	148	ILE	3.9
42	DU	21	LYS	3.9
50	B2	46	LYS	3.9
10	CJ	77	VAL	3.9
30	DI	79	LEU	3.9
27	DF	164	GLU	3.9
24	DC	245	VAL	3.9
32	DK	82	ASN	3.9
26	DE	175	ILE	3.9
7	CG	87	VAL	3.9
27	DF	158	THR	3.9
53	B5	150	ILE	3.9
19	CS	16	LEU	3.9
2	AB	131	LYS	3.9
27	DF	78	LYS	3.9
22	DA	1172	C	3.9
10	CJ	100	ILE	3.9
19	CS	51	VAL	3.9
10	CJ	15	HIS	3.9
53	B5	40	GLU	3.9
1	CA	1030	U	3.9
49	D1	47	VAL	3.9
14	AN	43	ASN	3.9
14	CN	22	ALA	3.9
21	AU	28	VAL	3.8
29	BH	58	LEU	3.8
35	DN	26	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
7	AG	143	ARG	3.8
19	CS	50	ALA	3.8
22	DA	345	A	3.8
45	DX	11	ARG	3.8
38	DQ	101	PHE	3.8
22	DA	1536	C	3.8
53	B5	46	ALA	3.8
30	BI	15	ALA	3.8
27	DF	100	PHE	3.8
29	BH	17	ASP	3.8
14	CN	10	GLU	3.8
22	BA	2137	U	3.8
14	AN	36	ALA	3.8
2	CB	201	PRO	3.8
53	B5	145	THR	3.8
2	CB	226	SER	3.8
7	CG	65	ALA	3.8
30	DI	44	ALA	3.8
42	DU	9	ASP	3.8
41	DT	49	LYS	3.8
30	DI	112	THR	3.8
30	BI	66	SER	3.8
44	DW	83	GLU	3.8
41	DT	76	ARG	3.8
53	B5	85	LYS	3.8
28	DG	40	ALA	3.8
30	BI	120	ALA	3.8
13	CM	114	LYS	3.8
53	B5	75	VAL	3.8
29	BH	137	GLU	3.8
29	DH	18	GLN	3.8
53	B5	70	GLY	3.8
27	DF	103	LEU	3.8
7	CG	60	GLU	3.8
53	B5	155	ARG	3.8
42	DU	30	SER	3.8
27	DF	41	GLY	3.7
49	D1	53	LYS	3.7
2	CB	83	ALA	3.7
44	DW	85	GLU	3.7
7	CG	130	ASN	3.7
29	BH	82	SER	3.7

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Mol	Chain	Res	Type	RSRZ
28	DG	39	ASP	3.7
10	CJ	26	VAL	3.7
14	AN	12	LYS	3.7
27	DF	20	PHE	3.7
26	DE	144	GLU	3.7
30	BI	17	MET	3.7
30	DI	24	VAL	3.7
12	CL	25	GLU	3.7
29	DH	140	ALA	3.7
29	DH	12	LEU	3.7
30	BI	55	ILE	3.7
27	DF	102	ARG	3.7
2	AB	69	PHE	3.7
2	CB	33	GLY	3.7
7	CG	74	GLU	3.7
22	BA	2169	A	3.7
1	CA	999	C	3.7
36	DO	78	VAL	3.7
2	AB	192	ASP	3.7
10	AJ	89	ARG	3.7
51	D3	14	PHE	3.7
14	CN	72	GLY	3.7
27	DF	32	GLU	3.7
41	DT	35	ALA	3.7
19	AS	49	ILE	3.7
13	CM	98	ARG	3.7
29	DH	13	GLY	3.7
42	DU	98	SER	3.7
1	AA	87	C	3.7
30	BI	83	ALA	3.7
7	AG	74	GLU	3.7
30	BI	26	PRO	3.6
30	DI	23	PRO	3.6
42	DU	13	VAL	3.6
27	DF	33	LYS	3.6
2	CB	23	TRP	3.6
9	AI	20	PHE	3.6
13	CM	79	ARG	3.6
27	DF	35	THR	3.6
3	CC	173	VAL	3.6
10	AJ	75	ASP	3.6
30	DI	26	PRO	3.6

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Mol	Chain	Res	Type	RSRZ
30	DI	86	ILE	3.6
32	DK	112	PHE	3.6
29	DH	149	GLU	3.6
42	DU	29	LEU	3.6
19	CS	74	PHE	3.6
35	DN	24	MET	3.6
42	DU	87	PHE	3.6
7	CG	134	ALA	3.6
30	DI	120	ALA	3.6
42	BU	49	VAL	3.6
3	CC	53	SER	3.6
29	BH	105	ALA	3.6
53	B5	63	VAL	3.6
46	DY	13	GLU	3.6
40	DS	16	LYS	3.6
30	DI	78	VAL	3.6
11	AK	42	LEU	3.6
30	BI	16	GLY	3.6
53	B5	210	LEU	3.6
41	DT	37	ASP	3.6
20	CT	72	ALA	3.6
27	DF	54	ALA	3.6
34	DM	80	VAL	3.6
42	DU	3	ALA	3.6
25	DD	186	LEU	3.6
44	DW	54	GLY	3.6
40	DS	40	ASN	3.6
28	DG	2	SER	3.6
30	BI	68	THR	3.6
3	CC	79	LYS	3.6
22	BA	138	U	3.6
27	DF	21	ASN	3.6
17	CQ	11	ARG	3.6
2	CB	187	VAL	3.6
53	B5	86	GLU	3.6
7	CG	39	ALA	3.6
28	DG	45	HIS	3.6
1	CA	1538	C	3.6
30	DI	14	ALA	3.6
9	CI	129	LYS	3.5
13	CM	40	ALA	3.5
2	AB	156	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
29	BH	109	GLU	3.5
3	CC	32	ASN	3.5
29	DH	119	ASN	3.5
22	DA	2309	A	3.5
24	DC	233	GLY	3.5
29	BH	86	ASP	3.5
53	B5	43	GLU	3.5
53	B5	44	VAL	3.5
2	CB	74	ARG	3.5
27	DF	55	ALA	3.5
53	B5	165	ARG	3.5
2	CB	128	LYS	3.5
10	CJ	73	LEU	3.5
13	CM	96	PRO	3.5
21	CU	38	TYR	3.5
27	DF	114	PHE	3.5
53	B5	164	PHE	3.5
3	CC	161	GLU	3.5
7	CG	148	ASN	3.5
53	B5	89	GLU	3.5
36	DO	93	ASP	3.5
3	CC	192	THR	3.5
41	DT	40	LYS	3.5
35	DN	83	LEU	3.5
9	AI	51	PRO	3.5
12	CL	124	ALA	3.5
30	DI	99	GLY	3.5
19	CS	19	VAL	3.5
36	DO	56	LYS	3.5
2	AB	32	PHE	3.5
53	B5	92	ALA	3.5
25	DD	74	GLU	3.5
1	CA	1021	A	3.5
7	CG	59	LEU	3.5
27	BF	80	ARG	3.5
36	DO	116	GLN	3.5
41	DT	72	GLN	3.5
42	DU	50	PRO	3.5
32	DK	110	GLU	3.5
27	DF	12	VAL	3.5
27	BF	76	GLY	3.5
44	DW	53	CYS	3.5

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Mol	Chain	Res	Type	RSRZ
7	AG	27	VAL	3.5
30	DI	33	VAL	3.5
42	DU	5	ILE	3.5
14	CN	53	ARG	3.5
30	BI	97	LYS	3.5
53	B5	121	MET	3.5
7	CG	52	GLN	3.5
46	BY	63	ALA	3.5
19	CS	38	SER	3.5
3	CC	155	GLY	3.5
36	DO	63	LYS	3.5
28	DG	9	VAL	3.4
29	BH	91	PHE	3.4
16	AP	81	ALA	3.4
2	AB	27	MET	3.4
7	AG	5	ARG	3.4
11	AK	96	THR	3.4
21	AU	42	THR	3.4
41	DT	71	GLY	3.4
13	CM	87	ARG	3.4
30	DI	110	ALA	3.4
49	B1	53	LYS	3.4
27	DF	40	VAL	3.4
7	CG	103	TRP	3.4
1	CA	1317	C	3.4
2	AB	36	ASN	3.4
1	CA	82	G	3.4
22	DA	2307	G	3.4
24	DC	238	ARG	3.4
14	AN	25	ALA	3.4
30	BI	78	VAL	3.4
27	DF	29	PRO	3.4
30	BI	100	LYS	3.4
30	DI	65	ARG	3.4
51	D3	61	CYS	3.4
30	BI	48	SER	3.4
52	D4	35	GLN	3.4
31	DJ	13	ARG	3.4
22	DA	228	C	3.4
22	DA	101	A	3.4
26	DE	128	ALA	3.4
53	B5	146	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
27	DF	60	ILE	3.4
30	DI	38	PHE	3.4
53	B5	220	GLY	3.4
29	BH	18	GLN	3.4
52	D4	16	ILE	3.4
28	DG	62	TRP	3.4
41	DT	67	VAL	3.4
46	DY	29	ARG	3.4
9	CI	112	GLU	3.4
30	DI	29	GLY	3.4
9	CI	4	ASN	3.4
29	BH	87	GLU	3.4
39	DR	50	GLY	3.4
50	D2	42	LEU	3.3
53	B5	87	ALA	3.3
9	CI	65	ILE	3.3
41	DT	79	ASP	3.3
27	DF	116	GLY	3.3
2	CB	138	THR	3.3
29	BH	122	LEU	3.3
1	CA	94	G	3.3
29	BH	59	ALA	3.3
53	B5	209	PHE	3.3
32	DK	81	GLY	3.3
1	CA	1020	G	3.3
29	DH	136	SER	3.3
41	DT	8	LEU	3.3
53	B5	57	GLN	3.3
14	CN	58	SER	3.3
2	CB	132	LYS	3.3
29	DH	83	LYS	3.3
31	DJ	47	HIS	3.3
33	DL	83	ALA	3.3
36	DO	58	ILE	3.3
53	B5	154	ILE	3.3
53	B5	125	GLY	3.3
2	AB	74	ARG	3.3
4	CD	36	GLN	3.3
53	B5	142	LYS	3.3
22	DA	1174	U	3.3
13	CM	46	SER	3.3
3	CC	124	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
30	BI	23	PRO	3.3
19	CS	12	ASP	3.3
22	BA	885	C	3.3
46	BY	62	GLY	3.3
29	DH	123	ARG	3.3
36	DO	13	ARG	3.3
29	DH	132	PHE	3.3
2	CB	100	MET	3.3
10	CJ	19	ASP	3.3
53	B5	101	ILE	3.3
27	DF	108	VAL	3.3
22	BA	2133	G	3.3
29	BH	121	VAL	3.3
7	AG	88	PRO	3.2
46	DY	59	GLU	3.2
33	DL	77	ILE	3.2
9	CI	44	ALA	3.2
27	DF	10	ASP	3.2
20	AT	68	HIS	3.2
28	DG	52	PHE	3.2
30	DI	13	VAL	3.2
33	DL	78	ARG	3.2
44	DW	60	PHE	3.2
2	CB	186	ILE	3.2
9	CI	127	PHE	3.2
22	DA	143	C	3.2
27	BF	78	LYS	3.2
46	DY	14	LEU	3.2
32	DK	65	THR	3.2
36	DO	16	ARG	3.2
52	D4	34	LYS	3.2
7	CG	72	THR	3.2
26	DE	186	VAL	3.2
17	CQ	4	LYS	3.2
22	DA	2126	A	3.2
22	DA	2174	C	3.2
2	AB	90	PHE	3.2
9	AI	104	VAL	3.2
28	DG	104	ASN	3.2
14	CN	7	LYS	3.2
22	BA	2125	G	3.2
7	CG	109	ARG	3.2

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Mol	Chain	Res	Type	RSRZ
13	CM	109	ARG	3.2
18	AR	20	GLU	3.2
53	B5	163	GLU	3.2
13	CM	113	ARG	3.2
41	DT	60	THR	3.2
2	AB	15	HIS	3.2
40	DS	5	ALA	3.2
43	DV	57	TYR	3.2
7	AG	150	ALA	3.2
30	DI	83	ALA	3.2
25	DD	60	VAL	3.2
18	CR	20	GLU	3.2
2	CB	225	ARG	3.2
13	CM	10	PRO	3.2
22	BA	2167	U	3.2
39	DR	37	GLU	3.2
2	AB	114	LEU	3.2
28	DG	33	LEU	3.2
35	DN	28	LEU	3.2
2	AB	187	VAL	3.2
2	AB	101	LEU	3.2
3	CC	144	LEU	3.2
33	DL	84	LYS	3.2
22	BA	2309	A	3.2
27	DF	66	LEU	3.1
40	DS	19	LEU	3.1
44	DW	68	LYS	3.1
33	DL	20	GLY	3.1
39	DR	20	VAL	3.1
19	CS	21	LYS	3.1
27	DF	113	ASP	3.1
30	DI	121	ASP	3.1
13	CM	69	LEU	3.1
22	DA	2602	A	3.1
53	B5	195	ARG	3.1
38	DQ	21	ALA	3.1
52	D4	9	LYS	3.1
30	BI	96	ASP	3.1
13	CM	43	VAL	3.1
19	CS	23	VAL	3.1
26	DE	33	VAL	3.1
14	AN	22	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
27	BF	75	ALA	3.1
29	DH	14	SER	3.1
33	DL	18	ARG	3.1
19	AS	33	THR	3.1
16	CP	81	ALA	3.1
22	BA	884	U	3.1
22	BA	2109	U	3.1
29	BH	5	LEU	3.1
2	CB	147	SER	3.1
19	AS	10	PHE	3.1
28	DG	82	GLY	3.1
2	CB	92	VAL	3.1
13	CM	72	GLU	3.1
27	DF	8	TYR	3.1
3	CC	77	ILE	3.1
2	AB	153	ASP	3.1
2	CB	192	ASP	3.1
14	CN	65	ARG	3.1
13	CM	106	ALA	3.1
20	CT	85	LYS	3.1
30	DI	87	LYS	3.1
49	D1	38	LYS	3.1
30	BI	101	ILE	3.1
31	DJ	142	ILE	3.1
30	BI	103	ARG	3.1
53	B5	198	GLU	3.1
27	DF	85	ILE	3.1
44	DW	51	VAL	3.1
13	AM	115	PRO	3.1
3	CC	67	THR	3.1
11	CK	42	LEU	3.1
20	CT	79	LEU	3.1
44	DW	63	ALA	3.1
29	BH	116	ARG	3.1
21	AU	5	LYS	3.1
26	DE	164	LEU	3.1
53	B5	51	ASP	3.1
19	CS	73	GLU	3.1
29	BH	19	VAL	3.1
40	DS	106	VAL	3.1
36	DO	41	ALA	3.1
53	B5	197	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
22	DA	1094	U	3.1
27	DF	157	THR	3.1
38	DQ	71	GLN	3.1
39	DR	29	THR	3.1
46	DY	37	LEU	3.1
7	CG	151	PHE	3.0
1	AA	85	U	3.0
1	AA	88	U	3.0
10	CJ	46	LYS	3.0
27	DF	87	CYS	3.0
41	DT	55	VAL	3.0
49	D1	23	THR	3.0
18	AR	74	HIS	3.0
29	BH	64	ALA	3.0
9	CI	117	GLY	3.0
13	CM	23	TYR	3.0
53	B5	104	ILE	3.0
21	CU	35	ARG	3.0
22	BA	2098	U	3.0
22	DA	2181	U	3.0
3	CC	157	LEU	3.0
9	AI	129	LYS	3.0
3	CC	103	ILE	3.0
9	CI	64	TYR	3.0
26	DE	190	ALA	3.0
27	DF	161	LYS	3.0
19	AS	40	ILE	3.0
29	BH	85	GLY	3.0
29	BH	99	ILE	3.0
7	CG	20	SER	3.0
29	DH	11	ASN	3.0
36	DO	26	LEU	3.0
13	CM	86	TYR	3.0
36	DO	46	GLU	3.0
30	BI	98	VAL	3.0
44	DW	43	THR	3.0
29	BH	129	GLU	3.0
32	DK	2	ILE	3.0
53	B5	130	ARG	3.0
28	DG	43	VAL	3.0
40	DS	47	VAL	3.0
50	D2	13	ASN	3.0

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Mol	Chain	Res	Type	RSRZ
22	BA	2173	A	3.0
2	CB	152	LYS	3.0
28	DG	102	VAL	3.0
30	BI	80	LEU	3.0
2	CB	191	SER	3.0
39	DR	59	ILE	3.0
22	DA	2172	U	3.0
9	CI	126	GLN	3.0
27	BF	81	GLN	3.0
29	BH	118	PRO	3.0
36	DO	19	GLN	3.0
41	DT	32	LEU	3.0
19	CS	3	ARG	3.0
36	DO	2	ASP	3.0
2	CB	37	LYS	3.0
10	CJ	40	ILE	3.0
21	AU	31	GLU	3.0
53	B5	158	LYS	3.0
30	DI	28	LEU	3.0
22	DA	1870	C	3.0
27	DF	135	GLN	3.0
22	BA	1175	A	3.0
27	DF	121	SER	3.0
26	DE	173	THR	3.0
27	DF	115	ARG	3.0
1	AA	1017	U	3.0
2	CB	155	GLY	3.0
3	CC	55	ILE	3.0
29	DH	72	ILE	3.0
44	DW	38	VAL	3.0
13	CM	108	THR	3.0
19	CS	61	PHE	3.0
27	DF	99	PHE	3.0
24	DC	244	PRO	3.0
28	DG	112	PRO	3.0
22	BA	546	U	3.0
2	CB	22	TYR	3.0
2	CB	82	ASP	3.0
42	DU	52	LEU	3.0
53	B5	69	LEU	3.0
2	CB	39	HIS	3.0
10	CJ	80	THR	3.0

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Mol	Chain	Res	Type	RSRZ
9	AI	89	GLU	3.0
45	DX	76	GLU	3.0
22	BA	2107	G	2.9
34	DM	40	ARG	2.9
1	CA	1286	U	2.9
7	AG	75	VAL	2.9
28	DG	107	LEU	2.9
30	DI	84	ALA	2.9
41	DT	33	LYS	2.9
22	DA	2125	G	2.9
14	CN	32	SER	2.9
27	DF	39	GLY	2.9
34	DM	17	ASN	2.9
46	DY	24	GLU	2.9
53	B5	82	GLU	2.9
4	AD	22	LYS	2.9
2	CB	84	ALA	2.9
53	B5	59	VAL	2.9
1	CA	209	U	2.9
24	BC	237	GLY	2.9
42	DU	57	GLY	2.9
7	AG	84	THR	2.9
39	DR	35	PHE	2.9
1	AA	1019	A	2.9
7	AG	140	ASP	2.9
14	CN	33	ASP	2.9
20	CT	66	LEU	2.9
28	DG	103	ILE	2.9
9	AI	123	ARG	2.9
19	AS	32	ARG	2.9
36	DO	99	TYR	2.9
29	BH	89	LYS	2.9
53	B5	219	MET	2.9
32	DK	99	ILE	2.9
22	DA	2305	U	2.9
14	CN	43	ASN	2.9
40	DS	92	ARG	2.9
13	AM	99	GLY	2.9
14	CN	6	MET	2.9
29	DH	92	GLY	2.9
52	D4	1	MET	2.9
2	CB	217	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
27	BF	74	VAL	2.9
34	DM	41	LEU	2.9
42	DU	42	VAL	2.9
53	B5	83	LYS	2.9
13	CM	115	PRO	2.9
14	AN	57	PRO	2.9
3	CC	196	ILE	2.9
48	D0	55	ILE	2.9
2	CB	34	ALA	2.9
3	CC	160	ALA	2.9
40	DS	90	LYS	2.9
43	DV	58	SER	2.9
7	CG	5	ARG	2.9
40	DS	3	THR	2.9
10	CJ	97	ASP	2.9
32	DK	37	ASP	2.9
22	DA	343	C	2.9
2	CB	149	GLY	2.9
22	BA	2123	G	2.9
22	BA	2108	A	2.9
27	DF	31	VAL	2.9
28	DG	133	LEU	2.9
42	DU	14	LEU	2.9
2	CB	182	PRO	2.9
3	CC	80	LYS	2.9
3	CC	109	PRO	2.9
21	AU	11	PRO	2.9
48	D0	42	HIS	2.9
13	CM	97	VAL	2.9
22	BA	139	U	2.9
22	DA	846	U	2.9
22	DA	1065	U	2.9
1	AA	412	A	2.9
3	CC	42	TYR	2.9
20	CT	24	ARG	2.9
31	DJ	95	ARG	2.9
36	DO	62	LEU	2.9
48	D0	39	LEU	2.9
26	DE	32	VAL	2.8
2	AB	88	ASP	2.8
19	AS	71	LEU	2.8
53	B5	151	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
2	AB	210	VAL	2.8
10	CJ	98	VAL	2.8
27	BF	79	ILE	2.8
21	CU	37	PHE	2.8
24	BC	239	ASN	2.8
7	CG	139	GLU	2.8
30	DI	111	GLN	2.8
7	AG	82	GLY	2.8
39	DR	26	ASP	2.8
22	DA	1535	A	2.8
33	DL	107	PHE	2.8
1	CA	211	G	2.8
27	DF	107	ALA	2.8
37	DP	91	ALA	2.8
19	AS	13	LEU	2.8
22	DA	2903	U	2.8
9	CI	21	ILE	2.8
27	DF	89	VAL	2.8
41	DT	6	ARG	2.8
33	DL	50	PHE	2.8
7	AG	65	ALA	2.8
33	DL	106	GLU	2.8
24	DC	18	LYS	2.8
21	AU	23	CYS	2.8
30	BI	84	ALA	2.8
45	DX	3	ARG	2.8
10	CJ	6	ILE	2.8
53	B5	22	THR	2.8
3	CC	174	PRO	2.8
13	CM	68	ASP	2.8
34	DM	105	MET	2.8
36	DO	57	ALA	2.8
3	CC	52	VAL	2.8
28	DG	4	VAL	2.8
29	BH	14	SER	2.8
30	DI	139	VAL	2.8
44	DW	81	SER	2.8
14	AN	26	GLU	2.8
13	CM	71	ARG	2.8
22	DA	2796	U	2.8
2	CB	133	GLU	2.8
7	CG	56	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
20	CT	25	ARG	2.8
16	CP	17	TYR	2.8
22	BA	2119	A	2.8
22	BA	1065	U	2.8
51	D3	57	LEU	2.8
16	AP	4	ILE	2.8
13	CM	103	LYS	2.8
22	DA	549	G	2.8
22	DA	2124	G	2.8
30	DI	97	LYS	2.8
42	BU	53	ASN	2.8
2	CB	159	ASP	2.8
13	CM	70	ARG	2.8
46	BY	2	LYS	2.8
27	DF	24	SER	2.8
7	CG	84	THR	2.8
27	DF	45	ALA	2.8
53	B5	90	ALA	2.8
9	CI	80	ARG	2.8
34	DM	100	LYS	2.8
44	DW	25	ARG	2.8
19	CS	13	LEU	2.8
28	DG	58	TYR	2.8
44	DW	50	ASN	2.8
7	AG	73	VAL	2.8
22	DA	2175	C	2.8
27	BF	72	LYS	2.8
7	CG	90	GLU	2.7
3	AC	12	LEU	2.7
13	CM	38	GLY	2.7
25	DD	6	GLY	2.7
29	BH	63	ALA	2.7
30	BI	7	ALA	2.7
53	B5	199	ALA	2.7
26	DE	129	PRO	2.7
30	DI	75	PRO	2.7
41	DT	58	VAL	2.7
41	DT	2	ILE	2.7
3	CC	126	ARG	2.7
3	CC	150	LYS	2.7
7	CG	141	VAL	2.7
27	BF	83	TYR	2.7

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Mol	Chain	Res	Type	RSRZ
29	DH	144	VAL	2.7
2	AB	40	ILE	2.7
40	DS	4	ILE	2.7
40	DS	68	ASP	2.7
2	AB	136	MET	2.7
42	DU	4	LYS	2.7
2	AB	67	ILE	2.7
42	DU	62	GLU	2.7
2	CB	20	THR	2.7
7	AG	4	ARG	2.7
34	DM	129	THR	2.7
41	DT	12	ARG	2.7
49	D1	24	THR	2.7
24	DC	26	LYS	2.7
36	DO	9	ARG	2.7
36	DO	52	SER	2.7
2	CB	212	LEU	2.7
26	DE	143	LEU	2.7
26	DE	200	LEU	2.7
27	DF	38	MET	2.7
30	DI	138	LEU	2.7
2	CB	213	TYR	2.7
3	CC	193	TYR	2.7
39	DR	84	ARG	2.7
22	DA	2797	U	2.7
30	DI	19	ASN	2.7
31	DJ	118	MET	2.7
41	DT	1	MET	2.7
24	BC	241	GLY	2.7
24	DC	246	THR	2.7
39	DR	96	VAL	2.7
51	D3	58	VAL	2.7
2	AB	139	ARG	2.7
28	DG	124	GLU	2.7
13	CM	105	ASN	2.7
16	CP	39	PHE	2.7
30	BI	25	GLY	2.7
36	DO	22	GLY	2.7
10	CJ	96	VAL	2.7
2	CB	142	GLU	2.7
33	DL	71	ALA	2.7
7	CG	30	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
2	AB	128	LYS	2.7
22	BA	2170	A	2.7
27	DF	146	VAL	2.7
2	CB	130	THR	2.7
10	CJ	27	GLU	2.7
22	DA	2164	C	2.7
29	DH	81	ALA	2.7
34	DM	79	ALA	2.7
42	DU	37	GLU	2.7
53	B5	216	THR	2.7
39	DR	25	LEU	2.7
3	CC	29	PHE	2.7
27	DF	88	LYS	2.7
29	BH	92	GLY	2.7
37	DP	43	PHE	2.7
41	BT	69	ARG	2.7
14	CN	30	ILE	2.7
41	BT	2	ILE	2.7
1	AA	1018	G	2.7
9	CI	63	LEU	2.7
34	DM	8	LYS	2.7
7	CG	79	ARG	2.7
9	CI	103	PHE	2.7
30	DI	12	GLN	2.7
43	DV	56	PHE	2.7
42	DU	51	ALA	2.7
51	D3	65	ALA	2.7
53	B5	171	ALA	2.7
5	AE	37	THR	2.7
26	DE	13	THR	2.7
53	B5	28	ARG	2.7
8	CH	123	GLY	2.7
9	CI	5	GLN	2.7
22	DA	2107	G	2.7
36	DO	39	VAL	2.7
52	D4	7	VAL	2.7
20	CT	9	LYS	2.6
25	DD	8	LYS	2.6
30	DI	88	SER	2.6
35	DN	102	PHE	2.6
14	CN	11	VAL	2.6
1	AA	1032	G	2.6

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Mol	Chain	Res	Type	RSRZ
2	CB	117	LEU	2.6
21	AU	35	ARG	2.6
30	DI	106	LEU	2.6
16	CP	60	TRP	2.6
7	CG	137	LYS	2.6
13	CM	64	VAL	2.6
52	D4	25	VAL	2.6
34	DM	124	LEU	2.6
43	DV	84	PRO	2.6
52	D4	33	HIS	2.6
53	B5	181	PHE	2.6
5	AE	159	LYS	2.6
10	CJ	63	ASP	2.6
12	CL	44	LYS	2.6
53	B5	80	LYS	2.6
53	B5	102	GLN	2.6
22	BA	846	U	2.6
2	CB	214	LEU	2.6
13	CM	2	ALA	2.6
14	AN	52	PRO	2.6
27	DF	119	ALA	2.6
31	DJ	97	PRO	2.6
35	DN	38	LEU	2.6
34	DM	36	VAL	2.6
45	DX	8	THR	2.6
14	CN	20	TYR	2.6
28	DG	165	ALA	2.6
41	DT	70	HIS	2.6
21	AU	51	SER	2.6
22	DA	2306	C	2.6
25	DD	200	ASP	2.6
2	AB	85	LEU	2.6
34	DM	72	PRO	2.6
14	AN	64	CYS	2.6
39	DR	88	GLY	2.6
2	AB	121	SER	2.6
38	DQ	15	LYS	2.6
41	DT	92	ASN	2.6
1	CA	1132	C	2.6
2	CB	110	SER	2.6
20	AT	61	GLN	2.6
25	DD	105	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
37	DP	12	GLN	2.6
2	AB	30	PHE	2.6
39	DR	19	THR	2.6
30	DI	52	GLY	2.6
13	CM	12	HIS	2.6
44	DW	23	VAL	2.6
44	DW	62	LYS	2.6
53	B5	37	LYS	2.6
53	B5	185	LYS	2.6
28	DG	148	LEU	2.6
41	DT	87	LEU	2.6
9	AI	110	GLN	2.6
2	CB	206	ALA	2.6
19	CS	58	VAL	2.6
29	BH	54	LEU	2.6
36	DO	61	GLN	2.6
9	AI	90	TYR	2.6
27	DF	129	SER	2.6
36	DO	91	SER	2.6
51	D3	64	TYR	2.6
31	DJ	98	GLU	2.6
2	CB	210	VAL	2.6
3	CC	84	VAL	2.6
3	CC	127	ARG	2.6
1	CA	1314	C	2.6
7	AG	83	SER	2.6
27	DF	13	VAL	2.6
27	DF	62	GLY	2.6
46	DY	35	GLY	2.6
53	B5	24	ASP	2.6
7	CG	122	ASN	2.6
19	CS	47	LEU	2.6
19	CS	33	THR	2.6
53	B5	41	THR	2.6
41	DT	80	TRP	2.5
7	CG	14	PRO	2.5
26	DE	199	MET	2.5
29	BH	94	ILE	2.5
30	BI	20	PRO	2.5
13	CM	47	GLU	2.5
18	AR	73	ARG	2.5
21	CU	8	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
7	CG	132	GLY	2.5
2	AB	205	ASP	2.5
29	BH	12	LEU	2.5
46	DY	28	LEU	2.5
53	B5	71	LYS	2.5
1	CA	79	G	2.5
53	B5	153	ILE	2.5
13	AM	85	CYS	2.5
19	CS	63	THR	2.5
53	B5	27	ALA	2.5
38	DQ	39	VAL	2.5
21	AU	21	ARG	2.5
27	DF	80	ARG	2.5
2	AB	39	HIS	2.5
11	CK	99	ALA	2.5
30	BI	24	VAL	2.5
48	D0	30	VAL	2.5
29	DH	122	LEU	2.5
40	DS	36	LEU	2.5
33	DL	100	ILE	2.5
2	AB	29	PRO	2.5
2	AB	82	ASP	2.5
10	CJ	11	LYS	2.5
53	B5	136	GLY	2.5
7	CG	23	LEU	2.5
20	CT	60	ARG	2.5
37	DP	84	ILE	2.5
2	CB	205	ASP	2.5
14	CN	68	GLY	2.5
22	DA	931	U	2.5
42	DU	49	VAL	2.5
2	CB	36	ASN	2.5
6	CF	39	LEU	2.5
7	AG	23	LEU	2.5
27	DF	152	LEU	2.5
33	DL	132	ARG	2.5
1	AA	1031	C	2.5
42	DU	72	ILE	2.5
26	DE	127	GLU	2.5
28	DG	167	GLU	2.5
2	CB	127	ASP	2.5
30	BI	82	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
9	AI	17	ALA	2.5
9	CI	51	PRO	2.5
21	AU	50	ALA	2.5
22	BA	549	G	2.5
49	B1	4	GLY	2.5
49	D1	21	TYR	2.5
26	DE	153	LEU	2.5
36	DO	38	GLN	2.5
22	DA	1606	C	2.5
46	DY	17	GLU	2.5
3	CC	71	ALA	2.5
33	DL	31	GLY	2.5
29	DH	82	SER	2.5
22	DA	2106	U	2.5
7	CG	63	GLU	2.5
3	CC	128	VAL	2.5
28	DG	54	PRO	2.5
51	D3	37	ALA	2.5
30	DI	81	LYS	2.5
16	CP	45	GLU	2.5
19	CS	68	GLY	2.5
33	DL	89	VAL	2.5
2	AB	152	LYS	2.5
14	AN	30	ILE	2.5
29	DH	143	ILE	2.5
53	B5	45	HIS	2.5
7	CG	111	ARG	2.5
15	CO	17	ARG	2.5
19	CS	81	ARG	2.5
4	CD	24	GLY	2.5
11	AK	113	VAL	2.5
28	DG	132	VAL	2.5
36	DO	27	VAL	2.5
40	DS	71	VAL	2.5
44	DW	75	LYS	2.5
50	D2	2	LYS	2.5
3	CC	181	ASP	2.5
35	DN	120	GLU	2.5
40	DS	85	ILE	2.5
1	AA	1492	A	2.4
9	CI	118	LEU	2.4
16	CP	52	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
22	DA	344	A	2.4
24	DC	237	GLY	2.4
37	DP	80	VAL	2.4
4	AD	109	ALA	2.4
10	CJ	23	ALA	2.4
13	CM	35	ALA	2.4
22	BA	1926	U	2.4
22	DA	653	U	2.4
33	DL	108	ALA	2.4
9	CI	39	PHE	2.4
2	CB	122	GLN	2.4
2	AB	18	HIS	2.4
28	DG	162	VAL	2.4
45	DX	49	LEU	2.4
52	D4	15	LYS	2.4
3	AC	158	GLY	2.4
53	B5	189	ASN	2.4
13	CM	73	ILE	2.4
30	BI	113	LYS	2.4
30	BI	142	ASP	2.4
36	DO	85	LYS	2.4
40	DS	94	ASP	2.4
3	CC	158	GLY	2.4
33	DL	6	LEU	2.4
38	DQ	7	GLY	2.4
2	AB	219	ALA	2.4
5	CE	151	GLU	2.4
17	CQ	21	ILE	2.4
29	DH	125	THR	2.4
30	DI	123	GLU	2.4
19	CS	15	LEU	2.4
26	DE	55	SER	2.4
31	DJ	15	TRP	2.4
32	DK	98	ARG	2.4
26	DE	124	PHE	2.4
9	AI	126	GLN	2.4
33	DL	73	ILE	2.4
22	DA	1170	C	2.4
30	DI	140	VAL	2.4
14	AN	33	ASP	2.4
20	CT	43	ASP	2.4
22	DA	1095	A	2.4

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Mol	Chain	Res	Type	RSRZ
2	AB	81	LYS	2.4
2	CB	160	ALA	2.4
24	DC	112	ALA	2.4
46	DY	32	ALA	2.4
10	CJ	87	LEU	2.4
26	DE	150	THR	2.4
29	BH	20	ASN	2.4
53	B5	166	ASN	2.4
2	CB	69	PHE	2.4
10	CJ	65	TYR	2.4
19	CS	17	LYS	2.4
24	DC	28	LYS	2.4
21	AU	24	GLU	2.4
22	DA	2308	G	2.4
36	DO	60	GLU	2.4
37	DP	112	GLU	2.4
27	DF	91	LEU	2.4
24	BC	242	LYS	2.4
24	DC	47	GLY	2.4
28	DG	20	ASN	2.4
29	BH	13	GLY	2.4
29	DH	31	VAL	2.4
2	AB	50	PHE	2.4
9	CI	45	ARG	2.4
29	DH	124	THR	2.4
50	D2	5	PHE	2.4
11	AK	66	ALA	2.4
19	CS	80	TYR	2.4
24	DC	102	ARG	2.4
30	DI	41	ALA	2.4
51	D3	48	ALA	2.4
30	DI	49	ILE	2.4
1	CA	1320	C	2.4
2	CB	66	LYS	2.4
30	BI	11	LEU	2.4
30	BI	138	LEU	2.4
49	D1	43	VAL	2.4
53	B5	213	VAL	2.4
22	DA	1614	A	2.4
44	DW	79	PHE	2.4
1	CA	1043	G	2.4
7	CG	26	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
38	DQ	73	GLY	2.4
37	DP	101	ARG	2.4
19	CS	20	GLU	2.4
32	DK	89	ASN	2.4
37	DP	34	GLU	2.4
45	DX	17	ASN	2.4
19	CS	14	HIS	2.4
3	AC	151	VAL	2.4
16	CP	20	VAL	2.4
7	CG	17	LYS	2.4
31	DJ	74	TYR	2.4
10	AJ	8	ILE	2.4
28	DG	131	ILE	2.4
2	CB	163	VAL	2.3
30	BI	69	PHE	2.3
42	DU	95	PHE	2.3
45	DX	35	SER	2.3
48	D0	37	LYS	2.3
1	AA	844	G	2.3
35	DN	111	ALA	2.3
14	CN	71	HIS	2.3
21	AU	53	VAL	2.3
47	DZ	8	THR	2.3
9	CI	20	PHE	2.3
2	AB	37	LYS	2.3
30	BI	117	MET	2.3
2	CB	145	GLU	2.3
7	AG	12	ILE	2.3
22	BA	2192	U	2.3
7	CG	143	ARG	2.3
24	DC	101	ARG	2.3
26	DE	134	LEU	2.3
30	DI	80	LEU	2.3
35	DN	97	ILE	2.3
34	DM	10	ARG	2.3
35	DN	109	PRO	2.3
36	DO	14	ALA	2.3
27	DF	93	GLY	2.3
29	DH	61	VAL	2.3
1	CA	1312	G	2.3
2	AB	20	THR	2.3
4	AD	177	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
36	DO	3	LYS	2.3
1	CA	1028	C	2.3
3	CC	36	ASP	2.3
10	CJ	91	ASP	2.3
10	CJ	67	ILE	2.3
26	DE	102	ARG	2.3
30	BI	59	ILE	2.3
21	AU	20	LYS	2.3
24	DC	232	HIS	2.3
48	D0	38	HIS	2.3
9	AI	32	GLN	2.3
30	DI	71	THR	2.3
9	CI	106	ARG	2.3
21	CU	47	ARG	2.3
9	CI	87	LEU	2.3
29	DH	90	LEU	2.3
28	DG	126	PRO	2.3
30	BI	95	LYS	2.3
43	DV	34	LYS	2.3
53	B5	176	VAL	2.3
1	CA	1324	A	2.3
7	CG	112	GLY	2.3
44	DW	70	GLU	2.3
9	CI	66	THR	2.3
40	DS	37	THR	2.3
2	AB	167	ASP	2.3
9	AI	28	ILE	2.3
16	CP	54	LEU	2.3
20	CT	12	ILE	2.3
26	DE	86	ALA	2.3
27	DF	34	ILE	2.3
36	DO	106	LEU	2.3
1	CA	1302	C	2.3
32	DK	69	VAL	2.3
40	DS	20	VAL	2.3
33	DL	104	GLN	2.3
10	CJ	90	LEU	2.3
27	DF	36	LEU	2.3
53	B5	169	THR	2.3
9	CI	17	ALA	2.3
11	AK	21	ALA	2.3
13	CM	81	MET	2.3

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Mol	Chain	Res	Type	RSRZ
22	DA	2150	C	2.3
36	DO	88	LYS	2.3
7	CG	124	LEU	2.3
22	DA	1078	U	2.3
25	DD	75	ALA	2.3
35	DN	29	VAL	2.3
43	DV	45	ASP	2.3
53	B5	177	GLY	2.3
7	CG	123	GLU	2.3
2	AB	86	SER	2.3
37	DP	19	SER	2.3
39	DR	48	LYS	2.3
2	CB	161	LEU	2.3
19	AS	56	GLN	2.3
22	DA	2795	C	2.3
33	DL	19	LEU	2.3
3	CC	39	VAL	2.3
13	CM	8	ASN	2.3
14	CN	21	PHE	2.3
17	CQ	50	ASN	2.3
22	DA	102	U	2.3
22	DA	646	U	2.3
22	DA	2105	U	2.3
24	DC	240	PHE	2.3
28	DG	151	TYR	2.3
29	DH	100	ALA	2.3
42	DU	53	ASN	2.3
42	DU	76	ALA	2.3
1	CA	954	G	2.3
49	D1	18	GLY	2.3
27	DF	134	GLU	2.3
45	DX	61	LYS	2.3
50	D2	7	PRO	2.3
30	DI	90	SER	2.3
53	B5	180	SER	2.3
7	CG	9	GLN	2.3
51	D3	24	HIS	2.3
29	BH	61	VAL	2.3
29	DH	74	ALA	2.3
44	DW	71	VAL	2.3
40	DS	73	LYS	2.3
53	B5	91	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
17	AQ	8	LEU	2.3
22	BA	1847	A	2.3
21	AU	30	ALA	2.3
25	DD	180	VAL	2.3
29	BH	139	PHE	2.3
20	CT	42	GLY	2.3
21	CU	44	GLU	2.3
36	DO	65	THR	2.3
8	CH	59	LEU	2.3
45	DX	74	ARG	2.3
33	DL	23	ILE	2.3
42	DU	44	LYS	2.3
7	AG	89	VAL	2.3
9	CI	48	VAL	2.3
22	DA	866	A	2.3
30	DI	77	ALA	2.3
29	DH	137	GLU	2.2
15	CO	89	ARG	2.2
19	AS	64	ASP	2.2
24	DC	49	ILE	2.2
25	DD	27	ILE	2.2
26	DE	23	PHE	2.2
39	DR	27	ILE	2.2
12	AL	68	GLY	2.2
24	DC	99	GLY	2.2
26	DE	172	ALA	2.2
41	DT	13	ALA	2.2
51	D3	21	GLY	2.2
13	AM	92	ARG	2.2
13	CM	29	ARG	2.2
20	CT	64	LYS	2.2
20	CT	86	LEU	2.2
2	CB	188	ASP	2.2
29	BH	11	ASN	2.2
5	AE	31	PHE	2.2
22	DA	1066	U	2.2
25	DD	96	ILE	2.2
33	DL	74	THR	2.2
51	D3	63	PRO	2.2
22	DA	2300	C	2.2
43	DV	82	TYR	2.2
33	DL	7	SER	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1044	A	2.2
3	CC	85	GLU	2.2
22	BA	2885	G	2.2
29	BH	67	ALA	2.2
47	DZ	37	GLU	2.2
53	B5	99	GLU	2.2
2	AB	186	ILE	2.2
3	CC	156	ARG	2.2
3	CC	169	ARG	2.2
19	CS	27	ASP	2.2
20	CT	8	LYS	2.2
24	DC	51	THR	2.2
25	DD	55	LYS	2.2
29	DH	39	ALA	2.2
30	BI	72	LYS	2.2
37	DP	9	GLU	2.2
13	CM	48	LEU	2.2
7	CG	43	VAL	2.2
11	AK	110	ILE	2.2
26	DE	178	VAL	2.2
27	DF	132	VAL	2.2
28	DG	161	GLY	2.2
29	BH	8	LYS	2.2
30	DI	131	GLY	2.2
51	D3	23	LYS	2.2
19	AS	5	LEU	2.2
22	BA	2126	A	2.2
24	BC	243	HIS	2.2
13	CM	4	ILE	2.2
37	DP	65	SER	2.2
1	CA	979	C	2.2
33	DL	28	GLY	2.2
19	CS	9	PRO	2.2
15	AO	39	LEU	2.2
7	AG	109	ARG	2.2
7	CG	131	LYS	2.2
33	DL	126	ARG	2.2
17	CQ	53	CYS	2.2
14	CN	99	ALA	2.2
27	DF	83	TYR	2.2
34	DM	52	ALA	2.2
7	CG	13	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
14	CN	63	ARG	2.2
22	DA	2103	C	2.2
36	DO	42	PRO	2.2
42	BU	52	LEU	2.2
3	CC	49	LYS	2.2
7	CG	38	THR	2.2
22	DA	1112	G	2.2
42	DU	61	LYS	2.2
30	DI	9	VAL	2.2
36	DO	28	VAL	2.2
9	AI	34	SER	2.2
34	DM	56	ALA	2.2
2	AB	47	VAL	2.2
27	DF	151	GLY	2.2
1	CA	1313	U	2.2
2	CB	108	ARG	2.2
7	CG	51	ALA	2.2
10	CJ	30	LYS	2.2
11	AK	13	ARG	2.2
14	CN	9	ARG	2.2
19	CS	32	ARG	2.2
26	DE	12	LEU	2.2
30	DI	51	LYS	2.2
41	DT	20	ALA	2.2
22	DA	2163	A	2.2
19	AS	24	GLU	2.2
26	DE	28	VAL	2.2
3	CC	136	ARG	2.2
13	AM	86	TYR	2.2
30	BI	81	LYS	2.2
40	DS	46	LEU	2.2
7	CG	41	SER	2.2
33	DL	81	ASP	2.2
53	B5	120	VAL	2.2
22	DA	1084	A	2.2
39	DR	92	TRP	2.1
51	D3	47	LYS	2.2
22	DA	2165	C	2.1
10	CJ	85	ASP	2.1
41	DT	68	LYS	2.1
51	D3	41	LYS	2.1
22	BA	2190	G	2.1

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Mol	Chain	Res	Type	RSRZ
10	CJ	42	LEU	2.1
44	DW	59	LEU	2.1
2	CB	90	PHE	2.1
30	BI	38	PHE	2.1
31	DJ	119	PHE	2.1
2	AB	217	VAL	2.1
14	AN	63	ARG	2.1
31	DJ	96	ARG	2.1
50	D2	33	ARG	2.1
53	B5	215	VAL	2.1
11	AK	67	ALA	2.1
26	DE	17	THR	2.1
28	DG	25	THR	2.1
7	CG	78	ARG	2.1
7	AG	144	MET	2.1
1	CA	4	U	2.1
1	CA	1209	C	2.1
21	AU	27	GLY	2.1
44	DW	55	ARG	2.1
45	DX	18	ARG	2.1
11	AK	84	VAL	2.1
17	AQ	55	ILE	2.1
19	CS	65	GLU	2.1
34	DM	73	ILE	2.1
41	DT	16	VAL	2.1
22	DA	1068	G	2.1
33	DL	80	SER	2.1
3	CC	88	ARG	2.1
9	CI	13	LYS	2.1
10	CJ	82	LYS	2.1
12	AL	124	ALA	2.1
14	CN	29	ALA	2.1
40	DS	110	ARG	2.1
43	DV	74	ALA	2.1
11	AK	129	VAL	2.1
16	CP	67	ILE	2.1
2	CB	154	MET	2.1
27	DF	57	LEU	2.1
40	DS	33	LEU	2.1
13	CM	76	SER	2.1
19	CS	6	LYS	2.1
8	CH	130	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
10	CJ	86	ALA	2.1
9	CI	67	VAL	2.1
42	DU	88	GLU	2.1
35	DN	36	THR	2.1
47	DZ	5	ILE	2.1
44	DW	73	GLY	2.1
45	DX	77	LYS	2.1
14	AN	2	ALA	2.1
41	DT	84	TYR	2.1
9	AI	19	VAL	2.1
13	CM	39	ILE	2.1
36	DO	54	VAL	2.1
39	DR	66	HIS	2.1
9	CI	10	GLY	2.1
11	AK	126	LYS	2.1
13	CM	44	LYS	2.1
24	DC	235	GLY	2.1
22	DA	1211	C	2.1
22	DA	2156	G	2.1
27	DF	150	ARG	2.1
33	DL	69	ARG	2.1
33	DL	102	GLY	2.1
38	DQ	44	GLN	2.1
40	DS	97	LEU	2.1
9	AI	125	PRO	2.1
11	AK	14	LYS	2.1
13	CM	54	ASP	2.1
1	CA	1025	U	2.1
3	AC	178	LEU	2.1
9	AI	122	ARG	2.1
27	DF	106	ILE	2.1
10	CJ	13	PHE	2.1
37	DP	115	ASN	2.1
7	AG	44	TYR	2.1
45	DX	78	TYR	2.1
2	AB	45	LYS	2.1
13	CM	74	SER	2.1
28	DG	110	SER	2.1
13	CM	19	LEU	2.1
2	AB	42	ASN	2.1
41	DT	51	PHE	2.1
28	DG	84	THR	2.1

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Mol	Chain	Res	Type	RSRZ
30	BI	71	THR	2.1
35	DN	37	THR	2.1
51	D3	28	ASN	2.1
2	CB	63	ARG	2.1
25	DD	132	ALA	2.1
27	DF	28	VAL	2.1
50	D2	32	ALA	2.1
22	DA	2148	G	2.1
28	DG	50	LEU	2.1
32	DK	101	GLY	2.1
46	DY	21	LEU	2.1
52	D4	20	ASP	2.1
27	DF	22	TYR	2.1
29	DH	97	ARG	2.1
2	AB	196	VAL	2.1
39	DR	38	VAL	2.1
2	AB	117	LEU	2.1
27	DF	162	SER	2.1
2	AB	91	PHE	2.0
2	CB	126	PHE	2.0
27	DF	144	ASP	2.1
24	BC	238	ARG	2.0
1	AA	79	G	2.0
41	DT	56	GLU	2.0
2	AB	193	PRO	2.0
7	CG	108	ALA	2.0
10	CJ	41	PRO	2.0
33	DL	15	ALA	2.0
13	CM	33	ILE	2.0
29	DH	6	LEU	2.0
45	DX	22	LEU	2.0
10	AJ	35	GLN	2.0
32	DK	14	SER	2.0
2	AB	78	GLU	2.0
14	CN	34	VAL	2.0
40	DS	32	ALA	2.0
9	AI	21	ILE	2.0
13	CM	111	GLY	2.0
19	CS	26	GLY	2.0
26	DE	177	PRO	2.0
33	DL	30	THR	2.0
14	AN	24	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
21	AU	33	ARG	2.0
30	BI	125	MET	2.0
35	DN	30	ARG	2.0
14	AN	54	ASP	2.0
20	CT	13	GLN	2.0
31	DJ	49	ASP	2.0
36	DO	112	GLU	2.0
2	AB	75	ALA	2.0
7	AG	6	VAL	2.0
53	B5	21	TYR	2.0
9	AI	30	ILE	2.0
16	CP	4	ILE	2.0
22	BA	1172	C	2.0
13	AM	3	ARG	2.0
44	DW	58	THR	2.0
7	CG	37	SER	2.0
20	AT	36	TYR	2.0
26	DE	14	VAL	2.0
28	DG	44	LYS	2.0
34	DM	26	VAL	2.0
2	AB	200	ILE	2.0
29	BH	143	ILE	2.0
44	DW	82	ILE	2.0
9	CI	125	PRO	2.0
10	AJ	49	PHE	2.0
37	DP	7	GLN	2.0
10	CJ	75	ASP	2.0
30	DI	95	LYS	2.0
36	DO	89	ASP	2.0
40	DS	83	LYS	2.0
21	AU	52	ALA	2.0
35	DN	113	ILE	2.0
42	DU	86	ARG	2.0
39	DR	67	GLY	2.0
22	DA	1077	A	2.0
22	DA	2173	A	2.0
13	CM	52	GLN	2.0
13	CM	62	LYS	2.0
22	BA	1925	C	2.0
29	BH	141	LYS	2.0
33	DL	67	THR	2.0
49	D1	37	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
29	DH	68	ARG	2.0
36	DO	21	LEU	2.0
45	DX	50	ARG	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
54	MHU	D6	5	15/16	0.82	0.38	45,58,69,72	0
54	DBB	D6	3	6/7	0.88	0.50	45,50,65,70	0
54	04X	D6	6	15/16	0.90	0.27	47,59,67,73	0
54	MHU	B6	5	15/16	0.93	0.24	3,7,15,15	0
54	MHW	D6	1	9/10	0.94	0.18	55,59,63,66	0
54	DBB	B6	3	6/7	0.94	0.28	8,14,20,33	0
54	004	D6	7	10/11	0.95	0.23	47,52,61,64	0
54	MHW	B6	1	9/10	0.97	0.20	8,13,21,30	0
54	004	B6	7	10/11	0.97	0.28	2,4,6,6	0
54	04X	B6	6	15/16	0.97	0.19	6,11,15,20	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	AA	1627	1/1	0.17	0.55	76,76,76,76	0
55	MG	DA	3071	1/1	0.18	0.59	93,93,93,93	0
55	MG	DA	3072	1/1	0.23	0.50	89,89,89,89	0
55	MG	AA	1644	1/1	0.24	0.69	49,49,49,49	0
55	MG	DA	3061	1/1	0.25	1.80	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3093	1/1	0.26	0.35	99,99,99,99	0
55	MG	CA	1631	1/1	0.35	0.26	98,98,98,98	0
55	MG	DA	3011	1/1	0.41	0.30	74,74,74,74	0
55	MG	DA	3057	1/1	0.41	0.29	82,82,82,82	0
55	MG	DA	3116	1/1	0.43	0.34	92,92,92,92	0
55	MG	DA	3005	1/1	0.44	0.12	90,90,90,90	0
55	MG	DA	3041	1/1	0.46	0.42	66,66,66,66	0
55	MG	CA	1629	1/1	0.49	0.10	84,84,84,84	0
55	MG	CA	1621	1/1	0.51	0.09	67,67,67,67	0
55	MG	CA	1637	1/1	0.52	0.37	80,80,80,80	0
55	MG	DA	3132	1/1	0.53	0.79	85,85,85,85	0
55	MG	DA	3027	1/1	0.55	0.12	82,82,82,82	0
55	MG	DA	3104	1/1	0.56	0.18	76,76,76,76	0
55	MG	BA	3055	1/1	0.58	0.25	50,50,50,50	0
55	MG	DA	3120	1/1	0.58	0.56	95,95,95,95	0
55	MG	DA	3085	1/1	0.58	0.19	78,78,78,78	0
55	MG	DA	3134	1/1	0.58	0.58	87,87,87,87	0
55	MG	CA	1628	1/1	0.59	0.28	100,100,100,100	0
55	MG	DA	3070	1/1	0.60	0.11	93,93,93,93	0
55	MG	DA	3016	1/1	0.60	0.42	84,84,84,84	0
55	MG	CA	1627	1/1	0.61	0.29	88,88,88,88	0
55	MG	DA	3077	1/1	0.62	0.26	76,76,76,76	0
55	MG	AA	1665	1/1	0.63	0.74	53,53,53,53	0
55	MG	AA	1635	1/1	0.63	0.27	76,76,76,76	0
55	MG	BA	3119	1/1	0.64	0.36	49,49,49,49	0
55	MG	BA	3135	1/1	0.65	0.27	48,48,48,48	0
55	MG	CA	1609	1/1	0.67	0.09	78,78,78,78	0
55	MG	DA	3032	1/1	0.67	0.20	78,78,78,78	0
55	MG	DA	3062	1/1	0.68	0.77	70,70,70,70	0
55	MG	DA	3079	1/1	0.68	0.08	94,94,94,94	0
55	MG	DA	3056	1/1	0.68	0.28	80,80,80,80	0
55	MG	DA	3028	1/1	0.69	0.56	86,86,86,86	0
55	MG	DA	3111	1/1	0.69	0.12	81,81,81,81	0
55	MG	DA	3008	1/1	0.70	0.16	80,80,80,80	0
55	MG	CA	1636	1/1	0.70	0.29	97,97,97,97	0
55	MG	BA	3016	1/1	0.70	0.22	31,31,31,31	0
55	MG	DA	3021	1/1	0.70	0.34	62,62,62,62	0
55	MG	AA	1651	1/1	0.70	0.34	55,55,55,55	0
55	MG	DA	3137	1/1	0.70	0.27	84,84,84,84	0
55	MG	DA	3153	1/1	0.70	0.12	68,68,68,68	0
55	MG	DA	3078	1/1	0.71	0.20	95,95,95,95	0
55	MG	AA	1667	1/1	0.72	0.68	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3082	1/1	0.72	0.11	65,65,65,65	0
55	MG	BA	3011	1/1	0.72	0.16	30,30,30,30	0
55	MG	BA	3115	1/1	0.73	0.51	76,76,76,76	0
55	MG	BA	3048	1/1	0.73	0.08	26,26,26,26	0
55	MG	BA	3090	1/1	0.73	0.20	33,33,33,33	0
55	MG	BA	3098	1/1	0.73	0.59	73,73,73,73	0
55	MG	DA	3024	1/1	0.73	0.17	45,45,45,45	0
55	MG	AA	1670	1/1	0.74	0.40	45,45,45,45	0
55	MG	BA	3047	1/1	0.74	0.11	40,40,40,40	0
55	MG	DA	3121	1/1	0.74	0.16	60,60,60,60	0
55	MG	DA	3122	1/1	0.74	0.08	64,64,64,64	0
55	MG	DA	3155	1/1	0.74	0.28	37,37,37,37	0
55	MG	DA	3165	1/1	0.74	0.38	43,43,43,43	0
55	MG	CA	1635	1/1	0.75	0.10	94,94,94,94	0
55	MG	AA	1634	1/1	0.75	0.09	49,49,49,49	0
55	MG	DA	3150	1/1	0.75	0.21	50,50,50,50	0
55	MG	DA	3151	1/1	0.75	0.47	40,40,40,40	0
55	MG	DA	3094	1/1	0.75	0.20	83,83,83,83	0
55	MG	BA	3154	1/1	0.75	0.23	21,21,21,21	0
55	MG	CA	1605	1/1	0.75	0.25	78,78,78,78	0
55	MG	CA	1655	1/1	0.76	1.02	67,67,67,67	0
55	MG	DA	3010	1/1	0.76	0.10	64,64,64,64	0
55	MG	AA	1601	1/1	0.76	0.11	61,61,61,61	0
55	MG	DA	3145	1/1	0.76	0.09	68,68,68,68	0
55	MG	DA	3164	1/1	0.76	0.76	56,56,56,56	0
55	MG	DA	3149	1/1	0.76	0.19	49,49,49,49	0
55	MG	DB	201	1/1	0.76	0.05	96,96,96,96	0
55	MG	AA	1646	1/1	0.77	0.21	50,50,50,50	0
55	MG	AA	1648	1/1	0.77	0.26	39,39,39,39	0
55	MG	DA	3019	1/1	0.77	0.15	84,84,84,84	0
55	MG	DA	3091	1/1	0.77	0.13	79,79,79,79	0
55	MG	DA	3029	1/1	0.77	0.37	66,66,66,66	0
55	MG	DA	3002	1/1	0.77	0.52	81,81,81,81	0
55	MG	DA	3106	1/1	0.78	0.31	70,70,70,70	0
55	MG	BA	3031	1/1	0.78	0.11	7,7,7,7	0
55	MG	DA	3038	1/1	0.78	0.14	63,63,63,63	0
55	MG	DA	3084	1/1	0.78	0.15	75,75,75,75	0
55	MG	BA	3190	1/1	0.78	0.53	42,42,42,42	0
55	MG	DA	3042	1/1	0.78	0.14	69,69,69,69	0
55	MG	DA	3158	1/1	0.78	0.46	58,58,58,58	0
55	MG	DA	3160	1/1	0.78	0.20	47,47,47,47	0
55	MG	DA	3048	1/1	0.78	0.22	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	CA	1602	1/1	0.78	0.12	69,69,69,69	0
55	MG	CA	1626	1/1	0.78	0.26	66,66,66,66	0
55	MG	DA	3092	1/1	0.79	0.44	94,94,94,94	0
55	MG	BA	3015	1/1	0.79	0.41	61,61,61,61	0
55	MG	AA	1623	1/1	0.79	0.17	49,49,49,49	0
55	MG	DA	3161	1/1	0.79	0.33	48,48,48,48	0
55	MG	DA	3014	1/1	0.79	0.36	73,73,73,73	0
55	MG	DA	3015	1/1	0.79	0.57	77,77,77,77	0
55	MG	BA	3025	1/1	0.79	0.18	40,40,40,40	0
55	MG	DA	3126	1/1	0.80	0.17	61,61,61,61	0
55	MG	DA	3040	1/1	0.80	0.21	66,66,66,66	0
55	MG	DA	3136	1/1	0.81	0.42	81,81,81,81	0
55	MG	CA	1652	1/1	0.81	0.11	62,62,62,62	0
55	MG	DA	3044	1/1	0.81	0.21	83,83,83,83	0
55	MG	BA	3004	1/1	0.81	0.14	52,52,52,52	0
55	MG	BA	3070	1/1	0.81	0.11	37,37,37,37	0
55	MG	DA	3133	1/1	0.81	0.19	55,55,55,55	0
55	MG	BA	3019	1/1	0.81	0.26	1,1,1,1	0
55	MG	BA	3029	1/1	0.82	0.12	35,35,35,35	0
55	MG	DA	3090	1/1	0.82	0.08	59,59,59,59	0
55	MG	DA	3154	1/1	0.82	0.24	40,40,40,40	0
55	MG	DA	3033	1/1	0.82	0.09	54,54,54,54	0
55	MG	DA	3098	1/1	0.82	0.08	50,50,50,50	0
55	MG	DB	203	1/1	0.82	0.09	90,90,90,90	0
55	MG	DA	3013	1/1	0.83	0.11	64,64,64,64	0
55	MG	BA	3157	1/1	0.83	0.34	34,34,34,34	0
55	MG	AA	1652	1/1	0.83	0.13	40,40,40,40	0
55	MG	AA	1657	1/1	0.83	0.34	37,37,37,37	0
55	MG	AA	1662	1/1	0.83	0.27	49,49,49,49	0
55	MG	CA	1638	1/1	0.83	0.16	74,74,74,74	0
55	MG	DA	3058	1/1	0.83	0.16	70,70,70,70	0
55	MG	DA	3166	1/1	0.83	0.19	44,44,44,44	0
55	MG	AA	1630	1/1	0.83	0.15	67,67,67,67	0
55	MG	DA	3099	1/1	0.83	0.41	82,82,82,82	0
55	MG	DA	3009	1/1	0.84	0.09	69,69,69,69	0
55	MG	DA	3055	1/1	0.84	0.07	57,57,57,57	0
55	MG	DA	3115	1/1	0.84	0.09	79,79,79,79	0
55	MG	BA	3161	1/1	0.84	0.17	15,15,15,15	0
55	MG	BA	3168	1/1	0.84	0.24	21,21,21,21	0
55	MG	DA	3006	1/1	0.84	0.22	98,98,98,98	0
55	MG	CA	1611	1/1	0.84	0.17	69,69,69,69	0
55	MG	DA	3060	1/1	0.85	0.22	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3113	1/1	0.85	0.12	2,2,2,2	0
55	MG	CA	1615	1/1	0.85	0.23	56,56,56,56	0
55	MG	AA	1659	1/1	0.85	0.48	32,32,32,32	0
55	MG	BA	3045	1/1	0.85	0.12	4,4,4,4	0
55	MG	DA	3046	1/1	0.85	0.11	62,62,62,62	0
55	MG	DA	3127	1/1	0.85	0.13	88,88,88,88	0
55	MG	AA	1671	1/1	0.85	0.34	54,54,54,54	0
55	MG	CA	1604	1/1	0.85	0.07	78,78,78,78	0
55	MG	DA	3100	1/1	0.85	0.31	73,73,73,73	0
55	MG	CM	201	1/1	0.85	0.38	50,50,50,50	0
55	MG	AA	1617	1/1	0.85	0.11	62,62,62,62	0
55	MG	DA	3144	1/1	0.85	0.30	58,58,58,58	0
55	MG	BA	3109	1/1	0.85	0.21	1,1,1,1	0
55	MG	CA	1620	1/1	0.86	0.13	81,81,81,81	0
55	MG	BA	3076	1/1	0.86	0.28	56,56,56,56	0
55	MG	DA	3102	1/1	0.86	0.31	72,72,72,72	0
55	MG	DA	3018	1/1	0.86	0.11	68,68,68,68	0
55	MG	BA	3129	1/1	0.86	0.13	0,0,0,0	0
55	MG	DA	3004	1/1	0.86	0.48	87,87,87,87	0
55	MG	DA	3112	1/1	0.86	0.13	64,64,64,64	0
55	MG	DA	3054	1/1	0.87	0.08	62,62,62,62	0
55	MG	DA	3135	1/1	0.87	0.08	46,46,46,46	0
55	MG	AA	1624	1/1	0.87	0.10	50,50,50,50	0
55	MG	DA	3063	1/1	0.87	0.12	53,53,53,53	0
55	MG	DA	3069	1/1	0.87	0.20	77,77,77,77	0
55	MG	BA	3150	1/1	0.87	0.20	37,37,37,37	0
55	MG	BA	3093	1/1	0.87	0.10	26,26,26,26	0
55	MG	BA	3028	1/1	0.87	0.10	3,3,3,3	0
55	MG	DA	3073	1/1	0.87	0.10	35,35,35,35	0
55	MG	BA	3080	1/1	0.87	0.09	24,24,24,24	0
55	MG	BA	3003	1/1	0.88	0.10	29,29,29,29	0
55	MG	AA	1607	1/1	0.88	0.12	48,48,48,48	0
55	MG	BA	3061	1/1	0.88	0.64	66,66,66,66	0
55	MG	CA	1606	1/1	0.88	0.25	76,76,76,76	0
55	MG	BA	3160	1/1	0.88	0.20	5,5,5,5	0
55	MG	BA	3124	1/1	0.88	0.09	9,9,9,9	0
55	MG	BA	3166	1/1	0.88	0.20	37,37,37,37	0
55	MG	CA	1646	1/1	0.88	0.23	36,36,36,36	0
55	MG	DA	3103	1/1	0.88	0.28	67,67,67,67	0
55	MG	CA	1650	1/1	0.88	0.63	50,50,50,50	0
55	MG	BA	3167	1/1	0.88	0.17	22,22,22,22	0
55	MG	DA	3152	1/1	0.88	0.32	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	CA	1654	1/1	0.88	0.20	26,26,26,26	0
55	MG	AA	1639	1/1	0.88	0.10	67,67,67,67	0
55	MG	DA	3081	1/1	0.88	0.12	62,62,62,62	0
55	MG	CA	1622	1/1	0.88	0.12	57,57,57,57	0
55	MG	DA	3118	1/1	0.88	0.11	73,73,73,73	0
55	MG	BA	3180	1/1	0.88	0.62	25,25,25,25	0
55	MG	DA	3025	1/1	0.88	0.12	65,65,65,65	0
55	MG	DA	3088	1/1	0.88	0.08	69,69,69,69	0
55	MG	DA	3125	1/1	0.88	0.17	86,86,86,86	0
55	MG	DA	3089	1/1	0.88	0.62	91,91,91,91	0
55	MG	BA	3002	1/1	0.88	0.09	18,18,18,18	0
55	MG	DQ	201	1/1	0.88	0.30	40,40,40,40	0
55	MG	BA	3118	1/1	0.89	0.14	34,34,34,34	0
55	MG	AA	1636	1/1	0.89	0.18	42,42,42,42	0
55	MG	DA	3113	1/1	0.89	0.46	75,75,75,75	0
55	MG	DA	3157	1/1	0.89	0.14	29,29,29,29	0
55	MG	CA	1608	1/1	0.89	0.12	65,65,65,65	0
55	MG	CA	1648	1/1	0.89	0.14	51,51,51,51	0
55	MG	BA	3056	1/1	0.89	0.19	22,22,22,22	0
55	MG	BA	3020	1/1	0.89	0.13	5,5,5,5	0
55	MG	DA	3045	1/1	0.89	0.21	61,61,61,61	0
55	MG	BB	202	1/1	0.89	0.10	4,4,4,4	0
55	MG	CA	1633	1/1	0.89	0.80	82,82,82,82	0
55	MG	BA	3133	1/1	0.89	0.34	57,57,57,57	0
55	MG	AA	1614	1/1	0.89	0.19	66,66,66,66	0
55	MG	BA	3026	1/1	0.90	0.10	6,6,6,6	0
55	MG	AA	1658	1/1	0.90	0.16	35,35,35,35	0
55	MG	BA	3077	1/1	0.90	0.07	38,38,38,38	0
55	MG	AA	1643	1/1	0.90	0.15	23,23,23,23	0
55	MG	DA	3138	1/1	0.90	0.36	37,37,37,37	0
55	MG	DA	3139	1/1	0.90	0.56	47,47,47,47	0
55	MG	BA	3088	1/1	0.90	0.08	29,29,29,29	0
55	MG	DA	3043	1/1	0.90	0.07	67,67,67,67	0
55	MG	BA	3052	1/1	0.90	0.09	21,21,21,21	0
55	MG	BA	3091	1/1	0.90	0.05	48,48,48,48	0
55	MG	CA	1624	1/1	0.90	0.07	52,52,52,52	0
55	MG	DA	3047	1/1	0.90	0.14	71,71,71,71	0
55	MG	BA	3007	1/1	0.90	0.09	32,32,32,32	0
55	MG	DA	3049	1/1	0.90	0.10	69,69,69,69	0
55	MG	DA	3083	1/1	0.90	0.24	65,65,65,65	0
55	MG	DA	3053	1/1	0.90	0.13	39,39,39,39	0
55	MG	BB	203	1/1	0.90	0.09	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3087	1/1	0.90	0.05	58,58,58,58	0
55	MG	BA	3145	1/1	0.90	0.16	26,26,26,26	0
55	MG	BA	3036	1/1	0.90	0.15	23,23,23,23	0
55	MG	CA	1630	1/1	0.90	0.65	102,102,102,102	0
55	MG	BA	3099	1/1	0.90	0.16	21,21,21,21	0
55	MG	DA	3130	1/1	0.90	0.19	43,43,43,43	0
55	MG	DB	202	1/1	0.90	0.13	57,57,57,57	0
55	MG	CA	1632	1/1	0.90	0.07	75,75,75,75	0
55	MG	BA	3044	1/1	0.90	0.21	8,8,8,8	0
55	MG	DA	3142	1/1	0.91	0.40	39,39,39,39	0
55	MG	BA	3050	1/1	0.91	0.07	7,7,7,7	0
55	MG	AA	1631	1/1	0.91	0.16	52,52,52,52	0
55	MG	DA	3147	1/1	0.91	0.15	35,35,35,35	0
55	MG	DA	3065	1/1	0.91	0.07	41,41,41,41	0
55	MG	BA	3054	1/1	0.91	0.08	7,7,7,7	0
55	MG	CA	1645	1/1	0.91	0.12	32,32,32,32	0
55	MG	BA	3112	1/1	0.91	0.09	20,20,20,20	0
55	MG	BA	3073	1/1	0.91	0.15	9,9,9,9	0
55	MG	BA	3173	1/1	0.91	0.29	30,30,30,30	0
55	MG	BA	3075	1/1	0.91	0.14	6,6,6,6	0
55	MG	DA	3035	1/1	0.91	0.13	71,71,71,71	0
55	MG	DA	3128	1/1	0.91	0.07	74,74,74,74	0
55	MG	CA	1653	1/1	0.91	0.38	48,48,48,48	0
55	MG	DA	3101	1/1	0.91	0.08	63,63,63,63	0
55	MG	DA	3163	1/1	0.91	0.21	47,47,47,47	0
55	MG	DA	3080	1/1	0.91	0.10	91,91,91,91	0
55	MG	BA	3152	1/1	0.91	0.27	8,8,8,8	0
55	MG	CA	1618	1/1	0.91	0.21	35,35,35,35	0
55	MG	DA	3059	1/1	0.91	0.09	42,42,42,42	0
55	MG	DA	3107	1/1	0.91	0.19	56,56,56,56	0
55	MG	BA	3092	1/1	0.91	0.19	42,42,42,42	0
55	MG	BA	3040	1/1	0.91	0.39	2,2,2,2	0
55	MG	BA	3178	1/1	0.92	0.35	12,12,12,12	0
55	MG	AA	1668	1/1	0.92	0.38	33,33,33,33	0
55	MG	BA	3059	1/1	0.92	0.12	5,5,5,5	0
55	MG	DA	3108	1/1	0.92	0.14	55,55,55,55	0
55	MG	AA	1669	1/1	0.92	0.27	34,34,34,34	0
55	MG	DA	3146	1/1	0.92	0.11	41,41,41,41	0
55	MG	BA	3136	1/1	0.92	0.57	43,43,43,43	0
55	MG	DA	3148	1/1	0.92	0.22	51,51,51,51	0
55	MG	CA	1601	1/1	0.92	0.17	52,52,52,52	0
55	MG	DA	3031	1/1	0.92	0.14	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3144	1/1	0.92	0.24	24,24,24,24	0
55	MG	BA	3095	1/1	0.92	0.08	14,14,14,14	0
55	MG	DA	3007	1/1	0.92	0.37	80,80,80,80	0
55	MG	BA	3066	1/1	0.92	0.14	2,2,2,2	0
55	MG	AA	1610	1/1	0.92	0.15	51,51,51,51	0
55	MG	DA	3064	1/1	0.92	0.19	48,48,48,48	0
55	MG	AA	1604	1/1	0.92	0.08	48,48,48,48	0
55	MG	BA	3111	1/1	0.92	0.08	27,27,27,27	0
55	MG	DA	3095	1/1	0.92	0.24	69,69,69,69	0
55	MG	DA	3129	1/1	0.92	0.13	70,70,70,70	0
55	MG	DA	3096	1/1	0.92	0.09	54,54,54,54	0
55	MG	AA	1661	1/1	0.92	0.35	23,23,23,23	0
55	MG	AA	1616	1/1	0.92	0.09	62,62,62,62	0
55	MG	AA	1663	1/1	0.92	0.23	49,49,49,49	0
55	MG	AA	1602	1/1	0.92	0.38	53,53,53,53	0
55	MG	AA	1609	1/1	0.92	0.08	33,33,33,33	0
55	MG	BA	3034	1/1	0.92	0.13	5,5,5,5	0
55	MG	AA	1655	1/1	0.93	0.14	20,20,20,20	0
55	MG	BA	3179	1/1	0.93	0.34	30,30,30,30	0
55	MG	BA	3057	1/1	0.93	0.21	20,20,20,20	0
55	MG	BA	3181	1/1	0.93	0.12	26,26,26,26	0
55	MG	BA	3038	1/1	0.93	0.14	1,1,1,1	0
55	MG	BA	3023	1/1	0.93	0.17	0,0,0,0	0
55	MG	AA	1605	1/1	0.93	0.20	29,29,29,29	0
55	MG	AA	1606	1/1	0.93	0.06	58,58,58,58	0
55	MG	BA	3071	1/1	0.93	0.14	17,17,17,17	0
55	MG	BA	3102	1/1	0.93	0.18	17,17,17,17	0
55	MG	BA	3151	1/1	0.93	0.14	23,23,23,23	0
55	MG	BA	3027	1/1	0.93	0.35	36,36,36,36	0
55	MG	CA	1639	1/1	0.93	0.13	43,43,43,43	0
55	MG	CA	1640	1/1	0.93	0.15	36,36,36,36	0
55	MG	BA	3074	1/1	0.93	0.21	32,32,32,32	0
55	MG	BA	3014	1/1	0.93	0.19	26,26,26,26	0
55	MG	DA	3159	1/1	0.93	0.26	57,57,57,57	0
55	MG	BA	3001	1/1	0.93	0.05	21,21,21,21	0
55	MG	AA	1619	1/1	0.93	0.15	65,65,65,65	0
55	MG	BA	3032	1/1	0.93	0.12	2,2,2,2	0
55	MG	CA	1619	1/1	0.93	0.12	27,27,27,27	0
55	MG	AA	1629	1/1	0.93	0.17	54,54,54,54	0
55	MG	BA	3120	1/1	0.93	0.12	11,11,11,11	0
55	MG	BA	3171	1/1	0.93	0.17	20,20,20,20	0
55	MG	DA	3036	1/1	0.93	0.12	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	CA	1623	1/1	0.93	0.17	66,66,66,66	0
55	MG	BA	3123	1/1	0.93	0.13	11,11,11,11	0
55	MG	BA	3138	1/1	0.94	0.30	0,0,0,0	0
55	MG	DA	3030	1/1	0.94	0.27	61,61,61,61	0
55	MG	BA	3140	1/1	0.94	0.15	7,7,7,7	0
55	MG	AM	201	1/1	0.94	0.61	50,50,50,50	0
55	MG	CA	1641	1/1	0.94	0.40	58,58,58,58	0
55	MG	AA	1650	1/1	0.94	0.25	20,20,20,20	0
55	MG	AA	1638	1/1	0.94	0.11	63,63,63,63	0
55	MG	BA	3108	1/1	0.94	0.16	5,5,5,5	0
55	MG	BA	3053	1/1	0.94	0.18	0,0,0,0	0
55	MG	AA	1613	1/1	0.94	0.07	23,23,23,23	0
55	MG	BA	3155	1/1	0.94	0.18	2,2,2,2	0
55	MG	CA	1610	1/1	0.94	0.07	58,58,58,58	0
55	MG	AA	1640	1/1	0.94	0.10	57,57,57,57	0
55	MG	DA	3141	1/1	0.94	0.42	45,45,45,45	0
55	MG	CA	1614	1/1	0.94	0.05	52,52,52,52	0
55	MG	DA	3001	1/1	0.94	0.08	37,37,37,37	0
55	MG	BA	3159	1/1	0.94	0.14	24,24,24,24	0
55	MG	CA	1616	1/1	0.94	0.10	38,38,38,38	0
55	MG	BA	3079	1/1	0.94	0.09	21,21,21,21	0
55	MG	AA	1608	1/1	0.94	0.15	20,20,20,20	0
55	MG	BA	3087	1/1	0.94	0.09	27,27,27,27	0
55	MG	BA	3041	1/1	0.94	0.10	11,11,11,11	0
55	MG	BA	3089	1/1	0.94	0.14	1,1,1,1	0
55	MG	BA	3122	1/1	0.94	0.17	0,0,0,0	0
55	MG	AA	1625	1/1	0.94	0.09	51,51,51,51	0
55	MG	BA	3174	1/1	0.94	0.14	5,5,5,5	0
55	MG	BA	3175	1/1	0.94	0.10	9,9,9,9	0
55	MG	BA	3177	1/1	0.94	0.10	9,9,9,9	0
55	MG	AA	1615	1/1	0.94	0.13	63,63,63,63	0
55	MG	BA	3065	1/1	0.94	0.12	1,1,1,1	0
55	MG	BA	3046	1/1	0.94	0.17	3,3,3,3	0
55	MG	AA	1620	1/1	0.94	0.06	55,55,55,55	0
55	MG	DA	3068	1/1	0.94	0.07	60,60,60,60	0
55	MG	DA	3022	1/1	0.94	0.13	43,43,43,43	0
55	MG	BA	3183	1/1	0.94	0.26	22,22,22,22	0
55	MG	DA	3119	1/1	0.94	0.07	58,58,58,58	0
55	MG	DA	3167	1/1	0.94	0.13	30,30,30,30	0
55	MG	BA	3097	1/1	0.94	0.12	0,0,0,0	0
55	MG	DA	3026	1/1	0.94	0.70	75,75,75,75	0
55	MG	BA	3193	1/1	0.94	0.17	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BB	201	1/1	0.94	0.08	28,28,28,28	0
55	MG	DA	3051	1/1	0.95	0.05	33,33,33,33	0
55	MG	DA	3052	1/1	0.95	0.06	47,47,47,47	0
55	MG	CA	1642	1/1	0.95	0.20	25,25,25,25	0
55	MG	BA	3182	1/1	0.95	0.22	14,14,14,14	0
55	MG	AA	1660	1/1	0.95	0.09	41,41,41,41	0
55	MG	CA	1647	1/1	0.95	0.31	35,35,35,35	0
55	MG	BA	3184	1/1	0.95	0.13	8,8,8,8	0
55	MG	BA	3039	1/1	0.95	0.22	1,1,1,1	0
55	MG	DA	3097	1/1	0.95	0.15	67,67,67,67	0
55	MG	CA	1651	1/1	0.95	0.25	72,72,72,72	0
55	MG	BA	3084	1/1	0.95	0.10	7,7,7,7	0
55	MG	DA	3143	1/1	0.95	0.18	35,35,35,35	0
55	MG	BA	3194	1/1	0.95	0.19	22,22,22,22	0
55	MG	BA	3195	1/1	0.95	0.14	36,36,36,36	0
55	MG	BA	3137	1/1	0.95	0.29	2,2,2,2	0
55	MG	BA	3096	1/1	0.95	0.18	2,2,2,2	0
55	MG	AA	1666	1/1	0.95	0.25	32,32,32,32	0
55	MG	DA	3066	1/1	0.95	0.12	45,45,45,45	0
55	MG	BA	3169	1/1	0.95	0.10	4,4,4,4	0
55	MG	DA	3034	1/1	0.95	0.20	58,58,58,58	0
55	MG	BA	3064	1/1	0.95	0.15	0,0,0,0	0
55	MG	CA	1603	1/1	0.95	0.15	45,45,45,45	0
55	MG	DA	3037	1/1	0.95	0.08	76,76,76,76	0
55	MG	DA	3114	1/1	0.95	0.09	52,52,52,52	0
55	MG	BA	3024	1/1	0.95	0.07	3,3,3,3	0
55	MG	DA	3039	1/1	0.95	0.10	53,53,53,53	0
55	MG	BA	3101	1/1	0.95	0.09	11,11,11,11	0
55	MG	AA	1618	1/1	0.95	0.09	34,34,34,34	0
55	MG	BA	3176	1/1	0.95	0.27	24,24,24,24	0
55	MG	BA	3104	1/1	0.95	0.26	0,0,0,0	0
55	MG	BA	3105	1/1	0.95	0.22	0,0,0,0	0
55	MG	DA	3123	1/1	0.95	0.15	44,44,44,44	0
55	MG	DA	3124	1/1	0.95	0.16	41,41,41,41	0
55	MG	DA	3012	1/1	0.95	0.14	39,39,39,39	0
55	MG	BA	3125	1/1	0.95	0.17	2,2,2,2	0
55	MG	CA	1612	1/1	0.95	0.05	43,43,43,43	0
55	MG	BA	3156	1/1	0.95	0.15	9,9,9,9	0
55	MG	BA	3068	1/1	0.95	0.17	1,1,1,1	0
55	MG	BA	3117	1/1	0.96	0.16	1,1,1,1	0
55	MG	AA	1633	1/1	0.96	0.08	35,35,35,35	0
55	MG	DA	3003	1/1	0.96	0.13	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3082	1/1	0.96	0.07	6,6,6,6	0
55	MG	BA	3083	1/1	0.96	0.22	34,34,34,34	0
55	MG	BA	3185	1/1	0.96	0.14	5,5,5,5	0
55	MG	BA	3186	1/1	0.96	0.23	12,12,12,12	0
55	MG	BA	3188	1/1	0.96	0.10	35,35,35,35	0
55	MG	BA	3121	1/1	0.96	0.06	14,14,14,14	0
55	MG	BA	3191	1/1	0.96	0.18	26,26,26,26	0
55	MG	BA	3192	1/1	0.96	0.23	11,11,11,11	0
55	MG	BA	3069	1/1	0.96	0.15	64,64,64,64	0
55	MG	BA	3100	1/1	0.96	0.10	9,9,9,9	0
55	MG	BA	3085	1/1	0.96	0.17	11,11,11,11	0
55	MG	AA	1626	1/1	0.96	0.21	26,26,26,26	0
55	MG	CA	1634	1/1	0.96	0.06	58,58,58,58	0
55	MG	BA	3163	1/1	0.96	0.14	27,27,27,27	0
55	MG	BA	3165	1/1	0.96	0.12	3,3,3,3	0
55	MG	BA	3126	1/1	0.96	0.15	3,3,3,3	0
55	MG	BA	3103	1/1	0.96	0.07	7,7,7,7	0
55	MG	DA	3023	1/1	0.96	0.10	60,60,60,60	0
55	MG	BA	3012	1/1	0.96	0.16	0,0,0,0	0
55	MG	DA	3105	1/1	0.96	0.12	52,52,52,52	0
55	MG	BA	3049	1/1	0.96	0.14	3,3,3,3	0
55	MG	BA	3170	1/1	0.96	0.26	22,22,22,22	0
55	MG	BA	3022	1/1	0.96	0.15	0,0,0,0	0
55	MG	DA	3110	1/1	0.96	0.24	45,45,45,45	0
55	MG	CA	1644	1/1	0.96	0.38	36,36,36,36	0
55	MG	DA	3156	1/1	0.96	0.13	58,58,58,58	0
55	MG	CA	1607	1/1	0.96	0.14	55,55,55,55	0
55	MG	BA	3172	1/1	0.96	0.12	16,16,16,16	0
55	MG	BA	3013	1/1	0.96	0.17	0,0,0,0	0
55	MG	BA	3110	1/1	0.96	0.11	26,26,26,26	0
55	MG	AA	1637	1/1	0.96	0.14	16,16,16,16	0
55	MG	DA	3117	1/1	0.96	0.12	55,55,55,55	0
55	MG	BA	3143	1/1	0.96	0.32	3,3,3,3	0
55	MG	DA	3075	1/1	0.96	0.26	61,61,61,61	0
55	MG	DA	3076	1/1	0.96	0.13	59,59,59,59	0
55	MG	CA	1613	1/1	0.96	0.14	17,17,17,17	0
55	MG	BA	3005	1/1	0.96	0.17	43,43,43,43	0
55	MG	BA	3094	1/1	0.96	0.12	20,20,20,20	0
55	MG	BA	3146	1/1	0.96	0.21	22,22,22,22	0
55	MG	BA	3067	1/1	0.96	0.20	0,0,0,0	0
55	MG	BA	3127	1/1	0.97	0.10	2,2,2,2	0
55	MG	BA	3162	1/1	0.97	0.14	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3062	1/1	0.97	0.11	4,4,4,4	0
55	MG	BB	204	1/1	0.97	0.36	0,0,0,0	0
55	MG	BA	3130	1/1	0.97	0.17	2,2,2,2	0
55	MG	DA	3020	1/1	0.97	0.19	44,44,44,44	0
55	MG	BA	3131	1/1	0.97	0.32	37,37,37,37	0
55	MG	BA	3132	1/1	0.97	0.20	32,32,32,32	0
55	MG	DA	3140	1/1	0.97	0.23	42,42,42,42	0
55	MG	BA	3043	1/1	0.97	0.06	23,23,23,23	0
55	MG	BA	3134	1/1	0.97	0.09	3,3,3,3	0
55	MG	BA	3009	1/1	0.97	0.08	2,2,2,2	0
55	MG	CA	1643	1/1	0.97	0.37	41,41,41,41	0
55	MG	AA	1649	1/1	0.97	0.12	28,28,28,28	0
55	MG	AA	1603	1/1	0.97	0.21	57,57,57,57	0
55	MG	AA	1641	1/1	0.97	0.12	7,7,7,7	0
55	MG	AA	1611	1/1	0.97	0.07	21,21,21,21	0
55	MG	DA	3109	1/1	0.97	0.19	30,30,30,30	0
55	MG	BA	3142	1/1	0.97	0.21	0,0,0,0	0
55	MG	BA	3030	1/1	0.97	0.16	3,3,3,3	0
55	MG	AA	1653	1/1	0.97	0.18	34,34,34,34	0
55	MG	BA	3116	1/1	0.97	0.19	30,30,30,30	0
55	MG	BA	3072	1/1	0.97	0.19	2,2,2,2	0
55	MG	BA	3147	1/1	0.97	0.14	11,11,11,11	0
55	MG	CA	1617	1/1	0.97	0.09	41,41,41,41	0
55	MG	BA	3148	1/1	0.97	0.14	13,13,13,13	0
55	MG	BA	3149	1/1	0.97	0.23	0,0,0,0	0
55	MG	AA	1664	1/1	0.97	0.13	51,51,51,51	0
55	MG	BA	3018	1/1	0.97	0.08	10,10,10,10	0
55	MG	AA	1654	1/1	0.97	0.14	41,41,41,41	0
55	MG	DA	3162	1/1	0.97	0.11	48,48,48,48	0
55	MG	BA	3153	1/1	0.97	0.16	2,2,2,2	0
55	MG	AA	1632	1/1	0.97	0.13	40,40,40,40	0
55	MG	BA	3189	1/1	0.97	0.20	0,0,0,0	0
55	MG	AA	1628	1/1	0.97	0.04	39,39,39,39	0
55	MG	BA	3006	1/1	0.97	0.07	13,13,13,13	0
55	MG	BA	3058	1/1	0.97	0.07	15,15,15,15	0
55	MG	BA	3158	1/1	0.97	0.12	15,15,15,15	0
55	MG	AA	1622	1/1	0.97	0.22	21,21,21,21	0
55	MG	BA	3042	1/1	0.97	0.14	1,1,1,1	0
56	ZN	D4	101	1/1	0.97	0.07	74,74,74,74	0
55	MG	CA	1625	1/1	0.98	0.17	18,18,18,18	0
55	MG	BA	3106	1/1	0.98	0.24	0,0,0,0	0
55	MG	BA	3081	1/1	0.98	0.10	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3021	1/1	0.98	0.15	2,2,2,2	0
55	MG	BA	3139	1/1	0.98	0.27	0,0,0,0	0
55	MG	CA	1649	1/1	0.98	0.22	24,24,24,24	0
55	MG	BA	3060	1/1	0.98	0.13	29,29,29,29	0
55	MG	BA	3051	1/1	0.98	0.14	4,4,4,4	0
55	MG	DA	3131	1/1	0.98	0.13	50,50,50,50	0
55	MG	BA	3035	1/1	0.98	0.07	0,0,0,0	0
55	MG	DA	3017	1/1	0.98	0.18	39,39,39,39	0
55	MG	BA	3008	1/1	0.98	0.13	0,0,0,0	0
55	MG	DA	3086	1/1	0.98	0.12	61,61,61,61	0
55	MG	BA	3128	1/1	0.98	0.19	3,3,3,3	0
55	MG	BA	3114	1/1	0.98	0.09	28,28,28,28	0
55	MG	BA	3037	1/1	0.98	0.19	0,0,0,0	0
55	MG	BA	3164	1/1	0.98	0.30	6,6,6,6	0
55	MG	BA	3017	1/1	0.98	0.16	0,0,0,0	0
55	MG	AA	1612	1/1	0.98	0.13	38,38,38,38	0
55	MG	BA	3078	1/1	0.98	0.04	38,38,38,38	0
55	MG	BA	3010	1/1	0.98	0.09	1,1,1,1	0
55	MG	AA	1621	1/1	0.98	0.09	37,37,37,37	0
55	MG	BA	3187	1/1	0.98	0.21	3,3,3,3	0
55	MG	DA	3050	1/1	0.98	0.12	52,52,52,52	0
55	MG	DA	3074	1/1	0.98	0.08	47,47,47,47	0
55	MG	AA	1642	1/1	0.99	0.07	25,25,25,25	0
55	MG	BA	3107	1/1	0.99	0.14	3,3,3,3	0
55	MG	BA	3086	1/1	0.99	0.20	0,0,0,0	0
55	MG	BA	3141	1/1	0.99	0.40	0,0,0,0	0
55	MG	DA	3067	1/1	0.99	0.18	43,43,43,43	0
55	MG	AA	1656	1/1	0.99	0.07	32,32,32,32	0
55	MG	BA	3063	1/1	0.99	0.13	2,2,2,2	0
55	MG	BA	3033	1/1	0.99	0.20	0,0,0,0	0
55	MG	AA	1647	1/1	0.99	0.17	44,44,44,44	0
55	MG	AA	1645	1/1	0.99	0.09	42,42,42,42	0
56	ZN	B4	101	1/1	1.00	0.08	76,76,76,76	0

6.5 Other polymers (i)

There are no such residues in this entry.