Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 09:13 PM UTC

PDB ID	:	4U20 / pdb_00004u20
Title	:	Crystal structure of the E. coli ribosome bound to flopristin.
Authors	:	Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.
Deposited on	:	2014-07-16
Resolution	:	2.90 Å(reported)

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

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

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

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

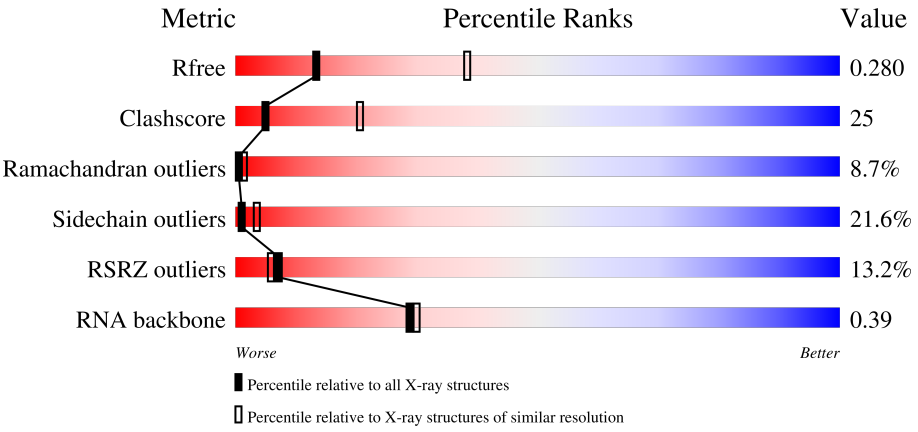
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.90 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	2481 (2.90-2.90)
Clashscore	190562	2690 (2.90-2.90)
Ramachandran outliers	187476	2623 (2.90-2.90)
Sidechain outliers	187428	2625 (2.90-2.90)
RSRZ outliers	180081	2481 (2.90-2.90)
RNA backbone	3983	1120 (3.10-2.70)

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

Mol	Chain	Length	Quality of chain
1	AA	1539	5% 30% 53% 17%
1	CA	1539	8% 31% 53% 16%
2	AB	218	14% 14% 47% 30% 9%
2	CB	218	27% 22% 49% 24% .

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Mol	Chain	Length	Quality of chain
3	AC	206	3% 36% 49% 13%
3	CC	206	8% 38% 45% 15%
4	AD	205	8% 28% 47% 22%
4	CD	205	7% 40% 41% 16%
5	AE	150	7% 33% 45% 19%
5	CE	150	13% 34% 37% 25%
6	AF	100	5% 27% 43% 26%
6	CF	100	9% 29% 39% 28%
7	AG	151	19% 30% 48% 21%
7	CG	151	43% 42% 42% 13%
8	AH	129	2% 40% 38% 22%
8	CH	129	9% 41% 42% 15%
9	AI	127	20% 27% 51% 18%
9	CI	127	47% 31% 48% 20%
10	AJ	98	13% 20% 45% 31%
10	CJ	98	47% 40% 42% 14%
11	AK	117	11% 33% 44% 21%
11	CK	117	2% 32% 51% 15%
12	AL	123	7% 51% 34% 11%
12	CL	123	12% 40% 37% 20%
13	AM	114	7% 36% 49% 11%
13	CM	114	55% 39% 41% 18%
14	AN	100	20% 22% 53% 17%
14	CN	100	36% 33% 45% 17%
15	AO	88	11% 31% 47% 23%

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Mol	Chain	Length	Quality of chain
15	CO	88	8% 39% 44% 16%
16	AP	82	9% 24% 44% 28%
16	CP	82	17% 45% 40% 13%
17	AQ	80	14% 34% 39% 22% 5%
17	CQ	80	22% 31% 42% 24%
18	AR	55	9% 51% 40% 9%
18	CR	55	9% 27% 62% 9%
19	AS	79	16% 47% 34% 14% 5%
19	CS	79	53% 44% 47% 6%
20	AT	85	8% 32% 53% 13%
20	CT	85	28% 36% 40% 21%
21	AU	51	33% 27% 37% 27% 8%
21	CU	51	27% 18% 41% 29% 12%
22	BA	2903	6% 36% 50% 14%
22	DA	2903	8% 31% 53% 16%
23	BB	119	51% 37% 12%
23	DB	119	3% 34% 53% 13%
24	BC	271	3% 43% 45% 12%
24	DC	271	24% 37% 51% 13%
25	BD	209	% 45% 46% 8%
25	DD	209	15% 54% 37% 8%
26	BE	201	% 50% 38% 11%
26	DE	201	29% 40% 45% 13%
27	BF	177	11% 47% 40% 12%
27	DF	177	29% 42% 46% 11%

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Mol	Chain	Length	Quality of chain
28	BG	176	3% 51% 38% 10%
28	DG	176	31% 49% 40% 11%
29	BH	149	61% 26% 47% 22% 5%
29	DH	149	49% 37% 48% 11%
30	BI	141	55% 27% 44% 26%
30	DI	141	70% 38% 41% 19%
31	BJ	142	4% 55% 34% 10%
31	DJ	142	18% 49% 41% 10%
32	BK	122	2% 48% 37% 12%
32	DK	122	11% 54% 36% 8%
33	BL	143	% 47% 34% 18%
33	DL	143	34% 44% 42% 13%
34	BM	136	% 49% 43% 7%
34	DM	136	10% 60% 33% 7%
35	BN	120	% 43% 42% 13%
35	DN	120	33% 38% 47% 14%
36	BO	116	% 46% 42% 12%
36	DO	116	27% 45% 45% 10%
37	BP	114	% 54% 39% 7%
37	DP	114	14% 41% 49% 6%
38	BQ	117	47% 38% 15%
38	DQ	117	24% 54% 40% 6%
39	BR	103	2% 38% 49% 11%
39	DR	103	20% 44% 44% 12%
40	BS	110	% 46% 38% 13%

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Mol	Chain	Length	Quality of chain
40	DS	110	30% 44% 45% 11%
41	BT	93	9% 42% 40% 18%
41	DT	93	43% 29% 51% 17%
42	BU	102	2% 53% 34% 12%
42	DU	102	54% 29% 50% 18%
43	BV	94	% 45% 43% 13%
43	DV	94	10% 52% 40% 6%
44	BW	76	3% 54% 42%
44	DW	76	24% 64% 25% 9%
45	BX	77	3% 48% 40% 12%
45	DX	77	34% 21% 62% 17%
46	BY	63	6% 35% 48% 16%
46	DY	63	48% 24% 65% 8%
47	BZ	58	43% 48% 9%
47	DZ	58	12% 48% 36% 12%
48	B0	56	43% 39% 18%
48	D0	56	29% 55% 36% 9%
49	B1	50	2% 50% 36% 12%
49	D1	50	30% 40% 46% 14%
50	B2	46	2% 59% 28% 13%
50	D2	46	35% 43% 41% 13%
51	B3	64	62% 30% 8%
51	D3	64	55% 45% 48% 6%
52	B4	38	3% 47% 50%
52	D4	38	37% 45% 29% 26%

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Mol	Chain	Length	Quality of chain
53	B5	228	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	DA	3062	-	-	-	X
54	MG	DA	3132	-	-	-	X
56	ZN	B4	101	-	-	X	-

2 Entry composition (i)

There are 57 unique types of molecules in this entry. The entry contains 288258 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

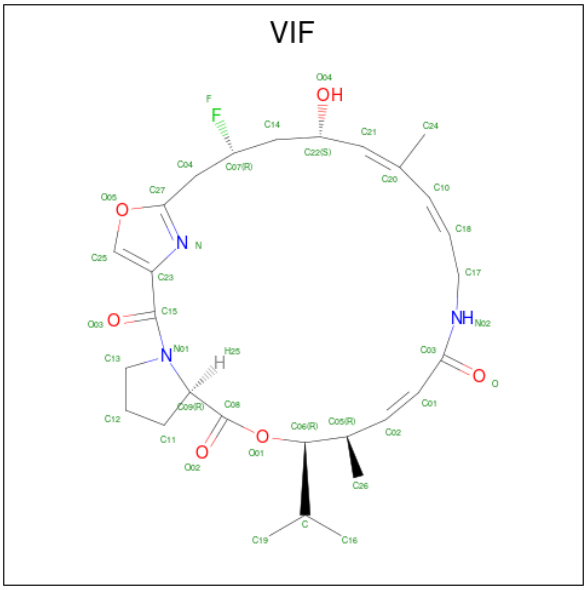
- Molecule 53 is a protein called 50S ribosomal protein L1.

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

- Molecule 54 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

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

- Molecule 55 is Flopristin (CCD ID: VIF) (formula: $C_{28}H_{38}FN_3O_6$).



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

- Molecule 56 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 57 is water.

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

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

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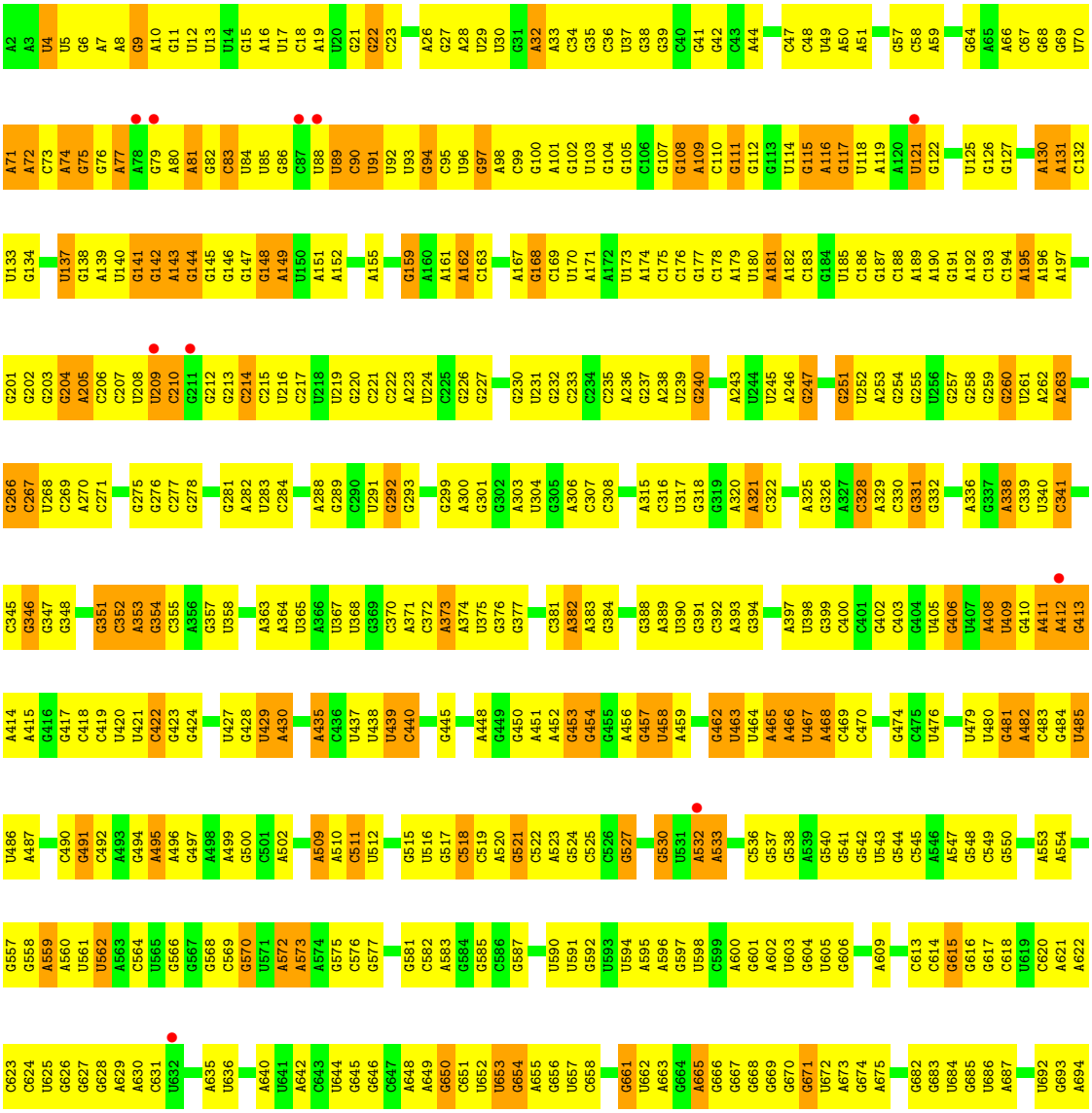
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	D2	3	Total O 3 3	0	0
57	D3	2	Total O 2 2	0	0
57	D4	1	Total O 1 1	0	0

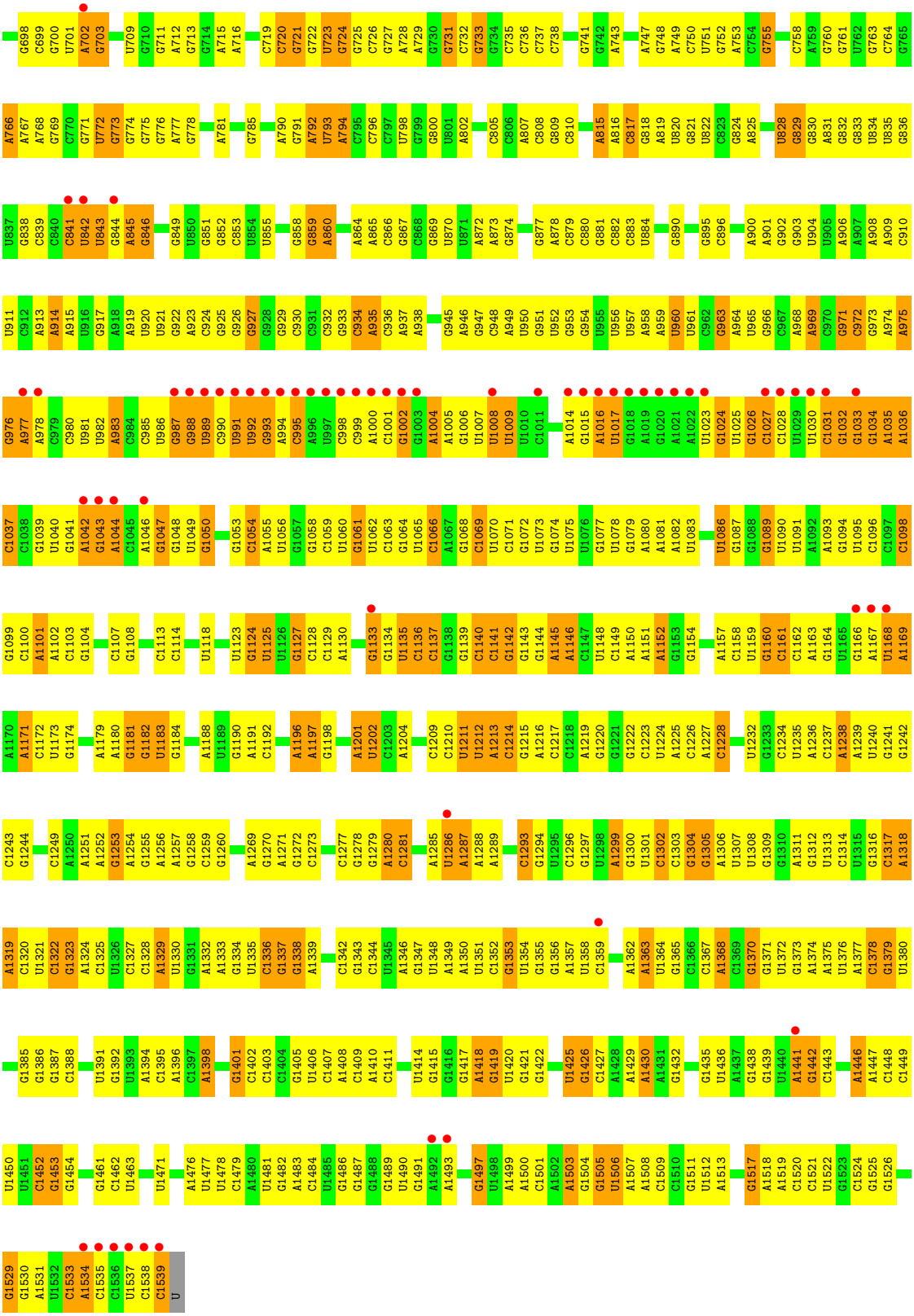
3 Residue-property plots (i)

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

- Molecule 1: 16S rRNA

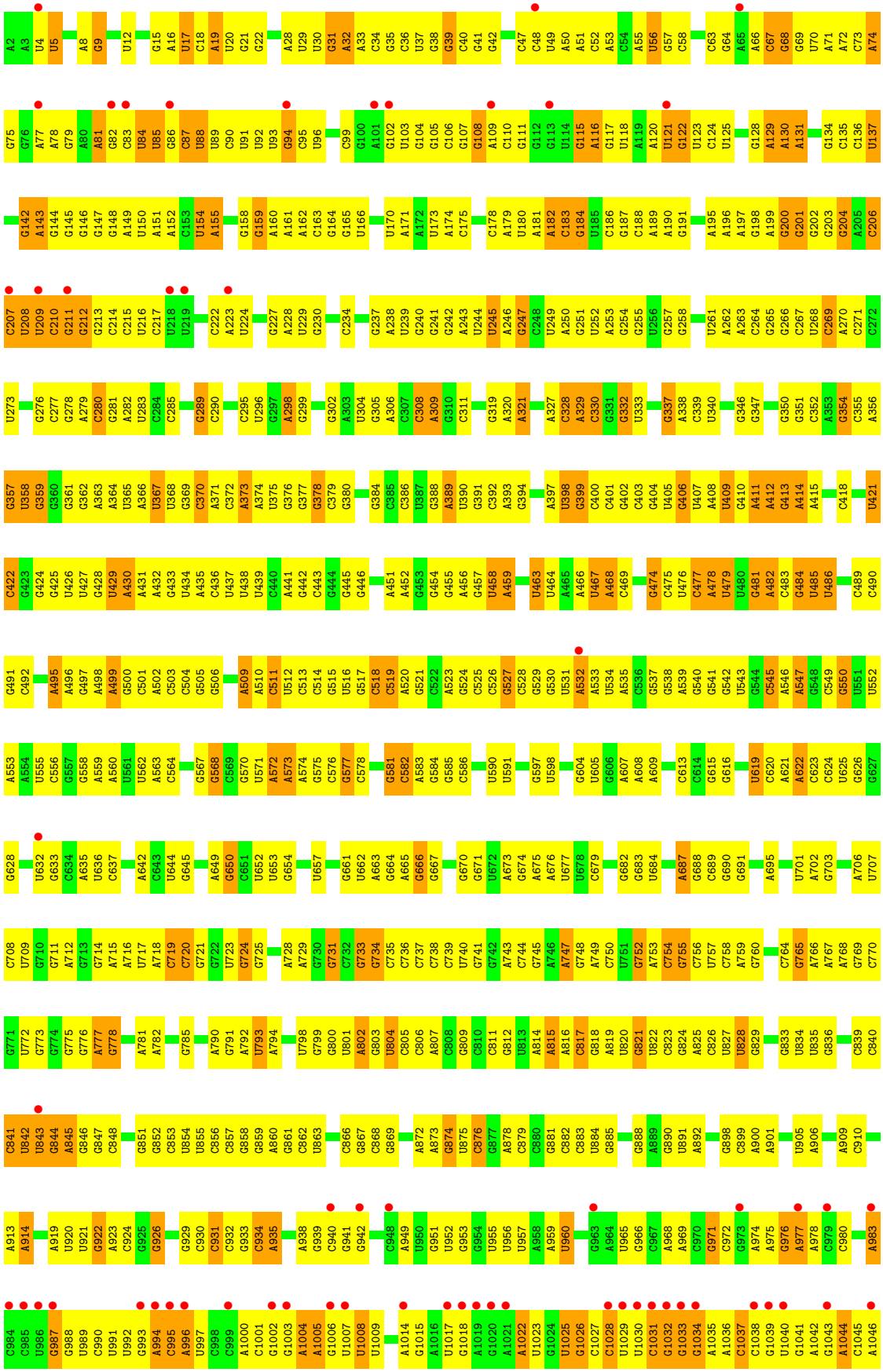
Chain AA:

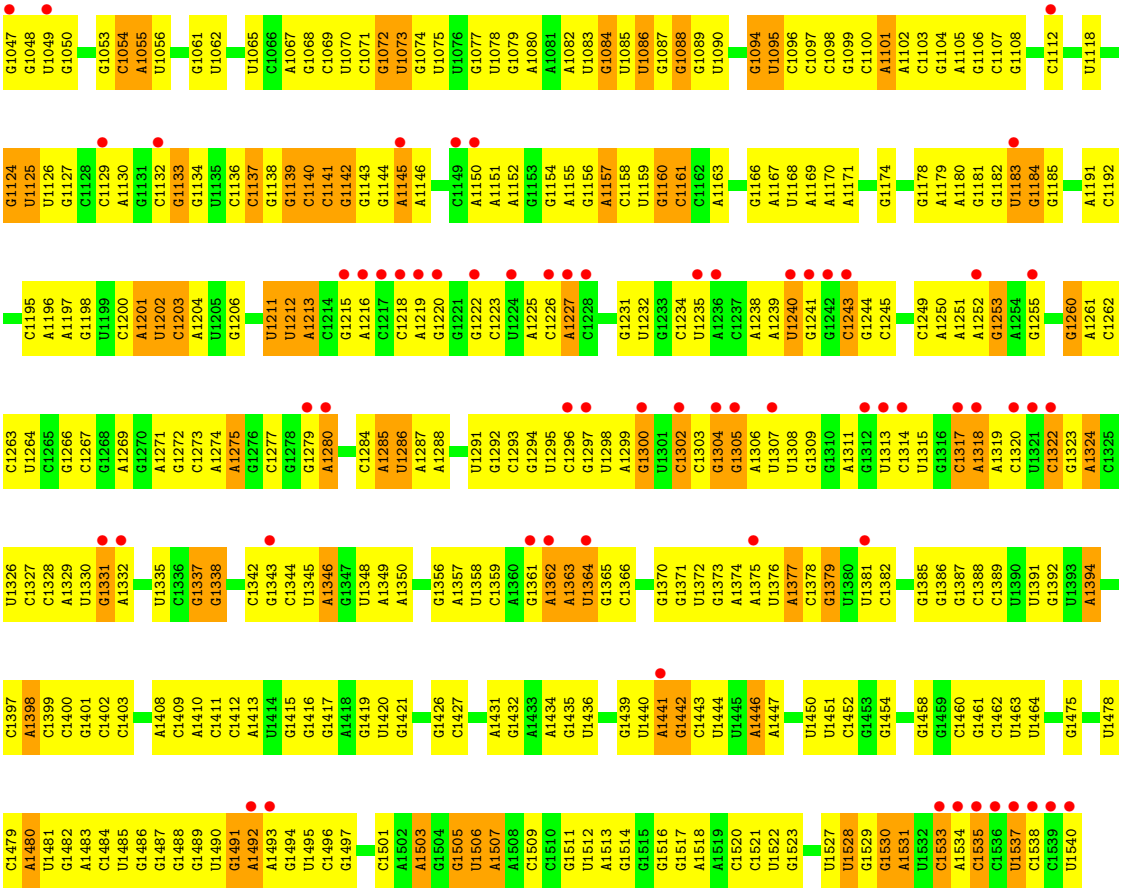




• Molecule 1: 16S rRNA

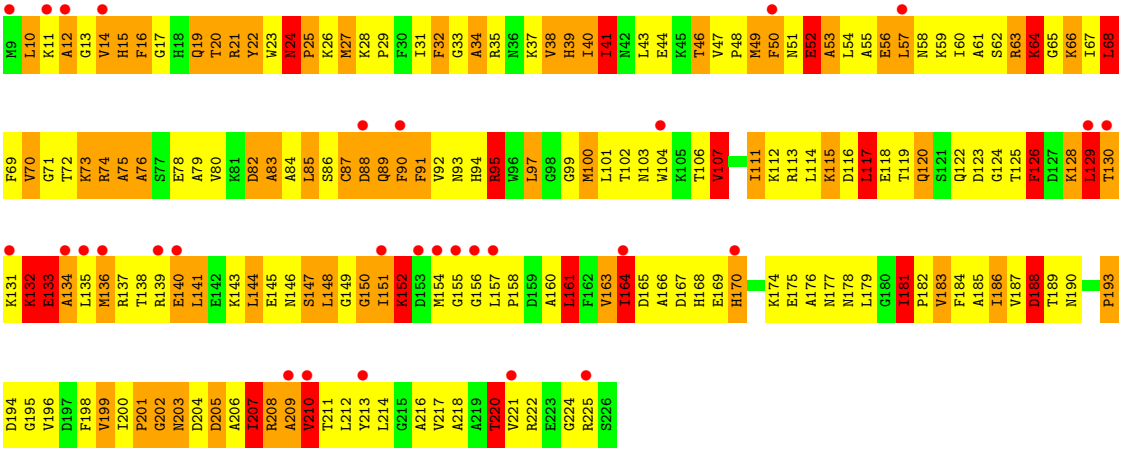
Chain CA:


A2 A3 U4 U5 A8 G9 U12 G15 A16 U17 C18 A19 U20 G21 G22 A28 U29 U30 G31 A32 A33 C34 G35 C36 U37 G38 G39 C40 G41 G42 C47 C48 U49 A50 A51 C52 A53 C54 A55 U56 G57 C58 C63 G64 A65 A66 C67 G68 G69 U70 A71 A72 C73 A74
G75 G76 A77 A78 G79 A80 A81 G82 C83 U84 U85 G86 C87 U88 U89 C90 U91 U92 G93 G94 C95 U96 C99 G100 A101 G102 U103 G104 G105 C106 G107 G108 A109 C110 G111 G112 G113 U114 G115 A116 G117 U118 A119 A120 U121 G122 U123 C124 U125 G128 A129 A130 A131 G134 C135 C136 U137
G142 A143 G144 G145 G146 G147 G148 A149 U150 A151 A152 C153 U154 A155 G158 G159 A160 A161 A162 C163 G164 G165 U166 U170 A171 A172 U173 A174 C175 C178 A179 U180 A181 A182 C183 G184 U185 C186 G187 C188 A189 A190 G191 A195 A196 A197 G198 A199 G200 G201 G202 G203 G204 A205 C206
C207 U208 U209 C210 G211 G212 G213 C214 C215 U216 C217 U218 U219 C222 A223 U224 G227 A228 U229 G230 C234 G237 A238 U239 G240 G241 G242 A243 U244 U245 A246 G247 C248 U249 A250 G251 U252 A253 G254 G255 U256 G257 G258 U261 A262 A263 C264 G265 G266 C267 U268 C269 A270 C271 C272
U273 G276 C277 G278 A279 C280 G281 A282 U283 C284 C285 G289 C290 C295 U296 G297 A298 G299 G302 A303 U304 G305 A306 C307 C308 A309 G310 C311 G319 A320 A321 A327 G328 A329 C330 G331 G332 U333 G337 A338 C339 U340 G346 G347 G350 G351 C352 A353 G354 C355 A356
G357 U358 C359 G360 G361 G362 A363 A364 U365 A366 U367 U368 G369 C370 A371 C372 A373 A374 U375 G376 G377 G378 C379 G380 G384 C385 C386 U387 G388 A389 U390 G391 C392 A393 G394 A397 U398 G399 C400 C401 G402 C403 G404 U405 G406 U407 A408 U409 C410 A411 A412 C413 A414 A415 C418 U421
C422 G423 G424 G425 U426 U427 G428 U429 A430 A431 A432 C433 U434 A435 C436 U437 U438 U439 C440 A441 G442 C443 G444 G445 G446 A451 A452 G453 C454 G455 A456 G457 U458 A459 U463 U464 A465 A466 U467 A468 C469 G474 C475 U476 C477 A478 U479 U480 G481 A482 C483 G484 U485 U486 C489 C490
G491 C492 A495 A496 G497 A498 A499 G500 C501 A502 C503 C504 G505 G506 A509 A510 C511 U512 C513 C514 G515 U516 G517 C518 C519 A520 G521 C522 A523 G524 C525 C526 G527 C528 G529 G530 U531 A532 A533 U534 A535 C536 G537 G538 A539 G540 G541 G542 U543 G544 C545 A546 A547 G548 C549 G550 U551 U552
A553 A554 U555 C556 G557 G558 A559 A560 U561 U562 A563 C564 G567 G568 C569 G570 U571 A572 A573 A574 G575 C576 G577 C578 G581 C582 A583 G584 G585 C586 U590 U591 G597 U598 G604 U605 G606 A607 A608 A609 C613 C614 G615 G616 U619 C620 A621 A622 A623 C624 U625 G626 G627
G628 U632 G633 C634 A635 U636 C637 A642 C643 U644 G645 A649 G650 C651 U652 U653 G654 U657 G661 U662 A663 G664 A665 G666 G667 G670 G671 U672 A673 G674 A675 A676 U677 U678 C679 G682 G683 U684 A687 G688 C689 G690 G691 A695 U701 A702 G703 A706 U707
C708 U709 G710 G711 A712 G713 G714 A715 A716 U717 A718 C719 C720 G721 G722 U723 G724 G725 A728 A729 G730 G731 C732 G733 G734 C735 C736 C737 C738 C739 U740 G741 G742 A743 C744 G745 A746 A747 G748 A749 C750 U751 G752 A753 C754 G755 C756 U757 C758 A759 G760 C764 G765 A766 A767 A768 G769 C770
G771 U772 G773 G774 G775 G776 A777 G778 A781 A782 G785 A790 G791 A792 U793 A794 U798 G799 G800 U801 A802 G803 U804 C805 C806 A807 C808 G809 C810 C811 G812 U813 A814 A815 A816 C817 U884 A819 U820 G821 U822 C823 G824 A825 C826 U827 U828 G829 G833 U834 U835 G836 C839 C840
C841 U842 U843 G844 A845 G846 G847 C848 G851 G852 C853 U854 U855 C856 C857 G858 G859 A860 G861 C862 U863 C866 G867 C868 G869 A872 A873 G874 U875 C876 G877 A878 C879 C880 G881 C882 C883 U884 G885 G888 A889 G890 U891 A892 G898 C899 A900 A901 U905 A906 A909 C910
A913 A914 A919 U920 U921 G922 A923 C924 G925 G926 G929 C930 C931 C932 G933 C934 A935 A938 G939 C940 G941 G942 C948 A949 U950 G951 U952 G953 G954 U955 U956 U957 A958 A959 U960 G963 A964 U965 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 A978 C979 C980 A983
C984 C985 U986 G987 G988 U989 C990 U991 U992 G993 A994 C995 A996 U997 C998 C999 A1000 C1001 G1002 G1003 A1004 A1005 G1006 U1007 U1008 U1009 A1014 G1015 A1016 U1017 G1018 A1019 G1020 A1021 A1022 U1023 G1024 U1025 G1026 C1027 C1028 U1029 U1030 C1031 G1032 G1033 G1034 A1035 A1036 C1037 C1038 G1039 U1040 G1041 A1042 G1043 A1044 C1045 A1046



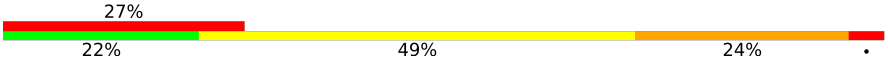
• Molecule 2: 30S ribosomal protein S2

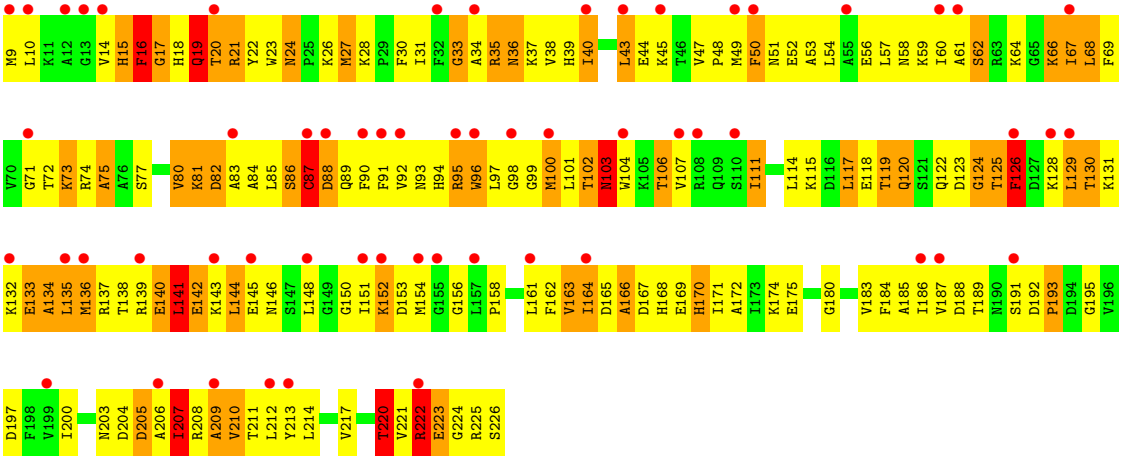
Chain AB:



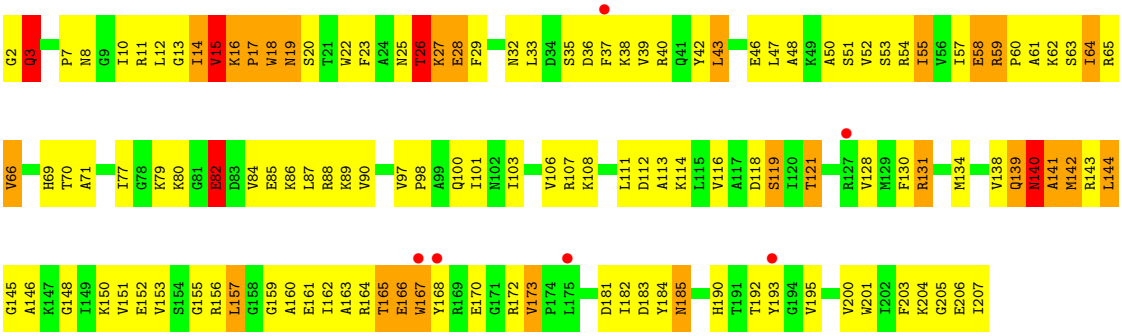
• Molecule 2: 30S ribosomal protein S2

Chain CB:

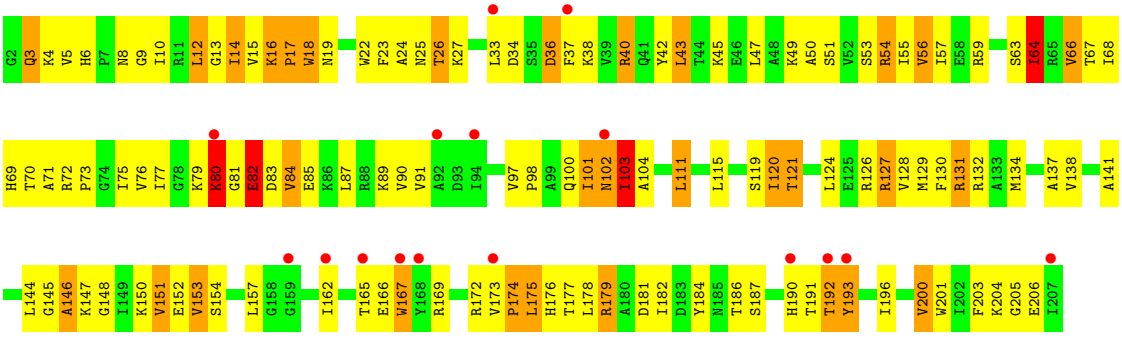




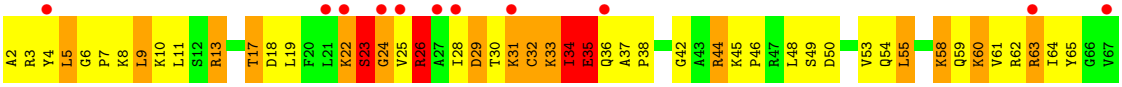
• Molecule 3: 30S ribosomal protein S3

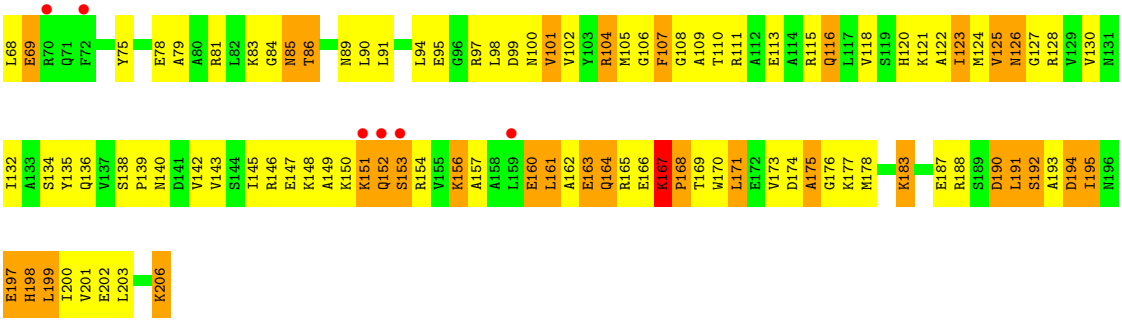


• Molecule 3: 30S ribosomal protein S3



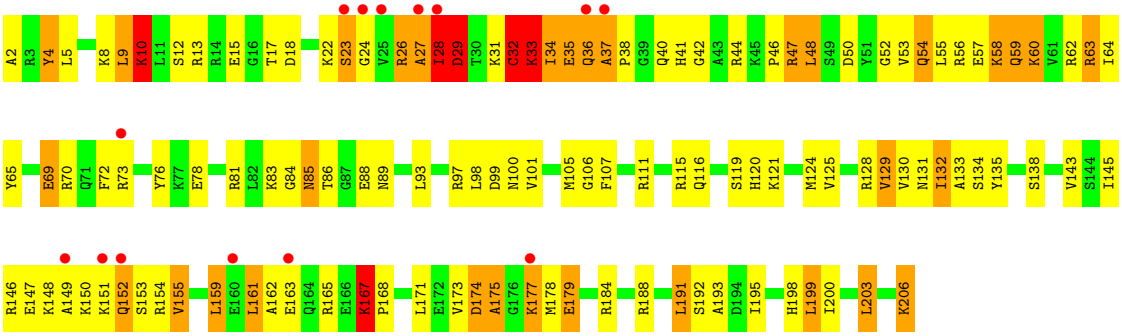
• Molecule 4: 30S ribosomal protein S4





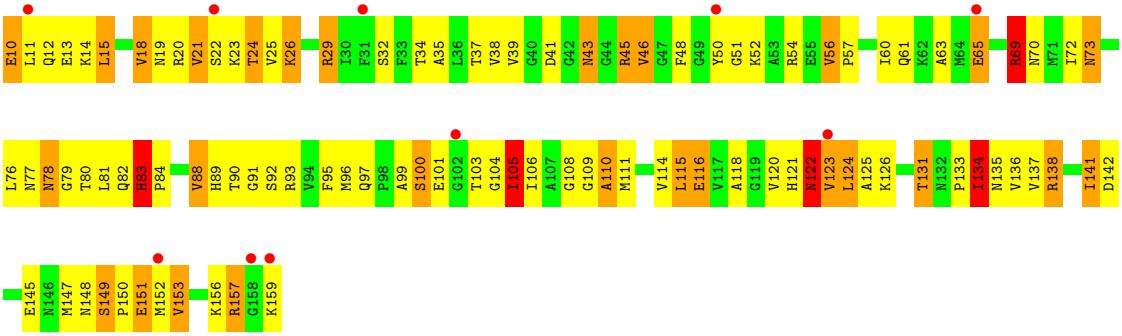
• Molecule 4: 30S ribosomal protein S4

Chain CD:



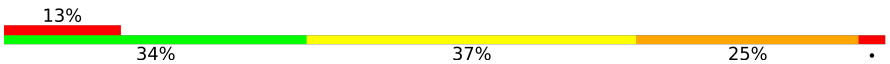
• Molecule 5: 30S ribosomal protein S5

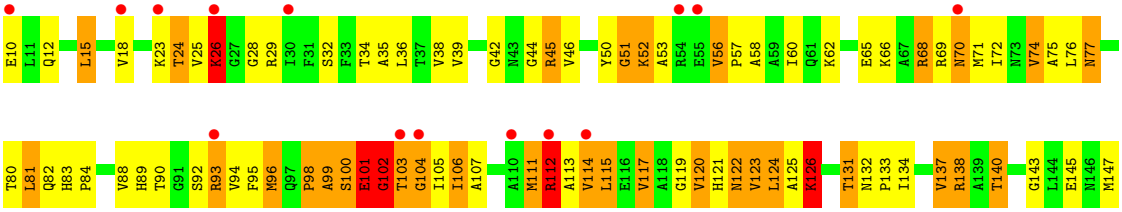
Chain AE:

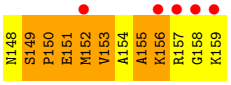


• Molecule 5: 30S ribosomal protein S5

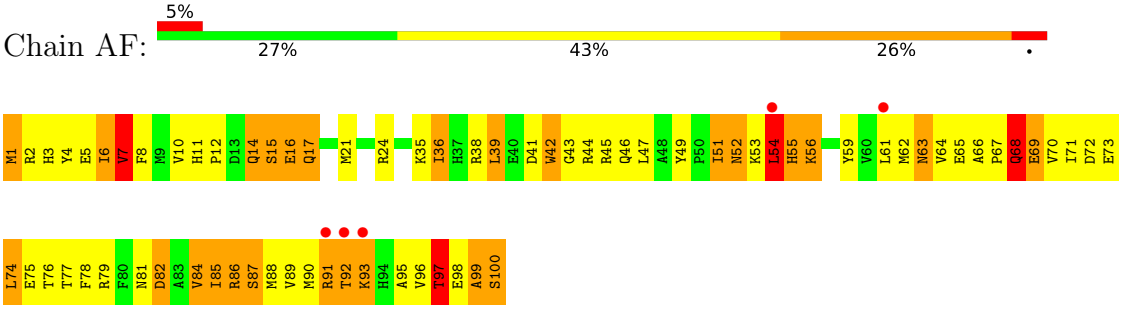
Chain CE:



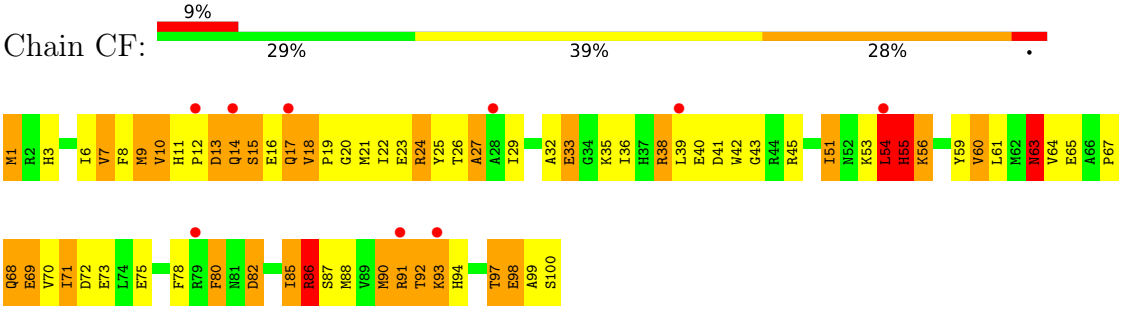




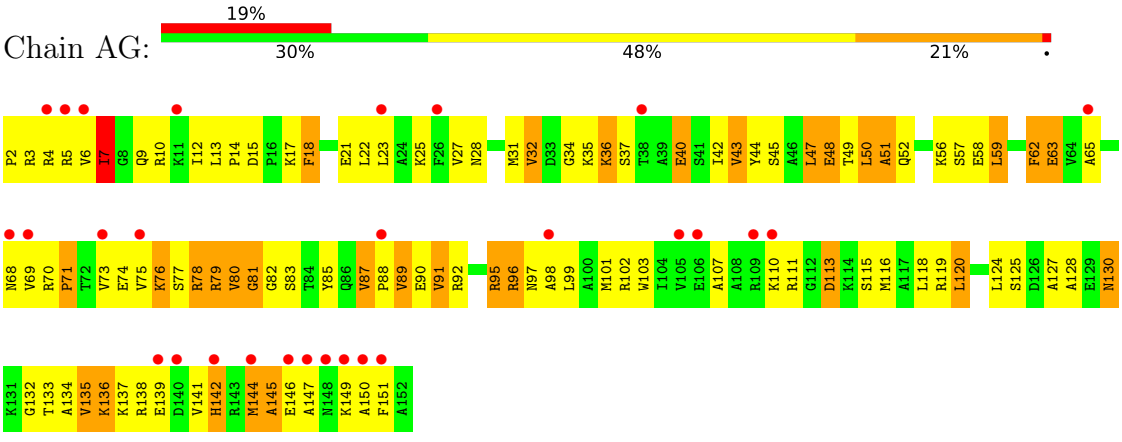
• Molecule 6: 30S ribosomal protein S6



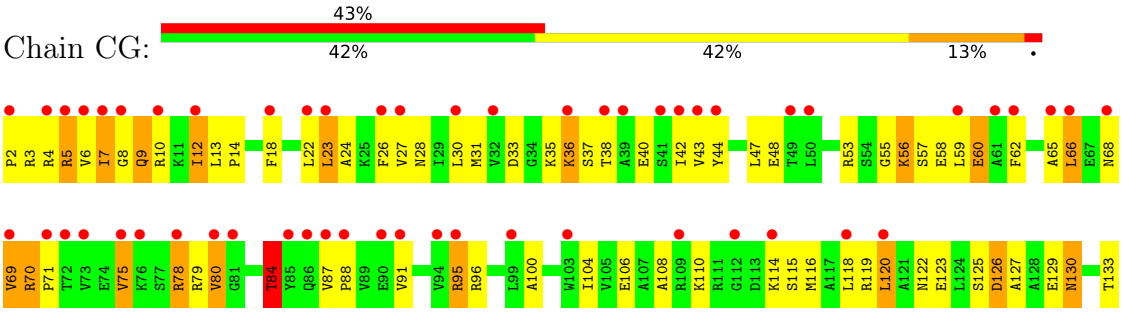
• Molecule 6: 30S ribosomal protein S6

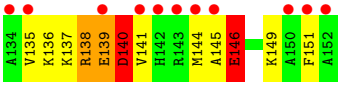


• Molecule 7: 30S ribosomal protein S7

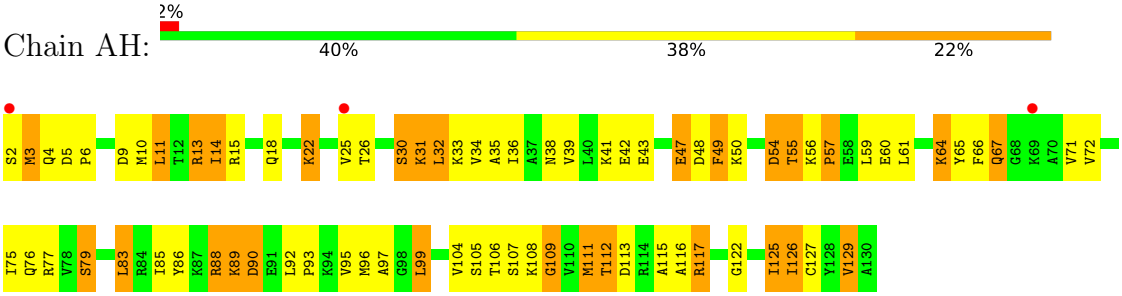


• Molecule 7: 30S ribosomal protein S7

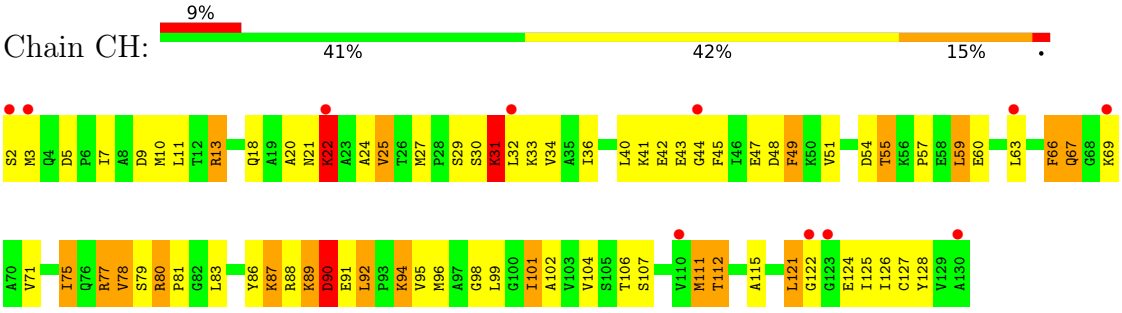




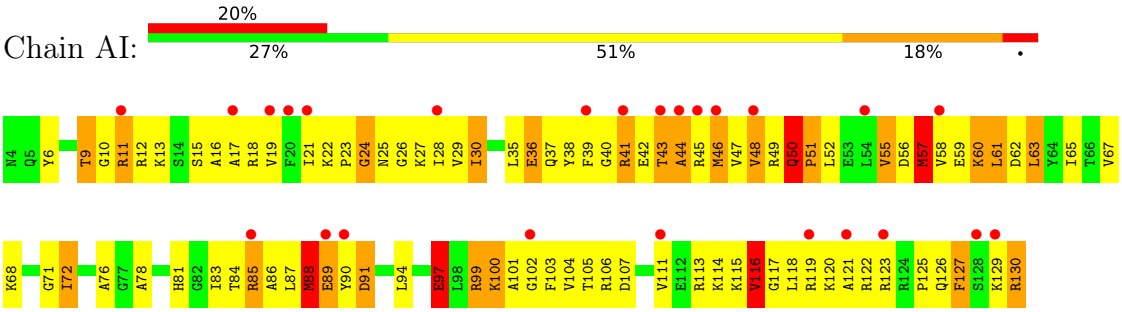
• Molecule 8: 30S ribosomal protein S8



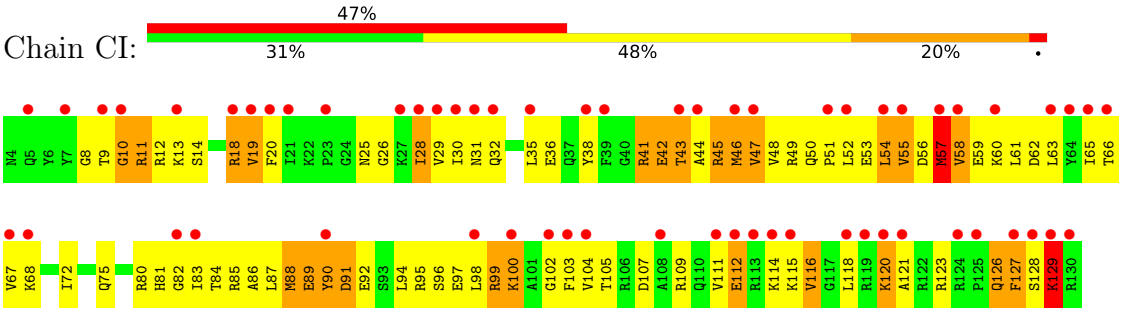
• Molecule 8: 30S ribosomal protein S8



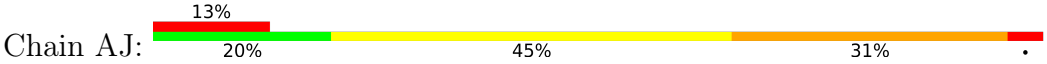
• Molecule 9: 30S ribosomal protein S9

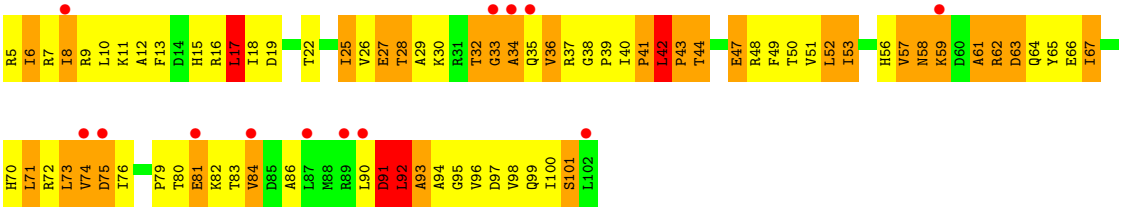


• Molecule 9: 30S ribosomal protein S9



• Molecule 10: 30S ribosomal protein S10





• Molecule 10: 30S ribosomal protein S10

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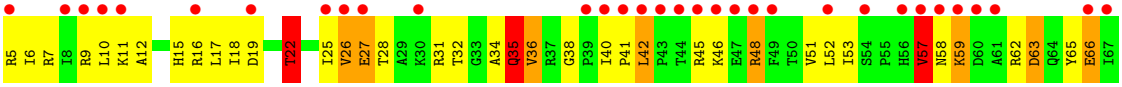
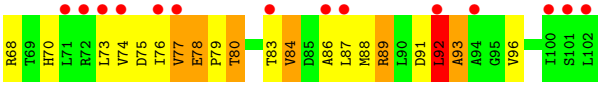
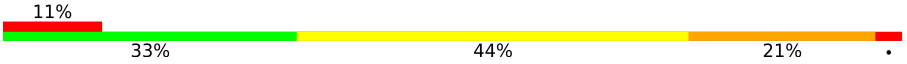
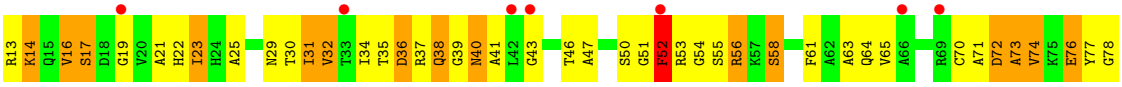


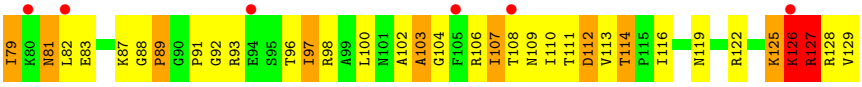


• Molecule 11: 30S ribosomal protein S11

Chain AK:

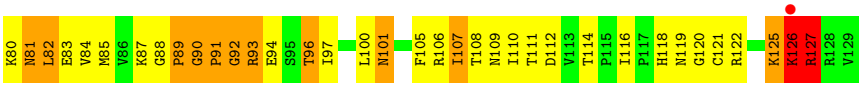






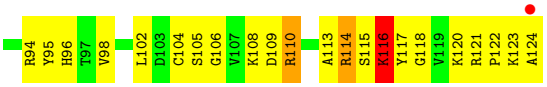
• Molecule 11: 30S ribosomal protein S11

Chain CK:



• Molecule 12: 30S ribosomal protein S12

Chain AL:



• Molecule 12: 30S ribosomal protein S12

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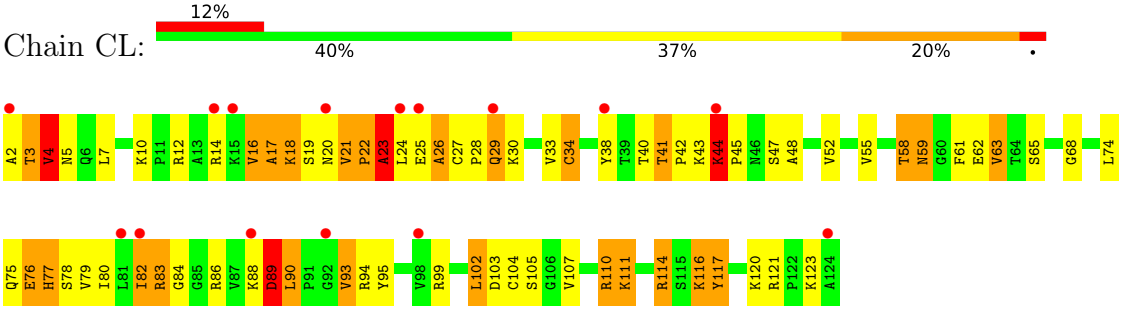
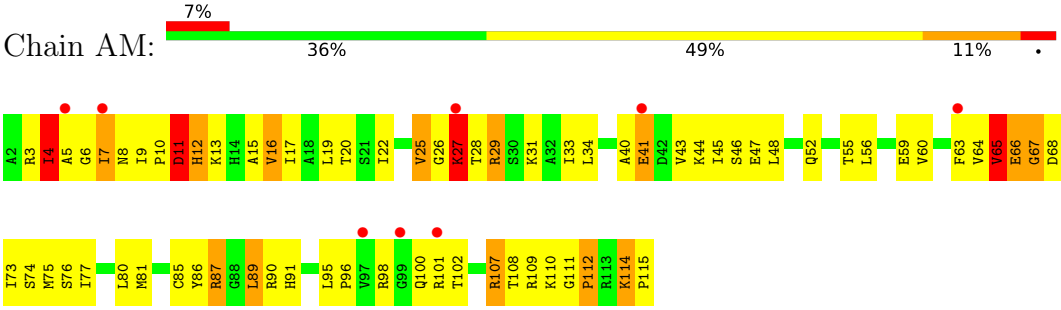


• Molecule 13: 30S ribosomal protein S13

Chain AM:



• Molecule 13: 30S ribosomal protein S13

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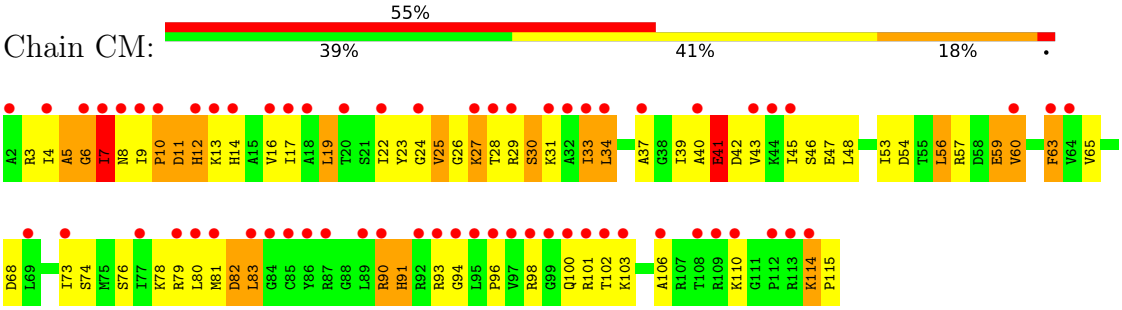
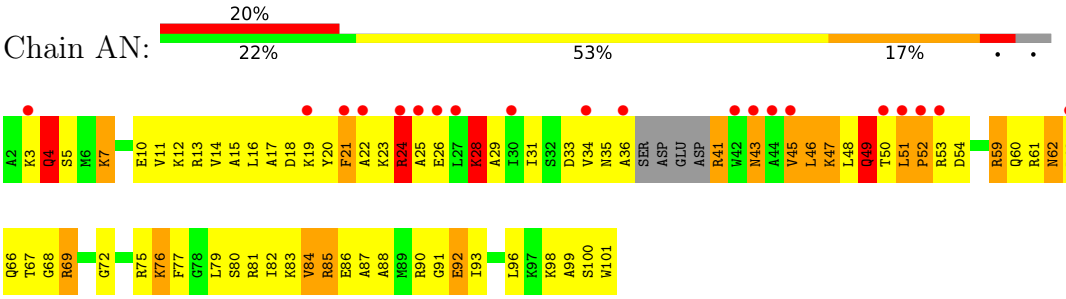


• Molecule 14: 30S ribosomal protein S14

Chain AN:



• Molecule 14: 30S ribosomal protein S14

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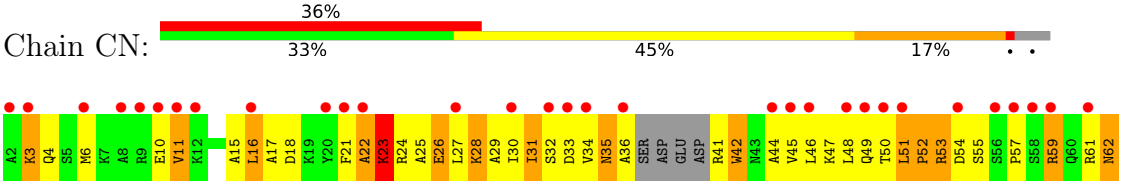
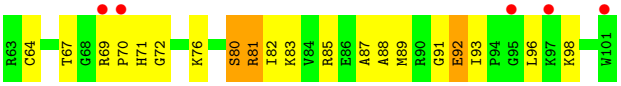
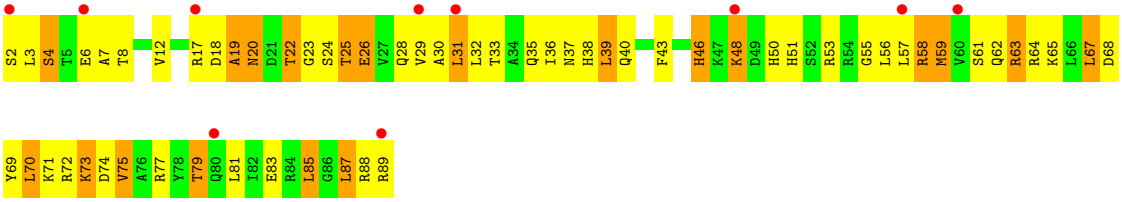
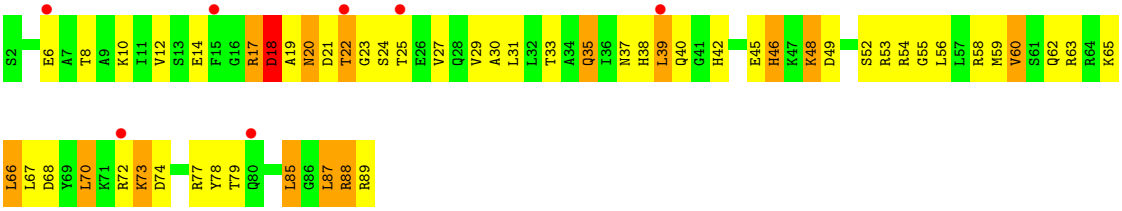




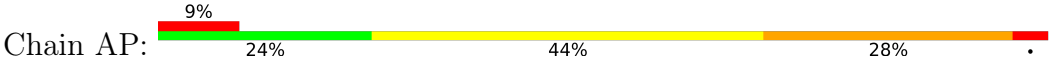
• Molecule 15: 30S ribosomal protein S15

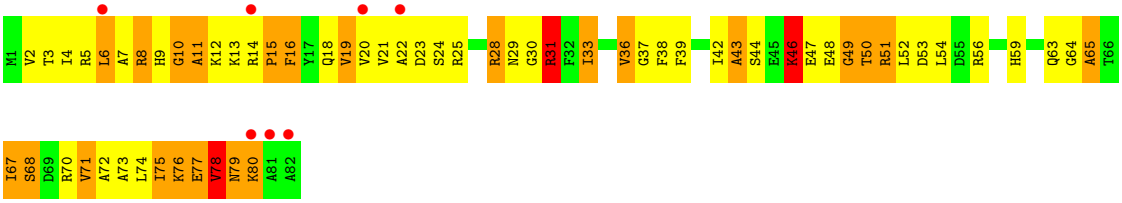


• Molecule 15: 30S ribosomal protein S15



• Molecule 16: 30S ribosomal protein S16





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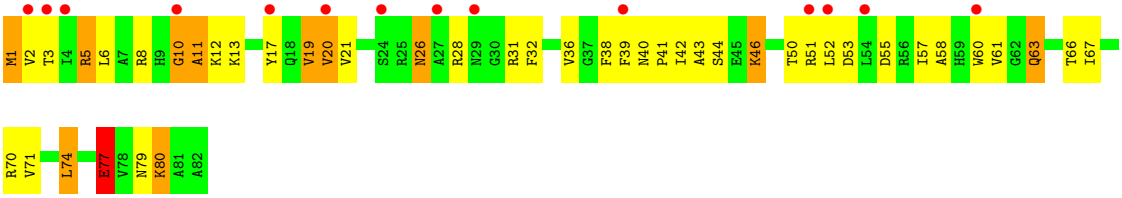
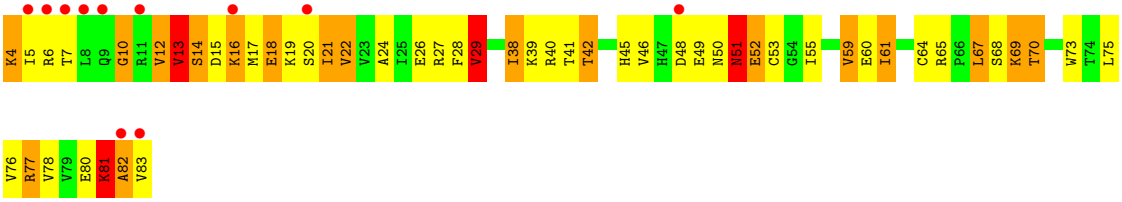
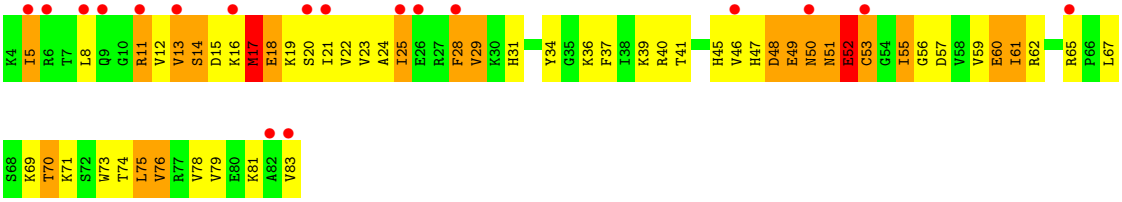


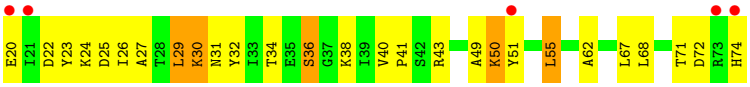
• Molecule 17: 30S ribosomal protein S17



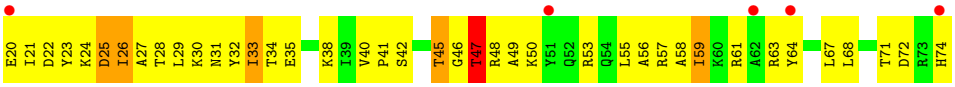
• Molecule 17: 30S ribosomal protein S17



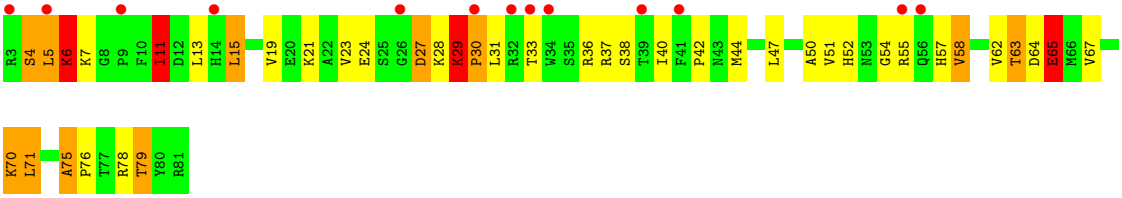
• Molecule 18: 30S ribosomal protein S18



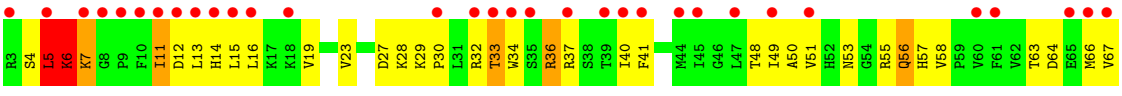
• Molecule 18: 30S ribosomal protein S18

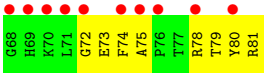


• Molecule 19: 30S ribosomal protein S19



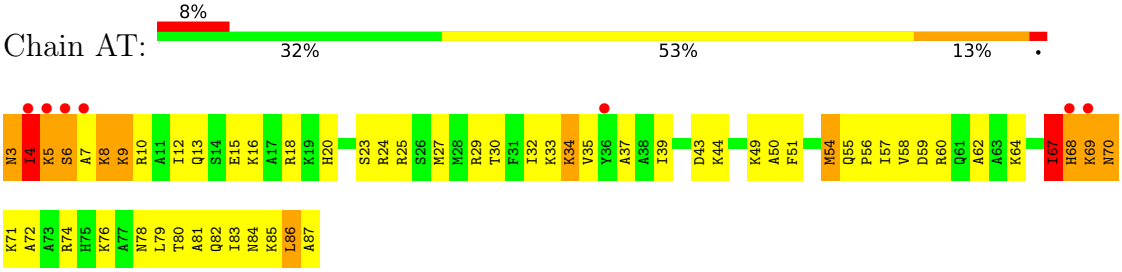
• Molecule 19: 30S ribosomal protein S19





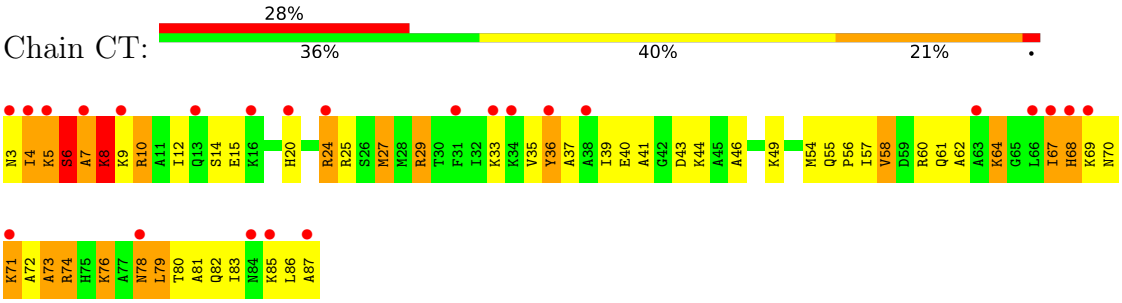
• Molecule 20: 30S ribosomal protein S20

Chain AT:



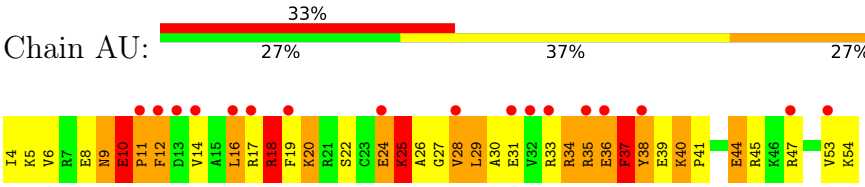
• Molecule 20: 30S ribosomal protein S20

Chain CT:



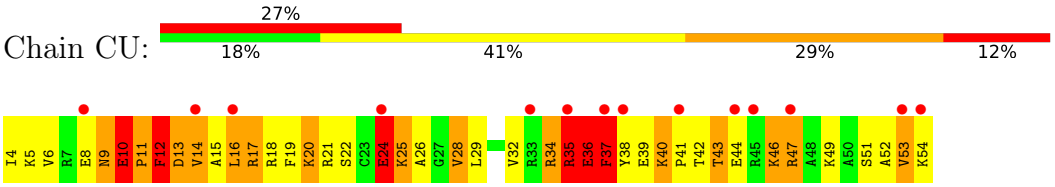
• Molecule 21: 30S ribosomal protein S21

Chain AU:



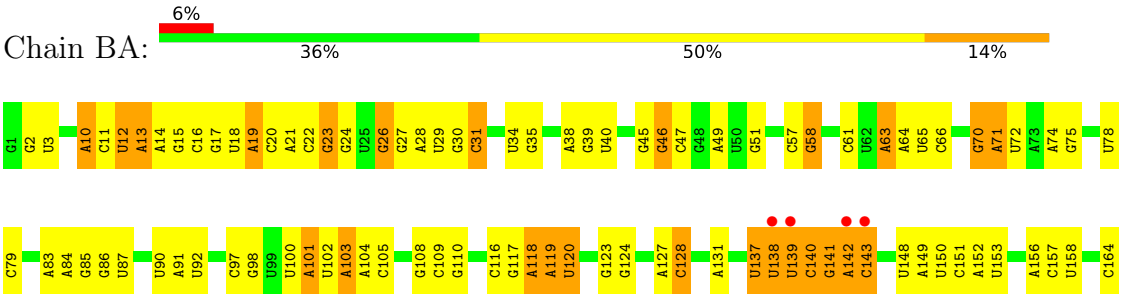
• Molecule 21: 30S ribosomal protein S21

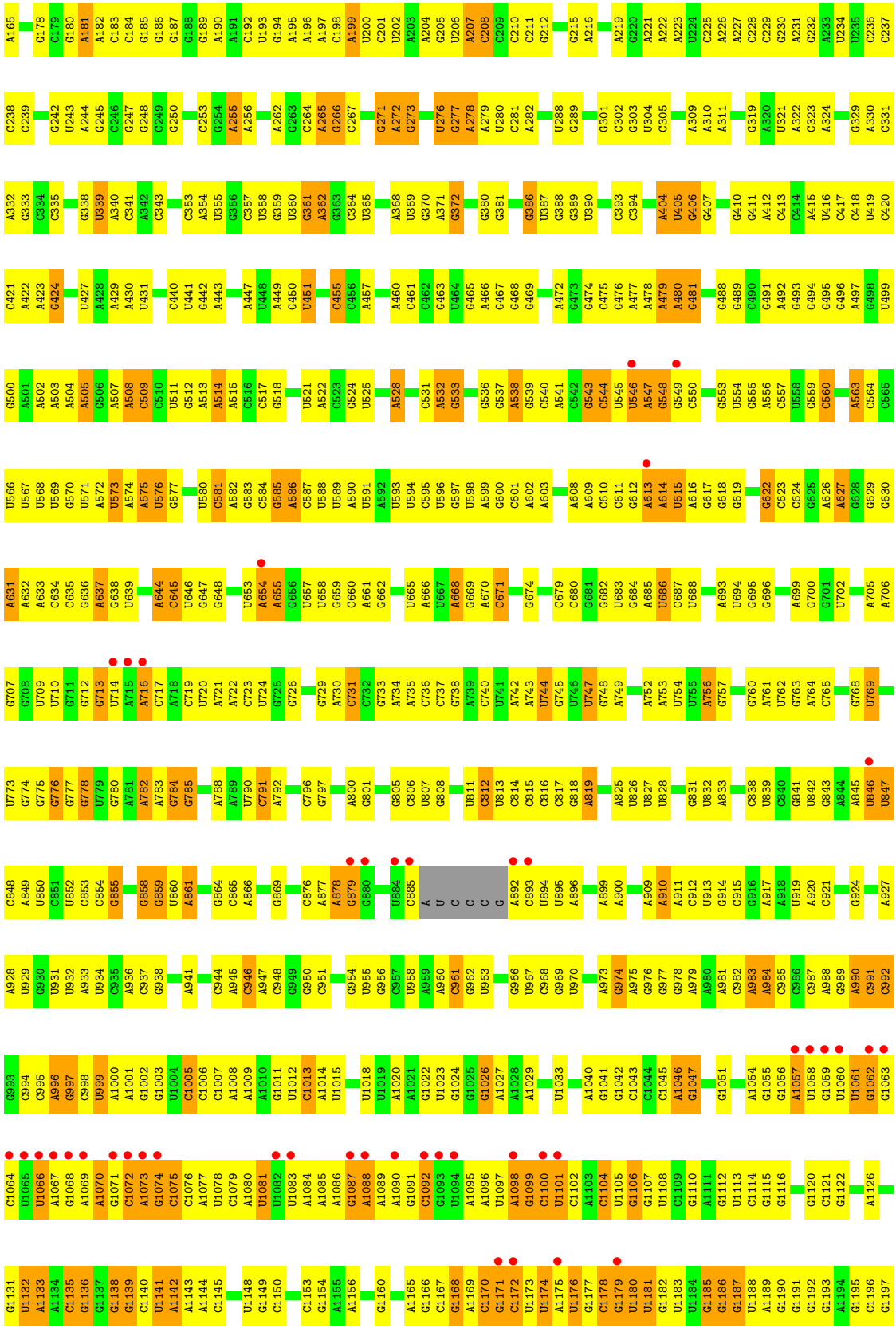
Chain CU:

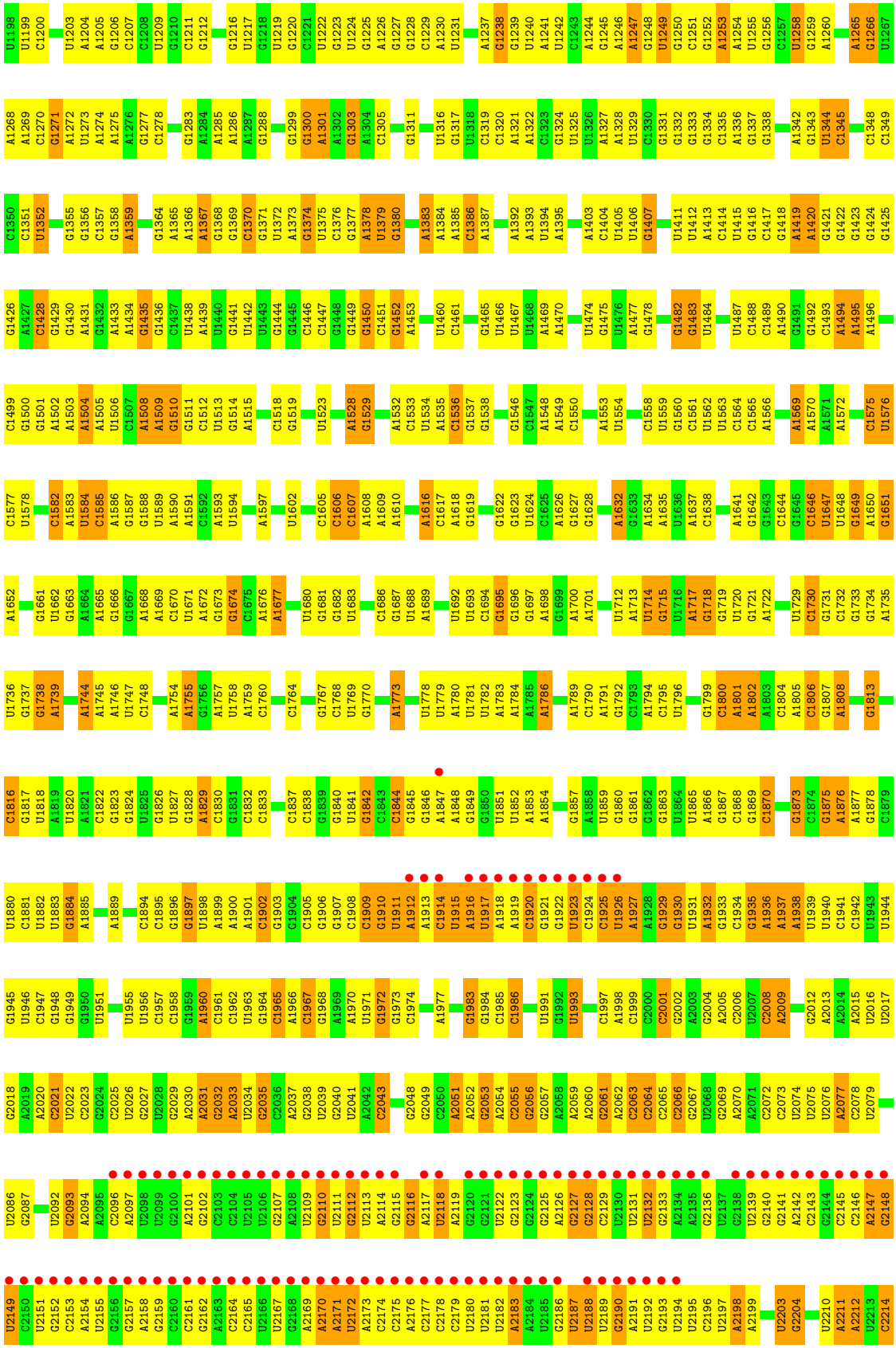


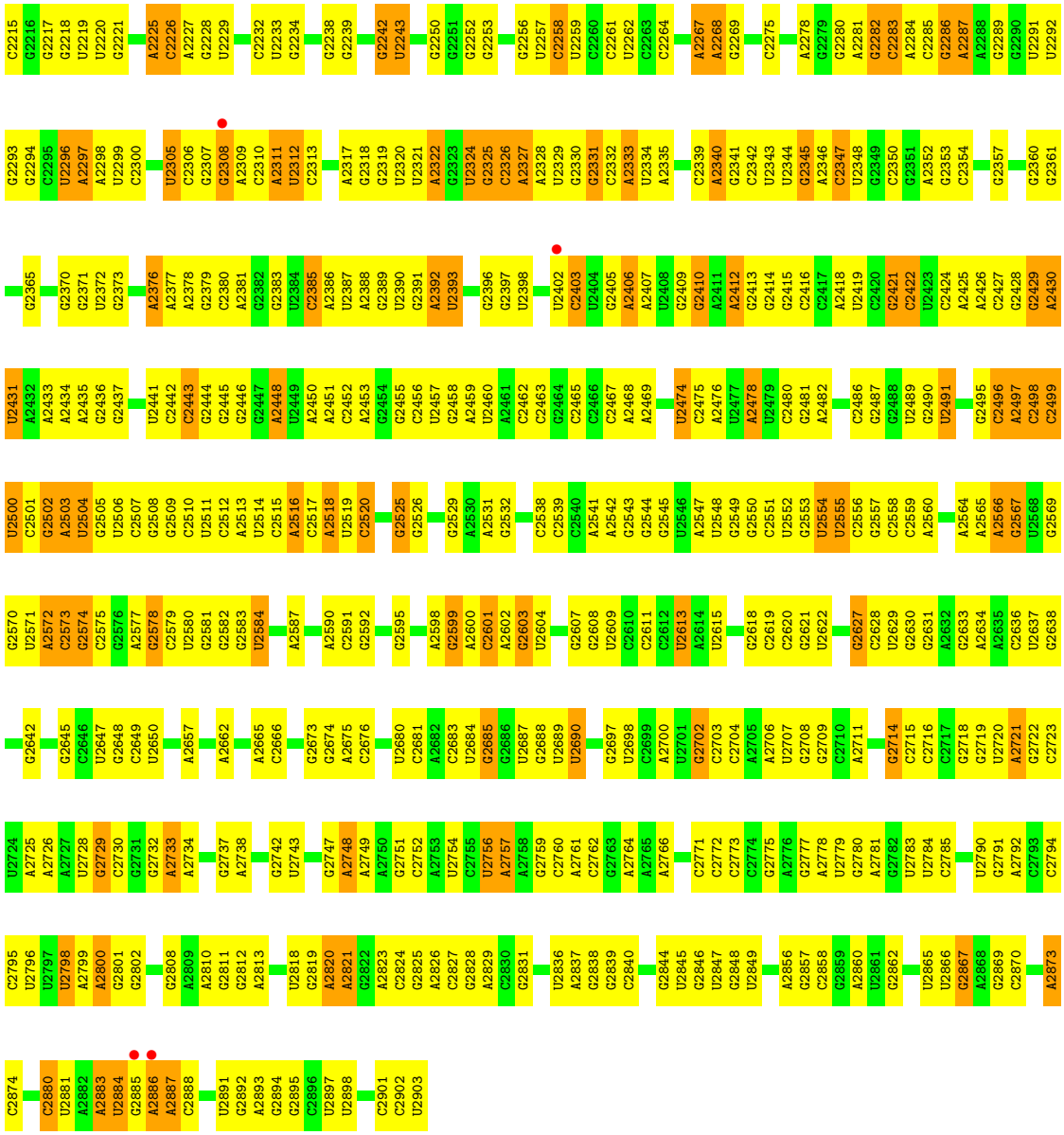
• Molecule 22: 23S rRNA

Chain BA:



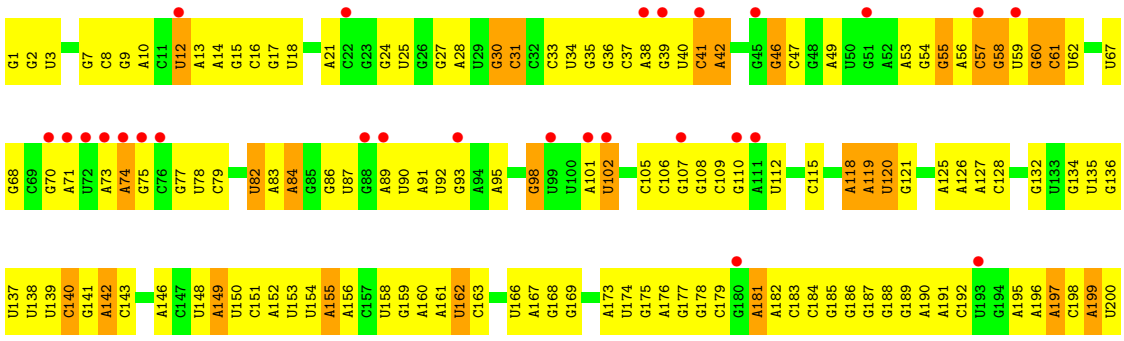


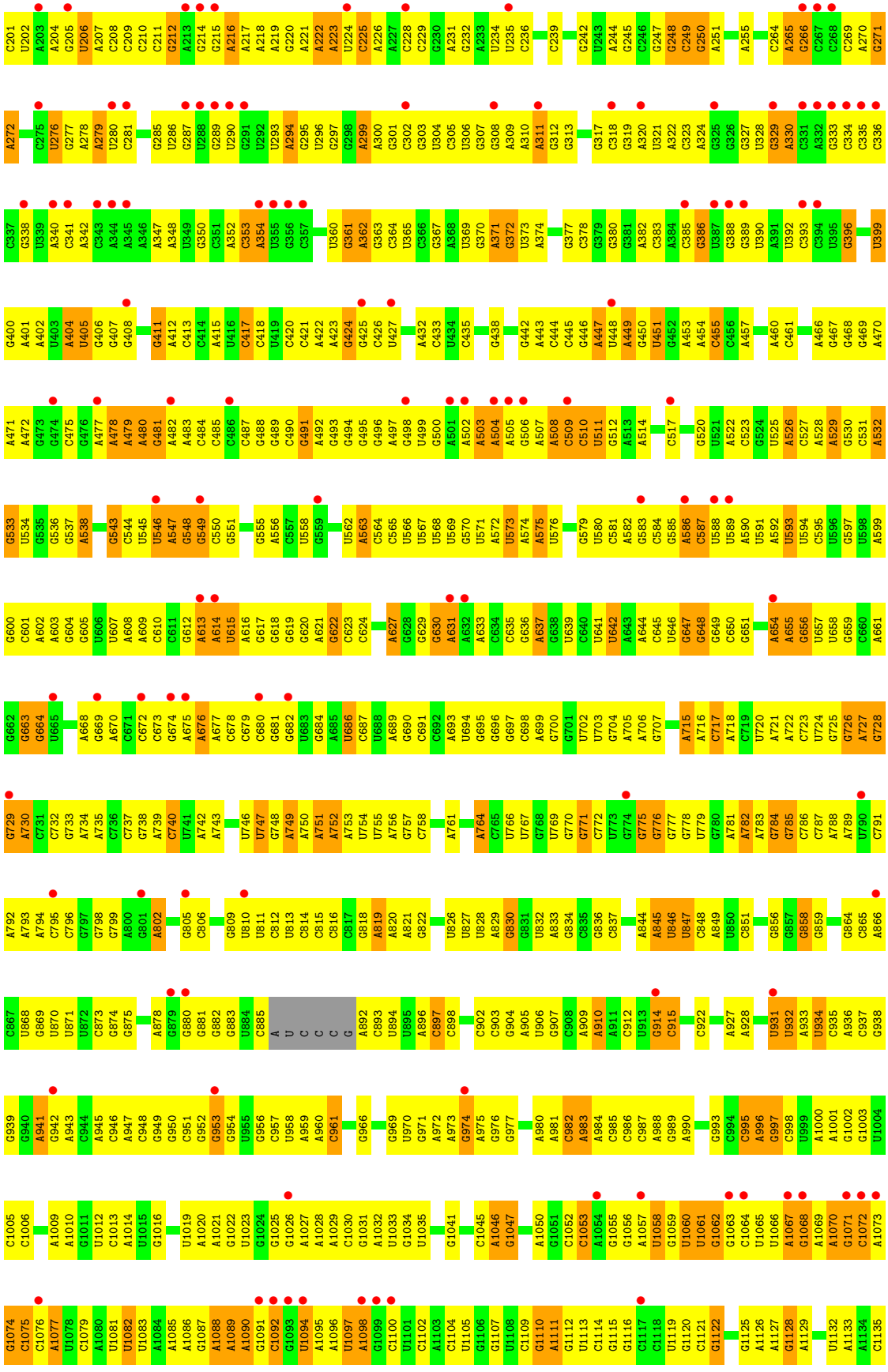




• Molecule 22: 23S rRNA

Chain DA:

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A272 C275 U276 G277 A278 A279 U280 C281 G285 U286 G287 U288 G289 U290 G291 U292 U293 A294 G295 U296 G297 G298 A299 A300 G301 C302 G303 U304 C305 U306 G307 G308 A309 A310 A311 G312 G313 G317 C318 G319 A320 U321 A322 C323 A324 G325 G326 G327 U328 G329 A330 C331 A332 G333 C334 C335 C336
C337 G338 U339 A340 C341 A342 C343 A344 A345 A346 A347 A348 U349 G350 C351 A352 C353 A354 U355 G356 C357 U360 G361 A362 G363 C364 U365 C366 G367 A368 U369 G370 A371 G372 U373 A374 G377 C378 G379 G380 G381 A382 C383 A384 C385 G386 U387 G388 G389 U390 A391 U392 C393 C394 U395 G396 U399
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G600 C601 A602 A603 G604 G605 U606 U607 A608 A609 C610 C611 G612 A613 A614 U615 A616 G617 G618 G619 G620 A621 G622 C623 C624 A627 G628 G629 G630 A631 A632 A633 C634 C635 G636 A637 G638 U639 C640 U641 U642 A643 A644 C645 U646 G647 G648 G649 C650 G651 A654 A655 G656 U657 U658 G659 C660 A661
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A792 A793 A794 C795 C796 G797 G798 G799 A800 G801 A802 G805 C806 G809 U810 U811 C812 U813 C814 C815 C816 C817 G818 A819 A820 A821 G822 U826 U827 U828 A829 G830 G831 U832 A833 G834 C835 G836 C837 A844 A845 U846 U847 C848 A849 U850 C851 G856 G857 G858 G859 G864 C865 A866
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G939 G940 A941 G942 A943 C944 A945 C946 A947 C948 G949 G950 C951 G952 G953 G954 U955 G956 C957 U958 A959 A960 C961 G966 G969 U970 G971 A972 A973 G974 A975 G976 G977 A980 A981 C982 A983 A984 C985 C986 C987 A988 G989 A990 G993 C994 C995 A996 G997 C998 U999 A1000 A1001 G1002 G1003 U1004
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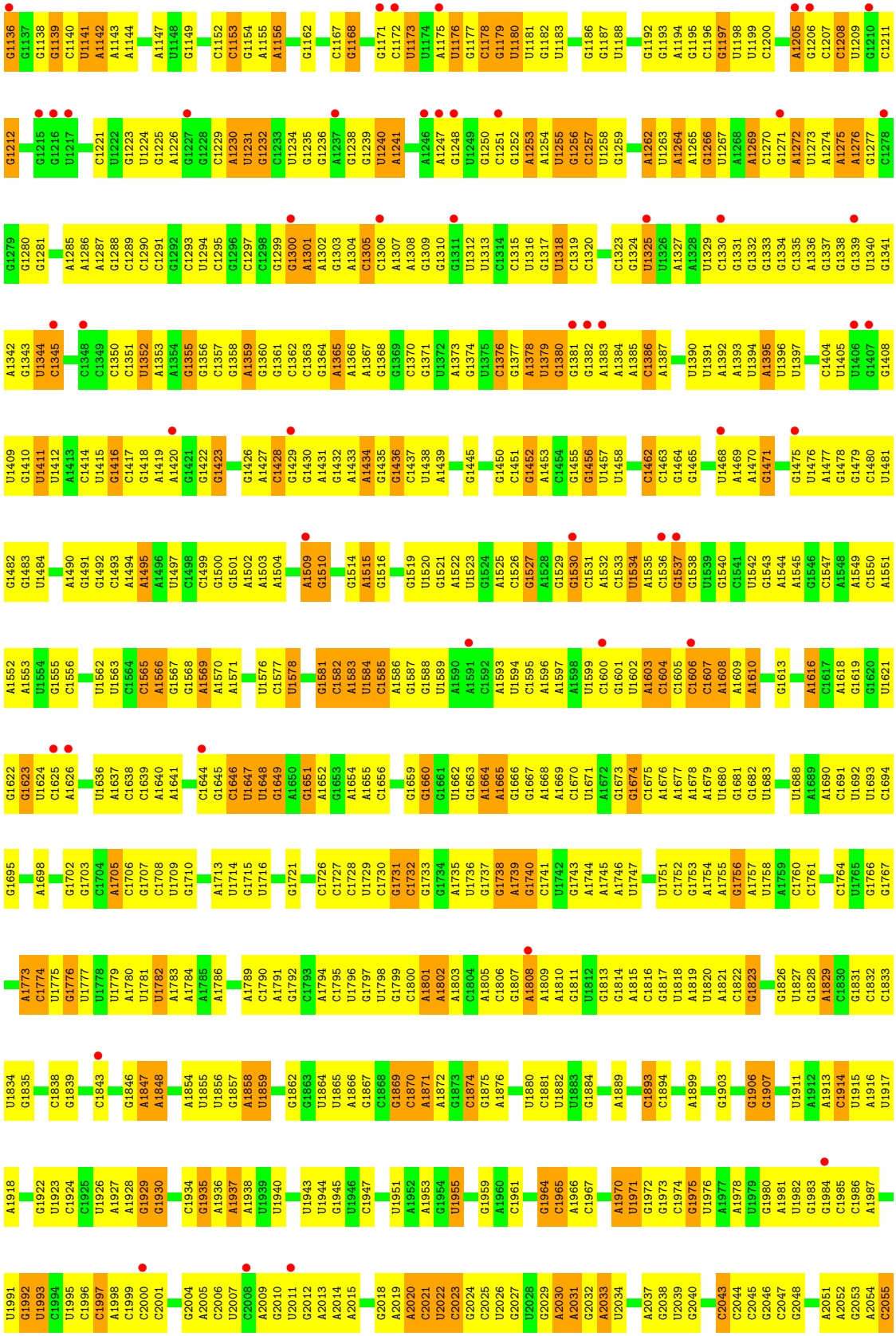
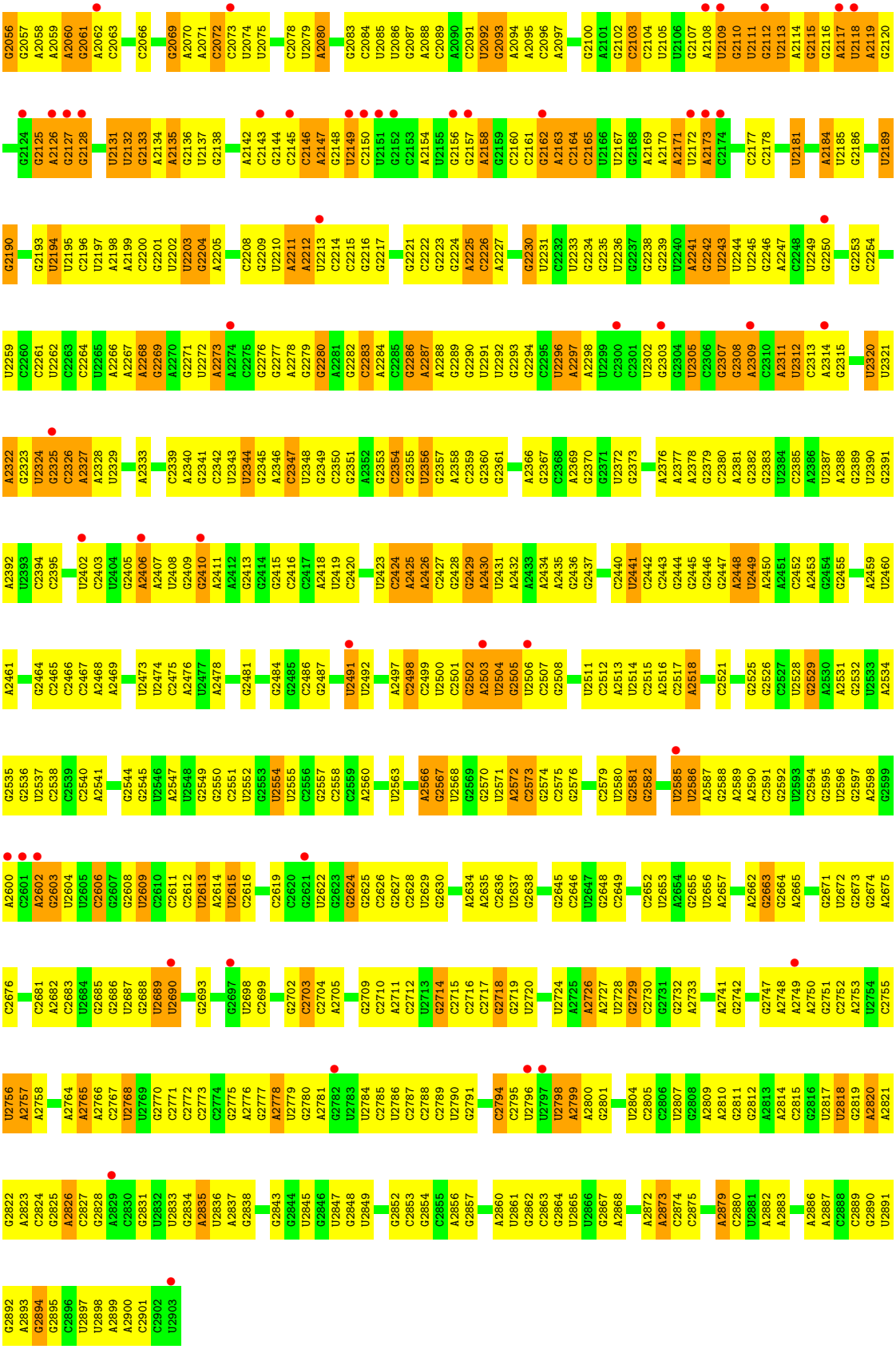
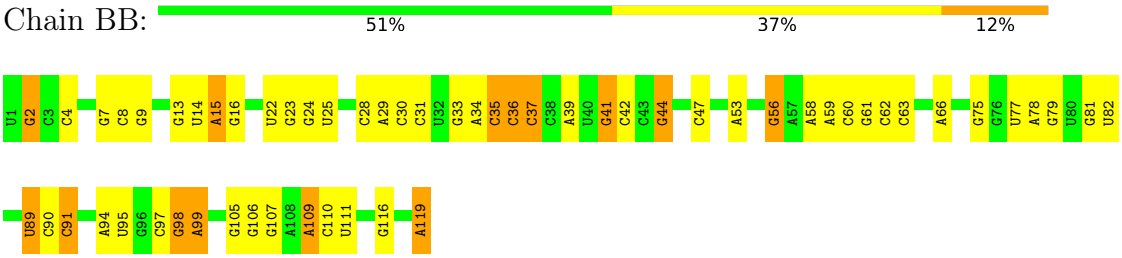
G1074 C1075 C1076 A1077 U1078 C1079 A1080 U1081 U1082 U1083 A1084 A1085 A1086 G1087 A1088 A1089 A1090 G1091 C1092 G1093 U1094 A1095 A1096 U1097 A1098 G1099 C1100 U1101 C1102 A1103 C1104 U1105 C1106 G1107 U1108 C1109 G1110 A1111 G1112 U1113 C1114 G1115 G1116 C1117 C1118 U1119 G1120 C1121 G1122 G1125 A1126 A1127 G1128 A1129 U1132 A1133 A1134 C1135





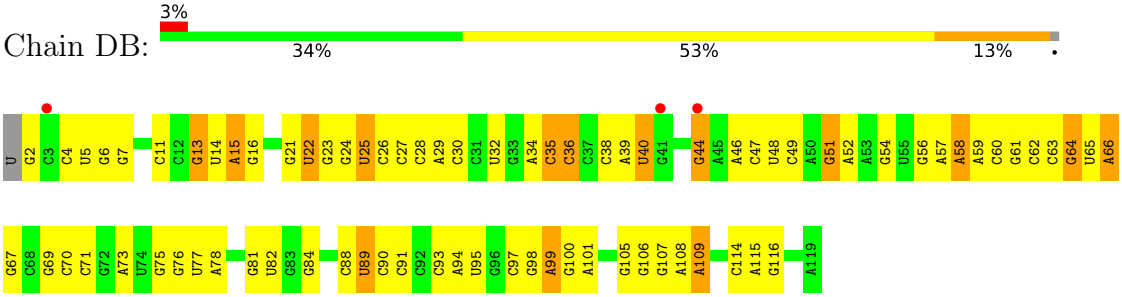
• Molecule 23: 5S rRNA

Chain BB:



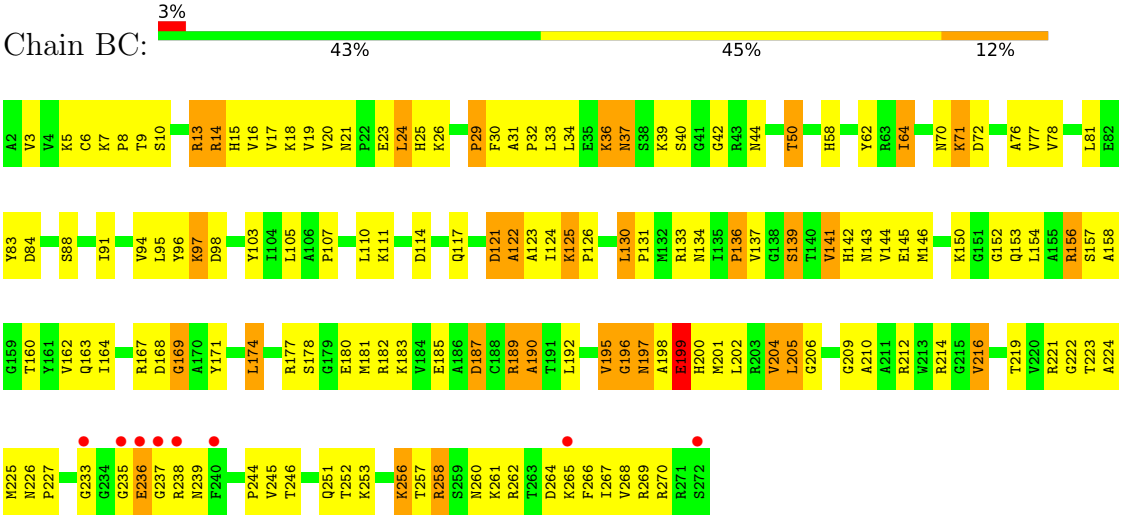
• Molecule 23: 5S rRNA

Chain DB:



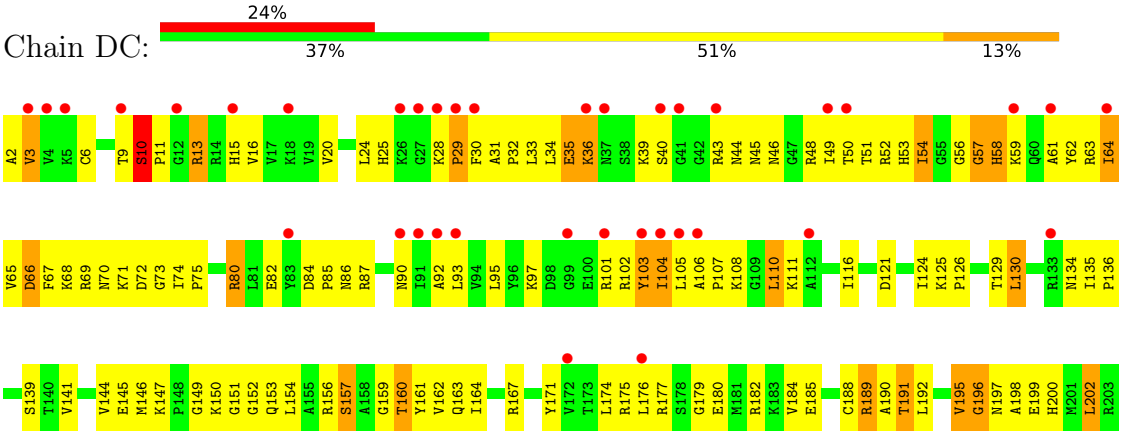
• Molecule 24: 50S ribosomal protein L2

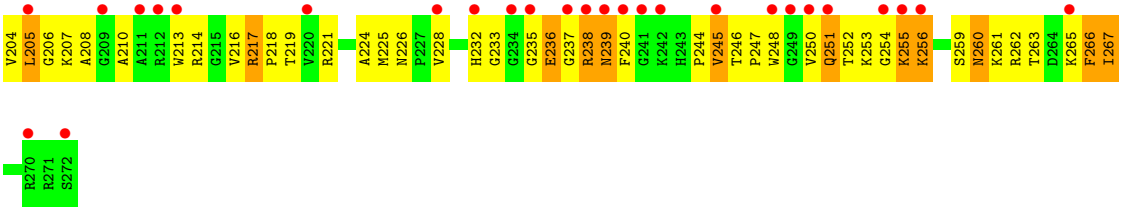
Chain BC:



• Molecule 24: 50S ribosomal protein L2

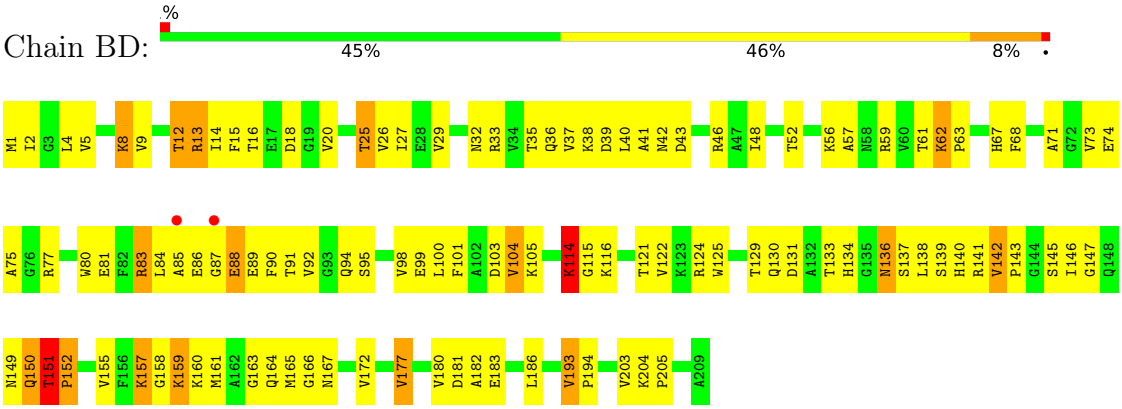
Chain DC:





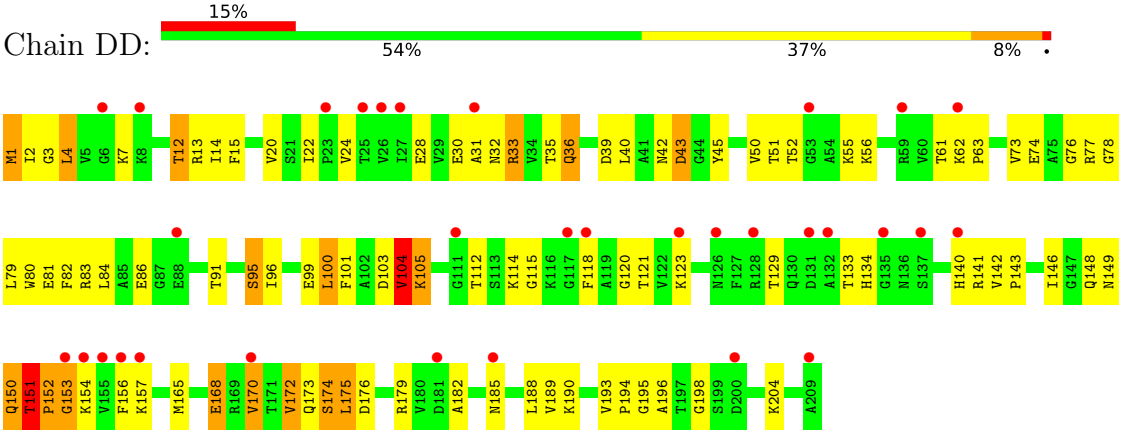
• Molecule 25: 50S ribosomal protein L3

Chain BD:



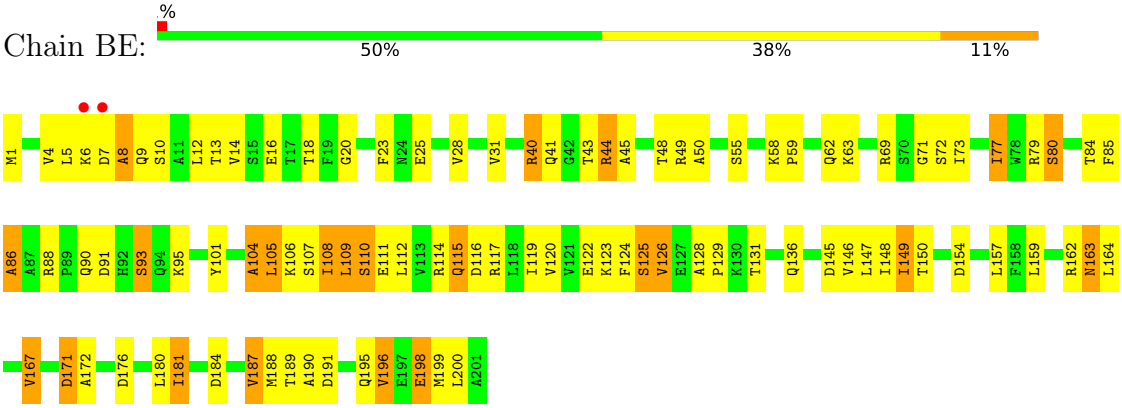
• Molecule 25: 50S ribosomal protein L3

Chain DD:



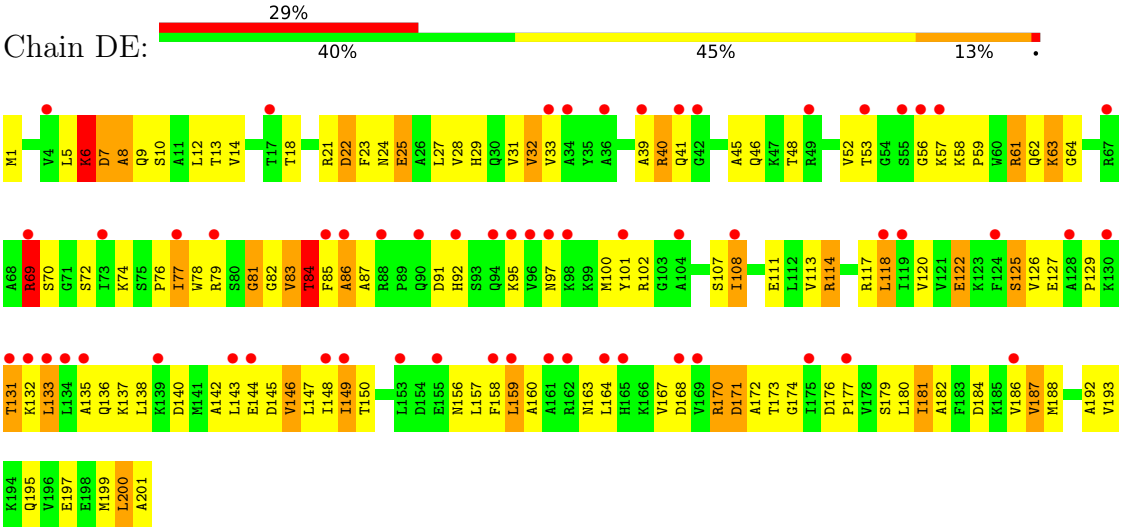
• Molecule 26: 50S ribosomal protein L4

Chain BE:



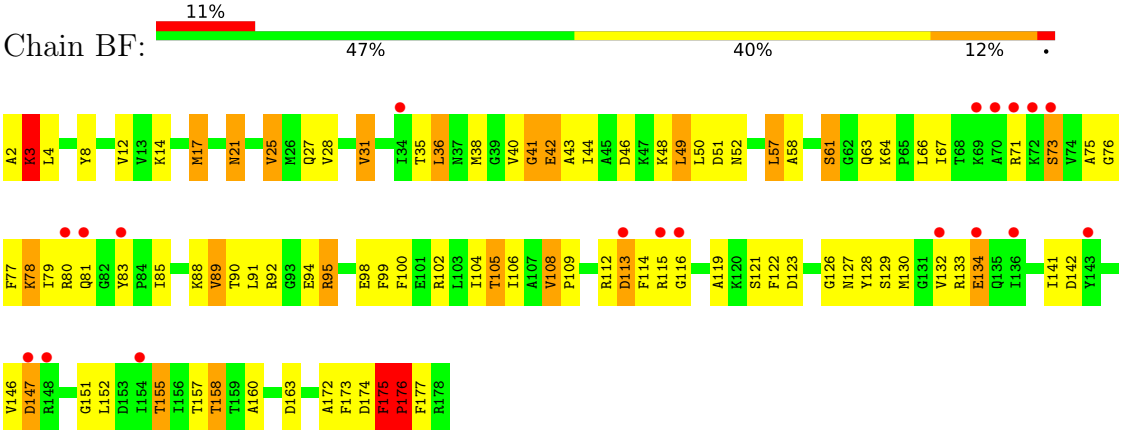
• Molecule 26: 50S ribosomal protein L4

Chain DE:



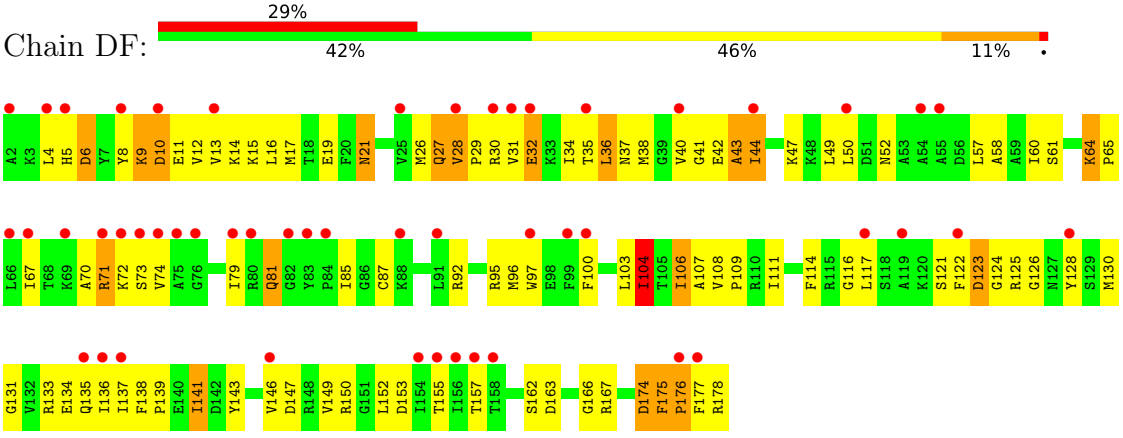
• Molecule 27: 50S ribosomal protein L5

Chain BF:



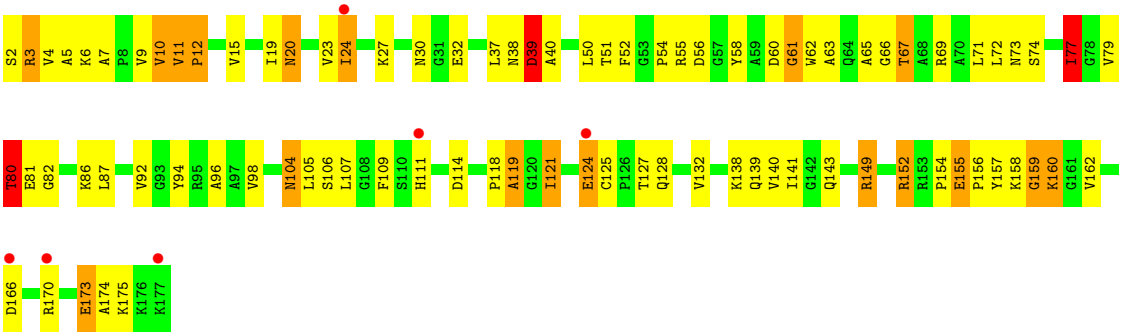
• Molecule 27: 50S ribosomal protein L5

Chain DF:



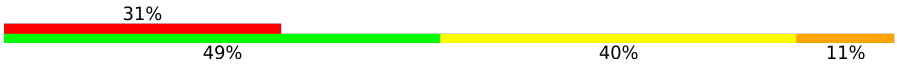
• Molecule 28: 50S ribosomal protein L6

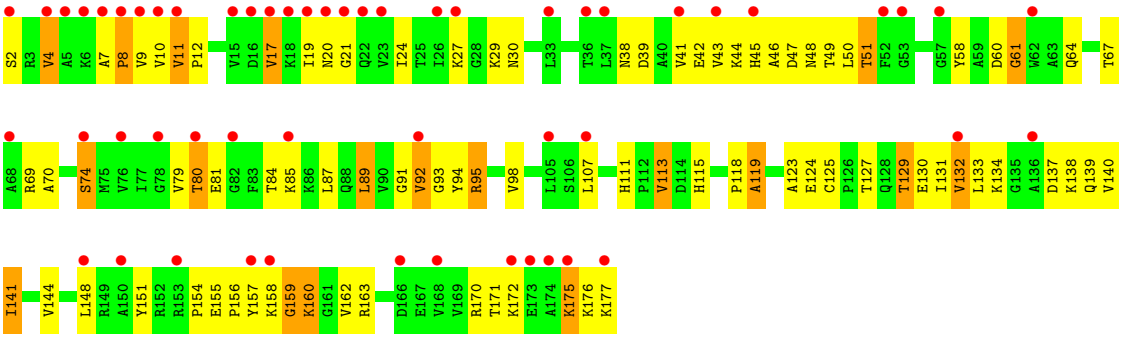
Chain BG:



• Molecule 28: 50S ribosomal protein L6

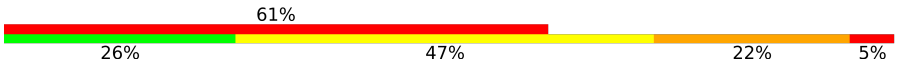
Chain DG:

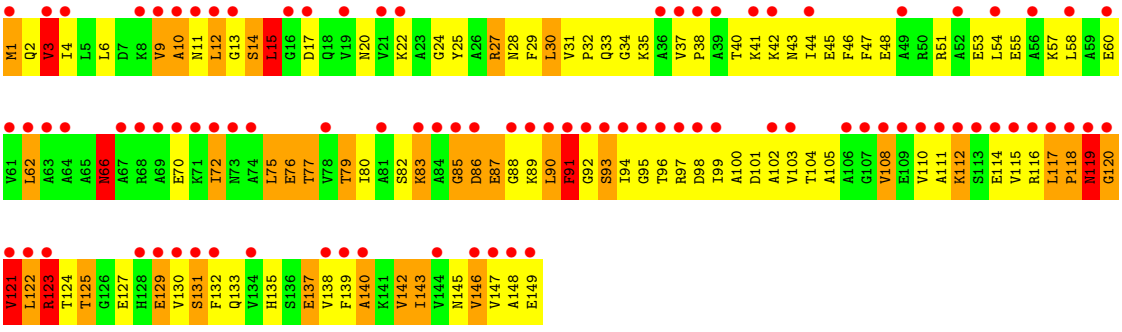




• Molecule 29: 50S ribosomal protein L9

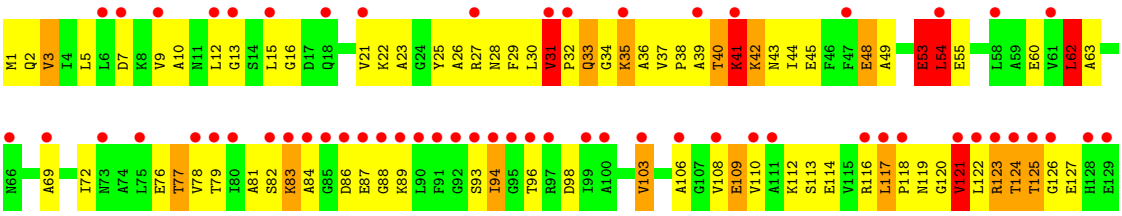
Chain BH:

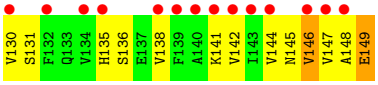




• Molecule 29: 50S ribosomal protein L9

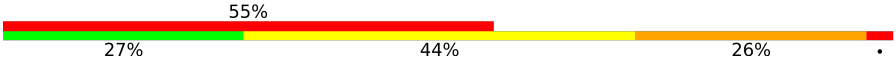
Chain DH:

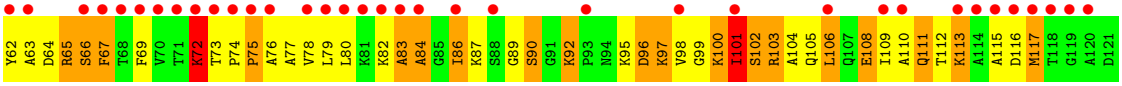


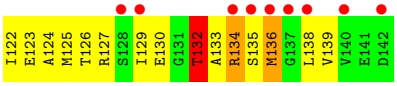


• Molecule 30: 50S ribosomal protein L11

Chain BI:

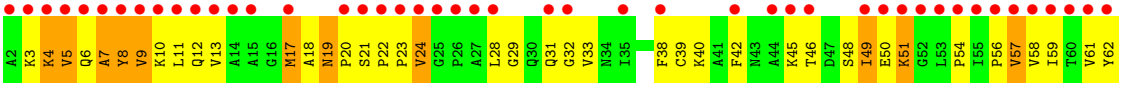


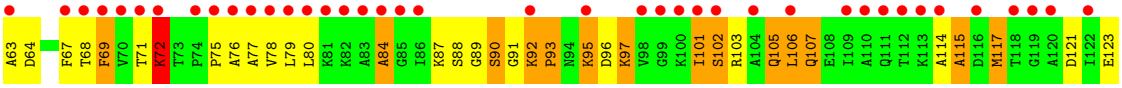




• Molecule 30: 50S ribosomal protein L11

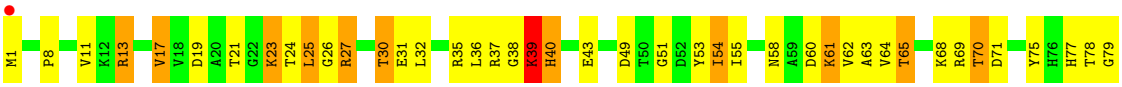
Chain DI:

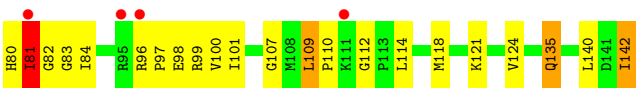




• Molecule 31: 50S ribosomal protein L13

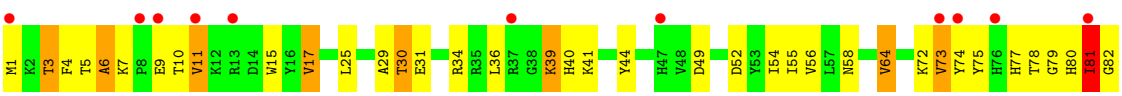
Chain BJ:

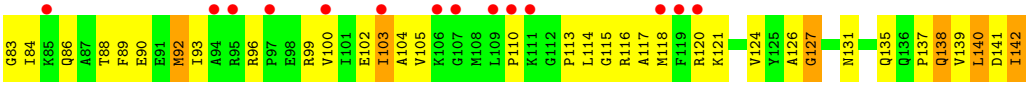




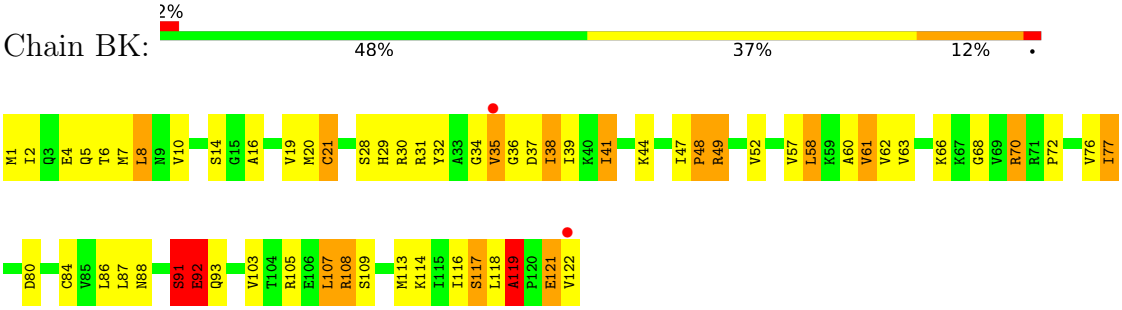
• Molecule 31: 50S ribosomal protein L13

Chain DJ:

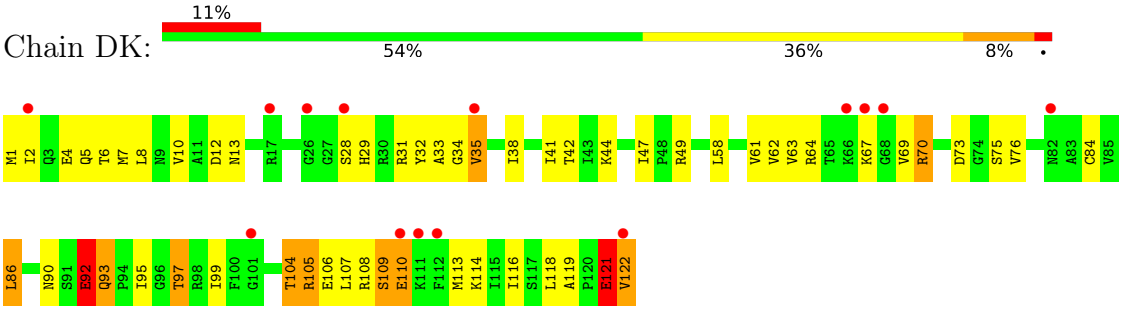




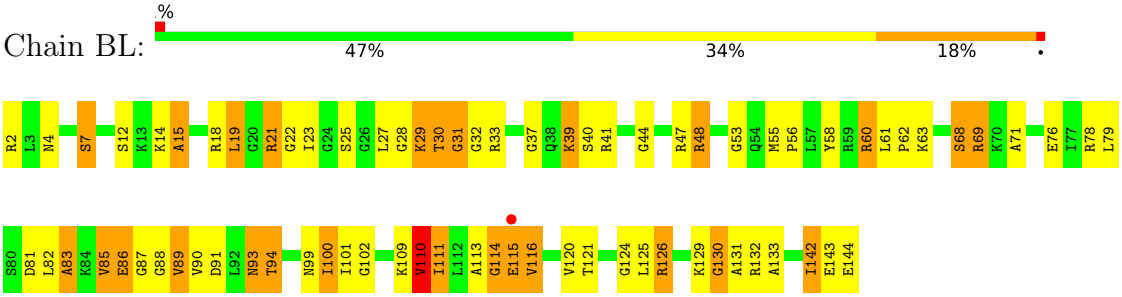
• Molecule 32: 50S ribosomal protein L14



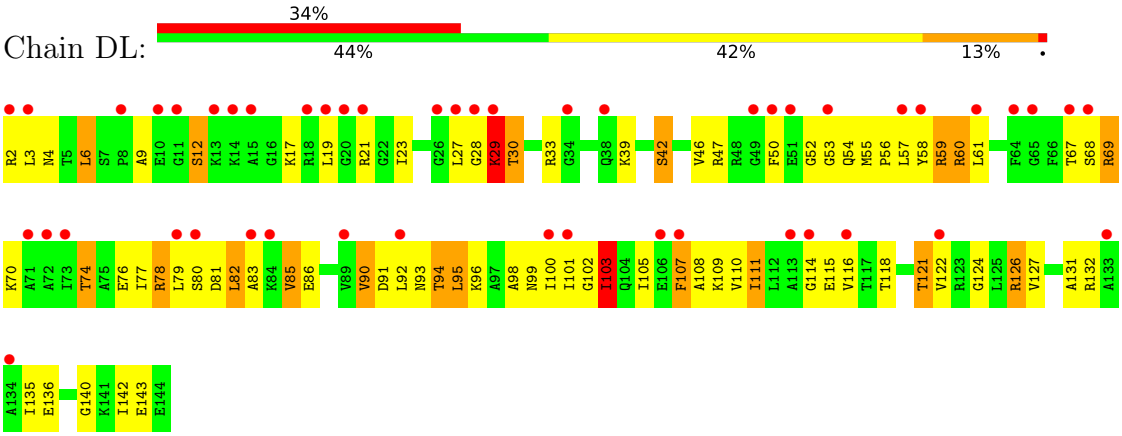
• Molecule 32: 50S ribosomal protein L14



• Molecule 33: 50S ribosomal protein L15

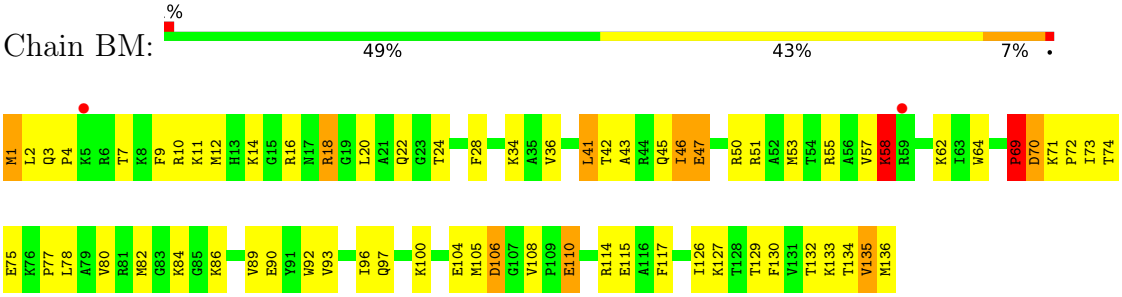


• Molecule 33: 50S ribosomal protein L15



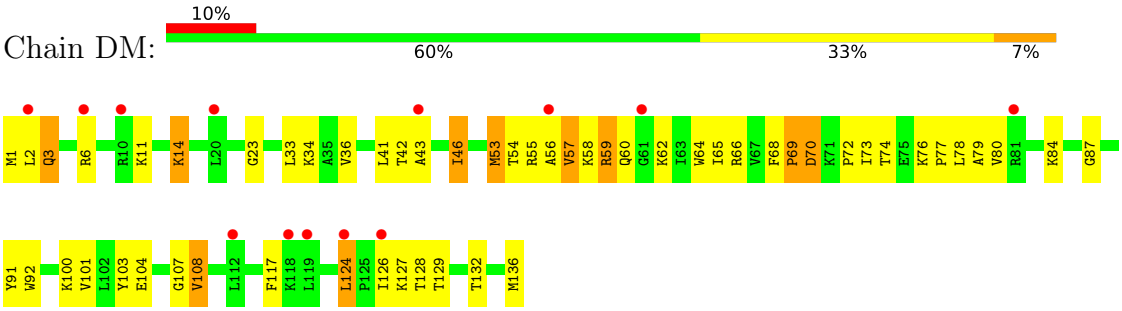
• Molecule 34: 50S ribosomal protein L16

Chain BM:



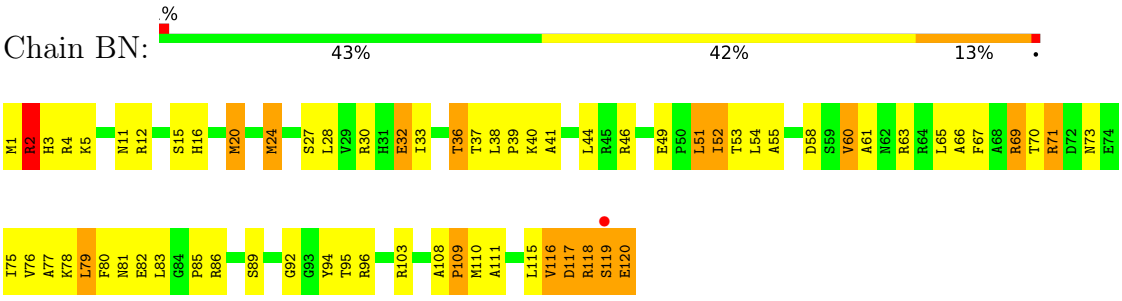
• Molecule 34: 50S ribosomal protein L16

Chain DM:



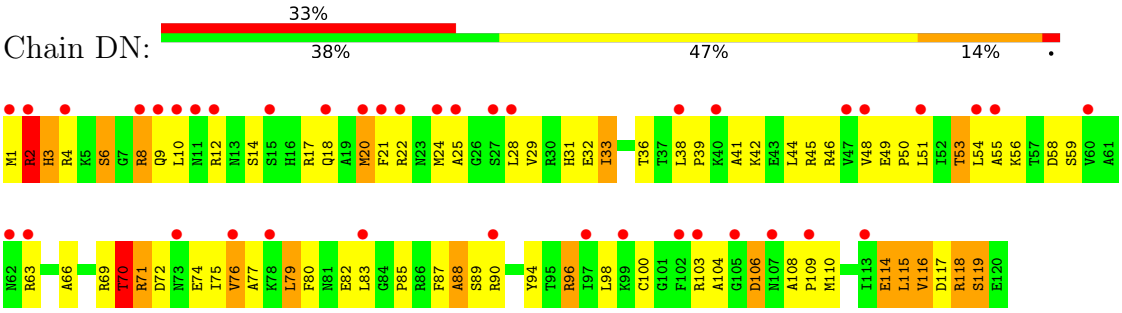
• Molecule 35: 50S ribosomal protein L17

Chain BN:



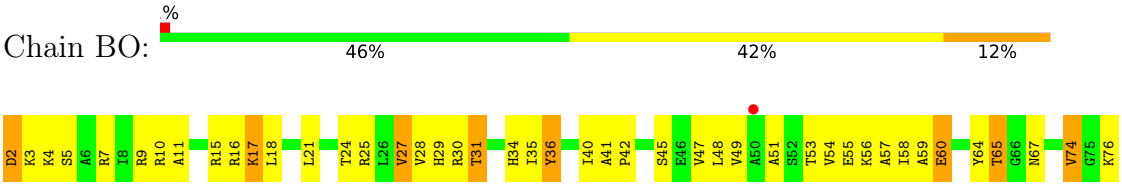
• Molecule 35: 50S ribosomal protein L17

Chain DN:



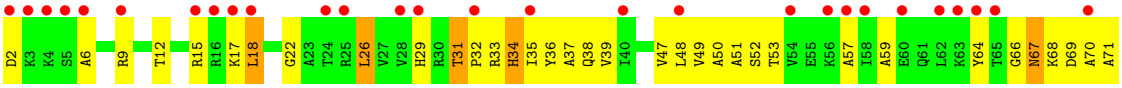
• Molecule 36: 50S ribosomal protein L18

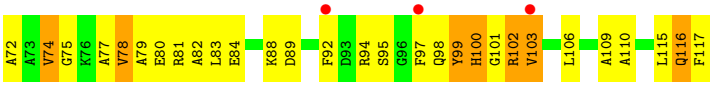
Chain BO:



• Molecule 36: 50S ribosomal protein L18

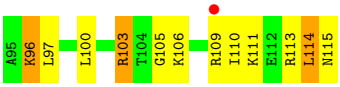
Chain DO:





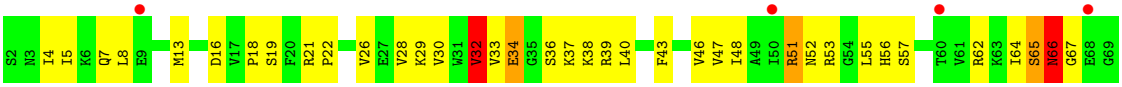
• Molecule 37: 50S ribosomal protein L19

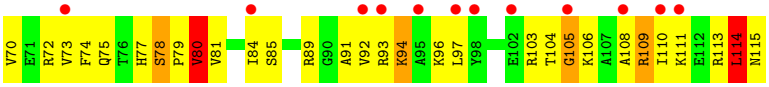
Chain BP:



• Molecule 37: 50S ribosomal protein L19

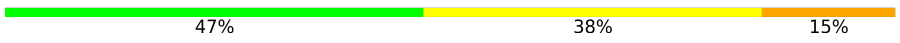
Chain DP:

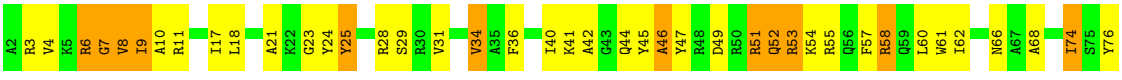


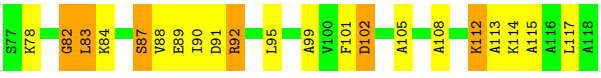


• Molecule 38: 50S ribosomal protein L20

Chain BQ:

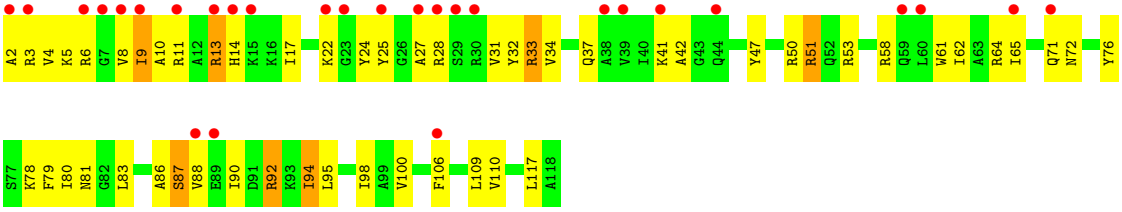






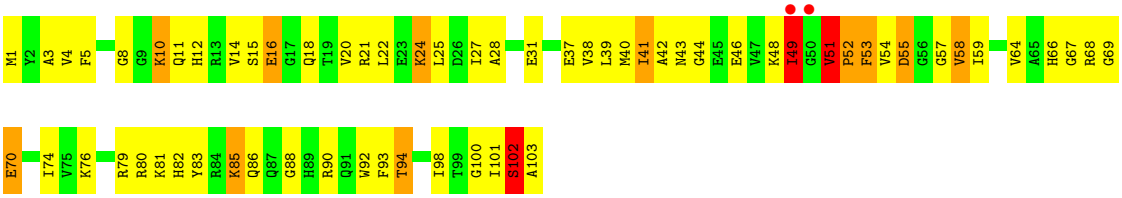
• Molecule 38: 50S ribosomal protein L20

Chain DQ:



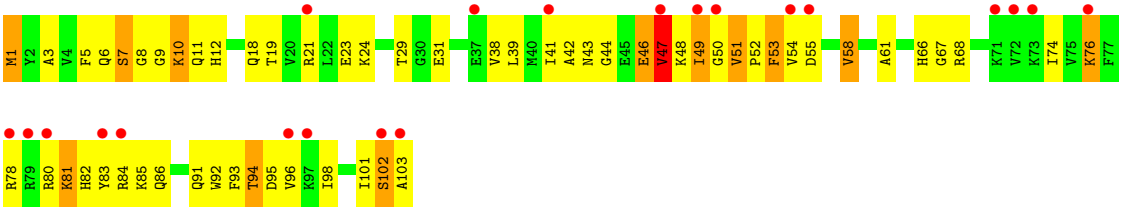
• Molecule 39: 50S ribosomal protein L21

Chain BR:



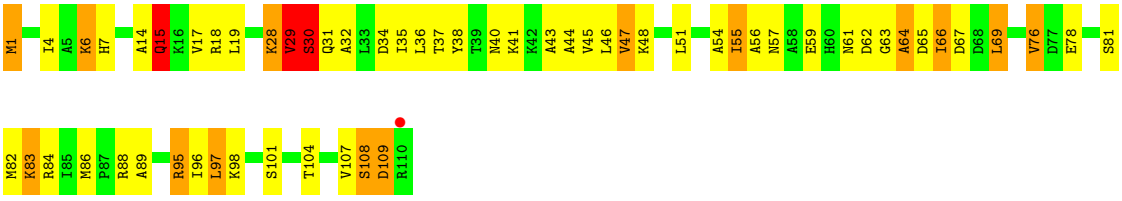
• Molecule 39: 50S ribosomal protein L21

Chain DR:



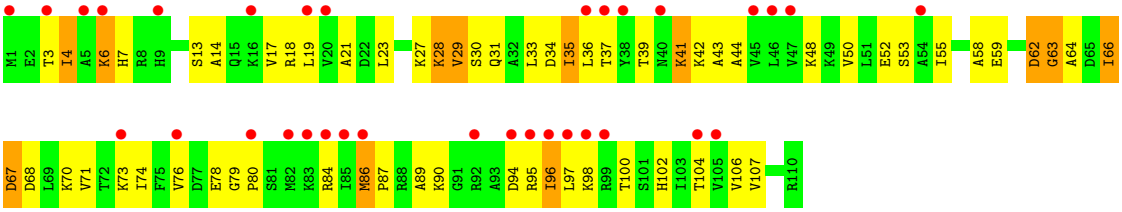
• Molecule 40: 50S ribosomal protein L22

Chain BS:



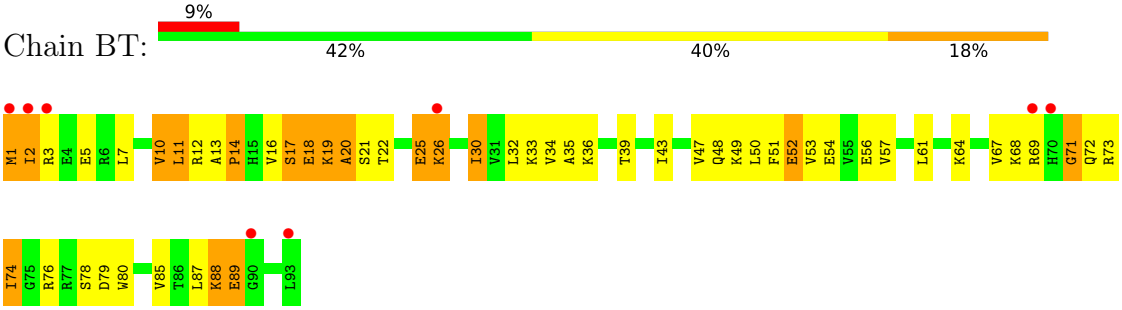
• Molecule 40: 50S ribosomal protein L22

Chain DS:



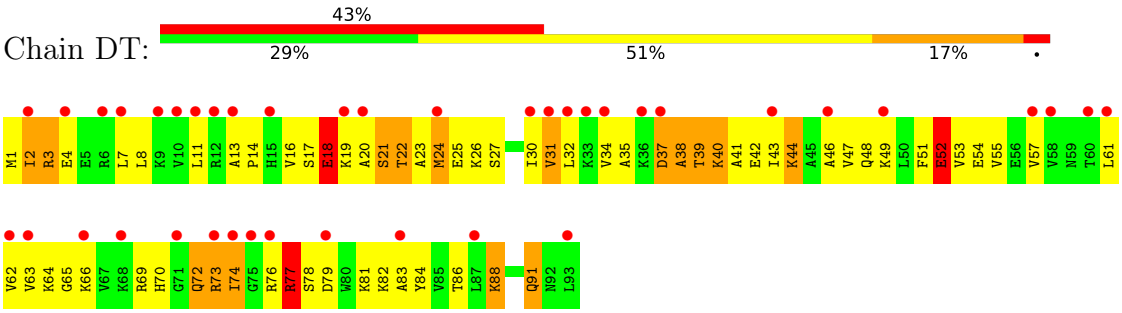
• Molecule 41: 50S ribosomal protein L23

Chain BT:



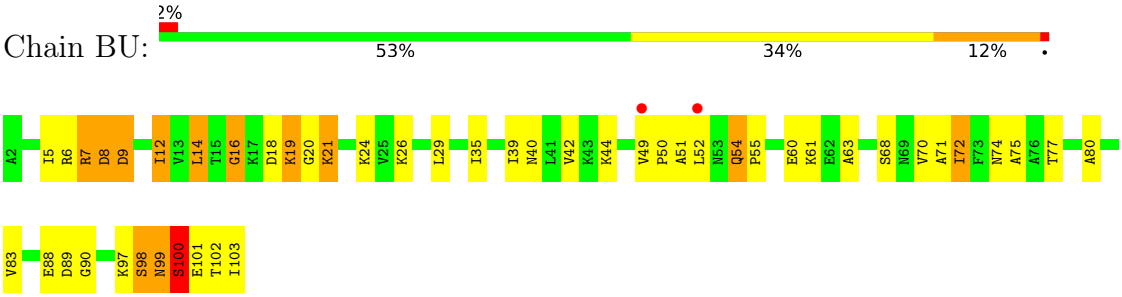
• Molecule 41: 50S ribosomal protein L23

Chain DT:



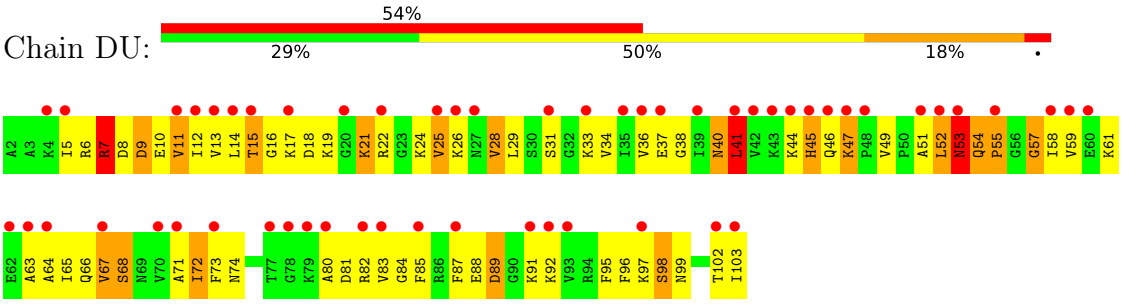
• Molecule 42: 50S ribosomal protein L24

Chain BU:



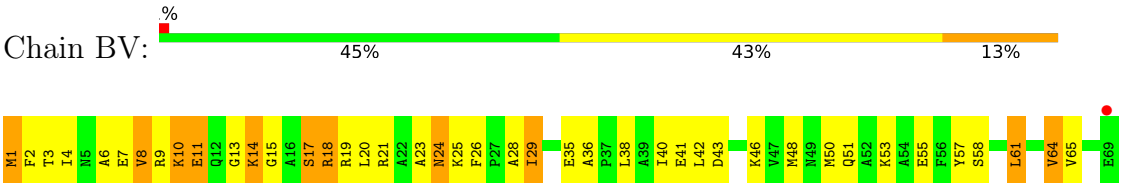
• Molecule 42: 50S ribosomal protein L24

Chain DU:

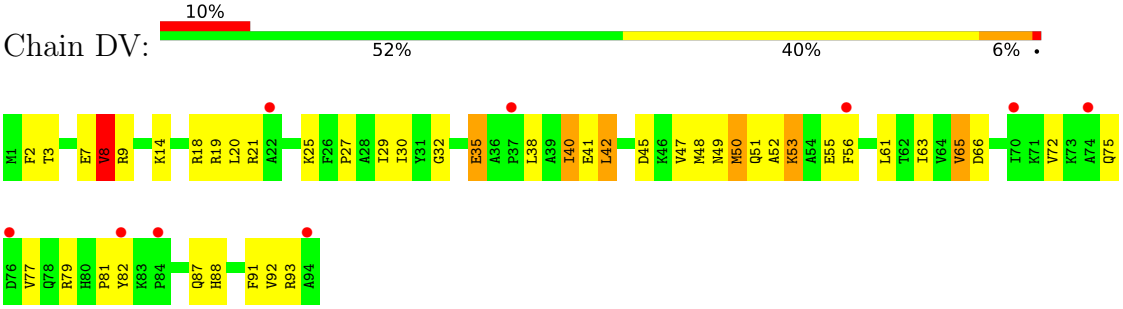


• Molecule 43: 50S ribosomal protein L25

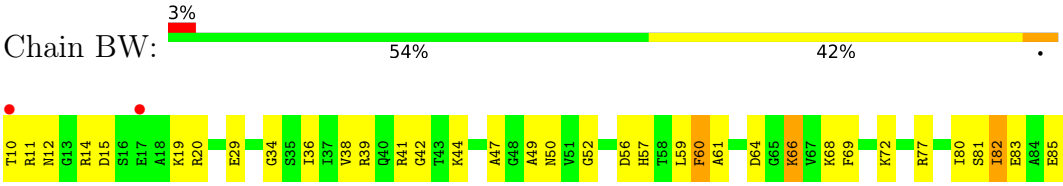
Chain BV:



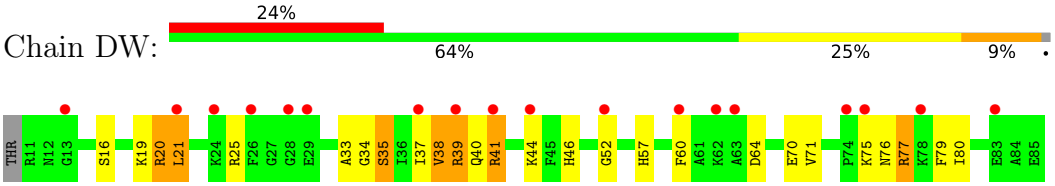
• Molecule 43: 50S ribosomal protein L25



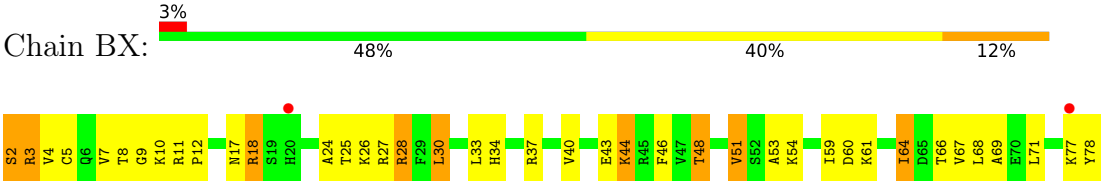
• Molecule 44: 50S ribosomal protein L27



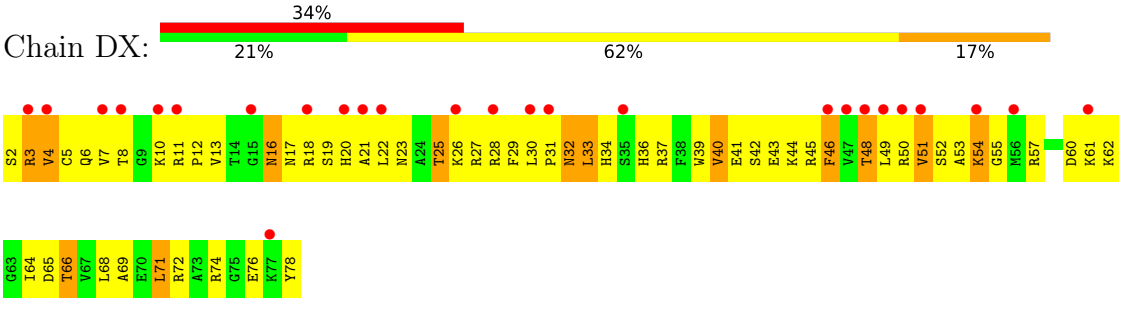
• Molecule 44: 50S ribosomal protein L27



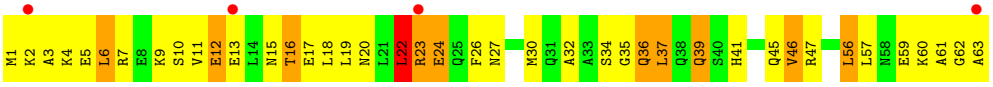
• Molecule 45: 50S ribosomal protein L28



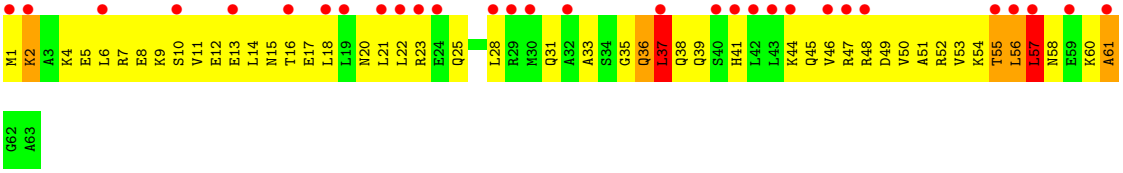
• Molecule 45: 50S ribosomal protein L28



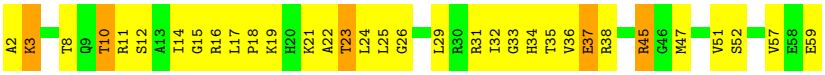
• Molecule 46: 50S ribosomal protein L29



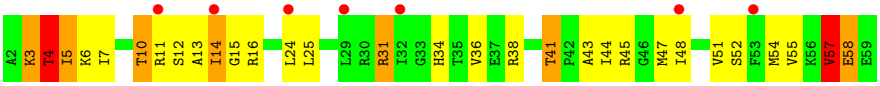
• Molecule 46: 50S ribosomal protein L29



• Molecule 47: 50S ribosomal protein L30

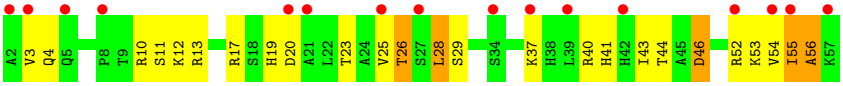


• Molecule 47: 50S ribosomal protein L30

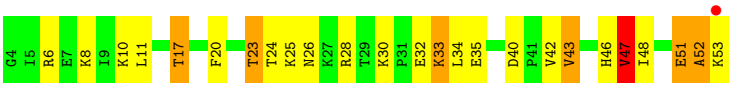


• Molecule 48: 50S ribosomal protein L32

• Molecule 48: 50S ribosomal protein L32

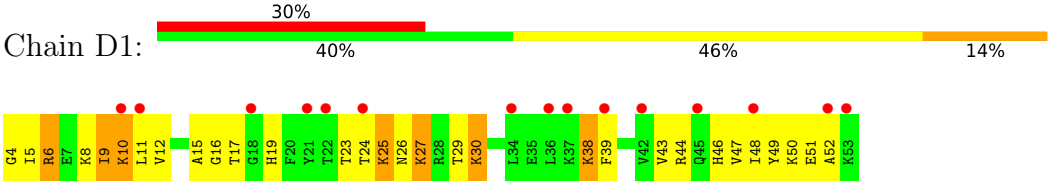


• Molecule 49: 50S ribosomal protein L33



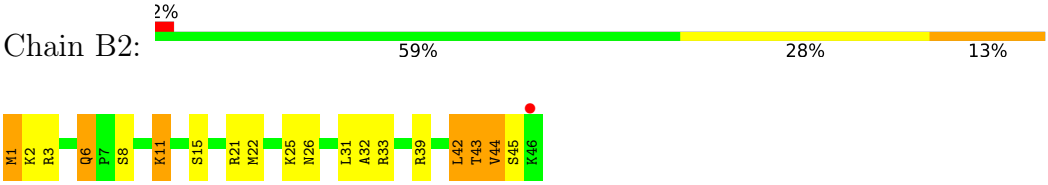
• Molecule 49: 50S ribosomal protein L33

Chain D1:



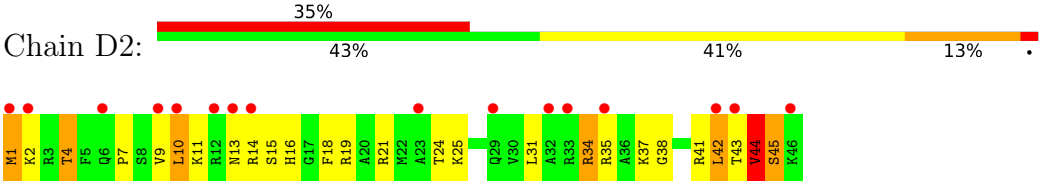
• Molecule 50: 50S ribosomal protein L34

Chain B2:



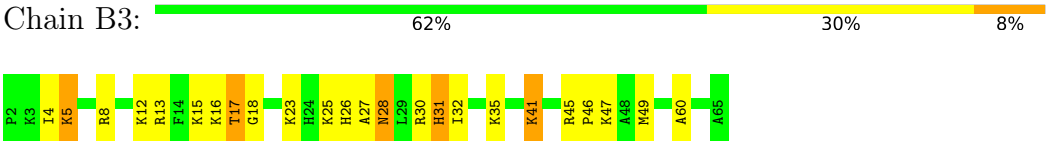
• Molecule 50: 50S ribosomal protein L34

Chain D2:



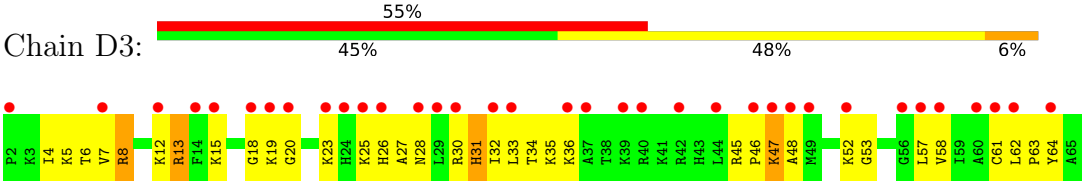
• Molecule 51: 50S ribosomal protein L35

Chain B3:



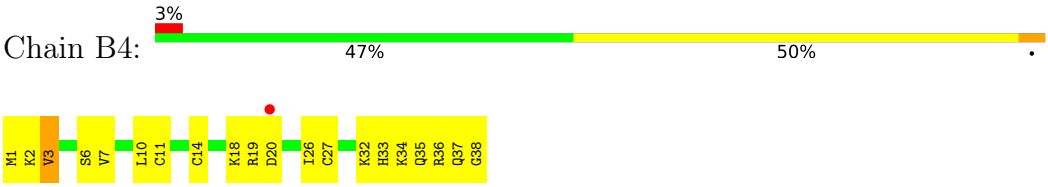
• Molecule 51: 50S ribosomal protein L35

Chain D3:



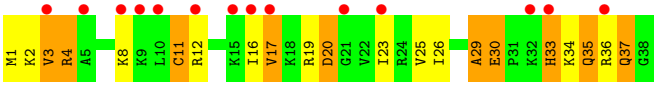
• Molecule 52: 50S ribosomal protein L36

Chain B4:



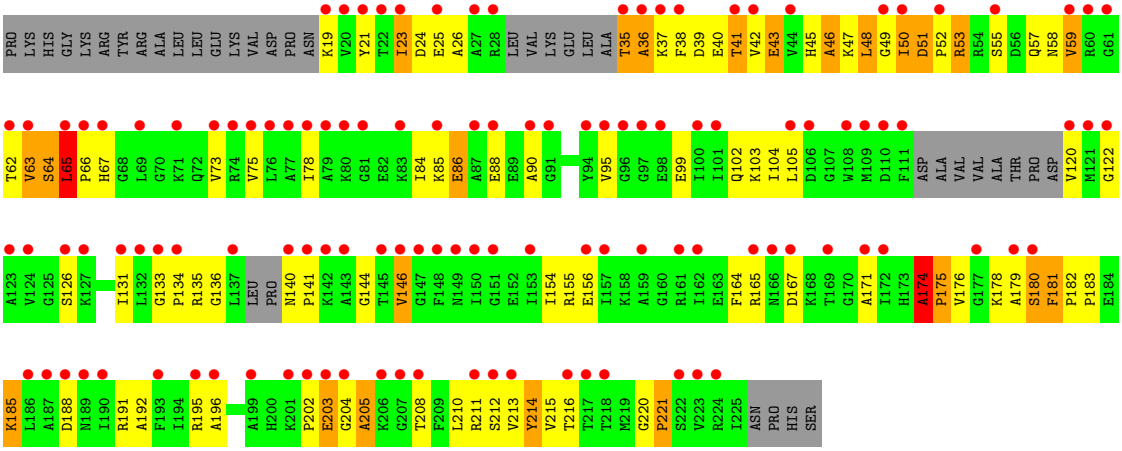
• Molecule 52: 50S ribosomal protein L36

Chain D4:



• Molecule 53: 50S ribosomal protein L1

Chain B5:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.79Å 433.06Å 623.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.33 – 2.90 69.33 – 2.90	Depositor EDS
% Data completeness (in resolution range)	87.4 (69.33-2.90) 87.4 (69.33-2.90)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.50 (at 2.91Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.235 , 0.279 0.238 , 0.280	Depositor DCC
R_{free} test set	4412 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å^2)	48.9	Xtriage
Anisotropy	0.742	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 50.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	288258	wwPDB-VP
Average B, all atoms (Å^2)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.85% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.26	0/36944	0.46	0/57632
1	CA	0.22	0/36966	0.42	0/57666
2	AB	0.45	0/1736	0.96	5/2338 (0.2%)
2	CB	0.44	0/1736	0.88	1/2338 (0.0%)
3	AC	0.45	0/1652	0.88	1/2225 (0.0%)
3	CC	0.43	0/1652	0.84	1/2225 (0.0%)
4	AD	0.43	0/1665	0.88	2/2227 (0.1%)
4	CD	0.50	0/1665	0.91	2/2227 (0.1%)
5	AE	0.56	2/1119 (0.2%)	0.95	1/1504 (0.1%)
5	CE	0.51	0/1119	1.01	5/1504 (0.3%)
6	AF	0.52	0/836	0.87	1/1128 (0.1%)
6	CF	0.44	0/836	0.88	4/1128 (0.4%)
7	AG	0.43	0/1196	0.87	2/1602 (0.1%)
7	CG	0.43	0/1196	0.84	0/1602
8	AH	0.44	0/989	0.88	5/1326 (0.4%)
8	CH	0.40	0/989	0.83	2/1326 (0.2%)
9	AI	0.42	0/1034	0.84	1/1375 (0.1%)
9	CI	0.41	0/1034	0.87	1/1375 (0.1%)
10	AJ	0.48	0/797	0.84	0/1077
10	CJ	0.45	0/797	0.85	2/1077 (0.2%)
11	AK	0.48	0/893	0.86	0/1205
11	CK	0.45	0/893	0.90	3/1205 (0.2%)
12	AL	0.49	0/969	0.92	3/1300 (0.2%)
12	CL	0.48	0/969	1.04	3/1300 (0.2%)
13	AM	0.46	0/893	0.91	0/1193
13	CM	0.49	0/893	0.90	0/1193
14	AN	0.43	0/785	0.90	1/1043 (0.1%)
14	CN	0.39	0/785	0.85	2/1043 (0.2%)
15	AO	0.43	0/718	0.83	1/959 (0.1%)
15	CO	0.39	0/718	0.82	1/959 (0.1%)
16	AP	0.48	0/659	0.91	2/884 (0.2%)
16	CP	0.47	0/659	0.83	1/884 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.47	0/658	0.88	1/881 (0.1%)
17	CQ	0.48	0/658	0.80	1/881 (0.1%)
18	AR	0.44	0/463	0.87	1/621 (0.2%)
18	CR	0.44	0/463	0.84	0/621
19	AS	0.46	0/653	0.97	4/877 (0.5%)
19	CS	0.46	0/653	0.83	1/877 (0.1%)
20	AT	0.42	0/671	0.86	1/888 (0.1%)
20	CT	0.42	0/671	0.87	1/888 (0.1%)
21	AU	0.57	0/431	1.03	3/570 (0.5%)
21	CU	0.55	0/431	0.96	2/570 (0.4%)
22	BA	0.43	0/69659	0.63	0/108672
22	DA	0.22	0/69659	0.41	0/108672
23	BB	0.36	0/2850	0.55	0/4444
23	DB	0.18	0/2828	0.34	0/4410
24	BC	0.59	0/2122	1.00	6/2852 (0.2%)
24	DC	0.44	0/2122	0.88	6/2852 (0.2%)
25	BD	0.70	0/1586	1.15	5/2134 (0.2%)
25	DD	0.43	0/1586	0.85	3/2134 (0.1%)
26	BE	0.61	0/1571	0.90	2/2113 (0.1%)
26	DE	0.46	0/1571	0.86	1/2113 (0.0%)
27	BF	0.48	0/1435	0.89	2/1926 (0.1%)
27	DF	0.44	0/1435	0.86	3/1926 (0.2%)
28	BG	0.46	0/1343	0.99	8/1816 (0.4%)
28	DG	0.43	0/1343	0.85	2/1816 (0.1%)
29	BH	0.48	0/1121	0.98	5/1515 (0.3%)
29	DH	0.47	0/1121	0.92	5/1515 (0.3%)
30	BI	0.57	0/1046	0.96	6/1410 (0.4%)
30	DI	0.56	0/1046	1.03	5/1410 (0.4%)
31	BJ	0.72	0/1152	1.00	2/1551 (0.1%)
31	DJ	0.40	0/1152	0.90	2/1551 (0.1%)
32	BK	0.67	0/948	1.06	5/1268 (0.4%)
32	DK	0.42	0/948	0.86	3/1268 (0.2%)
33	BL	0.68	0/1054	1.16	8/1403 (0.6%)
33	DL	0.48	0/1054	0.94	2/1403 (0.1%)
34	BM	0.67	0/1093	1.02	4/1460 (0.3%)
34	DM	0.40	0/1093	0.84	0/1460
35	BN	0.72	0/974	1.07	1/1301 (0.1%)
35	DN	0.46	0/974	0.85	1/1301 (0.1%)
36	BO	0.55	0/902	0.93	1/1209 (0.1%)
36	DO	0.40	0/902	0.81	1/1209 (0.1%)
37	BP	0.61	0/929	0.97	1/1242 (0.1%)
37	DP	0.44	0/929	0.84	2/1242 (0.2%)
38	BQ	0.75	0/960	1.13	2/1278 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DQ	0.41	0/960	0.79	0/1278
39	BR	0.74	0/829	1.07	3/1107 (0.3%)
39	DR	0.43	0/829	0.86	4/1107 (0.4%)
40	BS	0.84	0/864	1.06	2/1156 (0.2%)
40	DS	0.47	0/864	0.84	0/1156
41	BT	0.53	0/745	0.90	0/994
41	DT	0.46	0/745	0.82	1/994 (0.1%)
42	BU	0.53	0/788	0.90	0/1051
42	DU	0.50	0/788	0.88	0/1051
43	BV	0.57	0/766	0.95	2/1025 (0.2%)
43	DV	0.39	0/766	0.85	1/1025 (0.1%)
44	BW	0.69	0/587	0.98	1/776 (0.1%)
44	DW	0.38	0/576	0.75	0/762
45	BX	0.56	0/635	0.98	1/848 (0.1%)
45	DX	0.43	0/635	0.89	2/848 (0.2%)
46	BY	0.50	0/510	0.91	1/677 (0.1%)
46	DY	0.42	0/510	0.86	0/677
47	BZ	0.79	0/453	1.12	2/605 (0.3%)
47	DZ	0.44	0/453	0.82	1/605 (0.2%)
48	B0	0.73	0/450	1.10	2/599 (0.3%)
48	D0	0.46	0/450	0.80	0/599
49	B1	0.49	0/417	0.85	0/554
49	D1	0.45	0/417	0.75	0/554
50	B2	0.68	0/380	1.08	3/498 (0.6%)
50	D2	0.44	0/380	0.86	0/498
51	B3	0.65	0/513	0.96	0/676
51	D3	0.41	0/513	0.81	0/676
52	B4	0.69	0/303	0.92	0/397
52	D4	0.72	2/303 (0.7%)	1.00	3/397 (0.8%)
53	B5	0.51	0/1145	1.16	10/1556 (0.6%)
All	All	0.38	4/310626 (0.0%)	0.64	201/464366 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	CB	0	1
5	CE	0	1
6	CF	0	1
11	AK	0	1

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

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	D4	33	HIS	CG-CD2	6.72	1.43	1.35
52	D4	33	HIS	CE1-NE2	-6.53	1.26	1.32
5	AE	83	HIS	CG-ND1	-5.11	1.32	1.38
5	AE	83	HIS	CE1-NE2	-5.02	1.27	1.32

All (201) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	BD	151	THR	CA-C-N	15.42	139.11	119.84
25	BD	151	THR	C-N-CA	15.42	139.11	119.84
53	B5	182	PRO	CA-C-N	12.09	134.96	119.84
53	B5	182	PRO	C-N-CA	12.09	134.96	119.84
53	B5	220	GLY	CA-C-N	10.62	133.11	119.84
53	B5	220	GLY	C-N-CA	10.62	133.11	119.84
39	BR	51	VAL	CA-C-N	-9.02	108.56	119.84
39	BR	51	VAL	C-N-CA	-9.02	108.56	119.84
33	BL	7	SER	CA-C-N	8.55	128.59	119.78
33	BL	7	SER	C-N-CA	8.55	128.59	119.78
28	BG	111	HIS	CA-C-N	-8.31	109.46	119.84
28	BG	111	HIS	C-N-CA	-8.31	109.46	119.84
30	DI	57	VAL	N-CA-C	8.20	117.70	107.70
53	B5	140	ASN	CA-C-N	8.19	130.08	119.84
53	B5	140	ASN	C-N-CA	8.19	130.08	119.84
12	CL	41	THR	CA-C-N	8.16	128.11	120.03
12	CL	41	THR	C-N-CA	8.16	128.11	120.03
20	AT	8	LYS	N-CA-C	-7.99	102.56	111.82
35	BN	79	LEU	N-CA-C	-7.96	100.06	110.33
4	AD	34	ILE	N-CA-C	7.90	119.65	109.30
40	BS	86	MET	CA-C-N	-7.75	111.93	120.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BS	86	MET	C-N-CA	-7.75	111.93	120.14
25	BD	151	THR	C-N-CD	-7.67	93.53	125.00
39	DR	51	VAL	CA-C-N	-7.61	112.15	119.76
39	DR	51	VAL	C-N-CA	-7.61	112.15	119.76
12	AL	21	VAL	CA-C-N	7.49	129.20	119.84
12	AL	21	VAL	C-N-CA	7.49	129.20	119.84
25	DD	151	THR	CA-C-N	-7.46	110.51	119.84
25	DD	151	THR	C-N-CA	-7.46	110.51	119.84
46	BY	56	LEU	N-CA-C	-7.46	100.21	110.35
4	CD	167	LYS	CA-C-N	7.33	127.38	119.90
4	CD	167	LYS	C-N-CA	7.33	127.38	119.90
7	AG	145	ALA	N-CA-C	-7.32	101.08	110.53
24	DC	196	GLY	N-CA-C	7.26	122.06	112.77
34	BM	97	GLN	CA-C-N	-7.25	112.29	119.90
34	BM	97	GLN	C-N-CA	-7.25	112.29	119.90
20	CT	8	LYS	N-CA-C	-7.22	103.73	112.54
33	DL	95	LEU	N-CA-C	-7.20	103.51	111.36
8	CH	101	ILE	N-CA-C	7.12	118.42	108.23
29	BH	121	VAL	CA-C-N	7.11	134.50	121.70
29	BH	121	VAL	C-N-CA	7.11	134.50	121.70
25	DD	153	GLY	N-CA-C	-7.04	106.70	115.08
27	DF	175	PHE	CA-C-N	6.95	128.53	119.84
27	DF	175	PHE	C-N-CA	6.95	128.53	119.84
11	CK	90	GLY	CA-C-N	6.93	128.50	119.84
11	CK	90	GLY	C-N-CA	6.93	128.50	119.84
24	DC	217	ARG	CA-C-N	6.90	128.47	119.84
24	DC	217	ARG	C-N-CA	6.90	128.47	119.84
4	AD	22	LYS	N-CA-C	-6.88	104.89	113.28
10	CJ	91	ASP	N-CA-C	6.83	118.38	111.07
19	AS	29	LYS	CA-C-N	-6.82	111.32	119.84
19	AS	29	LYS	C-N-CA	-6.82	111.32	119.84
52	D4	30	GLU	CA-C-N	6.78	127.33	119.47
52	D4	30	GLU	C-N-CA	6.78	127.33	119.47
14	AN	45	VAL	N-CA-C	6.75	117.25	110.23
5	CE	56	VAL	CB-CA-C	-6.74	107.21	114.35
14	CN	51	LEU	CA-C-N	6.74	128.26	119.84
14	CN	51	LEU	C-N-CA	6.74	128.26	119.84
17	AQ	29	VAL	N-CA-C	6.69	116.62	108.06
30	BI	73	THR	CA-C-N	6.64	127.22	120.38
30	BI	73	THR	C-N-CA	6.64	127.22	120.38
32	DK	47	ILE	CA-C-N	6.63	125.87	118.97
32	DK	47	ILE	C-N-CA	6.63	125.87	118.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	BL	44	GLY	N-CA-C	-6.61	100.07	111.57
29	DH	121	VAL	N-CA-C	-6.61	106.23	113.43
29	BH	123	ARG	N-CA-C	6.60	119.50	110.06
2	AB	181	ILE	CA-C-N	6.60	128.09	119.84
2	AB	181	ILE	C-N-CA	6.60	128.09	119.84
33	BL	60	ARG	N-CA-C	-6.52	105.14	113.23
27	BF	175	PHE	CA-C-N	6.51	127.98	119.84
27	BF	175	PHE	C-N-CA	6.51	127.98	119.84
43	BV	36	ALA	CA-C-N	-6.51	113.58	120.03
43	BV	36	ALA	C-N-CA	-6.51	113.58	120.03
21	AU	9	ASN	N-CA-C	6.50	119.20	108.48
28	DG	7	ALA	CA-C-N	6.49	127.95	119.84
28	DG	7	ALA	C-N-CA	6.49	127.95	119.84
6	CF	90	MET	N-CA-C	6.42	117.60	108.74
48	B0	25	VAL	N-CA-C	6.40	117.40	111.45
45	DX	51	VAL	N-CA-C	6.38	116.60	108.82
16	AP	14	ARG	CA-C-N	6.35	127.78	119.84
16	AP	14	ARG	C-N-CA	6.35	127.78	119.84
24	BC	58	HIS	N-CA-C	6.29	118.91	110.35
26	BE	146	VAL	N-CA-C	6.24	118.11	108.44
8	CH	90	ASP	N-CA-C	-6.15	104.68	111.82
11	CK	126	LYS	N-CA-C	6.15	118.72	110.35
28	BG	7	ALA	CA-C-N	6.02	126.36	119.92
28	BG	7	ALA	C-N-CA	6.02	126.36	119.92
34	BM	22	GLN	N-CA-C	6.01	120.74	113.17
53	B5	43	GLU	N-CA-C	6.01	118.74	109.07
32	BK	121	GLU	N-CA-C	5.97	119.39	109.96
25	BD	193	VAL	CA-C-N	5.96	125.92	119.78
25	BD	193	VAL	C-N-CA	5.96	125.92	119.78
5	CE	153	VAL	N-CA-C	-5.95	104.22	112.50
6	CF	11	HIS	CA-C-N	5.94	127.27	119.84
6	CF	11	HIS	C-N-CA	5.94	127.27	119.84
7	AG	7	ILE	N-CA-C	5.84	115.66	108.53
33	BL	55	MET	CA-C-N	5.82	125.72	119.85
33	BL	55	MET	C-N-CA	5.82	125.72	119.85
38	BQ	11	ARG	N-CA-C	-5.82	104.13	111.11
39	DR	9	GLY	N-CA-C	-5.81	104.84	114.48
6	AF	97	THR	N-CA-C	5.77	117.88	108.76
39	DR	44	GLY	N-CA-C	-5.76	105.82	112.73
29	DH	31	VAL	CA-C-N	-5.75	113.78	119.93
29	DH	31	VAL	C-N-CA	-5.75	113.78	119.93
30	DI	63	ALA	N-CA-C	-5.75	106.88	112.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	DF	104	ILE	N-CA-C	5.73	116.46	110.62
47	BZ	16	ARG	N-CA-C	5.68	119.36	110.32
32	DK	121	GLU	N-CA-C	5.67	117.16	108.42
38	BQ	53	ARG	N-CA-C	-5.67	104.57	112.45
36	DO	12	THR	N-CA-C	5.66	117.13	111.07
32	BK	119	ALA	CA-C-N	5.66	126.91	119.84
32	BK	119	ALA	C-N-CA	5.66	126.91	119.84
34	BM	108	VAL	N-CA-C	5.66	113.83	109.19
30	DI	136	MET	N-CA-C	-5.65	106.39	113.28
15	AO	19	ALA	N-CA-C	-5.64	103.08	110.53
33	BL	83	ALA	N-CA-C	-5.62	105.77	113.30
5	CE	18	VAL	N-CA-C	-5.61	103.87	110.21
31	BJ	112	GLY	CA-C-N	5.58	126.82	119.84
31	BJ	112	GLY	C-N-CA	5.58	126.82	119.84
32	BK	38	ILE	CB-CA-C	-5.58	104.27	111.53
32	BK	31	ARG	N-CA-C	5.57	120.19	112.45
30	DI	92	LYS	CA-C-N	5.56	126.79	119.84
30	DI	92	LYS	C-N-CA	5.56	126.79	119.84
24	BC	246	THR	CA-C-N	5.55	126.78	119.84
24	BC	246	THR	C-N-CA	5.55	126.78	119.84
6	CF	20	GLY	N-CA-C	-5.53	107.81	114.66
24	BC	199	GLU	N-CA-C	-5.52	106.53	113.20
18	AR	40	VAL	N-CA-C	5.50	113.36	108.63
29	BH	70	GLU	N-CA-C	-5.48	106.55	113.18
24	BC	216	VAL	N-CA-C	5.48	115.98	107.99
30	BI	92	LYS	CA-C-N	5.47	125.12	119.05
30	BI	92	LYS	C-N-CA	5.47	125.12	119.05
10	CJ	22	THR	N-CA-C	-5.47	106.28	113.17
21	AU	18	ARG	N-CA-C	-5.46	106.28	113.17
26	BE	73	ILE	N-CA-C	-5.46	105.58	113.07
5	CE	104	GLY	N-CA-C	5.46	118.17	111.45
53	B5	165	ARG	N-CA-C	5.45	113.98	108.75
48	B0	12	LYS	N-CA-C	-5.44	105.00	111.69
31	DJ	96	ARG	CA-C-N	5.44	125.52	119.87
31	DJ	96	ARG	C-N-CA	5.44	125.52	119.87
5	CE	112	ARG	N-CA-C	-5.43	105.00	111.03
53	B5	174	ALA	CA-C-N	5.41	126.61	119.84
53	B5	174	ALA	C-N-CA	5.41	126.61	119.84
44	BW	36	ILE	CB-CA-C	-5.39	104.77	111.08
28	BG	77	ILE	N-CA-C	-5.38	105.13	110.62
28	BG	98	VAL	N-CA-C	5.38	116.27	107.24
24	DC	236	GLU	N-CA-C	-5.35	104.01	111.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	B2	43	THR	N-CA-C	5.31	122.11	110.80
35	DN	9	GLN	N-CA-C	-5.29	106.99	113.50
9	CI	47	VAL	N-CA-C	-5.29	106.12	113.00
19	CS	36	ARG	N-CA-C	-5.27	106.87	113.72
26	DE	146	VAL	N-CA-C	5.26	117.20	108.99
8	AH	56	LYS	CA-C-N	5.25	126.40	119.84
8	AH	56	LYS	C-N-CA	5.25	126.40	119.84
24	BC	9	THR	N-CA-C	-5.25	106.88	113.28
3	AC	82	GLU	N-CA-C	5.25	116.69	110.97
47	DZ	57	VAL	N-CA-C	5.25	115.41	107.75
29	BH	91	PHE	N-CA-C	-5.23	106.91	113.28
28	BG	3	ARG	N-CA-C	-5.22	105.07	111.75
8	AH	5	ASP	CA-C-N	5.22	126.36	119.84
8	AH	5	ASP	C-N-CA	5.22	126.36	119.84
33	DL	83	ALA	N-CA-C	-5.21	107.09	113.50
45	BX	30	LEU	N-CA-C	-5.20	104.15	110.13
21	AU	30	ALA	N-CA-C	-5.19	105.74	111.71
37	BP	3	ASN	N-CA-C	-5.19	107.50	113.88
9	AI	97	GLU	N-CA-C	-5.18	107.01	113.38
5	AE	151	GLU	N-CA-C	-5.16	106.12	112.72
30	BI	132	THR	N-CA-C	-5.16	107.06	113.19
45	DX	16	ASN	N-CA-C	5.15	117.80	109.40
8	AH	109	GLY	N-CA-C	5.15	119.34	112.65
24	DC	10	SER	CA-C-N	-5.14	114.48	119.78
24	DC	10	SER	C-N-CA	-5.14	114.48	119.78
47	BZ	29	LEU	N-CA-C	-5.14	103.25	110.50
2	CB	31	ILE	N-CA-C	5.12	115.29	108.27
15	CO	48	LYS	N-CA-C	-5.12	105.72	112.94
16	CP	41	PRO	N-CA-C	-5.10	109.38	114.68
41	DT	38	ALA	CB-CA-C	-5.10	110.72	116.63
39	BR	51	VAL	N-CA-C	-5.09	97.89	108.88
29	DH	123	ARG	N-CA-C	-5.09	105.38	112.30
12	AL	116	LYS	N-CA-C	-5.08	103.82	110.53
2	AB	164	ILE	N-CA-C	5.08	115.36	110.74
2	AB	24	ASN	CA-C-N	5.07	126.18	119.84
2	AB	24	ASN	C-N-CA	5.07	126.18	119.84
28	BG	159	GLY	N-CA-C	-5.07	108.32	115.32
43	DV	8	VAL	N-CA-C	5.06	114.06	106.42
30	BI	22	PRO	N-CA-C	5.05	116.86	110.70
19	AS	75	ALA	CA-C-N	5.04	126.14	119.84
19	AS	75	ALA	C-N-CA	5.04	126.14	119.84
36	BO	10	ARG	N-CA-C	-5.04	106.64	112.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	CU	10	GLU	CA-C-N	5.04	126.14	119.84
21	CU	10	GLU	C-N-CA	5.04	126.14	119.84
33	BL	126	ARG	N-CA-C	-5.03	103.89	110.53
50	B2	6	GLN	CA-C-N	-5.03	114.73	119.76
50	B2	6	GLN	C-N-CA	-5.03	114.73	119.76
37	DP	78	SER	CA-C-N	5.02	124.19	118.97
37	DP	78	SER	C-N-CA	5.02	124.19	118.97
52	D4	33	HIS	CG-CD2-NE2	-5.02	102.18	107.20
12	CL	26	ALA	N-CA-C	-5.02	104.47	111.30
29	DH	62	LEU	N-CA-C	-5.02	107.11	113.18
3	CC	40	ARG	N-CA-C	-5.01	105.90	111.36
17	CQ	62	ARG	N-CA-C	5.01	116.67	108.76

There are no chirality outliers.

All (13) planarity outliers are listed below:

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

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32995	0	16607	1177	4
1	CA	33015	0	16617	1166	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	AB	1705	0	1732	211	0
2	CB	1705	0	1732	162	0
3	AC	1625	0	1696	96	0
3	CC	1625	0	1696	98	0
4	AD	1643	0	1707	155	0
4	CD	1643	0	1707	142	0
5	AE	1106	0	1148	91	0
5	CE	1106	0	1148	121	0
6	AF	818	0	808	66	0
6	CF	818	0	808	68	0
7	AG	1182	0	1238	92	0
7	CG	1182	0	1238	60	0
8	AH	979	0	1031	69	0
8	CH	979	0	1031	59	0
9	AI	1022	0	1070	97	0
9	CI	1022	0	1070	71	0
10	AJ	787	0	828	100	0
10	CJ	787	0	828	49	0
11	AK	877	0	887	90	0
11	CK	877	0	887	79	0
12	AL	955	0	1016	54	0
12	CL	955	0	1016	65	0
13	AM	884	0	941	75	0
13	CM	884	0	941	57	0
14	AN	774	0	824	80	0
14	CN	774	0	824	58	0
15	AO	710	0	728	49	0
15	CO	710	0	728	52	0
16	AP	649	0	666	67	0
16	CP	649	0	666	32	0
17	AQ	649	0	691	62	0
17	CQ	649	0	691	56	0
18	AR	456	0	478	24	0
18	CR	456	0	478	42	0
19	AS	638	0	665	40	0
19	CS	638	0	665	31	0
20	AT	665	0	714	57	0
20	CT	665	0	714	50	0
21	AU	426	0	449	61	0
21	CU	426	0	449	56	0
22	BA	62195	0	31280	1968	0
22	DA	62195	0	31280	2100	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	BB	2549	0	1291	47	0
23	DB	2529	0	1281	65	0
24	BC	2083	0	2154	139	0
24	DC	2083	0	2154	149	0
25	BD	1565	0	1616	111	0
25	DD	1565	0	1616	90	0
26	BE	1552	0	1619	78	0
26	DE	1552	0	1619	112	0
27	BF	1411	0	1444	88	0
27	DF	1411	0	1444	57	0
28	BG	1323	0	1371	66	0
28	DG	1323	0	1371	63	0
29	BH	1110	0	1147	172	0
29	DH	1110	0	1148	98	4
30	BI	1032	0	1085	98	0
30	DI	1032	0	1085	81	0
31	BJ	1129	0	1162	51	0
31	DJ	1129	0	1162	58	0
32	BK	939	0	1012	51	0
32	DK	939	0	1012	38	0
33	BL	1045	0	1117	60	0
33	DL	1045	0	1117	71	0
34	BM	1074	0	1157	56	0
34	DM	1074	0	1157	37	0
35	BN	961	0	1000	72	0
35	DN	961	0	1000	75	0
36	BO	892	0	923	43	0
36	DO	892	0	923	48	0
37	BP	917	0	962	44	0
37	DP	917	0	962	54	0
38	BQ	947	0	1019	69	0
38	DQ	947	0	1019	57	0
39	BR	816	0	839	90	0
39	DR	816	0	839	58	0
40	BS	857	0	922	61	0
40	DS	857	0	922	46	0
41	BT	739	0	807	40	0
41	DT	739	0	807	57	0
42	BU	780	0	831	37	0
42	DU	780	0	831	72	0
43	BV	753	0	780	38	0
43	DV	753	0	780	33	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BW	580	0	594	21	0
44	DW	569	0	581	19	0
45	BX	625	0	652	28	0
45	DX	625	0	652	70	0
46	BY	509	0	543	40	0
46	DY	509	0	543	47	0
47	BZ	449	0	488	24	0
47	DZ	449	0	488	16	0
48	B0	444	0	458	35	0
48	D0	444	0	458	25	0
49	B1	410	0	440	22	0
49	D1	410	0	440	19	0
50	B2	377	0	418	15	0
50	D2	377	0	418	28	0
51	B3	504	0	572	26	0
51	D3	504	0	572	31	0
52	B4	302	0	340	20	0
52	D4	302	0	342	22	0
53	B5	1142	0	865	61	0
54	AA	72	0	0	0	0
54	BA	194	0	0	0	0
54	BB	4	0	0	0	0
54	BN	1	0	0	0	0
54	CA	55	0	0	0	0
54	CM	1	0	0	0	0
54	D2	1	0	0	0	0
54	DA	166	0	0	0	0
54	DB	3	0	0	0	0
54	DQ	1	0	0	0	0
55	BA	38	0	38	5	0
55	DA	38	0	37	11	0
56	B4	1	0	0	2	0
56	D4	1	0	0	0	0
57	AA	195	0	0	29	0
57	AL	1	0	0	0	0
57	AN	5	0	0	0	0
57	AT	1	0	0	0	0
57	AU	1	0	0	1	0
57	B2	1	0	0	1	0
57	B3	2	0	0	0	0
57	B4	1	0	0	0	0
57	BA	620	0	0	101	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	BB	13	0	0	0	0
57	BC	6	0	0	4	0
57	BD	3	0	0	3	0
57	BE	4	0	0	0	0
57	BF	1	0	0	1	0
57	BG	1	0	0	0	0
57	BL	8	0	0	0	0
57	BN	4	0	0	0	0
57	BS	1	0	0	0	0
57	BV	1	0	0	0	0
57	CA	189	0	0	19	0
57	CL	1	0	0	0	0
57	CN	3	0	0	0	0
57	CT	4	0	0	0	0
57	CU	1	0	0	0	0
57	D0	1	0	0	0	0
57	D2	3	0	0	0	0
57	D3	2	0	0	0	0
57	D4	1	0	0	0	0
57	DA	613	0	0	87	0
57	DB	13	0	0	1	0
57	DC	9	0	0	1	0
57	DD	4	0	0	2	0
57	DE	2	0	0	0	0
57	DJ	1	0	0	0	0
57	DL	3	0	0	1	0
57	DN	1	0	0	0	0
57	DT	2	0	0	0	0
57	DV	1	0	0	0	0
All	All	288258	0	192864	11899	5

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 25.

All (11899) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:123:ARG:NH2	1:CA:367:U:OP2	1.64	1.27
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
15:AO:89:ARG:NH1	22:BA:716:A:OP2	1.75	1.19
22:BA:1153:C:OP2	57:BA:3357:HOH:O	1.59	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2574:G:OP1	57:BA:3713:HOH:O	1.61	1.18
22:BA:1342:A:OP2	57:BA:3717:HOH:O	1.63	1.16
22:BA:2005:A:OP1	57:BA:3383:HOH:O	1.63	1.15
1:AA:684:U:O2'	11:AK:40:ASN:O	1.63	1.14
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
25:BD:140:HIS:NE2	57:BD:302:HOH:O	1.81	1.13
1:CA:1385:G:N7	57:CA:1870:HOH:O	1.81	1.12
1:AA:516:U:O4	57:AA:1849:HOH:O	1.68	1.11
22:DA:2711:A:OP2	57:DA:3548:HOH:O	1.68	1.11
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
22:DA:192:C:OP1	57:DA:3738:HOH:O	1.69	1.08
22:BA:2579:C:OP1	57:BA:3541:HOH:O	1.71	1.08
1:AA:702:A:N6	22:BA:1846:G:O2'	1.87	1.08
22:DA:1395:A:OP2	57:DA:3403:HOH:O	1.72	1.07
22:BA:731:C:OP2	57:BA:3695:HOH:O	1.72	1.07
25:DD:151:THR:O	25:DD:153:GLY:N	1.88	1.06
22:BA:2498:C:OP2	57:BA:3687:HOH:O	1.72	1.04
22:BA:2453:A:N7	57:BA:3524:HOH:O	1.91	1.04
22:BA:842:U:O4	57:BA:3588:HOH:O	1.74	1.04
22:DA:756:A:N7	57:DA:3301:HOH:O	1.90	1.04
22:BA:2499:C:OP2	57:BA:3687:HOH:O	1.77	1.03
22:BA:978:G:N7	57:BA:3590:HOH:O	1.89	1.03
22:DA:2588:G:OP1	57:DA:3314:HOH:O	1.77	1.03
22:BA:2575:C:OP2	57:BA:3713:HOH:O	1.76	1.02
29:BH:97:ARG:HD2	1:CA:369:G:O2'	1.57	1.01
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	1.00
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	1.95	1.00
1:AA:965:U:OP2	57:AA:1832:HOH:O	1.79	1.00
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.99
22:DA:370:G:N7	57:DA:3560:HOH:O	1.92	0.99
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
22:DA:1371:G:N7	57:DA:3399:HOH:O	1.95	0.99
5:CE:157:ARG:O	5:CE:159:LYS:N	1.95	0.99
22:BA:2757:A:N1	28:BG:67:THR:HG21	1.78	0.99
22:BA:1179:G:C5	22:BA:1180:U:H1'	1.96	0.99
22:BA:2728:U:O2'	22:BA:2729:G:OP2	1.79	0.99
22:DA:973:A:OP2	39:DR:81:LYS:NZ	1.95	0.98
4:AD:125:VAL:O	4:AD:127:GLY:N	1.97	0.98
14:CN:41:ARG:NH1	14:CN:42:TRP:O	1.97	0.97
22:DA:1010:A:OP2	57:DA:3780:HOH:O	1.81	0.97
22:DA:1006:C:OP2	57:DA:3781:HOH:O	1.83	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1823:G:N7	57:DA:3654:HOH:O	1.96	0.97
2:AB:82:ASP:O	2:AB:85:LEU:N	1.97	0.96
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.96
1:AA:1077:G:N7	57:AA:1789:HOH:O	1.98	0.96
22:DA:58:G:OP1	41:DT:78:SER:OG	1.82	0.96
29:BH:123:ARG:HH22	1:CA:367:U:P	1.88	0.96
2:CB:206:ALA:O	2:CB:208:ARG:N	1.98	0.96
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.47	0.96
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.01	0.95
22:BA:747:U:C5	22:BA:2613:U:C5	2.54	0.95
5:AE:14:LYS:NZ	5:AE:116:GLU:OE1	1.99	0.95
2:AB:21:ARG:O	2:AB:23:TRP:N	2.00	0.95
22:BA:1602:U:O4	57:BA:3717:HOH:O	1.83	0.94
29:BH:83:LYS:HD2	1:CA:55:A:O2'	1.67	0.94
27:DF:122:PHE:O	27:DF:124:GLY:N	2.01	0.94
22:DA:2004:G:OP2	57:DA:3803:HOH:O	1.85	0.94
22:BA:14:A:OP2	57:BA:3553:HOH:O	1.84	0.94
22:BA:2025:C:OP2	57:BA:3473:HOH:O	1.84	0.94
22:DA:602:A:O2'	22:DA:604:G:O2'	1.83	0.94
22:BA:2057:G:OP2	57:BA:3488:HOH:O	1.85	0.93
1:AA:533:A:OP1	57:AA:1849:HOH:O	1.86	0.93
22:BA:944:C:O3'	57:BA:3345:HOH:O	1.86	0.93
22:BA:1669:A:OP2	57:BA:3726:HOH:O	1.86	0.92
4:AD:22:LYS:O	4:AD:24:GLY:N	2.03	0.92
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.92
1:CA:1198:G:N7	57:CA:1849:HOH:O	2.01	0.92
22:DA:450:G:O6	57:DA:3240:HOH:O	1.86	0.92
22:DA:528:A:OP1	57:DA:3244:HOH:O	1.87	0.91
22:BA:58:G:OP1	41:BT:78:SER:HB2	1.70	0.91
1:CA:257:G:N7	57:CA:1718:HOH:O	2.03	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
5:CE:101:GLU:O	5:CE:103:THR:N	2.04	0.90
22:BA:1965:C:OP1	22:BA:1966:A:O2'	1.90	0.89
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.52	0.89
22:DA:527:C:OP1	57:DA:3245:HOH:O	1.90	0.89
1:AA:405:U:O4	4:AD:2:ALA:N	2.05	0.89
22:DA:2134:A:N6	22:DA:2157:G:O2'	2.04	0.89
1:AA:1407:C:O2'	22:BA:1912:A:N6	2.05	0.89
22:DA:1602:U:O4	57:DA:3713:HOH:O	1.88	0.89
6:CF:12:PRO:O	6:CF:15:SER:OG	1.91	0.89
21:AU:35:ARG:O	21:AU:37:PHE:N	2.06	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:159:LYS:O	8:AH:64:LYS:NZ	2.05	0.89
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.73	0.89
22:BA:1780:A:OP1	57:BA:3694:HOH:O	1.91	0.89
1:CA:858:G:N7	57:CA:1817:HOH:O	2.05	0.89
6:CF:91:ARG:O	6:CF:92:THR:OG1	1.89	0.88
12:CL:116:LYS:O	12:CL:117:TYR:CG	2.26	0.88
22:BA:2615:U:OP2	57:BA:3753:HOH:O	1.89	0.88
22:BA:2497:A:O3'	57:BA:3688:HOH:O	1.91	0.88
22:BA:2573:C:OP1	57:BA:3713:HOH:O	1.89	0.88
1:CA:1097:C:OP1	2:CB:139:ARG:NH2	2.07	0.88
1:AA:1500:A:OP2	57:AA:1872:HOH:O	1.91	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.07	0.88
1:CA:484:G:H4'	1:CA:485:U:O5'	1.74	0.88
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	2.07	0.87
22:DA:761:A:OP2	57:DA:3295:HOH:O	1.92	0.87
1:CA:687:A:O2'	1:CA:701:U:O4	1.92	0.87
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.08	0.87
22:BA:1070:A:O2'	22:BA:1097:U:OP1	1.91	0.87
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.86
22:BA:273:G:N2	22:BA:365:U:O2	2.08	0.86
1:CA:412:A:O2'	1:CA:413:G:H4'	1.75	0.86
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.08	0.86
22:DA:161:A:H3'	22:DA:162:U:H5"	1.57	0.86
14:AN:46:LEU:O	14:AN:48:LEU:N	2.08	0.86
22:DA:1378:A:O2'	22:DA:1380:G:N7	2.07	0.86
22:DA:2006:C:OP1	57:DA:3379:HOH:O	1.92	0.86
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.06	0.86
22:BA:2458:G:N3	22:BA:2490:G:N2	2.24	0.85
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.85
22:DA:249:C:O5'	22:DA:2394:C:O2'	1.94	0.85
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.05	0.85
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.94	0.85
21:CU:10:GLU:HG3	21:CU:11:PRO:HD3	1.56	0.85
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.77	0.85
22:DA:310:A:O2'	22:DA:311:A:OP2	1.94	0.85
22:DA:2271:G:O6	57:DA:3509:HOH:O	1.94	0.85
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.30	0.85
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.11	0.85
22:DA:1817:G:OP1	24:DC:62:TYR:OH	1.92	0.85
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1266:G:O2'	22:DA:2012:G:O6	1.95	0.85
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.58	0.84
22:BA:2258:C:O2'	22:BA:2427:C:OP2	1.95	0.84
2:CB:221:VAL:O	2:CB:223:GLU:N	2.10	0.84
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.96	0.84
50:D2:43:THR:O	50:D2:44:VAL:HB	1.77	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
31:BJ:49:ASP:OD1	31:BJ:121:LYS:HE3	1.77	0.84
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.92	0.84
22:BA:819:A:C4	22:BA:1189:A:C2	2.66	0.84
35:DN:87:PHE:O	35:DN:89:SER:N	2.11	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.07	0.84
5:CE:102:GLY:O	5:CE:104:GLY:N	2.11	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.83
17:AQ:68:SER:O	17:AQ:70:THR:N	2.11	0.83
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.79	0.83
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.12	0.83
22:DA:618:G:O6	57:DA:3291:HOH:O	1.96	0.83
5:CE:99:ALA:O	5:CE:122:ASN:ND2	2.12	0.83
22:DA:2010:G:N7	57:DA:3371:HOH:O	2.10	0.83
2:AB:136:MET:N	2:AB:136:MET:SD	2.52	0.83
22:BA:756:A:N7	57:BA:3300:HOH:O	2.12	0.83
22:DA:1827:U:O2'	22:DA:1970:A:N3	2.11	0.83
1:AA:536:C:OP1	57:AA:1885:HOH:O	1.97	0.83
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.61	0.82
29:BH:83:LYS:CD	1:CA:55:A:O2'	2.26	0.82
22:DA:732:C:OP2	57:DA:3298:HOH:O	1.95	0.82
22:BA:1823:G:N7	57:BA:3658:HOH:O	2.11	0.82
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.14	0.82
22:BA:2448:A:OP2	57:BA:3686:HOH:O	1.95	0.82
33:BL:87:GLY:O	33:BL:89:VAL:N	2.12	0.82
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.82
22:BA:2211:A:O2'	22:BA:2212:A:OP1	1.98	0.82
1:AA:976:G:OP2	1:AA:1358:U:O2'	1.98	0.82
22:BA:2243:U:OP1	57:BA:3743:HOH:O	1.98	0.82
22:BA:826:U:OP2	57:BA:3702:HOH:O	1.97	0.82
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.11	0.82
22:DA:866:A:O4'	22:DA:914:G:N2	2.13	0.82
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.96	0.81
22:BA:1693:U:O2'	24:BC:14:ARG:NH2	2.13	0.81
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.13	0.81
22:BA:2800:A:H3'	22:BA:2801:G:H5'	1.62	0.81
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.63	0.81
22:BA:614:A:O2'	22:BA:615:U:OP2	1.97	0.81
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.22	0.81
7:CG:145:ALA:O	7:CG:146:GLU:HB2	1.78	0.81
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.80	0.81
22:DA:1325:U:OP1	22:DA:1647:U:O2'	1.99	0.81
18:CR:25:ASP:O	18:CR:27:ALA:N	2.13	0.81
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.28	0.81
28:DG:170:ARG:NH1	52:D4:29:ALA:O	2.14	0.81
22:BA:1494:A:O2'	22:BA:1495:A:O5'	1.98	0.81
22:DA:822:G:OP2	57:DA:3347:HOH:O	1.98	0.81
26:DE:58:LYS:NZ	26:DE:70:SER:O	2.12	0.81
13:AM:11:ASP:OD1	13:AM:12:HIS:N	2.14	0.80
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.13	0.80
1:CA:527:G:C2	1:CA:528:C:C6	2.68	0.80
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.13	0.80
22:BA:481:G:C4	22:BA:507:A:C2	2.70	0.80
26:BE:1:MET:N	26:BE:14:VAL:O	2.14	0.80
1:CA:798:U:O4	57:CA:1805:HOH:O	1.99	0.80
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.82	0.80
22:DA:1340:U:C5	22:DA:1603:A:C8	2.69	0.80
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.15	0.80
24:BC:71:LYS:NZ	24:BC:98:ASP:OD2	2.15	0.80
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.64	0.80
22:BA:195:A:C6	22:BA:198:C:C5	2.70	0.80
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.14	0.80
28:DG:158:LYS:O	28:DG:160:LYS:N	2.15	0.80
14:AN:91:GLY:O	14:AN:93:ILE:N	2.15	0.80
22:BA:2324:U:H3'	22:BA:2325:G:C5'	2.11	0.80
31:BJ:80:HIS:HB3	31:BJ:81:ILE:HG22	1.62	0.80
1:CA:581:G:OP1	15:CO:65:LYS:NZ	2.14	0.80
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.63	0.80
22:BA:1917:U:C4	22:BA:1918:A:C5	2.70	0.79
22:BA:2550:G:OP2	57:BA:3725:HOH:O	1.99	0.79
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.17	0.79
22:DA:422:A:OP2	57:DA:3561:HOH:O	1.98	0.79
22:BA:819:A:OP2	22:BA:1187:G:N2	2.15	0.79
29:BH:123:ARG:NH2	1:CA:367:U:P	2.49	0.79
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:582:C:N3	1:CA:760:G:C6	2.50	0.79
34:DM:53:MET:HE1	34:DM:103:TYR:CG	2.17	0.79
1:CA:840:C:N3	1:CA:842:U:H4'	1.97	0.79
22:DA:2243:U:OP1	57:DA:3738:HOH:O	1.99	0.79
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.00	0.79
22:BA:2748:A:N1	57:BA:3815:HOH:O	2.15	0.79
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.79
22:DA:1001:A:OP2	57:DA:3732:HOH:O	2.01	0.79
6:AF:7:VAL:O	6:AF:7:VAL:HG22	1.81	0.79
22:BA:2579:C:OP1	57:BA:3543:HOH:O	2.01	0.79
24:DC:157:SER:O	24:DC:160:THR:OG1	1.99	0.79
1:CA:32:A:C2	1:CA:33:A:C5	2.71	0.79
22:DA:668:A:N6	22:DA:670:A:O2'	2.16	0.79
22:DA:2162:G:H4'	22:DA:2163:A:OP1	1.83	0.79
1:AA:792:A:H4'	1:AA:793:U:O5'	1.82	0.78
22:BA:1083:U:O2	22:BA:1086:A:N1	2.16	0.78
22:BA:2269:G:OP1	57:BA:3512:HOH:O	2.01	0.78
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.78
22:BA:2820:A:OP2	35:BN:2:ARG:NH1	2.16	0.78
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.16	0.78
22:DA:1619:G:N7	57:DA:3644:HOH:O	2.17	0.78
24:BC:133:ARG:NH2	4:CD:174:ASP:OD2	2.17	0.78
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.13	0.78
52:B4:11:CYS:SG	56:B4:101:ZN:ZN	1.70	0.78
22:DA:1342:A:OP2	57:DA:3713:HOH:O	1.99	0.78
22:DA:1823:G:C8	57:DA:3654:HOH:O	2.34	0.78
1:AA:1504:G:O3'	57:AA:1870:HOH:O	2.02	0.78
2:AB:115:LYS:O	2:AB:117:LEU:N	2.16	0.78
22:BA:2495:G:C2'	22:BA:2496:C:H5'	2.13	0.78
22:DA:613:A:OP2	22:DA:614:A:N7	2.17	0.78
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.15	0.78
22:BA:850:U:HO2'	47:BZ:23:THR:HG1	1.29	0.78
22:DA:444:C:OP1	26:DE:40:ARG:NH1	2.17	0.78
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.66	0.78
22:DA:53:A:C8	22:DA:54:G:C8	2.71	0.78
22:BA:2550:G:P	57:BA:3725:HOH:O	2.42	0.77
22:DA:1607:C:N4	22:DA:1622:G:N7	2.32	0.77
9:AI:40:GLY:O	9:AI:41:ARG:HB2	1.82	0.77
22:BA:731:C:P	57:BA:3695:HOH:O	2.39	0.77
22:DA:1019:U:O2	22:DA:1142:A:N6	2.17	0.77
22:DA:2504:U:C5	55:DA:3001:VIF:H30	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1074:G:C4	1:AA:1102:A:C2	2.73	0.77
22:BA:733:G:OP2	57:BA:3295:HOH:O	2.01	0.77
22:DA:1265:A:OP1	57:DA:3747:HOH:O	2.00	0.77
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.64	0.77
22:BA:1061:U:O2'	22:BA:1062:G:O5'	2.01	0.77
22:BA:2714:G:OP2	57:BA:3549:HOH:O	2.01	0.77
15:CO:19:ALA:O	15:CO:20:ASN:HB2	1.85	0.77
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.83	0.77
22:BA:555:G:O2'	22:BA:556:A:OP2	2.02	0.77
22:DA:582:A:OP2	57:DA:3283:HOH:O	2.02	0.77
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.00	0.77
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	2.17	0.77
22:DA:27:G:O2'	22:DA:28:A:OP2	2.03	0.77
22:DA:2551:C:OP2	57:DA:3720:HOH:O	2.02	0.77
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.85	0.77
22:BA:747:U:C4	22:BA:2613:U:C5	2.73	0.77
24:BC:236:GLU:OE2	57:BC:303:HOH:O	2.02	0.77
1:CA:1095:U:OP2	57:CA:1852:HOH:O	2.03	0.77
1:AA:995:C:N3	1:AA:1046:A:O2'	2.17	0.77
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.18	0.77
32:BK:121:GLU:OE2	37:BP:65:SER:OG	2.00	0.77
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.83	0.77
22:DA:1335:C:N4	57:DA:3392:HOH:O	2.17	0.77
22:DA:1359:A:C8	22:DA:1373:A:C2	2.73	0.77
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.18	0.77
22:DA:2575:C:OP2	57:DA:3709:HOH:O	2.03	0.76
22:DA:46:G:C2	22:DA:47:C:C5	2.73	0.76
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.20	0.76
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.76
22:BA:475:C:C4	22:BA:481:G:O6	2.38	0.76
22:BA:500:G:N2	22:BA:502:A:H3'	2.01	0.76
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.33	0.76
22:BA:2847:U:OP1	37:BP:96:LYS:NZ	2.17	0.76
22:DA:1344:U:O2'	22:DA:1345:C:OP2	2.03	0.76
1:AA:1406:U:C5	1:AA:1407:C:C5	2.74	0.76
29:BH:90:LEU:O	1:CA:358:U:H4'	1.86	0.76
35:BN:103:ARG:HD3	35:BN:110:MET:HE2	1.67	0.76
22:DA:618:G:N7	57:DA:3289:HOH:O	2.18	0.76
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.02	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
2:AB:73:LYS:O	2:AB:75:ALA:N	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.18	0.76
1:AA:1129:C:O2	1:AA:1130:A:N6	2.18	0.76
24:BC:204:VAL:O	24:BC:205:LEU:HB2	1.86	0.76
22:DA:1377:G:OP2	57:DA:3394:HOH:O	2.04	0.76
22:DA:2057:G:OP2	57:DA:3486:HOH:O	2.03	0.76
12:AL:24:LEU:O	12:AL:26:ALA:N	2.19	0.76
22:BA:495:G:O4'	40:BS:57:ASN:ND2	2.18	0.76
22:BA:686:U:H2'	22:BA:788:A:C2	2.21	0.76
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.19	0.76
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.33	0.76
17:CQ:21:ILE:N	17:CQ:48:ASP:OD1	2.17	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
22:BA:2199:A:C1'	29:BH:28:ASN:ND2	2.48	0.76
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.01	0.76
22:BA:64:A:H2'	22:BA:65:U:C6	2.20	0.75
22:BA:627:A:C6	22:BA:637:A:C8	2.75	0.75
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.67	0.75
1:CA:55:A:N7	1:CA:56:U:C4	2.54	0.75
1:CA:209:U:H4'	1:CA:210:C:OP2	1.85	0.75
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.00	0.75
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.20	0.75
30:BI:122:ILE:O	30:BI:126:THR:OG1	2.05	0.75
41:BT:1:MET:HB2	41:BT:2:ILE:HD12	1.65	0.75
1:CA:378:G:C2	1:CA:386:C:O2	2.39	0.75
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.19	0.75
2:AB:160:ALA:O	2:AB:161:LEU:HB2	1.86	0.75
22:BA:927:A:H2'	22:BA:928:A:C8	2.21	0.75
22:BA:1474:U:O4	22:BA:1475:G:N2	2.20	0.75
22:BA:2291:U:H2'	22:BA:2292:U:H6	1.48	0.75
39:BR:24:LYS:HA	39:BR:94:THR:CG2	2.16	0.75
22:DA:118:A:C8	22:DA:119:A:C8	2.73	0.75
22:DA:2209:G:C2	22:DA:2216:G:C2	2.73	0.75
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.02	0.75
2:AB:26:LYS:NZ	2:AB:194:ASP:OD2	2.13	0.75
38:BQ:41:LYS:HD3	38:BQ:45:TYR:CZ	2.21	0.75
43:BV:6:ALA:HB1	43:BV:40:ILE:CG2	2.17	0.75
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.19	0.75
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.27	0.75
22:BA:1779:U:H5	22:BA:1784:A:N7	1.84	0.75
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	1.68	0.75
13:CM:6:GLY:O	13:CM:8:ASN:N	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
4:AD:151:LYS:HA	4:AD:178:MET:HE1	1.69	0.75
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.44	0.75
22:BA:2097:A:C2	22:BA:2193:G:C6	2.74	0.75
28:BG:104:ASN:ND2	28:BG:114:ASP:OD1	2.18	0.75
22:DA:447:A:H5'	22:DA:449:A:C5	2.21	0.75
17:CQ:48:ASP:N	17:CQ:48:ASP:OD2	2.17	0.75
22:DA:1289:C:O2'	22:DA:1330:C:H4'	1.87	0.75
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.67	0.75
22:BA:1779:U:C5	22:BA:1784:A:N7	2.55	0.74
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.69	0.74
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.04	0.74
1:AA:533:A:OP1	57:AA:1848:HOH:O	2.05	0.74
1:CA:978:A:OP2	1:CA:1362:A:N6	2.20	0.74
1:CA:1101:A:H61	2:CB:102:THR:HG21	1.51	0.74
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.20	0.74
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.20	0.74
3:AC:205:GLY:O	3:AC:206:GLU:HG2	1.87	0.74
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.70	0.74
22:BA:1203:U:O4	22:BA:1204:A:C6	2.40	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
23:DB:29:A:O2'	23:DB:58:A:N1	2.19	0.74
22:BA:278:A:C2	22:BA:362:A:C8	2.75	0.74
22:BA:2516:A:C2	22:BA:2569:G:C2	2.75	0.74
25:BD:125:TRP:CD2	25:BD:160:LYS:HD3	2.22	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.87	0.74
22:BA:2516:A:C2	22:BA:2569:G:N3	2.55	0.74
1:CA:1362:A:OP1	1:CA:1362:A:H4'	1.86	0.74
2:CB:210:VAL:O	2:CB:214:LEU:HB2	1.88	0.74
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.22	0.74
25:DD:33:ARG:NH2	25:DD:74:GLU:O	2.21	0.74
1:AA:1151:A:O2'	1:AA:1152:A:O5'	2.05	0.74
53:B5:59:VAL:HG21	53:B5:167:ASP:C	2.12	0.74
1:CA:919:A:C2	1:CA:920:U:C5	2.76	0.74
3:CC:175:LEU:HD12	3:CC:175:LEU:O	1.88	0.74
22:DA:1847:A:HO2'	22:DA:1848:A:H8	1.34	0.74
38:BQ:36:PHE:CE1	38:BQ:40:ILE:HD11	2.23	0.74
5:CE:69:ARG:O	5:CE:70:ASN:HB2	1.87	0.74
22:DA:1315:C:OP2	57:DA:3762:HOH:O	2.06	0.74
27:BF:41:GLY:O	27:BF:43:ALA:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:169:GLU:O	2:CB:171:ILE:N	2.21	0.74
1:AA:108:G:N3	1:AA:108:G:H5'	2.03	0.74
22:BA:1171:G:N2	22:BA:1178:C:O2	2.20	0.74
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.21	0.73
10:AJ:47:GLU:OE2	14:AN:76:LYS:NZ	2.21	0.73
22:BA:1253:A:N7	57:BA:3336:HOH:O	2.20	0.73
22:BA:1910:G:H2'	22:BA:1911:U:O4'	1.88	0.73
22:BA:1838:C:C5	22:BA:1899:A:C6	2.77	0.73
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.37	0.73
1:CA:66:A:C6	1:CA:67:C:C5	2.76	0.73
22:DA:2125:G:N1	22:DA:2171:A:OP1	2.20	0.73
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.24	0.73
13:AM:10:PRO:O	13:AM:11:ASP:HB3	1.87	0.73
22:BA:2127:G:H4'	22:BA:2128:G:OP1	1.87	0.73
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.23	0.73
29:BH:86:ASP:HB2	1:CA:359:G:O2'	1.88	0.73
34:BM:110:GLU:OE2	34:BM:114:ARG:NH2	2.21	0.73
42:BU:14:LEU:HD11	42:BU:71:ALA:HB2	1.70	0.73
10:CJ:63:ASP:OD1	14:CN:85:ARG:NH1	2.22	0.73
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.70	0.73
22:DA:1378:A:O2'	57:DA:3753:HOH:O	2.06	0.73
22:DA:1428:C:O2'	22:DA:1569:A:OP2	2.02	0.73
29:DH:27:ARG:HE	45:DX:60:ASP:CG	1.96	0.73
1:AA:131:A:H2'	1:AA:132:C:C6	2.23	0.73
5:AE:41:ASP:OD1	5:AE:43:ASN:N	2.22	0.73
1:CA:552:U:O2'	12:CL:83:ARG:O	2.05	0.73
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.22	0.73
4:CD:145:ILE:HG21	4:CD:150:LYS:HA	1.70	0.73
22:BA:1838:C:C5	22:BA:1899:A:C5	2.77	0.73
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.19	0.73
32:DK:70:ARG:HD3	32:DK:76:VAL:HB	1.69	0.73
22:BA:563:A:C2	22:BA:564:C:C2	2.77	0.73
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.69	0.73
22:DA:2269:G:OP1	57:DA:3508:HOH:O	2.06	0.73
22:BA:30:G:O3'	57:BA:3705:HOH:O	2.05	0.73
1:CA:495:A:C2	1:CA:496:A:C6	2.77	0.73
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.71	0.73
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.04	0.73
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.22	0.73
22:BA:1916:A:H2'	22:BA:1917:U:O4'	1.88	0.73
45:BX:2:SER:O	45:BX:4:VAL:N	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:542:G:C2	1:CA:543:U:C5	2.76	0.73
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	1.70	0.73
1:AA:1505:G:P	57:AA:1870:HOH:O	2.46	0.73
2:AB:82:ASP:O	2:AB:84:ALA:N	2.22	0.73
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.71	0.73
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.71	0.73
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.24	0.73
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.69	0.73
22:BA:2311:A:N3	27:BF:85:ILE:HD11	2.04	0.73
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.22	0.73
41:DT:17:SER:O	41:DT:19:LYS:N	2.22	0.73
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.37	0.72
22:DA:488:G:N2	22:DA:493:G:O6	2.22	0.72
22:DA:1450:G:C6	22:DA:1451:C:N4	2.57	0.72
1:AA:515:G:N7	57:AA:1847:HOH:O	2.22	0.72
1:CA:268:U:H2'	1:CA:269:C:C6	2.24	0.72
2:CB:86:SER:O	2:CB:87:CYS:O	2.07	0.72
7:AG:146:GLU:HA	7:AG:149:LYS:HB2	1.70	0.72
22:BA:2199:A:H1'	29:BH:28:ASN:ND2	2.04	0.72
1:AA:1014:A:N7	1:AA:1015:G:C5	2.57	0.72
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.22	0.72
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.05	0.72
42:BU:72:ILE:HD13	42:BU:83:VAL:HG23	1.70	0.72
11:CK:101:ASN:C	11:CK:101:ASN:OD1	2.32	0.72
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.19	0.72
22:BA:2839:G:O2'	35:BN:49:GLU:OE1	2.08	0.72
1:AA:144:G:C4	1:AA:179:A:C2	2.78	0.72
5:AE:149:SER:O	5:AE:153:VAL:HG12	1.89	0.72
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.23	0.72
35:BN:32:GLU:OE1	35:BN:86:ARG:NH2	2.23	0.72
5:CE:94:VAL:HG13	5:CE:111:MET:HE1	1.72	0.72
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.89	0.72
1:AA:64:G:C8	1:AA:99:C:N4	2.58	0.72
22:BA:1274:A:N1	22:BA:1644:C:O2'	2.19	0.72
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.23	0.72
22:DA:1167:C:H2'	22:DA:1168:G:H5'	1.70	0.72
22:DA:2268:A:OP1	57:DA:3508:HOH:O	2.07	0.72
25:DD:148:GLN:OE1	25:DD:148:GLN:N	2.23	0.72
1:AA:951:G:OP2	13:AM:101:ARG:NH2	2.23	0.72
1:AA:1197:A:OP2	57:AA:1784:HOH:O	2.07	0.72
22:BA:572:A:H5"	22:BA:573:U:OP2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.90	0.72
22:BA:1925:C:H5"	22:BA:1926:U:O4	1.89	0.72
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.25	0.72
1:CA:55:A:C6	1:CA:56:U:C2	2.77	0.72
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.72
41:DT:54:GLU:HB3	41:DT:88:LYS:HG3	1.72	0.72
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.23	0.71
22:BA:508:A:H4'	22:BA:509:C:OP2	1.89	0.71
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.32	0.71
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.25	0.71
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.90	0.71
22:BA:253:C:OP2	51:B3:5:LYS:HE3	1.89	0.71
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.26	0.71
28:BG:109:PHE:HE2	28:BG:152:ARG:CZ	2.03	0.71
39:DR:58:VAL:HG13	39:DR:102:SER:HB2	1.72	0.71
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.05	0.71
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.72	0.71
12:CL:34:CYS:HA	12:CL:55:VAL:HA	1.71	0.71
16:CP:43:ALA:O	16:CP:44:SER:OG	2.04	0.71
42:DU:38:GLY:HA2	42:DU:41:LEU:HD21	1.71	0.71
1:AA:1048:G:N3	1:AA:1050:G:C8	2.59	0.71
1:AA:1074:G:C2	1:AA:1075:U:C2	2.79	0.71
1:AA:1377:A:N3	7:AG:2:PRO:HG3	2.06	0.71
8:AH:2:SER:C	8:AH:4:GLN:H	1.98	0.71
22:BA:1838:C:C2	22:BA:1898:U:C5	2.79	0.71
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.15	0.71
24:DC:70:ASN:O	24:DC:72:ASP:N	2.23	0.71
1:AA:145:G:N2	1:AA:178:C:C2	2.59	0.71
9:AI:30:ILE:HD11	9:AI:38:TYR:CD2	2.24	0.71
14:CN:91:GLY:O	14:CN:93:ILE:N	2.24	0.71
22:DA:2843:G:N2	22:DA:2875:C:C2	2.58	0.71
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.25	0.71
23:BB:78:A:N6	23:BB:98:G:O2'	2.23	0.71
29:BH:89:LYS:HB3	1:CA:359:G:H5"	1.72	0.71
22:DA:846:U:O2'	22:DA:847:U:O5'	2.08	0.71
1:CA:499:A:C6	1:CA:547:A:C8	2.78	0.71
1:CA:689:C:OP2	11:CK:53:ARG:NH2	2.24	0.71
4:CD:168:PRO:HB2	4:CD:171:LEU:CD1	2.21	0.71
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.23	0.71
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.21	0.71
29:BH:123:ARG:CZ	1:CA:367:U:OP2	2.39	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:405:U:O4	4:CD:2:ALA:N	2.23	0.71
1:CA:679:C:O2	1:CA:712:A:C2	2.43	0.71
4:CD:173:VAL:O	4:CD:179:GLU:O	2.07	0.71
22:DA:2750:A:O2'	22:DA:2752:C:N4	2.24	0.71
19:AS:29:LYS:HB3	19:AS:30:PRO:CD	2.21	0.70
22:BA:70:G:H4'	22:BA:71:A:OP1	1.90	0.70
22:BA:2856:A:N6	22:BA:2857:G:C6	2.59	0.70
50:B2:43:THR:O	50:B2:44:VAL:HG12	1.90	0.70
1:CA:374:A:H5"	1:CA:452:A:N1	2.06	0.70
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.25	0.70
22:DA:1153:C:P	57:DA:3360:HOH:O	2.48	0.70
1:AA:1461:G:C5	1:AA:1462:C:C5	2.78	0.70
22:BA:455:C:N3	22:BA:472:A:H2'	2.06	0.70
22:BA:1417:C:H2'	22:BA:1418:G:O4'	1.90	0.70
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.26	0.70
1:AA:322:C:O2'	20:AT:18:ARG:HG3	1.90	0.70
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.08	0.70
22:BA:1085:A:C6	22:BA:1086:A:N6	2.59	0.70
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.25	0.70
22:DA:488:G:C2	22:DA:493:G:O6	2.45	0.70
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.06	0.70
22:BA:1435:G:O2'	22:BA:1436:G:H5'	1.91	0.70
38:BQ:41:LYS:HA	38:BQ:44:GLN:HG3	1.71	0.70
1:CA:86:G:H1'	1:CA:87:C:O4'	1.90	0.70
42:DU:7:ARG:O	42:DU:25:VAL:HB	1.92	0.70
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.23	0.70
1:CA:319:G:O6	57:CA:1734:HOH:O	2.06	0.70
1:CA:933:G:N7	7:CG:3:ARG:NH2	2.39	0.70
2:CB:54:LEU:HD12	2:CB:220:THR:HG21	1.74	0.70
22:DA:2143:C:H2'	22:DA:2144:G:O4'	1.92	0.70
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	1.91	0.70
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.90	0.70
24:BC:78:VAL:HG21	24:BC:110:LEU:HD21	1.74	0.70
8:CH:96:MET:HB2	8:CH:99:LEU:O	1.92	0.70
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.27	0.70
2:AB:104:TRP:CZ2	2:AB:154:MET:HG2	2.26	0.70
11:AK:76:GLU:O	22:BA:2141:G:H5"	1.92	0.70
22:BA:195:A:N7	57:BA:3763:HOH:O	2.23	0.70
22:BA:1277:G:H5'	35:BN:20:MET:HE2	1.73	0.70
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.07	0.70
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.25	0.70
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.92	0.70
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.45	0.70
22:BA:1925:C:H4'	22:BA:1926:U:C5	2.26	0.70
26:BE:171:ASP:C	26:BE:171:ASP:OD1	2.34	0.70
4:CD:44:ARG:NE	4:CD:44:ARG:HA	2.06	0.70
22:DA:1187:G:N7	57:DA:3578:HOH:O	2.24	0.70
22:DA:1738:G:O2'	22:DA:1739:A:O5'	2.09	0.70
1:AA:657:U:O2	15:AO:22:THR:HG23	1.92	0.70
2:AB:15:HIS:C	2:AB:15:HIS:CD2	2.69	0.70
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.21	0.70
22:BA:1002:G:N7	57:BA:3742:HOH:O	2.23	0.70
22:BA:1086:A:O2'	22:BA:1087:G:N7	2.24	0.70
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.44	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.75	0.70
4:CD:151:LYS:O	4:CD:152:GLN:NE2	2.24	0.70
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.74	0.70
10:CJ:65:TYR:HB3	14:CN:96:LEU:HD11	1.74	0.70
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.90	0.70
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.25	0.70
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.07	0.70
22:BA:1344:U:H4'	22:BA:1345:C:OP2	1.90	0.70
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.56	0.70
22:BA:2066:C:OP1	57:BA:3509:HOH:O	2.10	0.70
22:BA:2502:G:C5'	22:BA:2503:A:H5"	2.22	0.70
1:CA:728:A:H2'	1:CA:729:A:C8	2.27	0.70
22:DA:1317:G:H2'	22:DA:1318:U:O4'	1.91	0.70
1:AA:1125:U:C5	1:AA:1127:G:C6	2.80	0.69
22:BA:2516:A:N6	22:BA:2517:C:N4	2.39	0.69
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.74	0.69
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.56	0.69
1:CA:568:G:O6	12:CL:2:ALA:HB2	1.92	0.69
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.25	0.69
22:DA:197:A:H62	22:DA:2430:A:H2'	1.56	0.69
22:DA:469:G:O6	50:D2:37:LYS:HE2	1.92	0.69
22:DA:2507:C:OP1	57:DA:3710:HOH:O	2.08	0.69
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.60	0.69
2:AB:85:LEU:HG	2:AB:86:SER:N	2.05	0.69
22:BA:2151:U:H2'	22:BA:2152:G:C8	2.26	0.69
40:BS:66:ILE:HA	40:BS:69:LEU:CD2	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.72	0.69
22:DA:2575:C:OP1	57:DA:3711:HOH:O	2.10	0.69
26:DE:21:ARG:O	26:DE:114:ARG:NH2	2.24	0.69
22:BA:686:U:OP2	57:BA:3723:HOH:O	2.10	0.69
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.23	0.69
1:AA:1368:A:OP1	10:AJ:64:GLN:NE2	2.26	0.69
22:BA:1115:G:N3	22:BA:1116:G:C8	2.61	0.69
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.69
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.25	0.69
48:D0:55:ILE:HG22	48:D0:56:ALA:N	2.06	0.69
1:AA:562:U:OP2	12:AL:14:ARG:NH1	2.25	0.69
1:AA:1014:A:N7	1:AA:1015:G:C6	2.61	0.69
1:CA:1408:A:C2	1:CA:1494:G:C4	2.81	0.69
10:CJ:5:ARG:HG3	10:CJ:6:ILE:HG13	1.74	0.69
1:AA:568:G:C2	1:AA:569:C:C5	2.81	0.69
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.22	0.69
13:AM:3:ARG:CG	13:AM:4:ILE:N	2.56	0.69
22:BA:1154:G:OP2	38:BQ:58:ARG:NH1	2.25	0.69
22:BA:1936:A:C8	22:BA:1945:G:O6	2.46	0.69
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.17	0.69
1:CA:154:U:O4	1:CA:155:A:N6	2.26	0.69
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.22	0.69
1:AA:96:U:O2'	1:AA:97:G:P	2.50	0.69
1:AA:452:A:N6	1:AA:480:U:O2	2.26	0.69
4:AD:168:PRO:HG2	4:AD:171:LEU:HD11	1.75	0.69
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.40	0.69
22:BA:465:G:H2'	22:BA:466:A:C8	2.28	0.69
22:BA:1073:A:C3'	22:BA:1074:G:H5"	2.23	0.69
22:BA:1186:G:OP2	57:BA:3601:HOH:O	2.10	0.69
22:BA:2305:U:O2'	27:BF:133:ARG:NE	2.25	0.69
22:BA:2564:A:C6	22:BA:2565:A:N1	2.60	0.69
24:BC:13:ARG:HA	24:BC:16:VAL:HG23	1.75	0.69
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.58	0.69
9:CI:90:TYR:O	9:CI:91:ASP:CG	2.36	0.69
11:CK:17:SER:O	11:CK:80:LYS:N	2.26	0.69
22:DA:733:G:OP2	57:DA:3296:HOH:O	2.10	0.69
22:DA:777:G:C2	22:DA:778:G:C8	2.81	0.69
22:DA:1638:C:H4'	22:DA:2710:C:O2	1.93	0.69
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.28	0.69
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.28	0.69
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.74	0.69
4:CD:198:HIS:CE1	4:CD:199:LEU:HD23	2.28	0.69
1:AA:68:G:C5	1:AA:69:G:H1'	2.28	0.69
10:AJ:52:LEU:HB3	14:AN:81:ARG:NE	2.08	0.69
22:BA:370:G:N7	57:BA:3562:HOH:O	2.26	0.69
22:BA:2595:G:N2	22:BA:2598:A:OP2	2.25	0.69
17:CQ:46:VAL:HG21	17:CQ:61:ILE:HD11	1.75	0.69
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.26	0.69
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.08	0.69
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.93	0.68
3:AC:77:ILE:HA	3:AC:84:VAL:HG23	1.75	0.68
22:BA:2061:G:O5'	57:BA:3491:HOH:O	2.10	0.68
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.74	0.68
39:BR:49:ILE:HB	39:BR:52:PRO:HA	1.74	0.68
52:B4:11:CYS:SG	52:B4:33:HIS:ND1	2.66	0.68
22:DA:1010:A:N7	57:DA:3778:HOH:O	2.26	0.68
4:AD:123:ILE:HD13	4:AD:123:ILE:N	2.08	0.68
9:AI:99:ARG:O	9:AI:102:GLY:N	2.25	0.68
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	1.93	0.68
22:BA:2502:G:H5"	22:BA:2503:A:H5"	1.75	0.68
48:B0:55:ILE:O	48:B0:56:ALA:CB	2.40	0.68
1:CA:527:G:N1	1:CA:528:C:C5	2.61	0.68
6:CF:88:MET:HE3	18:CR:64:TYR:CD2	2.28	0.68
22:DA:21:A:C2	22:DA:520:G:C2	2.80	0.68
22:DA:479:A:H4'	22:DA:480:A:OP1	1.93	0.68
33:DL:77:ILE:HG23	33:DL:81:ASP:OD2	1.93	0.68
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.08	0.68
22:BA:137:U:H2'	22:BA:140:C:C2	2.28	0.68
22:BA:818:G:N7	57:BA:3580:HOH:O	2.25	0.68
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.28	0.68
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.08	0.68
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.28	0.68
22:DA:2261:C:C2	22:DA:2280:G:N2	2.62	0.68
1:AA:328:C:O2	1:AA:328:C:H2'	1.92	0.68
2:AB:83:ALA:HA	2:AB:86:SER:OG	1.94	0.68
4:AD:78:GLU:OE2	4:AD:81:ARG:NH1	2.26	0.68
22:BA:819:A:N3	22:BA:1189:A:C2	2.61	0.68
22:BA:2515:C:O2	22:BA:2570:G:C2	2.47	0.68
23:DB:57:A:H1'	27:DF:27:GLN:HA	1.75	0.68
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.23	0.68
1:AA:11:G:C5	1:AA:12:U:C5	2.81	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.27	0.68
41:BT:2:ILE:HA	41:BT:3:ARG:C	2.18	0.68
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.75	0.68
22:DA:834:G:H1'	22:DA:2358:A:N3	2.08	0.68
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	1.76	0.68
1:AA:1395:C:HO2'	1:AA:1401:G:HO2'	1.41	0.68
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	1.75	0.68
16:AP:39:PHE:CD2	16:AP:74:LEU:HD11	2.28	0.68
22:BA:619:G:O6	57:BA:3291:HOH:O	2.10	0.68
22:BA:1265:A:OP1	57:BA:3752:HOH:O	2.11	0.68
40:BS:83:LYS:O	40:BS:84:ARG:HD3	1.94	0.68
52:B4:27:CYS:SG	56:B4:101:ZN:ZN	1.81	0.68
53:B5:42:VAL:O	53:B5:179:ALA:N	2.26	0.68
1:CA:1244:G:C6	1:CA:1245:C:N4	2.62	0.68
10:AJ:48:ARG:NH1	14:AN:101:TRP:CE3	2.62	0.68
22:BA:1414:C:C4	22:BA:1415:U:C5	2.81	0.68
22:BA:2578:G:N7	25:BD:145:SER:HB2	2.09	0.68
32:BK:91:SER:O	32:BK:92:GLU:C	2.36	0.68
32:BK:107:LEU:O	32:BK:109:SER:N	2.27	0.68
36:BO:100:HIS:O	36:BO:104:GLN:HB3	1.94	0.68
1:CA:31:G:N7	1:CA:306:A:H1'	2.09	0.68
1:CA:505:G:C6	1:CA:535:A:C2	2.82	0.68
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.08	0.68
38:DQ:79:PHE:CZ	38:DQ:83:LEU:HD11	2.28	0.68
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	1.75	0.68
22:BA:2078:C:O2'	22:BA:2079:U:H5'	1.94	0.68
22:BA:2385:C:O2'	22:BA:2386:A:H5'	1.93	0.68
23:BB:30:C:H2'	23:BB:31:C:H5'	1.75	0.68
14:CN:61:ARG:O	14:CN:62:ASN:HB2	1.94	0.68
22:DA:764:A:N1	22:DA:1789:A:O2'	2.27	0.68
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.76	0.68
22:BA:588:U:H2'	22:BA:589:U:C6	2.29	0.68
22:DA:485:C:C2	22:DA:496:G:N2	2.62	0.68
25:DD:140:HIS:NE2	57:DD:302:HOH:O	2.13	0.68
37:BP:15:GLN:O	37:BP:16:ASP:HB3	1.94	0.68
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.93	0.68
22:BA:973:A:C8	22:BA:1188:U:N3	2.62	0.67
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.58	0.67
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.27	0.67
12:CL:21:VAL:O	12:CL:23:ALA:N	2.27	0.67
22:DA:1060:U:O4'	22:DA:1062:G:H5'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:71:A:H3'	1:AA:71:A:OP2	1.93	0.67
1:AA:983:A:N3	1:AA:983:A:H2'	2.08	0.67
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.09	0.67
7:AG:146:GLU:HA	7:AG:149:LYS:CB	2.24	0.67
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.10	0.67
21:AU:4:ILE:HA	21:AU:20:LYS:HE3	1.75	0.67
22:BA:2310:C:C4	27:BF:77:PHE:CZ	2.81	0.67
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.29	0.67
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.75	0.67
1:CA:683:G:N2	11:CK:39:GLY:O	2.27	0.67
1:CA:976:G:OP2	1:CA:1358:U:O2'	2.12	0.67
14:CN:21:PHE:O	14:CN:23:LYS:N	2.27	0.67
22:DA:686:U:OP2	57:DA:3718:HOH:O	2.11	0.67
22:DA:724:U:H2'	22:DA:725:G:O4'	1.94	0.67
22:DA:948:C:O2	22:DA:984:A:O2'	2.11	0.67
1:AA:91:U:H2'	1:AA:92:U:O4'	1.95	0.67
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.29	0.67
12:AL:85:GLY:O	12:AL:96:HIS:ND1	2.28	0.67
22:BA:622:G:P	57:BA:3293:HOH:O	2.51	0.67
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.08	0.67
22:BA:2728:U:O2'	22:BA:2729:G:P	2.53	0.67
24:BC:70:ASN:O	24:BC:72:ASP:N	2.27	0.67
52:B4:33:HIS:O	52:B4:35:GLN:HG3	1.94	0.67
1:CA:72:A:C6	1:CA:73:C:N4	2.62	0.67
1:CA:518:C:H2'	1:CA:530:G:C8	2.29	0.67
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.43	0.67
20:CT:6:SER:OG	20:CT:7:ALA:N	2.23	0.67
22:BA:1582:C:O2'	22:BA:1585:C:N3	2.26	0.67
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.92	0.67
26:BE:7:ASP:O	26:BE:9:GLN:N	2.27	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.76	0.67
39:DR:81:LYS:HD3	39:DR:81:LYS:N	2.10	0.67
1:AA:1079:G:OP1	57:AA:1791:HOH:O	2.12	0.67
5:AE:95:PHE:CZ	5:AE:97:GLN:HG3	2.29	0.67
21:AU:4:ILE:N	21:AU:20:LYS:HE3	2.09	0.67
22:BA:2061:G:O6	55:BA:3001:VIF:H29	1.94	0.67
22:BA:2392:A:O2'	33:BL:60:ARG:O	2.12	0.67
25:BD:133:THR:O	25:BD:134:HIS:HB2	1.94	0.67
34:BM:28:PHE:HB2	34:BM:104:GLU:OE2	1.94	0.67
35:DN:117:ASP:O	35:DN:118:ARG:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1504:G:H3'	57:AA:1803:HOH:O	1.93	0.67
1:AA:1525:G:O6	57:AA:1869:HOH:O	2.08	0.67
2:AB:103:ASN:O	2:AB:106:THR:N	2.27	0.67
22:BA:18:U:O4	57:BA:3205:HOH:O	2.10	0.67
22:BA:197:A:N6	22:BA:2430:A:H2'	2.09	0.67
22:BA:747:U:C4	22:BA:2613:U:C4	2.82	0.67
1:CA:404:G:O6	4:CD:2:ALA:N	2.28	0.67
22:BA:276:U:H2'	22:BA:276:U:O2	1.95	0.67
22:BA:2554:U:C4	22:BA:2555:U:O4	2.47	0.67
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.77	0.67
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.28	0.67
1:CA:111:G:O6	1:CA:330:C:N4	2.27	0.67
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.30	0.67
1:AA:992:U:C2	1:AA:1043:G:N7	2.63	0.67
22:BA:1142:A:N3	22:BA:1144:A:C8	2.63	0.67
39:BR:46:GLU:N	39:BR:46:GLU:OE1	2.26	0.67
1:CA:1055:A:C6	1:CA:1206:G:C5	2.83	0.67
1:CA:1298:U:O2	1:CA:1298:U:H2'	1.94	0.67
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.28	0.67
13:CM:40:ALA:O	13:CM:42:ASP:N	2.28	0.67
16:CP:42:ILE:O	16:CP:44:SER:N	2.23	0.67
22:DA:1380:G:OP2	57:DA:3753:HOH:O	2.12	0.67
5:AE:99:ALA:O	5:AE:101:GLU:N	2.28	0.67
22:BA:1422:G:C4	22:BA:1423:G:C8	2.83	0.67
28:BG:174:ALA:O	28:BG:175:LYS:HB3	1.95	0.67
22:DA:1809:A:C6	22:DA:1810:A:C6	2.83	0.67
22:DA:1826:G:C5	22:DA:1827:U:C5	2.82	0.67
24:DC:30:PHE:CE2	24:DC:32:PRO:HG2	2.29	0.67
24:DC:69:ARG:HD3	24:DC:104:ILE:HG21	1.74	0.67
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.25	0.67
27:BF:67:ILE:HD12	27:BF:67:ILE:O	1.94	0.67
31:BJ:81:ILE:HG12	31:BJ:82:GLY:N	2.09	0.67
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.28	0.67
1:CA:1388:C:C2	1:CA:1389:C:C5	2.83	0.67
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.95	0.67
27:DF:32:GLU:OE1	27:DF:92:ARG:NH1	2.28	0.67
1:AA:173:U:C2	1:AA:197:A:N1	2.63	0.66
21:AU:35:ARG:NH2	57:AU:101:HOH:O	2.22	0.66
22:BA:714:U:O2'	22:BA:716:A:N7	2.28	0.66
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.66
36:BO:55:GLU:OE1	36:BO:81:ARG:NH1	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:51:SER:O	21:CU:53:VAL:N	2.28	0.66
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.95	0.66
22:DA:2838:G:OP1	57:DA:3806:HOH:O	2.13	0.66
41:DT:14:PRO:HD2	46:DY:33:ALA:HB1	1.76	0.66
1:AA:598:U:H4'	8:AH:86:TYR:CD1	2.30	0.66
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.28	0.66
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.96	0.66
39:BR:49:ILE:HB	39:BR:51:VAL:O	1.95	0.66
51:B3:17:THR:HG21	51:B3:49:MET:HE1	1.75	0.66
2:CB:73:LYS:O	2:CB:75:ALA:N	2.28	0.66
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.76	0.66
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.48	0.66
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.10	0.66
44:DW:21:LEU:HA	44:DW:39:ARG:HB2	1.77	0.66
11:AK:29:ASN:OD1	11:AK:47:ALA:HB3	1.93	0.66
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.78	0.66
21:AU:14:VAL:HG13	21:AU:16:LEU:CD2	2.25	0.66
22:BA:357:C:H2'	22:BA:358:U:C6	2.30	0.66
22:BA:826:U:P	57:BA:3702:HOH:O	2.53	0.66
22:BA:945:A:C8	57:BA:3263:HOH:O	2.48	0.66
1:CA:532:A:N6	3:CC:192:THR:OG1	2.27	0.66
7:CG:12:ILE:HD12	7:CG:24:ALA:HB1	1.75	0.66
22:DA:1139:G:N2	22:DA:1140:C:C2	2.63	0.66
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.10	0.66
1:AA:144:G:C5	1:AA:179:A:C2	2.82	0.66
1:AA:663:A:N1	1:AA:743:A:C2	2.63	0.66
22:BA:974:G:C8	22:BA:989:G:C2	2.84	0.66
22:BA:1180:U:H2'	22:BA:1181:U:H5'	1.77	0.66
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.31	0.66
22:BA:1936:A:C8	22:BA:1945:G:C6	2.83	0.66
22:BA:2516:A:N6	22:BA:2517:C:H42	1.93	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
34:BM:136:MET:CE	43:BV:57:TYR:CD2	2.78	0.66
2:CB:99:GLY:O	2:CB:101:LEU:N	2.28	0.66
22:DA:46:G:C2	22:DA:47:C:C6	2.84	0.66
1:AA:1033:G:H2'	1:AA:1034:G:H5'	1.77	0.66
1:AA:1228:C:OP2	13:AM:107:ARG:NH2	2.29	0.66
3:AC:139:GLN:O	3:AC:141:ALA:N	2.29	0.66
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.26	0.66
10:AJ:12:ALA:HB2	10:AJ:96:VAL:HA	1.78	0.66
22:BA:933:A:H5'	22:BA:934:U:OP2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.31	0.66
22:BA:2291:U:H2'	22:BA:2292:U:C5	2.31	0.66
22:BA:2674:G:H4'	32:BK:30:ARG:HD2	1.77	0.66
24:BC:71:LYS:HE3	24:BC:96:TYR:CD2	2.30	0.66
39:BR:76:LYS:HD2	39:BR:85:LYS:HD2	1.76	0.66
41:BT:19:LYS:O	41:BT:21:SER:N	2.29	0.66
43:BV:80:HIS:CE1	43:BV:83:LYS:HG3	2.30	0.66
5:CE:149:SER:HB2	5:CE:152:MET:CG	2.26	0.66
13:CM:11:ASP:OD1	13:CM:12:HIS:N	2.27	0.66
22:DA:187:G:C2	22:DA:210:C:C2	2.83	0.66
22:DA:2163:A:OP1	22:DA:2171:A:C8	2.49	0.66
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.78	0.66
29:BH:93:SER:OG	1:CA:357:G:H4'	1.96	0.66
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.10	0.66
22:DA:617:G:O6	57:DA:3286:HOH:O	2.09	0.66
22:DA:2690:U:C4	22:DA:2873:A:N1	2.63	0.66
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.29	0.66
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.78	0.66
22:BA:1439:A:OP2	57:BA:3634:HOH:O	2.14	0.66
22:BA:2012:G:OP1	40:BS:98:LYS:HG2	1.95	0.66
22:BA:2819:G:OP1	57:BA:3807:HOH:O	2.13	0.66
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.77	0.66
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.95	0.66
4:CD:50:ASP:O	4:CD:53:VAL:HG22	1.95	0.66
12:AL:24:LEU:HG	12:AL:25:GLU:H	1.61	0.66
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.25	0.66
22:BA:608:A:C6	22:BA:609:A:C6	2.84	0.66
28:BG:10:VAL:O	28:BG:10:VAL:CG1	2.44	0.66
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.96	0.66
1:CA:72:A:N6	1:CA:73:C:N4	2.43	0.66
9:CI:54:LEU:O	9:CI:55:VAL:HG22	1.95	0.66
22:DA:1240:U:HO2'	22:DA:1241:A:P	2.17	0.66
1:AA:702:A:H3'	1:AA:703:G:C5'	2.26	0.66
2:AB:49:MET:O	2:AB:53:ALA:HB2	1.94	0.66
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.44	0.66
22:BA:206:U:C2'	22:BA:207:A:H5'	2.26	0.66
24:BC:222:GLY:HA2	24:BC:225:MET:HE3	1.77	0.66
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.66
22:DA:1973:G:C6	22:DA:1974:C:C4	2.84	0.66
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.78	0.66
1:AA:872:A:C4	1:AA:874:G:N7	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1143:A:N7	31:BJ:27:ARG:NH1	2.44	0.66
22:BA:1730:C:H4'	22:BA:1730:C:OP1	1.96	0.66
7:CG:75:VAL:HG21	7:CG:144:MET:HG2	1.77	0.66
22:DA:60:G:O2'	22:DA:62:U:OP2	2.14	0.66
22:DA:1871:A:O2'	22:DA:1872:A:N7	2.29	0.66
22:DA:2125:G:H5'	22:DA:2126:A:OP2	1.96	0.66
23:DB:84:G:N2	23:DB:93:C:C2	2.64	0.66
4:AD:59:GLN:O	4:AD:63:ARG:HG2	1.95	0.65
22:BA:1745:A:C2	22:BA:1746:A:C8	2.84	0.65
22:BA:2346:A:H4'	22:BA:2347:C:OP2	1.94	0.65
25:BD:12:THR:CG2	37:BP:9:GLU:OE2	2.44	0.65
25:BD:84:LEU:HD22	25:BD:88:GLU:HB3	1.79	0.65
14:CN:51:LEU:O	14:CN:53:ARG:N	2.29	0.65
22:DA:269:C:N3	22:DA:270:A:C8	2.63	0.65
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.31	0.65
22:DA:1429:G:N7	24:DC:28:LYS:NZ	2.44	0.65
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.78	0.65
38:DQ:47:TYR:CZ	38:DQ:51:ARG:CZ	2.79	0.65
1:AA:483:C:O2	16:AP:13:LYS:NZ	2.29	0.65
2:AB:21:ARG:C	2:AB:23:TRP:H	2.01	0.65
16:AP:78:VAL:HG13	16:AP:78:VAL:O	1.96	0.65
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.68	0.65
22:BA:265:A:H4'	22:BA:266:G:OP1	1.96	0.65
22:BA:575:A:H2'	22:BA:576:U:H5'	1.78	0.65
1:CA:495:A:C2	1:CA:496:A:N6	2.64	0.65
2:CB:83:ALA:O	2:CB:86:SER:OG	2.15	0.65
18:CR:20:GLU:O	18:CR:22:ASP:N	2.29	0.65
22:DA:24:G:C5	22:DA:25:U:C5	2.85	0.65
22:DA:247:G:H4'	22:DA:386:G:C5	2.31	0.65
22:DA:996:A:C2	22:DA:997:G:C8	2.83	0.65
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.11	0.65
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.26	0.65
22:DA:2504:U:C4	55:DA:3001:VIF:H30	2.31	0.65
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.30	0.65
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.31	0.65
1:AA:1289:A:O3'	7:AG:35:LYS:NZ	2.29	0.65
2:AB:168:HIS:ND1	2:AB:168:HIS:O	2.28	0.65
9:AI:81:HIS:NE2	9:AI:104:VAL:O	2.29	0.65
13:AM:26:GLY:O	13:AM:28:THR:N	2.29	0.65
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.11	0.65
22:BA:1027:A:C6	22:BA:1126:A:N3	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:226:ASN:ND2	57:BC:302:HOH:O	2.28	0.65
38:BQ:36:PHE:CE1	38:BQ:40:ILE:CD1	2.78	0.65
53:B5:50:ILE:CG2	53:B5:51:ASP:N	2.59	0.65
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.78	0.65
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.44	0.65
22:DA:2344:U:H4'	22:DA:2345:G:OP1	1.96	0.65
24:DC:62:TYR:CE1	24:DC:63:ARG:O	2.49	0.65
52:D4:30:GLU:HB3	52:D4:33:HIS:CD2	2.31	0.65
22:BA:996:A:C2	22:BA:997:G:C8	2.85	0.65
22:DA:514:A:N3	22:DA:581:C:O2'	2.23	0.65
22:DA:2225:A:H4'	22:DA:2226:C:O5'	1.96	0.65
4:AD:191:LEU:HD12	4:AD:192:SER:HB2	1.78	0.65
9:AI:56:ASP:O	9:AI:60:LYS:NZ	2.18	0.65
22:BA:1258:U:C4	22:BA:1259:G:N7	2.65	0.65
38:BQ:47:TYR:C	38:BQ:47:TYR:CD2	2.74	0.65
23:DB:34:A:N6	23:DB:44:G:O2'	2.30	0.65
1:AA:872:A:C5	1:AA:874:G:C8	2.85	0.65
2:AB:51:ASN:O	2:AB:52:GLU:HB2	1.96	0.65
3:AC:11:ARG:O	3:AC:14:ILE:O	2.15	0.65
3:AC:25:ASN:O	3:AC:27:LYS:N	2.29	0.65
4:AD:106:GLY:O	4:AD:108:GLY:N	2.29	0.65
4:AD:151:LYS:HB2	4:AD:156:LYS:HE3	1.79	0.65
22:BA:576:U:H2'	22:BA:577:G:C8	2.31	0.65
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.79	0.65
24:BC:244:PRO:O	24:BC:251:GLN:NE2	2.29	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
22:DA:352:A:H2'	22:DA:353:C:O4'	1.96	0.65
1:AA:800:G:O6	57:AA:1813:HOH:O	2.11	0.65
16:AP:42:ILE:O	16:AP:44:SER:N	2.30	0.65
22:BA:1816:C:C5	24:BC:62:TYR:CE1	2.85	0.65
22:BA:1925:C:H4'	22:BA:1926:U:C4	2.31	0.65
22:BA:2555:U:C5	22:BA:2556:C:C2	2.84	0.65
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.78	0.65
31:BJ:13:ARG:HB3	31:BJ:51:GLY:O	1.97	0.65
35:BN:77:ALA:O	35:BN:81:ASN:HB2	1.97	0.65
37:BP:103:ARG:HH11	37:BP:103:ARG:HG3	1.61	0.65
44:BW:52:GLY:HA3	44:BW:60:PHE:CE2	2.31	0.65
1:CA:575:G:O2'	1:CA:821:G:OP2	2.13	0.65
24:DC:61:ALA:O	24:DC:63:ARG:NH2	2.30	0.65
30:DI:69:PHE:N	30:DI:69:PHE:HD1	1.94	0.65
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:21:VAL:HG23	12:AL:95:TYR:CE1	2.30	0.65
20:AT:29:ARG:O	20:AT:33:LYS:HG2	1.97	0.65
22:BA:1509:A:O2'	22:BA:1510:G:P	2.54	0.65
22:BA:2264:C:N4	44:BW:15:ASP:OD1	2.29	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
45:BX:12:PRO:HB3	45:BX:30:LEU:HD23	1.79	0.65
1:CA:152:A:N6	1:CA:170:U:C2	2.65	0.65
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.12	0.65
12:CL:116:LYS:O	12:CL:117:TYR:CD2	2.49	0.65
13:CM:33:ILE:HD13	13:CM:59:GLU:HB3	1.79	0.65
22:DA:2136:G:N1	22:DA:2156:G:H1'	2.12	0.65
1:AA:721:G:H4'	1:AA:722:G:O4'	1.97	0.65
1:AA:1054:C:OP2	57:AA:1784:HOH:O	2.14	0.65
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.31	0.65
22:BA:528:A:C8	22:BA:528:A:H3'	2.32	0.65
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.13	0.65
22:BA:2034:U:O4	57:BA:3579:HOH:O	2.12	0.65
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.32	0.65
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.30	0.65
1:CA:790:A:C6	1:CA:791:G:C6	2.85	0.65
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.30	0.65
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.29	0.65
22:DA:1477:A:N6	22:DA:1514:G:O2'	2.30	0.65
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.32	0.65
32:DK:76:VAL:HG12	37:DP:73:VAL:CG2	2.26	0.65
1:AA:652:U:O2'	1:AA:653:U:OP2	2.13	0.65
2:AB:33:GLY:O	2:AB:34:ALA:HB2	1.97	0.65
20:AT:6:SER:OG	20:AT:7:ALA:N	2.30	0.65
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.27	0.65
30:BI:47:ASP:HA	30:BI:51:LYS:CD	2.26	0.65
1:CA:718:A:C8	1:CA:719:C:C5	2.84	0.65
1:AA:920:U:O4'	1:AA:1080:A:C2	2.49	0.64
3:AC:206:GLU:O	3:AC:207:ILE:O	2.15	0.64
5:AE:159:LYS:C	8:AH:64:LYS:HZ1	2.00	0.64
10:AJ:33:GLY:O	10:AJ:34:ALA:HB2	1.97	0.64
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.30	0.64
22:BA:2020:A:C2	22:BA:2035:G:N1	2.65	0.64
27:BF:36:LEU:HD22	27:BF:91:LEU:HD11	1.78	0.64
38:BQ:40:ILE:O	38:BQ:44:GLN:HG3	1.97	0.64
2:CB:141:LEU:O	2:CB:145:GLU:N	2.30	0.64
22:DA:204:A:H5'	22:DA:206:U:O4'	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.32	0.64
22:DA:2681:C:C2	22:DA:2724:U:O4	2.50	0.64
40:DS:41:LYS:O	40:DS:44:ALA:N	2.30	0.64
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.80	0.64
1:AA:174:A:C5	1:AA:175:C:C5	2.85	0.64
22:BA:118:A:C8	22:BA:119:A:C8	2.84	0.64
22:BA:1926:U:H2'	22:BA:1926:U:O2	1.96	0.64
26:BE:108:ILE:HD13	26:BE:181:ILE:HG12	1.78	0.64
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.50	0.64
2:CB:206:ALA:C	2:CB:208:ARG:N	2.55	0.64
22:DA:107:G:O3'	22:DA:293:U:O2'	2.12	0.64
22:DA:247:G:H4'	22:DA:386:G:C4	2.33	0.64
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.30	0.64
22:DA:2346:A:H3'	22:DA:2347:C:H5'	1.77	0.64
1:AA:232:G:H2'	1:AA:233:C:O4'	1.97	0.64
1:AA:624:C:H4'	16:AP:11:ALA:HB2	1.79	0.64
1:AA:731:G:OP1	1:AA:766:A:H1'	1.97	0.64
4:AD:17:THR:HG23	4:AD:18:ASP:N	2.12	0.64
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.30	0.64
8:AH:2:SER:C	8:AH:4:GLN:N	2.55	0.64
22:BA:2176:A:C6	22:BA:2177:C:N4	2.65	0.64
1:CA:4:U:H5"	1:CA:5:U:OP1	1.97	0.64
6:CF:9:MET:HG3	6:CF:86:ARG:HB2	1.78	0.64
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.30	0.64
22:DA:2063:C:O2	22:DA:2063:C:H2'	1.97	0.64
22:DA:2127:G:H4'	22:DA:2128:G:OP1	1.96	0.64
44:DW:52:GLY:HA3	44:DW:60:PHE:CZ	2.32	0.64
1:AA:663:A:C2	1:AA:743:A:C2	2.86	0.64
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.79	0.64
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.97	0.64
1:CA:866:C:C5	1:CA:867:G:H1'	2.32	0.64
2:CB:123:ASP:O	2:CB:124:GLY:C	2.40	0.64
22:DA:1127:A:C2'	22:DA:1128:G:H5"	2.27	0.64
22:DA:2436:G:C2	22:DA:2437:G:C8	2.85	0.64
28:DG:159:GLY:O	28:DG:163:ARG:NH1	2.30	0.64
1:AA:1374:A:C2	1:AA:1375:A:C8	2.85	0.64
2:AB:151:ILE:O	2:AB:152:LYS:C	2.40	0.64
22:BA:991:C:C4	22:BA:1185:G:C6	2.86	0.64
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.19	0.64
22:BA:2458:G:C2	22:BA:2490:G:N2	2.66	0.64
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:118:A:N3	22:DA:178:G:H1'	2.13	0.64
22:DA:370:G:C6	22:DA:424:G:N7	2.66	0.64
22:DA:1530:G:N2	22:DA:1542:U:O2	2.31	0.64
1:AA:544:G:C5	1:AA:545:C:C5	2.86	0.64
4:AD:75:TYR:OH	4:AD:97:ARG:NH1	2.30	0.64
15:AO:8:THR:O	15:AO:12:VAL:HG23	1.97	0.64
22:BA:447:A:OP2	57:BA:3210:HOH:O	2.14	0.64
22:BA:572:A:C2	22:BA:2033:A:C2	2.86	0.64
22:BA:983:A:C6	22:BA:984:A:C2	2.86	0.64
30:BI:58:VAL:HG12	30:BI:59:ILE:N	2.12	0.64
8:CH:77:ARG:NE	8:CH:79:SER:O	2.30	0.64
8:CH:94:LYS:HD3	8:CH:98:GLY:HA2	1.79	0.64
15:CO:62:GLN:O	15:CO:66:LEU:HD23	1.97	0.64
20:CT:78:ASN:O	20:CT:82:GLN:HG2	1.98	0.64
22:DA:151:C:H2'	22:DA:152:A:C8	2.32	0.64
22:DA:192:C:O2'	22:DA:802:A:N3	2.29	0.64
22:DA:1359:A:C8	22:DA:1373:A:N1	2.66	0.64
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.32	0.64
22:DA:2282:G:N3	22:DA:2425:A:N6	2.46	0.64
42:DU:9:ASP:OD2	42:DU:10:GLU:N	2.31	0.64
1:AA:91:U:C2	1:AA:92:U:H1'	2.33	0.64
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.32	0.64
22:BA:211:C:OP1	50:B2:25:LYS:NZ	2.30	0.64
22:BA:2282:G:H5"	22:BA:2283:C:O4'	1.98	0.64
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.32	0.64
22:BA:2839:G:C5	22:BA:2840:C:C5	2.85	0.64
35:BN:2:ARG:HA	35:BN:5:LYS:CD	2.26	0.64
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.51	0.64
22:DA:1774:C:O2	24:DC:11:PRO:HB2	1.97	0.64
31:DJ:142:ILE:OXT	31:DJ:142:ILE:HG23	1.96	0.64
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.46	0.64
1:AA:468:A:C2	1:AA:469:C:C4	2.85	0.64
1:AA:673:A:H2'	1:AA:674:G:C8	2.32	0.64
1:AA:1304:G:N1	1:AA:1305:G:N2	2.45	0.64
2:AB:95:ARG:HH12	2:AB:97:LEU:HA	1.63	0.64
22:BA:206:U:H2'	22:BA:207:A:H5'	1.79	0.64
22:BA:1176:U:H2'	22:BA:1177:G:C8	2.32	0.64
22:BA:2474:U:H5"	22:BA:2475:C:OP2	1.98	0.64
22:BA:2828:G:C2	22:BA:2829:A:C8	2.85	0.64
2:CB:23:TRP:CG	2:CB:23:TRP:O	2.51	0.64
2:CB:35:ARG:O	2:CB:37:LYS:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:120:LYS:HG2	9:CI:123:ARG:HB3	1.79	0.64
17:CQ:8:LEU:HD22	17:CQ:73:TRP:CH2	2.32	0.64
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.97	0.64
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.33	0.64
1:AA:532:A:N6	3:AC:192:THR:OG1	2.31	0.64
1:AA:566:G:O6	57:AA:1840:HOH:O	2.10	0.64
2:AB:213:TYR:O	2:AB:217:VAL:HG23	1.97	0.64
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.33	0.64
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	1.80	0.64
22:BA:947:A:O2'	22:BA:984:A:H2	1.79	0.64
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.32	0.64
38:BQ:21:ALA:HA	38:BQ:24:TYR:CE1	2.33	0.64
48:B0:54:VAL:O	48:B0:55:ILE:C	2.41	0.64
1:CA:1029:U:O2	1:CA:1029:U:H2'	1.96	0.64
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.80	0.64
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.64
45:DX:33:LEU:O	45:DX:34:HIS:CG	2.51	0.64
1:AA:208:U:C5	1:AA:210:C:C4	2.86	0.64
1:AA:657:U:O2	15:AO:22:THR:CG2	2.46	0.64
1:AA:1031:C:O2'	1:AA:1032:G:OP2	2.16	0.64
4:AD:124:MET:HE2	4:AD:146:ARG:HD2	1.80	0.64
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.66	0.64
22:BA:2516:A:C6	22:BA:2517:C:N4	2.65	0.64
29:BH:89:LYS:HB3	1:CA:359:G:C5'	2.28	0.64
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	1.98	0.64
43:BV:13:GLY:O	43:BV:17:SER:OG	2.15	0.64
1:CA:980:C:OP2	57:CA:1861:HOH:O	2.15	0.64
2:CB:135:LEU:O	2:CB:137:ARG:N	2.31	0.64
22:DA:526:A:N6	22:DA:2626:C:H4'	2.13	0.64
25:DD:151:THR:O	25:DD:152:PRO:C	2.39	0.64
1:AA:262:A:C6	1:AA:263:A:C6	2.85	0.63
7:AG:27:VAL:HG12	7:AG:43:VAL:HG21	1.79	0.63
24:BC:136:PRO:O	24:BC:139:SER:OG	2.16	0.63
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	1.99	0.63
1:CA:289:G:C2	1:CA:290:C:C5	2.85	0.63
1:CA:463:U:H5'	1:CA:464:U:OP2	1.98	0.63
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.11	0.63
22:DA:1651:G:C6	22:DA:1652:A:C5	2.87	0.63
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.33	0.63
3:AC:130:PHE:CZ	3:AC:131:ARG:HD2	2.33	0.63
22:BA:2325:G:C6	22:BA:2326:C:N4	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:50:ILE:O	53:B5:52:PRO:HD3	1.98	0.63
1:CA:949:A:O2'	1:CA:971:G:O6	2.08	0.63
4:CD:46:PRO:O	4:CD:47:ARG:C	2.41	0.63
20:CT:80:THR:O	20:CT:83:ILE:HG13	1.99	0.63
22:DA:563:A:C4	22:DA:2018:G:C2	2.86	0.63
22:DA:717:C:N4	22:DA:718:A:C2	2.67	0.63
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.33	0.63
22:DA:1187:G:H5"	39:DR:83:TYR:CE2	2.33	0.63
11:AK:126:LYS:C	21:AU:34:ARG:CZ	2.71	0.63
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.31	0.63
22:BA:250:G:OP1	57:BA:3818:HOH:O	2.15	0.63
22:BA:321:U:H5"	26:BE:131:THR:HG23	1.80	0.63
22:BA:2571:U:H2'	22:BA:2572:A:OP1	1.99	0.63
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.80	0.63
1:CA:64:G:C8	1:CA:99:C:N4	2.65	0.63
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.32	0.63
19:CS:40:ILE:HB	19:CS:66:MET:O	1.98	0.63
20:CT:81:ALA:O	20:CT:85:LYS:HG2	1.98	0.63
22:DA:197:A:N6	22:DA:2430:A:H2'	2.12	0.63
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.34	0.63
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.33	0.63
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.64	0.63
1:AA:373:A:C2	1:AA:374:A:C8	2.85	0.63
5:AE:25:VAL:O	5:AE:26:LYS:C	2.41	0.63
22:BA:790:U:O2'	22:BA:791:C:P	2.57	0.63
22:BA:1838:C:C4	22:BA:1899:A:C4	2.86	0.63
22:BA:2015:A:C6	48:B0:3:VAL:HG23	2.33	0.63
39:BR:102:SER:O	39:BR:103:ALA:O	2.16	0.63
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.46	0.63
1:CA:624:C:H2'	1:CA:625:U:O4'	1.99	0.63
1:CA:909:A:H2'	1:CA:910:C:O4'	1.98	0.63
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.79	0.63
16:CP:20:VAL:CG2	16:CP:32:PHE:HB2	2.29	0.63
22:DA:12:U:O2	22:DA:12:U:H2'	1.98	0.63
22:DA:310:A:H5"	42:DU:15:THR:HG22	1.80	0.63
22:DA:2211:A:H1'	22:DA:2212:A:OP1	1.99	0.63
22:DA:2311:A:O2'	22:DA:2312:U:P	2.56	0.63
1:AA:206:C:H2'	1:AA:207:C:O4'	1.98	0.63
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.32	0.63
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.79	0.63
4:AD:152:GLN:O	4:AD:153:SER:C	2.41	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:55:THR:C	8:AH:57:PRO:HD3	2.23	0.63
22:BA:58:G:OP1	41:BT:78:SER:CB	2.45	0.63
22:BA:1020:A:C2	22:BA:1141:U:C2	2.86	0.63
22:BA:2495:G:H2'	22:BA:2496:C:H5'	1.80	0.63
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.39	0.63
1:CA:216:U:H4'	1:CA:464:U:H4'	1.80	0.63
1:CA:811:C:O2'	1:CA:901:A:N1	2.30	0.63
1:CA:858:G:O6	1:CA:869:G:H3'	1.98	0.63
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.34	0.63
19:CS:4:SER:O	19:CS:5:LEU:HB2	1.97	0.63
22:DA:420:C:H2'	22:DA:421:C:H6	1.64	0.63
22:DA:753:A:C2	22:DA:754:U:C2	2.86	0.63
24:DC:93:LEU:HD13	24:DC:103:TYR:CE1	2.34	0.63
46:DY:9:LYS:HB3	46:DY:12:GLU:HG2	1.80	0.63
49:D1:10:LYS:O	49:D1:51:GLU:HG2	1.98	0.63
2:AB:15:HIS:O	2:AB:16:PHE:C	2.41	0.63
10:AJ:10:LEU:HB2	10:AJ:72:ARG:HB2	1.79	0.63
17:AQ:15:ASP:C	17:AQ:17:MET:SD	2.82	0.63
22:BA:936:A:H2'	22:BA:937:C:C6	2.34	0.63
22:BA:1838:C:N4	22:BA:1899:A:C4	2.67	0.63
22:BA:2808:G:N2	22:BA:2891:U:C6	2.67	0.63
30:BI:28:LEU:HD12	30:BI:28:LEU:O	1.96	0.63
1:CA:66:A:H4'	1:CA:173:U:C5	2.34	0.63
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.80	0.63
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.33	0.63
11:AK:102:ALA:O	11:AK:104:GLY:N	2.31	0.63
22:BA:12:U:H2'	22:BA:12:U:O2	1.99	0.63
22:BA:742:A:H2'	22:BA:743:A:C8	2.34	0.63
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.31	0.63
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.31	0.63
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.34	0.63
1:CA:373:A:C2	1:CA:374:A:C8	2.87	0.63
22:DA:528:A:C2	22:DA:2043:C:H4'	2.33	0.63
22:DA:1789:A:H5"	24:DC:219:THR:O	1.99	0.63
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.34	0.63
22:DA:2308:G:H5"	22:DA:2309:A:OP2	1.98	0.63
22:DA:2428:G:H5"	22:DA:2429:G:OP1	1.99	0.63
1:AA:983:A:N3	1:AA:983:A:C2'	2.61	0.63
22:BA:474:G:O6	57:BA:3208:HOH:O	2.14	0.63
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.79	0.63
25:BD:39:ASP:OD2	25:BD:40:LEU:N	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1048:G:OP1	57:CA:1846:HOH:O	2.16	0.63
11:CK:15:GLN:HA	11:CK:77:TYR:HA	1.81	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.66	0.63
1:AA:466:A:H5'	1:AA:467:U:OP2	1.98	0.63
2:AB:187:VAL:HG23	2:AB:187:VAL:O	1.99	0.63
12:AL:24:LEU:HG	12:AL:25:GLU:N	2.14	0.63
17:AQ:68:SER:O	17:AQ:69:LYS:C	2.42	0.63
22:BA:1922:G:C2	22:BA:1923:U:C6	2.86	0.63
26:BE:91:ASP:OD1	26:BE:93:SER:OG	2.15	0.63
52:B4:3:VAL:HG13	52:B4:36:ARG:HB3	1.79	0.63
22:DA:152:A:C2	22:DA:175:G:C2	2.87	0.63
22:DA:306:U:O2	22:DA:312:G:N2	2.31	0.63
22:DA:945:A:C8	22:DA:2448:A:C2	2.86	0.63
37:DP:22:PRO:HA	37:DP:47:VAL:HG12	1.79	0.63
1:AA:205:A:OP1	1:AA:205:A:H4'	1.99	0.62
1:AA:484:G:H4'	1:AA:485:U:OP1	1.99	0.62
1:AA:1198:G:N7	57:AA:1786:HOH:O	2.31	0.62
22:BA:947:A:H2'	22:BA:948:C:C6	2.33	0.62
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.62	0.62
22:BA:1216:G:C5	22:BA:1217:U:C5	2.87	0.62
22:BA:1907:G:C5	22:BA:1908:C:C4	2.87	0.62
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.34	0.62
1:CA:374:A:H5"	1:CA:452:A:C2	2.34	0.62
1:CA:1182:G:H4'	1:CA:1183:U:H5"	1.79	0.62
1:CA:1215:G:C5	1:CA:1216:A:N7	2.67	0.62
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.99	0.62
22:DA:305:C:H1'	22:DA:313:G:N2	2.14	0.62
22:DA:594:U:H2'	22:DA:595:C:C6	2.34	0.62
22:DA:1320:C:N4	22:DA:1333:G:C6	2.67	0.62
22:DA:2499:C:N4	22:DA:2500:U:O4	2.32	0.62
1:AA:213:G:C8	1:AA:214:C:C5	2.87	0.62
1:AA:375:U:C4	1:AA:376:G:N7	2.67	0.62
12:AL:22:PRO:C	12:AL:24:LEU:N	2.56	0.62
22:BA:1153:C:OP1	38:BQ:92:ARG:NH1	2.32	0.62
22:BA:1794:A:O4'	22:BA:1900:A:C2	2.52	0.62
25:BD:140:HIS:CD2	57:BD:302:HOH:O	2.37	0.62
51:B3:17:THR:OG1	51:B3:18:GLY:N	2.31	0.62
1:CA:257:G:C5	57:CA:1718:HOH:O	2.49	0.62
3:CC:6:HIS:CD2	14:CN:89:MET:HB3	2.34	0.62
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:29:ARG:O	20:CT:33:LYS:HG2	1.98	0.62
22:DA:1649:G:C6	22:DA:2009:A:C6	2.86	0.62
22:DA:1805:A:C2	22:DA:1813:G:C2	2.87	0.62
22:DA:1805:A:N3	22:DA:1813:G:C2	2.67	0.62
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	2.32	0.62
22:BA:1087:G:N2	22:BA:1090:A:C8	2.67	0.62
1:CA:16:A:C2'	1:CA:17:U:H5'	2.29	0.62
1:CA:32:A:OP1	1:CA:398:U:H1'	1.99	0.62
1:CA:562:U:H4'	1:CA:563:A:O5'	2.00	0.62
1:CA:1263:C:H2'	1:CA:1264:U:C6	2.34	0.62
2:CB:23:TRP:O	2:CB:23:TRP:CD1	2.51	0.62
2:CB:186:ILE:HA	2:CB:200:ILE:HB	1.79	0.62
16:CP:20:VAL:HG21	16:CP:32:PHE:HB2	1.81	0.62
22:DA:1153:C:H5'	38:DQ:62:ILE:HD13	1.80	0.62
23:DB:81:G:C5	23:DB:82:U:C5	2.88	0.62
33:DL:81:ASP:O	33:DL:82:LEU:HB3	1.98	0.62
1:AA:451:A:H5"	16:AP:70:ARG:NH2	2.14	0.62
1:AA:727:G:N2	1:AA:731:G:C4	2.67	0.62
2:AB:50:PHE:HA	2:AB:213:TYR:OH	2.00	0.62
9:AI:57:MET:SD	9:AI:58:VAL:N	2.69	0.62
22:BA:1421:G:C2	22:BA:1422:G:C8	2.87	0.62
22:BA:1686:C:H2'	22:BA:1687:G:O4'	1.99	0.62
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.30	0.62
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.32	0.62
35:BN:103:ARG:CD	35:BN:110:MET:HE2	2.29	0.62
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	1.99	0.62
40:BS:6:LYS:HB3	40:BS:104:THR:HA	1.80	0.62
1:CA:55:A:C8	1:CA:56:U:C5	2.88	0.62
1:CA:866:C:C4	1:CA:867:G:H1'	2.35	0.62
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.35	0.62
4:CD:35:GLU:O	4:CD:37:ALA:N	2.31	0.62
22:DA:811:U:O2	22:DA:1251:C:C5	2.52	0.62
22:DA:2061:G:O6	55:DA:3001:VIF:H29	1.98	0.62
22:DA:2689:U:H4'	22:DA:2690:U:OP2	1.99	0.62
24:DC:24:LEU:HD21	24:DC:90:ASN:ND2	2.13	0.62
28:DG:70:ALA:O	28:DG:74:SER:OG	2.10	0.62
1:AA:259:G:C2	1:AA:260:G:H1'	2.34	0.62
2:AB:163:VAL:HG13	2:AB:185:ALA:HB2	1.81	0.62
11:AK:76:GLU:HA	22:BA:2141:G:P	2.40	0.62
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.80	0.62
22:BA:1450:G:C6	22:BA:1451:C:N4	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2199:A:O4'	29:BH:28:ASN:ND2	2.33	0.62
27:BF:4:LEU:HD11	27:BF:104:ILE:HD11	1.81	0.62
1:CA:435:A:H2'	1:CA:436:C:O5'	1.99	0.62
1:CA:555:U:H2'	1:CA:556:C:C6	2.34	0.62
11:CK:16:VAL:O	11:CK:17:SER:OG	2.16	0.62
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.33	0.62
22:DA:228:C:H4'	22:DA:229:C:H5"	1.82	0.62
22:DA:2899:A:H2'	22:DA:2900:A:C8	2.34	0.62
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.62	0.62
40:DS:28:LYS:O	40:DS:30:SER:N	2.33	0.62
1:AA:914:A:C4	1:AA:915:A:C8	2.88	0.62
1:AA:998:C:H2'	1:AA:999:C:C6	2.34	0.62
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.35	0.62
2:AB:15:HIS:CD2	2:AB:16:PHE:O	2.53	0.62
4:AD:122:ALA:O	4:AD:123:ILE:HG23	2.00	0.62
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.80	0.62
22:BA:2478:A:C5'	52:B4:32:LYS:HD3	2.28	0.62
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	1.81	0.62
32:BK:34:GLY:O	32:BK:35:VAL:C	2.42	0.62
4:CD:59:GLN:O	4:CD:63:ARG:HG3	1.99	0.62
11:CK:91:PRO:O	11:CK:92:GLY:C	2.43	0.62
22:DA:503:A:C4	22:DA:506:G:N7	2.68	0.62
22:DA:642:U:O2'	22:DA:644:A:N7	2.25	0.62
22:DA:674:G:H1'	26:DE:69:ARG:HD3	1.82	0.62
22:DA:1182:G:H2'	22:DA:1183:U:O4'	1.99	0.62
33:DL:85:VAL:O	33:DL:86:GLU:HB3	1.98	0.62
1:AA:373:A:N3	1:AA:374:A:C8	2.67	0.62
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.99	0.62
9:AI:90:TYR:O	9:AI:91:ASP:CG	2.43	0.62
22:BA:1425:G:O2'	22:BA:1426:G:H5'	2.00	0.62
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.82	0.62
22:BA:2630:G:H2'	22:BA:2631:G:O4'	1.99	0.62
1:CA:407:U:C2	1:CA:408:A:C8	2.87	0.62
1:CA:552:U:C4	1:CA:553:A:N7	2.68	0.62
22:DA:301:G:H1'	22:DA:302:C:C6	2.35	0.62
22:DA:1027:A:C6	22:DA:1126:A:N3	2.67	0.62
22:DA:1064:C:N3	22:DA:1074:G:N2	2.48	0.62
1:AA:212:G:N2	1:AA:213:G:C4	2.68	0.62
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.99	0.62
22:BA:1018:U:O3'	22:BA:1120:G:N2	2.32	0.62
4:CD:188:ARG:NH1	4:CD:191:LEU:CD1	2.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:783:A:O2'	22:DA:1779:U:O2	2.16	0.62
22:DA:983:A:N6	22:DA:984:A:C2	2.68	0.62
41:DT:64:LYS:HD2	41:DT:79:ASP:OD1	2.00	0.62
8:AH:125:ILE:O	8:AH:125:ILE:HG13	1.99	0.62
22:BA:1142:A:C2	22:BA:1144:A:N9	2.67	0.62
22:BA:1936:A:N7	22:BA:1945:G:C6	2.68	0.62
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.48	0.62
1:CA:55:A:N7	1:CA:56:U:C5	2.68	0.62
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.33	0.62
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.73	0.62
6:CF:41:ASP:OD2	6:CF:43:GLY:N	2.33	0.62
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.30	0.62
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.35	0.62
22:DA:2164:C:H2'	22:DA:2165:C:H6	1.59	0.62
3:AC:7:PRO:HD2	3:AC:184:TYR:CD2	2.35	0.62
22:BA:988:A:P	47:BZ:12:SER:HB2	2.40	0.62
22:BA:1808:A:O2'	45:BX:3:ARG:NH1	2.32	0.62
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.15	0.62
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.35	0.62
6:CF:45:ARG:O	6:CF:56:LYS:HA	2.00	0.62
22:DA:185:G:C6	22:DA:212:G:C2	2.88	0.62
22:DA:910:A:N3	22:DA:2264:C:O2'	2.32	0.62
22:DA:1045:C:H1'	22:DA:1047:G:C6	2.35	0.62
22:DA:1187:G:OP1	39:DR:85:LYS:HE3	2.00	0.62
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.09	0.62
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.00	0.62
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.47	0.62
38:DQ:27:ALA:HB1	38:DQ:31:VAL:HB	1.82	0.62
1:AA:19:A:N3	1:AA:917:G:C2	2.68	0.61
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.82	0.61
22:BA:1061:U:O4	30:BI:11:LEU:HA	2.00	0.61
22:BA:1100:C:H2'	22:BA:1101:U:C5	2.35	0.61
24:BC:25:HIS:CE1	24:BC:26:LYS:O	2.53	0.61
30:BI:17:MET:HE2	30:BI:17:MET:HA	1.82	0.61
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HB	1.80	0.61
4:CD:26:ARG:O	4:CD:27:ALA:HB2	2.00	0.61
22:DA:67:U:C2	22:DA:68:G:C8	2.88	0.61
22:DA:377:G:C6	22:DA:378:C:C4	2.88	0.61
22:DA:2091:C:H3'	22:DA:2092:U:H5"	1.82	0.61
23:DB:22:U:O4	57:DB:302:HOH:O	2.12	0.61
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:66:GLU:O	13:AM:69:LEU:N	2.33	0.61
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.32	0.61
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.16	0.61
31:BJ:27:ARG:HH11	31:BJ:27:ARG:CG	2.13	0.61
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.80	0.61
39:BR:21:ARG:NE	39:BR:93:PHE:CD1	2.67	0.61
12:CL:86:ARG:CZ	12:CL:88:LYS:HB3	2.30	0.61
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.36	0.61
1:AA:771:G:C2'	1:AA:772:U:H5'	2.30	0.61
6:AF:98:GLU:HG3	6:AF:99:ALA:H	1.65	0.61
22:BA:495:G:C1'	40:BS:57:ASN:ND2	2.63	0.61
22:BA:714:U:C2'	22:BA:716:A:N7	2.62	0.61
22:BA:1098:A:C5	22:BA:1099:G:C6	2.88	0.61
22:BA:2262:U:OP1	44:BW:41:ARG:NH2	2.33	0.61
22:BA:2516:A:C4	22:BA:2569:G:N2	2.68	0.61
25:BD:129:THR:HG22	25:BD:130:GLN:O	2.00	0.61
27:BF:2:ALA:O	27:BF:3:LYS:C	2.43	0.61
30:BI:6:GLN:O	30:BI:7:ALA:HB3	2.00	0.61
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.33	0.61
1:CA:632:U:O2	1:CA:632:U:H2'	1.99	0.61
1:CA:955:U:H2'	1:CA:956:U:O4'	2.01	0.61
1:CA:1080:A:OP1	5:CE:52:LYS:CE	2.48	0.61
6:CF:64:VAL:HG12	6:CF:65:GLU:N	2.15	0.61
22:DA:297:G:H5"	42:DU:85:PHE:HB2	1.82	0.61
22:DA:400:G:N7	45:DX:57:ARG:NH1	2.47	0.61
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.99	0.61
22:DA:1607:C:O2	22:DA:1621:U:C5	2.52	0.61
22:DA:2005:A:OP1	57:DA:3383:HOH:O	2.16	0.61
22:DA:2250:G:OP1	34:DM:84:LYS:NZ	2.33	0.61
22:DA:2812:G:N2	22:DA:2889:C:C2	2.69	0.61
22:DA:2889:C:H2'	22:DA:2890:G:C8	2.35	0.61
23:DB:25:U:C4	23:DB:26:C:C4	2.88	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
50:D2:15:SER:OG	50:D2:16:HIS:CE1	2.53	0.61
1:AA:393:A:C2	1:AA:394:G:C8	2.89	0.61
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.34	0.61
11:AK:127:ARG:N	21:AU:34:ARG:CZ	2.63	0.61
22:BA:555:G:HO2'	22:BA:556:A:P	2.23	0.61
22:BA:1496:A:N3	22:BA:1577:C:O2'	2.28	0.61
29:BH:86:ASP:CB	1:CA:359:G:O2'	2.47	0.61
53:B5:43:GLU:HA	53:B5:178:LYS:HA	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:64:SER:O	53:B5:65:LEU:HB2	2.00	0.61
1:CA:978:A:P	1:CA:1362:A:N6	2.73	0.61
1:CA:990:C:C4	1:CA:991:U:O4	2.54	0.61
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.82	0.61
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.16	0.61
22:DA:2283:C:C2	22:DA:2389:G:C2	2.88	0.61
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.36	0.61
35:DN:98:LEU:HD13	48:D0:54:VAL:HG21	1.82	0.61
1:AA:428:G:O4'	1:AA:430:A:C8	2.54	0.61
1:AA:701:U:H4'	1:AA:702:A:H5"	1.82	0.61
4:AD:150:LYS:O	4:AD:151:LYS:C	2.43	0.61
16:AP:52:LEU:O	16:AP:54:LEU:N	2.34	0.61
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.00	0.61
22:BA:228:C:H4'	22:BA:229:C:H5"	1.81	0.61
22:BA:1142:A:C2	22:BA:1144:A:C1'	2.83	0.61
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.35	0.61
27:BF:40:VAL:O	27:BF:42:GLU:N	2.33	0.61
1:CA:18:C:C2	1:CA:19:A:C8	2.88	0.61
1:CA:115:G:H4'	1:CA:116:A:O5'	2.01	0.61
1:CA:328:C:H4'	1:CA:329:A:H5"	1.83	0.61
22:DA:593:U:H2'	22:DA:594:U:C6	2.36	0.61
22:DA:1355:G:C2	22:DA:1356:G:C8	2.88	0.61
22:DA:1435:G:H2'	22:DA:1436:G:H5'	1.82	0.61
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.01	0.61
39:DR:42:ALA:HA	39:DR:46:GLU:HA	1.83	0.61
46:DY:28:LEU:CD1	46:DY:46:VAL:HG21	2.31	0.61
4:AD:174:ASP:O	4:AD:175:ALA:HB2	1.99	0.61
11:AK:126:LYS:C	21:AU:34:ARG:NH2	2.58	0.61
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.30	0.61
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.00	0.61
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.18	0.61
22:BA:2114:A:H2'	22:BA:2114:A:N3	2.14	0.61
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.35	0.61
1:CA:435:A:C2'	1:CA:436:C:O5'	2.48	0.61
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.35	0.61
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.16	0.61
22:DA:30:G:C6	22:DA:31:C:N3	2.69	0.61
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.36	0.61
49:D1:4:GLY:O	49:D1:6:ARG:N	2.25	0.61
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.49	0.61
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:4:ILE:O	13:AM:6:GLY:N	2.33	0.61
22:BA:11:C:H2'	22:BA:12:U:H5'	1.81	0.61
22:BA:998:C:H2'	22:BA:999:U:O5'	2.00	0.61
29:BH:123:ARG:C	29:BH:124:THR:CG2	2.65	0.61
42:BU:99:ASN:O	42:BU:101:GLU:N	2.33	0.61
1:CA:378:G:N2	1:CA:386:C:O2	2.34	0.61
1:CA:790:A:N6	1:CA:791:G:C6	2.69	0.61
1:CA:1125:U:H4'	10:CJ:7:ARG:NH1	2.16	0.61
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.57	0.61
4:CD:4:TYR:O	4:CD:5:LEU:HB2	2.00	0.61
6:CF:88:MET:HE3	18:CR:64:TYR:CE2	2.36	0.61
20:CT:25:ARG:O	20:CT:29:ARG:HG2	2.01	0.61
22:DA:485:C:N3	22:DA:496:G:C2	2.68	0.61
22:DA:536:G:N2	22:DA:558:U:C2	2.68	0.61
24:DC:2:ALA:HA	24:DC:199:GLU:OE2	2.00	0.61
1:AA:315:A:O2'	1:AA:330:C:H4'	2.00	0.61
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.16	0.61
1:AA:1089:G:H2'	1:AA:1090:U:O4'	2.01	0.61
2:AB:132:LYS:O	2:AB:134:ALA:N	2.33	0.61
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.16	0.61
5:AE:137:VAL:O	5:AE:138:ARG:HB2	2.00	0.61
6:AF:53:LYS:O	6:AF:54:LEU:HB3	1.99	0.61
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.80	0.61
22:BA:2673:G:C2	22:BA:2674:G:C8	2.89	0.61
35:BN:78:LYS:C	35:BN:79:LEU:O	2.41	0.61
43:BV:1:MET:SD	43:BV:1:MET:C	2.83	0.61
22:DA:373:U:C2	22:DA:374:A:C8	2.88	0.61
22:DA:1027:A:N7	22:DA:1126:A:C2	2.67	0.61
22:DA:1599:U:C4	22:DA:1600:C:N4	2.68	0.61
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.68	0.61
1:AA:277:C:H2'	1:AA:278:G:H5'	1.82	0.61
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.36	0.61
4:AD:84:GLY:O	4:AD:89:ASN:ND2	2.34	0.61
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.34	0.61
10:AJ:90:LEU:N	10:AJ:91:ASP:OD1	2.34	0.61
14:AN:68:GLY:O	14:AN:69:ARG:C	2.43	0.61
22:BA:195:A:C5	22:BA:198:C:C5	2.89	0.61
22:BA:1278:C:OP1	35:BN:36:THR:OG1	2.18	0.61
27:BF:158:THR:O	57:BF:201:HOH:O	2.16	0.61
43:BV:64:VAL:O	43:BV:64:VAL:HG12	2.01	0.61
1:CA:706:A:C5	1:CA:707:U:C5	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1169:A:C6	1:CA:1170:A:C6	2.89	0.61
22:DA:482:A:N6	22:DA:506:G:O2'	2.33	0.61
22:DA:565:C:H4'	22:DA:1253:A:N6	2.16	0.61
22:DA:1599:U:O4	22:DA:1600:C:N4	2.34	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
1:AA:276:G:OP1	17:AQ:17:MET:HE2	2.01	0.61
1:AA:620:C:H2'	1:AA:621:A:O4'	2.01	0.61
1:AA:1348:U:H4'	9:AI:122:ARG:HG3	1.82	0.61
20:AT:5:LYS:O	20:AT:7:ALA:N	2.34	0.61
22:BA:1897:G:C2	22:BA:1898:U:O2	2.54	0.61
1:CA:369:G:OP2	1:CA:388:G:N1	2.33	0.61
1:CA:388:G:O2'	1:CA:389:A:OP1	2.14	0.61
2:CB:16:PHE:CE1	2:CB:18:HIS:CE1	2.89	0.61
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.00	0.61
12:CL:58:THR:HG22	12:CL:59:ASN:N	2.15	0.61
22:DA:2209:G:N2	22:DA:2216:G:N3	2.48	0.61
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.83	0.61
26:DE:131:THR:HA	26:DE:160:ALA:HB1	1.83	0.61
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.36	0.60
13:AM:15:ALA:CB	13:AM:34:LEU:HD21	2.31	0.60
21:AU:4:ILE:CA	21:AU:20:LYS:HE3	2.31	0.60
22:BA:1924:C:O2	22:BA:1926:U:O4	2.19	0.60
22:BA:2559:C:O2'	22:BA:2560:A:H5'	2.00	0.60
25:BD:4:LEU:CD2	25:BD:100:LEU:HD23	2.31	0.60
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.60
30:BI:47:ASP:HA	30:BI:51:LYS:HD2	1.83	0.60
1:CA:409:U:OP1	4:CD:24:GLY:HA3	2.01	0.60
1:CA:805:C:C2	1:CA:806:C:C5	2.89	0.60
1:CA:995:C:N3	1:CA:1046:A:O2'	2.31	0.60
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.19	0.60
2:CB:206:ALA:O	2:CB:207:ILE:C	2.42	0.60
9:CI:52:LEU:HD13	9:CI:57:MET:HG2	1.82	0.60
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.31	0.60
15:CO:18:ASP:C	15:CO:18:ASP:OD1	2.44	0.60
22:DA:235:U:C4	22:DA:236:C:C5	2.89	0.60
22:DA:1806:C:C5	22:DA:1807:G:C8	2.89	0.60
22:DA:2038:G:H2'	22:DA:2039:U:O4'	1.99	0.60
25:DD:78:GLY:HA3	25:DD:80:TRP:CH2	2.35	0.60
1:AA:71:A:O2'	1:AA:72:A:P	2.60	0.60
1:AA:927:G:C2	1:AA:1391:U:O2	2.54	0.60
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.19	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:69:ARG:C	28:BG:69:ARG:HD3	2.27	0.60
1:CA:577:G:C8	1:CA:816:A:C6	2.89	0.60
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.00	0.60
1:AA:604:G:C2	1:AA:635:A:C2	2.89	0.60
4:AD:29:ASP:O	4:AD:31:LYS:HD3	2.01	0.60
12:AL:50:ARG:HG3	12:AL:90:LEU:HD11	1.83	0.60
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.31	0.60
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.01	0.60
26:BE:125:SER:OG	26:BE:126:VAL:N	2.31	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
32:BK:8:LEU:HD12	32:BK:8:LEU:N	2.17	0.60
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.37	0.60
5:CE:137:VAL:O	5:CE:138:ARG:HB2	2.01	0.60
13:CM:26:GLY:O	13:CM:30:SER:HB2	2.00	0.60
17:CQ:8:LEU:HB2	17:CQ:61:ILE:CG2	2.30	0.60
22:DA:195:A:C6	22:DA:198:C:C5	2.89	0.60
22:DA:981:A:N1	22:DA:2027:G:O2'	2.32	0.60
22:DA:1317:G:C2	22:DA:1336:A:C2	2.88	0.60
22:DA:1663:G:C6	22:DA:1992:G:N7	2.68	0.60
22:DA:1779:U:H5	22:DA:1784:A:N7	1.99	0.60
24:DC:237:GLY:O	24:DC:239:ASN:N	2.34	0.60
35:DN:1:MET:O	35:DN:3:HIS:N	2.34	0.60
40:DS:7:HIS:HB2	40:DS:50:VAL:HG21	1.81	0.60
49:D1:38:LYS:HB2	49:D1:49:TYR:CD2	2.36	0.60
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.37	0.60
4:AD:191:LEU:O	4:AD:192:SER:CB	2.49	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
30:BI:18:ALA:O	30:BI:19:ASN:CB	2.49	0.60
33:BL:48:ARG:HG2	51:B3:60:ALA:HB1	1.83	0.60
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.16	0.60
1:CA:525:C:N4	1:CA:526:C:N4	2.49	0.60
1:CA:1534:A:H5"	1:CA:1535:C:OP1	2.01	0.60
2:CB:166:ALA:HB2	2:CB:187:VAL:HG12	1.82	0.60
12:CL:25:GLU:O	12:CL:26:ALA:C	2.41	0.60
22:DA:749:A:C5	22:DA:750:A:N7	2.70	0.60
22:DA:938:G:C2	22:DA:939:G:N7	2.69	0.60
22:DA:2138:G:N2	22:DA:2154:A:H1'	2.16	0.60
22:DA:2212:A:C2	22:DA:2214:C:C4	2.89	0.60
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.26	0.60
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.23	0.60
8:AH:2:SER:O	8:AH:4:GLN:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:43:THR:O	9:AI:44:ALA:CB	2.49	0.60
12:AL:59:ASN:C	12:AL:59:ASN:OD1	2.44	0.60
22:BA:244:A:C2	22:BA:255:A:C4	2.89	0.60
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.48	0.60
22:BA:1073:A:N7	22:BA:1074:G:H8	1.99	0.60
22:BA:1714:U:H5"	22:BA:1715:G:H5'	1.82	0.60
1:CA:568:G:N2	1:CA:883:C:C2	2.70	0.60
2:CB:66:LYS:NZ	2:CB:154:MET:O	2.33	0.60
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.17	0.60
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.02	0.60
22:DA:856:G:N2	22:DA:922:C:C2	2.70	0.60
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.37	0.60
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.83	0.60
22:DA:2199:A:C6	22:DA:2200:C:C2	2.89	0.60
22:DA:2819:G:OP1	57:DA:3808:HOH:O	2.16	0.60
50:D2:18:PHE:O	50:D2:19:ARG:C	2.44	0.60
1:AA:1359:C:O3'	57:AA:1777:HOH:O	2.16	0.60
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.01	0.60
22:BA:877:A:N6	22:BA:899:A:N6	2.49	0.60
24:BC:160:THR:O	24:BC:195:VAL:HG12	2.02	0.60
30:BI:34:ASN:OD1	30:BI:65:ARG:NH2	2.34	0.60
32:BK:34:GLY:O	32:BK:36:GLY:N	2.34	0.60
1:CA:411:A:C6	1:CA:429:U:C5	2.89	0.60
1:CA:1239:A:H2'	1:CA:1298:U:O4	2.01	0.60
22:DA:247:G:N7	22:DA:249:C:C2	2.69	0.60
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.32	0.60
22:DA:2033:A:OP2	57:DA:3476:HOH:O	2.16	0.60
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.01	0.60
22:DA:2474:U:H5"	22:DA:2475:C:OP2	2.02	0.60
1:AA:946:A:O2'	1:AA:1333:A:N3	2.34	0.60
1:AA:1048:G:N3	1:AA:1050:G:N7	2.50	0.60
6:AF:7:VAL:O	6:AF:7:VAL:CG2	2.50	0.60
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	2.29	0.60
22:BA:1348:C:C5	22:BA:1349:C:C5	2.90	0.60
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.36	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
40:BS:30:SER:OG	40:BS:31:GLN:N	2.34	0.60
1:CA:515:G:H2'	1:CA:516:U:O4'	2.02	0.60
1:CA:642:A:C5	8:CH:107:SER:HA	2.37	0.60
1:CA:778:G:O2'	11:CK:121:CYS:HB3	2.01	0.60
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1995:U:OP1	57:DA:3810:HOH:O	2.17	0.60
41:DT:34:VAL:HG21	41:DT:43:ILE:HD11	1.84	0.60
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.02	0.60
11:AK:76:GLU:N	11:AK:76:GLU:CD	2.59	0.60
11:AK:102:ALA:O	11:AK:103:ALA:C	2.44	0.60
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.02	0.60
22:BA:17:G:C4	22:BA:524:G:N2	2.69	0.60
22:BA:983:A:N6	22:BA:984:A:N1	2.50	0.60
22:BA:1140:C:OP2	31:BJ:68:LYS:NZ	2.31	0.60
22:BA:2142:A:H2'	22:BA:2143:C:C6	2.36	0.60
22:BA:2309:A:C6	22:BA:2310:C:N4	2.69	0.60
51:B3:15:LYS:HD2	51:B3:23:LYS:HE2	1.84	0.60
1:CA:495:A:N1	1:CA:496:A:N6	2.49	0.60
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.02	0.60
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.84	0.60
34:DM:70:ASP:C	34:DM:70:ASP:OD1	2.44	0.60
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.83	0.60
42:DU:11:VAL:HG12	42:DU:72:ILE:HA	1.82	0.60
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.34	0.60
1:AA:251:G:C6	1:AA:266:G:C6	2.89	0.60
5:AE:72:ILE:HD13	5:AE:145:GLU:CD	2.27	0.60
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.83	0.60
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.37	0.60
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.17	0.60
25:BD:172:VAL:HG21	25:BD:194:PRO:HD3	1.84	0.60
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.02	0.60
1:CA:736:C:H2'	1:CA:737:C:C6	2.37	0.60
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.01	0.60
10:CJ:6:ILE:HD12	10:CJ:76:ILE:HB	1.84	0.60
12:CL:30:LYS:HA	12:CL:30:LYS:HE3	1.83	0.60
22:DA:2004:G:P	57:DA:3803:HOH:O	2.55	0.60
22:DA:2502:G:H5'	22:DA:2503:A:H5"	1.83	0.60
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.37	0.60
24:DC:247:PRO:HG2	24:DC:248:TRP:CZ3	2.36	0.60
42:DU:44:LYS:O	42:DU:58:ILE:HA	2.01	0.60
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.16	0.60
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.01	0.60
4:AD:160:GLU:O	4:AD:162:ALA:N	2.35	0.60
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.32	0.60
14:AN:33:ASP:O	14:AN:35:ASN:N	2.34	0.60
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.02	0.60
22:BA:2458:G:C4	22:BA:2490:G:C2	2.90	0.60
53:B5:35:THR:O	53:B5:35:THR:OG1	2.17	0.60
1:CA:502:A:H2'	1:CA:503:C:O4'	2.00	0.60
3:CC:42:TYR:CE1	3:CC:90:VAL:HG21	2.37	0.60
6:CF:19:PRO:HA	6:CF:22:ILE:HB	1.84	0.60
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.67	0.60
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.83	0.60
22:DA:13:A:N1	22:DA:525:U:H2'	2.17	0.60
48:D0:55:ILE:O	48:D0:56:ALA:CB	2.50	0.60
1:AA:7:A:N6	5:AE:97:GLN:OE1	2.35	0.59
1:AA:1216:A:OP1	14:AN:3:LYS:HE2	2.01	0.59
10:AJ:51:VAL:HB	14:AN:81:ARG:HB2	1.83	0.59
13:AM:3:ARG:HG3	13:AM:4:ILE:N	2.16	0.59
13:AM:77:ILE:HG22	13:AM:81:MET:HE2	1.84	0.59
16:AP:42:ILE:O	16:AP:42:ILE:HG22	2.02	0.59
22:BA:780:G:H2'	22:BA:782:A:N7	2.17	0.59
22:BA:1250:G:C5'	38:BQ:6:ARG:HD3	2.32	0.59
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.02	0.59
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.84	0.59
41:BT:73:ARG:NH2	41:BT:73:ARG:HB3	2.17	0.59
1:CA:38:G:N2	1:CA:397:A:C4	2.70	0.59
1:CA:203:G:N2	1:CA:215:C:C2	2.70	0.59
1:CA:406:G:C2	1:CA:407:U:C6	2.90	0.59
1:CA:583:A:C2	1:CA:759:A:C5	2.90	0.59
1:CA:1124:G:C2	1:CA:1127:G:N2	2.70	0.59
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.02	0.59
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.17	0.59
17:CQ:14:SER:C	17:CQ:17:MET:HE1	2.27	0.59
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.01	0.59
22:DA:1856:U:O4	22:DA:1857:G:C6	2.55	0.59
22:DA:2262:U:N3	22:DA:2279:G:C2	2.70	0.59
22:DA:2845:U:H5"	37:DP:52:ASN:O	2.02	0.59
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
1:AA:64:G:C2	1:AA:67:C:N4	2.71	0.59
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.02	0.59
9:AI:84:THR:HG21	9:AI:103:PHE:HB2	1.84	0.59
22:BA:190:A:C4	22:BA:207:A:C2	2.90	0.59
22:BA:576:U:OP1	57:BA:3672:HOH:O	2.17	0.59
22:BA:813:U:H2'	22:BA:814:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.32	0.59
22:BA:1142:A:C2	22:BA:1144:A:C8	2.91	0.59
29:BH:83:LYS:CE	1:CA:55:A:O2'	2.49	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
44:BW:68:LYS:HE2	44:BW:83:GLU:OE2	2.01	0.59
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.84	0.59
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.16	0.59
19:CS:66:MET:SD	19:CS:74:PHE:CZ	2.95	0.59
22:DA:1805:A:N3	22:DA:1813:G:N2	2.50	0.59
22:DA:2311:A:C2	27:DF:79:ILE:HG21	2.37	0.59
41:DT:44:LYS:HE3	41:DT:55:VAL:HB	1.84	0.59
1:AA:1407:C:O2'	22:BA:1912:A:C6	2.51	0.59
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.18	0.59
22:BA:265:A:N1	22:BA:427:U:O2'	2.31	0.59
22:BA:528:A:C2	22:BA:2043:C:H5'	2.37	0.59
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.02	0.59
22:BA:1731:G:C6	22:BA:1733:G:C5	2.90	0.59
22:BA:1791:A:O2'	24:BC:206:GLY:HA2	2.02	0.59
22:BA:2032:G:N7	57:BA:3534:HOH:O	2.31	0.59
22:BA:2390:U:OP2	51:B3:35:LYS:NZ	2.35	0.59
1:CA:527:G:C2	1:CA:528:C:C5	2.90	0.59
1:CA:906:A:N6	57:CA:1823:HOH:O	2.35	0.59
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.01	0.59
3:CC:130:PHE:CE2	3:CC:131:ARG:HD3	2.37	0.59
14:CN:64:CYS:SG	14:CN:83:LYS:HG3	2.42	0.59
22:DA:753:A:H2'	22:DA:754:U:C6	2.37	0.59
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.10	0.59
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.03	0.59
22:DA:2415:G:C6	22:DA:2416:C:C4	2.90	0.59
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.02	0.59
38:DQ:47:TYR:OH	38:DQ:51:ARG:NH1	2.34	0.59
40:DS:33:LEU:HD21	40:DS:52:GLU:CG	2.32	0.59
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.70	0.59
2:AB:184:PHE:CE2	2:AB:198:PHE:CD2	2.90	0.59
2:AB:218:ALA:O	2:AB:222:ARG:HB2	2.02	0.59
4:AD:30:THR:O	4:AD:31:LYS:C	2.46	0.59
22:BA:543:G:C2	22:BA:544:C:H1'	2.38	0.59
22:BA:761:A:N7	57:BA:3294:HOH:O	2.35	0.59
22:BA:1027:A:C6	22:BA:1126:A:C4	2.90	0.59
22:BA:1838:C:C6	22:BA:1899:A:C6	2.90	0.59
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2517:C:C5	22:BA:2542:A:C5	2.91	0.59
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.32	0.59
35:BN:36:THR:HG23	35:BN:37:THR:N	2.17	0.59
1:CA:295:C:C4	1:CA:296:U:C4	2.91	0.59
1:CA:1028:C:O2	1:CA:1028:C:H2'	2.01	0.59
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.38	0.59
22:DA:186:G:C2	22:DA:211:C:C2	2.90	0.59
22:DA:219:A:N6	22:DA:220:G:C6	2.70	0.59
39:DR:47:VAL:O	39:DR:47:VAL:CG1	2.49	0.59
1:AA:148:G:H2'	1:AA:149:A:O5'	2.03	0.59
1:AA:1048:G:C2	1:AA:1050:G:C5	2.91	0.59
1:AA:1417:G:C6	1:AA:1482:G:C6	2.90	0.59
2:AB:62:SER:C	2:AB:64:LYS:N	2.59	0.59
11:AK:43:GLY:HA3	11:AK:74:VAL:HG13	1.85	0.59
13:AM:73:ILE:O	13:AM:76:SER:OG	2.17	0.59
13:AM:95:LEU:HB3	13:AM:96:PRO:CD	2.32	0.59
22:BA:78:U:H2'	22:BA:79:C:C6	2.38	0.59
22:BA:2001:C:C2	22:BA:2002:G:C8	2.90	0.59
22:BA:2502:G:H5"	22:BA:2503:A:C5'	2.33	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
31:BJ:19:ASP:OD2	31:BJ:58:ASN:ND2	2.35	0.59
46:BY:37:LEU:HD11	46:BY:39:GLN:O	2.02	0.59
1:CA:269:C:H2'	1:CA:270:A:C8	2.38	0.59
1:CA:542:G:C2	1:CA:543:U:C6	2.91	0.59
1:CA:570:G:C4	1:CA:571:U:C5	2.91	0.59
17:CQ:52:GLU:HG2	17:CQ:53:CYS:SG	2.42	0.59
22:DA:132:G:N2	22:DA:148:U:C2	2.70	0.59
22:DA:1529:G:C6	22:DA:1543:G:N2	2.70	0.59
22:DA:2272:U:H5"	22:DA:2273:A:OP1	2.03	0.59
22:DA:2873:A:H4'	57:DA:3807:HOH:O	2.03	0.59
27:DF:10:ASP:OD2	27:DF:11:GLU:HG3	2.02	0.59
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.35	0.59
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.02	0.59
22:BA:319:G:C4	22:BA:333:G:N2	2.70	0.59
24:BC:252:THR:O	24:BC:253:LYS:C	2.45	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.34	0.59
46:BY:61:ALA:O	46:BY:63:ALA:N	2.36	0.59
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.38	0.59
4:CD:31:LYS:HD3	4:CD:31:LYS:N	2.17	0.59
22:DA:142:A:H2'	22:DA:143:C:C6	2.37	0.59
22:DA:1109:C:C4	22:DA:1110:G:C6	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1173:U:O2'	22:DA:1176:U:O2	2.12	0.59
24:DC:67:PHE:HB3	24:DC:151:GLY:O	2.02	0.59
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	1.84	0.59
10:AJ:9:ARG:HB2	10:AJ:99:GLN:HB2	1.83	0.59
20:AT:83:ILE:O	20:AT:87:ALA:HB3	2.03	0.59
22:BA:415:A:N1	22:BA:2409:G:C6	2.71	0.59
22:BA:585:G:H5"	22:BA:586:A:P	2.42	0.59
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.38	0.59
27:BF:130:MET:HE2	27:BF:132:VAL:HG13	1.84	0.59
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.33	0.59
1:CA:791:G:C6	1:CA:792:A:N7	2.71	0.59
1:CA:1219:A:N6	1:CA:1220:G:O6	2.36	0.59
5:CE:75:ALA:O	5:CE:147:MET:HE2	2.03	0.59
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.02	0.59
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.03	0.59
22:DA:2146:C:H5"	22:DA:2147:A:OP1	2.02	0.59
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.02	0.59
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.51	0.59
30:DI:39:CYS:HA	30:DI:42:PHE:HB3	1.83	0.59
33:DL:77:ILE:O	33:DL:110:VAL:O	2.20	0.59
1:AA:92:U:H2'	1:AA:93:U:C6	2.37	0.59
1:AA:673:A:H5"	6:AF:86:ARG:NH1	2.17	0.59
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.03	0.59
11:AK:23:ILE:HG13	11:AK:23:ILE:O	2.02	0.59
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.38	0.59
22:BA:2029:G:N1	22:BA:2033:A:OP2	2.32	0.59
22:BA:2721:A:C2	22:BA:2873:A:C5	2.91	0.59
34:BM:136:MET:HE2	43:BV:57:TYR:CD2	2.38	0.59
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.03	0.59
1:CA:160:A:H2'	1:CA:161:A:O4'	2.02	0.59
1:CA:202:G:O2'	1:CA:468:A:C8	2.56	0.59
2:CB:99:GLY:O	2:CB:103:ASN:N	2.35	0.59
12:CL:74:LEU:HD21	12:CL:104:CYS:SG	2.43	0.59
14:CN:30:ILE:HG22	14:CN:35:ASN:OD1	2.03	0.59
16:CP:20:VAL:HG21	16:CP:32:PHE:CB	2.32	0.59
22:DA:279:A:C2	22:DA:362:A:H4'	2.38	0.59
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.38	0.59
22:DA:2199:A:C4	22:DA:2225:A:C2	2.90	0.59
22:DA:2415:G:C2	22:DA:2416:C:C2	2.91	0.59
37:DP:65:SER:O	37:DP:67:GLY:N	2.36	0.59
2:AB:106:THR:O	2:AB:107:VAL:CB	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:111:ILE:CG1	2:AB:151:ILE:HG12	2.32	0.59
12:AL:25:GLU:O	12:AL:26:ALA:C	2.46	0.59
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.38	0.59
21:AU:35:ARG:O	21:AU:36:GLU:C	2.45	0.59
22:BA:1219:U:H2'	22:BA:1220:G:H8	1.68	0.59
22:BA:2714:G:P	57:BA:3549:HOH:O	2.60	0.59
24:BC:237:GLY:O	57:BC:305:HOH:O	2.17	0.59
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.59
41:BT:56:GLU:HB2	41:BT:88:LYS:HA	1.85	0.59
1:CA:441:A:C2	1:CA:497:G:C6	2.91	0.59
1:CA:1511:G:C5	1:CA:1512:U:C5	2.91	0.59
3:CC:173:VAL:O	3:CC:175:LEU:N	2.36	0.59
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.19	0.59
22:DA:2345:G:C6	22:DA:2347:C:N4	2.71	0.59
23:DB:58:A:H2'	23:DB:59:A:O4'	2.03	0.59
1:AA:554:A:H5'	12:AL:26:ALA:HB1	1.84	0.59
11:AK:23:ILE:HG22	11:AK:32:VAL:HG22	1.84	0.59
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.32	0.59
1:CA:1458:G:H5'	20:CT:27:MET:HB3	1.85	0.59
5:CE:74:VAL:HB	5:CE:76:LEU:HD11	1.85	0.59
5:CE:115:LEU:O	5:CE:120:VAL:HG23	2.02	0.59
12:CL:90:LEU:CB	12:CL:93:VAL:HG21	2.33	0.59
17:CQ:12:VAL:HG23	17:CQ:57:ASP:O	2.03	0.59
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.86	0.59
22:DA:590:A:C6	22:DA:591:U:C4	2.90	0.59
22:DA:608:A:H2'	22:DA:609:A:C8	2.37	0.59
22:DA:1823:G:O6	57:DA:3658:HOH:O	2.16	0.59
22:DA:2819:G:H2'	22:DA:2821:A:N7	2.18	0.59
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.18	0.59
24:DC:226:ASN:ND2	57:DC:304:HOH:O	2.24	0.59
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.38	0.58
1:AA:152:A:N6	1:AA:170:U:C2	2.71	0.58
1:AA:451:A:OP2	16:AP:70:ARG:NH2	2.36	0.58
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.33	0.58
2:AB:47:VAL:HB	2:AB:48:PRO:HD3	1.85	0.58
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.38	0.58
22:BA:1057:A:C2	22:BA:1086:A:C2	2.91	0.58
22:BA:2309:A:N6	22:BA:2310:C:N4	2.51	0.58
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.02	0.58
33:BL:81:ASP:CG	33:BL:100:ILE:HD13	2.28	0.58
35:BN:117:ASP:O	35:BN:119:SER:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:32:A:H2'	1:CA:32:A:N3	2.18	0.58
1:CA:216:U:H2'	1:CA:217:C:C6	2.38	0.58
1:CA:657:U:O2	15:CO:22:THR:CG2	2.51	0.58
7:CG:115:SER:HB3	7:CG:118:LEU:HG	1.85	0.58
22:DA:59:U:O2'	22:DA:74:A:OP2	2.19	0.58
22:DA:248:G:H5'	22:DA:250:G:N7	2.18	0.58
22:DA:720:U:H2'	22:DA:721:A:C8	2.38	0.58
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.18	0.58
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.38	0.58
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.33	0.58
1:AA:259:G:H2'	1:AA:260:G:O4'	2.03	0.58
2:AB:188:ASP:HB2	2:AB:204:ASP:OD1	2.03	0.58
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.65	0.58
4:AD:147:GLU:OE1	4:AD:148:LYS:NZ	2.35	0.58
16:AP:77:GLU:C	16:AP:79:ASN:H	2.11	0.58
22:BA:608:A:N1	22:BA:609:A:C2	2.71	0.58
37:BP:26:VAL:HG23	37:BP:85:SER:O	2.03	0.58
42:BU:18:ASP:O	42:BU:20:GLY:N	2.36	0.58
48:B0:55:ILE:O	48:B0:56:ALA:HB3	2.03	0.58
52:B4:10:LEU:HB2	52:B4:33:HIS:CE1	2.38	0.58
1:CA:228:A:H4'	16:CP:63:GLN:HG2	1.85	0.58
4:CD:124:MET:HG3	4:CD:146:ARG:HG2	1.84	0.58
7:CG:125:SER:C	7:CG:127:ALA:H	2.11	0.58
11:CK:14:LYS:HD2	11:CK:14:LYS:C	2.29	0.58
15:CO:87:LEU:O	15:CO:88:ARG:HB3	2.04	0.58
20:CT:3:ASN:O	20:CT:5:LYS:N	2.35	0.58
22:DA:297:G:H5"	42:DU:85:PHE:CB	2.34	0.58
22:DA:771:G:C2	22:DA:772:C:C6	2.91	0.58
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.39	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
31:DJ:31:GLU:HG3	31:DJ:142:ILE:HD11	1.85	0.58
1:AA:96:U:O2'	1:AA:97:G:OP2	2.20	0.58
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.03	0.58
1:AA:1181:G:C2	1:AA:1182:G:N2	2.70	0.58
16:AP:77:GLU:C	16:AP:79:ASN:N	2.60	0.58
17:AQ:4:LYS:HG3	17:AQ:7:THR:CG2	2.33	0.58
22:BA:181:A:C2	22:BA:182:A:C4	2.92	0.58
22:BA:1000:A:C6	22:BA:1001:A:C6	2.91	0.58
22:BA:1006:C:C2	22:BA:1138:G:N2	2.70	0.58
22:BA:1259:G:O2'	22:BA:1260:A:H5'	2.03	0.58
22:BA:2021:C:OP1	48:B0:9:THR:HG21	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:73:SER:OG	27:BF:80:ARG:HA	2.03	0.58
31:BJ:49:ASP:OD1	31:BJ:121:LYS:CE	2.49	0.58
38:BQ:101:PHE:O	38:BQ:102:ASP:HB2	2.03	0.58
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.85	0.58
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.04	0.58
2:CB:208:ARG:O	2:CB:212:LEU:N	2.35	0.58
17:CQ:14:SER:OG	17:CQ:17:MET:HE1	2.03	0.58
22:DA:388:G:N7	22:DA:390:U:H2'	2.18	0.58
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.03	0.58
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.38	0.58
24:DC:15:HIS:O	24:DC:204:VAL:HG21	2.03	0.58
39:DR:61:ALA:HB2	39:DR:98:ILE:HD13	1.85	0.58
1:AA:32:A:OP1	1:AA:398:U:H1'	2.04	0.58
1:AA:188:C:O2	1:AA:188:C:C2'	2.52	0.58
1:AA:338:A:N1	1:AA:351:G:O6	2.36	0.58
1:AA:572:A:H5'	1:AA:573:A:OP2	2.02	0.58
1:AA:913:A:H4'	1:AA:914:A:OP1	2.04	0.58
1:AA:1125:U:C5	1:AA:1127:G:C5	2.92	0.58
6:AF:17:GLN:NE2	6:AF:17:GLN:O	2.37	0.58
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.85	0.58
22:BA:991:C:C2'	22:BA:992:C:O5'	2.50	0.58
22:BA:998:C:C2'	22:BA:999:U:O5'	2.52	0.58
22:BA:1153:C:N4	22:BA:1154:G:N1	2.51	0.58
22:BA:1324:G:C2	22:BA:1328:A:N1	2.70	0.58
22:BA:2360:G:H1'	33:BL:60:ARG:HD3	1.84	0.58
22:BA:2571:U:C2'	22:BA:2572:A:OP1	2.50	0.58
24:BC:258:ARG:NH1	24:BC:264:ASP:OD2	2.36	0.58
27:BF:175:PHE:HD1	27:BF:177:PHE:CE1	2.21	0.58
28:BG:124:GLU:CD	28:BG:125:CYS:H	2.10	0.58
9:CI:95:ARG:O	9:CI:99:ARG:N	2.32	0.58
18:CR:25:ASP:O	18:CR:28:THR:N	2.36	0.58
22:DA:533:G:H5'	38:DQ:24:TYR:CE2	2.39	0.58
22:DA:655:A:H4'	22:DA:656:G:OP1	2.03	0.58
22:DA:1366:A:C4	22:DA:1367:A:C8	2.91	0.58
22:DA:2234:G:C6	22:DA:2235:G:N7	2.72	0.58
40:DS:84:ARG:HB2	40:DS:96:ILE:HG12	1.85	0.58
16:AP:71:VAL:O	16:AP:75:ILE:HG13	2.03	0.58
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.46	0.58
22:BA:1356:G:N2	22:BA:1357:C:H1'	2.19	0.58
22:BA:2192:U:C2	22:BA:2193:G:C8	2.91	0.58
22:BA:2298:A:C4	22:BA:2321:U:C5	2.90	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.38	0.58
39:BR:49:ILE:C	39:BR:51:VAL:O	2.46	0.58
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.47	0.58
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.18	0.58
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.18	0.58
22:DA:35:G:H1'	22:DA:454:A:C4	2.39	0.58
22:DA:607:U:O4	22:DA:619:G:H2'	2.03	0.58
22:DA:1439:A:N7	22:DA:1552:A:H2	2.01	0.58
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.04	0.58
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	1.86	0.58
26:DE:108:ILE:HD13	26:DE:181:ILE:HG12	1.86	0.58
37:DP:92:VAL:HG21	37:DP:97:LEU:HD11	1.84	0.58
1:AA:1349:A:C2	1:AA:1374:A:C5	2.91	0.58
10:AJ:91:ASP:C	10:AJ:92:LEU:HG	2.29	0.58
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.28	0.58
22:BA:528:A:C8	22:BA:528:A:C3'	2.86	0.58
28:BG:124:GLU:CD	28:BG:125:CYS:N	2.61	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.39	0.58
3:CC:145:GLY:O	3:CC:146:ALA:O	2.20	0.58
15:CO:46:HIS:O	15:CO:48:LYS:N	2.36	0.58
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.03	0.58
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.18	0.58
46:DY:9:LYS:N	46:DY:12:GLU:HG3	2.19	0.58
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.84	0.58
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	2.03	0.58
22:BA:2517:C:C6	22:BA:2542:A:C5	2.92	0.58
24:BC:189:ARG:O	24:BC:190:ALA:HB2	2.03	0.58
27:BF:52:ASN:HB3	27:BF:147:ASP:OD1	2.04	0.58
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.47	0.58
20:CT:7:ALA:HB1	20:CT:10:ARG:HB2	1.86	0.58
22:DA:21:A:C2	22:DA:520:G:N3	2.71	0.58
22:DA:186:G:N2	22:DA:211:C:C2	2.71	0.58
22:DA:301:G:C2	22:DA:302:C:C2	2.91	0.58
22:DA:776:G:C8	22:DA:793:A:C4	2.91	0.58
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.36	0.58
22:DA:1809:A:N6	22:DA:1810:A:C6	2.72	0.58
1:AA:188:C:O2	1:AA:188:C:H2'	2.04	0.58
1:AA:223:A:H2'	1:AA:224:U:C6	2.39	0.58
1:AA:1210:C:O4'	1:AA:1214:C:C5	2.57	0.58
1:AA:1371:G:C6	1:AA:1372:U:C4	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:25:ASN:O	3:AC:26:THR:C	2.46	0.58
22:BA:575:A:C2'	22:BA:576:U:H5'	2.34	0.58
22:BA:1180:U:H2'	22:BA:1181:U:C5'	2.33	0.58
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.04	0.58
22:BA:2462:C:H2'	22:BA:2463:C:C6	2.38	0.58
28:BG:60:ASP:O	28:BG:61:GLY:C	2.47	0.58
29:BH:97:ARG:CD	1:CA:369:G:O2'	2.44	0.58
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.77	0.58
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.33	0.58
1:CA:227:G:H2'	1:CA:228:A:O4'	2.03	0.58
1:CA:829:G:C6	1:CA:858:G:N2	2.72	0.58
4:CD:29:ASP:C	4:CD:31:LYS:H	2.12	0.58
22:DA:575:A:C2	22:DA:576:U:C6	2.92	0.58
31:DJ:34:ARG:O	31:DJ:39:LYS:HB2	2.02	0.58
35:DN:118:ARG:O	35:DN:119:SER:CB	2.52	0.58
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.29	0.58
22:BA:997:G:OP1	38:BQ:92:ARG:CG	2.51	0.58
22:BA:1260:A:N6	57:BA:3276:HOH:O	2.36	0.58
22:BA:1499:C:C4	22:BA:1500:G:N7	2.71	0.58
23:BB:94:A:O2'	23:BB:95:U:H5'	2.03	0.58
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.36	0.58
38:BQ:76:TYR:C	38:BQ:76:TYR:CD2	2.81	0.58
1:CA:511:C:C2	1:CA:512:U:C6	2.92	0.58
1:CA:841:C:H3'	1:CA:843:U:H5"	1.84	0.58
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.39	0.58
22:DA:24:G:C6	22:DA:25:U:C4	2.92	0.58
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.57	0.58
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.19	0.58
2:AB:99:GLY:O	2:AB:103:ASN:N	2.36	0.58
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.67	0.58
8:AH:59:LEU:HD13	8:AH:60:GLU:N	2.18	0.58
16:AP:51:ARG:HG2	16:AP:51:ARG:HH11	1.69	0.58
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.04	0.58
22:BA:2780:G:H4'	22:BA:2781:A:OP2	2.03	0.58
26:BE:149:ILE:HG23	26:BE:188:MET:HG2	1.86	0.58
30:BI:92:LYS:HB3	30:BI:95:LYS:HG2	1.84	0.58
53:B5:48:LEU:HA	53:B5:208:THR:CB	2.34	0.58
1:CA:1036:A:H3'	1:CA:1037:C:C6	2.39	0.58
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.04	0.58
2:CB:163:VAL:HG23	2:CB:185:ALA:HB2	1.85	0.58
9:CI:25:ASN:O	9:CI:62:ASP:HA	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:328:U:O3'	42:DU:66:GLN:HG3	2.04	0.58
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.51	0.58
22:DA:1809:A:C5	22:DA:1810:A:C5	2.92	0.58
22:DA:2468:A:C2	22:DA:2481:G:C2	2.92	0.58
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	1.85	0.58
31:DJ:84:ILE:O	31:DJ:84:ILE:HG13	2.04	0.58
35:DN:103:ARG:CD	35:DN:110:MET:HE3	2.34	0.58
38:DQ:47:TYR:CZ	38:DQ:51:ARG:NH1	2.72	0.58
45:DX:41:GLU:O	45:DX:44:LYS:HD2	2.04	0.58
1:AA:80:A:C2	1:AA:90:C:N3	2.72	0.57
1:AA:186:C:H2'	1:AA:187:G:O4'	2.04	0.57
1:AA:1375:A:C6	1:AA:1376:U:C4	2.92	0.57
2:AB:106:THR:O	2:AB:107:VAL:HB	2.03	0.57
7:AG:43:VAL:O	7:AG:47:LEU:HB2	2.04	0.57
7:AG:149:LYS:O	7:AG:151:PHE:O	2.21	0.57
22:BA:264:C:O2'	22:BA:265:A:H2'	2.03	0.57
22:BA:404:A:H1'	22:BA:405:U:OP2	2.04	0.57
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.39	0.57
22:BA:1355:G:O2'	22:BA:1356:G:H5'	2.03	0.57
22:BA:2180:U:H5"	22:BA:2181:U:OP2	2.03	0.57
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.03	0.57
1:CA:206:C:H2'	1:CA:207:C:C4'	2.34	0.57
2:CB:35:ARG:O	2:CB:38:VAL:N	2.35	0.57
4:CD:48:LEU:HD21	4:CD:52:GLY:C	2.29	0.57
5:CE:149:SER:O	5:CE:153:VAL:HG13	2.03	0.57
22:DA:503:A:N3	22:DA:506:G:C8	2.72	0.57
22:DA:574:A:P	57:DA:3263:HOH:O	2.62	0.57
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.19	0.57
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.19	0.57
22:DA:2297:A:N1	22:DA:2321:U:C5	2.71	0.57
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.39	0.57
1:AA:763:G:C2	1:AA:764:C:C2	2.92	0.57
2:AB:20:THR:OG1	2:AB:21:ARG:N	2.35	0.57
2:AB:148:LEU:HA	2:AB:151:ILE:HG22	1.86	0.57
11:AK:71:ALA:O	11:AK:73:ALA:N	2.37	0.57
22:BA:761:A:C8	57:BA:3294:HOH:O	2.52	0.57
22:BA:1249:U:C2	33:BL:18:ARG:NH1	2.72	0.57
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.34	0.57
22:BA:2507:C:P	57:BA:3714:HOH:O	2.61	0.57
24:BC:13:ARG:HA	24:BC:16:VAL:CG2	2.34	0.57
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.37	0.57
53:B5:191:ARG:O	53:B5:195:ARG:CB	2.52	0.57
1:CA:475:C:H2'	1:CA:476:U:C6	2.39	0.57
1:CA:1133:G:C2	1:CA:1142:G:C2	2.92	0.57
2:CB:53:ALA:C	2:CB:54:LEU:HD22	2.29	0.57
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.04	0.57
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.84	0.57
21:CU:11:PRO:C	21:CU:12:PHE:CG	2.80	0.57
22:DA:78:U:OP2	46:DY:2:LYS:CD	2.52	0.57
22:DA:563:A:C6	22:DA:2018:G:C4	2.92	0.57
22:DA:649:G:H2'	22:DA:650:C:C6	2.39	0.57
22:DA:813:U:H1'	22:DA:1226:A:N3	2.18	0.57
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.03	0.57
22:DA:2594:C:N4	22:DA:2595:G:O6	2.37	0.57
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.52	0.57
41:DT:73:ARG:NH1	41:DT:74:ILE:O	2.36	0.57
1:AA:990:C:N3	1:AA:991:U:C4	2.72	0.57
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.86	0.57
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.40	0.57
22:BA:2779:U:C5	22:BA:2781:A:C2	2.92	0.57
23:BB:41:G:H5"	27:BF:66:LEU:HD13	1.86	0.57
1:CA:147:G:H2'	1:CA:148:G:C8	2.40	0.57
1:CA:1330:U:H4'	13:CM:23:TYR:CE1	2.39	0.57
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.39	0.57
22:DA:1445:G:N2	22:DA:1547:C:C2	2.73	0.57
22:DA:1654:A:P	35:DN:1:MET:HA	2.43	0.57
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.57
42:DU:34:VAL:HG22	42:DU:65:ILE:O	2.04	0.57
1:AA:202:G:N2	1:AA:216:U:O2	2.37	0.57
1:AA:1168:U:O2	1:AA:1168:U:C2'	2.52	0.57
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.35	0.57
8:AH:22:LYS:N	8:AH:65:TYR:OH	2.37	0.57
8:AH:88:ARG:O	8:AH:122:GLY:HA3	2.04	0.57
14:AN:48:LEU:O	14:AN:50:THR:N	2.37	0.57
22:BA:1385:A:C4	22:BA:1386:C:C5	2.91	0.57
23:BB:47:C:OP2	36:BO:3:LYS:HE3	2.04	0.57
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.20	0.57
52:B4:11:CYS:SG	52:B4:33:HIS:CE1	2.97	0.57
53:B5:204:GLY:O	53:B5:205:ALA:CB	2.52	0.57
1:CA:366:A:O2'	1:CA:394:G:N2	2.38	0.57
1:CA:667:G:C2	1:CA:740:U:O2	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.04	0.57
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.69	0.57
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.19	0.57
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.52	0.57
19:CS:11:ILE:HG13	19:CS:12:ASP:N	2.19	0.57
19:CS:58:VAL:HG11	19:CS:75:ALA:HA	1.86	0.57
22:DA:537:G:N1	22:DA:555:G:C2	2.72	0.57
22:DA:1167:C:C2'	22:DA:1168:G:H5'	2.34	0.57
22:DA:1177:G:H2'	22:DA:1178:C:O4'	2.03	0.57
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.05	0.57
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.57
32:DK:105:ARG:NH1	37:DP:34:GLU:HG3	2.19	0.57
45:DX:2:SER:O	45:DX:4:VAL:N	2.37	0.57
1:AA:438:U:C2	1:AA:494:G:C6	2.92	0.57
1:AA:1031:C:C2'	1:AA:1032:G:OP2	2.51	0.57
2:AB:200:ILE:O	2:AB:201:PRO:O	2.23	0.57
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.69	0.57
10:AJ:59:LYS:HD2	10:AJ:59:LYS:C	2.29	0.57
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.34	0.57
22:BA:277:G:O2'	22:BA:361:G:N1	2.37	0.57
22:BA:1091:G:O2'	22:BA:1092:C:OP2	2.22	0.57
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.37	0.57
22:BA:1845:G:OP1	24:BC:256:LYS:NZ	2.37	0.57
22:BA:1971:U:OP2	22:BA:1971:U:H4'	2.04	0.57
22:BA:2611:C:OP2	57:BA:3540:HOH:O	2.17	0.57
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.38	0.57
42:BU:97:LYS:O	42:BU:98:SER:OG	2.22	0.57
1:CA:1072:G:C5	1:CA:1073:U:C4	2.93	0.57
3:CC:83:ASP:O	3:CC:85:GLU:N	2.38	0.57
7:CG:136:LYS:O	7:CG:140:ASP:HB2	2.04	0.57
12:CL:65:SER:HB2	12:CL:82:ILE:HD11	1.85	0.57
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.02	0.57
22:DA:223:A:N1	22:DA:407:G:O2'	2.36	0.57
22:DA:1773:A:N3	22:DA:1978:A:C2	2.73	0.57
22:DA:2296:U:H4'	22:DA:2297:A:OP1	2.02	0.57
22:DA:2585:U:O2'	22:DA:2586:U:O5'	2.21	0.57
23:DB:106:G:H2'	23:DB:107:G:O4'	2.04	0.57
25:DD:78:GLY:C	25:DD:80:TRP:CZ3	2.82	0.57
46:DY:11:VAL:HA	46:DY:14:LEU:HB2	1.87	0.57
1:AA:11:G:C6	1:AA:12:U:C4	2.92	0.57
1:AA:108:G:O6	20:AT:10:ARG:HG2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:496:A:C2	1:AA:497:G:C5	2.92	0.57
1:AA:596:A:C6	1:AA:645:G:C2	2.92	0.57
22:BA:1917:U:O2	22:BA:1918:A:O4'	2.22	0.57
22:BA:2191:A:C6	22:BA:2192:U:C4	2.92	0.57
22:BA:2324:U:H3'	22:BA:2325:G:H5'	1.84	0.57
22:BA:2495:G:O2'	22:BA:2496:C:H5'	2.05	0.57
22:BA:2564:A:C6	22:BA:2565:A:C6	2.92	0.57
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.57
1:CA:406:G:C2	1:CA:407:U:C5	2.92	0.57
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.39	0.57
18:CR:35:GLU:HB2	21:CU:19:PHE:CZ	2.40	0.57
18:CR:49:ALA:O	18:CR:50:LYS:C	2.48	0.57
22:DA:118:A:H1'	22:DA:178:G:O4'	2.05	0.57
22:DA:301:G:C6	22:DA:317:G:C6	2.93	0.57
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.04	0.57
22:DA:2004:G:C5	22:DA:2005:A:C8	2.92	0.57
22:DA:2056:G:C2	22:DA:2057:G:C8	2.92	0.57
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.20	0.57
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.39	0.57
25:DD:12:THR:HG21	37:DP:5:ILE:HG23	1.86	0.57
1:AA:79:G:N2	1:AA:91:U:O4	2.36	0.57
1:AA:686:U:O4	1:AA:703:G:O2'	2.15	0.57
1:AA:872:A:C8	1:AA:874:G:C8	2.93	0.57
1:AA:1313:U:O4	19:AS:4:SER:HA	2.05	0.57
9:AI:50:GLN:C	9:AI:52:LEU:H	2.13	0.57
22:BA:116:C:N4	22:BA:117:G:C6	2.72	0.57
22:BA:539:G:C5	22:BA:540:C:C5	2.93	0.57
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.20	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.04	0.57
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.87	0.57
43:BV:2:PHE:CD1	43:BV:50:MET:HE3	2.39	0.57
1:CA:518:C:H4'	1:CA:519:C:O5'	2.03	0.57
1:CA:822:U:C2	1:CA:823:C:C5	2.93	0.57
1:CA:890:G:O2'	1:CA:891:U:OP2	2.21	0.57
1:CA:957:U:O2	1:CA:959:A:C8	2.58	0.57
17:CQ:12:VAL:HG12	17:CQ:13:VAL:H	1.67	0.57
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.52	0.57
21:CU:37:PHE:HA	21:CU:40:LYS:HE3	1.85	0.57
22:DA:224:U:C4	22:DA:225:C:C5	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.05	0.57
28:DG:89:LEU:HB2	28:DG:129:THR:HG22	1.85	0.57
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.40	0.57
2:AB:10:LEU:HG	2:AB:11:LYS:N	2.19	0.57
2:AB:32:PHE:CG	2:AB:32:PHE:O	2.57	0.57
12:AL:44:LYS:HB2	12:AL:45:PRO:HD3	1.86	0.57
15:AO:64:ARG:NH2	15:AO:68:ASP:OD2	2.38	0.57
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.35	0.57
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.04	0.57
22:BA:2189:U:H2'	22:BA:2190:G:O4'	2.04	0.57
22:BA:2794:C:H2'	22:BA:2795:C:H6	1.70	0.57
28:BG:74:SER:HA	28:BG:77:ILE:HG13	1.85	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
1:CA:577:G:C8	1:CA:816:A:N1	2.73	0.57
1:CA:1343:G:O2'	9:CI:123:ARG:HD2	2.04	0.57
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.04	0.57
5:CE:122:ASN:CG	5:CE:123:VAL:N	2.62	0.57
12:CL:44:LYS:HB2	12:CL:45:PRO:HD3	1.87	0.57
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.86	0.57
22:DA:320:A:H2'	26:DE:131:THR:HG21	1.87	0.57
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.40	0.57
22:DA:1308:A:N6	22:DA:1309:G:C2	2.73	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
30:DI:5:VAL:HA	30:DI:8:TYR:CE1	2.40	0.57
34:DM:56:ALA:C	34:DM:58:LYS:H	2.11	0.57
36:DO:79:ALA:HA	36:DO:115:LEU:HD22	1.86	0.57
1:AA:921:U:H2'	1:AA:922:G:O4'	2.04	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.20	0.57
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.05	0.57
21:AU:16:LEU:C	21:AU:18:ARG:HD2	2.30	0.57
22:BA:892:A:H2'	22:BA:892:A:N3	2.20	0.57
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.05	0.57
22:BA:1467:U:C4	22:BA:1546:G:C2	2.93	0.57
24:BC:15:HIS:O	24:BC:204:VAL:HG21	2.04	0.57
26:BE:12:LEU:HD23	26:BE:13:THR:N	2.20	0.57
33:BL:68:SER:O	33:BL:69:ARG:CB	2.52	0.57
50:B2:22:MET:HE2	50:B2:31:LEU:HD12	1.86	0.57
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.19	0.57
1:CA:484:G:C5	1:CA:486:U:H1'	2.39	0.57
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.86	0.57
21:CU:24:GLU:HA	21:CU:28:VAL:HG22	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:161:A:C3'	22:DA:162:U:H5"	2.34	0.57
22:DA:697:G:C2	22:DA:766:U:O2	2.58	0.57
22:DA:1428:C:C4	22:DA:1569:A:H5"	2.40	0.57
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.53	0.57
23:DB:81:G:C6	23:DB:82:U:C4	2.93	0.57
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.87	0.57
46:DY:41:HIS:O	46:DY:45:GLN:HG2	2.04	0.57
1:AA:8:A:N6	4:AD:202:GLU:O	2.38	0.57
1:AA:568:G:N3	1:AA:569:C:C5	2.73	0.57
1:AA:820:U:H4'	1:AA:821:G:OP2	2.05	0.57
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.04	0.57
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.77	0.57
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.40	0.57
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.69	0.57
28:BG:11:VAL:CG2	28:BG:11:VAL:O	2.53	0.57
30:BI:18:ALA:O	30:BI:19:ASN:HB3	2.05	0.57
1:CA:485:U:O2'	1:CA:486:U:OP1	2.22	0.57
1:CA:562:U:OP2	12:CL:14:ARG:NH2	2.38	0.57
1:CA:1072:G:C6	1:CA:1073:U:C4	2.93	0.57
7:CG:88:PRO:HD2	7:CG:151:PHE:O	2.05	0.57
8:CH:111:MET:HE2	8:CH:115:ALA:HB1	1.87	0.57
15:CO:19:ALA:O	15:CO:20:ASN:CB	2.52	0.57
22:DA:897:C:H2'	22:DA:898:C:C6	2.40	0.57
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.23	0.57
22:DA:2093:G:C6	22:DA:2225:A:C8	2.93	0.57
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.38	0.57
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.40	0.57
31:DJ:64:VAL:HG11	31:DJ:89:PHE:CZ	2.40	0.57
1:AA:1418:A:N1	22:BA:1948:G:O2'	2.38	0.56
1:AA:1520:C:C2	1:AA:1521:C:C5	2.93	0.56
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.38	0.56
19:AS:36:ARG:NH2	19:AS:75:ALA:O	2.38	0.56
22:BA:197:A:C6	22:BA:198:C:C2	2.93	0.56
22:BA:1840:G:C2	22:BA:1841:U:C2	2.92	0.56
22:BA:2051:A:H4'	22:BA:2052:A:OP1	2.05	0.56
22:BA:2318:G:C6	22:BA:2319:G:N1	2.72	0.56
22:BA:2343:U:O2'	22:BA:2373:G:O2'	2.17	0.56
22:BA:2564:A:C5	22:BA:2565:A:C6	2.93	0.56
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.36	0.56
23:BB:91:C:OP2	34:BM:18:ARG:HG2	2.04	0.56
24:BC:7:LYS:HB3	24:BC:8:PRO:CD	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.05	0.56
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	1.86	0.56
1:CA:1198:G:OP1	57:CA:1835:HOH:O	2.17	0.56
5:CE:81:LEU:CD1	5:CE:120:VAL:HG11	2.35	0.56
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.20	0.56
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	1.86	0.56
22:DA:55:G:C2	22:DA:56:A:C8	2.93	0.56
22:DA:341:C:H2'	22:DA:342:A:C8	2.40	0.56
22:DA:674:G:H1'	26:DE:69:ARG:CD	2.35	0.56
22:DA:2469:A:O2'	34:DM:55:ARG:NH2	2.38	0.56
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.04	0.56
24:DC:68:LYS:HG2	24:DC:151:GLY:HA2	1.86	0.56
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.86	0.56
1:AA:109:A:C6	1:AA:326:G:C6	2.93	0.56
1:AA:194:C:OP1	57:AA:1880:HOH:O	2.18	0.56
1:AA:600:A:H2'	1:AA:601:G:C8	2.39	0.56
1:AA:665:A:H2'	1:AA:732:C:O2	2.05	0.56
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.52	0.56
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.52	0.56
1:AA:1319:A:C8	1:AA:1323:G:C5	2.92	0.56
2:AB:82:ASP:C	2:AB:84:ALA:N	2.63	0.56
13:AM:25:VAL:HG12	13:AM:29:ARG:HB3	1.87	0.56
15:AO:89:ARG:NH1	22:BA:714:U:C6	2.73	0.56
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.40	0.56
22:BA:1142:A:C4	22:BA:1144:A:C8	2.93	0.56
22:BA:1334:G:C6	22:BA:1335:C:C4	2.93	0.56
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.05	0.56
22:BA:1800:C:H3'	24:BC:146:MET:HE1	1.86	0.56
22:BA:2800:A:H3'	22:BA:2801:G:C5'	2.33	0.56
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.05	0.56
34:BM:70:ASP:OD2	34:BM:70:ASP:C	2.48	0.56
35:BN:12:ARG:NH1	35:BN:20:MET:HE1	2.20	0.56
1:CA:552:U:C2	1:CA:553:A:C8	2.92	0.56
1:CA:1431:A:C6	1:CA:1432:G:C6	2.92	0.56
20:CT:67:ILE:HD11	20:CT:71:LYS:HD3	1.87	0.56
22:DA:584:C:N4	57:DA:3282:HOH:O	2.38	0.56
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.36	0.56
22:DA:956:G:O6	34:DM:14:LYS:NZ	2.38	0.56
22:DA:1428:C:C5	22:DA:1569:A:H5"	2.40	0.56
22:DA:1581:G:C5	22:DA:1582:C:C4	2.93	0.56
22:DA:2345:G:H5'	22:DA:2347:C:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:196:A:N3	1:AA:222:C:H1'	2.20	0.56
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.05	0.56
1:AA:946:A:C2	1:AA:1236:A:C2	2.93	0.56
1:AA:1226:C:O2'	13:AM:110:LYS:NZ	2.38	0.56
1:AA:1517:G:H1'	22:BA:1919:A:O3'	2.04	0.56
2:AB:15:HIS:HB2	2:AB:209:ALA:HB2	1.87	0.56
4:AD:197:GLU:N	4:AD:197:GLU:OE2	2.38	0.56
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.87	0.56
7:AG:47:LEU:O	7:AG:51:ALA:HB2	2.05	0.56
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	1.88	0.56
10:AJ:36:VAL:HG23	10:AJ:76:ILE:HG23	1.86	0.56
22:BA:195:A:C5	22:BA:198:C:H5	2.23	0.56
22:BA:205:G:O2'	22:BA:206:U:P	2.63	0.56
22:BA:585:G:C5'	22:BA:586:A:OP1	2.53	0.56
22:BA:1014:A:C4	22:BA:1149:G:N2	2.73	0.56
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.85	0.56
22:BA:1156:A:C8	38:BQ:51:ARG:HG2	2.40	0.56
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.20	0.56
22:BA:1266:G:O2'	22:BA:2012:G:O6	2.15	0.56
22:BA:1426:G:H1'	22:BA:1572:A:N6	2.19	0.56
22:BA:2267:A:H5"	22:BA:2268:A:H5'	1.87	0.56
22:BA:2502:G:C5'	22:BA:2503:A:C5'	2.84	0.56
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.05	0.56
24:BC:121:ASP:O	24:BC:122:ALA:O	2.23	0.56
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.19	0.56
34:BM:4:PRO:HG3	34:BM:70:ASP:HA	1.87	0.56
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.65	0.56
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.04	0.56
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.05	0.56
2:CB:91:PHE:O	2:CB:150:GLY:HA3	2.05	0.56
5:CE:131:THR:O	5:CE:132:ASN:C	2.48	0.56
15:CO:25:THR:HG23	15:CO:66:LEU:HD12	1.86	0.56
18:CR:58:ALA:O	18:CR:61:ARG:N	2.38	0.56
22:DA:377:G:C5	22:DA:378:C:C5	2.94	0.56
22:DA:420:C:H2'	22:DA:421:C:C6	2.40	0.56
22:DA:483:A:H1'	42:DU:45:HIS:HB2	1.87	0.56
22:DA:987:C:H2'	22:DA:988:A:O4'	2.05	0.56
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.04	0.56
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.20	0.56
22:DA:1826:G:C6	22:DA:1827:U:C4	2.94	0.56
22:DA:1831:G:N2	22:DA:1975:G:C4	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1973:G:C5	22:DA:1974:C:C4	2.94	0.56
22:DA:2131:U:H5'	22:DA:2132:U:H5"	1.88	0.56
22:DA:2514:U:H2'	22:DA:2515:C:C6	2.40	0.56
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	1.87	0.56
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.20	0.56
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.05	0.56
27:DF:126:GLY:HA2	27:DF:163:ASP:HA	1.87	0.56
33:DL:77:ILE:HD11	33:DL:101:ILE:HG21	1.86	0.56
36:DO:53:THR:O	36:DO:59:ALA:HB2	2.05	0.56
40:DS:41:LYS:O	40:DS:42:LYS:C	2.48	0.56
43:DV:14:LYS:HD3	43:DV:18:ARG:NH2	2.20	0.56
1:AA:100:G:N7	1:AA:101:A:N7	2.53	0.56
1:AA:107:G:H2'	1:AA:108:G:H5"	1.87	0.56
1:AA:1182:G:C4'	1:AA:1183:U:H5'	2.34	0.56
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.41	0.56
4:AD:198:HIS:CE1	4:AD:199:LEU:HD23	2.41	0.56
6:AF:81:ASN:O	6:AF:84:VAL:HG12	2.05	0.56
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.85	0.56
15:AO:4:SER:O	15:AO:8:THR:HG23	2.05	0.56
19:AS:44:MET:HA	19:AS:47:LEU:HD12	1.88	0.56
38:BQ:57:PHE:O	38:BQ:60:LEU:N	2.38	0.56
1:CA:898:G:O2'	1:CA:900:A:N7	2.37	0.56
1:CA:1309:G:C6	1:CA:1329:A:C2	2.94	0.56
8:CH:9:ASP:OD2	8:CH:13:ARG:NH1	2.38	0.56
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.35	0.56
13:CM:10:PRO:O	13:CM:11:ASP:CB	2.53	0.56
22:DA:781:A:H2'	22:DA:1777:U:O2'	2.06	0.56
22:DA:893:C:H2'	22:DA:894:U:O4'	2.04	0.56
22:DA:1206:G:C6	22:DA:1207:C:C4	2.93	0.56
22:DA:1654:A:O2'	25:DD:118:PHE:O	2.20	0.56
22:DA:2503:A:H8	55:DA:3001:VIF:C10	2.18	0.56
22:DA:2571:U:C4	22:DA:2574:G:C8	2.93	0.56
22:DA:2834:G:O6	22:DA:2879:A:O2'	2.22	0.56
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.41	0.56
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.56
31:DJ:5:THR:C	31:DJ:6:ALA:O	2.48	0.56
1:AA:935:A:C2	1:AA:936:C:C2	2.92	0.56
1:AA:982:U:H4'	1:AA:983:A:H5'	1.88	0.56
13:AM:66:GLU:O	13:AM:68:ASP:N	2.39	0.56
17:AQ:69:LYS:O	17:AQ:70:THR:HB	2.05	0.56
21:AU:12:PHE:N	21:AU:12:PHE:CD2	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:322:A:C5	22:BA:340:A:C2	2.94	0.56
24:BC:3:VAL:HG12	24:BC:19:VAL:HG22	1.88	0.56
29:BH:83:LYS:HD2	1:CA:55:A:HO2'	1.66	0.56
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	1.87	0.56
1:CA:159:G:N2	1:CA:162:A:OP2	2.39	0.56
1:CA:716:A:N3	11:CK:119:ASN:O	2.39	0.56
1:CA:1118:U:OP1	9:CI:11:ARG:NH1	2.39	0.56
1:CA:1361:G:C2	1:CA:1362:A:N7	2.73	0.56
2:CB:210:VAL:CG2	2:CB:211:THR:N	2.68	0.56
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.88	0.56
22:DA:1855:U:C5	22:DA:1856:U:C5	2.93	0.56
28:DG:19:ILE:O	28:DG:21:GLY:N	2.39	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
30:DI:6:GLN:O	30:DI:7:ALA:HB2	2.06	0.56
39:DR:81:LYS:N	39:DR:81:LYS:CD	2.69	0.56
47:DZ:3:LYS:O	47:DZ:4:THR:O	2.23	0.56
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.88	0.56
1:AA:1374:A:N3	1:AA:1375:A:C8	2.74	0.56
12:AL:86:ARG:NE	12:AL:88:LYS:HB3	2.20	0.56
15:AO:32:LEU:O	15:AO:33:THR:C	2.49	0.56
22:BA:404:A:C8	22:BA:406:G:C6	2.93	0.56
22:BA:1536:C:H4'	22:BA:1537:G:H5"	1.87	0.56
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.05	0.56
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.41	0.56
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.05	0.56
37:BP:113:ARG:O	37:BP:114:LEU:HG	2.05	0.56
51:B3:45:ARG:N	51:B3:46:PRO:HD2	2.20	0.56
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.41	0.56
5:CE:82:GLN:OE1	5:CE:150:PRO:HD3	2.05	0.56
19:CS:63:THR:HG22	19:CS:64:ASP:N	2.20	0.56
22:DA:2311:A:O2'	22:DA:2312:U:OP1	2.21	0.56
24:DC:10:SER:O	24:DC:13:ARG:HB3	2.05	0.56
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.35	0.56
1:AA:923:A:O4'	1:AA:1398:A:C2	2.58	0.56
1:AA:1141:C:O2'	1:AA:1142:G:P	2.63	0.56
1:AA:1375:A:C5	1:AA:1376:U:C5	2.93	0.56
1:AA:1377:A:O2'	7:AG:2:PRO:HB3	2.04	0.56
2:AB:126:PHE:CD2	2:AB:126:PHE:N	2.73	0.56
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	1.86	0.56
11:AK:74:VAL:C	11:AK:76:GLU:H	2.11	0.56
12:AL:51:LYS:HD3	12:AL:51:LYS:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1056:G:H4'	22:BA:1086:A:C8	2.41	0.56
22:BA:1219:U:H2'	22:BA:1220:G:C8	2.41	0.56
22:BA:1301:A:C4	22:BA:1303:G:C8	2.94	0.56
22:BA:2311:A:C2	27:BF:85:ILE:HD11	2.41	0.56
23:BB:42:C:C5	27:BF:66:LEU:HD22	2.40	0.56
30:BI:67:PHE:CD2	30:BI:67:PHE:N	2.74	0.56
39:BR:68:ARG:NH1	39:BR:90:ARG:HD3	2.20	0.56
44:BW:41:ARG:HH11	44:BW:41:ARG:HG3	1.70	0.56
50:B2:1:MET:O	50:B2:2:LYS:C	2.48	0.56
1:CA:804:U:H5"	1:CA:805:C:OP2	2.05	0.56
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.37	0.56
2:CB:119:THR:O	2:CB:120:GLN:CB	2.54	0.56
3:CC:63:SER:OG	3:CC:64:ILE:N	2.36	0.56
3:CC:72:ARG:HB3	3:CC:75:ILE:HG22	1.88	0.56
20:CT:74:ARG:O	20:CT:78:ASN:OD1	2.24	0.56
22:DA:777:G:N7	22:DA:793:A:H2	2.02	0.56
22:DA:1820:U:OP1	24:DC:177:ARG:HG2	2.06	0.56
22:DA:1965:C:OP1	22:DA:1966:A:C2'	2.54	0.56
22:DA:2550:G:O6	22:DA:2551:C:N4	2.38	0.56
27:DF:5:HIS:HB2	27:DF:97:TRP:CG	2.41	0.56
31:DJ:64:VAL:CG1	31:DJ:89:PHE:CZ	2.89	0.56
3:AC:97:VAL:HB	3:AC:98:PRO:CD	2.36	0.56
21:AU:25:LYS:HD2	21:AU:26:ALA:N	2.21	0.56
22:BA:587:C:C6	22:BA:671:C:H1'	2.41	0.56
22:BA:1139:G:O2'	22:BA:1140:C:H5'	2.06	0.56
22:BA:1171:G:C5	22:BA:1172:C:C4	2.94	0.56
22:BA:1356:G:C2	22:BA:1357:C:C2	2.94	0.56
22:BA:1916:A:N3	22:BA:1917:U:H1'	2.21	0.56
22:BA:2204:G:O5'	24:BC:150:LYS:HE3	2.05	0.56
22:BA:2296:U:H4'	22:BA:2297:A:OP1	2.06	0.56
22:BA:2452:C:C4	22:BA:2453:A:C6	2.94	0.56
25:BD:40:LEU:O	25:BD:41:ALA:C	2.49	0.56
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	1.88	0.56
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	1.87	0.56
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.69	0.56
37:BP:31:TRP:CD2	37:BP:40:LEU:CD1	2.89	0.56
41:BT:2:ILE:HG12	41:BT:7:LEU:HD11	1.88	0.56
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.53	0.56
1:CA:211:G:O2'	1:CA:212:G:C4'	2.53	0.56
1:CA:371:A:H1'	1:CA:482:A:H1'	1.86	0.56
1:CA:511:C:C2	1:CA:512:U:C5	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:78:VAL:N	8:CH:126:ILE:O	2.38	0.56
22:DA:197:A:H2'	22:DA:197:A:N3	2.21	0.56
22:DA:747:U:C5	22:DA:2613:U:C5	2.93	0.56
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.06	0.56
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.21	0.56
22:DA:2521:C:C2	22:DA:2545:G:N2	2.74	0.56
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.89	0.56
26:DE:5:LEU:O	26:DE:7:ASP:N	2.38	0.56
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.21	0.56
1:AA:108:G:C6	20:AT:10:ARG:HG2	2.41	0.56
1:AA:355:C:O2'	1:AA:388:G:N3	2.38	0.56
1:AA:775:G:O2'	1:AA:776:G:H5'	2.06	0.56
1:AA:1032:G:H3'	1:AA:1033:G:O4'	2.06	0.56
1:AA:1311:A:C2	1:AA:1327:C:N3	2.74	0.56
2:AB:126:PHE:N	2:AB:126:PHE:HD2	2.04	0.56
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.88	0.56
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.06	0.56
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.36	0.56
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.06	0.56
22:BA:528:A:H2	22:BA:2043:C:H5'	1.69	0.56
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.79	0.56
22:BA:1494:A:C2	22:BA:1495:A:C4	2.94	0.56
22:BA:1651:G:OP1	35:BN:40:LYS:HE3	2.06	0.56
22:BA:1941:C:C4	22:BA:1942:C:C4	2.94	0.56
22:BA:2032:G:C8	57:BA:3534:HOH:O	2.58	0.56
25:BD:4:LEU:HD23	25:BD:101:PHE:CE1	2.41	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
30:BI:100:LYS:HB3	30:BI:139:VAL:HB	1.88	0.56
1:CA:242:G:N2	1:CA:285:C:C2	2.74	0.56
1:CA:302:G:O2'	1:CA:556:C:H5"	2.05	0.56
1:CA:337:G:H2'	1:CA:338:A:C8	2.41	0.56
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.87	0.56
12:CL:21:VAL:N	12:CL:22:PRO:HD3	2.21	0.56
12:CL:43:LYS:O	12:CL:44:LYS:C	2.49	0.56
22:DA:569:U:H5"	22:DA:821:A:C2	2.41	0.56
22:DA:607:U:H5	22:DA:619:G:C4	2.24	0.56
22:DA:1152:C:H3'	57:DA:3360:HOH:O	2.05	0.56
22:DA:1206:G:C5	22:DA:1207:C:C5	2.94	0.56
22:DA:1297:C:O2'	22:DA:1302:A:N1	2.36	0.56
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.41	0.56
38:DQ:94:ILE:HD13	39:DR:11:GLN:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:17:SER:O	41:DT:18:GLU:C	2.49	0.56
41:DT:72:GLN:O	41:DT:73:ARG:C	2.48	0.56
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.86	0.56
1:AA:137:U:H1'	1:AA:227:G:N2	2.21	0.56
1:AA:1168:U:O2	1:AA:1168:U:H2'	2.06	0.56
4:AD:123:ILE:N	4:AD:123:ILE:CD1	2.68	0.56
5:AE:50:TYR:CE2	5:AE:134:ILE:HD11	2.40	0.56
7:AG:73:VAL:HG12	7:AG:90:GLU:HG3	1.87	0.56
7:AG:146:GLU:O	7:AG:149:LYS:HB3	2.05	0.56
13:AM:107:ARG:HG2	13:AM:107:ARG:HH11	1.70	0.56
16:AP:51:ARG:HH11	16:AP:51:ARG:CG	2.19	0.56
21:AU:25:LYS:HD2	21:AU:26:ALA:H	1.70	0.56
22:BA:1452:G:C4	22:BA:2702:G:C6	2.94	0.56
28:BG:10:VAL:O	28:BG:10:VAL:HG13	2.06	0.56
30:BI:122:ILE:O	30:BI:122:ILE:HG22	2.06	0.56
36:BO:78:VAL:O	36:BO:79:ALA:C	2.49	0.56
37:BP:14:LYS:HE3	37:BP:77:HIS:HA	1.88	0.56
1:CA:1074:G:H4'	2:CB:103:ASN:CB	2.35	0.56
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.41	0.56
2:CB:134:ALA:O	2:CB:138:THR:N	2.38	0.56
6:CF:86:ARG:CG	6:CF:86:ARG:HH11	2.19	0.56
6:CF:97:THR:O	6:CF:98:GLU:CB	2.54	0.56
22:DA:242:G:H5"	51:D3:64:TYR:CZ	2.40	0.56
22:DA:491:G:C6	22:DA:492:A:C6	2.93	0.56
22:DA:547:A:H3'	22:DA:548:G:H5'	1.88	0.56
22:DA:635:C:O2'	22:DA:639:U:H5"	2.05	0.56
22:DA:1312:U:C2	22:DA:1603:A:C2	2.94	0.56
22:DA:2831:G:OP1	25:DD:56:LYS:NZ	2.35	0.56
28:DG:133:LEU:O	28:DG:133:LEU:HD12	2.05	0.56
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.05	0.56
50:D2:16:HIS:HB3	50:D2:21:ARG:NH1	2.21	0.56
1:AA:381:C:H2'	1:AA:382:A:O4'	2.06	0.55
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.05	0.55
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.41	0.55
2:AB:50:PHE:HA	2:AB:53:ALA:HB3	1.87	0.55
3:AC:140:ASN:HA	3:AC:143:ARG:CB	2.35	0.55
4:AD:23:SER:O	4:AD:24:GLY:C	2.49	0.55
7:AG:147:ALA:O	11:AK:61:PHE:CD1	2.59	0.55
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.21	0.55
22:BA:545:U:H2'	22:BA:546:U:O3'	2.06	0.55
22:BA:894:U:H2'	22:BA:895:U:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1808:A:N1	45:BX:28:ARG:HD2	2.22	0.55
22:BA:2673:G:N3	22:BA:2674:G:C8	2.74	0.55
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.36	0.55
28:BG:40:ALA:HB2	28:BG:58:TYR:CG	2.41	0.55
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.04	0.55
1:CA:411:A:C5	1:CA:429:U:C5	2.94	0.55
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.41	0.55
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.40	0.55
10:CJ:80:THR:O	10:CJ:84:VAL:HB	2.06	0.55
20:CT:73:ALA:O	20:CT:74:ARG:C	2.49	0.55
22:DA:511:U:O4	22:DA:512:G:N1	2.38	0.55
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.40	0.55
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.42	0.55
23:DB:14:U:O2	23:DB:14:U:C2'	2.54	0.55
28:DG:27:LYS:HG3	28:DG:27:LYS:O	2.06	0.55
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.55
1:AA:1145:A:O2'	1:AA:1146:A:P	2.65	0.55
2:AB:61:ALA:HA	2:AB:65:GLY:CA	2.37	0.55
2:AB:67:ILE:O	2:AB:68:LEU:HB2	2.07	0.55
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.79	0.55
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.36	0.55
22:BA:26:G:C6	22:BA:27:G:N1	2.75	0.55
22:BA:593:U:H2'	22:BA:594:U:C6	2.40	0.55
22:BA:1008:A:N6	22:BA:1136:G:C6	2.74	0.55
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	2.94	0.55
22:BA:1467:U:C4	22:BA:1546:G:N2	2.74	0.55
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.06	0.55
22:BA:1587:G:C4	22:BA:1588:G:C8	2.95	0.55
22:BA:2566:A:N1	32:BK:28:SER:OG	2.36	0.55
33:BL:109:LYS:HG2	33:BL:126:ARG:CB	2.35	0.55
39:BR:68:ARG:CZ	39:BR:90:ARG:HD3	2.37	0.55
1:CA:68:G:C6	1:CA:69:G:H1'	2.41	0.55
1:CA:833:G:C5	1:CA:834:U:C5	2.94	0.55
1:CA:987:G:C6	1:CA:988:G:C5	2.94	0.55
2:CB:102:THR:O	2:CB:103:ASN:HB3	2.06	0.55
5:CE:25:VAL:O	5:CE:28:GLY:N	2.39	0.55
22:DA:1651:G:N2	22:DA:2007:U:O2	2.39	0.55
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.24	0.55
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.05	0.55
1:AA:15:G:H4'	5:AE:29:ARG:NH1	2.22	0.55
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.05	0.55
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.06	0.55
21:AU:14:VAL:HG13	21:AU:16:LEU:HD21	1.88	0.55
22:BA:1141:U:OP2	31:BJ:65:THR:HG21	2.06	0.55
22:BA:1508:A:H4'	22:BA:1508:A:OP1	2.06	0.55
22:BA:1905:C:H2'	22:BA:1930:G:C8	2.42	0.55
22:BA:1911:U:H2'	22:BA:1918:A:C2	2.42	0.55
22:BA:2478:A:H5'	52:B4:32:LYS:CD	2.32	0.55
22:BA:2688:G:C8	22:BA:2719:G:C6	2.94	0.55
29:BH:91:PHE:HB3	1:CA:55:A:N3	2.21	0.55
35:BN:24:MET:SD	35:BN:44:LEU:HD22	2.46	0.55
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.21	0.55
47:BZ:35:THR:HG22	47:BZ:36:VAL:N	2.21	0.55
1:CA:158:G:H2'	1:CA:159:G:H5"	1.87	0.55
1:CA:200:G:C3'	1:CA:201:G:H5"	2.36	0.55
2:CB:27:MET:SD	2:CB:193:PRO:HD3	2.47	0.55
20:CT:5:LYS:O	20:CT:7:ALA:N	2.39	0.55
22:DA:42:A:C2	22:DA:438:G:C2	2.94	0.55
22:DA:153:U:H2'	22:DA:154:U:C6	2.42	0.55
22:DA:188:G:C6	22:DA:189:G:C4	2.95	0.55
22:DA:279:A:N6	22:DA:361:G:O2'	2.38	0.55
22:DA:547:A:H3'	22:DA:548:G:C5'	2.34	0.55
22:DA:674:G:C1'	26:DE:69:ARG:HD3	2.37	0.55
22:DA:1415:U:H2'	22:DA:1416:G:H4'	1.89	0.55
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.42	0.55
22:DA:2611:C:OP2	57:DA:3538:HOH:O	2.17	0.55
24:DC:129:THR:C	24:DC:130:LEU:HD23	2.32	0.55
40:DS:33:LEU:HD21	40:DS:52:GLU:HG3	1.88	0.55
1:AA:316:C:C2	1:AA:317:U:C5	2.94	0.55
1:AA:609:A:N7	57:AA:1852:HOH:O	2.33	0.55
1:AA:1072:G:C5	1:AA:1073:U:C4	2.94	0.55
1:AA:1491:G:H5"	12:AL:43:LYS:HG3	1.88	0.55
2:AB:71:GLY:HA2	2:AB:164:ILE:HG22	1.88	0.55
2:AB:103:ASN:CG	2:AB:106:THR:HB	2.31	0.55
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.07	0.55
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.06	0.55
12:AL:74:LEU:HD21	12:AL:104:CYS:HA	1.87	0.55
13:AM:90:ARG:NH1	13:AM:95:LEU:HB2	2.21	0.55
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.07	0.55
22:BA:1607:C:N4	22:BA:1622:G:C8	2.74	0.55
22:BA:2193:G:O2'	22:BA:2194:U:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2412:A:H5"	22:BA:2413:G:OP2	2.07	0.55
25:BD:101:PHE:HE2	25:BD:203:VAL:CG1	2.20	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
42:BU:72:ILE:HD13	42:BU:83:VAL:CG2	2.36	0.55
3:CC:179:ARG:O	3:CC:206:GLU:O	2.24	0.55
4:CD:150:LYS:O	4:CD:151:LYS:C	2.47	0.55
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.20	0.55
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.22	0.55
26:DE:149:ILE:HG23	26:DE:188:MET:HG2	1.89	0.55
38:DQ:32:TYR:C	38:DQ:32:TYR:CD2	2.84	0.55
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.20	0.55
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.06	0.55
3:AC:7:PRO:HG2	3:AC:184:TYR:CD1	2.42	0.55
9:AI:22:LYS:NZ	9:AI:62:ASP:OD2	2.39	0.55
9:AI:90:TYR:O	9:AI:91:ASP:CB	2.55	0.55
11:AK:76:GLU:CA	22:BA:2141:G:OP1	2.54	0.55
18:AR:22:ASP:OD2	18:AR:24:LYS:N	2.38	0.55
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.36	0.55
22:BA:29:U:H2'	22:BA:30:G:C8	2.41	0.55
22:BA:608:A:C2	22:BA:609:A:C4	2.95	0.55
22:BA:1317:G:C2	22:BA:1336:A:C2	2.95	0.55
22:BA:2582:G:OP2	22:BA:2583:G:OP2	2.24	0.55
22:BA:2648:G:N2	22:BA:2673:G:H1'	2.22	0.55
24:BC:260:ASN:O	24:BC:262:ARG:N	2.38	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
53:B5:65:LEU:C	53:B5:67:HIS:H	2.14	0.55
1:CA:542:G:N3	1:CA:543:U:C6	2.75	0.55
1:CA:585:G:C6	1:CA:586:C:C4	2.95	0.55
2:CB:134:ALA:O	2:CB:138:THR:HG23	2.07	0.55
2:CB:135:LEU:O	2:CB:138:THR:N	2.40	0.55
22:DA:847:U:O2	22:DA:934:U:H1'	2.06	0.55
22:DA:1087:G:N1	22:DA:1089:A:C2	2.75	0.55
22:DA:1644:C:O2	22:DA:1644:C:H2'	2.06	0.55
22:DA:1670:C:C5	22:DA:1671:U:C4	2.94	0.55
30:DI:71:THR:C	30:DI:72:LYS:HD3	2.31	0.55
42:DU:14:LEU:HD11	42:DU:71:ALA:HB2	1.89	0.55
47:DZ:52:SER:HA	47:DZ:55:VAL:HG22	1.89	0.55
1:AA:17:U:H2'	1:AA:18:C:C6	2.42	0.55
1:AA:736:C:H2'	1:AA:737:C:C6	2.42	0.55
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.55	0.55
5:AE:131:THR:OG1	5:AE:131:THR:O	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.07	0.55
22:BA:219:A:N3	22:BA:234:U:O2'	2.32	0.55
22:BA:1070:A:C2	30:BI:10:LYS:HG3	2.42	0.55
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.87	0.55
22:BA:1866:A:N1	22:BA:1876:A:C8	2.74	0.55
22:BA:2131:U:H5'	22:BA:2132:U:H5"	1.89	0.55
55:BA:3001:VIF:C13	55:BA:3001:VIF:N	2.70	0.55
28:BG:19:ILE:HG12	28:BG:24:ILE:HD13	1.88	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
35:BN:32:GLU:HG3	35:BN:120:GLU:HG2	1.89	0.55
40:BS:28:LYS:O	40:BS:29:VAL:C	2.49	0.55
48:B0:55:ILE:HG22	48:B0:56:ALA:H	1.72	0.55
1:CA:243:A:H4'	1:CA:244:U:H5"	1.89	0.55
1:CA:519:C:OP2	12:CL:47:SER:OG	2.24	0.55
1:CA:572:A:H5'	1:CA:573:A:OP2	2.07	0.55
1:CA:661:G:C2	1:CA:662:U:C6	2.95	0.55
1:CA:991:U:C4	1:CA:1212:U:H1'	2.40	0.55
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.36	0.55
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.41	0.55
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.72	0.55
2:CB:52:GLU:HG3	2:CB:56:GLU:HG2	1.89	0.55
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.39	0.55
5:CE:101:GLU:HA	5:CE:122:ASN:HB2	1.88	0.55
6:CF:18:VAL:HA	6:CF:21:MET:HE2	1.88	0.55
10:CJ:48:ARG:HH11	10:CJ:48:ARG:CG	2.20	0.55
22:DA:1469:A:C2	22:DA:1470:A:C5	2.94	0.55
22:DA:1649:G:N1	22:DA:2009:A:C6	2.75	0.55
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.42	0.55
35:DN:103:ARG:HD3	35:DN:110:MET:HE3	1.89	0.55
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.07	0.55
1:AA:204:G:H2'	1:AA:205:A:O4'	2.06	0.55
1:AA:209:U:H4'	1:AA:210:C:OP2	2.06	0.55
1:AA:408:A:C2	1:AA:435:A:C2	2.95	0.55
1:AA:810:C:O2	1:AA:810:C:H2'	2.06	0.55
1:AA:992:U:H4'	1:AA:993:G:O5'	2.06	0.55
1:AA:1367:C:H5'	10:AJ:62:ARG:NH1	2.22	0.55
2:AB:20:THR:O	2:AB:21:ARG:NH1	2.39	0.55
4:AD:190:ASP:OD2	4:AD:190:ASP:N	2.36	0.55
5:AE:109:GLY:O	5:AE:110:ALA:HB3	2.07	0.55
22:BA:477:A:H2'	22:BA:478:A:C8	2.41	0.55
22:BA:969:G:C6	22:BA:970:U:C4	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.54	0.55
22:BA:1086:A:H5"	22:BA:1087:G:OP1	2.07	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
31:BJ:27:ARG:HH11	31:BJ:27:ARG:HG2	1.71	0.55
34:BM:36:VAL:O	34:BM:36:VAL:HG12	2.07	0.55
36:BO:15:ARG:HG2	36:BO:93:ASP:OD1	2.07	0.55
39:BR:21:ARG:CZ	39:BR:93:PHE:CE1	2.90	0.55
1:CA:1003:G:C2	1:CA:1038:C:C2	2.95	0.55
5:CE:137:VAL:O	5:CE:138:ARG:HB3	2.06	0.55
22:DA:450:G:N1	22:DA:454:A:OP2	2.31	0.55
22:DA:728:G:C2	22:DA:730:A:C4	2.95	0.55
22:DA:1083:U:O2	22:DA:1086:A:N1	2.40	0.55
22:DA:1943:U:H4'	22:DA:1944:U:OP1	2.07	0.55
22:DA:2043:C:OP1	22:DA:2777:G:O2'	2.21	0.55
22:DA:2195:U:C2	22:DA:2196:C:C6	2.95	0.55
22:DA:2249:U:N3	22:DA:2253:G:OP2	2.39	0.55
22:DA:2571:U:N3	22:DA:2574:G:C8	2.74	0.55
24:DC:33:LEU:HA	24:DC:64:ILE:HD12	1.89	0.55
46:DY:1:MET:O	46:DY:5:GLU:HG3	2.07	0.55
1:AA:145:G:N2	1:AA:178:C:N3	2.54	0.55
1:AA:203:G:N2	1:AA:215:C:C2	2.75	0.55
1:AA:772:U:H2'	1:AA:773:G:O5'	2.07	0.55
1:AA:929:G:C6	1:AA:930:C:C4	2.95	0.55
1:AA:956:U:C4	1:AA:957:U:C5	2.95	0.55
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.41	0.55
22:BA:381:G:OP1	45:BX:18:ARG:NH2	2.40	0.55
22:BA:388:G:C8	22:BA:390:U:C6	2.95	0.55
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.55
40:BS:38:TYR:CE1	48:B0:28:LEU:HD21	2.42	0.55
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.88	0.55
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.55	0.55
1:CA:77:A:H2'	1:CA:78:A:O4'	2.05	0.55
1:CA:261:U:OP2	20:CT:71:LYS:HD2	2.07	0.55
1:CA:295:C:C4	1:CA:296:U:C5	2.95	0.55
5:CE:72:ILE:HD13	5:CE:145:GLU:CD	2.32	0.55
9:CI:57:MET:SD	9:CI:58:VAL:N	2.78	0.55
15:CO:46:HIS:C	15:CO:48:LYS:H	2.14	0.55
22:DA:689:A:H2'	22:DA:690:G:C8	2.42	0.55
22:DA:1344:U:O2'	22:DA:1345:C:P	2.65	0.55
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2346:A:H4'	22:DA:2347:C:OP2	2.07	0.55
1:AA:74:A:C2	1:AA:97:G:C4	2.94	0.55
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.40	0.55
1:AA:992:U:O2	1:AA:1043:G:N7	2.39	0.55
2:AB:47:VAL:C	2:AB:49:MET:H	2.15	0.55
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.37	0.55
15:AO:35:GLN:HB3	15:AO:59:MET:HE2	1.88	0.55
20:AT:83:ILE:O	20:AT:87:ALA:CB	2.55	0.55
22:BA:714:U:H2'	22:BA:716:A:N7	2.22	0.55
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.07	0.55
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.42	0.55
22:BA:1820:U:O4	24:BC:198:ALA:HB1	2.06	0.55
22:BA:1918:A:H1'	22:BA:1919:A:N7	2.22	0.55
22:BA:1919:A:H2'	22:BA:1919:A:N3	2.22	0.55
22:BA:2139:U:C2	22:BA:2140:G:C8	2.95	0.55
23:BB:29:A:C2	23:BB:56:G:C2	2.95	0.55
23:BB:77:U:C2'	23:BB:78:A:H5'	2.36	0.55
38:BQ:41:LYS:O	38:BQ:42:ALA:C	2.50	0.55
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.21	0.55
1:CA:16:A:H2'	1:CA:17:U:H5'	1.88	0.55
1:CA:545:C:H5'	4:CD:69:GLU:HG2	1.88	0.55
1:CA:702:A:N6	22:DA:1848:A:C6	2.75	0.55
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.42	0.55
12:CL:22:PRO:O	12:CL:24:LEU:N	2.39	0.55
22:DA:636:G:N1	33:DL:76:GLU:OE2	2.38	0.55
22:DA:2796:U:C4	22:DA:2798:U:C4	2.95	0.55
24:DC:92:ALA:HB3	24:DC:104:ILE:HD12	1.88	0.55
26:DE:5:LEU:O	26:DE:6:LYS:C	2.49	0.55
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD2	2.39	0.55
33:DL:61:LEU:O	51:D3:13:ARG:HD3	2.07	0.55
35:DN:75:ILE:O	35:DN:79:LEU:HD12	2.06	0.55
35:DN:83:LEU:CD2	35:DN:115:LEU:HD13	2.37	0.55
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.89	0.55
44:DW:34:GLY:O	44:DW:35:SER:C	2.50	0.55
2:AB:41:ILE:HD13	2:AB:41:ILE:C	2.32	0.55
11:AK:34:ILE:HG13	11:AK:74:VAL:HG21	1.89	0.55
14:AN:31:ILE:HG23	14:AN:45:VAL:HB	1.87	0.55
22:BA:204:A:O4'	22:BA:206:U:C6	2.60	0.55
22:BA:590:A:H2'	22:BA:591:U:C6	2.42	0.55
22:BA:991:C:H2'	22:BA:992:C:O5'	2.07	0.55
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1482:G:C2	22:BA:1483:G:C8	2.95	0.55
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.40	0.55
25:BD:12:THR:HG21	37:BP:9:GLU:CG	2.37	0.55
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.37	0.55
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.07	0.55
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.47	0.55
32:BK:7:MET:HE1	32:BK:44:LYS:HG3	1.89	0.55
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.37	0.55
1:CA:477:C:H2'	1:CA:478:A:C8	2.41	0.55
1:CA:666:G:C6	1:CA:741:G:C6	2.95	0.55
1:CA:891:U:C5	1:CA:906:A:C2	2.95	0.55
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.07	0.55
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.72	0.55
4:CD:32:CYS:O	4:CD:33:LYS:HB2	2.07	0.55
18:CR:25:ASP:C	18:CR:27:ALA:N	2.63	0.55
22:DA:53:A:C2	22:DA:179:C:H4'	2.42	0.55
22:DA:92:U:H2'	22:DA:93:G:O4'	2.06	0.55
22:DA:219:A:C6	22:DA:220:G:C6	2.95	0.55
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.42	0.55
22:DA:1409:U:C5	57:DA:3622:HOH:O	2.54	0.55
22:DA:1783:A:C6	22:DA:2587:A:C2	2.95	0.55
23:DB:48:U:H4'	36:DO:100:HIS:NE2	2.21	0.55
23:DB:62:C:H2'	23:DB:63:C:C6	2.41	0.55
26:DE:143:LEU:HB3	26:DE:146:VAL:HG11	1.90	0.55
31:DJ:140:LEU:HD12	31:DJ:141:ASP:N	2.22	0.55
40:DS:95:ARG:O	40:DS:95:ARG:CG	2.54	0.55
41:DT:21:SER:O	41:DT:24:MET:N	2.40	0.55
1:AA:168:G:C6	1:AA:169:C:N3	2.75	0.54
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.71	0.54
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.89	0.54
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.88	0.54
22:BA:15:G:C6	22:BA:16:C:C4	2.95	0.54
22:BA:236:C:O2'	22:BA:237:C:H5'	2.07	0.54
22:BA:636:G:O2'	22:BA:638:G:O2'	2.20	0.54
22:BA:990:A:H5"	22:BA:991:C:OP1	2.07	0.54
22:BA:2297:A:N1	22:BA:2321:U:C5	2.75	0.54
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.42	0.54
48:B0:15:MET:O	48:B0:18:SER:HB3	2.07	0.54
1:CA:18:C:N3	1:CA:19:A:C8	2.75	0.54
1:CA:756:C:O2'	1:CA:757:U:H5'	2.06	0.54
1:CA:1166:G:C6	1:CA:1168:U:H5"	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.07	0.54
22:DA:183:C:H1'	22:DA:433:C:H1'	1.89	0.54
22:DA:537:G:OP1	22:DA:995:C:N4	2.41	0.54
22:DA:2133:G:C2	22:DA:2158:A:N6	2.75	0.54
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.07	0.54
39:DR:68:ARG:HD3	39:DR:92:TRP:CE2	2.43	0.54
41:DT:47:VAL:O	41:DT:47:VAL:HG12	2.07	0.54
1:AA:1288:A:N3	1:AA:1352:C:O2'	2.35	0.54
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.55	0.54
3:AC:53:SER:HB2	3:AC:112:ASP:OD2	2.08	0.54
3:AC:140:ASN:HA	3:AC:143:ARG:HB3	1.88	0.54
4:AD:130:VAL:HG11	4:AD:135:TYR:CD1	2.42	0.54
5:AE:18:VAL:HA	5:AE:34:THR:O	2.07	0.54
14:AN:63:ARG:HG2	14:AN:68:GLY:O	2.07	0.54
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.72	0.54
22:BA:1754:A:C6	22:BA:1755:A:C6	2.96	0.54
22:BA:1869:G:C2	22:BA:1873:G:C6	2.95	0.54
22:BA:1917:U:O4	22:BA:1918:A:C6	2.60	0.54
22:BA:2187:U:C4	22:BA:2188:U:C4	2.96	0.54
22:BA:2297:A:C2	22:BA:2298:A:C8	2.95	0.54
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.07	0.54
43:BV:38:LEU:HD23	43:BV:40:ILE:HD11	1.88	0.54
46:BY:1:MET:HA	46:BY:4:LYS:HB2	1.88	0.54
1:CA:403:C:OP1	4:CD:134:SER:HB3	2.06	0.54
1:CA:824:G:H1'	8:CH:2:SER:N	2.21	0.54
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.22	0.54
6:CF:14:GLN:C	6:CF:16:GLU:H	2.14	0.54
8:CH:18:GLN:HG2	8:CH:63:LEU:HD13	1.88	0.54
9:CI:54:LEU:O	9:CI:55:VAL:HG13	2.06	0.54
22:DA:1319:C:O2'	22:DA:1320:C:H5'	2.07	0.54
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.06	0.54
22:DA:2810:A:C8	22:DA:2811:G:C8	2.95	0.54
40:DS:107:VAL:HG13	40:DS:107:VAL:O	2.06	0.54
42:DU:96:PHE:CZ	42:DU:103:ILE:HG12	2.43	0.54
46:DY:35:GLY:C	46:DY:36:GLN:HG3	2.33	0.54
1:AA:448:A:C4	1:AA:487:A:C2	2.95	0.54
2:AB:71:GLY:O	2:AB:93:ASN:HA	2.07	0.54
2:AB:94:HIS:CE1	2:AB:146:ASN:HB2	2.42	0.54
3:AC:87:LEU:O	3:AC:88:ARG:C	2.50	0.54
16:AP:23:ASP:O	16:AP:25:ARG:N	2.40	0.54
22:BA:192:C:H2'	22:BA:193:U:H5'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:586:A:C2	22:BA:1254:A:C2	2.96	0.54
22:BA:616:A:O2'	26:BE:199:MET:HE1	2.07	0.54
22:BA:712:G:C2'	22:BA:713:G:H5'	2.38	0.54
22:BA:744:U:H2'	22:BA:745:G:O4'	2.07	0.54
22:BA:776:G:H4'	22:BA:777:G:O5'	2.07	0.54
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.37	0.54
22:BA:1877:A:N6	22:BA:1878:G:C6	2.75	0.54
22:BA:2496:C:C2'	22:BA:2497:A:O5'	2.55	0.54
22:BA:2687:U:O4	22:BA:2688:G:N1	2.40	0.54
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.08	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
40:BS:18:ARG:HG2	40:BS:76:VAL:HG23	1.88	0.54
1:CA:109:A:C6	1:CA:327:A:C6	2.95	0.54
1:CA:186:C:O4'	20:CT:76:LYS:HD2	2.08	0.54
1:CA:374:A:C5	1:CA:375:U:C5	2.95	0.54
1:CA:1439:G:C2	1:CA:1463:U:O2	2.60	0.54
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.07	0.54
15:CO:70:LEU:HD22	15:CO:78:TYR:HB2	1.89	0.54
22:DA:699:A:H2'	22:DA:700:G:H5'	1.89	0.54
22:DA:989:G:OP2	47:DZ:12:SER:OG	2.19	0.54
22:DA:1716:U:C5	22:DA:1743:G:C2	2.95	0.54
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.42	0.54
22:DA:2133:G:N2	22:DA:2158:A:C6	2.75	0.54
22:DA:2391:G:OP2	51:D3:35:LYS:NZ	2.35	0.54
31:DJ:7:LYS:O	31:DJ:11:VAL:CG2	2.55	0.54
41:DT:2:ILE:HG23	41:DT:3:ARG:C	2.32	0.54
1:AA:429:U:H4'	1:AA:430:A:OP1	2.04	0.54
1:AA:1461:G:C6	1:AA:1462:C:C4	2.95	0.54
1:AA:1503:A:C8	1:AA:1531:A:O2'	2.60	0.54
1:AA:1539:C:H5"	21:AU:18:ARG:CB	2.37	0.54
5:AE:133:PRO:O	5:AE:135:ASN:N	2.40	0.54
5:AE:149:SER:HB2	5:AE:152:MET:HB2	1.88	0.54
9:AI:57:MET:HA	9:AI:60:LYS:HB2	1.89	0.54
22:BA:570:G:H2'	22:BA:2030:A:C8	2.43	0.54
22:BA:1197:G:H5'	22:BA:1227:G:O2'	2.08	0.54
22:BA:1230:A:H2'	22:BA:1231:U:O4'	2.07	0.54
22:BA:1372:U:O2'	22:BA:1373:A:H5'	2.07	0.54
22:BA:1912:A:C2	22:BA:1919:A:C4	2.95	0.54
22:BA:2458:G:C4	22:BA:2490:G:N2	2.76	0.54
25:BD:1:MET:HG3	25:BD:205:PRO:HG2	1.89	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
40:BS:37:THR:CG2	40:BS:38:TYR:CE1	2.89	0.54
1:CA:209:U:O2	1:CA:209:U:H2'	2.06	0.54
1:CA:451:A:H61	1:CA:481:G:H5'	1.73	0.54
1:CA:1022:A:C6	1:CA:1023:U:C4	2.96	0.54
2:CB:131:LYS:O	2:CB:135:LEU:N	2.40	0.54
11:CK:25:ALA:N	11:CK:87:LYS:O	2.40	0.54
13:CM:27:LYS:O	13:CM:27:LYS:HD3	2.06	0.54
22:DA:324:A:N6	22:DA:338:G:O2'	2.40	0.54
22:DA:491:G:C6	22:DA:492:A:C5	2.96	0.54
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.88	0.54
22:DA:983:A:C6	22:DA:984:A:C2	2.95	0.54
22:DA:2359:C:N4	22:DA:2360:G:C6	2.75	0.54
23:DB:64:G:H2'	23:DB:65:U:C6	2.42	0.54
26:DE:179:SER:HA	26:DE:182:ALA:HB3	1.88	0.54
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.08	0.54
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.89	0.54
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.07	0.54
42:DU:12:ILE:HG13	42:DU:21:LYS:O	2.08	0.54
47:DZ:10:THR:HG22	47:DZ:54:MET:C	2.33	0.54
1:AA:96:U:O2'	1:AA:97:G:O5'	2.26	0.54
1:AA:209:U:C5'	1:AA:210:C:OP2	2.55	0.54
1:AA:687:A:C2	1:AA:700:G:N3	2.76	0.54
1:AA:963:G:H2'	1:AA:963:G:N3	2.22	0.54
2:AB:206:ALA:O	2:AB:208:ARG:N	2.40	0.54
3:AC:70:THR:O	3:AC:106:VAL:N	2.40	0.54
11:AK:53:ARG:O	11:AK:56:ARG:HG3	2.07	0.54
22:BA:1355:G:C4	22:BA:1356:G:C8	2.95	0.54
27:BF:133:ARG:O	27:BF:134:GLU:HB2	2.07	0.54
35:BN:103:ARG:HB2	35:BN:110:MET:HE2	1.90	0.54
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.88	0.54
46:BY:5:GLU:C	46:BY:7:ARG:N	2.61	0.54
1:CA:115:G:C2	1:CA:289:G:N7	2.75	0.54
1:CA:577:G:C2	1:CA:578:C:C6	2.95	0.54
1:CA:620:C:H2'	1:CA:621:A:O4'	2.07	0.54
2:CB:103:ASN:CG	2:CB:103:ASN:O	2.50	0.54
3:CC:121:THR:HB	3:CC:187:SER:OG	2.07	0.54
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.08	0.54
5:CE:101:GLU:C	5:CE:103:THR:N	2.66	0.54
18:CR:22:ASP:OD2	18:CR:24:LYS:NZ	2.33	0.54
21:CU:43:THR:O	21:CU:44:GLU:C	2.51	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:126:A:N7	22:DA:127:A:N1	2.55	0.54
22:DA:187:G:C2	22:DA:210:C:O2	2.61	0.54
22:DA:1581:G:C6	22:DA:1582:C:C4	2.95	0.54
22:DA:2676:C:OP1	32:DK:31:ARG:NH2	2.41	0.54
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.23	0.54
27:DF:34:ILE:HA	27:DF:155:THR:O	2.07	0.54
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.55	0.54
39:DR:21:ARG:CZ	39:DR:93:PHE:CE1	2.90	0.54
1:AA:981:U:O2'	14:AN:61:ARG:NE	2.41	0.54
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.61	0.54
1:AA:1481:U:O2'	1:AA:1482:G:H5'	2.08	0.54
2:AB:88:ASP:HB2	2:AB:221:VAL:HG12	1.88	0.54
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.06	0.54
5:AE:153:VAL:HG11	8:AH:99:LEU:HD13	1.88	0.54
22:BA:1355:G:C6	22:BA:1356:G:N7	2.75	0.54
22:BA:1438:U:H3'	57:BA:3634:HOH:O	2.07	0.54
22:BA:1731:G:N1	22:BA:1733:G:C4	2.75	0.54
22:BA:2052:A:C2	22:BA:2053:G:C8	2.95	0.54
22:BA:2820:A:OP1	57:BA:3811:HOH:O	2.19	0.54
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.08	0.54
24:BC:31:ALA:HB3	24:BC:32:PRO:HD3	1.90	0.54
24:BC:162:VAL:HG12	24:BC:163:GLN:N	2.21	0.54
26:BE:84:THR:HG22	26:BE:85:PHE:CD2	2.43	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.38	0.54
4:CD:105:MET:SD	4:CD:143:VAL:CG1	2.95	0.54
8:CH:7:ILE:HB	8:CH:77:ARG:NH1	2.22	0.54
15:CO:10:LYS:O	15:CO:14:GLU:HG3	2.08	0.54
22:DA:108:G:O2'	22:DA:347:A:N3	2.37	0.54
22:DA:297:G:OP1	42:DU:92:LYS:HD3	2.07	0.54
22:DA:327:G:H2'	22:DA:328:U:O4'	2.08	0.54
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.55	0.54
22:DA:1544:A:N6	22:DA:1545:A:C6	2.75	0.54
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.25	0.54
22:DA:1833:C:C4	22:DA:1834:U:C4	2.96	0.54
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.07	0.54
22:DA:2449:U:H4'	22:DA:2450:A:OP1	2.08	0.54
24:DC:82:GLU:OE1	24:DC:103:TYR:OH	2.24	0.54
27:DF:43:ALA:O	27:DF:47:LYS:HD2	2.08	0.54
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.54
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:21:ARG:HA	43:DV:25:LYS:O	2.06	0.54
50:D2:44:VAL:O	50:D2:45:SER:OG	2.20	0.54
1:AA:622:A:C8	1:AA:623:C:C6	2.96	0.54
1:AA:1204:A:OP1	57:AA:1780:HOH:O	2.18	0.54
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.43	0.54
2:AB:187:VAL:O	2:AB:187:VAL:CG2	2.56	0.54
4:AD:50:ASP:O	4:AD:54:GLN:HB2	2.07	0.54
5:AE:50:TYR:CZ	5:AE:134:ILE:HD11	2.42	0.54
8:AH:10:MET:HE1	8:AH:33:LYS:HA	1.90	0.54
10:AJ:32:THR:O	10:AJ:33:GLY:O	2.25	0.54
22:BA:492:A:H2'	22:BA:493:G:O4'	2.08	0.54
22:BA:842:U:C2	22:BA:843:G:C8	2.96	0.54
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.90	0.54
22:BA:1829:A:C8	22:BA:1830:C:C6	2.95	0.54
22:BA:2076:U:O2	22:BA:2076:U:O5'	2.26	0.54
22:BA:2305:U:N3	27:BF:151:GLY:HA3	2.22	0.54
22:BA:2392:A:C2	22:BA:2393:U:C2	2.96	0.54
22:BA:2675:A:C2'	22:BA:2676:C:H5'	2.38	0.54
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.90	0.54
53:B5:43:GLU:O	53:B5:213:VAL:HA	2.08	0.54
3:CC:181:ASP:O	3:CC:203:PHE:HA	2.08	0.54
5:CE:38:VAL:HG11	5:CE:114:VAL:HA	1.88	0.54
21:CU:34:ARG:NE	21:CU:35:ARG:HB2	2.23	0.54
22:DA:14:A:C6	22:DA:526:A:C2	2.95	0.54
22:DA:224:U:OP2	22:DA:408:G:N2	2.40	0.54
22:DA:572:A:H5"	22:DA:573:U:OP2	2.07	0.54
22:DA:2815:C:O2'	48:D0:41:HIS:ND1	2.41	0.54
28:DG:140:VAL:O	28:DG:144:VAL:HG23	2.06	0.54
36:DO:97:PHE:CB	36:DO:103:VAL:HG11	2.37	0.54
39:DR:101:ILE:O	39:DR:103:ALA:N	2.41	0.54
1:AA:147:G:N2	1:AA:176:C:C2	2.76	0.54
1:AA:277:C:C2'	1:AA:278:G:H5'	2.38	0.54
1:AA:453:G:H2'	1:AA:454:G:C8	2.43	0.54
1:AA:760:G:C5	1:AA:761:G:C8	2.96	0.54
1:AA:1032:G:H5'	1:AA:1033:G:OP2	2.07	0.54
1:AA:1367:C:C4	1:AA:1368:A:N7	2.76	0.54
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.90	0.54
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.08	0.54
16:AP:51:ARG:NH1	16:AP:51:ARG:HB3	2.23	0.54
22:BA:752:A:C2	22:BA:1781:U:C2	2.96	0.54
22:BA:990:A:H5"	22:BA:991:C:P	2.48	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.07	0.54
22:BA:1355:G:C2	22:BA:1356:G:C8	2.96	0.54
22:BA:1413:A:C6	22:BA:1414:C:N3	2.75	0.54
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.30	0.54
22:BA:2112:G:H2'	22:BA:2112:G:N3	2.23	0.54
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.43	0.54
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.54	0.54
28:BG:63:ALA:O	28:BG:67:THR:HG22	2.08	0.54
36:BO:59:ALA:O	36:BO:60:GLU:C	2.50	0.54
43:BV:35:GLU:HB2	43:BV:93:ARG:CZ	2.37	0.54
44:BW:41:ARG:HG3	44:BW:41:ARG:NH1	2.22	0.54
53:B5:42:VAL:HG12	53:B5:214:TYR:HA	1.90	0.54
1:CA:517:G:O6	57:CA:1761:HOH:O	2.18	0.54
2:CB:102:THR:HG22	2:CB:175:GLU:OE1	2.06	0.54
4:CD:98:LEU:O	4:CD:99:ASP:C	2.51	0.54
8:CH:32:LEU:HD12	8:CH:32:LEU:O	2.08	0.54
12:CL:19:SER:OG	12:CL:21:VAL:HG23	2.07	0.54
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.08	0.54
22:DA:105:C:H2'	22:DA:106:C:C6	2.43	0.54
22:DA:846:U:HO2'	22:DA:847:U:P	2.31	0.54
22:DA:847:U:O2	22:DA:847:U:H2'	2.06	0.54
22:DA:936:A:C2	22:DA:937:C:C2	2.96	0.54
22:DA:1027:A:C6	22:DA:1126:A:C4	2.96	0.54
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	1.89	0.54
22:DA:2200:C:O2	22:DA:2226:C:N4	2.41	0.54
36:DO:50:ALA:O	36:DO:81:ARG:NH2	2.41	0.54
1:AA:521:G:OP2	12:AL:51:LYS:NZ	2.20	0.54
1:AA:842:U:H3'	1:AA:843:U:C5'	2.38	0.54
3:AC:153:VAL:HG23	3:AC:157:LEU:HD22	1.90	0.54
7:AG:50:LEU:O	7:AG:51:ALA:C	2.50	0.54
7:AG:146:GLU:HG3	7:AG:149:LYS:HE2	1.90	0.54
17:AQ:52:GLU:OE1	17:AQ:52:GLU:N	2.38	0.54
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.23	0.54
22:BA:1074:G:C2'	22:BA:1075:C:H5'	2.38	0.54
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.42	0.54
22:BA:2502:G:H5'	22:BA:2503:A:H5"	1.89	0.54
29:BH:95:GLY:CA	1:CA:368:U:OP1	2.56	0.54
1:CA:102:G:O2'	1:CA:151:A:N3	2.34	0.54
1:CA:254:G:OP1	17:CQ:69:LYS:O	2.26	0.54
1:CA:518:C:H2'	1:CA:530:G:H8	1.72	0.54
1:CA:773:G:C2	1:CA:807:A:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:920:U:H2'	1:CA:921:U:C6	2.43	0.54
1:CA:1150:A:N6	1:CA:1151:A:H62	2.06	0.54
1:CA:1227:A:OP2	13:CM:110:LYS:HE3	2.08	0.54
1:CA:1317:C:OP1	14:CN:57:PRO:HD2	2.07	0.54
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.90	0.54
3:CC:177:THR:HG22	3:CC:179:ARG:HG3	1.90	0.54
21:CU:10:GLU:CG	21:CU:11:PRO:HD3	2.33	0.54
22:DA:218:A:N7	57:DA:3223:HOH:O	2.33	0.54
22:DA:247:G:C8	22:DA:249:C:C6	2.96	0.54
22:DA:776:G:N7	22:DA:793:A:C4	2.76	0.54
28:DG:11:VAL:O	28:DG:48:ASN:CG	2.51	0.54
28:DG:98:VAL:CG2	28:DG:125:CYS:SG	2.96	0.54
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.89	0.54
34:DM:42:THR:O	34:DM:46:ILE:HG13	2.08	0.54
1:AA:73:C:O2'	1:AA:74:A:H5"	2.08	0.54
1:AA:415:A:OP2	57:AA:1720:HOH:O	2.19	0.54
1:AA:792:A:H1'	1:AA:794:A:N7	2.23	0.54
1:AA:880:C:C2'	1:AA:881:G:H5'	2.37	0.54
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.56	0.54
9:AI:26:GLY:N	9:AI:59:GLU:HA	2.23	0.54
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.90	0.54
20:AT:58:VAL:HG12	20:AT:72:ALA:CB	2.38	0.54
22:BA:22:C:H2'	22:BA:23:G:O5'	2.08	0.54
22:BA:370:G:C8	57:BA:3562:HOH:O	2.60	0.54
22:BA:415:A:C2	22:BA:2409:G:C2	2.96	0.54
22:BA:585:G:H4'	22:BA:586:A:OP1	2.07	0.54
22:BA:674:G:H5"	26:BE:71:GLY:N	2.23	0.54
22:BA:721:A:H2'	22:BA:722:A:C8	2.42	0.54
22:BA:743:A:O3'	57:BA:3656:HOH:O	2.19	0.54
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.43	0.54
22:BA:1115:G:C4	22:BA:1116:G:C8	2.96	0.54
22:BA:1916:A:C2	22:BA:1917:U:H1'	2.42	0.54
22:BA:2286:G:OP2	49:B1:6:ARG:NH2	2.41	0.54
22:BA:2469:A:C6	22:BA:2482:A:C8	2.96	0.54
22:BA:2757:A:N1	28:BG:67:THR:CG2	2.62	0.54
57:BA:3805:HOH:O	35:BN:11:ASN:ND2	2.41	0.54
23:BB:78:A:C2	23:BB:99:A:C4	2.95	0.54
27:BF:80:ARG:HG2	27:BF:81:GLN:N	2.23	0.54
40:BS:55:ILE:O	40:BS:56:ALA:C	2.51	0.54
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	1.89	0.54
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.42	0.54
9:CI:31:ASN:ND2	9:CI:38:TYR:OH	2.41	0.54
22:DA:276:U:O2'	22:DA:278:A:N7	2.41	0.54
22:DA:607:U:O4	22:DA:620:G:H5'	2.08	0.54
22:DA:1069:A:N1	22:DA:1073:A:N7	2.56	0.54
22:DA:1087:G:C4	22:DA:1089:A:H1'	2.43	0.54
26:DE:52:VAL:HG11	26:DE:81:GLY:HA3	1.88	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
37:DP:22:PRO:HA	37:DP:47:VAL:CG1	2.37	0.54
42:DU:33:LYS:HE2	42:DU:66:GLN:CD	2.32	0.54
1:AA:338:A:C5	1:AA:339:C:C5	2.96	0.53
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.90	0.53
7:AG:70:ARG:HG3	7:AG:96:ARG:HG2	1.90	0.53
7:AG:146:GLU:CG	7:AG:149:LYS:HE2	2.38	0.53
13:AM:6:GLY:C	13:AM:8:ASN:N	2.63	0.53
13:AM:10:PRO:O	13:AM:11:ASP:CB	2.54	0.53
22:BA:332:A:C2	22:BA:335:C:C5	2.96	0.53
22:BA:1056:G:H5"	22:BA:1057:A:H5'	1.90	0.53
22:BA:1357:C:H2'	22:BA:1358:G:O4'	2.08	0.53
22:BA:2094:A:OP1	29:BH:22:LYS:HE3	2.08	0.53
28:BG:40:ALA:HA	28:BG:58:TYR:CD1	2.43	0.53
33:BL:61:LEU:HB3	33:BL:62:PRO:HD2	1.90	0.53
34:BM:20:LEU:HD12	43:BV:81:PRO:HG2	1.88	0.53
40:BS:34:ASP:OD2	48:B0:37:LYS:NZ	2.41	0.53
1:CA:104:G:C2	1:CA:105:G:C8	2.96	0.53
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.72	0.53
1:CA:1279:G:OP2	10:CJ:11:LYS:NZ	2.41	0.53
1:CA:1309:G:C6	1:CA:1329:A:N1	2.77	0.53
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	1.90	0.53
5:CE:122:ASN:O	5:CE:123:VAL:O	2.26	0.53
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.89	0.53
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.07	0.53
10:CJ:26:VAL:HG22	10:CJ:36:VAL:HG11	1.89	0.53
16:CP:44:SER:O	16:CP:46:LYS:HG3	2.07	0.53
22:DA:187:G:O2'	22:DA:1365:A:N3	2.34	0.53
22:DA:228:C:C5'	22:DA:229:C:C6	2.91	0.53
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.23	0.53
22:DA:2259:U:H1'	22:DA:2427:C:C2	2.43	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.90	0.53
1:AA:872:A:C4	1:AA:874:G:C8	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:989:U:H2'	1:AA:990:C:H6	1.72	0.53
1:AA:1211:U:O2'	1:AA:1212:U:P	2.66	0.53
1:AA:1346:A:N7	7:AG:10:ARG:NH2	2.57	0.53
4:AD:22:LYS:O	4:AD:23:SER:C	2.51	0.53
8:AH:30:SER:O	8:AH:31:LYS:C	2.51	0.53
11:AK:37:ARG:C	11:AK:39:GLY:H	2.15	0.53
13:AM:15:ALA:HB3	13:AM:34:LEU:HD21	1.90	0.53
13:AM:29:ARG:NH2	13:AM:63:PHE:HB2	2.23	0.53
17:AQ:4:LYS:HD2	17:AQ:4:LYS:O	2.08	0.53
19:AS:5:LEU:O	19:AS:6:LYS:HD2	2.07	0.53
20:AT:70:ASN:OD1	20:AT:70:ASN:N	2.40	0.53
22:BA:1046:A:H3'	22:BA:1047:G:H5'	1.90	0.53
22:BA:1122:G:H2'	22:BA:1122:G:N3	2.22	0.53
22:BA:1167:C:H2'	22:BA:1168:G:H5"	1.89	0.53
22:BA:1225:G:C2	22:BA:1226:A:C2	2.96	0.53
22:BA:1712:U:OP2	22:BA:1713:A:O2'	2.17	0.53
22:BA:1789:A:H5"	24:BC:219:THR:O	2.08	0.53
23:BB:116:G:H4'	36:BO:54:VAL:O	2.08	0.53
24:BC:157:SER:O	24:BC:158:ALA:C	2.50	0.53
34:BM:7:THR:OG1	34:BM:9:PHE:O	2.25	0.53
34:BM:78:LEU:O	34:BM:80:VAL:HG23	2.08	0.53
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.89	0.53
1:CA:1074:G:H4'	2:CB:103:ASN:HB3	1.90	0.53
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.22	0.53
5:CE:81:LEU:CD1	5:CE:81:LEU:N	2.70	0.53
9:CI:120:LYS:O	9:CI:121:ALA:HB3	2.09	0.53
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.09	0.53
22:DA:396:G:H1'	45:DX:29:PHE:HB3	1.89	0.53
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.43	0.53
22:DA:2189:U:H2'	22:DA:2190:G:H5"	1.90	0.53
22:DA:2467:C:N4	22:DA:2468:A:C6	2.76	0.53
22:DA:2491:U:H5"	22:DA:2570:G:H5"	1.89	0.53
1:AA:102:G:N2	1:AA:103:U:C2	2.77	0.53
1:AA:151:A:H2'	1:AA:152:A:O4'	2.08	0.53
1:AA:237:G:H2'	1:AA:238:A:O4'	2.09	0.53
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.08	0.53
4:AD:99:ASP:OD1	4:AD:99:ASP:N	2.41	0.53
5:AE:13:GLU:HB3	5:AE:39:VAL:HG12	1.91	0.53
22:BA:1917:U:H2'	22:BA:1917:U:O2	2.09	0.53
22:BA:2317:A:H2'	22:BA:2318:G:H5'	1.90	0.53
27:BF:63:GLN:NE2	27:BF:90:THR:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.91	0.53
32:BK:121:GLU:O	32:BK:122:VAL:C	2.50	0.53
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.07	0.53
42:BU:49:VAL:O	42:BU:51:ALA:N	2.41	0.53
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.22	0.53
1:CA:399:G:C6	1:CA:400:C:C4	2.97	0.53
1:CA:1007:U:H2'	1:CA:1008:U:H5"	1.89	0.53
1:CA:1055:A:N6	1:CA:1206:G:C5	2.76	0.53
11:CK:21:ALA:HB3	11:CK:84:VAL:HG13	1.90	0.53
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.43	0.53
22:DA:1045:C:O2	22:DA:1047:G:N1	2.41	0.53
22:DA:1525:A:C6	22:DA:1526:C:C4	2.97	0.53
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.43	0.53
22:DA:1993:U:H4'	25:DD:133:THR:HG21	1.91	0.53
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.37	0.53
22:DA:2550:G:C6	22:DA:2551:C:C4	2.97	0.53
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.38	0.53
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.37	0.53
27:DF:135:GLN:N	27:DF:135:GLN:OE1	2.41	0.53
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.09	0.53
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	1.89	0.53
34:DM:53:MET:HE1	34:DM:103:TYR:CB	2.37	0.53
35:DN:54:LEU:HD23	35:DN:66:ALA:HB2	1.90	0.53
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.07	0.53
46:DY:45:GLN:O	46:DY:47:ARG:N	2.41	0.53
1:AA:205:A:H2'	1:AA:205:A:N3	2.22	0.53
1:AA:533:A:P	57:AA:1848:HOH:O	2.66	0.53
1:AA:728:A:C6	1:AA:729:A:C6	2.96	0.53
1:AA:1374:A:C2	1:AA:1375:A:C4	2.96	0.53
1:AA:1378:C:H2'	1:AA:1379:G:O5'	2.08	0.53
2:AB:35:ARG:HA	2:AB:35:ARG:HE	1.74	0.53
4:AD:35:GLU:CD	4:AD:35:GLU:C	2.76	0.53
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.90	0.53
13:AM:80:LEU:HD21	13:AM:87:ARG:HE	1.74	0.53
22:BA:996:A:C2	22:BA:997:G:N9	2.77	0.53
22:BA:1268:A:C2	22:BA:2013:A:C4	2.96	0.53
22:BA:2211:A:O2'	22:BA:2212:A:P	2.67	0.53
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.22	0.53
23:BB:34:A:O2'	23:BB:35:C:H5"	2.08	0.53
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	2.08	0.53
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:72:PRO:O	34:BM:73:ILE:HD13	2.07	0.53
39:BR:39:LEU:O	39:BR:40:MET:HB2	2.09	0.53
50:B2:43:THR:O	50:B2:44:VAL:CG1	2.56	0.53
1:CA:57:G:C6	1:CA:58:C:C4	2.96	0.53
1:CA:78:A:N6	1:CA:79:G:C6	2.76	0.53
1:CA:123:U:OP1	1:CA:311:C:O2'	2.22	0.53
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.07	0.53
9:CI:127:PHE:C	9:CI:127:PHE:CD2	2.87	0.53
12:CL:16:VAL:O	12:CL:17:ALA:C	2.51	0.53
21:CU:28:VAL:O	21:CU:32:VAL:HG23	2.09	0.53
22:DA:329:G:O4'	22:DA:477:A:H1'	2.08	0.53
22:DA:995:C:N3	31:DJ:3:THR:N	2.55	0.53
22:DA:1422:G:C6	22:DA:1423:G:C5	2.96	0.53
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.90	0.53
22:DA:2043:C:H1'	22:DA:2779:U:O4	2.08	0.53
22:DA:2581:G:H1'	22:DA:2582:G:N7	2.23	0.53
22:DA:2652:C:C4	22:DA:2653:U:C4	2.97	0.53
29:DH:27:ARG:HE	45:DX:60:ASP:CB	2.20	0.53
31:DJ:5:THR:HG22	31:DJ:6:ALA:O	2.09	0.53
31:DJ:78:THR:OG1	31:DJ:80:HIS:HB2	2.08	0.53
36:DO:15:ARG:O	36:DO:18:LEU:HB2	2.09	0.53
39:DR:19:THR:CG2	39:DR:95:ASP:HB3	2.39	0.53
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.24	0.53
5:AE:96:MET:HB3	5:AE:125:ALA:HB2	1.89	0.53
17:AQ:15:ASP:HA	17:AQ:21:ILE:CD1	2.37	0.53
22:BA:700:G:O2'	22:BA:1632:A:N3	2.29	0.53
22:BA:1584:U:O2	22:BA:1584:U:H2'	2.07	0.53
22:BA:2020:A:C2	22:BA:2035:G:C6	2.97	0.53
23:BB:78:A:H2'	23:BB:79:G:O4'	2.08	0.53
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.23	0.53
1:CA:73:C:HO2'	1:CA:74:A:C5'	2.22	0.53
1:CA:818:G:O2'	1:CA:819:A:H5'	2.09	0.53
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.09	0.53
4:CD:145:ILE:HD12	4:CD:145:ILE:N	2.23	0.53
4:CD:151:LYS:HA	4:CD:178:MET:HE1	1.89	0.53
11:CK:25:ALA:HA	11:CK:30:THR:HG22	1.88	0.53
15:CO:70:LEU:HD13	15:CO:78:TYR:HA	1.89	0.53
22:DA:451:U:H2'	22:DA:453:A:N7	2.24	0.53
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.24	0.53
22:DA:1866:A:N7	22:DA:1867:G:C8	2.76	0.53
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:7:LYS:HD3	25:DD:198:GLY:HA2	1.91	0.53
27:DF:122:PHE:O	27:DF:123:ASP:C	2.50	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
39:DR:47:VAL:O	39:DR:47:VAL:HG12	2.09	0.53
49:D1:50:LYS:O	49:D1:51:GLU:HB3	2.07	0.53
1:AA:190:A:C8	1:AA:191:G:C8	2.97	0.53
1:AA:275:G:C2	1:AA:276:G:C8	2.97	0.53
1:AA:1066:C:H2'	1:AA:1066:C:O2	2.08	0.53
2:AB:147:SER:O	2:AB:148:LEU:CB	2.56	0.53
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.24	0.53
7:AG:120:LEU:HD22	7:AG:124:LEU:HD23	1.90	0.53
11:AK:110:ILE:HB	21:AU:6:VAL:HG22	1.91	0.53
14:AN:25:ALA:O	14:AN:28:LYS:HG2	2.08	0.53
22:BA:137:U:H2'	22:BA:140:C:N1	2.23	0.53
22:BA:749:A:C6	22:BA:1618:A:C2	2.97	0.53
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.08	0.53
22:BA:1435:G:HO2'	22:BA:1436:G:H5'	1.74	0.53
22:BA:2665:A:C2	22:BA:2666:C:C6	2.96	0.53
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.91	0.53
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.86	0.53
1:CA:354:G:C2	1:CA:355:C:C5	2.96	0.53
1:CA:1124:G:N2	1:CA:1127:G:C2	2.76	0.53
1:CA:1125:U:C6	10:CJ:40:ILE:HD13	2.44	0.53
1:CA:1250:A:C6	1:CA:1251:A:C6	2.96	0.53
1:CA:1373:G:H5"	7:CG:36:LYS:HB2	1.90	0.53
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.41	0.53
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.09	0.53
22:DA:18:U:O4	57:DA:3205:HOH:O	2.14	0.53
22:DA:35:G:N2	22:DA:450:G:H1'	2.23	0.53
22:DA:160:A:C6	22:DA:161:A:C6	2.96	0.53
22:DA:770:G:H1'	22:DA:1379:U:C4	2.44	0.53
22:DA:2133:G:N3	22:DA:2158:A:N1	2.57	0.53
22:DA:2244:U:C5	22:DA:2245:U:C4	2.97	0.53
24:DC:262:ARG:HG2	24:DC:263:THR:HG23	1.90	0.53
26:DE:181:ILE:HD13	33:DL:2:ARG:NH2	2.24	0.53
51:D3:34:THR:HG23	51:D3:35:LYS:N	2.22	0.53
1:AA:74:A:N3	1:AA:97:G:C2	2.77	0.53
1:AA:131:A:O2'	1:AA:262:A:N3	2.37	0.53
1:AA:561:U:O2'	1:AA:562:U:P	2.66	0.53
1:AA:946:A:H2'	1:AA:947:G:C8	2.44	0.53
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1533:C:H5'	1:AA:1534:A:OP1	2.09	0.53
3:AC:55:ILE:O	3:AC:55:ILE:HG13	2.08	0.53
3:AC:107:ARG:O	3:AC:108:LYS:C	2.52	0.53
4:AD:97:ARG:HB3	4:AD:99:ASP:OD1	2.09	0.53
12:AL:88:LYS:O	12:AL:88:LYS:HG3	2.08	0.53
15:AO:55:GLY:O	15:AO:58:ARG:HB3	2.09	0.53
16:AP:78:VAL:O	16:AP:80:LYS:N	2.41	0.53
22:BA:102:U:H4'	22:BA:103:A:OP1	2.08	0.53
22:BA:782:A:C2	24:BC:225:MET:SD	3.02	0.53
22:BA:1779:U:H2'	57:BA:3694:HOH:O	2.07	0.53
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.07	0.53
22:BA:2347:C:H2'	22:BA:2348:U:C6	2.44	0.53
22:BA:2591:C:H2'	22:BA:2592:G:H8	1.72	0.53
26:BE:7:ASP:OD2	26:BE:8:ALA:N	2.39	0.53
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.44	0.53
33:BL:28:GLY:C	33:BL:29:LYS:O	2.52	0.53
33:BL:85:VAL:HG11	33:BL:94:THR:HG22	1.91	0.53
41:BT:71:GLY:O	41:BT:73:ARG:N	2.42	0.53
50:B2:43:THR:O	50:B2:44:VAL:CB	2.57	0.53
1:CA:247:G:C6	1:CA:278:G:C2	2.97	0.53
1:CA:435:A:C2	1:CA:436:C:H1'	2.44	0.53
1:CA:657:U:O2	15:CO:22:THR:HG23	2.09	0.53
1:CA:743:A:C6	1:CA:744:C:C4	2.97	0.53
1:CA:1101:A:H61	2:CB:102:THR:CG2	2.20	0.53
1:CA:1417:G:C6	1:CA:1482:G:C6	2.97	0.53
1:CA:1441:A:C8	1:CA:1442:G:C8	2.97	0.53
2:CB:103:ASN:O	2:CB:103:ASN:OD1	2.27	0.53
2:CB:139:ARG:C	2:CB:139:ARG:CD	2.82	0.53
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.90	0.53
5:CE:126:LYS:HE2	5:CE:126:LYS:HA	1.91	0.53
6:CF:88:MET:SD	6:CF:90:MET:SD	3.07	0.53
10:CJ:26:VAL:HG12	10:CJ:27:GLU:N	2.23	0.53
12:CL:16:VAL:O	12:CL:17:ALA:O	2.27	0.53
22:DA:56:A:C2	22:DA:57:C:C2	2.96	0.53
22:DA:1031:G:H5"	52:D4:8:LYS:HE3	1.89	0.53
22:DA:1073:A:O2'	22:DA:2474:U:H5'	2.08	0.53
22:DA:1258:U:H2'	22:DA:1259:G:H8	1.68	0.53
22:DA:1364:G:H5"	45:DX:3:ARG:NH1	2.23	0.53
22:DA:2070:A:C2	22:DA:2442:C:C2	2.97	0.53
22:DA:2648:G:C4	22:DA:2673:G:C2	2.97	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	1.91	0.53
33:DL:77:ILE:CD1	33:DL:108:ALA:HB1	2.38	0.53
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.77	0.53
1:AA:276:G:P	17:AQ:17:MET:HE2	2.49	0.53
1:AA:485:U:O2	1:AA:485:U:O4'	2.26	0.53
1:AA:581:G:C5	1:AA:758:C:C5	2.97	0.53
2:AB:56:GLU:HA	2:AB:59:LYS:HB3	1.90	0.53
2:AB:154:MET:CE	2:AB:158:PRO:HG3	2.39	0.53
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.38	0.53
3:AC:46:GLU:C	3:AC:48:ALA:H	2.16	0.53
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.08	0.53
9:AI:36:GLU:OE2	9:AI:36:GLU:N	2.42	0.53
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.76	0.53
11:AK:81:ASN:HB3	11:AK:106:ARG:HB3	1.90	0.53
22:BA:1066:U:O2	22:BA:1069:A:N7	2.42	0.53
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.22	0.53
22:BA:1714:U:H5"	22:BA:1715:G:C5'	2.38	0.53
22:BA:2783:U:H2'	22:BA:2784:U:C6	2.44	0.53
25:BD:16:THR:HG23	25:BD:20:VAL:O	2.09	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.24	0.53
34:BM:74:THR:O	34:BM:75:GLU:HG2	2.09	0.53
34:BM:135:VAL:O	34:BM:136:MET:O	2.27	0.53
37:BP:53:ARG:O	37:BP:54:GLY:C	2.51	0.53
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.44	0.53
42:BU:89:ASP:OD1	42:BU:90:GLY:N	2.42	0.53
1:CA:247:G:C6	1:CA:278:G:N1	2.76	0.53
1:CA:527:G:C6	1:CA:528:C:C5	2.97	0.53
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.09	0.53
4:CD:145:ILE:HG22	4:CD:146:ARG:O	2.08	0.53
4:CD:147:GLU:O	4:CD:148:LYS:C	2.51	0.53
8:CH:67:GLN:C	8:CH:69:LYS:N	2.65	0.53
11:CK:51:GLY:O	11:CK:52:PHE:O	2.26	0.53
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	1.91	0.53
22:DA:242:G:H5"	51:D3:64:TYR:CE2	2.44	0.53
22:DA:811:U:C2	22:DA:1251:C:C5	2.96	0.53
22:DA:1544:A:C6	22:DA:1545:A:C6	2.97	0.53
22:DA:1831:G:C5	22:DA:1832:C:C4	2.97	0.53
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.91	0.53
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.09	0.53
22:DA:2503:A:C8	55:DA:3001:VIF:H1	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.53
33:DL:58:TYR:O	51:D3:13:ARG:HD3	2.08	0.53
35:DN:87:PHE:CZ	35:DN:94:TYR:HB3	2.44	0.53
37:DP:39:ARG:CG	37:DP:40:LEU:H	2.21	0.53
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.09	0.53
3:AC:7:PRO:O	3:AC:11:ARG:HG3	2.08	0.53
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.09	0.53
16:AP:4:ILE:HD12	16:AP:67:ILE:HD11	1.91	0.53
19:AS:29:LYS:CB	19:AS:30:PRO:CD	2.87	0.53
22:BA:991:C:C4	22:BA:1185:G:O6	2.62	0.53
22:BA:1090:A:H2'	22:BA:1091:G:H5'	1.90	0.53
22:BA:1358:G:H1'	22:BA:1374:G:N2	2.23	0.53
22:BA:2073:C:O2	22:BA:2437:G:C2	2.62	0.53
22:BA:2191:A:C2	22:BA:2192:U:C2	2.96	0.53
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.91	0.53
49:B1:11:LEU:N	49:B1:11:LEU:HD23	2.23	0.53
1:CA:976:G:P	1:CA:1358:U:O2'	2.67	0.53
1:CA:1080:A:OP1	5:CE:52:LYS:HE3	2.09	0.53
1:CA:1364:U:O2	1:CA:1364:U:H2'	2.08	0.53
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.74	0.53
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.09	0.53
3:CC:83:ASP:O	3:CC:84:VAL:C	2.51	0.53
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.24	0.53
12:CL:7:LEU:HD22	12:CL:12:ARG:CD	2.38	0.53
22:DA:532:A:H2'	22:DA:532:A:N3	2.24	0.53
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.24	0.53
22:DA:2127:G:C2	22:DA:2162:G:C8	2.97	0.53
24:DC:57:GLY:O	24:DC:58:HIS:O	2.26	0.53
44:DW:21:LEU:HD22	44:DW:39:ARG:HB3	1.90	0.53
51:D3:52:LYS:O	51:D3:53:GLY:C	2.51	0.53
1:AA:142:G:H3'	1:AA:143:A:H8	1.74	0.53
1:AA:268:U:H2'	1:AA:269:C:C6	2.44	0.53
1:AA:464:U:C2	1:AA:466:A:H5"	2.45	0.53
1:AA:890:G:O2'	1:AA:906:A:N6	2.42	0.53
1:AA:1374:A:C2	1:AA:1375:A:N9	2.77	0.53
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.07	0.53
3:AC:11:ARG:O	3:AC:12:LEU:C	2.51	0.53
3:AC:40:ARG:NH1	3:AC:55:ILE:O	2.41	0.53
3:AC:114:LYS:HD3	3:AC:185:ASN:OD1	2.08	0.53
9:AI:115:LYS:O	9:AI:116:VAL:C	2.52	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.09	0.53
11:AK:17:SER:HA	11:AK:79:ILE:HA	1.90	0.53
18:AR:29:LEU:O	18:AR:31:ASN:N	2.42	0.53
22:BA:45:G:C5'	22:BA:46:G:OP1	2.57	0.53
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.55	0.53
22:BA:499:U:C4	22:BA:500:G:C6	2.97	0.53
22:BA:580:U:O3'	38:BQ:31:VAL:HG13	2.08	0.53
22:BA:695:G:C2	22:BA:696:G:C8	2.97	0.53
22:BA:841:G:H2'	22:BA:842:U:H6	1.73	0.53
22:BA:1084:A:C5	22:BA:1085:A:C6	2.97	0.53
22:BA:1984:G:O2'	22:BA:1985:C:H5'	2.09	0.53
22:BA:2127:G:H2'	22:BA:2128:G:C8	2.44	0.53
36:BO:2:ASP:OD1	36:BO:2:ASP:C	2.52	0.53
37:BP:2:SER:O	37:BP:6:LYS:HG2	2.09	0.53
41:BT:48:GLN:OE1	41:BT:54:GLU:HA	2.09	0.53
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.24	0.53
1:CA:485:U:OP2	1:CA:485:U:H4'	2.09	0.53
1:CA:608:A:H2'	1:CA:609:A:O4'	2.09	0.53
4:CD:35:GLU:O	4:CD:38:PRO:HD3	2.09	0.53
14:CN:36:ALA:HB2	14:CN:42:TRP:CH2	2.44	0.53
22:DA:1125:G:C6	22:DA:1126:A:N6	2.76	0.53
22:DA:1855:U:C5	22:DA:1856:U:C4	2.97	0.53
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	1.90	0.53
26:DE:193:VAL:O	26:DE:197:GLU:HB2	2.09	0.53
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.53
41:DT:54:GLU:CB	41:DT:88:LYS:HG3	2.39	0.53
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.56	0.53
48:D0:44:THR:C	48:D0:46:ASP:H	2.17	0.53
1:AA:257:G:C2	1:AA:258:G:C5	2.96	0.52
1:AA:345:C:N3	32:BK:117:SER:OG	2.42	0.52
1:AA:495:A:C2	1:AA:496:A:N6	2.76	0.52
1:AA:1160:G:O2'	1:AA:1161:C:P	2.67	0.52
22:BA:156:A:H2'	22:BA:157:C:O4'	2.09	0.52
22:BA:1073:A:C2'	22:BA:1074:G:H5"	2.39	0.52
22:BA:1717:A:C5	22:BA:1718:G:C8	2.97	0.52
22:BA:1842:G:N3	22:BA:1901:A:C2	2.77	0.52
22:BA:1848:A:H2'	22:BA:1849:G:O4'	2.09	0.52
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.72	0.52
26:BE:105:LEU:O	26:BE:106:LYS:C	2.51	0.52
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.91	0.52
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:134:G:H2'	1:CA:135:C:O4'	2.09	0.52
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.08	0.52
12:CL:22:PRO:C	12:CL:24:LEU:H	2.16	0.52
12:CL:25:GLU:CB	12:CL:27:CYS:SG	2.97	0.52
20:CT:6:SER:O	20:CT:8:LYS:N	2.42	0.52
22:DA:40:U:H2'	22:DA:41:C:C6	2.45	0.52
22:DA:500:G:N2	22:DA:502:A:C8	2.77	0.52
22:DA:734:A:C8	22:DA:735:A:C8	2.98	0.52
22:DA:811:U:O2	22:DA:1251:C:C6	2.61	0.52
22:DA:1782:U:O4'	22:DA:2609:U:C2	2.62	0.52
22:DA:2013:A:N1	22:DA:2014:A:C2	2.78	0.52
24:DC:68:LYS:HD3	24:DC:149:GLY:O	2.09	0.52
25:DD:13:ARG:HD2	25:DD:15:PHE:CE1	2.44	0.52
26:DE:143:LEU:HB3	26:DE:146:VAL:CG1	2.39	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.09	0.52
30:DI:42:PHE:O	30:DI:46:THR:OG1	2.27	0.52
30:DI:97:LYS:N	30:DI:97:LYS:HD2	2.24	0.52
31:DJ:17:VAL:HG22	31:DJ:55:ILE:HB	1.91	0.52
36:DO:39:VAL:N	36:DO:49:VAL:O	2.41	0.52
37:DP:13:MET:HE3	37:DP:77:HIS:CE1	2.43	0.52
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	1.91	0.52
41:DT:13:ALA:O	41:DT:32:LEU:HB2	2.08	0.52
1:AA:568:G:C4	1:AA:569:C:H5	2.28	0.52
1:AA:702:A:H3'	1:AA:703:G:H5'	1.90	0.52
1:AA:1135:U:C2	1:AA:1137:C:N3	2.77	0.52
7:AG:40:GLU:HB2	7:AG:44:TYR:CE2	2.44	0.52
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.10	0.52
16:AP:50:THR:O	16:AP:50:THR:HG22	2.09	0.52
21:AU:25:LYS:O	21:AU:29:LEU:HB2	2.09	0.52
22:BA:583:G:H2'	22:BA:584:C:O5'	2.10	0.52
22:BA:1064:C:O2	22:BA:1064:C:H2'	2.08	0.52
22:BA:1083:U:O2	22:BA:1086:A:C2	2.61	0.52
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.09	0.52
22:BA:1912:A:N1	22:BA:1919:A:C4	2.76	0.52
24:BC:10:SER:O	24:BC:13:ARG:HB3	2.09	0.52
26:BE:85:PHE:O	26:BE:86:ALA:O	2.27	0.52
32:BK:57:VAL:C	32:BK:58:LEU:HD13	2.34	0.52
35:BN:67:PHE:CE2	35:BN:71:ARG:NH1	2.77	0.52
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.91	0.52
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.90	0.52
40:BS:59:GLU:HG3	40:BS:66:ILE:CD1	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:238:A:C5	1:CA:239:U:C5	2.97	0.52
1:CA:847:G:H2'	1:CA:848:C:O4'	2.08	0.52
1:CA:1490:U:H2'	1:CA:1491:G:C8	2.44	0.52
7:CG:146:GLU:HA	7:CG:149:LYS:HB2	1.91	0.52
16:CP:61:VAL:HG21	16:CP:67:ILE:HD11	1.89	0.52
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.56	0.52
22:DA:119:A:H4'	22:DA:120:U:O5'	2.09	0.52
22:DA:277:G:H1'	22:DA:361:G:O6	2.10	0.52
22:DA:370:G:O2'	22:DA:423:A:H3'	2.10	0.52
22:DA:1605:C:O2	22:DA:1610:A:O2'	2.25	0.52
22:DA:1799:G:O2'	24:DC:180:GLU:OE2	2.27	0.52
22:DA:2341:G:C5	22:DA:2342:C:C4	2.98	0.52
24:DC:171:TYR:CD2	24:DC:185:GLU:HA	2.44	0.52
39:DR:68:ARG:HD3	39:DR:92:TRP:CZ2	2.44	0.52
50:D2:11:LYS:O	50:D2:15:SER:N	2.42	0.52
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.08	0.52
1:AA:100:G:O6	1:AA:101:A:C6	2.62	0.52
1:AA:518:C:H5	1:AA:530:G:OP2	1.91	0.52
1:AA:1000:A:C2	1:AA:1041:G:C2	2.97	0.52
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.44	0.52
4:AD:62:ARG:NH1	4:AD:69:GLU:HG2	2.25	0.52
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.42	0.52
6:AF:51:ILE:HD12	6:AF:86:ARG:CZ	2.39	0.52
17:AQ:52:GLU:N	17:AQ:52:GLU:CD	2.66	0.52
22:BA:744:U:O4	22:BA:745:G:C6	2.62	0.52
22:BA:1414:C:C4	22:BA:1415:U:H5	2.26	0.52
22:BA:2094:A:C2	22:BA:2196:C:C2	2.98	0.52
25:BD:131:ASP:HB3	25:BD:133:THR:O	2.09	0.52
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.16	0.52
27:BF:38:MET:HE3	27:BF:57:LEU:HG	1.92	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
41:BT:69:ARG:HB2	41:BT:74:ILE:HG22	1.90	0.52
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.45	0.52
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.09	0.52
1:CA:1144:G:C2	1:CA:1145:A:C2	2.97	0.52
3:CC:50:ALA:HB1	3:CC:76:VAL:CG2	2.40	0.52
8:CH:51:VAL:O	8:CH:51:VAL:HG22	2.09	0.52
12:CL:25:GLU:HB2	12:CL:27:CYS:SG	2.49	0.52
18:CR:24:LYS:O	18:CR:26:ILE:N	2.39	0.52
22:DA:624:C:O2'	22:DA:657:U:H5"	2.09	0.52
22:DA:651:G:P	51:D3:19:LYS:HG3	2.49	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:873:C:N3	22:DA:905:A:C2	2.78	0.52
22:DA:987:C:O2'	22:DA:1000:A:N3	2.41	0.52
22:DA:1984:G:C6	22:DA:1985:C:C4	2.97	0.52
22:DA:2110:G:C6	22:DA:2120:G:C8	2.98	0.52
24:DC:80:ARG:NE	24:DC:82:GLU:OE2	2.41	0.52
32:DK:58:LEU:HD11	32:DK:86:LEU:HB3	1.91	0.52
34:DM:54:THR:HA	34:DM:57:VAL:HG22	1.91	0.52
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.44	0.52
46:DY:60:LYS:O	46:DY:61:ALA:C	2.52	0.52
1:AA:502:A:OP1	12:AL:115:SER:HB3	2.10	0.52
1:AA:520:A:N1	1:AA:536:C:H1'	2.24	0.52
1:AA:602:A:C2	1:AA:603:U:C2	2.97	0.52
1:AA:1014:A:C8	1:AA:1015:G:C5	2.97	0.52
1:AA:1144:G:H5"	1:AA:1145:A:OP2	2.09	0.52
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.50	0.52
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.08	0.52
4:AD:113:GLU:CD	4:AD:154:ARG:HD2	2.34	0.52
6:AF:70:VAL:HA	6:AF:73:GLU:HG2	1.90	0.52
14:AN:7:LYS:O	14:AN:10:GLU:N	2.42	0.52
15:AO:74:ASP:OD1	15:AO:77:ARG:HD3	2.09	0.52
16:AP:72:ALA:HA	16:AP:75:ILE:HD11	1.92	0.52
22:BA:811:U:C4	33:BL:21:ARG:NH2	2.77	0.52
22:BA:2462:C:N4	22:BA:2463:C:N4	2.57	0.52
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.74	0.52
24:BC:13:ARG:CA	24:BC:16:VAL:HG23	2.38	0.52
26:BE:44:ARG:HG2	26:BE:45:ALA:N	2.21	0.52
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.34	0.52
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.09	0.52
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.40	0.52
40:BS:51:LEU:O	40:BS:54:ALA:HB3	2.09	0.52
46:BY:7:ARG:O	46:BY:7:ARG:HG3	2.09	0.52
48:B0:17:ARG:HB3	48:B0:20:ASP:OD1	2.08	0.52
53:B5:102:GLN:HA	53:B5:105:LEU:CB	2.40	0.52
1:CA:8:A:C2	5:CE:112:ARG:NH2	2.78	0.52
1:CA:206:C:H2'	1:CA:207:C:H4'	1.90	0.52
1:CA:920:U:C2	1:CA:921:U:C5	2.97	0.52
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.92	0.52
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.39	0.52
1:CA:1379:G:N2	1:CA:1381:U:O4	2.38	0.52
4:CD:151:LYS:C	4:CD:152:GLN:HE21	2.17	0.52
5:CE:98:PRO:O	5:CE:99:ALA:CB	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:99:ALA:O	6:CF:100:SER:HB3	2.10	0.52
9:CI:19:VAL:HG21	9:CI:82:GLY:C	2.34	0.52
10:CJ:52:LEU:HD22	10:CJ:59:LYS:HA	1.91	0.52
22:DA:489:G:C2	22:DA:491:G:H1'	2.45	0.52
22:DA:973:A:O4'	22:DA:1188:U:C6	2.62	0.52
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.92	0.52
23:DB:71:C:C2	23:DB:106:G:C2	2.97	0.52
25:DD:78:GLY:CA	25:DD:80:TRP:CH2	2.92	0.52
25:DD:157:LYS:HD2	31:DJ:79:GLY:O	2.10	0.52
28:DG:91:GLY:O	28:DG:92:VAL:O	2.27	0.52
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.35	0.52
38:DQ:72:ASN:CB	38:DQ:110:VAL:HG11	2.40	0.52
45:DX:40:VAL:CG2	45:DX:43:GLU:HB2	2.39	0.52
1:AA:841:C:O2	1:AA:843:U:N3	2.43	0.52
1:AA:1053:G:O5'	1:AA:1054:C:H5'	2.09	0.52
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.42	0.52
22:BA:816:C:C2	22:BA:1192:G:N2	2.77	0.52
22:BA:973:A:OP2	39:BR:81:LYS:NZ	2.39	0.52
22:BA:1392:A:C6	22:BA:1393:A:N1	2.78	0.52
22:BA:2572:A:N7	25:BD:150:GLN:HB2	2.24	0.52
23:BB:75:G:H1'	43:BV:29:ILE:HG13	1.91	0.52
28:BG:118:PRO:O	28:BG:119:ALA:C	2.52	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
32:BK:47:ILE:HB	32:BK:48:PRO:HD3	1.92	0.52
35:BN:67:PHE:HE2	35:BN:71:ARG:NH1	2.08	0.52
39:BR:21:ARG:NH1	39:BR:93:PHE:CE1	2.78	0.52
44:BW:47:ALA:HB2	44:BW:59:LEU:HD22	1.91	0.52
48:B0:46:ASP:O	48:B0:53:LYS:HE3	2.10	0.52
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.09	0.52
1:CA:909:A:C8	1:CA:910:C:C5	2.97	0.52
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.45	0.52
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	1.92	0.52
4:CD:168:PRO:HB2	4:CD:171:LEU:HD13	1.91	0.52
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.09	0.52
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.10	0.52
22:DA:957:C:C4	22:DA:2459:A:H1'	2.45	0.52
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.91	0.52
28:DG:80:THR:HG22	28:DG:81:GLU:N	2.24	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52
40:DS:86:MET:HE3	40:DS:87:PRO:HD2	1.90	0.52
41:DT:51:PHE:O	41:DT:53:VAL:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:121:U:OP2	1:AA:121:U:H4'	2.09	0.52
1:AA:338:A:N6	1:AA:339:C:C4	2.77	0.52
1:AA:1074:G:N1	1:AA:1075:U:C2	2.78	0.52
1:AA:1140:C:O2'	1:AA:1141:C:P	2.67	0.52
1:AA:1286:U:OP1	1:AA:1286:U:C6	2.63	0.52
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.23	0.52
20:AT:3:ASN:O	20:AT:4:ILE:C	2.52	0.52
20:AT:58:VAL:CG1	20:AT:72:ALA:HA	2.40	0.52
22:BA:975:A:C2	22:BA:990:A:C8	2.97	0.52
22:BA:1588:G:C2	22:BA:1589:U:C6	2.98	0.52
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.74	0.52
22:BA:2462:C:C4	22:BA:2463:C:N4	2.77	0.52
23:BB:24:G:N2	23:BB:28:C:C2	2.77	0.52
25:BD:104:VAL:O	25:BD:105:LYS:HB2	2.10	0.52
28:BG:24:ILE:HD12	28:BG:72:LEU:HD21	1.91	0.52
28:BG:67:THR:O	28:BG:71:LEU:HG	2.10	0.52
31:BJ:30:THR:CG2	31:BJ:31:GLU:N	2.72	0.52
38:BQ:74:ILE:HG23	38:BQ:74:ILE:O	2.10	0.52
42:BU:14:LEU:HD12	42:BU:70:VAL:C	2.34	0.52
1:CA:18:C:C4	1:CA:19:A:N7	2.77	0.52
1:CA:123:U:H2'	1:CA:124:C:H6	1.74	0.52
1:CA:801:U:H2'	1:CA:802:A:H8	1.73	0.52
1:CA:1521:C:C2	1:CA:1522:U:C6	2.98	0.52
2:CB:80:VAL:HG13	2:CB:214:LEU:HD11	1.91	0.52
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.34	0.52
5:CE:76:LEU:HD23	5:CE:120:VAL:HG13	1.91	0.52
16:CP:38:PHE:CZ	16:CP:51:ARG:HB3	2.45	0.52
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.25	0.52
22:DA:1638:C:H5"	22:DA:2710:C:O2'	2.10	0.52
22:DA:1856:U:C4	22:DA:1857:G:C6	2.98	0.52
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.09	0.52
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.10	0.52
28:DG:84:THR:OG1	28:DG:134:LYS:HG2	2.08	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.92	0.52
33:DL:50:PHE:CZ	33:DL:52:GLY:O	2.63	0.52
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.56	0.52
47:DZ:41:THR:HG23	47:DZ:44:ILE:HG12	1.92	0.52
1:AA:207:C:O2	1:AA:213:G:N2	2.43	0.52
1:AA:924:C:O2'	1:AA:925:G:H5'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:994:A:N1	1:AA:1047:G:H4'	2.25	0.52
1:AA:1107:C:C4	1:AA:1108:G:N7	2.78	0.52
1:AA:1224:U:O2'	1:AA:1322:C:OP1	2.27	0.52
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.75	0.52
3:AC:165:THR:O	3:AC:166:GLU:HB2	2.09	0.52
4:AD:150:LYS:O	4:AD:152:GLN:N	2.43	0.52
7:AG:63:GLU:OE1	7:AG:63:GLU:O	2.27	0.52
9:AI:99:ARG:O	9:AI:101:ALA:N	2.42	0.52
12:AL:23:ALA:O	12:AL:24:LEU:C	2.52	0.52
19:AS:51:VAL:HG22	19:AS:71:LEU:CD1	2.39	0.52
22:BA:515:A:H1'	22:BA:581:C:H1'	1.90	0.52
22:BA:812:C:C5	22:BA:1250:G:C6	2.97	0.52
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.45	0.52
22:BA:1269:A:H2'	22:BA:1270:C:C6	2.44	0.52
22:BA:1316:U:C2	22:BA:1337:G:N2	2.78	0.52
22:BA:2226:C:O2	22:BA:2226:C:H2'	2.09	0.52
24:BC:107:PRO:HB3	24:BC:142:HIS:HE1	1.73	0.52
24:BC:130:LEU:HD23	24:BC:130:LEU:N	2.25	0.52
25:BD:103:ASP:O	25:BD:105:LYS:N	2.39	0.52
26:BE:104:ALA:O	26:BE:105:LEU:C	2.52	0.52
30:BI:57:VAL:CG2	30:BI:58:VAL:N	2.71	0.52
35:BN:1:MET:O	35:BN:2:ARG:CB	2.57	0.52
1:CA:295:C:N4	1:CA:296:U:O4	2.43	0.52
1:CA:545:C:H5'	4:CD:69:GLU:CG	2.39	0.52
1:CA:1022:A:C5	1:CA:1023:U:C4	2.98	0.52
1:CA:1215:G:C6	1:CA:1216:A:C5	2.98	0.52
1:CA:1300:G:C6	1:CA:1335:U:C6	2.97	0.52
1:CA:1311:A:C2	1:CA:1327:C:N3	2.78	0.52
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.45	0.52
5:CE:52:LYS:O	5:CE:53:ALA:HB2	2.09	0.52
5:CE:111:MET:HE2	5:CE:125:ALA:HB1	1.90	0.52
5:CE:122:ASN:CG	5:CE:123:VAL:H	2.18	0.52
17:CQ:47:HIS:HB2	17:CQ:67:LEU:CD1	2.40	0.52
22:DA:686:U:H2'	22:DA:788:A:C2	2.43	0.52
22:DA:704:G:H1'	22:DA:726:G:H22	1.75	0.52
22:DA:830:G:C2	22:DA:2448:A:N7	2.78	0.52
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.09	0.52
24:DC:101:ARG:O	24:DC:102:ARG:HG3	2.10	0.52
49:D1:15:ALA:O	49:D1:17:THR:N	2.43	0.52
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.10	0.52
1:AA:669:G:H2'	1:AA:670:G:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:796:C:OP1	11:AK:126:LYS:HB2	2.10	0.52
1:AA:815:A:H4'	1:AA:817:C:C4	2.45	0.52
1:AA:973:G:H1'	10:AJ:56:HIS:HD2	1.74	0.52
1:AA:1060:U:O2	1:AA:1061:G:C8	2.63	0.52
2:AB:117:LEU:HB3	2:AB:141:LEU:HD11	1.92	0.52
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.73	0.52
14:AN:46:LEU:C	14:AN:48:LEU:N	2.68	0.52
15:AO:24:SER:O	15:AO:25:THR:C	2.53	0.52
18:AR:25:ASP:O	18:AR:27:ALA:N	2.42	0.52
20:AT:25:ARG:O	20:AT:29:ARG:HG3	2.10	0.52
21:AU:12:PHE:N	21:AU:12:PHE:HD2	2.07	0.52
21:AU:16:LEU:O	21:AU:18:ARG:HD2	2.10	0.52
22:BA:84:A:H4'	22:BA:85:G:O5'	2.10	0.52
22:BA:110:G:H2'	22:BA:110:G:N3	2.25	0.52
22:BA:503:A:C2	22:BA:505:A:C4	2.98	0.52
22:BA:585:G:C4'	22:BA:586:A:OP1	2.57	0.52
22:BA:616:A:OP2	57:BA:3290:HOH:O	2.19	0.52
22:BA:1187:G:H5'	39:BR:83:TYR:CZ	2.44	0.52
22:BA:2075:U:H2'	22:BA:2077:A:OP2	2.09	0.52
22:BA:2513:A:H2'	22:BA:2513:A:N3	2.25	0.52
25:BD:1:MET:HA	25:BD:88:GLU:OE2	2.10	0.52
26:BE:109:LEU:O	26:BE:110:SER:C	2.52	0.52
34:BM:34:LYS:O	34:BM:129:THR:N	2.43	0.52
35:BN:49:GLU:OE2	35:BN:95:THR:CG2	2.58	0.52
39:BR:41:ILE:O	39:BR:46:GLU:HB2	2.09	0.52
1:CA:273:U:H1'	17:CQ:18:GLU:OE2	2.10	0.52
1:CA:407:U:H2'	1:CA:408:A:C8	2.45	0.52
1:CA:855:U:H2'	1:CA:856:C:C6	2.44	0.52
6:CF:16:GLU:C	6:CF:18:VAL:H	2.17	0.52
7:CG:42:ILE:HD13	7:CG:116:MET:HB3	1.91	0.52
13:CM:33:ILE:HG23	13:CM:59:GLU:HB3	1.91	0.52
22:DA:39:G:C6	22:DA:40:U:C4	2.98	0.52
22:DA:661:A:H1'	33:DL:12:SER:O	2.09	0.52
22:DA:696:G:C2	22:DA:767:U:O2	2.63	0.52
22:DA:748:G:O6	22:DA:751:A:H5'	2.09	0.52
22:DA:833:A:H2'	22:DA:834:G:C8	2.44	0.52
22:DA:993:G:H1'	39:DR:91:GLN:OE1	2.10	0.52
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.75	0.52
22:DA:1355:G:C6	22:DA:1356:G:N7	2.78	0.52
22:DA:1738:G:HO2'	22:DA:1739:A:P	2.32	0.52
22:DA:2499:C:C4	22:DA:2500:U:O4	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2549:G:C2	22:DA:2560:A:C2	2.98	0.52
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.45	0.52
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.10	0.52
24:DC:107:PRO:HD2	24:DC:110:LEU:HD22	1.92	0.52
27:DF:5:HIS:O	27:DF:9:LYS:HG3	2.10	0.52
32:DK:4:GLU:C	32:DK:5:GLN:HG2	2.35	0.52
42:DU:74:ASN:HA	42:DU:96:PHE:CZ	2.45	0.52
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.45	0.52
1:AA:1306:A:C5	1:AA:1307:U:C5	2.97	0.52
3:AC:8:ASN:C	3:AC:8:ASN:OD1	2.53	0.52
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.92	0.52
9:AI:46:MET:SD	9:AI:46:MET:N	2.83	0.52
22:BA:238:C:H2'	22:BA:239:C:O5'	2.09	0.52
22:BA:613:A:H2'	22:BA:614:A:H5"	1.91	0.52
22:BA:674:G:O2'	26:BE:69:ARG:HD3	2.10	0.52
22:BA:893:C:H2'	22:BA:894:U:O4'	2.10	0.52
22:BA:1002:G:C2	22:BA:1003:G:H1'	2.44	0.52
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.91	0.52
22:BA:1121:C:H2'	22:BA:1122:G:O4'	2.10	0.52
22:BA:1271:G:O2'	22:BA:1618:A:OP1	2.20	0.52
22:BA:1374:G:C2'	22:BA:1375:U:H5'	2.40	0.52
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.57	0.52
22:BA:1829:A:O2'	24:BC:15:HIS:CD2	2.63	0.52
22:BA:2116:G:C6	22:BA:2171:A:N6	2.77	0.52
22:BA:2331:G:C6	22:BA:2332:C:C4	2.97	0.52
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.40	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
29:BH:123:ARG:NH2	1:CA:367:U:O5'	2.43	0.52
30:BI:116:ASP:O	30:BI:117:MET:CB	2.57	0.52
32:BK:116:ILE:O	32:BK:118:LEU:O	2.27	0.52
1:CA:369:G:OP2	1:CA:388:G:N2	2.39	0.52
1:CA:604:G:H2'	1:CA:605:U:O4'	2.09	0.52
1:CA:632:U:O2	1:CA:632:U:C2'	2.58	0.52
1:CA:926:G:C6	1:CA:1505:G:C5	2.98	0.52
1:CA:976:G:N2	1:CA:1363:A:C4	2.78	0.52
5:CE:25:VAL:N	5:CE:28:GLY:O	2.37	0.52
5:CE:101:GLU:HA	5:CE:122:ASN:CB	2.40	0.52
8:CH:89:LYS:HA	8:CH:92:LEU:HD12	1.92	0.52
11:CK:27:PHE:CE1	11:CK:89:PRO:HG2	2.45	0.52
17:CQ:61:ILE:HA	17:CQ:75:LEU:HA	1.92	0.52
20:CT:39:ILE:HD11	20:CT:83:ILE:HG22	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:289:G:C2	22:DA:352:A:C2	2.98	0.52
22:DA:1020:A:C2	22:DA:1141:U:C2	2.98	0.52
25:DD:123:LYS:HD3	25:DD:165:MET:SD	2.49	0.52
27:DF:106:ILE:HG12	27:DF:107:ALA:N	2.25	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
37:DP:48:ILE:HD13	37:DP:62:ARG:HB2	1.92	0.52
41:DT:72:GLN:O	41:DT:73:ARG:O	2.28	0.52
1:AA:347:G:H2'	1:AA:348:G:O5'	2.10	0.52
1:AA:715:A:OP1	1:AA:805:C:H1'	2.10	0.52
2:AB:128:LYS:O	2:AB:129:LEU:C	2.52	0.52
4:AD:151:LYS:CA	4:AD:178:MET:HE1	2.38	0.52
5:AE:60:ILE:HG13	5:AE:61:GLN:N	2.24	0.52
6:AF:84:VAL:HG22	6:AF:84:VAL:O	2.10	0.52
14:AN:64:CYS:HB2	14:AN:80:SER:HB2	1.91	0.52
14:AN:64:CYS:O	14:AN:66:GLN:N	2.43	0.52
15:AO:88:ARG:O	15:AO:89:ARG:OXT	2.28	0.52
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.10	0.52
22:BA:574:A:H4'	22:BA:575:A:O5'	2.10	0.52
22:BA:699:A:N7	22:BA:734:A:C5	2.78	0.52
22:BA:877:A:C6	22:BA:899:A:C6	2.98	0.52
22:BA:1073:A:N7	22:BA:1074:G:C8	2.78	0.52
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.44	0.52
22:BA:2619:C:H5'	25:BD:155:VAL:O	2.10	0.52
25:BD:139:SER:HA	25:BD:142:VAL:HG13	1.91	0.52
25:BD:158:GLY:O	25:BD:159:LYS:C	2.53	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.43	0.52
39:BR:25:LEU:N	39:BR:94:THR:HG21	2.25	0.52
39:BR:79:ARG:O	39:BR:80:ARG:CB	2.58	0.52
45:BX:17:ASN:OD1	45:BX:27:ARG:HD2	2.10	0.52
1:CA:72:A:C5	1:CA:73:C:C5	2.98	0.52
1:CA:142:G:C2	1:CA:143:A:H1'	2.44	0.52
1:CA:1082:A:C6	1:CA:1083:U:N3	2.78	0.52
2:CB:59:LYS:HA	2:CB:62:SER:HB2	1.92	0.52
2:CB:82:ASP:OD1	2:CB:82:ASP:N	2.43	0.52
4:CD:124:MET:HE3	4:CD:146:ARG:HD2	1.92	0.52
4:CD:134:SER:O	4:CD:135:TYR:C	2.53	0.52
5:CE:105:ILE:N	5:CE:122:ASN:O	2.44	0.52
5:CE:155:ALA:HB1	8:CH:66:PHE:CE2	2.44	0.52
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.08	0.52
13:CM:19:LEU:CB	13:CM:30:SER:OG	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:23:LYS:HG3	14:CN:24:ARG:N	2.24	0.52
15:CO:56:LEU:O	15:CO:59:MET:N	2.43	0.52
15:CO:73:LYS:HE2	15:CO:73:LYS:HA	1.91	0.52
19:CS:29:LYS:CB	19:CS:30:PRO:HD2	2.40	0.52
20:CT:80:THR:O	20:CT:83:ILE:N	2.42	0.52
22:DA:271:G:H4'	22:DA:272:A:OP1	2.09	0.52
22:DA:729:G:H2'	22:DA:1775:U:H1'	1.92	0.52
22:DA:1340:U:H4'	22:DA:1341:G:OP2	2.09	0.52
22:DA:1566:A:N1	24:DC:213:TRP:CE3	2.78	0.52
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.10	0.52
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.45	0.52
22:DA:2133:G:C2	22:DA:2158:A:C6	2.98	0.52
22:DA:2297:A:C8	22:DA:2320:U:C4	2.98	0.52
22:DA:2311:A:HO2'	22:DA:2312:U:P	2.30	0.52
22:DA:2554:U:H2'	22:DA:2555:U:C6	2.45	0.52
26:DE:83:VAL:CG1	26:DE:86:ALA:HA	2.40	0.52
35:DN:46:ARG:O	35:DN:50:PRO:HG2	2.10	0.52
36:DO:97:PHE:HB2	36:DO:103:VAL:HG11	1.92	0.52
39:DR:29:THR:O	39:DR:29:THR:HG22	2.09	0.52
46:DY:1:MET:HA	46:DY:4:LYS:HD3	1.92	0.52
50:D2:18:PHE:O	50:D2:21:ARG:N	2.43	0.52
51:D3:27:ALA:O	51:D3:28:ASN:HB2	2.10	0.52
1:AA:27:G:C5	1:AA:557:G:C2	2.97	0.51
1:AA:209:U:C4'	1:AA:210:C:OP2	2.58	0.51
1:AA:568:G:C4	1:AA:569:C:C5	2.97	0.51
1:AA:620:C:H1'	4:AD:132:ILE:HD11	1.91	0.51
1:AA:701:U:H4'	1:AA:702:A:C5'	2.40	0.51
1:AA:1349:A:C6	1:AA:1374:A:C8	2.98	0.51
1:AA:1353:G:C2	1:AA:1354:U:C6	2.99	0.51
2:AB:24:ASN:C	2:AB:24:ASN:OD1	2.53	0.51
5:AE:108:GLY:O	5:AE:109:GLY:C	2.52	0.51
22:BA:418:C:H2'	22:BA:419:U:O4'	2.10	0.51
22:BA:584:C:OP2	38:BQ:6:ARG:HG3	2.10	0.51
22:BA:784:G:H5"	24:BC:226:ASN:OD1	2.10	0.51
22:BA:1080:A:H2'	22:BA:1080:A:N3	2.25	0.51
22:BA:2498:C:P	57:BA:3688:HOH:O	2.64	0.51
22:BA:2821:A:OP2	25:BD:115:GLY:HA3	2.10	0.51
28:BG:149:ARG:CG	28:BG:149:ARG:HH11	2.22	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.91	0.51
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:14:ALA:O	40:BS:15:GLN:C	2.53	0.51
40:BS:41:LYS:HE3	48:B0:22:LEU:HD21	1.92	0.51
42:BU:18:ASP:O	42:BU:19:LYS:C	2.52	0.51
45:BX:43:GLU:O	45:BX:44:LYS:C	2.52	0.51
1:CA:19:A:C2	1:CA:20:U:C2	2.98	0.51
1:CA:505:G:H2'	1:CA:506:G:C8	2.45	0.51
1:CA:844:G:H2'	1:CA:844:G:N3	2.25	0.51
1:CA:1084:G:C5	1:CA:1085:U:C4	2.98	0.51
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.25	0.51
1:CA:1202:U:C2'	1:CA:1203:C:H5'	2.40	0.51
2:CB:206:ALA:O	2:CB:209:ALA:N	2.43	0.51
3:CC:81:GLY:O	3:CC:82:GLU:C	2.52	0.51
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.10	0.51
5:CE:149:SER:HB2	5:CE:152:MET:HG3	1.92	0.51
22:DA:2:G:C6	22:DA:3:U:C4	2.97	0.51
22:DA:158:U:H2'	22:DA:159:G:H5'	1.92	0.51
22:DA:270:A:C2	22:DA:369:U:H4'	2.45	0.51
22:DA:621:A:OP2	33:DL:99:ASN:ND2	2.41	0.51
22:DA:1551:A:N6	57:DA:3632:HOH:O	2.42	0.51
22:DA:1647:U:H3'	22:DA:1647:U:OP2	2.10	0.51
22:DA:2712:C:OP1	22:DA:2714:G:H4'	2.10	0.51
27:DF:73:SER:HB2	27:DF:81:GLN:HB3	1.92	0.51
30:DI:8:TYR:CD1	30:DI:8:TYR:O	2.63	0.51
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.39	0.51
45:DX:28:ARG:NH1	45:DX:30:LEU:HD21	2.25	0.51
45:DX:54:LYS:O	45:DX:57:ARG:N	2.43	0.51
1:AA:100:G:C5	1:AA:101:A:C5	2.99	0.51
1:AA:131:A:H2'	1:AA:132:C:H6	1.75	0.51
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.09	0.51
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.75	0.51
5:AE:82:GLN:H	5:AE:147:MET:CE	2.23	0.51
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.93	0.51
13:AM:114:LYS:CB	13:AM:115:PRO:CD	2.89	0.51
17:AQ:16:LYS:O	17:AQ:16:LYS:HE3	2.10	0.51
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.73	0.51
22:BA:623:C:H2'	22:BA:624:C:C6	2.45	0.51
22:BA:1301:A:C4	22:BA:1303:G:N7	2.79	0.51
22:BA:1392:A:C6	22:BA:1393:A:C6	2.97	0.51
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.10	0.51
22:BA:2056:G:N2	22:BA:2057:G:C4	2.79	0.51
22:BA:2180:U:C5'	22:BA:2181:U:OP2	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2681:C:OP2	25:BD:114:LYS:HE2	2.09	0.51
25:BD:146:ILE:HG22	25:BD:159:LYS:HE3	1.91	0.51
32:BK:10:VAL:HG21	32:BK:16:ALA:HB3	1.92	0.51
45:BX:8:THR:OG1	45:BX:10:LYS:HG3	2.10	0.51
1:CA:844:G:C8	1:CA:844:G:OP2	2.64	0.51
1:CA:1028:C:OP2	1:CA:1028:C:C6	2.63	0.51
2:CB:183:VAL:N	2:CB:197:ASP:OD1	2.43	0.51
9:CI:87:LEU:C	9:CI:89:GLU:H	2.18	0.51
11:CK:52:PHE:CZ	11:CK:62:ALA:HA	2.45	0.51
14:CN:64:CYS:SG	14:CN:80:SER:HB2	2.51	0.51
22:DA:30:G:C5	22:DA:31:C:C4	2.99	0.51
22:DA:200:U:C4	22:DA:248:G:C2	2.98	0.51
22:DA:214:G:H1'	22:DA:217:A:H5'	1.92	0.51
22:DA:228:C:H5"	22:DA:229:C:C6	2.46	0.51
22:DA:792:A:N3	22:DA:2072:C:O2'	2.32	0.51
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.41	0.51
22:DA:2199:A:C5	22:DA:2225:A:C6	2.98	0.51
22:DA:2518:A:P	57:DA:3533:HOH:O	2.67	0.51
28:DG:113:VAL:HG11	28:DG:151:TYR:CE2	2.46	0.51
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.92	0.51
34:DM:59:ARG:O	34:DM:59:ARG:HD3	2.10	0.51
41:DT:38:ALA:O	41:DT:39:THR:HB	2.11	0.51
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.11	0.51
50:D2:44:VAL:O	50:D2:45:SER:CB	2.58	0.51
1:AA:102:G:C2	1:AA:103:U:C5	2.99	0.51
1:AA:111:G:H5"	1:AA:112:G:OP2	2.10	0.51
1:AA:502:A:C2	1:AA:544:G:C2	2.98	0.51
1:AA:972:C:H4'	10:AJ:59:LYS:HE3	1.92	0.51
1:AA:999:C:H2'	1:AA:1000:A:C8	2.45	0.51
1:AA:1538:C:C2'	1:AA:1539:C:H5'	2.41	0.51
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.42	0.51
11:AK:55:SER:O	11:AK:56:ARG:C	2.53	0.51
20:AT:5:LYS:O	20:AT:6:SER:C	2.52	0.51
21:AU:14:VAL:HG13	21:AU:16:LEU:HG	1.92	0.51
22:BA:340:A:H2'	22:BA:341:C:H5'	1.92	0.51
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.58	0.51
22:BA:1423:G:C2	22:BA:1424:G:C4	2.98	0.51
22:BA:1504:A:C2	22:BA:1505:A:C4	2.98	0.51
22:BA:1791:A:OP2	57:BA:3787:HOH:O	2.19	0.51
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.40	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:73:C:C2	1:CA:74:A:C8	2.98	0.51
1:CA:476:U:O2'	1:CA:477:C:H5'	2.10	0.51
1:CA:528:C:H2'	1:CA:528:C:O2	2.11	0.51
1:CA:878:A:C6	1:CA:879:C:C4	2.99	0.51
1:CA:1323:G:O2'	1:CA:1362:A:N3	2.40	0.51
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.91	0.51
2:CB:81:LYS:HG2	2:CB:85:LEU:HD23	1.93	0.51
4:CD:161:LEU:HD23	4:CD:162:ALA:N	2.24	0.51
5:CE:148:ASN:OD1	8:CH:96:MET:HE1	2.09	0.51
16:CP:10:GLY:O	16:CP:11:ALA:HB2	2.11	0.51
22:DA:570:G:C4	22:DA:2030:A:N7	2.79	0.51
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.45	0.51
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.45	0.51
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.43	0.51
22:DA:2013:A:N6	22:DA:2014:A:N1	2.58	0.51
22:DA:2061:G:H5"	22:DA:2503:A:C2	2.46	0.51
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.46	0.51
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.41	0.51
22:DA:2148:G:C2	22:DA:2149:U:C4	2.99	0.51
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.43	0.51
23:DB:14:U:O2	23:DB:14:U:O2'	2.27	0.51
33:DL:55:MET:SD	33:DL:59:ARG:NH2	2.84	0.51
33:DL:82:LEU:HD23	33:DL:82:LEU:C	2.35	0.51
36:DO:35:ILE:HG23	36:DO:35:ILE:O	2.11	0.51
1:AA:375:U:OP1	16:AP:70:ARG:NH1	2.44	0.51
1:AA:429:U:H1'	1:AA:430:A:H5"	1.91	0.51
1:AA:616:G:N2	1:AA:617:G:C4	2.79	0.51
1:AA:859:G:H2'	1:AA:860:A:C8	2.45	0.51
1:AA:1081:A:H5'	5:AE:23:LYS:HG3	1.92	0.51
1:AA:1197:A:OP1	1:AA:1198:G:OP2	2.28	0.51
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.45	0.51
3:AC:70:THR:OG1	3:AC:71:ALA:N	2.43	0.51
5:AE:151:GLU:C	5:AE:153:VAL:H	2.19	0.51
6:AF:10:VAL:HG12	6:AF:11:HIS:N	2.25	0.51
22:BA:841:G:H2'	22:BA:842:U:C6	2.45	0.51
22:BA:1358:G:C8	22:BA:1371:G:O6	2.63	0.51
22:BA:1936:A:N3	22:BA:1940:U:O2	2.43	0.51
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.46	0.51
22:BA:2298:A:C4	22:BA:2321:U:H5	2.29	0.51
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.45	0.51
22:BA:2451:A:C2	55:BA:3001:VIF:C23	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.09	0.51
26:BE:147:LEU:CD2	26:BE:180:LEU:HD23	2.39	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
30:BI:43:ASN:OD1	30:BI:46:THR:HB	2.10	0.51
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.75	0.51
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.58	0.51
39:BR:5:PHE:HA	39:BR:39:LEU:HD12	1.92	0.51
1:CA:673:A:H2'	1:CA:674:G:C8	2.45	0.51
1:CA:987:G:N2	1:CA:1218:C:O2	2.44	0.51
1:CA:1434:A:N6	1:CA:1435:G:C6	2.79	0.51
1:CA:1450:U:O2'	1:CA:1451:U:H2'	2.11	0.51
2:CB:50:PHE:HB2	2:CB:213:TYR:OH	2.10	0.51
2:CB:102:THR:CG2	2:CB:175:GLU:HG2	2.40	0.51
3:CC:77:ILE:HA	3:CC:84:VAL:CG2	2.39	0.51
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.11	0.51
22:DA:579:G:N2	22:DA:1262:A:C4	2.78	0.51
22:DA:756:A:H2'	22:DA:757:G:O4'	2.10	0.51
22:DA:1316:U:C2	22:DA:1337:G:N2	2.78	0.51
22:DA:1693:U:O4	22:DA:1976:U:O2'	2.12	0.51
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.92	0.51
23:DB:115:A:H2'	23:DB:116:G:C8	2.45	0.51
24:DC:35:GLU:O	24:DC:36:LYS:O	2.29	0.51
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	1.92	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
1:AA:596:A:N6	1:AA:645:G:C6	2.79	0.51
1:AA:1150:A:O2'	10:AJ:43:PRO:HD3	2.10	0.51
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.25	0.51
2:AB:91:PHE:O	2:AB:150:GLY:HA3	2.10	0.51
5:AE:77:ASN:O	5:AE:78:ASN:CB	2.59	0.51
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.11	0.51
15:AO:46:HIS:C	15:AO:48:LYS:H	2.18	0.51
22:BA:45:G:H5'	22:BA:46:G:OP1	2.10	0.51
22:BA:229:C:H2'	22:BA:230:G:O5'	2.11	0.51
22:BA:1107:G:C6	22:BA:1108:U:C4	2.98	0.51
22:BA:1275:A:C8	35:BN:16:HIS:ND1	2.79	0.51
22:BA:2077:A:O2'	22:BA:2078:C:H5'	2.10	0.51
22:BA:2486:C:C2'	22:BA:2487:G:O5'	2.58	0.51
36:BO:56:LYS:O	36:BO:57:ALA:C	2.54	0.51
46:BY:45:GLN:O	46:BY:46:VAL:HG23	2.10	0.51
51:B3:31:HIS:CD2	51:B3:31:HIS:C	2.88	0.51
1:CA:31:G:O4'	1:CA:306:A:C2	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:756:C:C2'	1:CA:757:U:H5'	2.41	0.51
1:CA:1130:A:N9	1:CA:1146:A:C2	2.78	0.51
2:CB:126:PHE:CD2	2:CB:126:PHE:N	2.78	0.51
2:CB:225:ARG:O	2:CB:226:SER:HB2	2.11	0.51
12:CL:90:LEU:CB	12:CL:93:VAL:CG2	2.89	0.51
22:DA:571:U:C4	22:DA:2030:A:C6	2.99	0.51
22:DA:675:A:C6	22:DA:676:A:C6	2.99	0.51
22:DA:706:A:C2	22:DA:707:G:H1'	2.45	0.51
22:DA:931:U:H4'	22:DA:932:U:OP2	2.10	0.51
22:DA:1082:U:OP1	30:DI:124:ALA:HB2	2.10	0.51
22:DA:1376:C:H3'	57:DA:3398:HOH:O	2.10	0.51
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.64	0.51
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.11	0.51
22:DA:1869:G:N2	22:DA:1871:A:O2'	2.43	0.51
22:DA:1965:C:OP1	22:DA:1966:A:O2'	2.28	0.51
22:DA:2058:A:N6	22:DA:2059:A:N6	2.58	0.51
26:DE:181:ILE:HG23	33:DL:2:ARG:CZ	2.41	0.51
27:DF:134:GLU:HG3	27:DF:136:ILE:HD12	1.91	0.51
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.26	0.51
30:DI:76:ALA:HB3	30:DI:132:THR:HG21	1.91	0.51
31:DJ:15:TRP:O	31:DJ:137:PRO:HA	2.10	0.51
37:DP:113:ARG:O	37:DP:114:LEU:HD23	2.11	0.51
1:AA:321:A:N7	1:AA:328:C:O2'	2.34	0.51
1:AA:339:C:H2'	1:AA:340:U:H6	1.75	0.51
1:AA:682:G:N2	1:AA:709:U:C2	2.78	0.51
1:AA:832:G:C4	1:AA:833:G:C8	2.98	0.51
1:AA:1489:G:C6	1:AA:1490:U:C4	2.98	0.51
2:AB:23:TRP:HB3	2:AB:39:HIS:CE1	2.45	0.51
2:AB:72:THR:O	2:AB:73:LYS:CB	2.58	0.51
4:AD:174:ASP:OD2	4:AD:177:LYS:N	2.37	0.51
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.35	0.51
14:AN:46:LEU:O	14:AN:47:LYS:C	2.52	0.51
15:AO:43:PHE:CE1	15:AO:56:LEU:HD22	2.46	0.51
22:BA:164:C:C2'	22:BA:165:A:H5'	2.41	0.51
22:BA:2056:G:H2'	22:BA:2056:G:N3	2.25	0.51
22:BA:2371:G:C2	22:BA:2372:U:C6	2.99	0.51
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.10	0.51
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.68	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:100:HIS:CG	36:BO:101:GLY:N	2.77	0.51
1:CA:17:U:C2	1:CA:18:C:C6	2.99	0.51
1:CA:304:U:H2'	1:CA:305:G:C8	2.46	0.51
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.73	0.51
1:CA:1491:G:H2'	1:CA:1492:A:C8	2.45	0.51
2:CB:57:LEU:HD13	2:CB:58:ASN:N	2.26	0.51
4:CD:48:LEU:CD2	4:CD:52:GLY:C	2.84	0.51
10:CJ:27:GLU:O	10:CJ:27:GLU:HG2	2.09	0.51
11:CK:26:SER:OG	11:CK:29:ASN:O	2.17	0.51
17:CQ:69:LYS:O	17:CQ:70:THR:CB	2.58	0.51
20:CT:67:ILE:O	20:CT:68:HIS:O	2.29	0.51
22:DA:155:A:H2'	22:DA:156:A:C8	2.45	0.51
22:DA:1677:A:H5"	57:DA:3436:HOH:O	2.11	0.51
22:DA:1914:C:C5	22:DA:1915:U:C2	2.99	0.51
22:DA:1936:A:H2	22:DA:1943:U:H3	1.56	0.51
22:DA:2354:C:O2'	44:DW:35:SER:HA	2.10	0.51
35:DN:72:ASP:HB3	35:DN:75:ILE:HB	1.92	0.51
41:DT:14:PRO:HA	41:DT:32:LEU:HB3	1.93	0.51
1:AA:220:G:C5	1:AA:221:C:C5	2.99	0.51
1:AA:1539:C:H5"	21:AU:18:ARG:HG3	1.93	0.51
2:AB:21:ARG:NH1	2:AB:21:ARG:HA	2.25	0.51
2:AB:94:HIS:O	2:AB:95:ARG:C	2.53	0.51
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.11	0.51
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.10	0.51
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE2	2.45	0.51
11:AK:36:ASP:OD1	11:AK:40:ASN:HB2	2.10	0.51
11:AK:125:LYS:HG2	11:AK:126:LYS:N	2.26	0.51
22:BA:1846:G:C2	22:BA:1895:C:C2	2.98	0.51
22:BA:2380:C:C2	22:BA:2381:A:C8	2.98	0.51
22:BA:2547:A:H5"	32:BK:29:HIS:NE2	2.25	0.51
22:BA:2708:G:H1'	35:BN:71:ARG:CZ	2.41	0.51
22:BA:2737:G:C6	22:BA:2738:A:C6	2.99	0.51
26:BE:171:ASP:OD1	26:BE:172:ALA:N	2.43	0.51
33:BL:142:ILE:CG2	33:BL:143:GLU:N	2.73	0.51
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.45	0.51
53:B5:64:SER:O	53:B5:65:LEU:CB	2.58	0.51
1:CA:769:G:O2'	1:CA:770:C:H5'	2.11	0.51
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.93	0.51
2:CB:119:THR:O	2:CB:120:GLN:HB3	2.10	0.51
8:CH:5:ASP:OD1	8:CH:81:PRO:HD3	2.11	0.51
22:DA:478:A:C6	22:DA:480:A:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:868:U:C4	22:DA:869:G:N7	2.79	0.51
22:DA:1097:U:O2	30:DI:9:VAL:HG11	2.11	0.51
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.40	0.51
22:DA:2142:A:C6	22:DA:2143:C:C4	2.98	0.51
22:DA:2478:A:C8	22:DA:2529:G:C5	2.99	0.51
22:DA:2794:C:H2'	22:DA:2795:C:O4'	2.11	0.51
31:DJ:9:GLU:O	31:DJ:10:THR:CG2	2.59	0.51
36:DO:33:ARG:HG2	36:DO:34:HIS:CD2	2.45	0.51
52:D4:11:CYS:SG	52:D4:12:ARG:N	2.83	0.51
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.11	0.51
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.36	0.51
3:AC:118:ASP:HA	3:AC:121:THR:HB	1.93	0.51
4:AD:98:LEU:O	4:AD:99:ASP:C	2.53	0.51
6:AF:67:PRO:O	6:AF:69:GLU:N	2.44	0.51
7:AG:144:MET:HA	7:AG:144:MET:CE	2.41	0.51
9:AI:103:PHE:N	9:AI:103:PHE:CD1	2.77	0.51
11:AK:21:ALA:HA	11:AK:34:ILE:HD13	1.93	0.51
17:AQ:42:THR:O	17:AQ:42:THR:HG22	2.09	0.51
22:BA:479:A:N3	22:BA:481:G:H5"	2.26	0.51
22:BA:841:G:C2	22:BA:938:G:C2	2.99	0.51
22:BA:998:C:OP2	38:BQ:58:ARG:NH2	2.41	0.51
22:BA:1759:A:C2	22:BA:1760:C:C2	2.99	0.51
22:BA:1801:A:C8	22:BA:2203:U:H2'	2.46	0.51
22:BA:2275:C:O2	34:BM:84:LYS:HD2	2.10	0.51
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.29	0.51
22:BA:2510:C:C2'	22:BA:2511:U:H5'	2.41	0.51
25:BD:103:ASP:O	25:BD:104:VAL:HG22	2.11	0.51
25:BD:163:GLY:O	25:BD:164:GLN:C	2.53	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.74	0.51
32:BK:91:SER:O	32:BK:91:SER:OG	2.28	0.51
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.74	0.51
39:BR:25:LEU:N	39:BR:94:THR:CG2	2.74	0.51
39:BR:66:HIS:CE1	39:BR:94:THR:HB	2.46	0.51
1:CA:8:A:O4'	5:CE:107:ALA:C	2.54	0.51
1:CA:56:U:H2'	1:CA:57:G:C8	2.46	0.51
1:CA:131:A:O2'	1:CA:262:A:N3	2.37	0.51
1:CA:258:G:C2	1:CA:269:C:O2	2.64	0.51
1:CA:439:U:H5"	4:CD:121:LYS:HD2	1.93	0.51
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1540:U:O3'	21:CU:18:ARG:NE	2.43	0.51
20:CT:57:ILE:O	20:CT:61:GLN:HG2	2.11	0.51
22:DA:404:A:C1'	22:DA:405:U:OP2	2.59	0.51
22:DA:587:C:OP2	33:DL:21:ARG:NH1	2.44	0.51
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.25	0.51
22:DA:769:U:N3	22:DA:770:G:N7	2.59	0.51
22:DA:1483:G:C6	22:DA:1484:U:C4	2.98	0.51
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.93	0.51
22:DA:2282:G:C2	22:DA:2425:A:C6	2.98	0.51
34:DM:11:LYS:HE3	34:DM:87:GLY:O	2.11	0.51
35:DN:103:ARG:NE	35:DN:110:MET:HE3	2.25	0.51
37:DP:51:ARG:O	37:DP:57:SER:HA	2.11	0.51
1:AA:79:G:N2	1:AA:91:U:C4	2.78	0.51
1:AA:901:A:N7	1:AA:902:G:H1'	2.26	0.51
1:AA:1306:A:C4	1:AA:1307:U:C6	2.99	0.51
6:AF:16:GLU:OE2	4:CD:188:ARG:NH1	2.44	0.51
8:AH:49:PHE:CD1	8:AH:49:PHE:C	2.89	0.51
16:AP:48:GLU:HG3	16:AP:49:GLY:N	2.26	0.51
20:AT:3:ASN:O	20:AT:5:LYS:N	2.43	0.51
21:AU:19:PHE:O	21:AU:22:SER:HB3	2.11	0.51
22:BA:545:U:H3'	22:BA:546:U:H4'	1.93	0.51
22:BA:582:A:N1	22:BA:1259:G:C6	2.79	0.51
22:BA:1333:G:C2	22:BA:1334:G:C8	2.98	0.51
22:BA:2697:G:C5	22:BA:2698:U:C5	2.99	0.51
25:BD:2:ILE:HD13	25:BD:90:PHE:CZ	2.46	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.93	0.51
40:BS:66:ILE:HA	40:BS:69:LEU:HD23	1.93	0.51
46:BY:9:LYS:O	46:BY:11:VAL:N	2.43	0.51
1:CA:1104:G:H2'	1:CA:1105:A:O4'	2.10	0.51
4:CD:9:LEU:O	4:CD:10:LYS:C	2.54	0.51
4:CD:64:ILE:HG22	4:CD:65:TYR:CD1	2.46	0.51
4:CD:150:LYS:O	4:CD:151:LYS:HG2	2.11	0.51
13:CM:54:ASP:HA	13:CM:57:ARG:HB3	1.93	0.51
14:CN:16:LEU:HB3	14:CN:55:SER:HA	1.93	0.51
18:CR:34:THR:CG2	18:CR:38:LYS:HB2	2.41	0.51
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.75	0.51
22:DA:851:C:O2'	47:DZ:43:ALA:O	2.28	0.51
22:DA:1439:A:N7	22:DA:1552:A:C2	2.79	0.51
22:DA:1651:G:C2	22:DA:2007:U:O2	2.63	0.51
37:DP:32:VAL:O	37:DP:38:LYS:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:37:THR:OG1	40:DS:48:LYS:NZ	2.32	0.51
1:AA:34:C:O2'	1:AA:35:G:H5'	2.11	0.51
1:AA:71:A:O2'	1:AA:72:A:OP2	2.24	0.51
1:AA:258:G:C6	1:AA:259:G:C5	2.99	0.51
1:AA:451:A:C8	1:AA:452:A:C2	2.99	0.51
1:AA:577:G:C1'	1:AA:816:A:H2'	2.41	0.51
1:AA:914:A:C5	1:AA:915:A:N7	2.79	0.51
1:AA:960:U:H2'	1:AA:1225:A:H62	1.76	0.51
2:AB:87:CYS:HB2	2:AB:89:GLN:NE2	2.25	0.51
3:AC:142:MET:HE1	3:AC:148:GLY:HA2	1.91	0.51
4:AD:90:LEU:O	4:AD:90:LEU:HD12	2.10	0.51
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.11	0.51
15:AO:39:LEU:HD23	15:AO:56:LEU:HD13	1.92	0.51
22:BA:223:A:C6	22:BA:422:A:C5	2.99	0.51
22:BA:388:G:N7	22:BA:390:U:H2'	2.26	0.51
22:BA:686:U:H2'	22:BA:788:A:N1	2.26	0.51
22:BA:817:C:P	57:BA:3583:HOH:O	2.68	0.51
22:BA:1079:C:C5	22:BA:1088:A:C2	2.99	0.51
22:BA:1185:G:H5"	22:BA:1186:G:P	2.50	0.51
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.41	0.51
22:BA:2198:A:C4	29:BH:29:PHE:HB2	2.46	0.51
22:BA:2708:G:O2'	35:BN:71:ARG:HD3	2.11	0.51
27:BF:108:VAL:HG13	27:BF:114:PHE:CE2	2.46	0.51
34:BM:41:LEU:O	34:BM:93:VAL:HA	2.11	0.51
38:BQ:66:ASN:CG	38:BQ:76:TYR:HB2	2.36	0.51
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.89	0.51
42:BU:97:LYS:O	42:BU:98:SER:CB	2.59	0.51
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.41	0.51
1:CA:724:G:C2	1:CA:725:G:C8	2.98	0.51
1:CA:1084:G:OP1	1:CA:1086:U:C6	2.64	0.51
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.46	0.51
5:CE:23:LYS:O	5:CE:24:THR:CB	2.59	0.51
5:CE:150:PRO:O	5:CE:153:VAL:HG22	2.11	0.51
6:CF:70:VAL:HG23	6:CF:71:ILE:N	2.26	0.51
10:CJ:59:LYS:O	10:CJ:62:ARG:HD2	2.11	0.51
12:CL:75:GLN:O	12:CL:76:GLU:C	2.53	0.51
20:CT:70:ASN:O	20:CT:74:ARG:N	2.43	0.51
22:DA:582:A:OP1	38:DQ:14:HIS:ND1	2.43	0.51
22:DA:686:U:H6	22:DA:788:A:N1	2.09	0.51
22:DA:752:A:N1	22:DA:1781:U:H1'	2.26	0.51
22:DA:818:G:O2'	22:DA:819:A:O4'	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1027:A:C5	22:DA:1126:A:C2	2.99	0.51
22:DA:1073:A:H2'	22:DA:1074:G:H5'	1.93	0.51
22:DA:1323:C:N4	22:DA:1324:G:O6	2.44	0.51
22:DA:1737:G:C6	22:DA:1738:G:N1	2.79	0.51
22:DA:2056:G:OP1	57:DA:3667:HOH:O	2.19	0.51
24:DC:260:ASN:OD1	24:DC:263:THR:N	2.42	0.51
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.78	0.51
27:DF:117:LEU:O	27:DF:177:PHE:HA	2.11	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.59	0.51
32:DK:2:ILE:HB	32:DK:33:ALA:O	2.11	0.51
39:DR:3:ALA:HB2	39:DR:101:ILE:HG23	1.93	0.51
1:AA:668:G:O2'	1:AA:669:G:H5'	2.11	0.50
1:AA:1222:G:C6	1:AA:1223:C:C4	2.99	0.50
2:AB:203:ASN:OD1	2:AB:204:ASP:N	2.44	0.50
7:AG:95:ARG:O	7:AG:98:ALA:N	2.44	0.50
9:AI:16:ALA:O	9:AI:67:VAL:HA	2.11	0.50
10:AJ:48:ARG:HD3	14:AN:101:TRP:CH2	2.46	0.50
12:AL:110:ARG:NH2	12:AL:117:TYR:CE2	2.79	0.50
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.91	0.50
22:BA:194:G:N7	57:BA:3763:HOH:O	2.35	0.50
22:BA:211:C:O2'	22:BA:212:G:H5'	2.11	0.50
22:BA:528:A:H3'	22:BA:528:A:H8	1.73	0.50
22:BA:1394:U:P	57:BA:3407:HOH:O	2.69	0.50
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.11	0.50
22:BA:1687:G:C2	22:BA:1688:U:C4	2.98	0.50
22:BA:1832:C:N4	22:BA:1833:C:C4	2.79	0.50
22:BA:2004:G:OP1	57:BA:3804:HOH:O	2.19	0.50
22:BA:2574:G:O2'	22:BA:2575:C:H5'	2.11	0.50
22:BA:2748:A:C2	22:BA:2757:A:C4	2.99	0.50
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.92	0.50
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.42	0.50
41:BT:87:LEU:O	41:BT:88:LYS:C	2.54	0.50
1:CA:425:G:H2'	1:CA:426:U:O4'	2.11	0.50
1:CA:833:G:C4	1:CA:834:U:C6	3.00	0.50
1:CA:978:A:O2'	1:CA:1322:C:H5	1.94	0.50
1:CA:1160:G:O2'	1:CA:1161:C:P	2.70	0.50
3:CC:97:VAL:HB	3:CC:98:PRO:HD2	1.93	0.50
8:CH:11:LEU:HD22	8:CH:75:ILE:HD11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:31:ILE:O	11:CK:31:ILE:HG12	2.11	0.50
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.41	0.50
22:DA:483:A:C8	22:DA:484:C:C5	2.99	0.50
22:DA:1636:U:H2'	22:DA:1637:A:C8	2.45	0.50
22:DA:1682:G:N2	22:DA:1757:A:O4'	2.44	0.50
22:DA:1739:A:H2'	22:DA:1740:G:O5'	2.11	0.50
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.45	0.50
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.11	0.50
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.11	0.50
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.93	0.50
26:DE:170:ARG:HG3	26:DE:174:GLY:O	2.10	0.50
26:DE:170:ARG:HG3	26:DE:174:GLY:C	2.35	0.50
28:DG:89:LEU:HD12	28:DG:162:VAL:HG22	1.93	0.50
38:DQ:47:TYR:C	38:DQ:47:TYR:CD2	2.89	0.50
38:DQ:65:ILE:HD11	38:DQ:95:LEU:HB2	1.93	0.50
39:DR:46:GLU:C	39:DR:46:GLU:CD	2.79	0.50
39:DR:49:ILE:O	39:DR:49:ILE:HG13	2.11	0.50
1:AA:93:U:H2'	1:AA:94:G:H5"	1.93	0.50
1:AA:652:U:O2'	1:AA:653:U:P	2.68	0.50
1:AA:824:G:C2	1:AA:877:G:C2	3.00	0.50
1:AA:900:A:N1	1:AA:901:A:C2	2.78	0.50
2:AB:216:ALA:O	2:AB:220:THR:HG22	2.12	0.50
4:AD:98:LEU:HD23	4:AD:118:VAL:CG1	2.41	0.50
4:AD:145:ILE:N	4:AD:145:ILE:HD12	2.25	0.50
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.41	0.50
6:AF:8:PHE:HA	6:AF:87:SER:HA	1.93	0.50
17:AQ:69:LYS:O	17:AQ:70:THR:OG1	2.28	0.50
21:AU:4:ILE:N	21:AU:20:LYS:CE	2.75	0.50
22:BA:611:C:C2'	22:BA:612:G:H5'	2.41	0.50
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.46	0.50
22:BA:1421:G:C2	22:BA:1422:G:N7	2.79	0.50
22:BA:2016:U:H2'	22:BA:2017:U:C6	2.46	0.50
22:BA:2186:G:H2'	22:BA:2187:U:C6	2.46	0.50
22:BA:2496:C:H2'	22:BA:2497:A:O5'	2.11	0.50
30:BI:43:ASN:HB3	30:BI:47:ASP:OD1	2.11	0.50
30:BI:78:VAL:HG23	30:BI:79:LEU:HG	1.92	0.50
32:BK:2:ILE:HG23	32:BK:6:THR:HG21	1.93	0.50
40:BS:59:GLU:HG3	40:BS:66:ILE:HG13	1.92	0.50
47:BZ:37:GLU:O	47:BZ:38:ARG:HD3	2.12	0.50
49:B1:26:ASN:OD1	49:B1:28:ARG:HB2	2.10	0.50
1:CA:68:G:C5	1:CA:69:G:H1'	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:174:A:C4	1:CA:175:C:C6	2.99	0.50
1:CA:252:U:H5'	1:CA:253:A:OP2	2.10	0.50
1:CA:940:C:N4	1:CA:941:G:O6	2.45	0.50
1:CA:1505:G:H4'	1:CA:1506:U:H5"	1.93	0.50
1:CA:1521:C:C4	1:CA:1522:U:C5	3.00	0.50
9:CI:12:ARG:HD2	9:CI:107:ASP:HB3	1.92	0.50
13:CM:81:MET:O	13:CM:83:LEU:N	2.45	0.50
14:CN:53:ARG:C	14:CN:55:SER:H	2.19	0.50
19:CS:36:ARG:HB3	19:CS:72:GLY:CA	2.41	0.50
22:DA:299:A:N3	22:DA:319:G:O2'	2.38	0.50
22:DA:699:A:C2'	22:DA:700:G:H5'	2.40	0.50
22:DA:1062:G:C2	22:DA:1063:G:N1	2.80	0.50
22:DA:1063:G:O2'	30:DI:89:GLY:HA3	2.12	0.50
22:DA:1799:G:N2	22:DA:1818:U:O2'	2.42	0.50
22:DA:2341:G:C2	22:DA:2342:C:C2	2.99	0.50
22:DA:2351:G:H1'	22:DA:2367:G:N2	2.26	0.50
22:DA:2822:G:H2'	22:DA:2823:A:H5"	1.93	0.50
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.36	0.50
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.92	0.50
33:DL:79:LEU:HB3	33:DL:114:GLY:O	2.11	0.50
43:DV:9:ARG:HG3	43:DV:41:GLU:HB3	1.93	0.50
49:D1:47:VAL:HG12	49:D1:48:ILE:N	2.26	0.50
1:AA:74:A:C2	1:AA:97:G:C2	2.99	0.50
1:AA:89:U:O2'	1:AA:90:C:C5'	2.59	0.50
1:AA:771:G:O2'	1:AA:772:U:H5'	2.10	0.50
1:AA:1157:A:N7	1:AA:1180:A:N6	2.60	0.50
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.47	0.50
5:AE:15:LEU:HB3	5:AE:37:THR:HG22	1.93	0.50
6:AF:74:LEU:HD23	6:AF:78:PHE:CE1	2.46	0.50
7:AG:17:LYS:O	7:AG:18:PHE:CD1	2.64	0.50
9:AI:118:LEU:HA	9:AI:125:PRO:HD3	1.94	0.50
10:AJ:81:GLU:HA	10:AJ:84:VAL:HG12	1.93	0.50
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.11	0.50
16:AP:56:ARG:O	16:AP:59:HIS:HB3	2.12	0.50
19:AS:15:LEU:HD13	19:AS:33:THR:HG21	1.94	0.50
22:BA:182:A:H2'	22:BA:183:C:C6	2.46	0.50
22:BA:657:U:H2'	22:BA:658:U:C6	2.47	0.50
22:BA:864:G:C6	22:BA:865:C:N4	2.79	0.50
22:BA:1061:U:C4	30:BI:10:LYS:O	2.64	0.50
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.11	0.50
22:BA:2025:C:H2'	22:BA:2026:U:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:162:VAL:CG1	24:BC:163:GLN:N	2.75	0.50
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.93	0.50
41:BT:17:SER:O	41:BT:18:GLU:C	2.54	0.50
42:BU:42:VAL:O	42:BU:60:GLU:HA	2.11	0.50
43:BV:15:GLY:O	43:BV:19:ARG:HG3	2.11	0.50
1:CA:211:G:O2'	1:CA:212:G:H4'	2.12	0.50
1:CA:321:A:C8	1:CA:328:C:C2	2.99	0.50
1:CA:577:G:N3	1:CA:578:C:C6	2.80	0.50
1:CA:701:U:H4'	1:CA:703:G:C8	2.46	0.50
1:CA:711:G:O2'	1:CA:712:A:H5'	2.11	0.50
1:CA:957:U:O2	1:CA:959:A:H8	1.94	0.50
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.93	0.50
2:CB:18:HIS:CD2	2:CB:203:ASN:ND2	2.80	0.50
3:CC:47:LEU:HB3	3:CC:50:ALA:HB3	1.93	0.50
4:CD:116:GLN:NE2	4:CD:120:HIS:CE1	2.80	0.50
4:CD:145:ILE:CG2	4:CD:150:LYS:HA	2.41	0.50
11:CK:82:LEU:HD23	11:CK:82:LEU:O	2.11	0.50
22:DA:335:C:H6	22:DA:335:C:O5'	1.94	0.50
22:DA:447:A:H5'	22:DA:449:A:C4	2.46	0.50
22:DA:453:A:H4'	22:DA:472:A:N6	2.26	0.50
22:DA:690:G:H1'	22:DA:779:U:O3'	2.12	0.50
22:DA:1417:C:N4	22:DA:1418:G:C6	2.79	0.50
22:DA:1866:A:C8	22:DA:1867:G:C8	2.99	0.50
22:DA:2080:A:OP1	45:DX:20:HIS:HB2	2.11	0.50
22:DA:2244:U:C5	22:DA:2245:U:C5	2.98	0.50
22:DA:2382:G:OP1	22:DA:2382:G:H3'	2.11	0.50
22:DA:2767:C:C2'	22:DA:2768:U:H5'	2.41	0.50
22:DA:2823:A:C5	22:DA:2824:C:C5	3.00	0.50
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.46	0.50
24:DC:147:LYS:HG3	24:DC:150:LYS:HD2	1.93	0.50
26:DE:171:ASP:CG	26:DE:172:ALA:N	2.69	0.50
27:DF:58:ALA:HB2	27:DF:65:PRO:HD3	1.93	0.50
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.50
31:DJ:56:VAL:HB	31:DJ:124:VAL:HG12	1.94	0.50
43:DV:63:ILE:HD12	43:DV:72:VAL:HG21	1.93	0.50
1:AA:620:C:H1'	4:AD:132:ILE:CD1	2.41	0.50
1:AA:880:C:O2'	1:AA:881:G:H5'	2.11	0.50
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.40	0.50
1:AA:1353:G:C2	1:AA:1354:U:C5	3.00	0.50
4:AD:29:ASP:C	4:AD:30:THR:O	2.47	0.50
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:430:A:H5"	22:BA:431:U:OP2	2.12	0.50
22:BA:1107:G:C5	22:BA:1108:U:C5	2.99	0.50
22:BA:1258:U:N3	22:BA:1259:G:N7	2.59	0.50
22:BA:2313:C:H5"	27:BF:88:LYS:HD3	1.94	0.50
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.46	0.50
25:BD:136:ASN:ND2	25:BD:140:HIS:CD2	2.80	0.50
25:BD:166:GLY:O	25:BD:167:ASN:HB3	2.11	0.50
28:BG:12:PRO:HD2	28:BG:15:VAL:HG21	1.93	0.50
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.92	0.50
39:BR:59:ILE:HG23	39:BR:101:ILE:CD1	2.41	0.50
42:BU:88:GLU:O	42:BU:89:ASP:HB3	2.12	0.50
43:BV:23:ALA:O	43:BV:25:LYS:N	2.44	0.50
1:CA:18:C:N3	1:CA:19:A:N7	2.59	0.50
1:CA:1089:G:C4	1:CA:1090:U:C6	2.99	0.50
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.46	0.50
4:CD:34:ILE:O	4:CD:35:GLU:CB	2.59	0.50
7:CG:75:VAL:HG11	7:CG:144:MET:HG3	1.94	0.50
9:CI:57:MET:O	9:CI:59:GLU:N	2.45	0.50
11:CK:112:ASP:HB3	21:CU:20:LYS:HE3	1.93	0.50
14:CN:10:GLU:O	14:CN:11:VAL:C	2.54	0.50
18:CR:34:THR:HG22	18:CR:38:LYS:HB2	1.93	0.50
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.90	0.50
21:CU:4:ILE:O	21:CU:4:ILE:HG22	2.11	0.50
22:DA:310:A:C5	22:DA:330:A:C6	2.99	0.50
22:DA:396:G:C1'	45:DX:29:PHE:HB3	2.42	0.50
22:DA:591:U:C2	22:DA:592:A:C8	2.99	0.50
22:DA:636:G:C6	33:DL:111:ILE:HD11	2.46	0.50
22:DA:1127:A:H2'	22:DA:1128:G:H5"	1.94	0.50
22:DA:2466:C:OP1	52:D4:4:ARG:HB2	2.12	0.50
24:DC:31:ALA:HB3	24:DC:32:PRO:CD	2.41	0.50
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.26	0.50
28:DG:115:HIS:HE1	28:DG:144:VAL:HG13	1.77	0.50
39:DR:1:MET:HE1	39:DR:101:ILE:HB	1.93	0.50
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.11	0.50
47:DZ:6:LYS:HB2	47:DZ:58:GLU:HG3	1.93	0.50
49:D1:15:ALA:C	49:D1:17:THR:H	2.19	0.50
1:AA:116:A:C4	1:AA:117:G:C8	3.00	0.50
1:AA:1446:A:N6	1:AA:1447:A:H62	2.09	0.50
2:AB:176:ALA:O	2:AB:179:LEU:N	2.45	0.50
4:AD:30:THR:O	4:AD:31:LYS:HE2	2.11	0.50
4:AD:101:VAL:O	4:AD:101:VAL:HG12	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:81:LEU:HD12	5:AE:147:MET:SD	2.52	0.50
6:AF:99:ALA:O	6:AF:100:SER:CB	2.59	0.50
7:AG:56:LYS:O	7:AG:57:SER:HB3	2.11	0.50
9:AI:39:PHE:HA	9:AI:42:GLU:CD	2.37	0.50
14:AN:75:ARG:O	14:AN:76:LYS:C	2.55	0.50
22:BA:368:A:N6	22:BA:369:U:O4	2.45	0.50
22:BA:468:G:O6	22:BA:469:G:C2	2.64	0.50
22:BA:495:G:H1'	40:BS:57:ASN:ND2	2.26	0.50
22:BA:1424:G:H2'	22:BA:1425:G:O4'	2.12	0.50
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.42	0.50
22:BA:1846:G:N2	22:BA:1895:C:C2	2.79	0.50
22:BA:2839:G:C4	22:BA:2840:C:C6	3.00	0.50
24:BC:197:ASN:OD1	24:BC:197:ASN:C	2.54	0.50
25:BD:136:ASN:HD21	25:BD:140:HIS:CD2	2.30	0.50
25:BD:186:LEU:HD21	37:BP:4:ILE:HG21	1.94	0.50
27:BF:106:ILE:C	27:BF:109:PRO:HD2	2.37	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
48:B0:4:GLN:NE2	48:B0:7:LYS:HA	2.27	0.50
1:CA:84:U:O2'	1:CA:85:U:H5'	2.12	0.50
1:CA:237:G:C6	1:CA:238:A:C5	3.00	0.50
1:CA:649:A:H2'	1:CA:650:G:O4'	2.11	0.50
1:CA:679:C:C2	1:CA:712:A:C2	2.98	0.50
1:CA:1203:C:H4'	14:CN:67:THR:HB	1.93	0.50
2:CB:135:LEU:C	2:CB:137:ARG:H	2.19	0.50
2:CB:140:GLU:O	2:CB:141:LEU:C	2.54	0.50
4:CD:88:GLU:HG2	4:CD:188:ARG:HD3	1.93	0.50
22:DA:222:A:H3'	22:DA:421:C:H5'	1.93	0.50
22:DA:310:A:HO2'	22:DA:311:A:P	2.28	0.50
22:DA:786:C:H5"	22:DA:1780:A:N7	2.26	0.50
22:DA:1073:A:H4'	22:DA:2474:U:H4'	1.94	0.50
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.47	0.50
22:DA:1248:G:N3	38:DQ:3:ARG:HG3	2.26	0.50
22:DA:1856:U:O4	22:DA:1857:G:N1	2.44	0.50
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.46	0.50
23:DB:5:U:C2	23:DB:116:G:N2	2.79	0.50
24:DC:238:ARG:O	24:DC:239:ASN:O	2.30	0.50
25:DD:12:THR:CG2	37:DP:5:ILE:HG23	2.41	0.50
28:DG:118:PRO:O	28:DG:119:ALA:C	2.54	0.50
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.44	0.50
33:DL:102:GLY:N	57:DL:202:HOH:O	2.43	0.50
33:DL:111:ILE:N	33:DL:111:ILE:HD12	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:18:PRO:HG3	37:DP:84:ILE:O	2.12	0.50
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.27	0.50
44:DW:38:VAL:HG21	44:DW:80:ILE:CD1	2.42	0.50
45:DX:12:PRO:HB3	45:DX:28:ARG:NH2	2.27	0.50
1:AA:203:G:O2'	1:AA:465:A:N1	2.42	0.50
1:AA:490:C:C2	1:AA:491:G:C8	2.99	0.50
1:AA:553:A:O2'	1:AA:554:A:H5'	2.11	0.50
1:AA:582:C:C2	1:AA:583:A:C8	3.00	0.50
1:AA:618:C:O2	1:AA:618:C:H2'	2.10	0.50
1:AA:642:A:C4	8:AH:106:THR:O	2.64	0.50
1:AA:737:C:C2	1:AA:738:C:C5	2.99	0.50
1:AA:973:G:H1'	10:AJ:56:HIS:CD2	2.45	0.50
1:AA:1374:A:O3'	7:AG:28:ASN:ND2	2.45	0.50
4:AD:118:VAL:HA	4:AD:123:ILE:CD1	2.41	0.50
8:AH:83:LEU:C	8:AH:83:LEU:CD2	2.85	0.50
8:AH:89:LYS:HA	8:AH:92:LEU:HG	1.92	0.50
10:AJ:52:LEU:HD21	10:AJ:59:LYS:HA	1.94	0.50
11:AK:76:GLU:HA	22:BA:2141:G:OP1	2.12	0.50
12:AL:22:PRO:O	12:AL:24:LEU:N	2.41	0.50
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.93	0.50
22:BA:362:A:C8	22:BA:362:A:OP2	2.64	0.50
22:BA:511:U:C5	22:BA:512:G:C5	3.00	0.50
22:BA:665:U:O2'	22:BA:666:A:H5'	2.12	0.50
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.45	0.50
22:BA:983:A:C6	22:BA:984:A:N1	2.79	0.50
22:BA:1189:A:C8	22:BA:1190:G:C8	2.99	0.50
22:BA:1783:A:N1	22:BA:2587:A:H2'	2.27	0.50
27:BF:132:VAL:CG2	27:BF:152:LEU:HB3	2.42	0.50
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	1.93	0.50
30:BI:75:PRO:HB2	30:BI:78:VAL:HG13	1.94	0.50
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.24	0.50
1:CA:123:U:H2'	1:CA:124:C:C6	2.47	0.50
1:CA:124:C:N3	1:CA:125:U:C4	2.80	0.50
1:CA:505:G:H2'	1:CA:506:G:H8	1.76	0.50
1:CA:1226:C:H2'	13:CM:102:THR:HB	1.94	0.50
1:CA:1267:C:N3	1:CA:1327:C:H4'	2.27	0.50
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.27	0.50
2:CB:142:GLU:HA	2:CB:145:GLU:HB2	1.94	0.50
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.11	0.50
6:CF:67:PRO:O	6:CF:69:GLU:N	2.45	0.50
15:CO:18:ASP:CG	15:CO:19:ALA:O	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.12	0.50
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.12	0.50
22:DA:1906:G:OP1	22:DA:1930:G:C8	2.65	0.50
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.46	0.50
22:DA:2147:A:N7	22:DA:2148:G:C5	2.79	0.50
22:DA:2209:G:N2	22:DA:2216:G:C4	2.79	0.50
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.47	0.50
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.59	0.50
22:DA:2506:U:O2	22:DA:2506:U:H2'	2.10	0.50
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	1.92	0.50
28:DG:138:LYS:O	28:DG:141:ILE:HG13	2.12	0.50
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.12	0.50
35:DN:29:VAL:HG13	35:DN:83:LEU:HD11	1.94	0.50
35:DN:66:ALA:O	35:DN:70:THR:HG23	2.12	0.50
40:DS:73:LYS:CB	40:DS:106:VAL:HB	2.41	0.50
43:DV:20:LEU:HD22	43:DV:27:PRO:HD3	1.93	0.50
1:AA:357:G:C2	1:AA:358:U:C6	3.00	0.50
1:AA:468:A:H5'	1:AA:469:C:OP2	2.12	0.50
1:AA:920:U:C1'	1:AA:1080:A:C2	2.95	0.50
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.47	0.50
6:AF:3:HIS:HB2	6:AF:92:THR:HG23	1.93	0.50
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.27	0.50
8:AH:64:LYS:HB2	8:AH:71:VAL:HG21	1.92	0.50
10:AJ:27:GLU:C	10:AJ:29:ALA:H	2.20	0.50
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.77	0.50
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.27	0.50
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.41	0.50
22:BA:819:A:N3	22:BA:1189:A:H2	2.10	0.50
22:BA:1179:G:C3'	22:BA:1180:U:H4'	2.37	0.50
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.12	0.50
22:BA:1428:C:C5	22:BA:1569:A:H5"	2.46	0.50
22:BA:1947:C:C2	22:BA:1960:A:C2	2.99	0.50
22:BA:2320:U:O2	22:BA:2333:A:N6	2.43	0.50
22:BA:2467:C:N4	22:BA:2468:A:C6	2.80	0.50
22:BA:2883:A:OP2	48:B0:50:ARG:NH1	2.45	0.50
24:BC:210:ALA:O	24:BC:214:ARG:HG3	2.11	0.50
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.75	0.50
27:BF:127:ASN:OD1	27:BF:157:THR:HA	2.12	0.50
29:BH:93:SER:O	1:CA:368:U:C6	2.64	0.50
32:BK:1:MET:HE3	32:BK:32:TYR:CZ	2.47	0.50
46:BY:32:ALA:HB2	46:BY:37:LEU:HD23	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.59	0.50
1:CA:33:A:H2'	1:CA:34:C:C6	2.47	0.50
1:CA:183:C:O2'	1:CA:184:G:O5'	2.30	0.50
1:CA:421:U:O5'	1:CA:422:C:C5	2.65	0.50
1:CA:687:A:N3	1:CA:688:G:H1'	2.26	0.50
1:CA:756:C:H2'	1:CA:757:U:C5'	2.42	0.50
1:CA:938:A:N6	1:CA:939:G:C6	2.80	0.50
2:CB:64:LYS:HD3	2:CB:64:LYS:C	2.36	0.50
5:CE:150:PRO:C	5:CE:152:MET:H	2.20	0.50
8:CH:49:PHE:C	8:CH:49:PHE:CD1	2.87	0.50
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.11	0.50
20:CT:64:LYS:HA	20:CT:64:LYS:HE3	1.94	0.50
22:DA:844:A:C2	22:DA:845:A:N7	2.80	0.50
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.11	0.50
26:DE:1:MET:CG	26:DE:14:VAL:HG23	2.42	0.50
26:DE:28:VAL:O	26:DE:32:VAL:HG23	2.12	0.50
32:DK:7:MET:C	32:DK:8:LEU:HD12	2.37	0.50
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.42	0.50
42:DU:74:ASN:ND2	42:DU:96:PHE:CG	2.79	0.50
1:AA:9:G:OP2	5:AE:126:LYS:NZ	2.28	0.50
1:AA:15:G:C5	1:AA:1396:A:C2	2.99	0.50
1:AA:792:A:N3	1:AA:794:A:C5	2.80	0.50
1:AA:951:G:C2	1:AA:952:U:C2	3.00	0.50
1:AA:957:U:H1'	1:AA:960:U:N3	2.27	0.50
1:AA:1023:U:H2'	1:AA:1024:G:O4'	2.12	0.50
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.26	0.50
1:AA:1140:C:O2'	1:AA:1141:C:OP2	2.28	0.50
1:AA:1346:A:C5	7:AG:10:ARG:CZ	2.95	0.50
16:AP:56:ARG:O	16:AP:59:HIS:N	2.45	0.50
18:AR:49:ALA:O	18:AR:51:TYR:N	2.45	0.50
22:BA:27:G:N2	22:BA:512:G:H1'	2.26	0.50
22:BA:118:A:N3	22:BA:178:G:H1'	2.26	0.50
22:BA:790:U:O2'	22:BA:791:C:O5'	2.29	0.50
22:BA:1176:U:C4	22:BA:1177:G:O6	2.65	0.50
22:BA:1364:G:OP2	45:BX:2:SER:N	2.45	0.50
22:BA:1792:G:OP1	24:BC:204:VAL:O	2.30	0.50
22:BA:1924:C:O2	22:BA:1924:C:C2'	2.59	0.50
22:BA:2001:C:N3	22:BA:2002:G:N7	2.60	0.50
22:BA:2557:G:C6	22:BA:2558:C:N4	2.80	0.50
24:BC:205:LEU:HG	24:BC:210:ALA:HB1	1.93	0.50
24:BC:252:THR:HG22	24:BC:253:LYS:H	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:6:LYS:HG2	28:BG:62:TRP:CZ3	2.47	0.50
49:B1:11:LEU:O	49:B1:20:PHE:HB2	2.12	0.50
1:CA:213:G:C8	1:CA:214:C:C5	2.99	0.50
2:CB:50:PHE:CD1	2:CB:50:PHE:C	2.89	0.50
3:CC:153:VAL:O	3:CC:165:THR:O	2.30	0.50
4:CD:78:GLU:OE2	4:CD:81:ARG:NH1	2.44	0.50
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.11	0.50
12:CL:7:LEU:HD22	12:CL:12:ARG:HD2	1.93	0.50
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.55	0.50
22:DA:307:G:N2	22:DA:310:A:C8	2.80	0.50
22:DA:362:A:C4	22:DA:363:G:C8	3.00	0.50
22:DA:396:G:OP1	45:DX:13:VAL:HG11	2.11	0.50
22:DA:457:A:N1	22:DA:470:A:H5"	2.26	0.50
22:DA:555:G:O2'	22:DA:556:A:OP2	2.29	0.50
22:DA:699:A:N6	22:DA:733:G:O2'	2.44	0.50
22:DA:1109:C:H5"	22:DA:1110:G:OP2	2.12	0.50
22:DA:1247:A:O3'	38:DQ:2:ALA:HB3	2.11	0.50
22:DA:2012:G:OP1	40:DS:98:LYS:HG2	2.11	0.50
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.12	0.50
22:DA:2323:G:C6	22:DA:2324:U:C4	3.00	0.50
24:DC:260:ASN:O	24:DC:261:LYS:HB2	2.12	0.50
26:DE:148:ILE:HG12	26:DE:168:ASP:O	2.12	0.50
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.52	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.12	0.50
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.26	0.50
1:AA:219:U:C2	1:AA:220:G:C8	2.99	0.50
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.11	0.50
4:AD:78:GLU:CD	4:AD:81:ARG:NH1	2.70	0.50
5:AE:122:ASN:N	5:AE:122:ASN:ND2	2.57	0.50
8:AH:41:LYS:NZ	8:AH:48:ASP:OD2	2.43	0.50
9:AI:13:LYS:HG2	9:AI:13:LYS:O	2.12	0.50
10:AJ:7:ARG:HB2	10:AJ:75:ASP:OD1	2.12	0.50
10:AJ:26:VAL:HG12	10:AJ:30:LYS:HD3	1.94	0.50
11:AK:74:VAL:C	11:AK:76:GLU:N	2.68	0.50
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.26	0.50
22:BA:563:A:C2	22:BA:564:C:N1	2.80	0.50
22:BA:861:A:C2	22:BA:917:A:C4	2.99	0.50
22:BA:1131:G:O2'	22:BA:2025:C:O2'	2.27	0.50
22:BA:1169:A:N1	22:BA:1180:U:O4	2.44	0.50
22:BA:1487:U:O2	22:BA:1503:A:C2	2.64	0.50
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2118:U:O4	22:BA:2148:G:O2'	2.29	0.50
22:BA:2409:G:H2'	22:BA:2410:G:O4'	2.11	0.50
24:BC:17:VAL:H	24:BC:204:VAL:HG22	1.76	0.50
28:BG:20:ASN:O	28:BG:20:ASN:ND2	2.40	0.50
42:BU:6:ARG:O	42:BU:9:ASP:HB2	2.12	0.50
44:BW:38:VAL:HG12	44:BW:39:ARG:N	2.26	0.50
53:B5:24:ASP:CB	53:B5:185:LYS:O	2.60	0.50
53:B5:49:GLY:N	53:B5:208:THR:CB	2.75	0.50
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.60	0.50
1:CA:214:C:H2'	1:CA:215:C:C6	2.47	0.50
1:CA:934:C:H5"	57:CA:1825:HOH:O	2.11	0.50
1:CA:1105:A:C2	1:CA:1106:G:C8	3.00	0.50
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.93	0.50
5:CE:89:HIS:CE1	5:CE:90:THR:OG1	2.65	0.50
5:CE:105:ILE:H	5:CE:122:ASN:CA	2.25	0.50
6:CF:99:ALA:O	6:CF:100:SER:CB	2.59	0.50
18:CR:50:LYS:HA	18:CR:53:ARG:NH1	2.27	0.50
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.47	0.50
22:DA:586:A:N1	22:DA:809:G:O2'	2.42	0.50
22:DA:654:A:H3'	22:DA:654:A:N3	2.27	0.50
22:DA:715:A:N6	22:DA:716:A:C6	2.79	0.50
22:DA:810:U:C4	33:DL:30:THR:HA	2.46	0.50
22:DA:1491:G:C6	22:DA:1500:G:C2	3.00	0.50
22:DA:1593:A:H2'	22:DA:1594:U:O4'	2.12	0.50
22:DA:2165:C:O2	22:DA:2165:C:H2'	2.11	0.50
22:DA:2637:U:H5"	25:DD:83:ARG:NH2	2.26	0.50
26:DE:56:GLY:O	26:DE:57:LYS:C	2.54	0.50
39:DR:82:HIS:CG	39:DR:82:HIS:O	2.65	0.50
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.27	0.50
1:AA:68:G:C6	1:AA:69:G:H1'	2.47	0.49
1:AA:277:C:H2'	1:AA:278:G:C5'	2.42	0.49
1:AA:316:C:C5	1:AA:351:G:C2	3.00	0.49
1:AA:1136:C:O2	1:AA:1136:C:O4'	2.29	0.49
1:AA:1461:G:C4	1:AA:1462:C:C6	3.00	0.49
11:AK:21:ALA:CB	11:AK:34:ILE:HD13	2.42	0.49
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.12	0.49
16:AP:23:ASP:OD1	16:AP:23:ASP:C	2.55	0.49
16:AP:39:PHE:CD1	16:AP:39:PHE:C	2.90	0.49
16:AP:79:ASN:O	16:AP:80:LYS:HB2	2.12	0.49
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.26	0.49
22:BA:1857:G:H1'	22:BA:1884:G:N2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2214:C:C5	22:BA:2215:C:C5	3.00	0.49
22:BA:2309:A:C6	22:BA:2310:C:C4	2.99	0.49
22:BA:2500:U:H5"	22:BA:2501:C:OP2	2.12	0.49
22:BA:2549:G:N2	22:BA:2560:A:C4	2.80	0.49
22:BA:2598:A:C8	22:BA:2599:G:H1'	2.47	0.49
33:BL:111:ILE:H	33:BL:111:ILE:HD12	1.77	0.49
38:BQ:41:LYS:HD3	38:BQ:45:TYR:CE1	2.47	0.49
39:BR:11:GLN:O	39:BR:12:HIS:CG	2.65	0.49
1:CA:363:A:O2'	1:CA:364:A:H5'	2.12	0.49
1:CA:728:A:H2'	1:CA:729:A:H8	1.75	0.49
1:CA:1211:U:O2'	1:CA:1212:U:P	2.70	0.49
1:CA:1255:G:C6	1:CA:1279:G:C8	3.00	0.49
1:CA:1372:U:OP2	9:CI:13:LYS:NZ	2.41	0.49
4:CD:29:ASP:C	4:CD:31:LYS:N	2.70	0.49
4:CD:151:LYS:O	4:CD:151:LYS:HG3	2.12	0.49
5:CE:156:LYS:HD2	8:CH:71:VAL:HG13	1.93	0.49
9:CI:45:ARG:HG3	9:CI:46:MET:SD	2.51	0.49
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.37	0.49
21:CU:29:LEU:O	21:CU:29:LEU:HD23	2.12	0.49
22:DA:222:A:H3'	22:DA:421:C:C5'	2.41	0.49
22:DA:406:G:H2'	22:DA:407:G:O4'	2.11	0.49
22:DA:734:A:C5	22:DA:735:A:C8	3.00	0.49
22:DA:1045:C:C3'	22:DA:1046:A:H5'	2.41	0.49
22:DA:1323:C:C4	22:DA:1324:G:N7	2.80	0.49
22:DA:1581:G:C5	22:DA:1582:C:C5	3.00	0.49
22:DA:1651:G:N2	22:DA:2007:U:C2	2.80	0.49
22:DA:1738:G:O2'	22:DA:1739:A:P	2.69	0.49
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.94	0.49
24:DC:51:THR:O	24:DC:54:ILE:HG13	2.12	0.49
26:DE:113:VAL:HG23	26:DE:118:LEU:HD23	1.93	0.49
28:DG:139:GLN:C	28:DG:139:GLN:CD	2.80	0.49
32:DK:10:VAL:CG1	32:DK:12:ASP:OD1	2.59	0.49
35:DN:74:GLU:O	35:DN:77:ALA:HB3	2.12	0.49
41:DT:51:PHE:O	41:DT:53:VAL:HG22	2.12	0.49
1:AA:126:G:C2'	1:AA:127:G:O5'	2.60	0.49
1:AA:427:U:C4	1:AA:428:G:C6	2.99	0.49
1:AA:1001:C:H3'	1:AA:1001:C:H6	1.77	0.49
2:AB:95:ARG:HG2	2:AB:95:ARG:HH11	1.77	0.49
3:AC:16:LYS:HE3	3:AC:181:ASP:OD1	2.12	0.49
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.60	0.49
14:AN:21:PHE:O	14:AN:22:ALA:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:5:LEU:O	19:AS:6:LYS:CD	2.60	0.49
22:BA:187:G:C2	22:BA:210:C:C2	3.00	0.49
22:BA:859:G:O2'	22:BA:860:U:P	2.70	0.49
22:BA:981:A:OP1	57:BA:3596:HOH:O	2.19	0.49
22:BA:1178:C:C2'	22:BA:1179:G:N7	2.75	0.49
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.44	0.49
22:BA:1908:C:H2'	22:BA:1909:C:C6	2.47	0.49
22:BA:2001:C:C4	22:BA:2002:G:N7	2.80	0.49
22:BA:2127:G:C4'	22:BA:2128:G:OP1	2.59	0.49
22:BA:2531:A:H4'	28:BG:157:TYR:CD1	2.47	0.49
22:BA:2808:G:C2	22:BA:2891:U:C6	3.00	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.75	0.49
1:CA:577:G:C2	1:CA:578:C:C5	3.00	0.49
1:CA:951:G:N3	1:CA:1231:G:C2	2.79	0.49
1:CA:1408:A:C2	1:CA:1494:G:C5	3.00	0.49
2:CB:35:ARG:O	2:CB:38:VAL:HG12	2.12	0.49
2:CB:167:ASP:OD2	2:CB:191:SER:HA	2.11	0.49
5:CE:102:GLY:C	5:CE:104:GLY:N	2.70	0.49
6:CF:54:LEU:C	6:CF:55:HIS:O	2.54	0.49
10:CJ:48:ARG:HH11	10:CJ:48:ARG:HG3	1.76	0.49
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.27	0.49
11:CK:90:GLY:O	11:CK:91:PRO:O	2.29	0.49
22:DA:769:U:C4	22:DA:770:G:N7	2.81	0.49
22:DA:1016:G:C2	22:DA:1147:A:C2	3.00	0.49
22:DA:1438:U:O2	22:DA:1555:G:N2	2.45	0.49
22:DA:1566:A:C2	24:DC:213:TRP:CE3	3.00	0.49
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.46	0.49
22:DA:2199:A:C4	22:DA:2225:A:N1	2.81	0.49
23:DB:48:U:H2'	23:DB:49:C:C6	2.47	0.49
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.45	0.49
24:DC:53:HIS:NE2	24:DC:219:THR:HG23	2.27	0.49
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.49
31:DJ:114:LEU:HG	31:DJ:118:MET:HE3	1.93	0.49
44:DW:71:VAL:HG13	44:DW:76:ASN:O	2.12	0.49
45:DX:3:ARG:HG2	45:DX:33:LEU:HD22	1.94	0.49
1:AA:10:A:O2'	1:AA:11:G:H5'	2.12	0.49
1:AA:21:G:N2	1:AA:22:G:C6	2.81	0.49
1:AA:1430:A:C2	1:AA:1471:U:C2	3.00	0.49
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.12	0.49
8:AH:49:PHE:O	8:AH:50:LYS:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:28:ILE:HG12	9:AI:63:LEU:HD21	1.94	0.49
9:AI:52:LEU:HD13	9:AI:57:MET:HG2	1.95	0.49
22:BA:749:A:C5	22:BA:1618:A:C2	3.00	0.49
22:BA:967:U:H2'	22:BA:968:C:C6	2.47	0.49
22:BA:1056:G:C2	22:BA:1102:C:C5	3.01	0.49
22:BA:1392:A:C5	22:BA:1393:A:C6	2.99	0.49
22:BA:2127:G:O2'	22:BA:2128:G:O4'	2.28	0.49
22:BA:2190:G:C6	22:BA:2191:A:C5	3.00	0.49
22:BA:2262:U:OP2	44:BW:19:LYS:HE2	2.12	0.49
22:BA:2307:G:O4'	22:BA:2308:G:C2	2.66	0.49
22:BA:2318:G:C6	22:BA:2319:G:C6	3.01	0.49
22:BA:2642:G:C2	22:BA:2773:C:C2	3.00	0.49
25:BD:57:ALA:C	25:BD:59:ARG:H	2.21	0.49
36:BO:76:LYS:O	36:BO:77:ALA:C	2.56	0.49
37:BP:75:GLN:O	37:BP:77:HIS:N	2.46	0.49
44:BW:12:ASN:O	44:BW:14:ARG:NH1	2.45	0.49
47:BZ:2:ALA:HB1	47:BZ:3:LYS:HE3	1.95	0.49
1:CA:17:U:C2	1:CA:18:C:C5	3.00	0.49
1:CA:407:U:H2'	1:CA:408:A:H8	1.76	0.49
1:CA:582:C:C4	1:CA:760:G:C6	3.00	0.49
1:CA:748:G:H2'	1:CA:749:A:C8	2.47	0.49
2:CB:19:GLN:HB3	2:CB:189:THR:OG1	2.12	0.49
2:CB:36:ASN:O	2:CB:37:LYS:HB2	2.12	0.49
3:CC:19:ASN:HA	3:CC:56:VAL:HG13	1.94	0.49
3:CC:57:ILE:HG13	3:CC:66:VAL:HG22	1.94	0.49
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.11	0.49
6:CF:85:ILE:O	6:CF:86:ARG:O	2.29	0.49
7:CG:145:ALA:O	7:CG:146:GLU:CB	2.56	0.49
10:CJ:35:GLN:O	10:CJ:36:VAL:HB	2.12	0.49
12:CL:38:TYR:N	12:CL:52:VAL:O	2.42	0.49
14:CN:72:GLY:O	14:CN:80:SER:HA	2.12	0.49
22:DA:82:U:H5'	22:DA:296:U:H5"	1.94	0.49
22:DA:289:G:H2'	22:DA:290:U:O4'	2.12	0.49
22:DA:308:G:C6	22:DA:309:A:C6	3.01	0.49
22:DA:445:C:O2'	22:DA:449:A:N3	2.45	0.49
22:DA:549:G:N3	22:DA:549:G:O4'	2.44	0.49
22:DA:771:G:C6	22:DA:772:C:C5	3.01	0.49
22:DA:982:C:H5"	22:DA:983:A:P	2.52	0.49
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.65	0.49
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.47	0.49
22:DA:1370:C:H2'	22:DA:1371:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1456:G:C5	22:DA:1457:U:C5	3.00	0.49
22:DA:1479:G:H2'	22:DA:1480:C:O4'	2.12	0.49
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.11	0.49
22:DA:2757:A:N1	28:DG:67:THR:CG2	2.74	0.49
24:DC:159:GLY:N	24:DC:195:VAL:HG22	2.28	0.49
26:DE:22:ASP:OD2	26:DE:22:ASP:N	2.45	0.49
26:DE:97:ASN:HB2	26:DE:100:MET:HB2	1.92	0.49
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.42	0.49
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.49
32:DK:38:ILE:HD13	32:DK:61:VAL:HB	1.93	0.49
41:DT:35:ALA:HB3	41:DT:38:ALA:HB2	1.94	0.49
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.28	0.49
1:AA:15:G:N7	1:AA:1396:A:C2	2.80	0.49
1:AA:208:U:C5	1:AA:210:C:N3	2.81	0.49
1:AA:575:G:C6	1:AA:821:G:C8	3.00	0.49
1:AA:723:U:H5'	1:AA:724:G:OP1	2.12	0.49
1:AA:903:G:H2'	1:AA:904:U:H6	1.77	0.49
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.56	0.49
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.12	0.49
4:AD:91:LEU:HD21	4:AD:195:ILE:HD11	1.93	0.49
11:AK:70:CYS:O	11:AK:74:VAL:HG22	2.13	0.49
11:AK:89:PRO:HD3	21:AU:29:LEU:HD11	1.94	0.49
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.60	0.49
16:AP:73:ALA:O	16:AP:77:GLU:HB2	2.12	0.49
22:BA:581:C:H2'	22:BA:582:A:C8	2.47	0.49
22:BA:927:A:H2'	22:BA:928:A:H8	1.76	0.49
22:BA:954:G:C5	22:BA:955:U:C5	3.00	0.49
22:BA:1932:A:H5"	22:BA:1933:G:OP2	2.13	0.49
22:BA:2075:U:C2'	22:BA:2077:A:OP2	2.61	0.49
24:BC:30:PHE:O	24:BC:31:ALA:C	2.54	0.49
24:BC:44:ASN:HB3	24:BC:50:THR:HG21	1.94	0.49
27:BF:173:PHE:O	27:BF:174:ASP:HB3	2.11	0.49
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.43	0.49
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.95	0.49
41:BT:19:LYS:C	41:BT:21:SER:N	2.70	0.49
47:BZ:35:THR:CG2	47:BZ:36:VAL:N	2.75	0.49
1:CA:106:C:O2	1:CA:379:C:H4'	2.12	0.49
1:CA:263:A:OP1	20:CT:74:ARG:HD3	2.12	0.49
1:CA:552:U:N3	1:CA:553:A:N7	2.60	0.49
1:CA:951:G:C2	1:CA:1231:G:C2	3.01	0.49
1:CA:1005:A:N7	1:CA:1006:G:C4	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:80:THR:HA	5:CE:120:VAL:HG12	1.94	0.49
8:CH:75:ILE:HA	8:CH:128:TYR:O	2.13	0.49
10:CJ:84:VAL:O	10:CJ:88:MET:HG2	2.11	0.49
11:CK:16:VAL:HG12	11:CK:79:ILE:HG12	1.94	0.49
12:CL:77:HIS:O	12:CL:78:SER:CB	2.60	0.49
15:CO:33:THR:HA	15:CO:63:ARG:NH1	2.26	0.49
15:CO:37:ASN:O	15:CO:40:GLN:HB2	2.13	0.49
17:CQ:46:VAL:CG2	17:CQ:61:ILE:HD11	2.42	0.49
22:DA:347:A:C2	22:DA:348:A:C4	3.01	0.49
22:DA:404:A:C4'	22:DA:405:U:OP2	2.61	0.49
22:DA:604:G:N1	22:DA:605:G:C5	2.80	0.49
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.12	0.49
22:DA:1663:G:C6	22:DA:1992:G:C8	3.00	0.49
22:DA:2037:A:N6	22:DA:2038:G:O6	2.46	0.49
22:DA:2066:C:H5"	57:DA:3505:HOH:O	2.13	0.49
22:DA:2094:A:OP1	29:DH:22:LYS:HG3	2.12	0.49
22:DA:2131:U:H5'	22:DA:2132:U:C5'	2.42	0.49
22:DA:2376:A:H2'	22:DA:2377:A:O4'	2.12	0.49
22:DA:2612:C:H5"	22:DA:2613:U:OP1	2.13	0.49
28:DG:158:LYS:O	28:DG:159:GLY:C	2.56	0.49
1:AA:590:U:H2'	1:AA:591:U:C6	2.47	0.49
1:AA:1080:A:OP1	5:AE:52:LYS:CE	2.60	0.49
2:AB:47:VAL:C	2:AB:49:MET:N	2.68	0.49
2:AB:47:VAL:O	2:AB:49:MET:N	2.45	0.49
2:AB:74:ARG:O	2:AB:75:ALA:HB2	2.12	0.49
2:AB:119:THR:O	2:AB:120:GLN:CB	2.60	0.49
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.41	0.49
4:AD:153:SER:O	4:AD:154:ARG:C	2.56	0.49
5:AE:100:SER:O	5:AE:101:GLU:C	2.55	0.49
6:AF:6:ILE:HA	6:AF:88:MET:O	2.12	0.49
9:AI:40:GLY:O	9:AI:41:ARG:CB	2.54	0.49
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.94	0.49
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.31	0.49
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.26	0.49
15:AO:43:PHE:CD1	15:AO:56:LEU:HD22	2.48	0.49
22:BA:699:A:C8	22:BA:734:A:C2	3.00	0.49
22:BA:1203:U:C4	22:BA:1204:A:C5	3.00	0.49
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.47	0.49
22:BA:1415:U:H3'	22:BA:1415:U:O2	2.12	0.49
22:BA:1794:A:H1'	22:BA:1900:A:N3	2.27	0.49
22:BA:1853:A:C2	22:BA:1854:A:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2308:G:O6	22:BA:2311:A:C8	2.66	0.49
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.48	0.49
22:BA:2880:C:N3	22:BA:2881:U:C5	2.80	0.49
23:BB:33:G:O2'	23:BB:34:A:H5'	2.13	0.49
24:BC:171:TYR:CD2	24:BC:185:GLU:HA	2.47	0.49
24:BC:212:ARG:HD2	24:BC:216:VAL:O	2.13	0.49
28:BG:2:SER:C	28:BG:4:VAL:N	2.70	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.27	0.49
41:BT:2:ILE:CG1	41:BT:7:LEU:HD11	2.42	0.49
43:BV:23:ALA:O	43:BV:24:ASN:C	2.54	0.49
45:BX:37:ARG:HG3	45:BX:48:THR:HB	1.94	0.49
1:CA:523:A:N1	12:CL:89:ASP:HB2	2.27	0.49
1:CA:583:A:C8	1:CA:584:G:C8	3.00	0.49
1:CA:1460:C:N4	1:CA:1461:G:C6	2.80	0.49
2:CB:210:VAL:HG22	2:CB:211:THR:N	2.28	0.49
8:CH:11:LEU:HD11	8:CH:127:CYS:HB3	1.94	0.49
10:CJ:92:LEU:O	10:CJ:93:ALA:HB2	2.12	0.49
15:CO:45:GLU:O	15:CO:46:HIS:HB2	2.12	0.49
19:CS:80:TYR:O	19:CS:81:ARG:HB3	2.11	0.49
22:DA:585:G:H2'	22:DA:586:A:N7	2.27	0.49
22:DA:813:U:H2'	22:DA:814:C:C6	2.46	0.49
22:DA:945:A:C5	22:DA:2448:A:C2	3.00	0.49
22:DA:1530:G:N2	22:DA:1542:U:C2	2.80	0.49
22:DA:1688:U:C4	22:DA:1698:A:C2	3.00	0.49
22:DA:2372:U:H2'	22:DA:2373:G:C8	2.48	0.49
22:DA:2627:G:N2	22:DA:2777:G:OP2	2.45	0.49
23:DB:38:C:H2'	23:DB:39:A:O4'	2.12	0.49
24:DC:146:MET:SD	24:DC:154:LEU:HD21	2.53	0.49
25:DD:3:GLY:HA3	25:DD:204:LYS:HG2	1.93	0.49
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.12	0.49
41:DT:51:PHE:C	41:DT:52:GLU:HG2	2.37	0.49
1:AA:125:U:H2'	1:AA:126:G:O4'	2.12	0.49
1:AA:167:A:H2'	1:AA:168:G:O4'	2.11	0.49
1:AA:316:C:N3	1:AA:317:U:C5	2.81	0.49
1:AA:685:G:N1	1:AA:686:U:O4	2.46	0.49
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.13	0.49
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.37	0.49
2:AB:133:GLU:O	2:AB:137:ARG:N	2.46	0.49
3:AC:39:VAL:O	3:AC:43:LEU:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:54:ARG:HB3	3:AC:69:HIS:HB2	1.94	0.49
6:AF:46:GLN:HA	6:AF:56:LYS:HG2	1.93	0.49
7:AG:80:VAL:O	7:AG:81:GLY:C	2.56	0.49
9:AI:120:LYS:O	9:AI:121:ALA:HB3	2.12	0.49
12:AL:3:THR:HB	12:AL:6:GLN:HG3	1.94	0.49
13:AM:56:LEU:O	13:AM:59:GLU:N	2.46	0.49
15:AO:37:ASN:O	15:AO:38:HIS:C	2.54	0.49
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.47	0.49
22:BA:645:C:O2'	22:BA:646:U:H5"	2.13	0.49
22:BA:1419:A:C5	22:BA:1421:G:C5	3.00	0.49
22:BA:1860:G:C2	22:BA:1883:U:H1'	2.47	0.49
22:BA:2489:U:O2	22:BA:2491:U:C4	2.66	0.49
22:BA:2618:G:C6	22:BA:2619:C:C4	3.01	0.49
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.48	0.49
33:BL:90:VAL:HG23	33:BL:120:VAL:HG21	1.93	0.49
42:BU:89:ASP:CG	42:BU:90:GLY:N	2.70	0.49
49:B1:34:LEU:H	49:B1:52:ALA:CB	2.25	0.49
1:CA:182:A:C5	1:CA:184:G:N7	2.80	0.49
1:CA:635:A:C6	1:CA:636:U:C4	3.00	0.49
1:CA:1342:C:H1'	9:CI:126:GLN:HG3	1.94	0.49
2:CB:43:LEU:HG	2:CB:44:GLU:CG	2.43	0.49
2:CB:72:THR:HG23	2:CB:94:HIS:O	2.11	0.49
3:CC:16:LYS:HG3	3:CC:17:PRO:HD2	1.95	0.49
6:CF:88:MET:CE	18:CR:64:TYR:CD2	2.95	0.49
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.95	0.49
14:CN:31:ILE:HG22	14:CN:32:SER:N	2.27	0.49
14:CN:33:ASP:O	14:CN:35:ASN:N	2.42	0.49
14:CN:80:SER:O	14:CN:83:LYS:N	2.45	0.49
22:DA:121:G:H8	22:DA:121:G:O5'	1.95	0.49
22:DA:749:A:C4	22:DA:750:A:C8	3.01	0.49
22:DA:798:G:H2'	22:DA:799:G:C8	2.47	0.49
22:DA:1408:G:N2	22:DA:1595:C:H1'	2.27	0.49
22:DA:1638:C:O2'	22:DA:2698:U:O2	2.30	0.49
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.48	0.49
22:DA:2144:G:C2	22:DA:2146:C:O2	2.65	0.49
22:DA:2314:A:O4'	27:DF:155:THR:HG21	2.13	0.49
22:DA:2415:G:C5	22:DA:2416:C:C4	3.01	0.49
22:DA:2511:U:C5	22:DA:2512:C:C5	3.01	0.49
22:DA:2834:G:H2'	22:DA:2879:A:N6	2.27	0.49
23:DB:25:U:H2'	23:DB:26:C:O4'	2.12	0.49
38:DQ:47:TYR:CE1	38:DQ:51:ARG:NH2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:81:LYS:O	39:DR:82:HIS:C	2.54	0.49
1:AA:328:C:O2	1:AA:328:C:C2'	2.60	0.49
1:AA:338:A:C6	1:AA:339:C:C4	3.01	0.49
1:AA:1181:G:O2'	1:AA:1182:G:C8	2.66	0.49
1:AA:1293:C:H5'	1:AA:1294:G:OP2	2.12	0.49
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.94	0.49
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.47	0.49
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.93	0.49
7:AG:139:GLU:OE1	7:AG:139:GLU:HA	2.12	0.49
12:AL:72:HIS:ND1	12:AL:72:HIS:O	2.46	0.49
22:BA:100:U:H4'	22:BA:101:A:O5'	2.11	0.49
22:BA:449:A:C6	22:BA:450:G:C5	3.01	0.49
22:BA:948:C:H1'	22:BA:984:A:O2'	2.12	0.49
22:BA:1063:G:N2	30:BI:90:SER:HG	2.11	0.49
22:BA:1355:G:N3	22:BA:1356:G:C8	2.81	0.49
22:BA:2094:A:H5'	29:BH:25:TYR:CG	2.47	0.49
22:BA:2275:C:O2	34:BM:84:LYS:CD	2.60	0.49
22:BA:2415:G:C2	22:BA:2416:C:C2	3.00	0.49
22:BA:2456:C:C2'	22:BA:2457:U:H5'	2.43	0.49
22:BA:2555:U:H5"	22:BA:2556:C:OP2	2.12	0.49
25:BD:12:THR:HG21	37:BP:9:GLU:HG3	1.95	0.49
26:BE:48:THR:C	26:BE:50:ALA:H	2.19	0.49
30:BI:89:GLY:O	30:BI:90:SER:C	2.54	0.49
42:BU:12:ILE:HG13	42:BU:21:LYS:O	2.13	0.49
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.12	0.49
47:BZ:21:LYS:O	47:BZ:23:THR:N	2.46	0.49
1:CA:32:A:N1	1:CA:33:A:C6	2.80	0.49
1:CA:207:C:O2	1:CA:207:C:H2'	2.11	0.49
1:CA:509:A:N3	1:CA:543:U:O2'	2.41	0.49
1:CA:706:A:C1'	11:CK:31:ILE:HD11	2.42	0.49
1:CA:757:U:OP1	1:CA:822:U:O2'	2.24	0.49
1:CA:1144:G:H5"	1:CA:1145:A:OP2	2.12	0.49
4:CD:26:ARG:O	4:CD:27:ALA:CB	2.61	0.49
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.12	0.49
5:CE:155:ALA:C	5:CE:156:LYS:HG3	2.37	0.49
15:CO:87:LEU:HD23	15:CO:87:LEU:C	2.37	0.49
22:DA:200:U:C4	22:DA:248:G:N2	2.81	0.49
22:DA:833:A:P	33:DL:39:LYS:HE2	2.53	0.49
22:DA:953:G:O2'	22:DA:954:G:H5'	2.13	0.49
22:DA:1534:U:O2'	22:DA:1537:G:O6	2.29	0.49
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2020:A:C2	22:DA:2022:U:O4'	2.65	0.49
22:DA:2134:A:H62	22:DA:2157:G:H1'	1.77	0.49
22:DA:2351:G:O2'	22:DA:2366:A:N6	2.39	0.49
25:DD:150:GLN:C	25:DD:151:THR:O	2.50	0.49
26:DE:149:ILE:CG1	26:DE:188:MET:HE3	2.42	0.49
30:DI:33:VAL:HG22	30:DI:67:PHE:CE2	2.48	0.49
32:DK:63:VAL:O	32:DK:64:ARG:HG2	2.12	0.49
32:DK:63:VAL:O	32:DK:64:ARG:CG	2.61	0.49
1:AA:102:G:C2	1:AA:103:U:C6	3.00	0.49
1:AA:126:G:H2'	1:AA:127:G:O5'	2.13	0.49
1:AA:292:G:N7	1:AA:293:G:H1'	2.28	0.49
1:AA:382:A:H2'	1:AA:383:A:C8	2.48	0.49
1:AA:683:G:N2	11:AK:39:GLY:O	2.46	0.49
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.94	0.49
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.47	0.49
1:AA:1432:G:P	37:BP:106:LYS:HG2	2.52	0.49
2:AB:27:MET:HE1	2:AB:193:PRO:HB3	1.94	0.49
2:AB:207:ILE:HD13	2:AB:207:ILE:N	2.28	0.49
3:AC:60:PRO:HB3	10:AJ:94:ALA:HB1	1.94	0.49
5:AE:90:THR:HG22	5:AE:91:GLY:H	1.74	0.49
5:AE:153:VAL:O	5:AE:156:LYS:HB2	2.12	0.49
6:AF:17:GLN:OE1	6:AF:21:MET:HG3	2.13	0.49
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.60	0.49
10:AJ:36:VAL:HA	10:AJ:75:ASP:O	2.11	0.49
11:AK:112:ASP:OD2	11:AK:114:THR:HG23	2.13	0.49
14:AN:18:ASP:O	14:AN:19:LYS:C	2.55	0.49
20:AT:58:VAL:HG12	20:AT:72:ALA:HB1	1.95	0.49
22:BA:947:A:O2'	22:BA:984:A:C2	2.58	0.49
22:BA:1063:G:H4'	30:BI:77:ALA:HB1	1.93	0.49
22:BA:1649:G:C6	22:BA:2009:A:C6	3.01	0.49
22:BA:2331:G:O4'	44:BW:42:GLY:HA3	2.13	0.49
22:BA:2665:A:C2	22:BA:2666:C:C2	3.01	0.49
26:BE:119:ILE:CG2	26:BE:187:VAL:HG22	2.42	0.49
34:BM:51:ARG:O	34:BM:55:ARG:HG2	2.13	0.49
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.43	0.49
41:BT:10:VAL:HG12	41:BT:11:LEU:HD23	1.95	0.49
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.13	0.49
49:B1:23:THR:OG1	49:B1:24:THR:N	2.44	0.49
1:CA:92:U:C4	1:CA:93:U:O4	2.66	0.49
1:CA:862:C:H2'	1:CA:863:U:H6	1.78	0.49
3:CC:49:LYS:O	3:CC:72:ARG:NH1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:87:LYS:HG3	8:CH:91:GLU:HB3	1.95	0.49
9:CI:91:ASP:OD2	9:CI:91:ASP:C	2.55	0.49
10:CJ:18:ILE:HG23	10:CJ:19:ASP:N	2.28	0.49
14:CN:18:ASP:HA	14:CN:22:ALA:HB3	1.95	0.49
22:DA:70:G:H5"	22:DA:112:U:O2	2.13	0.49
22:DA:319:G:OP2	26:DE:132:LYS:HE2	2.12	0.49
22:DA:469:G:O6	50:D2:37:LYS:CE	2.60	0.49
22:DA:1060:U:H5	30:DI:132:THR:HG23	1.78	0.49
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.45	0.49
22:DA:2211:A:C1'	22:DA:2212:A:OP1	2.61	0.49
22:DA:2341:G:C6	22:DA:2342:C:C4	3.01	0.49
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.37	0.49
22:DA:2811:G:OP1	25:DD:62:LYS:N	2.45	0.49
26:DE:25:GLU:CD	33:DL:6:LEU:HA	2.38	0.49
35:DN:2:ARG:O	35:DN:3:HIS:C	2.56	0.49
42:DU:18:ASP:HB3	42:DU:21:LYS:HG3	1.94	0.49
1:AA:201:G:C2	1:AA:217:C:O2	2.66	0.49
1:AA:231:U:O2'	1:AA:232:G:H5'	2.12	0.49
1:AA:452:A:C8	1:AA:452:A:H3'	2.47	0.49
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.95	0.49
1:AA:843:U:H3	2:CB:115:LYS:HD3	1.78	0.49
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.13	0.49
1:AA:1026:G:C6	1:AA:1027:C:N3	2.81	0.49
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.77	0.49
1:AA:1302:C:C4	13:AM:17:ILE:CD1	2.96	0.49
1:AA:1503:A:C8	1:AA:1531:A:H1'	2.47	0.49
8:AH:14:ILE:O	8:AH:15:ARG:C	2.54	0.49
8:AH:49:PHE:CB	8:AH:61:LEU:HD23	2.43	0.49
9:AI:25:ASN:C	9:AI:59:GLU:HA	2.37	0.49
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.95	0.49
14:AN:43:ASN:HA	14:AN:45:VAL:HG22	1.95	0.49
14:AN:63:ARG:CG	14:AN:68:GLY:O	2.61	0.49
22:BA:58:G:N2	22:BA:70:G:C4	2.81	0.49
22:BA:627:A:C5	22:BA:637:A:N7	2.81	0.49
22:BA:1088:A:H3'	22:BA:1088:A:N3	2.28	0.49
22:BA:1132:U:H3'	22:BA:1133:A:H5"	1.94	0.49
22:BA:1922:G:C6	22:BA:1923:U:C5	3.00	0.49
22:BA:2287:A:C8	22:BA:2289:G:C8	3.00	0.49
22:BA:2572:A:OP1	22:BA:2574:G:H4'	2.13	0.49
22:BA:2580:U:C5	22:BA:2581:G:C6	3.00	0.49
22:BA:2600:A:C6	22:BA:2601:C:N4	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2620:C:C2	22:BA:2621:G:C8	3.01	0.49
25:BD:124:ARG:HA	25:BD:165:MET:SD	2.53	0.49
30:BI:99:GLY:O	30:BI:139:VAL:HG23	2.13	0.49
35:BN:2:ARG:CA	35:BN:5:LYS:HD2	2.39	0.49
42:BU:99:ASN:O	42:BU:100:SER:C	2.56	0.49
46:BY:36:GLN:O	46:BY:37:LEU:HB3	2.13	0.49
1:CA:106:C:C2'	1:CA:107:G:H5'	2.42	0.49
1:CA:247:G:C5	1:CA:278:G:N2	2.81	0.49
1:CA:743:A:C6	1:CA:744:C:C5	3.01	0.49
4:CD:57:GLU:O	4:CD:58:LYS:C	2.55	0.49
4:CD:151:LYS:O	4:CD:151:LYS:CG	2.61	0.49
4:CD:203:LEU:HD12	4:CD:203:LEU:O	2.11	0.49
22:DA:242:G:N7	51:D3:5:LYS:HG2	2.28	0.49
22:DA:574:A:H4'	22:DA:575:A:C5'	2.43	0.49
22:DA:2702:G:C6	22:DA:2703:C:C4	3.01	0.49
22:DA:2780:G:O6	31:DJ:102:GLU:OE2	2.31	0.49
24:DC:130:LEU:HD12	24:DC:134:ASN:HB2	1.95	0.49
25:DD:101:PHE:O	25:DD:104:VAL:HG22	2.12	0.49
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.49
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.28	0.49
35:DN:116:VAL:O	35:DN:116:VAL:HG13	2.12	0.49
52:D4:36:ARG:O	52:D4:37:GLN:C	2.56	0.49
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.28	0.49
1:AA:626:G:O2'	1:AA:627:G:H5'	2.13	0.49
1:AA:914:A:C6	1:AA:915:A:N7	2.81	0.49
1:AA:1072:G:C6	1:AA:1073:U:C4	3.01	0.49
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.48	0.49
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.47	0.49
4:AD:124:MET:SD	4:AD:127:GLY:O	2.71	0.49
11:AK:22:HIS:CD2	11:AK:35:THR:HG22	2.48	0.49
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.38	0.49
16:AP:39:PHE:CG	16:AP:74:LEU:HD11	2.48	0.49
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.56	0.49
18:AR:27:ALA:O	18:AR:30:LYS:HE3	2.12	0.49
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.28	0.49
21:AU:29:LEU:HD23	21:AU:29:LEU:O	2.13	0.49
22:BA:108:G:C6	22:BA:109:C:C4	3.01	0.49
22:BA:207:A:C2'	22:BA:208:C:O5'	2.61	0.49
22:BA:714:U:O2	22:BA:717:C:H5	1.96	0.49
22:BA:977:G:C5	57:BA:3590:HOH:O	2.64	0.49
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1342:A:C2	22:BA:1345:C:C6	3.01	0.49
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.47	0.49
22:BA:2190:G:C2	22:BA:2191:A:C4	3.01	0.49
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.48	0.49
25:BD:57:ALA:O	25:BD:59:ARG:N	2.46	0.49
27:BF:41:GLY:C	27:BF:43:ALA:N	2.71	0.49
28:BG:94:TYR:HA	28:BG:106:SER:O	2.13	0.49
31:BJ:114:LEU:HG	31:BJ:118:MET:CE	2.38	0.49
33:BL:110:VAL:O	33:BL:131:ALA:CB	2.61	0.49
35:BN:118:ARG:O	35:BN:120:GLU:N	2.42	0.49
46:BY:39:GLN:HB2	46:BY:41:HIS:CE1	2.48	0.49
49:B1:8:LYS:HA	49:B1:24:THR:HG22	1.95	0.49
1:CA:15:G:C4	1:CA:16:A:C8	3.01	0.49
1:CA:41:G:H2'	1:CA:42:G:C8	2.48	0.49
1:CA:243:A:C2	1:CA:246:A:C8	3.01	0.49
1:CA:247:G:C5	1:CA:278:G:C2	3.00	0.49
1:CA:254:G:C4	1:CA:255:G:C8	3.00	0.49
1:CA:433:G:C5	1:CA:434:U:C5	3.01	0.49
1:CA:562:U:H1'	12:CL:12:ARG:HG3	1.95	0.49
1:CA:834:U:H2'	1:CA:835:U:C6	2.48	0.49
2:CB:90:PHE:CD2	2:CB:150:GLY:O	2.66	0.49
5:CE:96:MET:HE1	5:CE:140:THR:HG22	1.95	0.49
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.77	0.49
8:CH:86:TYR:C	8:CH:87:LYS:HD2	2.38	0.49
9:CI:18:ARG:O	9:CI:65:ILE:HA	2.12	0.49
15:CO:74:ASP:CG	15:CO:77:ARG:HG3	2.38	0.49
18:CR:71:THR:OG1	18:CR:72:ASP:N	2.45	0.49
22:DA:1053:C:C2	22:DA:1107:G:C2	3.01	0.49
22:DA:1095:A:H2'	22:DA:1096:A:N9	2.27	0.49
22:DA:1379:U:OP1	22:DA:1379:U:C6	2.65	0.49
22:DA:1677:A:N6	22:DA:1678:A:C6	2.81	0.49
22:DA:1739:A:C2'	22:DA:1740:G:O5'	2.61	0.49
22:DA:1805:A:H5"	24:DC:248:TRP:CE2	2.48	0.49
22:DA:2054:A:C2	22:DA:2616:C:C2	3.01	0.49
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.13	0.49
22:DA:2282:G:C4	22:DA:2425:A:N6	2.81	0.49
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.77	0.49
22:DA:2784:U:O4	22:DA:2785:C:N4	2.46	0.49
24:DC:160:THR:O	24:DC:195:VAL:HG13	2.12	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
30:DI:33:VAL:HG22	30:DI:67:PHE:CD2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.56	0.49
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.27	0.49
42:DU:36:VAL:O	42:DU:37:GLU:C	2.56	0.49
42:DU:96:PHE:CE1	42:DU:103:ILE:CG1	2.96	0.49
48:D0:53:LYS:HE3	48:D0:56:ALA:HA	1.95	0.49
51:D3:33:LEU:HA	51:D3:36:LYS:HD2	1.93	0.49
1:AA:77:A:N1	1:AA:91:U:O4	2.46	0.48
1:AA:202:G:O2'	1:AA:468:A:C8	2.55	0.48
1:AA:254:G:O2'	1:AA:255:G:H5'	2.13	0.48
1:AA:363:A:O2'	1:AA:364:A:H5'	2.12	0.48
1:AA:559:A:C8	1:AA:561:U:C6	3.00	0.48
1:AA:712:A:C2	1:AA:713:G:C4	3.01	0.48
1:AA:1107:C:C4	1:AA:1108:G:C8	3.01	0.48
1:AA:1124:G:OP1	10:AJ:37:ARG:C	2.56	0.48
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.48	0.48
7:AG:76:LYS:HB3	7:AG:89:VAL:HG11	1.94	0.48
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.28	0.48
22:BA:207:A:H2'	22:BA:208:C:O5'	2.13	0.48
22:BA:1026:G:P	22:BA:1026:G:O4'	2.71	0.48
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.13	0.48
22:BA:1695:G:C8	24:BC:8:PRO:HG2	2.47	0.48
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.47	0.48
24:BC:180:GLU:HG3	24:BC:269:ARG:O	2.12	0.48
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.48
39:BR:4:VAL:HA	39:BR:12:HIS:O	2.12	0.48
42:BU:98:SER:O	42:BU:99:ASN:CB	2.61	0.48
53:B5:53:ARG:HD3	53:B5:204:GLY:HA3	1.94	0.48
53:B5:122:GLY:CA	53:B5:146:VAL:CB	2.90	0.48
1:CA:165:G:C2	1:CA:166:U:C2	3.01	0.48
1:CA:200:G:H2'	1:CA:201:G:H5"	1.94	0.48
1:CA:421:U:C4'	1:CA:421:U:OP1	2.61	0.48
1:CA:755:G:C2	1:CA:756:C:C5	3.01	0.48
1:CA:1068:G:H2'	1:CA:1069:C:H5'	1.94	0.48
6:CF:3:HIS:CD2	6:CF:94:HIS:HA	2.48	0.48
7:CG:42:ILE:HG22	7:CG:42:ILE:O	2.13	0.48
8:CH:67:GLN:C	8:CH:69:LYS:H	2.19	0.48
11:CK:127:ARG:N	21:CU:34:ARG:NH2	2.60	0.48
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.47	0.48
22:DA:276:U:O2	22:DA:276:U:H2'	2.12	0.48
22:DA:279:A:H61	22:DA:361:G:H1'	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:362:A:N3	22:DA:362:A:H2'	2.28	0.48
22:DA:415:A:C2	22:DA:2409:G:C2	3.01	0.48
22:DA:599:A:N3	22:DA:659:G:C2	2.81	0.48
22:DA:682:G:N3	22:DA:682:G:H2'	2.27	0.48
22:DA:704:G:H1'	22:DA:726:G:N2	2.28	0.48
22:DA:782:A:O2'	24:DC:224:ALA:O	2.28	0.48
22:DA:1180:U:H5'	22:DA:1181:U:OP2	2.14	0.48
22:DA:1265:A:C8	22:DA:1267:U:N3	2.81	0.48
22:DA:1343:G:N2	22:DA:1405:U:C2	2.81	0.48
22:DA:1601:G:C5	22:DA:1602:U:C4	3.00	0.48
22:DA:1753:G:N1	22:DA:1756:G:C2	2.81	0.48
22:DA:1760:C:H3'	22:DA:1761:C:H6	1.77	0.48
22:DA:2061:G:C6	55:DA:3001:VIF:H29	2.48	0.48
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.66	0.48
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.95	0.48
22:DA:2573:C:OP1	22:DA:2574:G:H5"	2.13	0.48
22:DA:2693:G:N2	22:DA:2717:C:C2	2.81	0.48
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.13	0.48
24:DC:9:THR:O	24:DC:10:SER:CB	2.60	0.48
25:DD:52:THR:O	25:DD:77:ARG:HG2	2.13	0.48
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.95	0.48
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.47	0.48
33:DL:28:GLY:O	33:DL:29:LYS:HB3	2.12	0.48
34:DM:76:LYS:HE3	34:DM:80:VAL:HG12	1.95	0.48
36:DO:92:PHE:HB2	36:DO:117:PHE:CE1	2.47	0.48
1:AA:406:G:C6	1:AA:495:A:C8	3.01	0.48
1:AA:596:A:N6	1:AA:645:G:N1	2.61	0.48
1:AA:623:C:C4	1:AA:624:C:C5	3.01	0.48
1:AA:661:G:N2	1:AA:662:U:C2	2.82	0.48
1:AA:958:A:C6	1:AA:959:A:N1	2.82	0.48
1:AA:1182:G:C3'	1:AA:1183:U:H5'	2.43	0.48
1:AA:1242:G:C6	1:AA:1243:C:N3	2.81	0.48
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.61	0.48
2:AB:208:ARG:O	2:AB:210:VAL:N	2.46	0.48
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.96	0.48
5:AE:41:ASP:OD1	5:AE:41:ASP:C	2.56	0.48
6:AF:45:ARG:HB3	6:AF:59:TYR:CD1	2.48	0.48
6:AF:47:LEU:HD12	6:AF:55:HIS:HA	1.95	0.48
6:AF:75:GLU:HA	6:AF:78:PHE:HB2	1.95	0.48
7:AG:147:ALA:HA	11:AK:61:PHE:CE1	2.48	0.48
11:AK:13:ARG:O	11:AK:14:LYS:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:128:ARG:HG2	11:AK:128:ARG:HH11	1.78	0.48
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.42	0.48
21:AU:18:ARG:HD2	21:AU:18:ARG:N	2.28	0.48
22:BA:184:C:H2'	22:BA:185:G:H8	1.78	0.48
22:BA:630:G:H5"	22:BA:631:A:OP2	2.13	0.48
22:BA:699:A:N7	22:BA:734:A:C4	2.82	0.48
22:BA:719:C:H2'	22:BA:720:U:O4'	2.13	0.48
22:BA:783:A:C8	22:BA:784:G:H4'	2.48	0.48
22:BA:1058:U:N3	22:BA:1059:G:N7	2.61	0.48
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.62	0.48
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.43	0.48
22:BA:2428:G:H5"	22:BA:2429:G:OP1	2.12	0.48
22:BA:2462:C:H2'	22:BA:2463:C:H6	1.78	0.48
22:BA:2599:G:C8	24:BC:236:GLU:HB2	2.48	0.48
22:BA:2721:A:H2'	22:BA:2722:G:O4'	2.13	0.48
24:BC:222:GLY:HA2	24:BC:225:MET:CE	2.43	0.48
32:BK:41:ILE:HD11	32:BK:86:LEU:HD22	1.95	0.48
37:BP:52:ASN:O	37:BP:53:ARG:HD3	2.13	0.48
38:BQ:74:ILE:O	38:BQ:74:ILE:CG2	2.60	0.48
46:BY:3:ALA:HA	46:BY:6:LEU:HB2	1.95	0.48
1:CA:263:A:P	20:CT:74:ARG:NH1	2.86	0.48
1:CA:620:C:C1'	4:CD:132:ILE:HD13	2.44	0.48
1:CA:636:U:H2'	1:CA:637:C:C6	2.47	0.48
1:CA:939:G:C2	1:CA:940:C:C2	3.01	0.48
1:CA:952:U:H2'	1:CA:953:G:C8	2.48	0.48
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.12	0.48
1:CA:1141:C:C2	1:CA:1142:G:C8	3.01	0.48
1:CA:1507:A:C5	1:CA:1530:G:C6	3.01	0.48
2:CB:15:HIS:O	2:CB:17:GLY:N	2.46	0.48
3:CC:102:ASN:N	3:CC:102:ASN:OD1	2.46	0.48
5:CE:150:PRO:C	5:CE:152:MET:N	2.71	0.48
6:CF:93:LYS:C	6:CF:94:HIS:CG	2.90	0.48
8:CH:55:THR:C	8:CH:57:PRO:HD3	2.38	0.48
10:CJ:46:LYS:HB3	10:CJ:66:GLU:OE1	2.13	0.48
13:CM:106:ALA:O	13:CM:110:LYS:HB3	2.13	0.48
18:CR:46:GLY:O	18:CR:47:THR:O	2.32	0.48
22:DA:158:U:C2'	22:DA:159:G:H5'	2.43	0.48
22:DA:382:A:N1	22:DA:383:C:C2	2.81	0.48
22:DA:479:A:N3	22:DA:481:G:H5"	2.27	0.48
22:DA:537:G:C6	22:DA:555:G:C2	3.00	0.48
22:DA:705:A:C2	22:DA:727:A:O4'	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1060:U:C5	30:DI:132:THR:HG23	2.48	0.48
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.48	0.48
26:DE:5:LEU:HD23	26:DE:122:GLU:HG2	1.94	0.48
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.12	0.48
32:DK:76:VAL:CG1	37:DP:73:VAL:HG22	2.43	0.48
32:DK:99:ILE:HD13	32:DK:118:LEU:HD12	1.94	0.48
36:DO:72:ALA:HA	36:DO:109:ALA:CB	2.43	0.48
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.95	0.48
50:D2:35:ARG:O	50:D2:38:GLY:N	2.45	0.48
1:AA:116:A:H2'	1:AA:117:G:H8	1.78	0.48
1:AA:437:U:C2'	1:AA:438:U:H5'	2.43	0.48
1:AA:577:G:C8	1:AA:816:A:C6	3.01	0.48
1:AA:601:G:H2'	1:AA:602:A:C8	2.48	0.48
1:AA:1270:G:C2	1:AA:1271:A:C8	3.00	0.48
1:AA:1483:A:H2'	1:AA:1484:C:O4'	2.13	0.48
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.95	0.48
2:AB:154:MET:HE2	2:AB:158:PRO:HG3	1.96	0.48
6:AF:36:ILE:HG23	6:AF:36:ILE:O	2.13	0.48
14:AN:46:LEU:C	14:AN:46:LEU:HD12	2.38	0.48
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.13	0.48
17:AQ:59:VAL:HG23	17:AQ:77:ARG:O	2.13	0.48
22:BA:513:A:C2	22:BA:514:A:C4	3.00	0.48
22:BA:614:A:HO2'	22:BA:615:U:P	2.32	0.48
22:BA:1027:A:N1	22:BA:1126:A:C4	2.82	0.48
22:BA:1085:A:C5	22:BA:1086:A:N6	2.82	0.48
22:BA:1224:U:C4	22:BA:1225:G:C6	3.00	0.48
22:BA:1372:U:C2'	22:BA:1373:A:H5'	2.43	0.48
22:BA:1383:A:N3	22:BA:1405:U:O2'	2.37	0.48
22:BA:2292:U:H2'	22:BA:2293:G:H8	1.77	0.48
22:BA:2429:G:OP2	57:BA:3343:HOH:O	2.20	0.48
22:BA:2779:U:C6	22:BA:2781:A:C2	3.01	0.48
22:BA:2820:A:P	35:BN:2:ARG:HH12	2.36	0.48
25:BD:4:LEU:HD12	25:BD:32:ASN:CG	2.38	0.48
34:BM:43:ALA:O	34:BM:47:GLU:HB2	2.13	0.48
40:BS:38:TYR:CD1	48:B0:28:LEU:HD21	2.48	0.48
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.27	0.48
1:CA:66:A:O4'	1:CA:173:U:C4	2.66	0.48
1:CA:445:G:C2	1:CA:490:C:C2	3.00	0.48
1:CA:890:G:O2'	1:CA:906:A:N6	2.47	0.48
1:CA:919:A:N1	1:CA:920:U:C5	2.82	0.48
1:CA:1089:G:N2	1:CA:1090:U:H1'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1512:U:O2	1:CA:1513:A:C8	2.67	0.48
2:CB:165:ASP:O	2:CB:169:GLU:HG2	2.13	0.48
3:CC:64:ILE:CG1	3:CC:66:VAL:HG23	2.43	0.48
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.21	0.48
7:CG:57:SER:HB3	7:CG:60:GLU:HG3	1.94	0.48
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.38	0.48
11:CK:122:ARG:NH1	21:CU:36:GLU:HG2	2.27	0.48
21:CU:14:VAL:HG12	21:CU:16:LEU:CD2	2.44	0.48
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.48	0.48
22:DA:319:G:OP2	26:DE:132:LYS:CE	2.61	0.48
22:DA:582:A:N7	57:DA:3285:HOH:O	2.35	0.48
22:DA:583:G:C5	22:DA:584:C:C5	3.01	0.48
22:DA:1138:G:O2'	31:DJ:104:ALA:O	2.30	0.48
22:DA:1317:G:N2	22:DA:1336:A:N3	2.61	0.48
22:DA:1525:A:C5	22:DA:1526:C:C4	3.01	0.48
22:DA:1813:G:H2'	22:DA:1814:G:O4'	2.12	0.48
22:DA:1997:C:P	25:DD:129:THR:HG1	2.37	0.48
22:DA:2267:A:H5"	22:DA:2268:A:H5'	1.95	0.48
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.28	0.48
23:DB:35:C:C2'	23:DB:36:C:O5'	2.61	0.48
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.13	0.48
35:DN:114:GLU:OE2	35:DN:118:ARG:CD	2.61	0.48
38:DQ:58:ARG:NH2	38:DQ:92:ARG:NH1	2.61	0.48
40:DS:66:ILE:HD13	40:DS:66:ILE:N	2.28	0.48
41:DT:65:GLY:O	41:DT:66:LYS:C	2.56	0.48
42:DU:6:ARG:O	42:DU:7:ARG:O	2.30	0.48
42:DU:47:LYS:HE2	42:DU:47:LYS:HB2	1.52	0.48
45:DX:31:PRO:HB2	45:DX:33:LEU:HD13	1.94	0.48
1:AA:44:A:C2	1:AA:399:G:C2	3.01	0.48
1:AA:376:G:H2'	1:AA:377:G:H8	1.78	0.48
1:AA:558:G:C5	1:AA:559:A:C2	3.01	0.48
1:AA:592:G:C6	1:AA:648:A:C6	3.01	0.48
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.40	0.48
4:AD:197:GLU:O	4:AD:200:ILE:N	2.46	0.48
7:AG:132:GLY:O	7:AG:135:VAL:HG22	2.14	0.48
8:AH:49:PHE:C	8:AH:49:PHE:HD1	2.21	0.48
10:AJ:52:LEU:HB3	14:AN:81:ARG:HE	1.76	0.48
13:AM:107:ARG:HG2	13:AM:107:ARG:NH1	2.28	0.48
22:BA:735:A:C8	22:BA:736:C:C5	3.01	0.48
22:BA:847:U:O2	22:BA:934:U:H1'	2.13	0.48
22:BA:1940:U:C2	22:BA:1965:C:OP2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2543:G:H2'	22:BA:2544:G:C8	2.48	0.48
22:BA:2598:A:OP1	24:BC:235:GLY:HA2	2.13	0.48
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.43	0.48
26:BE:109:LEU:O	26:BE:111:GLU:N	2.47	0.48
27:BF:119:ALA:HB2	27:BF:177:PHE:CD2	2.48	0.48
31:BJ:70:THR:C	31:BJ:71:ASP:OD2	2.56	0.48
32:BK:19:VAL:HG11	32:BK:41:ILE:HD13	1.95	0.48
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.12	0.48
1:CA:49:U:O4	1:CA:365:U:H5	1.96	0.48
1:CA:244:U:H4'	1:CA:245:U:C5'	2.44	0.48
1:CA:375:U:N3	1:CA:376:G:N7	2.61	0.48
1:CA:510:A:H5"	1:CA:511:C:P	2.53	0.48
1:CA:609:A:N7	57:CA:1795:HOH:O	2.35	0.48
1:CA:747:A:N6	1:CA:748:G:C6	2.81	0.48
2:CB:135:LEU:C	2:CB:137:ARG:N	2.71	0.48
15:CO:8:THR:O	15:CO:12:VAL:HG23	2.13	0.48
15:CO:42:HIS:O	15:CO:45:GLU:O	2.31	0.48
22:DA:784:G:N1	24:DC:228:VAL:HG21	2.28	0.48
22:DA:1058:U:H2'	22:DA:1059:G:C8	2.48	0.48
22:DA:1090:A:N6	22:DA:1091:G:O6	2.46	0.48
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.43	0.48
22:DA:1586:A:N6	22:DA:1587:G:C2	2.81	0.48
22:DA:1846:G:H5"	22:DA:1847:A:OP2	2.12	0.48
22:DA:2037:A:C6	22:DA:2038:G:C6	3.01	0.48
22:DA:2405:G:N2	22:DA:2411:A:C8	2.81	0.48
22:DA:2873:A:O4'	35:DN:6:SER:HB2	2.13	0.48
24:DC:141:VAL:O	24:DC:162:VAL:N	2.43	0.48
35:DN:51:LEU:N	35:DN:51:LEU:HD23	2.27	0.48
44:DW:33:ALA:N	44:DW:64:ASP:OD2	2.46	0.48
47:DZ:7:ILE:HD11	47:DZ:48:ILE:HD11	1.96	0.48
1:AA:34:C:H2'	1:AA:35:G:C8	2.48	0.48
1:AA:110:C:N4	1:AA:111:G:C6	2.81	0.48
1:AA:193:C:O4'	20:AT:55:GLN:OE1	2.31	0.48
1:AA:402:G:C5	1:AA:403:C:C5	3.01	0.48
1:AA:495:A:O4'	1:AA:496:A:C8	2.67	0.48
1:AA:499:A:H4'	1:AA:500:G:OP1	2.14	0.48
1:AA:575:G:C6	1:AA:821:G:N7	2.81	0.48
1:AA:772:U:C2'	1:AA:773:G:O5'	2.61	0.48
1:AA:785:G:N2	1:AA:798:U:C2	2.81	0.48
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.12	0.48
1:AA:1042:A:H2'	1:AA:1043:G:C1'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1058:G:C6	1:AA:1059:C:C4	3.01	0.48
1:AA:1133:G:N1	1:AA:1142:G:C6	2.81	0.48
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.46	0.48
4:AD:3:ARG:NE	4:AD:115:ARG:HD3	2.29	0.48
10:AJ:44:THR:CG2	10:AJ:70:HIS:HA	2.43	0.48
10:AJ:81:GLU:O	10:AJ:84:VAL:HG12	2.14	0.48
11:AK:125:LYS:CG	11:AK:126:LYS:N	2.76	0.48
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.62	0.48
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.94	0.48
14:AN:66:GLN:HG3	14:AN:79:LEU:HD21	1.94	0.48
20:AT:23:SER:OG	20:AT:24:ARG:N	2.46	0.48
22:BA:22:C:C2'	22:BA:23:G:O5'	2.61	0.48
22:BA:164:C:H2'	22:BA:165:A:H5'	1.94	0.48
22:BA:247:G:H4'	22:BA:386:G:C5	2.49	0.48
22:BA:842:U:N3	22:BA:843:G:N7	2.62	0.48
22:BA:1074:G:H2'	22:BA:1075:C:H5'	1.96	0.48
22:BA:1176:U:N3	22:BA:1177:G:C6	2.81	0.48
22:BA:1319:C:O2'	22:BA:1320:C:H5'	2.14	0.48
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.14	0.48
22:BA:1876:A:C2	22:BA:1877:A:C4	3.02	0.48
22:BA:1917:U:C2	22:BA:1918:A:C8	3.01	0.48
22:BA:2020:A:H5'	48:B0:9:THR:HG22	1.95	0.48
22:BA:2027:G:N2	22:BA:2037:A:C4	2.81	0.48
22:BA:2093:G:O5'	29:BH:24:GLY:HA3	2.14	0.48
22:BA:2371:G:N2	22:BA:2372:U:C2	2.81	0.48
23:BB:30:C:C2'	23:BB:31:C:H5'	2.40	0.48
24:BC:222:GLY:C	24:BC:224:ALA:H	2.22	0.48
30:BI:6:GLN:O	30:BI:7:ALA:CB	2.62	0.48
53:B5:59:VAL:HG12	53:B5:63:VAL:CG2	2.43	0.48
1:CA:501:C:H1'	1:CA:549:C:H1'	1.96	0.48
3:CC:148:GLY:O	3:CC:203:PHE:N	2.38	0.48
3:CC:152:GLU:OE2	3:CC:154:SER:HB3	2.14	0.48
8:CH:66:PHE:CD1	8:CH:66:PHE:C	2.89	0.48
8:CH:86:TYR:CE2	8:CH:124:GLU:HB2	2.48	0.48
11:CK:93:ARG:NH2	21:CU:20:LYS:HD2	2.29	0.48
15:CO:35:GLN:NE2	15:CO:39:LEU:HD22	2.28	0.48
17:CQ:45:HIS:ND1	17:CQ:70:THR:HG21	2.27	0.48
22:DA:27:G:N2	22:DA:512:G:H1'	2.29	0.48
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.46	0.48
22:DA:532:A:N7	22:DA:2021:C:H2'	2.28	0.48
22:DA:546:U:O2	22:DA:546:U:H3'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:664:G:H4'	22:DA:941:A:OP1	2.13	0.48
22:DA:737:C:C2	22:DA:738:G:C8	3.02	0.48
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.13	0.48
22:DA:1567:G:OP1	24:DC:85:PRO:HB3	2.13	0.48
22:DA:1647:U:H3'	22:DA:1647:U:P	2.54	0.48
22:DA:1864:U:H2'	22:DA:1865:U:H5'	1.94	0.48
22:DA:1983:G:O2'	22:DA:2606:C:H5'	2.13	0.48
22:DA:2305:U:C4	27:DF:152:LEU:HA	2.48	0.48
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.13	0.48
25:DD:179:ARG:NH1	37:DP:8:LEU:HD21	2.29	0.48
26:DE:145:ASP:HB3	26:DE:184:ASP:HB2	1.96	0.48
32:DK:113:MET:SD	32:DK:116:ILE:HD11	2.54	0.48
36:DO:2:ASP:O	36:DO:6:ALA:HB2	2.14	0.48
36:DO:80:GLU:HA	36:DO:83:LEU:HD12	1.96	0.48
41:DT:39:THR:HG23	41:DT:42:GLU:H	1.78	0.48
46:DY:18:LEU:O	46:DY:22:LEU:HB2	2.13	0.48
46:DY:23:ARG:NE	46:DY:23:ARG:HA	2.27	0.48
1:AA:108:G:N3	1:AA:108:G:C5'	2.74	0.48
1:AA:602:A:C6	1:AA:603:U:N3	2.82	0.48
1:AA:654:G:H2'	1:AA:655:A:H5'	1.94	0.48
1:AA:1036:A:H3'	1:AA:1037:C:C5	2.49	0.48
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.48	0.48
1:AA:1288:A:C6	1:AA:1289:A:C5	3.01	0.48
1:AA:1395:C:O2'	1:AA:1401:G:O2'	2.25	0.48
1:AA:1446:A:O2'	1:AA:1447:A:H5'	2.14	0.48
1:AA:1504:G:OP2	1:AA:1507:A:O2'	2.24	0.48
4:AD:192:SER:O	4:AD:193:ALA:HB3	2.14	0.48
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.43	0.48
7:AG:97:ASN:O	7:AG:101:MET:HG3	2.14	0.48
8:AH:32:LEU:CD1	8:AH:32:LEU:C	2.86	0.48
9:AI:25:ASN:HB2	9:AI:27:LYS:HG2	1.94	0.48
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.29	0.48
18:AR:25:ASP:O	18:AR:26:ILE:C	2.54	0.48
21:AU:6:VAL:O	21:AU:6:VAL:HG23	2.12	0.48
22:BA:194:G:C8	57:BA:3763:HOH:O	2.65	0.48
22:BA:301:G:H4'	22:BA:301:G:OP1	2.14	0.48
22:BA:602:A:N3	22:BA:655:A:C2	2.82	0.48
22:BA:612:G:H4'	22:BA:613:A:C2	2.48	0.48
22:BA:1115:G:C4	22:BA:1116:G:N7	2.82	0.48
22:BA:1789:A:OP1	24:BC:221:ARG:HG3	2.13	0.48
22:BA:1917:U:C4	22:BA:1918:A:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2317:A:C2'	22:BA:2318:G:H5'	2.44	0.48
22:BA:2665:A:C2	22:BA:2666:C:N1	2.82	0.48
22:BA:2687:U:H2'	22:BA:2688:G:O4'	2.13	0.48
27:BF:36:LEU:HB3	27:BF:57:LEU:HD21	1.94	0.48
27:BF:46:ASP:OD2	27:BF:49:LEU:HD13	2.13	0.48
28:BG:96:ALA:CB	28:BG:105:LEU:HD23	2.44	0.48
30:BI:5:VAL:O	30:BI:6:GLN:HB2	2.12	0.48
30:BI:92:LYS:HB3	30:BI:95:LYS:CG	2.43	0.48
30:BI:102:SER:OG	30:BI:103:ARG:N	2.47	0.48
30:BI:112:THR:O	30:BI:113:LYS:C	2.56	0.48
40:BS:54:ALA:O	40:BS:55:ILE:C	2.57	0.48
44:BW:82:ILE:HG22	44:BW:82:ILE:O	2.12	0.48
46:BY:46:VAL:O	46:BY:47:ARG:C	2.55	0.48
1:CA:55:A:N6	1:CA:56:U:N3	2.61	0.48
1:CA:207:C:O2	1:CA:207:C:C2'	2.61	0.48
1:CA:960:U:C5	1:CA:1225:A:C8	3.01	0.48
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.13	0.48
1:CA:1088:G:C4	1:CA:1089:G:C8	3.02	0.48
1:CA:1303:C:N4	1:CA:1304:G:C6	2.82	0.48
3:CC:22:TRP:CD1	3:CC:57:ILE:HG22	2.49	0.48
8:CH:88:ARG:O	8:CH:122:GLY:HA3	2.13	0.48
11:CK:110:ILE:O	21:CU:6:VAL:HG22	2.12	0.48
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	1.95	0.48
16:CP:50:THR:O	16:CP:50:THR:HG22	2.14	0.48
18:CR:25:ASP:C	18:CR:27:ALA:H	2.21	0.48
22:DA:532:A:N1	22:DA:2020:A:H1'	2.29	0.48
22:DA:703:U:C5	22:DA:704:G:C6	3.01	0.48
22:DA:769:U:C2	22:DA:770:G:C8	3.01	0.48
22:DA:783:A:H8	22:DA:784:G:H4'	1.78	0.48
22:DA:1027:A:N6	22:DA:1126:A:N3	2.61	0.48
22:DA:1062:G:H2'	22:DA:1063:G:C4	2.49	0.48
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.95	0.48
22:DA:1820:U:OP1	24:DC:177:ARG:CG	2.60	0.48
22:DA:2131:U:C4'	22:DA:2133:G:H1'	2.44	0.48
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.49	0.48
24:DC:84:ASP:OD1	24:DC:86:ASN:ND2	2.44	0.48
26:DE:5:LEU:HD13	26:DE:10:SER:O	2.14	0.48
26:DE:140:ASP:C	26:DE:142:ALA:H	2.21	0.48
28:DG:4:VAL:HG12	28:DG:69:ARG:HG2	1.94	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
33:DL:110:VAL:HG21	33:DL:127:VAL:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:56:ALA:C	34:DM:58:LYS:N	2.70	0.48
43:DV:30:ILE:HD11	43:DV:63:ILE:CD1	2.44	0.48
47:DZ:47:MET:O	47:DZ:51:VAL:HG22	2.14	0.48
49:D1:26:ASN:HB3	49:D1:29:THR:OG1	2.13	0.48
1:AA:90:C:C2	1:AA:91:U:C5	3.02	0.48
1:AA:469:C:C4	1:AA:470:C:C4	3.02	0.48
1:AA:852:G:C5	1:AA:853:C:C5	3.02	0.48
1:AA:1048:G:N2	1:AA:1050:G:C4	2.81	0.48
1:AA:1077:G:N1	1:AA:1081:A:C6	2.82	0.48
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.26	0.48
1:AA:1216:A:H2'	1:AA:1217:C:H6	1.78	0.48
4:AD:197:GLU:O	4:AD:199:LEU:N	2.46	0.48
5:AE:97:GLN:HB2	5:AE:124:LEU:HD12	1.95	0.48
9:AI:117:GLY:C	9:AI:118:LEU:HD12	2.38	0.48
11:AK:76:GLU:O	22:BA:2141:G:OP1	2.30	0.48
13:AM:15:ALA:HB1	13:AM:34:LEU:HD21	1.94	0.48
18:AR:36:SER:HA	18:AR:72:ASP:HB3	1.94	0.48
21:AU:17:ARG:NH1	21:AU:20:LYS:HG2	2.29	0.48
22:BA:83:A:C2	22:BA:101:A:C2	3.01	0.48
22:BA:238:C:C2'	22:BA:239:C:O5'	2.61	0.48
22:BA:380:G:H2'	22:BA:381:G:O4'	2.14	0.48
22:BA:848:C:H2'	22:BA:849:A:C8	2.48	0.48
22:BA:1662:U:O2	22:BA:1662:U:H2'	2.12	0.48
22:BA:1695:G:H1'	24:BC:8:PRO:O	2.13	0.48
22:BA:1799:G:O6	24:BC:178:SER:HB3	2.14	0.48
22:BA:2063:C:O2	22:BA:2450:A:N1	2.46	0.48
22:BA:2146:C:H5"	22:BA:2147:A:OP1	2.13	0.48
22:BA:2345:G:C5	22:BA:2381:A:C2	3.02	0.48
22:BA:2675:A:H2'	22:BA:2676:C:H5'	1.93	0.48
25:BD:29:VAL:HG11	25:BD:98:VAL:HG23	1.96	0.48
27:BF:80:ARG:O	27:BF:83:TYR:HB2	2.14	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
30:BI:77:ALA:HA	30:BI:80:LEU:HD12	1.95	0.48
35:BN:51:LEU:O	35:BN:52:ILE:C	2.57	0.48
38:BQ:9:ILE:O	38:BQ:9:ILE:HG13	2.12	0.48
38:BQ:115:ALA:C	38:BQ:117:LEU:H	2.22	0.48
39:BR:52:PRO:O	39:BR:53:PHE:O	2.31	0.48
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.29	0.48
1:CA:202:G:H2'	1:CA:203:G:O4'	2.13	0.48
1:CA:463:U:O2	1:CA:463:U:H2'	2.12	0.48
2:CB:62:SER:HA	2:CB:224:GLY:HA2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:77:ASN:HB2	5:CE:82:GLN:HG2	1.95	0.48
9:CI:41:ARG:O	9:CI:45:ARG:NH1	2.47	0.48
17:CQ:11:ARG:NH2	17:CQ:12:VAL:O	2.47	0.48
22:DA:204:A:O4'	22:DA:206:U:C6	2.67	0.48
22:DA:300:A:O5'	42:DU:82:ARG:NH1	2.46	0.48
22:DA:327:G:N2	42:DU:68:SER:HB2	2.29	0.48
22:DA:374:A:C2	22:DA:401:A:C4	3.01	0.48
22:DA:681:G:C4	22:DA:682:G:C8	3.02	0.48
22:DA:1087:G:H2'	22:DA:1088:A:H5'	1.96	0.48
22:DA:1544:A:N6	22:DA:1545:A:N1	2.61	0.48
22:DA:1821:A:H2'	22:DA:1822:C:O4'	2.14	0.48
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.29	0.48
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.48
31:DJ:9:GLU:O	31:DJ:10:THR:HG22	2.13	0.48
32:DK:121:GLU:O	32:DK:122:VAL:O	2.32	0.48
35:DN:117:ASP:O	35:DN:118:ARG:CB	2.60	0.48
42:DU:53:ASN:C	42:DU:55:PRO:HD3	2.39	0.48
52:D4:12:ARG:NH1	52:D4:12:ARG:HB2	2.28	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.49	0.48
1:AA:702:A:H61	22:BA:1846:G:C2'	2.27	0.48
1:AA:989:U:H2'	1:AA:990:C:C6	2.49	0.48
1:AA:1379:G:C5	1:AA:1380:U:C5	3.02	0.48
2:AB:35:ARG:HA	2:AB:35:ARG:NE	2.28	0.48
2:AB:46:THR:HG23	2:AB:201:PRO:HB2	1.96	0.48
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.28	0.48
7:AG:92:ARG:O	7:AG:96:ARG:HB2	2.14	0.48
9:AI:86:ALA:C	9:AI:88:MET:N	2.69	0.48
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.92	0.48
14:AN:3:LYS:O	14:AN:4:GLN:C	2.56	0.48
22:BA:627:A:C5	22:BA:637:A:C8	3.01	0.48
22:BA:748:G:OP2	40:BS:88:ARG:HB3	2.14	0.48
22:BA:811:U:C2	22:BA:1251:C:C5	3.02	0.48
22:BA:1564:C:H2'	22:BA:1565:C:C6	2.49	0.48
22:BA:1646:C:H5"	22:BA:1647:U:C5'	2.44	0.48
22:BA:2210:U:C2	22:BA:2212:A:N7	2.82	0.48
22:BA:2674:G:H2'	22:BA:2675:A:C8	2.48	0.48
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.43	0.48
23:BB:30:C:C5	23:BB:31:C:C6	3.02	0.48
29:BH:14:SER:HG	29:BH:17:ASP:CG	2.20	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
30:BI:7:ALA:HB2	30:BI:61:VAL:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:25:GLY:O	30:BI:28:LEU:HD23	2.13	0.48
36:BO:93:ASP:OD2	36:BO:95:SER:N	2.40	0.48
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.79	0.48
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.38	0.48
44:BW:10:THR:O	44:BW:11:ARG:CB	2.60	0.48
1:CA:644:U:C2	1:CA:645:G:C8	3.01	0.48
1:CA:756:C:N3	1:CA:757:U:C6	2.81	0.48
1:CA:767:A:H2'	1:CA:768:A:O4'	2.14	0.48
1:CA:799:G:C6	1:CA:800:G:C4	3.02	0.48
2:CB:126:PHE:N	2:CB:126:PHE:HD2	2.11	0.48
3:CC:184:TYR:CE1	3:CC:201:TRP:CE2	3.01	0.48
5:CE:93:ARG:NH1	5:CE:93:ARG:HB3	2.27	0.48
5:CE:153:VAL:O	5:CE:157:ARG:N	2.43	0.48
5:CE:157:ARG:C	5:CE:159:LYS:N	2.66	0.48
9:CI:116:VAL:HG21	10:CJ:62:ARG:HB2	1.95	0.48
22:DA:14:A:N1	22:DA:526:A:C2	2.81	0.48
22:DA:24:G:N2	22:DA:517:C:C2	2.82	0.48
22:DA:448:U:H4'	22:DA:449:A:OP2	2.13	0.48
22:DA:629:G:O6	22:DA:630:G:C6	2.66	0.48
22:DA:830:G:C4	22:DA:2448:A:C5	3.02	0.48
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.96	0.48
22:DA:1470:A:H2'	22:DA:1471:G:O5'	2.13	0.48
22:DA:1708:C:H2'	22:DA:1709:U:C6	2.49	0.48
24:DC:141:VAL:HG13	24:DC:191:THR:O	2.14	0.48
24:DC:162:VAL:HG12	24:DC:163:GLN:N	2.27	0.48
25:DD:112:THR:O	25:DD:195:GLY:HA2	2.14	0.48
27:DF:6:ASP:HA	27:DF:9:LYS:HD2	1.96	0.48
28:DG:17:VAL:HG12	28:DG:19:ILE:HD11	1.95	0.48
35:DN:69:ARG:O	35:DN:71:ARG:N	2.38	0.48
40:DS:58:ALA:O	40:DS:62:ASP:O	2.31	0.48
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.48	0.48
1:AA:1074:G:O3'	2:AB:102:THR:CG2	2.62	0.48
1:AA:1322:C:O2	1:AA:1322:C:O4'	2.27	0.48
2:AB:149:GLY:O	2:AB:151:ILE:N	2.46	0.48
2:AB:196:VAL:HG11	2:AB:199:VAL:HA	1.96	0.48
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.47	0.48
8:AH:95:VAL:O	8:AH:96:MET:C	2.57	0.48
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	2.13	0.48
10:AJ:81:GLU:C	10:AJ:84:VAL:HG12	2.39	0.48
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.29	0.48
22:BA:142:A:C5	22:BA:143:C:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:784:G:O2'	22:BA:785:G:H5"	2.13	0.48
22:BA:1098:A:C6	22:BA:1099:G:C6	3.01	0.48
22:BA:1415:U:O2	22:BA:1415:U:C2'	2.62	0.48
22:BA:1693:U:O4	22:BA:1977:A:C5	2.67	0.48
22:BA:2329:U:H2'	22:BA:2330:G:C8	2.49	0.48
22:BA:2619:C:OP1	25:BD:157:LYS:HE2	2.14	0.48
23:BB:22:U:H2'	23:BB:23:G:C8	2.49	0.48
25:BD:181:ASP:OD1	25:BD:183:GLU:OE1	2.32	0.48
31:BJ:96:ARG:NH2	31:BJ:99:ARG:HD3	2.29	0.48
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.14	0.48
1:CA:509:A:C2	1:CA:510:A:C2	3.02	0.48
1:CA:562:U:OP2	12:CL:14:ARG:CZ	2.62	0.48
1:CA:666:G:O2'	1:CA:667:G:H5'	2.14	0.48
1:CA:740:U:O2'	1:CA:741:G:H5'	2.13	0.48
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.95	0.48
1:CA:1346:A:N6	1:CA:1374:A:C8	2.81	0.48
3:CC:5:VAL:HG21	3:CC:10:ILE:HD13	1.94	0.48
7:CG:23:LEU:HD23	7:CG:26:PHE:HB3	1.96	0.48
7:CG:126:ASP:O	7:CG:130:ASN:HA	2.13	0.48
11:CK:23:ILE:HG13	11:CK:23:ILE:O	2.14	0.48
18:CR:24:LYS:C	18:CR:26:ILE:H	2.20	0.48
18:CR:58:ALA:HA	18:CR:61:ARG:HD3	1.96	0.48
21:CU:14:VAL:HG12	21:CU:16:LEU:HD23	1.94	0.48
22:DA:536:G:H2'	22:DA:537:G:O4'	2.14	0.48
22:DA:627:A:O2'	33:DL:76:GLU:OE1	2.32	0.48
22:DA:947:A:HO2'	22:DA:984:A:H2	1.59	0.48
22:DA:1070:A:H2'	22:DA:1097:U:OP1	2.14	0.48
22:DA:1198:U:O2	38:DQ:4:VAL:HG11	2.13	0.48
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.01	0.48
22:DA:2080:A:O5'	45:DX:19:SER:HB2	2.14	0.48
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.11	0.48
24:DC:3:VAL:HG11	24:DC:202:LEU:HD23	1.95	0.48
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.49	0.48
28:DG:38:ASN:HB3	28:DG:41:VAL:HG23	1.96	0.48
28:DG:39:ASP:HB3	28:DG:58:TYR:OH	2.14	0.48
30:DI:7:ALA:O	30:DI:59:ILE:HB	2.14	0.48
32:DK:105:ARG:HG2	32:DK:122:VAL:HG12	1.96	0.48
49:D1:26:ASN:O	49:D1:27:LYS:C	2.57	0.48
1:AA:374:A:C6	1:AA:375:U:C4	3.01	0.48
1:AA:464:U:O2'	1:AA:466:A:N7	2.40	0.48
1:AA:927:G:N1	1:AA:1391:U:C2	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1091:U:O2	1:AA:1095:U:C2	2.66	0.48
2:AB:56:GLU:HA	2:AB:59:LYS:CB	2.44	0.48
5:AE:20:ARG:O	5:AE:21:VAL:HG12	2.14	0.48
8:AH:66:PHE:CD2	8:AH:67:GLN:HG2	2.48	0.48
9:AI:47:VAL:O	9:AI:50:GLN:HB2	2.14	0.48
9:AI:57:MET:SD	9:AI:57:MET:N	2.85	0.48
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.13	0.48
13:AM:66:GLU:O	13:AM:67:GLY:C	2.57	0.48
20:AT:67:ILE:HG23	20:AT:67:ILE:O	2.14	0.48
22:BA:10:A:C5	22:BA:11:C:C5	3.02	0.48
22:BA:340:A:C2'	22:BA:341:C:H5'	2.44	0.48
22:BA:1170:C:H2'	22:BA:1171:G:C8	2.49	0.48
22:BA:1877:A:H2'	22:BA:1878:G:O4'	2.14	0.48
22:BA:1894:C:O2'	22:BA:1895:C:H5'	2.14	0.48
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.48	0.48
22:BA:2747:G:C2	22:BA:2756:U:C5	3.02	0.48
22:BA:2825:G:C3'	22:BA:2826:A:H5'	2.44	0.48
24:BC:88:SER:HB2	24:BC:200:HIS:CD2	2.49	0.48
32:BK:114:LYS:O	32:BK:118:LEU:HG	2.14	0.48
35:BN:52:ILE:O	35:BN:53:THR:C	2.56	0.48
1:CA:17:U:N3	1:CA:18:C:C5	2.82	0.48
1:CA:238:A:O2'	1:CA:239:U:H5'	2.14	0.48
1:CA:505:G:H5'	1:CA:534:U:C2	2.48	0.48
1:CA:652:U:C4	1:CA:752:G:N3	2.81	0.48
1:CA:1512:U:C2	1:CA:1513:A:C8	3.02	0.48
3:CC:79:LYS:O	3:CC:81:GLY:N	2.47	0.48
3:CC:87:LEU:O	3:CC:91:VAL:HG23	2.13	0.48
3:CC:130:PHE:CE1	3:CC:157:LEU:HB3	2.48	0.48
17:CQ:52:GLU:HG2	17:CQ:53:CYS:H	1.79	0.48
19:CS:63:THR:CG2	19:CS:64:ASP:N	2.77	0.48
22:DA:225:C:H2'	22:DA:226:A:O4'	2.13	0.48
22:DA:937:C:C4	22:DA:938:G:N7	2.82	0.48
22:DA:1062:G:N1	22:DA:1077:A:C2	2.82	0.48
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.13	0.48
22:DA:1361:G:C2	22:DA:1362:C:C6	3.02	0.48
22:DA:1775:U:H2'	22:DA:1776:G:O5'	2.13	0.48
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.44	0.48
22:DA:2491:U:C5'	22:DA:2570:G:H5"	2.43	0.48
22:DA:2615:U:H1'	48:D0:4:GLN:HB3	1.96	0.48
23:DB:84:G:C2	23:DB:93:C:C2	3.02	0.48
25:DD:39:ASP:OD1	25:DD:40:LEU:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:142:VAL:HB	25:DD:143:PRO:HD2	1.96	0.48
26:DE:146:VAL:HG22	26:DE:167:VAL:HG22	1.94	0.48
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.96	0.48
35:DN:85:PRO:HA	35:DN:88:ALA:HB2	1.95	0.48
1:AA:146:G:C2	1:AA:177:G:N7	2.82	0.47
1:AA:188:C:N3	1:AA:189:A:C2	2.82	0.47
1:AA:465:A:H2'	1:AA:466:A:C8	2.49	0.47
1:AA:683:G:N2	11:AK:40:ASN:HA	2.29	0.47
1:AA:737:C:N3	1:AA:738:C:C5	2.82	0.47
1:AA:960:U:O2'	1:AA:1223:C:H5"	2.14	0.47
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.49	0.47
1:AA:1213:A:C5	1:AA:1215:G:C4	3.02	0.47
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.95	0.47
2:AB:82:ASP:O	2:AB:83:ALA:C	2.55	0.47
2:AB:138:THR:HA	2:AB:141:LEU:HB2	1.96	0.47
4:AD:147:GLU:HA	4:AD:150:LYS:HD2	1.96	0.47
4:AD:177:LYS:N	4:AD:177:LYS:HD3	2.29	0.47
8:AH:11:LEU:N	8:AH:11:LEU:HD23	2.28	0.47
17:AQ:14:SER:OG	17:AQ:17:MET:CE	2.62	0.47
22:BA:2:G:H2'	22:BA:3:U:C6	2.49	0.47
22:BA:11:C:C2'	22:BA:12:U:H5'	2.44	0.47
22:BA:528:A:C2	22:BA:2043:C:H4'	2.49	0.47
22:BA:705:A:N6	22:BA:726:G:H1'	2.29	0.47
22:BA:991:C:C5	22:BA:1185:G:C6	3.02	0.47
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.13	0.47
24:BC:77:VAL:HA	24:BC:114:ASP:O	2.14	0.47
30:BI:34:ASN:HB2	30:BI:37:GLU:HG3	1.96	0.47
32:BK:21:CYS:HB2	32:BK:39:ILE:HD12	1.95	0.47
48:B0:20:ASP:O	48:B0:21:ALA:C	2.57	0.47
1:CA:664:G:N2	1:CA:666:G:C8	2.82	0.47
1:CA:829:G:C5	1:CA:858:G:N2	2.82	0.47
1:CA:881:G:C6	1:CA:882:C:C4	3.02	0.47
1:CA:1101:A:N6	2:CB:102:THR:HG21	2.23	0.47
1:CA:1255:G:N1	1:CA:1279:G:C8	2.82	0.47
1:CA:1388:C:N3	1:CA:1389:C:C5	2.82	0.47
1:CA:1431:A:C6	1:CA:1432:G:O6	2.66	0.47
3:CC:10:ILE:HD12	14:CN:98:LYS:HG3	1.96	0.47
3:CC:69:HIS:HA	3:CC:104:ALA:HB3	1.95	0.47
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.28	0.47
10:CJ:35:GLN:O	10:CJ:36:VAL:CB	2.61	0.47
22:DA:121:G:H4'	22:DA:149:A:H5'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:883:G:N2	22:DA:894:U:O2	2.47	0.47
22:DA:1229:C:C2	22:DA:1230:A:C8	3.02	0.47
22:DA:1285:A:N6	22:DA:1329:U:C6	2.82	0.47
22:DA:1826:G:C4	22:DA:1827:U:C6	3.02	0.47
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.44	0.47
22:DA:1893:C:C5	22:DA:1894:C:C5	3.02	0.47
22:DA:2142:A:C2	22:DA:2150:C:N3	2.82	0.47
28:DG:158:LYS:C	28:DG:160:LYS:N	2.72	0.47
33:DL:68:SER:O	33:DL:69:ARG:CB	2.61	0.47
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.49	0.47
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.29	0.47
41:DT:20:ALA:HA	41:DT:31:VAL:HG21	1.96	0.47
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.14	0.47
1:AA:19:A:C2	1:AA:917:G:C4	3.02	0.47
1:AA:1367:C:C5'	10:AJ:62:ARG:NH1	2.76	0.47
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.77	0.47
2:AB:120:GLN:N	2:AB:123:ASP:HB2	2.29	0.47
5:AE:141:ILE:HG22	5:AE:142:ASP:N	2.29	0.47
9:AI:114:LYS:HG2	9:AI:120:LYS:HA	1.95	0.47
22:BA:478:A:C6	22:BA:480:A:C6	3.02	0.47
22:BA:581:C:H2'	22:BA:582:A:H8	1.79	0.47
22:BA:596:U:O2'	22:BA:597:G:H5'	2.14	0.47
22:BA:790:U:O2'	22:BA:791:C:OP2	2.31	0.47
22:BA:1029:A:OP1	34:BM:127:LYS:NZ	2.47	0.47
22:BA:1228:G:C6	22:BA:1229:C:C4	3.02	0.47
22:BA:1911:U:O2	22:BA:1920:C:O2	2.31	0.47
22:BA:2790:U:H5'	22:BA:2893:A:N7	2.29	0.47
23:BB:109:A:C5	23:BB:110:C:C4	3.02	0.47
24:BC:107:PRO:HD2	24:BC:110:LEU:HB2	1.96	0.47
25:BD:13:ARG:HD2	25:BD:15:PHE:CE2	2.49	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
31:BJ:35:ARG:HG2	31:BJ:40:HIS:CD2	2.49	0.47
33:BL:132:ARG:NH1	33:BL:142:ILE:HG21	2.29	0.47
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.44	0.47
40:BS:83:LYS:HD2	40:BS:97:LEU:CD1	2.44	0.47
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.96	0.47
53:B5:41:THR:HG21	53:B5:216:THR:CB	2.45	0.47
1:CA:8:A:N6	4:CD:206:LYS:HB3	2.29	0.47
1:CA:57:G:C6	1:CA:58:C:N4	2.82	0.47
1:CA:211:G:N3	1:CA:211:G:H2'	2.29	0.47
1:CA:661:G:N3	1:CA:662:U:C6	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.14	0.47
1:CA:1080:A:OP1	5:CE:52:LYS:HE2	2.13	0.47
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.12	0.47
4:CD:78:GLU:HG3	4:CD:93:LEU:HD11	1.96	0.47
5:CE:68:ARG:O	5:CE:71:MET:HE3	2.14	0.47
12:CL:111:LYS:O	12:CL:114:ARG:HG3	2.14	0.47
13:CM:43:VAL:HG23	13:CM:43:VAL:O	2.14	0.47
14:CN:22:ALA:N	14:CN:25:ALA:HB2	2.29	0.47
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.96	0.47
22:DA:67:U:H2'	22:DA:68:G:O4'	2.14	0.47
22:DA:742:A:H2'	22:DA:743:A:C8	2.49	0.47
22:DA:1014:A:C2	22:DA:1149:G:C2	3.02	0.47
22:DA:1515:A:H5'	22:DA:1516:G:OP2	2.15	0.47
22:DA:1662:U:O2	22:DA:2687:U:H4'	2.13	0.47
22:DA:1754:A:C6	22:DA:1755:A:C6	3.02	0.47
22:DA:2111:U:H5	22:DA:2145:C:H2'	1.78	0.47
22:DA:2114:A:H2'	22:DA:2114:A:N3	2.29	0.47
22:DA:2491:U:H5'	22:DA:2570:G:H5'	1.96	0.47
22:DA:2886:A:C2	48:D0:29:SER:HB3	2.49	0.47
24:DC:29:PRO:HG3	24:DC:63:ARG:CZ	2.43	0.47
24:DC:39:LYS:HE3	24:DC:56:GLY:O	2.14	0.47
25:DD:172:VAL:CG2	25:DD:194:PRO:HD3	2.44	0.47
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.47
29:DH:83:LYS:CG	29:DH:149:GLU:CG	2.86	0.47
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.38	0.47
36:DO:99:TYR:CD1	36:DO:99:TYR:O	2.67	0.47
37:DP:52:ASN:O	37:DP:53:ARG:HD3	2.14	0.47
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.62	0.47
46:DY:56:LEU:O	46:DY:57:LEU:HB3	2.14	0.47
51:D3:7:VAL:HB	51:D3:61:CYS:HB3	1.95	0.47
1:AA:254:G:O2'	17:AQ:18:GLU:O	2.32	0.47
1:AA:352:C:OP2	57:AA:1891:HOH:O	2.19	0.47
1:AA:1202:U:C2	14:AN:82:ILE:HG21	2.50	0.47
8:AH:49:PHE:HB3	8:AH:61:LEU:HD23	1.97	0.47
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.29	0.47
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.61	0.47
18:AR:34:THR:CG2	18:AR:38:LYS:HB2	2.45	0.47
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.96	0.47
20:AT:69:LYS:HB2	20:AT:70:ASN:OD1	2.14	0.47
22:BA:149:A:C5	22:BA:150:U:C5	3.02	0.47
22:BA:242:G:C8	51:B3:5:LYS:HG2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:370:G:O2'	22:BA:424:G:OP1	2.26	0.47
22:BA:973:A:H5"	39:BR:81:LYS:HG3	1.96	0.47
22:BA:1014:A:C6	22:BA:1015:U:C4	3.02	0.47
22:BA:1026:G:H2'	22:BA:1027:A:H8	1.79	0.47
22:BA:1135:C:N4	22:BA:1139:G:C6	2.82	0.47
22:BA:1169:A:C6	22:BA:1180:U:O4	2.68	0.47
22:BA:1242:U:O2	33:BL:4:ASN:ND2	2.47	0.47
22:BA:1924:C:O2	22:BA:1924:C:H2'	2.13	0.47
22:BA:2281:A:C2	22:BA:2282:G:C5	3.03	0.47
22:BA:2729:G:C5	22:BA:2730:C:C5	3.02	0.47
24:BC:31:ALA:HA	24:BC:34:LEU:HD12	1.96	0.47
26:BE:7:ASP:C	26:BE:9:GLN:H	2.23	0.47
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.78	0.47
28:BG:63:ALA:O	28:BG:67:THR:CG2	2.62	0.47
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.29	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
30:BI:80:LEU:HA	30:BI:84:ALA:HB3	1.95	0.47
37:BP:14:LYS:NZ	37:BP:81:VAL:O	2.48	0.47
39:BR:24:LYS:CA	39:BR:94:THR:HG23	2.33	0.47
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.77	0.47
1:CA:781:A:H2'	1:CA:782:A:H5'	1.96	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.29	0.47
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.14	0.47
1:CA:1377:A:C5	7:CG:7:ILE:CD1	2.96	0.47
1:CA:1537:U:H5"	1:CA:1538:C:OP2	2.14	0.47
3:CC:138:VAL:O	3:CC:141:ALA:HB3	2.14	0.47
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.15	0.47
6:CF:38:ARG:HG2	6:CF:63:ASN:HB3	1.96	0.47
7:CG:125:SER:C	7:CG:127:ALA:N	2.72	0.47
12:CL:110:ARG:NE	12:CL:117:TYR:CD2	2.82	0.47
15:CO:60:VAL:O	15:CO:63:ARG:HB3	2.15	0.47
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.48	0.47
22:DA:79:C:O2	22:DA:108:G:C2	2.68	0.47
22:DA:510:C:C4	22:DA:511:U:C4	3.02	0.47
22:DA:961:C:C4	22:DA:2031:A:C4	3.01	0.47
22:DA:1833:C:C4	22:DA:1834:U:C5	3.02	0.47
22:DA:2160:C:H2'	22:DA:2161:C:O4'	2.14	0.47
22:DA:2253:G:C5	22:DA:2254:C:C5	3.02	0.47
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.62	0.47
24:DC:246:THR:C	24:DC:248:TRP:H	2.22	0.47
26:DE:150:THR:C	26:DE:192:ALA:HB2	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:197:GLU:O	26:DE:201:ALA:HB2	2.15	0.47
28:DG:10:VAL:O	28:DG:10:VAL:HG13	2.14	0.47
39:DR:67:GLY:C	39:DR:93:PHE:CE2	2.92	0.47
46:DY:9:LYS:H	46:DY:12:GLU:HG3	1.78	0.47
1:AA:8:A:H5'	5:AE:125:ALA:O	2.14	0.47
1:AA:148:G:C2'	1:AA:149:A:O5'	2.62	0.47
1:AA:903:G:H2'	1:AA:904:U:C6	2.50	0.47
1:AA:1418:A:C2	1:AA:1483:A:C2	3.03	0.47
2:AB:78:GLU:C	2:AB:80:VAL:H	2.22	0.47
2:AB:82:ASP:N	2:AB:85:LEU:HB3	2.29	0.47
2:AB:113:ARG:O	2:AB:117:LEU:HB2	2.15	0.47
2:AB:184:PHE:CE2	2:AB:198:PHE:HD2	2.31	0.47
4:AD:78:GLU:O	4:AD:79:ALA:C	2.56	0.47
4:AD:171:LEU:HD12	4:AD:171:LEU:O	2.14	0.47
12:AL:43:LYS:HG2	12:AL:44:LYS:HD3	1.96	0.47
16:AP:68:SER:HB2	16:AP:71:VAL:HB	1.96	0.47
20:AT:23:SER:OG	20:AT:24:ARG:HD2	2.14	0.47
22:BA:26:G:C6	22:BA:27:G:C6	3.03	0.47
22:BA:205:G:O2'	22:BA:206:U:OP2	2.32	0.47
22:BA:566:U:OP1	33:BL:29:LYS:HE3	2.15	0.47
22:BA:1446:C:H2'	22:BA:1447:C:C6	2.49	0.47
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.14	0.47
22:BA:1851:U:C4	22:BA:1852:U:C4	3.03	0.47
22:BA:1907:G:C8	22:BA:1908:C:C5	3.02	0.47
22:BA:2267:A:H2	57:BA:3511:HOH:O	1.96	0.47
22:BA:2321:U:C5'	22:BA:2322:A:OP2	2.57	0.47
22:BA:2642:G:N2	22:BA:2773:C:C2	2.81	0.47
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.14	0.47
24:BC:7:LYS:HB3	24:BC:8:PRO:HD2	1.95	0.47
28:BG:121:ILE:HD12	28:BG:141:ILE:CG2	2.44	0.47
29:BH:86:ASP:H	1:CA:359:G:H4'	1.80	0.47
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.82	0.47
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.95	0.47
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.91	0.47
1:CA:161:A:H2'	1:CA:162:A:C8	2.49	0.47
1:CA:439:U:H4'	4:CD:121:LYS:HD2	1.96	0.47
1:CA:756:C:C2	1:CA:757:U:C6	3.02	0.47
1:CA:821:G:H2'	1:CA:822:U:H6	1.79	0.47
1:CA:881:G:C5	1:CA:882:C:C5	3.03	0.47
1:CA:1098:C:C2	1:CA:1099:G:C8	3.02	0.47
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1296:C:H5"	1:CA:1297:G:OP2	2.14	0.47
6:CF:24:ARG:O	6:CF:27:ALA:HB3	2.15	0.47
13:CM:45:ILE:HG22	13:CM:45:ILE:O	2.14	0.47
14:CN:36:ALA:HB2	14:CN:41:ARG:HG3	1.95	0.47
15:CO:49:ASP:OD1	15:CO:52:SER:OG	2.25	0.47
22:DA:221:A:C8	22:DA:266:G:O6	2.68	0.47
22:DA:612:G:O2'	22:DA:613:A:C8	2.67	0.47
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.95	0.47
22:DA:1437:C:C4	22:DA:1438:U:C4	3.03	0.47
22:DA:1609:A:H5"	57:DA:3645:HOH:O	2.13	0.47
22:DA:1649:G:O6	22:DA:2009:A:N6	2.47	0.47
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.14	0.47
22:DA:2799:A:C6	22:DA:2801:G:C5	3.03	0.47
23:DB:66:A:N6	23:DB:107:G:H2'	2.30	0.47
28:DG:93:GLY:HA2	28:DG:95:ARG:NH2	2.29	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
29:DH:32:PRO:HB3	45:DX:39:TRP:CB	2.43	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
38:DQ:61:TRP:HB3	38:DQ:92:ARG:O	2.15	0.47
45:DX:33:LEU:O	45:DX:34:HIS:ND1	2.47	0.47
46:DY:28:LEU:HD23	46:DY:37:LEU:HD11	1.96	0.47
1:AA:109:A:H2'	1:AA:326:G:N2	2.29	0.47
1:AA:276:G:O3'	17:AQ:45:HIS:CE1	2.67	0.47
1:AA:557:G:C6	1:AA:558:G:N1	2.82	0.47
1:AA:994:A:N3	1:AA:994:A:H2'	2.29	0.47
1:AA:1403:C:H1'	1:AA:1500:A:N1	2.29	0.47
3:AC:113:ALA:HB2	3:AC:183:ASP:O	2.14	0.47
4:AD:63:ARG:HA	4:AD:63:ARG:HE	1.79	0.47
4:AD:116:GLN:NE2	4:AD:120:HIS:CE1	2.82	0.47
6:AF:81:ASN:O	6:AF:84:VAL:CG1	2.62	0.47
14:AN:23:LYS:O	14:AN:24:ARG:C	2.57	0.47
17:AQ:12:VAL:O	17:AQ:13:VAL:HB	2.13	0.47
20:AT:80:THR:O	20:AT:81:ALA:C	2.58	0.47
20:AT:80:THR:O	20:AT:83:ILE:HG13	2.14	0.47
22:BA:303:G:C5	22:BA:304:U:C5	3.02	0.47
22:BA:465:G:C6	22:BA:466:A:N6	2.82	0.47
22:BA:1042:G:C5	22:BA:1043:C:C5	3.03	0.47
22:BA:1060:U:H4'	22:BA:1061:U:H3'	1.94	0.47
22:BA:1078:U:H5"	22:BA:1079:C:OP1	2.15	0.47
22:BA:1098:A:N7	22:BA:1099:G:O6	2.47	0.47
22:BA:1259:G:N2	22:BA:1260:A:C4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1926:U:O2	22:BA:1927:A:OP2	2.32	0.47
22:BA:2674:G:C2	22:BA:2675:A:C4	3.03	0.47
22:BA:2820:A:O2'	22:BA:2821:A:OP1	2.32	0.47
23:BB:110:C:C4	23:BB:111:U:C5	3.02	0.47
25:BD:98:VAL:O	25:BD:98:VAL:HG22	2.15	0.47
26:BE:109:LEU:O	26:BE:112:LEU:N	2.47	0.47
28:BG:9:VAL:HG21	28:BG:73:ASN:HA	1.97	0.47
35:BN:36:THR:HG22	35:BN:41:ALA:HB2	1.95	0.47
36:BO:54:VAL:O	36:BO:54:VAL:HG22	2.15	0.47
37:BP:92:VAL:HG21	37:BP:97:LEU:HD11	1.96	0.47
41:BT:43:ILE:O	41:BT:47:VAL:HG23	2.15	0.47
48:B0:40:ARG:O	48:B0:41:HIS:HB2	2.13	0.47
1:CA:66:A:C4'	1:CA:173:U:C4	2.98	0.47
1:CA:81:A:H2'	1:CA:82:G:C8	2.49	0.47
1:CA:332:G:OP2	20:CT:5:LYS:HB3	2.14	0.47
1:CA:582:C:C2	1:CA:760:G:N1	2.83	0.47
1:CA:706:A:C5	1:CA:707:U:C4	3.02	0.47
1:CA:935:A:N1	7:CG:3:ARG:NH1	2.62	0.47
2:CB:104:TRP:CZ2	2:CB:156:GLY:N	2.83	0.47
3:CC:103:ILE:N	3:CC:103:ILE:HD12	2.29	0.47
5:CE:81:LEU:O	5:CE:98:PRO:HB3	2.15	0.47
6:CF:92:THR:O	6:CF:93:LYS:C	2.57	0.47
17:CQ:28:PHE:CE2	17:CQ:39:LYS:HG3	2.49	0.47
22:DA:135:U:H2'	22:DA:136:G:C8	2.49	0.47
22:DA:216:A:C8	22:DA:432:A:C6	3.02	0.47
22:DA:301:G:C5	22:DA:317:G:C6	3.02	0.47
22:DA:309:A:H4'	42:DU:16:GLY:HA2	1.97	0.47
22:DA:389:G:C8	22:DA:2413:G:H4'	2.48	0.47
22:DA:548:G:H4'	22:DA:549:G:C2	2.50	0.47
22:DA:597:G:C2	22:DA:661:A:C2	3.03	0.47
22:DA:1254:A:C6	26:DE:77:ILE:HD12	2.49	0.47
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.14	0.47
22:DA:1469:A:N1	22:DA:1470:A:C6	2.82	0.47
22:DA:2061:G:H2'	22:DA:2501:C:O2'	2.15	0.47
22:DA:2084:C:C4	22:DA:2085:U:C4	3.02	0.47
22:DA:2109:U:H1'	22:DA:2181:U:O2	2.15	0.47
22:DA:2280:G:O2'	22:DA:2388:A:N1	2.42	0.47
34:DM:72:PRO:HB3	34:DM:92:TRP:CZ3	2.49	0.47
38:DQ:50:ARG:NH2	39:DR:74:ILE:HG13	2.29	0.47
40:DS:84:ARG:HB2	40:DS:96:ILE:CG1	2.44	0.47
42:DU:7:ARG:HG3	42:DU:8:ASP:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:71:LEU:HA	45:DX:74:ARG:HG2	1.96	0.47
49:D1:8:LYS:HG3	49:D1:24:THR:HG22	1.95	0.47
1:AA:10:A:OP2	5:AE:131:THR:OG1	2.24	0.47
1:AA:49:U:O4	1:AA:365:U:C5	2.68	0.47
1:AA:159:G:N1	1:AA:163:C:N4	2.62	0.47
1:AA:409:U:OP1	4:AD:22:LYS:O	2.33	0.47
1:AA:616:G:C2	1:AA:617:G:C8	3.03	0.47
1:AA:790:A:C6	1:AA:791:G:C6	3.03	0.47
1:AA:1167:A:N7	1:AA:1169:A:C5	2.82	0.47
1:AA:1270:G:N3	1:AA:1271:A:C8	2.82	0.47
1:AA:1419:G:C6	1:AA:1420:U:C4	3.03	0.47
6:AF:41:ASP:O	6:AF:43:GLY:N	2.47	0.47
7:AG:134:ALA:O	7:AG:137:LYS:HB3	2.14	0.47
13:AM:86:TYR:HA	13:AM:89:LEU:HD12	1.97	0.47
22:BA:747:U:C2	22:BA:2613:U:O4	2.67	0.47
22:BA:1007:C:C4	22:BA:1008:A:C5	3.03	0.47
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.30	0.47
22:BA:1084:A:C5	22:BA:1085:A:N6	2.82	0.47
22:BA:1379:U:H2'	22:BA:1379:U:O2	2.15	0.47
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.50	0.47
22:BA:1767:G:C2	22:BA:1768:C:C6	3.02	0.47
22:BA:2043:C:OP1	22:BA:2777:G:O2'	2.23	0.47
22:BA:2056:G:C4	22:BA:2577:A:C2	3.02	0.47
22:BA:2516:A:C2	22:BA:2569:G:C4	3.03	0.47
22:BA:2553:G:H5"	22:BA:2554:U:OP2	2.15	0.47
22:BA:2761:A:H1'	28:BG:143:GLN:NE2	2.29	0.47
22:BA:2865:U:C4	22:BA:2866:U:C4	3.02	0.47
24:BC:199:GLU:O	24:BC:200:HIS:C	2.56	0.47
26:BE:115:GLN:OE1	26:BE:115:GLN:HA	2.12	0.47
28:BG:9:VAL:CG1	28:BG:50:LEU:HB2	2.45	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
30:BI:83:ALA:HB1	30:BI:109:ILE:HD13	1.96	0.47
31:BJ:23:LYS:O	31:BJ:63:ALA:HB3	2.15	0.47
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.14	0.47
52:B4:1:MET:HB3	52:B4:34:LYS:HB3	1.97	0.47
1:CA:33:A:H2'	1:CA:34:C:H6	1.78	0.47
1:CA:50:A:H1'	1:CA:52:C:O4'	2.15	0.47
1:CA:198:G:O2'	1:CA:199:A:H5'	2.15	0.47
1:CA:340:U:C2	1:CA:350:G:N2	2.82	0.47
1:CA:1033:G:H3'	1:CA:1034:G:H5"	1.97	0.47
1:CA:1061:G:C2	1:CA:1197:A:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1137:C:H1'	1:CA:1138:G:N2	2.29	0.47
1:CA:1320:C:N3	19:CS:36:ARG:NH1	2.63	0.47
1:CA:1337:G:C5'	1:CA:1338:G:OP1	2.62	0.47
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.15	0.47
1:CA:1492:A:H3'	1:CA:1493:A:C8	2.50	0.47
2:CB:33:GLY:HA2	2:CB:40:ILE:H	1.79	0.47
5:CE:83:HIS:CE1	8:CH:96:MET:HE3	2.50	0.47
5:CE:96:MET:HE3	5:CE:111:MET:HE3	1.95	0.47
5:CE:100:SER:O	5:CE:101:GLU:C	2.57	0.47
21:CU:19:PHE:HA	21:CU:22:SER:HB3	1.96	0.47
22:DA:195:A:C5	22:DA:198:C:C5	3.03	0.47
22:DA:404:A:H1'	22:DA:405:U:OP2	2.15	0.47
22:DA:1468:U:H2'	22:DA:1522:A:N6	2.30	0.47
22:DA:1652:A:OP1	35:DN:8:ARG:NH2	2.43	0.47
22:DA:2013:A:N1	22:DA:2014:A:N3	2.63	0.47
22:DA:2033:A:P	57:DA:3476:HOH:O	2.73	0.47
22:DA:2131:U:H4'	22:DA:2133:G:C1'	2.45	0.47
22:DA:2131:U:O4'	22:DA:2133:G:H1'	2.15	0.47
22:DA:2214:C:C2	22:DA:2215:C:C6	3.03	0.47
39:DR:29:THR:O	39:DR:29:THR:CG2	2.63	0.47
39:DR:66:HIS:CD2	39:DR:94:THR:CG2	2.97	0.47
45:DX:71:LEU:HB2	45:DX:76:GLU:HB2	1.95	0.47
1:AA:19:A:C2	1:AA:917:G:C2	3.03	0.47
1:AA:81:A:O2'	1:AA:89:U:O2	2.29	0.47
1:AA:125:U:C2'	1:AA:126:G:H5'	2.45	0.47
1:AA:127:G:N2	1:AA:235:C:C2	2.83	0.47
1:AA:251:G:H4'	1:AA:252:U:O5'	2.15	0.47
1:AA:270:A:H2'	1:AA:271:C:O4'	2.15	0.47
1:AA:318:G:C2	1:AA:336:A:C2	3.03	0.47
1:AA:390:U:H2'	1:AA:391:G:H8	1.79	0.47
1:AA:858:G:C2'	1:AA:859:G:H5'	2.44	0.47
1:AA:1151:A:O2'	1:AA:1152:A:P	2.73	0.47
1:AA:1157:A:C5	1:AA:1180:A:C6	3.03	0.47
1:AA:1314:C:H41	19:AS:4:SER:HA	1.80	0.47
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.49	0.47
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.29	0.47
2:AB:122:GLN:H	2:AB:122:GLN:CD	2.23	0.47
2:AB:128:LYS:O	2:AB:129:LEU:O	2.33	0.47
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.45	0.47
3:AC:181:ASP:OD2	3:AC:204:LYS:HB2	2.13	0.47
4:AD:35:GLU:O	4:AD:38:PRO:HD3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:100:ASN:C	4:AD:102:VAL:H	2.22	0.47
4:AD:160:GLU:C	4:AD:162:ALA:H	2.22	0.47
6:AF:46:GLN:HB2	6:AF:56:LYS:HE2	1.96	0.47
8:AH:83:LEU:C	8:AH:83:LEU:HD22	2.40	0.47
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.28	0.47
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.96	0.47
16:AP:30:GLY:O	16:AP:31:ARG:C	2.58	0.47
21:AU:25:LYS:CD	21:AU:26:ALA:N	2.77	0.47
22:BA:768:G:H2'	22:BA:769:U:O5'	2.15	0.47
22:BA:858:G:C4	22:BA:2268:A:C2	3.02	0.47
22:BA:975:A:N1	22:BA:990:A:C8	2.82	0.47
22:BA:988:A:P	47:BZ:12:SER:CB	3.03	0.47
22:BA:1101:U:O5'	22:BA:1101:U:H6	1.97	0.47
22:BA:1356:G:C6	22:BA:1357:C:C4	3.02	0.47
22:BA:1673:G:C2'	22:BA:1674:G:H5'	2.44	0.47
22:BA:1754:A:N1	22:BA:2716:C:O2'	2.41	0.47
22:BA:1846:G:N1	22:BA:1847:A:C2	2.82	0.47
22:BA:1919:A:C2	22:BA:1920:C:O4'	2.68	0.47
22:BA:2305:U:O2'	27:BF:133:ARG:CD	2.63	0.47
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.15	0.47
22:BA:2579:C:O2'	25:BD:136:ASN:HA	2.15	0.47
22:BA:2636:C:H4'	25:BD:81:GLU:CD	2.40	0.47
22:BA:2675:A:C6	22:BA:2676:C:C4	3.02	0.47
22:BA:2681:C:OP2	25:BD:114:LYS:CE	2.63	0.47
22:BA:2824:C:C4	22:BA:2825:G:C5	3.03	0.47
22:BA:2880:C:C2	22:BA:2881:U:C5	3.03	0.47
24:BC:168:ASP:CG	24:BC:169:GLY:N	2.73	0.47
26:BE:12:LEU:CD1	26:BE:190:ALA:HB1	2.44	0.47
26:BE:18:THR:HA	26:BE:106:LYS:HG2	1.96	0.47
27:BF:2:ALA:O	27:BF:4:LEU:N	2.48	0.47
27:BF:43:ALA:HB1	27:BF:46:ASP:O	2.14	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
32:BK:77:ILE:N	32:BK:77:ILE:CD1	2.78	0.47
32:BK:108:ARG:HD3	32:BK:113:MET:HE1	1.97	0.47
32:BK:108:ARG:O	32:BK:109:SER:C	2.56	0.47
35:BN:79:LEU:HA	35:BN:83:LEU:HB2	1.95	0.47
40:BS:1:MET:HE1	40:BS:62:ASP:HB3	1.97	0.47
41:BT:87:LEU:O	41:BT:89:GLU:N	2.47	0.47
46:BY:23:ARG:O	46:BY:24:GLU:C	2.58	0.47
49:B1:32:GLU:HG2	49:B1:32:GLU:O	2.14	0.47
51:B3:4:ILE:HG22	51:B3:5:LYS:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:135:C:O2	16:CP:1:MET:HB2	2.14	0.47
1:CA:158:G:C4	1:CA:159:G:C8	3.02	0.47
1:CA:280:C:H4'	1:CA:281:G:OP2	2.15	0.47
1:CA:289:G:N1	1:CA:290:C:C4	2.82	0.47
1:CA:512:U:H2'	1:CA:513:C:C6	2.50	0.47
1:CA:619:U:H3	4:CD:131:ASN:HB3	1.79	0.47
1:CA:859:G:C8	1:CA:869:G:N2	2.83	0.47
1:CA:905:U:C5	1:CA:906:A:N7	2.82	0.47
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.50	0.47
1:CA:1184:G:C4	1:CA:1185:G:C8	3.01	0.47
1:CA:1417:G:N2	1:CA:1484:C:C4	2.83	0.47
1:CA:1431:A:N6	1:CA:1432:G:O6	2.48	0.47
2:CB:72:THR:HG22	2:CB:73:LYS:N	2.29	0.47
3:CC:12:LEU:HD13	3:CC:18:TRP:CE2	2.49	0.47
3:CC:50:ALA:HB1	3:CC:76:VAL:HG22	1.97	0.47
3:CC:111:LEU:CD2	3:CC:111:LEU:N	2.77	0.47
3:CC:150:LYS:HB3	3:CC:169:ARG:HG2	1.96	0.47
4:CD:48:LEU:CD2	4:CD:53:VAL:N	2.77	0.47
4:CD:148:LYS:O	4:CD:150:LYS:N	2.48	0.47
8:CH:30:SER:O	8:CH:34:VAL:HG23	2.14	0.47
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.29	0.47
9:CI:92:GLU:HG3	9:CI:95:ARG:NH1	2.30	0.47
10:CJ:35:GLN:C	10:CJ:36:VAL:HG23	2.40	0.47
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.15	0.47
17:CQ:52:GLU:HG2	17:CQ:53:CYS:N	2.30	0.47
20:CT:62:ALA:HA	20:CT:68:HIS:N	2.30	0.47
20:CT:79:LEU:O	20:CT:82:GLN:HB2	2.15	0.47
21:CU:40:LYS:H	21:CU:41:PRO:CD	2.27	0.47
22:DA:53:A:N7	22:DA:54:G:C8	2.82	0.47
22:DA:190:A:H2'	22:DA:191:A:O4'	2.15	0.47
22:DA:207:A:C2	22:DA:208:C:H1'	2.50	0.47
22:DA:228:C:N4	22:DA:417:C:O2	2.44	0.47
22:DA:352:A:H2'	22:DA:353:C:C6	2.50	0.47
22:DA:848:C:H2'	22:DA:849:A:H8	1.79	0.47
22:DA:974:G:H1'	22:DA:975:A:C8	2.50	0.47
22:DA:1055:G:O2'	22:DA:1085:A:N1	2.36	0.47
22:DA:1304:A:C6	22:DA:1305:C:C4	3.02	0.47
22:DA:1529:G:O6	22:DA:1543:G:C2	2.68	0.47
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.95	0.47
22:DA:2195:U:N3	22:DA:2196:C:C5	2.82	0.47
22:DA:2282:G:C2	22:DA:2425:A:N6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.15	0.47
22:DA:2843:G:C2	22:DA:2875:C:N3	2.82	0.47
23:DB:94:A:H2'	23:DB:95:U:O4'	2.15	0.47
24:DC:160:THR:N	24:DC:195:VAL:HG13	2.30	0.47
26:DE:149:ILE:HG13	26:DE:188:MET:HE3	1.97	0.47
33:DL:92:LEU:HD21	33:DL:124:GLY:HA3	1.96	0.47
33:DL:105:ILE:CG2	33:DL:107:PHE:O	2.63	0.47
33:DL:110:VAL:HG12	33:DL:131:ALA:HB1	1.97	0.47
34:DM:58:LYS:C	34:DM:60:GLN:H	2.23	0.47
38:DQ:47:TYR:CE2	38:DQ:51:ARG:CZ	2.98	0.47
40:DS:39:THR:O	40:DS:39:THR:HG22	2.15	0.47
41:DT:11:LEU:HG	41:DT:46:ALA:HB1	1.97	0.47
42:DU:34:VAL:O	42:DU:64:ALA:HA	2.14	0.47
43:DV:87:GLN:O	43:DV:88:HIS:HB2	2.14	0.47
45:DX:13:VAL:HG23	45:DX:13:VAL:O	2.14	0.47
46:DY:11:VAL:O	46:DY:15:ASN:CG	2.58	0.47
1:AA:16:A:O2'	1:AA:17:U:H5'	2.15	0.47
1:AA:36:C:OP1	12:AL:120:LYS:HE3	2.15	0.47
1:AA:370:C:C2	1:AA:371:A:C8	3.03	0.47
1:AA:496:A:C2	1:AA:497:G:C6	3.03	0.47
1:AA:922:G:H1'	5:AE:24:THR:HG22	1.97	0.47
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.47
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.49	0.47
1:AA:1421:G:C2	1:AA:1422:G:C8	3.03	0.47
1:AA:1521:C:C2	1:AA:1522:U:C5	3.03	0.47
2:AB:19:GLN:HG2	2:AB:190:ASN:OD1	2.14	0.47
2:AB:128:LYS:HG3	2:AB:129:LEU:N	2.30	0.47
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	1.96	0.47
12:AL:3:THR:HG22	12:AL:5:ASN:N	2.30	0.47
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	2.14	0.47
16:AP:6:LEU:HD13	16:AP:71:VAL:HG23	1.96	0.47
20:AT:35:VAL:HG22	20:AT:50:ALA:CB	2.44	0.47
22:BA:38:A:C2	22:BA:442:G:C2	3.03	0.47
22:BA:288:U:C2	22:BA:289:G:C8	3.02	0.47
22:BA:1132:U:H4'	31:BJ:75:TYR:CE1	2.50	0.47
22:BA:1338:G:O2'	22:BA:1393:A:N1	2.43	0.47
22:BA:2229:U:O2	45:BX:34:HIS:HE1	1.98	0.47
25:BD:84:LEU:HD22	25:BD:88:GLU:CB	2.45	0.47
30:BI:39:CYS:O	30:BI:43:ASN:HB2	2.15	0.47
32:BK:6:THR:HG22	32:BK:7:MET:N	2.30	0.47
37:BP:75:GLN:O	37:BP:76:THR:C	2.58	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.44	0.47
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.50	0.47
53:B5:167:ASP:CB	53:B5:176:VAL:O	2.63	0.47
1:CA:36:C:OP1	12:CL:120:LYS:HE3	2.15	0.47
1:CA:339:C:O2	1:CA:351:G:N2	2.47	0.47
1:CA:407:U:O2	1:CA:408:A:C8	2.68	0.47
1:CA:439:U:H1'	4:CD:119:SER:O	2.14	0.47
1:CA:675:A:OP1	18:CR:74:HIS:CE1	2.67	0.47
1:CA:822:U:H2'	1:CA:823:C:H6	1.79	0.47
1:CA:1280:A:C8	10:CJ:42:LEU:HD23	2.49	0.47
5:CE:25:VAL:O	5:CE:26:LYS:C	2.58	0.47
5:CE:155:ALA:HB3	5:CE:156:LYS:HE3	1.97	0.47
8:CH:10:MET:HE1	8:CH:33:LYS:HA	1.97	0.47
11:CK:16:VAL:O	11:CK:17:SER:CB	2.62	0.47
11:CK:46:THR:O	11:CK:50:SER:OG	2.33	0.47
18:CR:24:LYS:C	18:CR:26:ILE:N	2.73	0.47
22:DA:46:G:N1	22:DA:47:C:C4	2.83	0.47
22:DA:46:G:N1	22:DA:47:C:C5	2.83	0.47
22:DA:630:G:C3'	22:DA:631:A:H5"	2.45	0.47
22:DA:806:C:O2'	22:DA:2445:G:H4'	2.15	0.47
22:DA:836:G:H2'	22:DA:837:C:C6	2.50	0.47
22:DA:1462:C:N3	22:DA:1463:C:C5	2.83	0.47
22:DA:1605:C:H2'	22:DA:1606:C:H5'	1.96	0.47
22:DA:1791:A:C8	22:DA:1792:G:C8	3.03	0.47
22:DA:2540:C:H2'	22:DA:2541:A:C8	2.50	0.47
22:DA:2596:U:C5	22:DA:2597:G:C5	3.03	0.47
22:DA:2798:U:H4'	22:DA:2799:A:H5'	1.96	0.47
23:DB:71:C:C2	23:DB:106:G:N2	2.83	0.47
31:DJ:135:GLN:CD	31:DJ:135:GLN:N	2.73	0.47
41:DT:2:ILE:HA	41:DT:3:ARG:CB	2.45	0.47
46:DY:31:GLN:HG2	46:DY:37:LEU:HB2	1.97	0.47
1:AA:554:A:C5'	12:AL:26:ALA:HB1	2.44	0.47
1:AA:559:A:C8	1:AA:561:U:C5	3.03	0.47
1:AA:760:G:N7	1:AA:761:G:C8	2.83	0.47
1:AA:922:G:N1	1:AA:923:A:C2	2.83	0.47
1:AA:1118:U:C5'	9:AI:106:ARG:HG3	2.44	0.47
1:AA:1272:G:H2'	1:AA:1273:C:O4'	2.15	0.47
2:AB:62:SER:C	2:AB:64:LYS:H	2.23	0.47
3:AC:203:PHE:CE1	3:AC:205:GLY:O	2.67	0.47
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.80	0.47
8:AH:93:PRO:HG3	8:AH:125:ILE:CD1	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	1.96	0.47
13:AM:45:ILE:CG2	13:AM:45:ILE:O	2.63	0.47
15:AO:71:LYS:O	15:AO:75:VAL:HG13	2.14	0.47
22:BA:181:A:H2'	22:BA:182:A:C8	2.50	0.47
22:BA:410:G:N2	22:BA:2407:A:C4	2.82	0.47
22:BA:538:A:O2'	31:BJ:8:PRO:HD2	2.15	0.47
22:BA:683:U:C2	22:BA:684:G:C8	3.03	0.47
22:BA:729:G:H4'	22:BA:763:G:C5'	2.45	0.47
22:BA:876:C:H2'	22:BA:877:A:O4'	2.15	0.47
22:BA:1002:G:N2	22:BA:1003:G:H1'	2.30	0.47
22:BA:1141:U:OP2	31:BJ:65:THR:CG2	2.63	0.47
22:BA:2293:G:C4	22:BA:2294:G:C8	3.03	0.47
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.50	0.47
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.45	0.47
30:BI:33:VAL:HG21	30:BI:59:ILE:HG23	1.95	0.47
38:BQ:82:GLY:O	38:BQ:84:LYS:N	2.48	0.47
39:BR:37:GLU:HG2	39:BR:53:PHE:CD2	2.50	0.47
44:BW:49:ALA:O	44:BW:50:ASN:HB2	2.14	0.47
46:BY:37:LEU:C	46:BY:37:LEU:HD12	2.40	0.47
51:B3:25:LYS:HG2	51:B3:26:HIS:N	2.28	0.47
1:CA:1521:C:C4	1:CA:1522:U:C4	3.03	0.47
2:CB:45:LYS:HG3	2:CB:45:LYS:O	2.15	0.47
7:CG:35:LYS:HB2	7:CG:38:THR:HG22	1.97	0.47
14:CN:24:ARG:HG2	14:CN:27:LEU:HD12	1.97	0.47
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.15	0.47
22:DA:17:G:H4'	38:DQ:25:TYR:HE1	1.80	0.47
22:DA:137:U:H2'	22:DA:140:C:C2	2.49	0.47
22:DA:167:A:C2	22:DA:168:G:H1'	2.50	0.47
22:DA:508:A:C3'	22:DA:509:C:H5'	2.45	0.47
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.49	0.47
22:DA:607:U:H5	22:DA:619:G:C5	2.32	0.47
22:DA:669:G:N3	22:DA:669:G:C2'	2.78	0.47
22:DA:672:C:N4	22:DA:673:C:N4	2.63	0.47
22:DA:749:A:C6	22:DA:750:A:N7	2.83	0.47
22:DA:818:G:C2'	22:DA:819:A:H5"	2.44	0.47
22:DA:1050:A:C2	22:DA:2751:G:C4	3.03	0.47
22:DA:1178:C:H2'	22:DA:1179:G:N7	2.30	0.47
22:DA:1255:U:C2'	22:DA:1256:G:OP1	2.63	0.47
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.30	0.47
22:DA:1934:C:H4'	22:DA:1974:C:O3'	2.15	0.47
22:DA:2000:C:O2'	22:DA:2688:G:H5"	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2053:G:H5'	25:DD:149:ASN:O	2.15	0.47
22:DA:2392:A:C8	22:DA:2429:G:C2	3.03	0.47
22:DA:2408:U:H2'	22:DA:2409:G:C8	2.50	0.47
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.48	0.47
26:DE:61:ARG:HD2	26:DE:63:LYS:O	2.15	0.47
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.55	0.47
26:DE:195:GLN:O	26:DE:199:MET:HB2	2.15	0.47
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.47
30:DI:62:TYR:C	30:DI:64:ASP:H	2.23	0.47
32:DK:35:VAL:HG22	32:DK:69:VAL:HG12	1.96	0.47
40:DS:43:ALA:O	40:DS:44:ALA:C	2.57	0.47
1:AA:173:U:C6	1:AA:197:A:C2	3.03	0.47
1:AA:353:A:C2'	1:AA:354:G:OP2	2.63	0.47
1:AA:391:G:C6	1:AA:392:C:C4	3.03	0.47
1:AA:451:A:C5'	16:AP:70:ARG:NH2	2.78	0.47
1:AA:645:G:C6	1:AA:646:G:N7	2.83	0.47
1:AA:791:G:N2	1:AA:1497:G:O3'	2.45	0.47
1:AA:988:G:N2	1:AA:1217:C:O2	2.48	0.47
2:AB:58:ASN:HA	2:AB:61:ALA:HB3	1.97	0.47
2:AB:95:ARG:HG2	2:AB:95:ARG:NH1	2.29	0.47
7:AG:89:VAL:CG2	7:AG:90:GLU:N	2.77	0.47
7:AG:107:ALA:O	7:AG:110:LYS:N	2.48	0.47
11:AK:83:GLU:HG3	11:AK:109:ASN:HB2	1.97	0.47
14:AN:11:VAL:O	14:AN:14:VAL:HG12	2.15	0.47
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.40	0.47
22:BA:142:A:C6	22:BA:143:C:N3	2.83	0.47
22:BA:150:U:H2'	22:BA:151:C:C6	2.50	0.47
22:BA:668:A:C2'	22:BA:669:G:OP1	2.63	0.47
22:BA:996:A:N6	22:BA:1160:G:C6	2.83	0.47
22:BA:1190:G:P	33:BL:32:GLY:HA2	2.55	0.47
22:BA:1469:A:C2	22:BA:1470:A:C4	3.03	0.47
22:BA:1853:A:N6	22:BA:1889:A:C4	2.83	0.47
22:BA:1917:U:N3	22:BA:1918:A:C4	2.83	0.47
22:BA:1918:A:H4'	22:BA:1919:A:OP1	2.15	0.47
22:BA:2008:C:C2'	22:BA:2009:A:O5'	2.63	0.47
22:BA:2531:A:C6	22:BA:2532:G:C5	3.02	0.47
24:BC:222:GLY:O	24:BC:224:ALA:N	2.48	0.47
25:BD:139:SER:HA	25:BD:142:VAL:CG1	2.45	0.47
28:BG:55:ARG:O	28:BG:56:ASP:C	2.58	0.47
30:BI:58:VAL:CG1	30:BI:59:ILE:N	2.78	0.47
39:BR:11:GLN:O	39:BR:12:HIS:CD2	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:53:A:C2	1:CA:359:G:C2	3.03	0.47
1:CA:468:A:O4'	1:CA:468:A:N3	2.48	0.47
1:CA:542:G:C4	1:CA:543:U:C5	3.03	0.47
1:CA:575:G:C6	1:CA:821:G:C5	3.03	0.47
1:CA:866:C:C5	1:CA:867:G:C1'	2.98	0.47
1:CA:938:A:O3'	7:CG:95:ARG:NH2	2.48	0.47
1:CA:994:A:N3	1:CA:994:A:H2'	2.30	0.47
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.81	0.47
1:CA:1138:G:C2	1:CA:1140:C:C5	3.03	0.47
1:CA:1163:A:C2	1:CA:1174:G:C2	3.04	0.47
1:CA:1182:G:H4'	1:CA:1183:U:C5'	2.43	0.47
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.82	0.47
4:CD:33:LYS:O	4:CD:34:ILE:C	2.59	0.47
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.14	0.47
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.88	0.47
8:CH:59:LEU:CD1	8:CH:60:GLU:N	2.78	0.47
12:CL:79:VAL:O	12:CL:103:ASP:HB2	2.15	0.47
13:CM:5:ALA:HB2	13:CM:57:ARG:CG	2.45	0.47
13:CM:11:ASP:HA	13:CM:45:ILE:HD13	1.97	0.47
13:CM:19:LEU:HB3	13:CM:30:SER:OG	2.15	0.47
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.62	0.47
22:DA:208:C:H2'	22:DA:209:C:C6	2.50	0.47
22:DA:300:A:HO2'	22:DA:318:C:HO2'	1.55	0.47
22:DA:392:U:H2'	22:DA:393:C:C6	2.50	0.47
22:DA:642:U:H5'	22:DA:2349:G:O3'	2.15	0.47
22:DA:1029:A:N7	22:DA:1030:C:C2	2.83	0.47
22:DA:1060:U:O4'	22:DA:1062:G:C5'	2.61	0.47
22:DA:1154:G:P	38:DQ:58:ARG:HH11	2.38	0.47
22:DA:1364:G:C8	45:DX:2:SER:CA	2.98	0.47
22:DA:1603:A:OP2	22:DA:1604:C:OP2	2.33	0.47
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.15	0.47
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.29	0.47
22:DA:2389:G:H5"	22:DA:2390:U:H5'	1.97	0.47
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.49	0.47
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.50	0.47
25:DD:121:THR:HG21	25:DD:143:PRO:HB3	1.96	0.47
30:DI:133:ALA:C	30:DI:138:LEU:HD12	2.40	0.47
34:DM:53:MET:HE2	34:DM:117:PHE:CD1	2.50	0.47
40:DS:62:ASP:O	40:DS:63:GLY:C	2.57	0.47
42:DU:28:VAL:HB	42:DU:34:VAL:HG12	1.97	0.47
43:DV:2:PHE:CD1	43:DV:50:MET:HE3	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:409:U:H2'	1:AA:410:G:C8	2.50	0.46
1:AA:671:G:H2'	1:AA:672:U:O4'	2.14	0.46
1:AA:781:A:C5	1:AA:802:A:C2	3.03	0.46
1:AA:842:U:O2	1:AA:842:U:H2'	2.15	0.46
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.76	0.46
1:AA:1329:A:H2'	1:AA:1330:U:H5'	1.97	0.46
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.49	0.46
3:AC:22:TRP:CG	3:AC:59:ARG:HG2	2.49	0.46
3:AC:190:HIS:ND1	3:AC:195:VAL:HG22	2.30	0.46
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.80	0.46
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.48	0.46
10:AJ:92:LEU:O	10:AJ:93:ALA:HB3	2.14	0.46
22:BA:281:C:H2'	22:BA:282:A:C8	2.50	0.46
22:BA:360:U:H3'	22:BA:361:G:C8	2.49	0.46
22:BA:364:C:H2'	22:BA:365:U:C6	2.50	0.46
22:BA:420:C:O2'	22:BA:421:C:H5'	2.16	0.46
22:BA:944:C:H2'	57:BA:3351:HOH:O	2.14	0.46
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.45	0.46
22:BA:1277:G:C5'	35:BN:20:MET:HE2	2.42	0.46
22:BA:1695:G:H8	24:BC:8:PRO:HB2	1.80	0.46
22:BA:1754:A:H2'	22:BA:1755:A:C8	2.50	0.46
22:BA:1915:U:O2'	22:BA:1916:A:H5'	2.15	0.46
22:BA:1935:G:C6	22:BA:1962:C:C5	3.03	0.46
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.46	0.46
22:BA:2688:G:N7	22:BA:2719:G:C6	2.83	0.46
22:BA:2856:A:C6	22:BA:2857:G:C6	3.03	0.46
27:BF:158:THR:CG2	27:BF:160:ALA:H	2.27	0.46
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	1.97	0.46
30:BI:115:ALA:O	30:BI:116:ASP:HB2	2.15	0.46
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.55	0.46
35:BN:3:HIS:O	35:BN:4:ARG:HB2	2.14	0.46
39:BR:37:GLU:HB3	39:BR:53:PHE:CE1	2.50	0.46
40:BS:55:ILE:HG23	40:BS:66:ILE:HG12	1.96	0.46
43:BV:10:LYS:HG2	43:BV:11:GLU:HG2	1.98	0.46
44:BW:34:GLY:N	44:BW:61:ALA:O	2.37	0.46
1:CA:158:G:C5	1:CA:159:G:N7	2.83	0.46
1:CA:828:U:H2'	1:CA:829:G:O5'	2.15	0.46
1:CA:890:G:HO2'	1:CA:891:U:P	2.38	0.46
1:CA:923:A:H2'	1:CA:924:C:O4'	2.15	0.46
1:CA:1385:G:C6	1:CA:1386:G:C5	3.03	0.46
1:CA:1443:C:H2'	1:CA:1444:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:19:ASN:OD1	3:CC:54:ARG:NE	2.48	0.46
4:CD:107:PHE:N	4:CD:107:PHE:CD1	2.81	0.46
12:CL:40:THR:HG22	12:CL:41:THR:N	2.30	0.46
14:CN:15:ALA:O	14:CN:17:ALA:N	2.48	0.46
17:CQ:14:SER:OG	17:CQ:17:MET:CE	2.63	0.46
19:CS:55:ARG:NE	19:CS:79:THR:CG2	2.78	0.46
22:DA:53:A:C8	22:DA:54:G:N7	2.82	0.46
22:DA:323:C:H6	22:DA:1205:A:N1	2.13	0.46
22:DA:512:G:OP1	22:DA:1234:U:O2'	2.31	0.46
22:DA:822:G:C6	22:DA:836:G:C2	3.02	0.46
22:DA:866:A:O4'	22:DA:914:G:C2	2.68	0.46
22:DA:1366:A:C2	22:DA:1367:A:H1'	2.50	0.46
22:DA:1599:U:C4	22:DA:1600:C:C4	3.03	0.46
22:DA:1665:A:C6	22:DA:1666:G:C5	3.03	0.46
22:DA:1831:G:C2	22:DA:1975:G:C4	3.03	0.46
22:DA:2058:A:C6	22:DA:2059:A:N6	2.83	0.46
22:DA:2267:A:H5"	22:DA:2268:A:C5'	2.46	0.46
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.51	0.46
22:DA:2772:C:H5'	25:DD:173:GLN:NE2	2.30	0.46
25:DD:62:LYS:HB2	25:DD:63:PRO:HD3	1.97	0.46
28:DG:129:THR:C	28:DG:130:GLU:HG2	2.40	0.46
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.97	0.46
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.14	0.46
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.97	0.46
1:AA:204:G:H1'	1:AA:465:A:C2	2.50	0.46
1:AA:347:G:C2'	1:AA:348:G:O5'	2.63	0.46
1:AA:1253:G:N1	1:AA:1285:A:N6	2.62	0.46
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.16	0.46
2:AB:70:VAL:O	2:AB:70:VAL:HG12	2.15	0.46
2:AB:111:ILE:HD11	2:AB:151:ILE:HG12	1.96	0.46
2:AB:132:LYS:CG	2:AB:133:GLU:N	2.78	0.46
4:AD:19:LEU:HD13	4:AD:63:ARG:HB2	1.98	0.46
7:AG:87:VAL:O	7:AG:87:VAL:HG12	2.14	0.46
8:AH:113:ASP:O	8:AH:117:ARG:HB2	2.14	0.46
9:AI:51:PRO:HB3	9:AI:84:THR:HG23	1.97	0.46
16:AP:7:ALA:O	16:AP:9:HIS:N	2.48	0.46
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.50	0.46
19:AS:11:ILE:HG13	19:AS:38:SER:HB3	1.96	0.46
21:AU:14:VAL:HG13	21:AU:16:LEU:CG	2.45	0.46
22:BA:141:G:H3'	22:BA:142:A:C8	2.51	0.46
22:BA:255:A:H2'	22:BA:256:A:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:422:A:N1	22:BA:423:A:C2	2.83	0.46
22:BA:597:G:C2	22:BA:661:A:C2	3.03	0.46
22:BA:608:A:N6	22:BA:609:A:C6	2.83	0.46
22:BA:744:U:C4	22:BA:745:G:C5	3.03	0.46
22:BA:909:A:H2'	22:BA:912:C:C5	2.50	0.46
22:BA:1195:G:O2'	22:BA:1196:C:H5'	2.15	0.46
22:BA:1248:G:OP1	26:BE:44:ARG:NH1	2.48	0.46
22:BA:1428:C:N4	22:BA:1570:A:OP2	2.37	0.46
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.16	0.46
22:BA:1794:A:C1'	22:BA:1900:A:C2	2.98	0.46
22:BA:1917:U:C4	22:BA:1918:A:C6	3.02	0.46
22:BA:2421:G:H5"	22:BA:2422:C:OP2	2.15	0.46
26:BE:115:GLN:HB3	26:BE:117:ARG:HD3	1.98	0.46
26:BE:145:ASP:HB3	26:BE:184:ASP:OD2	2.15	0.46
28:BG:159:GLY:O	28:BG:160:LYS:C	2.57	0.46
30:BI:124:ALA:C	30:BI:126:THR:N	2.73	0.46
33:BL:29:LYS:O	33:BL:31:GLY:N	2.48	0.46
35:BN:51:LEU:O	35:BN:54:LEU:HB3	2.15	0.46
50:B2:32:ALA:O	50:B2:33:ARG:C	2.58	0.46
1:CA:37:U:O2'	1:CA:500:G:H4'	2.15	0.46
1:CA:158:G:C5	1:CA:164:G:C6	3.04	0.46
1:CA:613:C:C2	1:CA:628:G:N2	2.83	0.46
1:CA:624:C:H4'	16:CP:10:GLY:O	2.14	0.46
1:CA:644:U:H2'	1:CA:645:G:O4'	2.15	0.46
1:CA:1244:G:C6	1:CA:1245:C:C4	3.04	0.46
2:CB:71:GLY:HA3	2:CB:164:ILE:CG2	2.45	0.46
2:CB:187:VAL:HB	2:CB:191:SER:CB	2.45	0.46
3:CC:102:ASN:C	3:CC:103:ILE:HG13	2.39	0.46
3:CC:130:PHE:CD2	3:CC:157:LEU:HD23	2.49	0.46
6:CF:59:TYR:C	6:CF:60:VAL:HG23	2.40	0.46
6:CF:86:ARG:HD3	18:CR:64:TYR:CE1	2.50	0.46
7:CG:13:LEU:CD1	7:CG:14:PRO:HD2	2.46	0.46
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.45	0.46
13:CM:74:SER:O	13:CM:78:LYS:HG3	2.16	0.46
13:CM:81:MET:O	13:CM:82:ASP:C	2.57	0.46
20:CT:80:THR:O	20:CT:81:ALA:C	2.56	0.46
22:DA:204:A:C8	22:DA:206:U:C2	3.03	0.46
22:DA:630:G:N2	22:DA:633:A:OP2	2.38	0.46
22:DA:783:A:C8	22:DA:784:G:H4'	2.50	0.46
22:DA:789:A:N1	57:DA:3312:HOH:O	2.36	0.46
22:DA:933:A:H5'	22:DA:934:U:OP2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1197:G:H2'	22:DA:1198:U:H6	1.78	0.46
22:DA:1240:U:O2'	22:DA:1241:A:O5'	2.26	0.46
22:DA:1364:G:N3	22:DA:1368:G:C2	2.83	0.46
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.50	0.46
22:DA:1607:C:O2	22:DA:1621:U:C6	2.68	0.46
22:DA:1766:G:C6	22:DA:1987:A:C6	3.03	0.46
22:DA:1801:A:C4	22:DA:2203:U:C5	3.03	0.46
22:DA:2087:G:C2	22:DA:2233:U:O2	2.68	0.46
22:DA:2499:C:C4	22:DA:2500:U:C4	3.04	0.46
22:DA:2505:G:OP2	55:DA:3001:VIF:H6	2.15	0.46
22:DA:2528:U:O2'	22:DA:2529:G:H3'	2.14	0.46
22:DA:2784:U:C4	22:DA:2785:C:N4	2.83	0.46
24:DC:254:GLY:O	24:DC:255:LYS:CB	2.62	0.46
27:DF:15:LYS:O	27:DF:19:GLU:HG3	2.15	0.46
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.46
31:DJ:39:LYS:NZ	31:DJ:44:TYR:CZ	2.84	0.46
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.50	0.46
32:DK:107:LEU:O	32:DK:109:SER:N	2.48	0.46
37:DP:16:ASP:OD2	37:DP:16:ASP:N	2.48	0.46
40:DS:14:ALA:HB1	40:DS:18:ARG:CZ	2.45	0.46
42:DU:5:ILE:HG22	42:DU:6:ARG:N	2.30	0.46
42:DU:7:ARG:CG	42:DU:8:ASP:N	2.78	0.46
42:DU:83:VAL:HG12	42:DU:84:GLY:N	2.30	0.46
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	1.97	0.46
46:DY:51:ALA:O	46:DY:55:THR:OG1	2.32	0.46
1:AA:223:A:C6	1:AA:224:U:C4	3.03	0.46
1:AA:397:A:N6	1:AA:548:G:C5	2.84	0.46
1:AA:412:A:H4'	1:AA:413:G:OP1	2.14	0.46
1:AA:518:C:H5"	1:AA:519:C:C6	2.50	0.46
1:AA:585:G:OP1	17:AQ:39:LYS:HE3	2.15	0.46
1:AA:587:G:H4'	8:AH:4:GLN:HA	1.96	0.46
1:AA:737:C:C2	1:AA:738:C:C6	3.03	0.46
1:AA:824:G:H1'	8:AH:2:SER:HA	1.97	0.46
1:AA:1349:A:C2	1:AA:1374:A:C4	3.03	0.46
4:AD:167:LYS:HA	4:AD:168:PRO:HD3	1.75	0.46
6:AF:8:PHE:CD1	6:AF:8:PHE:C	2.94	0.46
11:AK:127:ARG:N	21:AU:34:ARG:NH2	2.63	0.46
12:AL:21:VAL:C	12:AL:23:ALA:H	2.23	0.46
14:AN:82:ILE:O	14:AN:86:GLU:HG3	2.16	0.46
18:AR:49:ALA:O	18:AR:50:LYS:C	2.58	0.46
20:AT:34:LYS:O	20:AT:37:ALA:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:38:A:H2'	22:BA:39:G:O4'	2.15	0.46
22:BA:488:G:C2	22:BA:493:G:O6	2.68	0.46
22:BA:1063:G:C8	22:BA:1064:C:C6	3.03	0.46
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.50	0.46
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.80	0.46
22:BA:2055:C:H5'	22:BA:2056:G:H5"	1.95	0.46
22:BA:2182:U:H2'	22:BA:2183:A:C8	2.49	0.46
22:BA:2619:C:O2'	22:BA:2620:C:H5'	2.14	0.46
22:BA:2697:G:C6	22:BA:2711:A:N1	2.84	0.46
24:BC:209:GLY:O	24:BC:212:ARG:HB2	2.16	0.46
27:BF:36:LEU:HD21	27:BF:99:PHE:CE1	2.50	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
29:BH:80:ILE:HG21	29:BH:94:ILE:CG1	2.45	0.46
29:BH:132:PHE:CD2	29:BH:142:VAL:CG2	2.99	0.46
31:BJ:23:LYS:CE	31:BJ:142:ILE:OXT	2.63	0.46
35:BN:66:ALA:O	35:BN:69:ARG:O	2.33	0.46
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.97	0.46
47:BZ:21:LYS:C	47:BZ:23:THR:N	2.73	0.46
48:B0:10:ARG:HB2	48:B0:13:ARG:HH21	1.80	0.46
49:B1:25:LYS:NZ	49:B1:52:ALA:O	2.44	0.46
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.56	0.46
53:B5:48:LEU:HD12	53:B5:57:GLN:HG2	1.97	0.46
1:CA:328:C:O2	1:CA:328:C:C2'	2.64	0.46
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.45	0.46
14:CN:44:ALA:HA	14:CN:47:LYS:HG3	1.98	0.46
20:CT:33:LYS:O	20:CT:36:TYR:CD2	2.69	0.46
22:DA:235:U:C2	22:DA:236:C:C6	3.03	0.46
22:DA:600:G:C5	22:DA:601:C:C4	3.04	0.46
22:DA:699:A:H2'	22:DA:700:G:O4'	2.14	0.46
22:DA:1061:U:O2	22:DA:1061:U:H2'	2.15	0.46
22:DA:1331:G:O2'	22:DA:1332:G:H5'	2.16	0.46
22:DA:1835:G:N7	57:DA:3468:HOH:O	2.35	0.46
22:DA:2531:A:C4	22:DA:2532:G:C8	3.03	0.46
26:DE:148:ILE:HG21	26:DE:157:LEU:HD21	1.98	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
42:DU:34:VAL:HG13	42:DU:67:VAL:HG23	1.98	0.46
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.45	0.46
1:AA:147:G:H2'	1:AA:148:G:C8	2.50	0.46
1:AA:450:G:C8	1:AA:481:G:O6	2.69	0.46
1:AA:640:A:O3'	8:AH:108:LYS:NZ	2.48	0.46
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:167:ASP:OD1	2:AB:167:ASP:C	2.59	0.46
5:AE:133:PRO:C	5:AE:135:ASN:N	2.73	0.46
12:AL:23:ALA:O	12:AL:24:LEU:O	2.33	0.46
16:AP:72:ALA:HA	16:AP:75:ILE:CD1	2.45	0.46
17:AQ:17:MET:HB2	17:AQ:20:SER:HB3	1.97	0.46
21:AU:25:LYS:O	21:AU:29:LEU:CB	2.63	0.46
22:BA:39:G:H2'	22:BA:40:U:C6	2.50	0.46
22:BA:991:C:H5'	22:BA:1185:G:H2'	1.96	0.46
22:BA:1171:G:C6	22:BA:1172:C:N3	2.84	0.46
22:BA:1869:G:C3'	22:BA:1870:C:H5'	2.39	0.46
22:BA:2498:C:C2'	22:BA:2499:C:H5'	2.46	0.46
22:BA:2500:U:O2	22:BA:2504:U:C4	2.68	0.46
22:BA:2821:A:OP2	25:BD:115:GLY:CA	2.64	0.46
23:BB:109:A:C6	23:BB:110:C:C4	3.03	0.46
24:BC:17:VAL:N	24:BC:204:VAL:HG22	2.31	0.46
40:BS:30:SER:O	40:BS:31:GLN:C	2.57	0.46
43:BV:14:LYS:HD3	43:BV:18:ARG:NH1	2.30	0.46
46:BY:5:GLU:HG3	46:BY:56:LEU:CD1	2.45	0.46
48:B0:41:HIS:HA	48:B0:49:TYR:OH	2.16	0.46
1:CA:128:G:C2	1:CA:234:C:C2	3.03	0.46
1:CA:670:G:N2	1:CA:737:C:O2	2.49	0.46
3:CC:6:HIS:C	3:CC:8:ASN:H	2.23	0.46
4:CD:54:GLN:HG2	4:CD:203:LEU:HB2	1.97	0.46
7:CG:55:GLY:O	7:CG:56:LYS:O	2.33	0.46
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.97	0.46
11:CK:29:ASN:OD1	11:CK:47:ALA:HB3	2.15	0.46
20:CT:5:LYS:O	20:CT:6:SER:C	2.57	0.46
22:DA:454:A:H4'	22:DA:455:C:OP2	2.15	0.46
22:DA:750:A:H5"	22:DA:751:A:OP2	2.15	0.46
22:DA:845:A:H5'	22:DA:846:U:OP2	2.15	0.46
22:DA:874:G:C2	22:DA:904:G:C2	3.03	0.46
22:DA:972:A:N1	22:DA:973:A:N6	2.63	0.46
22:DA:1364:G:N7	45:DX:2:SER:N	2.64	0.46
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.50	0.46
22:DA:1706:C:O2'	22:DA:1757:A:OP2	2.27	0.46
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.15	0.46
22:DA:2063:C:H4'	55:DA:3001:VIF:H37	1.96	0.46
22:DA:2250:G:O5'	22:DA:2250:G:H8	1.98	0.46
22:DA:2297:A:N1	22:DA:2321:U:H5	2.11	0.46
22:DA:2516:A:O2'	22:DA:2517:C:H5'	2.16	0.46
22:DA:2862:G:N2	22:DA:2863:C:C2	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:89:U:O2	23:DB:89:U:O4'	2.34	0.46
24:DC:159:GLY:H	24:DC:195:VAL:HG22	1.81	0.46
24:DC:176:LEU:O	24:DC:179:GLY:N	2.45	0.46
28:DG:45:HIS:HA	28:DG:50:LEU:HD23	1.97	0.46
30:DI:10:LYS:HB3	30:DI:56:PRO:HB2	1.96	0.46
35:DN:106:ASP:C	35:DN:106:ASP:OD1	2.59	0.46
46:DY:17:GLU:OE1	46:DY:53:VAL:HB	2.15	0.46
1:AA:605:U:O2'	1:AA:606:G:H5'	2.16	0.46
1:AA:937:A:N1	7:AG:2:PRO:HG2	2.30	0.46
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.30	0.46
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.48	0.46
2:AB:33:GLY:O	2:AB:34:ALA:CB	2.60	0.46
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.62	0.46
4:AD:91:LEU:HD21	4:AD:195:ILE:CD1	2.46	0.46
9:AI:127:PHE:CD2	9:AI:127:PHE:C	2.93	0.46
14:AN:72:GLY:O	14:AN:80:SER:HA	2.15	0.46
14:AN:93:ILE:HG21	14:AN:96:LEU:HD22	1.98	0.46
22:BA:700:G:C6	22:BA:733:G:C2	3.03	0.46
22:BA:747:U:C6	22:BA:2613:U:C5	3.03	0.46
22:BA:796:C:H2'	22:BA:797:G:C8	2.51	0.46
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.50	0.46
22:BA:1575:C:H2'	22:BA:1576:U:O5'	2.15	0.46
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.80	0.46
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.97	0.46
24:BC:143:ASN:OD1	24:BC:143:ASN:O	2.34	0.46
26:BE:91:ASP:OD1	26:BE:91:ASP:C	2.58	0.46
27:BF:132:VAL:HG22	27:BF:152:LEU:HB3	1.98	0.46
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.16	0.46
29:BH:83:LYS:HG3	1:CA:55:A:N3	2.31	0.46
33:BL:30:THR:O	33:BL:32:GLY:N	2.48	0.46
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.97	0.46
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.51	0.46
40:BS:37:THR:CG2	40:BS:38:TYR:CD1	2.96	0.46
42:BU:49:VAL:O	42:BU:49:VAL:HG13	2.15	0.46
1:CA:136:C:H2'	1:CA:137:U:C6	2.50	0.46
1:CA:354:G:C2	1:CA:355:C:C6	3.03	0.46
1:CA:373:A:O2'	1:CA:374:A:H5'	2.15	0.46
1:CA:496:A:C2	1:CA:497:G:C5	3.03	0.46
1:CA:841:C:H2'	1:CA:843:U:O4'	2.15	0.46
1:CA:1521:C:N3	1:CA:1522:U:C5	2.83	0.46
8:CH:43:GLU:OE1	8:CH:112:THR:HG21	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:39:PHE:CD1	16:CP:39:PHE:C	2.92	0.46
18:CR:33:ILE:O	18:CR:33:ILE:HG12	2.14	0.46
20:CT:37:ALA:O	20:CT:40:GLU:HB3	2.15	0.46
22:DA:181:A:H1'	22:DA:435:C:O4'	2.15	0.46
22:DA:185:G:N1	22:DA:212:G:C2	2.84	0.46
22:DA:205:G:O2'	22:DA:206:U:P	2.73	0.46
22:DA:627:A:C6	22:DA:637:A:C8	3.03	0.46
22:DA:909:A:C6	22:DA:912:C:C2	3.03	0.46
22:DA:1662:U:O2'	22:DA:2687:U:H5"	2.16	0.46
22:DA:1767:G:C2	22:DA:1986:C:C2	3.04	0.46
22:DA:1802:A:C6	22:DA:1803:A:C6	3.04	0.46
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.16	0.46
22:DA:2204:G:C2	22:DA:2205:A:C8	3.03	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
30:DI:125:MET:HE2	30:DI:125:MET:HB2	1.88	0.46
34:DM:2:LEU:O	34:DM:3:GLN:CB	2.63	0.46
39:DR:102:SER:O	39:DR:103:ALA:O	2.34	0.46
43:DV:51:GLN:HA	43:DV:56:PHE:CB	2.46	0.46
1:AA:207:C:H2'	1:AA:208:U:C2	2.49	0.46
1:AA:357:G:C2	1:AA:358:U:C5	3.04	0.46
1:AA:1099:G:C5	1:AA:1100:C:C5	3.03	0.46
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.50	0.46
2:AB:22:TYR:N	2:AB:22:TYR:CD1	2.84	0.46
2:AB:69:PHE:N	2:AB:90:PHE:O	2.40	0.46
5:AE:81:LEU:HB3	5:AE:147:MET:HE1	1.98	0.46
6:AF:49:TYR:CE2	6:AF:51:ILE:HG22	2.50	0.46
9:AI:11:ARG:HB2	9:AI:15:SER:O	2.15	0.46
20:AT:3:ASN:OD1	20:AT:3:ASN:C	2.59	0.46
22:BA:280:U:H2'	22:BA:281:C:O4'	2.15	0.46
22:BA:340:A:H2'	22:BA:341:C:C5'	2.46	0.46
22:BA:361:G:O2'	22:BA:362:A:O5'	2.33	0.46
22:BA:910:A:C6	22:BA:911:A:C6	3.04	0.46
22:BA:988:A:C2'	22:BA:989:G:O5'	2.63	0.46
22:BA:1300:G:H4'	22:BA:1301:A:H5'	1.97	0.46
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.31	0.46
22:BA:1806:C:H2'	22:BA:1807:G:O5'	2.15	0.46
22:BA:2499:C:C4	22:BA:2500:U:C4	3.04	0.46
22:BA:2515:C:N3	22:BA:2570:G:C6	2.84	0.46
22:BA:2516:A:C6	22:BA:2517:C:C4	3.03	0.46
55:BA:3001:VIF:H6	55:BA:3001:VIF:H7	1.58	0.46
25:BD:146:ILE:HG21	25:BD:161:MET:HE2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:7:ASP:C	26:BE:9:GLN:N	2.74	0.46
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.16	0.46
27:BF:105:THR:CG2	27:BF:106:ILE:HG23	2.45	0.46
27:BF:174:ASP:O	27:BF:175:PHE:C	2.59	0.46
28:BG:11:VAL:O	28:BG:11:VAL:HG23	2.16	0.46
36:BO:64:TYR:HB3	36:BO:67:ASN:ND2	2.30	0.46
40:BS:95:ARG:NE	40:BS:97:LEU:HD22	2.29	0.46
1:CA:223:A:C6	1:CA:224:U:C4	3.03	0.46
1:CA:445:G:N1	1:CA:446:G:C5	2.84	0.46
1:CA:484:G:N7	1:CA:486:U:H1'	2.31	0.46
1:CA:511:C:O2	1:CA:512:U:C6	2.69	0.46
2:CB:152:LYS:HG3	2:CB:153:ASP:N	2.30	0.46
3:CC:9:GLY:HA2	3:CC:12:LEU:HG	1.97	0.46
9:CI:10:GLY:HA2	9:CI:81:HIS:ND1	2.31	0.46
9:CI:26:GLY:H	9:CI:59:GLU:HA	1.80	0.46
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.16	0.46
10:CJ:65:TYR:HB3	14:CN:96:LEU:CD1	2.44	0.46
22:DA:7:G:H2'	22:DA:8:C:O4'	2.15	0.46
22:DA:364:C:H2'	22:DA:365:U:O4'	2.15	0.46
22:DA:487:C:C2	22:DA:494:G:N2	2.83	0.46
22:DA:621:A:H2'	22:DA:622:G:O4'	2.16	0.46
22:DA:657:U:C2	22:DA:658:U:C5	3.03	0.46
22:DA:673:C:OP1	26:DE:76:PRO:HG3	2.15	0.46
22:DA:1019:U:O2'	22:DA:1021:A:N7	2.37	0.46
22:DA:1027:A:C5	22:DA:1126:A:N3	2.84	0.46
22:DA:1097:U:H3'	22:DA:1098:A:O4'	2.16	0.46
22:DA:1293:C:H2'	22:DA:1294:U:O5'	2.15	0.46
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.96	0.46
22:DA:1428:C:C5	22:DA:1569:A:C5'	2.98	0.46
22:DA:1529:G:C6	22:DA:1543:G:C2	3.03	0.46
22:DA:1682:G:C2	22:DA:1757:A:C1'	2.98	0.46
22:DA:1831:G:C6	22:DA:1832:C:C4	3.03	0.46
22:DA:2113:U:C2	22:DA:2114:A:C8	3.03	0.46
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.15	0.46
24:DC:135:ILE:O	24:DC:167:ARG:NH2	2.49	0.46
27:DF:13:VAL:O	27:DF:17:MET:HG2	2.16	0.46
27:DF:58:ALA:O	27:DF:61:SER:O	2.34	0.46
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.98	0.46
35:DN:69:ARG:C	35:DN:70:THR:HG23	2.40	0.46
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.98	0.46
39:DR:19:THR:HA	39:DR:96:VAL:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:26:LYS:HG2	42:DU:37:GLU:HB3	1.98	0.46
48:D0:10:ARG:HG2	48:D0:11:SER:N	2.30	0.46
1:AA:235:C:H2'	1:AA:236:A:H8	1.80	0.46
1:AA:625:U:H4'	16:AP:16:PHE:CZ	2.50	0.46
1:AA:878:A:H2'	1:AA:879:C:O4'	2.16	0.46
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.51	0.46
1:AA:1204:A:P	57:AA:1780:HOH:O	2.74	0.46
1:AA:1211:U:O2'	1:AA:1212:U:O5'	2.34	0.46
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.51	0.46
2:AB:106:THR:O	2:AB:107:VAL:CG2	2.64	0.46
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.51	0.46
4:AD:122:ALA:O	4:AD:123:ILE:CG2	2.62	0.46
4:AD:168:PRO:CG	4:AD:171:LEU:HD11	2.43	0.46
5:AE:115:LEU:HG	5:AE:123:VAL:HG21	1.98	0.46
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.15	0.46
13:AM:91:HIS:HA	13:AM:109:ARG:NH2	2.30	0.46
22:BA:199:A:C8	22:BA:2433:A:N6	2.83	0.46
22:BA:226:A:C6	22:BA:227:A:C6	3.04	0.46
22:BA:475:C:N3	22:BA:481:G:C6	2.84	0.46
22:BA:481:G:C2	22:BA:507:A:C4	3.04	0.46
22:BA:629:G:N3	22:BA:639:U:O2'	2.48	0.46
22:BA:1106:G:C2	22:BA:1107:G:N9	2.83	0.46
22:BA:1588:G:C2	22:BA:1589:U:C5	3.03	0.46
22:BA:1605:C:H2'	22:BA:1606:C:H5'	1.97	0.46
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.50	0.46
22:BA:1786:A:C4	22:BA:1938:A:C6	3.03	0.46
22:BA:2109:U:H2'	22:BA:2110:G:C8	2.51	0.46
24:BC:122:ALA:O	24:BC:123:ALA:C	2.58	0.46
25:BD:177:VAL:O	25:BD:177:VAL:HG22	2.14	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
31:BJ:77:HIS:HA	31:BJ:83:GLY:O	2.16	0.46
32:BK:14:SER:O	32:BK:52:VAL:HG22	2.16	0.46
34:BM:36:VAL:O	34:BM:36:VAL:CG1	2.63	0.46
35:BN:52:ILE:HG21	35:BN:94:TYR:CD2	2.51	0.46
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.15	0.46
41:BT:19:LYS:O	41:BT:20:ALA:C	2.59	0.46
42:BU:16:GLY:C	42:BU:18:ASP:H	2.24	0.46
1:CA:414:A:C2	1:CA:415:A:H1'	2.51	0.46
1:CA:582:C:C2	1:CA:760:G:C6	3.04	0.46
1:CA:862:C:H2'	1:CA:863:U:C6	2.50	0.46
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.50	0.46
3:CC:53:SER:O	3:CC:54:ARG:HB2	2.15	0.46
3:CC:172:ARG:C	3:CC:174:PRO:HD3	2.40	0.46
17:CQ:21:ILE:HB	17:CQ:48:ASP:OD1	2.16	0.46
22:DA:206:U:H2'	22:DA:207:A:H8	1.80	0.46
22:DA:749:A:C5	22:DA:750:A:C8	3.04	0.46
22:DA:961:C:C2	22:DA:2031:A:C6	3.04	0.46
22:DA:1288:G:C4	22:DA:1327:A:C2	3.04	0.46
22:DA:1502:A:C2	22:DA:1503:A:C4	3.03	0.46
22:DA:1649:G:C6	22:DA:2009:A:N6	2.84	0.46
22:DA:1753:G:C2	22:DA:1756:G:C2	3.04	0.46
22:DA:2125:G:C5'	22:DA:2126:A:OP2	2.62	0.46
22:DA:2377:A:O2'	22:DA:2378:A:H5'	2.15	0.46
22:DA:2603:G:C6	22:DA:2604:U:C4	3.03	0.46
22:DA:2718:G:C6	22:DA:2719:G:C4	3.04	0.46
22:DA:2854:G:C2	22:DA:2864:G:C2	3.04	0.46
23:DB:49:C:OP1	36:DO:101:GLY:HA3	2.16	0.46
23:DB:114:C:C2	23:DB:115:A:C8	3.04	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
37:DP:28:VAL:HG12	37:DP:30:VAL:HG23	1.97	0.46
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.16	0.46
42:DU:7:ARG:HD2	42:DU:8:ASP:OD2	2.16	0.46
48:D0:13:ARG:HD2	48:D0:17:ARG:NH2	2.30	0.46
50:D2:10:LEU:HD11	50:D2:14:ARG:CZ	2.46	0.46
1:AA:175:C:O2'	1:AA:176:C:H5'	2.15	0.46
1:AA:451:A:C2	1:AA:480:U:C4	3.03	0.46
1:AA:958:A:N3	1:AA:985:C:O2'	2.39	0.46
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.51	0.46
1:AA:1363:A:C4	1:AA:1365:G:C6	3.04	0.46
2:AB:161:LEU:HD12	2:AB:181:ILE:HG21	1.97	0.46
5:AE:101:GLU:HB3	5:AE:122:ASN:HB3	1.97	0.46
9:AI:43:THR:O	9:AI:44:ALA:HB3	2.16	0.46
10:AJ:8:ILE:HG13	10:AJ:74:VAL:HB	1.97	0.46
11:AK:87:LYS:HA	11:AK:114:THR:HG22	1.97	0.46
11:AK:102:ALA:C	11:AK:104:GLY:N	2.72	0.46
16:AP:46:LYS:HD3	16:AP:46:LYS:C	2.41	0.46
18:AR:62:ALA:HB3	18:AR:68:LEU:HD12	1.97	0.46
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.16	0.46
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.79	0.46
22:BA:229:C:C2'	22:BA:230:G:O5'	2.64	0.46
22:BA:584:C:N4	57:BA:3282:HOH:O	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:734:A:C4	22:BA:735:A:C8	3.04	0.46
22:BA:1059:G:H5"	22:BA:1060:U:H3'	1.98	0.46
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.51	0.46
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.16	0.46
22:BA:2299:U:O2'	22:BA:2300:C:H5'	2.16	0.46
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.50	0.46
22:BA:2743:U:OP1	52:B4:34:LYS:NZ	2.33	0.46
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	1.98	0.46
25:BD:87:GLY:O	25:BD:88:GLU:C	2.58	0.46
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.46
38:BQ:21:ALA:HB1	38:BQ:24:TYR:CD1	2.51	0.46
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.51	0.46
53:B5:65:LEU:HD11	53:B5:191:ARG:CA	2.45	0.46
1:CA:110:C:H2'	1:CA:111:G:O4'	2.16	0.46
1:CA:263:A:OP2	20:CT:74:ARG:NH1	2.49	0.46
1:CA:289:G:C2	1:CA:290:C:C6	3.03	0.46
1:CA:563:A:N7	1:CA:567:G:H1'	2.31	0.46
1:CA:706:A:C6	1:CA:707:U:C4	3.04	0.46
1:CA:791:G:C5	1:CA:792:A:N7	2.84	0.46
1:CA:899:C:O2'	22:DA:1832:C:OP1	2.22	0.46
1:CA:991:U:C4	1:CA:1212:U:C1'	2.99	0.46
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.16	0.46
4:CD:62:ARG:HG3	4:CD:72:PHE:CD2	2.51	0.46
6:CF:18:VAL:O	6:CF:21:MET:HB2	2.16	0.46
7:CG:42:ILE:O	7:CG:42:ILE:CG2	2.64	0.46
8:CH:21:ASN:O	8:CH:22:LYS:C	2.59	0.46
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.62	0.46
15:CO:23:GLY:O	15:CO:24:SER:C	2.59	0.46
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.97	0.46
22:DA:445:C:H2'	22:DA:446:G:C8	2.51	0.46
22:DA:1095:A:C6	22:DA:1096:A:C2	3.04	0.46
22:DA:1285:A:C6	22:DA:1329:U:C5	3.04	0.46
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.50	0.46
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.51	0.46
24:DC:210:ALA:HA	24:DC:213:TRP:NE1	2.29	0.46
25:DD:114:LYS:HE2	25:DD:196:ALA:HA	1.96	0.46
28:DG:60:ASP:O	28:DG:61:GLY:C	2.59	0.46
29:DH:27:ARG:NE	45:DX:60:ASP:CG	2.71	0.46
38:DQ:76:TYR:CE2	38:DQ:80:ILE:HG13	2.51	0.46
39:DR:80:ARG:HB3	39:DR:81:LYS:HD3	1.98	0.46
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.84	0.46
1:AA:69:G:H2'	1:AA:69:G:N3	2.31	0.46
1:AA:392:C:C2	1:AA:393:A:C8	3.04	0.46
1:AA:581:G:C6	1:AA:758:C:C5	3.04	0.46
1:AA:645:G:C2	1:AA:646:G:C8	3.04	0.46
1:AA:949:A:N1	1:AA:950:U:C2	2.84	0.46
1:AA:1016:A:N7	1:AA:1017:U:O2	2.49	0.46
1:AA:1060:U:OP1	14:AN:85:ARG:NH2	2.47	0.46
1:AA:1379:G:C6	1:AA:1380:U:C4	3.03	0.46
1:AA:1406:U:C5	1:AA:1407:C:C4	3.03	0.46
1:AA:1525:G:OP1	11:AK:122:ARG:NH2	2.44	0.46
2:AB:33:GLY:HA3	2:AB:39:HIS:CB	2.46	0.46
3:AC:10:ILE:O	3:AC:10:ILE:HG13	2.16	0.46
3:AC:47:LEU:HB3	3:AC:50:ALA:HB3	1.97	0.46
3:AC:116:VAL:O	3:AC:119:SER:HB3	2.16	0.46
7:AG:40:GLU:HA	7:AG:43:VAL:HG23	1.97	0.46
8:AH:75:ILE:HD13	8:AH:129:VAL:HG22	1.97	0.46
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.98	0.46
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.14	0.46
10:AJ:36:VAL:O	10:AJ:36:VAL:HG12	2.16	0.46
11:AK:81:ASN:HB3	11:AK:106:ARG:CG	2.45	0.46
17:AQ:49:GLU:O	17:AQ:52:GLU:OE2	2.33	0.46
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.33	0.46
22:BA:773:U:O2	22:BA:778:G:O2'	2.33	0.46
22:BA:1005:C:N3	22:BA:1143:A:C2	2.84	0.46
22:BA:1696:G:C6	22:BA:1697:G:C4	3.04	0.46
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.46	0.46
22:BA:2839:G:C6	22:BA:2840:C:C4	3.03	0.46
24:BC:97:LYS:N	24:BC:97:LYS:HD2	2.31	0.46
25:BD:5:VAL:HG21	25:BD:80:TRP:CD2	2.51	0.46
25:BD:42:ASN:O	25:BD:42:ASN:CG	2.59	0.46
25:BD:68:PHE:CE1	25:BD:75:ALA:HA	2.51	0.46
26:BE:48:THR:C	26:BE:50:ALA:N	2.72	0.46
27:BF:99:PHE:O	27:BF:100:PHE:C	2.59	0.46
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.46
30:BI:102:SER:HB3	30:BI:105:GLN:NE2	2.31	0.46
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.16	0.46
36:BO:7:ARG:HD2	36:BO:97:PHE:CE2	2.51	0.46
45:BX:11:ARG:HB2	45:BX:12:PRO:HD2	1.98	0.46
53:B5:24:ASP:HB2	53:B5:185:LYS:O	2.15	0.46
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:84:ILE:O	53:B5:84:ILE:HG22	2.16	0.46
1:CA:35:G:C2	1:CA:550:G:C2	3.04	0.46
1:CA:499:A:N1	1:CA:546:A:O2'	2.45	0.46
4:CD:62:ARG:CG	4:CD:72:PHE:CD2	2.99	0.46
5:CE:38:VAL:CG1	5:CE:117:VAL:HG21	2.46	0.46
5:CE:105:ILE:H	5:CE:122:ASN:C	2.24	0.46
15:CO:45:GLU:HG2	15:CO:46:HIS:N	2.31	0.46
15:CO:88:ARG:O	15:CO:88:ARG:HG3	2.15	0.46
22:DA:33:C:O2	22:DA:447:A:N6	2.49	0.46
22:DA:532:A:H2'	38:DQ:28:ARG:NH1	2.31	0.46
22:DA:589:U:H2'	22:DA:590:A:C8	2.51	0.46
22:DA:777:G:N3	22:DA:778:G:C8	2.84	0.46
22:DA:1269:A:C6	22:DA:1270:C:N4	2.83	0.46
22:DA:1351:C:O3'	22:DA:1571:A:O2'	2.30	0.46
22:DA:2004:G:C4	22:DA:2005:A:C8	3.04	0.46
22:DA:2563:U:C2	22:DA:2566:A:N7	2.84	0.46
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.16	0.46
22:DA:2834:G:H2'	22:DA:2879:A:H61	1.80	0.46
24:DC:53:HIS:O	24:DC:217:ARG:N	2.35	0.46
26:DE:29:HIS:HA	26:DE:32:VAL:HG23	1.98	0.46
27:DF:166:GLY:O	27:DF:167:ARG:C	2.59	0.46
33:DL:94:THR:O	33:DL:98:ALA:N	2.48	0.46
42:DU:82:ARG:O	42:DU:97:LYS:HG2	2.16	0.46
45:DX:69:ALA:O	45:DX:72:ARG:HB3	2.16	0.46
1:AA:29:U:C2'	1:AA:30:U:H5'	2.46	0.46
1:AA:41:G:H2'	1:AA:42:G:H8	1.81	0.46
1:AA:89:U:O2'	1:AA:90:C:H5'	2.16	0.46
1:AA:181:A:N6	1:AA:195:A:C8	2.84	0.46
1:AA:213:G:N7	1:AA:214:C:C4	2.84	0.46
1:AA:522:C:N4	1:AA:523:A:C6	2.84	0.46
1:AA:532:A:N7	3:AC:193:TYR:HB3	2.31	0.46
1:AA:557:G:C6	1:AA:558:G:C6	3.04	0.46
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.16	0.46
1:AA:1152:A:OP1	10:AJ:15:HIS:HB2	2.15	0.46
1:AA:1160:G:O6	1:AA:1181:G:C6	2.69	0.46
1:AA:1302:C:C5	13:AM:17:ILE:HD13	2.51	0.46
1:AA:1387:G:H2'	1:AA:1388:C:H6	1.81	0.46
8:AH:99:LEU:HD23	8:AH:99:LEU:N	2.31	0.46
12:AL:43:LYS:O	12:AL:44:LYS:C	2.59	0.46
15:AO:63:ARG:HG3	15:AO:67:LEU:HD12	1.97	0.46
22:BA:253:C:OP2	51:B3:5:LYS:CE	2.61	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1139:G:N2	22:BA:1140:C:C2	2.84	0.46
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.32	0.46
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.16	0.46
22:BA:1422:G:C5	22:BA:1423:G:N7	2.84	0.46
22:BA:1722:A:C2	22:BA:1739:A:H1'	2.51	0.46
22:BA:2181:U:H2'	22:BA:2182:U:O4'	2.16	0.46
22:BA:2232:C:C4	22:BA:2233:U:C4	3.04	0.46
22:BA:2444:G:OP2	26:BE:63:LYS:NZ	2.44	0.46
25:BD:104:VAL:HG23	25:BD:177:VAL:HG11	1.97	0.46
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.46
30:BI:65:ARG:HG3	30:BI:66:SER:N	2.30	0.46
32:BK:19:VAL:HG21	32:BK:84:CYS:SG	2.55	0.46
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.45	0.46
49:B1:48:ILE:N	49:B1:48:ILE:HD12	2.32	0.46
50:B2:3:ARG:O	50:B2:6:GLN:NE2	2.43	0.46
1:CA:137:U:H1'	1:CA:227:G:N2	2.30	0.46
1:CA:158:G:C6	1:CA:164:G:C6	3.04	0.46
1:CA:457:G:N2	1:CA:476:U:C2	2.84	0.46
1:CA:485:U:O2	1:CA:485:U:O4'	2.32	0.46
1:CA:545:C:O2'	1:CA:549:C:H5"	2.16	0.46
1:CA:570:G:N3	1:CA:571:U:C5	2.84	0.46
1:CA:623:C:C4	1:CA:624:C:C5	3.03	0.46
1:CA:853:C:C4	1:CA:854:U:C5	3.04	0.46
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.16	0.46
1:CA:1151:A:C2	1:CA:1152:A:C5	3.04	0.46
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.62	0.46
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.16	0.46
1:CA:1491:G:C6	1:CA:1492:A:C6	3.03	0.46
2:CB:15:HIS:ND1	2:CB:15:HIS:O	2.49	0.46
2:CB:141:LEU:O	2:CB:144:LEU:N	2.48	0.46
7:CG:116:MET:O	7:CG:120:LEU:HB2	2.16	0.46
8:CH:95:VAL:HG21	8:CH:128:TYR:HB3	1.98	0.46
9:CI:10:GLY:HA2	9:CI:81:HIS:HD1	1.81	0.46
11:CK:58:SER:O	11:CK:91:PRO:HG3	2.16	0.46
13:CM:79:ARG:O	13:CM:83:LEU:HD23	2.16	0.46
14:CN:26:GLU:C	14:CN:28:LYS:H	2.23	0.46
16:CP:77:GLU:C	16:CP:79:ASN:H	2.24	0.46
22:DA:86:G:C2	22:DA:87:U:C5	3.04	0.46
22:DA:184:C:H2'	22:DA:185:G:C8	2.50	0.46
22:DA:279:A:N6	22:DA:361:G:C2'	2.79	0.46
22:DA:310:A:C6	22:DA:330:A:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:734:A:N7	22:DA:735:A:N7	2.63	0.46
22:DA:1345:C:H5'	22:DA:1396:U:C5	2.51	0.46
22:DA:1437:C:N4	22:DA:1438:U:O4	2.49	0.46
22:DA:1829:A:O2'	24:DC:15:HIS:CD2	2.69	0.46
22:DA:2516:A:C6	22:DA:2517:C:N4	2.84	0.46
22:DA:2585:U:O2'	22:DA:2586:U:C5'	2.64	0.46
22:DA:2824:C:N4	22:DA:2825:G:C5	2.84	0.46
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.31	0.46
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	1.98	0.46
30:DI:61:VAL:HG22	30:DI:67:PHE:HB3	1.98	0.46
31:DJ:74:TYR:CD1	31:DJ:92:MET:HG3	2.50	0.46
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.15	0.46
33:DL:23:ILE:HD12	39:DR:84:ARG:NE	2.31	0.46
36:DO:98:GLN:O	36:DO:100:HIS:N	2.47	0.46
43:DV:7:GLU:HB2	43:DV:41:GLU:OE2	2.16	0.46
48:D0:13:ARG:HG2	48:D0:17:ARG:NE	2.31	0.46
1:AA:83:C:OP1	1:AA:83:C:H4'	2.16	0.45
1:AA:174:A:C6	1:AA:175:C:C4	3.04	0.45
1:AA:451:A:C5'	16:AP:70:ARG:HH22	2.29	0.45
1:AA:495:A:C2	1:AA:496:A:C6	3.05	0.45
1:AA:866:C:H2'	1:AA:867:G:O4'	2.16	0.45
1:AA:1061:G:H5"	1:AA:1062:U:OP2	2.16	0.45
1:AA:1180:A:H5"	1:AA:1181:G:OP2	2.16	0.45
1:AA:1319:A:C5	1:AA:1323:G:C4	3.05	0.45
10:AJ:10:LEU:HG	10:AJ:98:VAL:HG12	1.98	0.45
11:AK:125:LYS:O	21:AU:34:ARG:NE	2.44	0.45
13:AM:48:LEU:HD23	13:AM:52:GLN:HB2	1.98	0.45
14:AN:16:LEU:N	14:AN:16:LEU:HD23	2.31	0.45
17:AQ:21:ILE:HB	17:AQ:48:ASP:OD2	2.16	0.45
20:AT:54:MET:O	20:AT:57:ILE:HG22	2.17	0.45
22:BA:184:C:H2'	22:BA:185:G:C8	2.50	0.45
22:BA:288:U:N3	22:BA:289:G:N7	2.65	0.45
22:BA:847:U:C2'	22:BA:848:C:H5'	2.47	0.45
22:BA:852:U:H2'	22:BA:853:C:C6	2.51	0.45
22:BA:979:A:H2'	22:BA:982:C:H42	1.81	0.45
22:BA:1536:C:H4'	22:BA:1537:G:C5'	2.45	0.45
22:BA:1767:G:O2'	22:BA:1768:C:H5'	2.16	0.45
22:BA:1964:G:C2	22:BA:1967:C:C5	3.03	0.45
22:BA:2211:A:C2'	22:BA:2212:A:OP1	2.64	0.45
23:BB:14:U:O2	23:BB:107:G:H4'	2.16	0.45
23:BB:59:A:H2'	23:BB:60:C:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:204:VAL:O	24:BC:205:LEU:CB	2.57	0.45
25:BD:4:LEU:HD21	25:BD:100:LEU:HD23	1.96	0.45
25:BD:101:PHE:HE2	25:BD:203:VAL:HG12	1.81	0.45
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.16	0.45
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.45
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.49	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.45
33:BL:19:LEU:HD22	33:BL:31:GLY:O	2.16	0.45
34:BM:72:PRO:C	34:BM:73:ILE:HD13	2.41	0.45
37:BP:23:GLY:O	37:BP:90:GLY:HA3	2.16	0.45
37:BP:52:ASN:C	37:BP:53:ARG:HG2	2.40	0.45
1:CA:137:U:O2	1:CA:227:G:C2	2.69	0.45
1:CA:485:U:O2	1:CA:485:U:C5'	2.65	0.45
1:CA:577:G:C8	1:CA:816:A:C2	3.03	0.45
1:CA:666:G:C2	1:CA:667:G:C8	3.03	0.45
1:CA:790:A:C5	1:CA:791:G:C5	3.04	0.45
1:CA:1095:U:P	57:CA:1852:HOH:O	2.73	0.45
1:CA:1150:A:H1'	1:CA:1280:A:N6	2.31	0.45
3:CC:153:VAL:CG2	3:CC:157:LEU:HD21	2.46	0.45
3:CC:186:THR:HG22	3:CC:187:SER:N	2.31	0.45
10:CJ:28:THR:HG22	10:CJ:28:THR:O	2.16	0.45
12:CL:88:LYS:HG3	12:CL:88:LYS:O	2.16	0.45
17:CQ:70:THR:HG22	17:CQ:71:LYS:H	1.82	0.45
22:DA:188:G:O6	22:DA:189:G:C2	2.69	0.45
22:DA:219:A:N6	22:DA:220:G:N1	2.63	0.45
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.45	0.45
22:DA:627:A:OP1	33:DL:78:ARG:NH1	2.44	0.45
22:DA:751:A:C6	22:DA:789:A:C6	3.04	0.45
22:DA:871:U:C2	22:DA:907:G:C6	3.04	0.45
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.31	0.45
22:DA:1679:A:N6	57:DA:3439:HOH:O	2.49	0.45
22:DA:1944:U:C2	22:DA:1955:U:O4'	2.70	0.45
22:DA:1953:A:N1	22:DA:2550:G:H5'	2.31	0.45
22:DA:2100:G:C6	22:DA:2190:G:C5	3.05	0.45
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.49	0.45
22:DA:2466:C:OP1	52:D4:4:ARG:CB	2.64	0.45
22:DA:2468:A:N3	22:DA:2481:G:C2	2.84	0.45
22:DA:2506:U:O2	22:DA:2506:U:C2'	2.64	0.45
22:DA:2615:U:O2	22:DA:2615:U:H2'	2.16	0.45
22:DA:2765:A:H3'	22:DA:2765:A:N3	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:66:ASP:OD2	24:DC:102:ARG:HD3	2.15	0.45
28:DG:94:TYR:CD2	28:DG:107:LEU:HA	2.50	0.45
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.30	0.45
33:DL:77:ILE:HD13	33:DL:108:ALA:HB1	1.98	0.45
41:DT:69:ARG:HA	41:DT:74:ILE:HG22	1.98	0.45
45:DX:39:TRP:HB2	45:DX:46:PHE:CE2	2.51	0.45
50:D2:31:LEU:HD21	50:D2:43:THR:CG2	2.46	0.45
1:AA:194:C:O2'	1:AA:195:A:H5'	2.16	0.45
1:AA:900:A:C6	1:AA:901:A:N1	2.85	0.45
2:AB:132:LYS:O	2:AB:133:GLU:C	2.59	0.45
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.46	0.45
4:AD:190:ASP:O	4:AD:191:LEU:HG	2.16	0.45
5:AE:24:THR:HA	5:AE:29:ARG:HA	1.98	0.45
5:AE:84:PRO:HB3	5:AE:97:GLN:HG2	1.98	0.45
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.46	0.45
9:AI:39:PHE:HA	9:AI:42:GLU:OE1	2.16	0.45
11:AK:19:GLY:O	11:AK:82:LEU:HA	2.17	0.45
14:AN:36:ALA:HB2	14:AN:41:ARG:HE	1.81	0.45
14:AN:43:ASN:C	14:AN:45:VAL:N	2.71	0.45
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	1.97	0.45
20:AT:71:LYS:HD2	20:AT:74:ARG:HH21	1.82	0.45
22:BA:272:A:H2'	22:BA:273:G:O4'	2.16	0.45
22:BA:309:A:O3'	42:BU:16:GLY:HA2	2.17	0.45
22:BA:545:U:H1'	22:BA:548:G:OP2	2.16	0.45
22:BA:842:U:N3	22:BA:843:G:C8	2.84	0.45
22:BA:848:C:H2'	22:BA:849:A:H8	1.81	0.45
22:BA:1069:A:N1	22:BA:1073:A:N6	2.64	0.45
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.51	0.45
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.69	0.45
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.64	0.45
22:BA:1406:U:H2'	22:BA:1407:G:H8	1.80	0.45
22:BA:1482:G:H1'	22:BA:1509:A:H61	1.82	0.45
22:BA:1489:C:C2	22:BA:1501:G:C2	3.04	0.45
22:BA:1676:A:H2'	22:BA:1677:A:O4'	2.16	0.45
22:BA:1688:U:C4	22:BA:1698:A:C2	3.04	0.45
22:BA:1912:A:N1	22:BA:1919:A:N9	2.64	0.45
22:BA:2061:G:H5"	22:BA:2503:A:C2	2.51	0.45
22:BA:2170:A:C8	22:BA:2170:A:OP2	2.68	0.45
22:BA:2446:G:C2	22:BA:2501:C:C5	3.04	0.45
22:BA:2480:C:H2'	22:BA:2481:G:H5'	1.97	0.45
22:BA:2551:C:H2'	22:BA:2552:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2715:C:C4	22:BA:2716:C:C5	3.05	0.45
23:BB:24:G:N2	23:BB:28:C:O2	2.49	0.45
25:BD:186:LEU:HD13	37:BP:8:LEU:HD11	1.98	0.45
26:BE:25:GLU:O	26:BE:28:VAL:N	2.49	0.45
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.45
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.45
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.45
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.45
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.97	0.45
53:B5:75:VAL:HA	53:B5:120:VAL:O	2.16	0.45
1:CA:413:G:O2'	1:CA:428:G:N2	2.49	0.45
1:CA:542:G:N3	1:CA:543:U:C5	2.83	0.45
1:CA:682:G:N2	1:CA:709:U:C2	2.84	0.45
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.16	0.45
5:CE:149:SER:HB2	5:CE:152:MET:HG2	1.97	0.45
8:CH:24:ALA:O	8:CH:25:VAL:HG23	2.17	0.45
13:CM:34:LEU:N	13:CM:34:LEU:HD23	2.31	0.45
16:CP:12:LYS:O	16:CP:13:LYS:HB2	2.16	0.45
17:CQ:8:LEU:HD23	17:CQ:25:ILE:HD12	1.98	0.45
22:DA:729:G:C6	24:DC:207:LYS:HB2	2.51	0.45
22:DA:966:G:H4'	22:DA:2272:U:O2	2.15	0.45
22:DA:969:G:H2'	22:DA:970:U:C6	2.51	0.45
22:DA:1225:G:C6	22:DA:1226:A:N6	2.84	0.45
22:DA:1333:G:C2	22:DA:1334:G:C8	3.04	0.45
22:DA:1731:G:C5	22:DA:1733:G:C8	3.04	0.45
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.15	0.45
22:DA:1855:U:C4	22:DA:1856:U:C4	3.05	0.45
22:DA:2209:G:N2	22:DA:2216:G:C2	2.85	0.45
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.16	0.45
27:DF:9:LYS:O	27:DF:13:VAL:CG2	2.64	0.45
28:DG:61:GLY:O	28:DG:64:GLN:HB2	2.16	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45
30:DI:45:LYS:HA	30:DI:48:SER:HB3	1.99	0.45
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	1.99	0.45
31:DJ:88:THR:O	31:DJ:92:MET:N	2.45	0.45
31:DJ:140:LEU:HD12	31:DJ:140:LEU:C	2.41	0.45
46:DY:45:GLN:O	46:DY:46:VAL:C	2.59	0.45
1:AA:389:A:H2'	1:AA:389:A:N3	2.31	0.45
1:AA:828:U:H2'	1:AA:829:G:O5'	2.16	0.45
1:AA:911:U:OP2	12:AL:94:ARG:NH1	2.49	0.45
1:AA:1066:C:O2	1:AA:1066:C:C2'	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1216:A:H2'	1:AA:1217:C:C6	2.51	0.45
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.52	0.45
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.32	0.45
7:AG:116:MET:O	7:AG:120:LEU:HB2	2.17	0.45
7:AG:146:GLU:HA	7:AG:149:LYS:HB3	1.99	0.45
8:AH:105:SER:HB2	8:AH:126:ILE:HD11	1.99	0.45
12:AL:88:LYS:O	12:AL:89:ASP:HB2	2.16	0.45
13:AM:3:ARG:HA	13:AM:9:ILE:HG12	1.98	0.45
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.99	0.45
22:BA:49:A:H5"	22:BA:51:G:O4'	2.17	0.45
22:BA:684:G:C6	22:BA:774:G:C4	3.03	0.45
22:BA:974:G:C4	22:BA:1186:G:C2	3.04	0.45
22:BA:1344:U:O2'	22:BA:1345:C:P	2.75	0.45
22:BA:1680:U:O2'	22:BA:1681:G:H5'	2.16	0.45
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.31	0.45
22:BA:1826:G:C5	22:BA:1827:U:C5	3.04	0.45
22:BA:2013:A:H2'	22:BA:2013:A:N3	2.32	0.45
22:BA:2192:U:N3	22:BA:2193:G:N7	2.64	0.45
22:BA:2250:G:H8	22:BA:2250:G:O5'	2.00	0.45
22:BA:2298:A:C5	22:BA:2321:U:C5	3.03	0.45
22:BA:2436:G:O2'	22:BA:2598:A:N1	2.47	0.45
22:BA:2507:C:OP2	57:BA:3714:HOH:O	2.21	0.45
23:BB:97:C:C5	23:BB:98:G:C8	3.04	0.45
25:BD:103:ASP:CG	25:BD:104:VAL:N	2.74	0.45
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.41	0.45
33:BL:28:GLY:O	39:BR:82:HIS:CE1	2.70	0.45
35:BN:65:LEU:HD12	35:BN:65:LEU:O	2.16	0.45
39:BR:57:GLY:C	39:BR:58:VAL:HG12	2.42	0.45
44:BW:69:PHE:CE1	44:BW:80:ILE:HD11	2.51	0.45
53:B5:88:GLU:HG3	53:B5:95:VAL:HG23	1.99	0.45
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.65	0.45
1:CA:28:A:C5	1:CA:29:U:C5	3.04	0.45
1:CA:64:G:C2	1:CA:67:C:N4	2.84	0.45
1:CA:106:C:H2'	1:CA:107:G:H5'	1.98	0.45
1:CA:211:G:H21	1:CA:212:G:H1'	1.81	0.45
1:CA:407:U:C2	1:CA:408:A:N7	2.85	0.45
1:CA:573:A:C2	1:CA:574:A:C2	3.04	0.45
1:CA:652:U:C5	1:CA:752:G:N3	2.84	0.45
1:CA:718:A:H1'	11:CK:118:HIS:HA	1.98	0.45
1:CA:913:A:H4'	1:CA:914:A:OP1	2.17	0.45
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1387:G:C4	1:CA:1388:C:C5	3.04	0.45
1:CA:1397:C:O2	1:CA:1397:C:O4'	2.32	0.45
2:CB:47:VAL:O	2:CB:50:PHE:CD2	2.70	0.45
5:CE:44:GLY:O	5:CE:45:ARG:C	2.59	0.45
9:CI:99:ARG:HA	9:CI:104:VAL:CG2	2.46	0.45
9:CI:128:SER:O	9:CI:129:LYS:C	2.59	0.45
22:DA:60:G:C4	22:DA:74:A:C2	3.04	0.45
22:DA:78:U:H2'	22:DA:79:C:O4'	2.16	0.45
22:DA:189:G:P	45:DX:26:LYS:HE2	2.56	0.45
22:DA:242:G:C5'	51:D3:64:TYR:CZ	2.99	0.45
22:DA:352:A:C5	22:DA:353:C:C4	3.04	0.45
22:DA:370:G:C6	22:DA:424:G:C5	3.03	0.45
22:DA:715:A:C6	22:DA:716:A:C5	3.04	0.45
22:DA:1045:C:H4'	22:DA:1046:A:H5'	1.98	0.45
22:DA:1452:G:C6	22:DA:2702:G:N2	2.84	0.45
22:DA:2127:G:N3	22:DA:2162:G:N7	2.64	0.45
22:DA:2418:A:H2'	22:DA:2419:U:O4'	2.16	0.45
22:DA:2576:G:O2'	22:DA:2579:C:OP2	2.20	0.45
37:DP:33:VAL:O	37:DP:33:VAL:HG12	2.15	0.45
39:DR:76:LYS:HB2	39:DR:85:LYS:HB2	1.97	0.45
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.15	0.45
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.52	0.45
1:AA:29:U:O2'	1:AA:30:U:H5'	2.16	0.45
1:AA:64:G:C8	1:AA:99:C:C4	3.05	0.45
1:AA:594:U:C4	1:AA:595:A:C6	3.05	0.45
1:AA:828:U:C5	1:AA:859:G:C4	3.05	0.45
1:AA:851:G:C2'	1:AA:852:G:H5'	2.47	0.45
1:AA:1350:A:C8	1:AA:1351:U:C5	3.05	0.45
1:AA:1481:U:C2'	1:AA:1482:G:H5'	2.46	0.45
2:AB:27:MET:HA	2:AB:27:MET:HE3	1.97	0.45
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.42	0.45
2:AB:141:LEU:O	2:AB:145:GLU:N	2.46	0.45
4:AD:86:THR:HG22	4:AD:201:VAL:HG22	1.99	0.45
5:AE:34:THR:HB	5:AE:50:TYR:CE2	2.51	0.45
7:AG:25:LYS:HB2	7:AG:101:MET:HE1	1.98	0.45
15:AO:70:LEU:O	15:AO:73:LYS:N	2.49	0.45
16:AP:78:VAL:O	16:AP:79:ASN:C	2.60	0.45
21:AU:4:ILE:HD13	21:AU:20:LYS:HZ1	1.82	0.45
22:BA:533:G:OP1	38:BQ:24:TYR:O	2.35	0.45
22:BA:583:G:O2'	22:BA:584:C:H5'	2.17	0.45
22:BA:611:C:H2'	22:BA:612:G:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.52	0.45
22:BA:1478:G:H1	22:BA:1513:U:H3	1.63	0.45
22:BA:1488:C:O2	22:BA:1502:A:C2	2.69	0.45
22:BA:2074:U:H1'	22:BA:2598:A:N3	2.32	0.45
22:BA:2296:U:C4'	22:BA:2297:A:OP1	2.65	0.45
22:BA:2310:C:C2	27:BF:77:PHE:CE1	3.04	0.45
22:BA:2519:U:OP1	22:BA:2519:U:H3'	2.16	0.45
22:BA:2525:G:C2	22:BA:2539:C:C2	3.04	0.45
22:BA:2838:G:C6	22:BA:2839:G:C5	3.04	0.45
27:BF:41:GLY:O	27:BF:42:GLU:C	2.58	0.45
32:BK:103:VAL:HB	32:BK:107:LEU:CD1	2.46	0.45
35:BN:75:ILE:O	35:BN:79:LEU:HD12	2.16	0.45
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.98	0.45
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.99	0.45
43:BV:43:ASP:OD1	43:BV:46:LYS:CG	2.65	0.45
44:BW:29:GLU:O	44:BW:66:LYS:HA	2.16	0.45
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.69	0.45
47:BZ:3:LYS:HE3	47:BZ:3:LYS:H	1.82	0.45
1:CA:268:U:H2'	1:CA:269:C:H6	1.74	0.45
1:CA:819:A:H4'	1:CA:820:U:OP2	2.17	0.45
1:CA:919:A:C6	1:CA:920:U:C5	3.04	0.45
1:CA:1232:U:H5"	9:CI:126:GLN:O	2.16	0.45
1:CA:1533:C:H4'	1:CA:1533:C:OP1	2.16	0.45
2:CB:24:ASN:C	2:CB:26:LYS:H	2.24	0.45
2:CB:193:PRO:O	2:CB:195:GLY:N	2.47	0.45
5:CE:50:TYR:O	5:CE:51:GLY:O	2.35	0.45
5:CE:115:LEU:HD12	5:CE:120:VAL:HG21	1.99	0.45
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.49	0.45
11:CK:110:ILE:HG22	21:CU:17:ARG:NH1	2.29	0.45
12:CL:84:GLY:HA2	12:CL:95:TYR:HA	1.99	0.45
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.14	0.45
15:CO:46:HIS:C	15:CO:48:LYS:N	2.72	0.45
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.59	0.45
18:CR:28:THR:O	18:CR:31:ASN:HB2	2.15	0.45
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.80	0.45
22:DA:38:A:C2	22:DA:442:G:C6	3.04	0.45
22:DA:479:A:H1'	22:DA:481:G:H5'	1.99	0.45
22:DA:527:C:H2'	22:DA:2779:U:O2	2.16	0.45
22:DA:622:G:H2'	22:DA:623:C:C6	2.50	0.45
22:DA:675:A:C6	22:DA:676:A:N1	2.85	0.45
22:DA:914:G:H5'	22:DA:915:C:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1351:C:C2	22:DA:1381:G:C2	3.04	0.45
22:DA:1596:A:C6	22:DA:1597:A:C6	3.04	0.45
22:DA:1663:G:O6	22:DA:1992:G:C8	2.69	0.45
22:DA:1809:A:N6	22:DA:1810:A:N1	2.65	0.45
22:DA:2144:G:N3	22:DA:2146:C:O2	2.50	0.45
22:DA:2835:A:C2	22:DA:2879:A:N7	2.85	0.45
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.16	0.45
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.15	0.45
27:DF:108:VAL:HG11	27:DF:176:PRO:HG2	1.99	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
33:DL:70:LYS:O	33:DL:74:THR:HG23	2.17	0.45
33:DL:132:ARG:O	33:DL:136:GLU:HG3	2.17	0.45
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.70	0.45
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	1.98	0.45
41:DT:26:LYS:O	41:DT:26:LYS:HG2	2.16	0.45
45:DX:13:VAL:HG22	45:DX:29:PHE:HB2	1.98	0.45
45:DX:25:THR:O	45:DX:25:THR:HG22	2.15	0.45
1:AA:266:G:H4'	1:AA:267:C:OP1	2.16	0.45
1:AA:275:G:H4'	17:AQ:17:MET:HB3	1.97	0.45
1:AA:570:G:C6	1:AA:873:A:C2	3.05	0.45
1:AA:675:A:OP1	18:AR:74:HIS:NE2	2.47	0.45
1:AA:723:U:H5'	1:AA:724:G:P	2.57	0.45
1:AA:737:C:H2'	1:AA:738:C:H6	1.80	0.45
1:AA:841:C:O2	1:AA:843:U:C2	2.69	0.45
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.70	0.45
3:AC:152:GLU:HA	3:AC:166:GLU:O	2.16	0.45
4:AD:105:MET:HG2	4:AD:171:LEU:HD22	1.97	0.45
5:AE:101:GLU:CB	5:AE:122:ASN:HB3	2.47	0.45
6:AF:72:ASP:C	6:AF:74:LEU:H	2.24	0.45
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.63	0.45
10:AJ:80:THR:C	10:AJ:82:LYS:N	2.74	0.45
11:AK:77:TYR:O	11:AK:78:GLY:C	2.59	0.45
19:AS:27:ASP:OD2	19:AS:28:LYS:O	2.34	0.45
22:BA:141:G:H5"	22:BA:142:A:C5	2.51	0.45
22:BA:417:C:H2'	22:BA:418:C:C6	2.52	0.45
22:BA:747:U:N3	22:BA:2613:U:C4	2.85	0.45
22:BA:838:C:O2'	22:BA:839:U:H5'	2.17	0.45
22:BA:988:A:O5'	47:BZ:12:SER:HB2	2.17	0.45
22:BA:1299:G:H8	22:BA:1299:G:O5'	2.00	0.45
22:BA:1376:C:N4	22:BA:1377:G:N1	2.65	0.45
22:BA:1406:U:C2	22:BA:1407:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2128:G:H5'	53:B5:36:ALA:HA	1.98	0.45
22:BA:2199:A:C1'	29:BH:28:ASN:HD21	2.27	0.45
22:BA:2259:U:C6	22:BA:2427:C:C4	3.04	0.45
22:BA:2419:U:OP1	51:B3:41:LYS:HE2	2.17	0.45
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.51	0.45
23:BB:105:G:C2	23:BB:106:G:C8	3.04	0.45
25:BD:91:THR:O	25:BD:94:GLN:HB2	2.16	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
29:BH:83:LYS:HE2	1:CA:55:A:H2'	1.98	0.45
32:BK:107:LEU:C	32:BK:109:SER:N	2.74	0.45
33:BL:22:GLY:O	33:BL:25:SER:OG	2.35	0.45
33:BL:120:VAL:HG22	33:BL:121:THR:N	2.31	0.45
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.46	0.45
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.32	0.45
38:BQ:36:PHE:CE1	38:BQ:40:ILE:HD12	2.51	0.45
1:CA:21:G:H2'	1:CA:22:G:C8	2.51	0.45
1:CA:145:G:C2	1:CA:146:G:C8	3.05	0.45
1:CA:451:A:C8	1:CA:452:A:C6	3.04	0.45
1:CA:1198:G:H5"	57:CA:1835:HOH:O	2.17	0.45
1:CA:1512:U:O2'	1:CA:1513:A:H5'	2.16	0.45
2:CB:72:THR:HG22	2:CB:95:ARG:NH1	2.31	0.45
2:CB:151:ILE:O	2:CB:152:LYS:C	2.59	0.45
3:CC:151:VAL:HG12	3:CC:200:VAL:HB	1.98	0.45
5:CE:58:ALA:O	5:CE:62:LYS:HB2	2.16	0.45
12:CL:25:GLU:HB3	12:CL:27:CYS:SG	2.57	0.45
13:CM:114:LYS:CB	13:CM:115:PRO:HD3	2.47	0.45
14:CN:53:ARG:C	14:CN:55:SER:N	2.72	0.45
22:DA:140:C:O2	22:DA:140:C:O4'	2.34	0.45
22:DA:231:A:N6	22:DA:232:G:C2	2.84	0.45
22:DA:511:U:C2'	22:DA:512:G:H5'	2.46	0.45
22:DA:538:A:C2	22:DA:556:A:C4	3.04	0.45
22:DA:681:G:C2	22:DA:682:G:C8	3.04	0.45
22:DA:864:G:C6	22:DA:865:C:N4	2.85	0.45
22:DA:1252:G:N3	38:DQ:33:ARG:HG2	2.32	0.45
22:DA:1343:G:C6	22:DA:1344:U:O4	2.69	0.45
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.82	0.45
22:DA:1806:C:C5	22:DA:1807:G:N7	2.84	0.45
23:DB:78:A:C6	23:DB:99:A:C8	3.05	0.45
24:DC:87:ARG:HB3	24:DC:87:ARG:CZ	2.47	0.45
30:DI:57:VAL:CG2	30:DI:71:THR:HB	2.46	0.45
31:DJ:7:LYS:O	31:DJ:11:VAL:HG23	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:1:MET:HE2	32:DK:32:TYR:CE1	2.51	0.45
32:DK:13:ASN:OD1	32:DK:97:THR:N	2.45	0.45
38:DQ:65:ILE:HD11	38:DQ:92:ARG:HA	1.98	0.45
40:DS:27:LYS:O	40:DS:71:VAL:HG23	2.17	0.45
44:DW:21:LEU:HD11	44:DW:41:ARG:HG2	1.97	0.45
45:DX:7:VAL:HG12	45:DX:8:THR:N	2.31	0.45
45:DX:41:GLU:O	45:DX:42:SER:C	2.58	0.45
50:D2:1:MET:O	50:D2:2:LYS:C	2.60	0.45
1:AA:67:C:O2'	1:AA:171:A:N3	2.39	0.45
1:AA:89:U:O2'	1:AA:90:C:H5"	2.16	0.45
1:AA:102:G:N1	1:AA:103:U:C4	2.84	0.45
1:AA:115:G:H4'	1:AA:116:A:O5'	2.16	0.45
1:AA:174:A:C4	1:AA:175:C:C6	3.05	0.45
1:AA:306:A:H2'	1:AA:307:C:O4'	2.17	0.45
1:AA:417:G:C5	1:AA:418:C:C5	3.04	0.45
1:AA:711:G:H2'	1:AA:712:A:H8	1.82	0.45
1:AA:807:A:C5	1:AA:808:C:C5	3.05	0.45
1:AA:864:A:H3'	1:AA:865:A:C8	2.52	0.45
1:AA:1160:G:OP1	2:AB:132:LYS:NZ	2.42	0.45
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.51	0.45
1:AA:1242:G:N1	1:AA:1243:C:C2	2.85	0.45
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.52	0.45
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.16	0.45
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.52	0.45
2:AB:111:ILE:HG13	2:AB:151:ILE:HG12	1.98	0.45
2:AB:154:MET:O	2:AB:156:GLY:N	2.49	0.45
3:AC:167:TRP:HE3	3:AC:167:TRP:C	2.25	0.45
4:AD:98:LEU:HD23	4:AD:118:VAL:HG11	1.99	0.45
7:AG:135:VAL:O	7:AG:139:GLU:HG2	2.16	0.45
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.79	0.45
10:AJ:56:HIS:O	10:AJ:57:VAL:O	2.35	0.45
11:AK:76:GLU:O	22:BA:2141:G:C5'	2.64	0.45
13:AM:77:ILE:HG22	13:AM:81:MET:CE	2.46	0.45
13:AM:95:LEU:CB	13:AM:96:PRO:CD	2.94	0.45
16:AP:42:ILE:O	16:AP:43:ALA:C	2.58	0.45
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.31	0.45
22:BA:102:U:O4	46:BY:2:LYS:HB2	2.17	0.45
22:BA:142:A:C2'	22:BA:143:C:O5'	2.65	0.45
22:BA:410:G:C2	22:BA:2407:A:C5	3.05	0.45
22:BA:481:G:O2'	22:BA:507:A:N1	2.41	0.45
22:BA:613:A:C8	22:BA:616:A:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:713:G:C6	22:BA:714:U:C4	3.05	0.45
22:BA:846:U:C2'	22:BA:847:U:OP2	2.64	0.45
22:BA:946:C:OP2	57:BA:3347:HOH:O	2.21	0.45
22:BA:1131:G:C4	31:BJ:77:HIS:ND1	2.84	0.45
22:BA:1148:U:O2'	22:BA:1149:G:H5'	2.17	0.45
22:BA:1348:C:C5	22:BA:1349:C:C6	3.05	0.45
22:BA:1428:C:O2'	22:BA:1569:A:OP2	2.21	0.45
22:BA:1549:A:C6	22:BA:1550:C:C4	3.05	0.45
22:BA:2259:U:C5	22:BA:2427:C:N4	2.85	0.45
22:BA:2784:U:C2	22:BA:2785:C:C5	3.04	0.45
24:BC:83:TYR:CE2	57:BC:306:HOH:O	2.69	0.45
25:BD:57:ALA:C	25:BD:59:ARG:N	2.74	0.45
30:BI:113:LYS:HE2	30:BI:116:ASP:OD1	2.17	0.45
33:BL:100:ILE:O	33:BL:100:ILE:HG13	2.17	0.45
34:BM:77:PRO:HD2	34:BM:80:VAL:HG21	1.99	0.45
1:CA:195:A:C6	1:CA:196:A:N1	2.84	0.45
1:CA:200:G:C2'	1:CA:201:G:H5"	2.47	0.45
1:CA:282:A:C8	1:CA:283:U:C5	3.04	0.45
1:CA:392:C:H2'	1:CA:393:A:C8	2.50	0.45
1:CA:431:A:H2'	1:CA:432:A:O4'	2.16	0.45
1:CA:597:G:H2'	1:CA:598:U:H5'	1.98	0.45
1:CA:691:G:H4'	1:CA:798:U:OP1	2.17	0.45
1:CA:891:U:C4	1:CA:906:A:C2	3.05	0.45
1:CA:938:A:C2	1:CA:1345:U:O4	2.69	0.45
1:CA:1031:C:H4'	1:CA:1032:G:C2	2.52	0.45
1:CA:1053:G:O5'	1:CA:1054:C:H5'	2.17	0.45
1:CA:1160:G:O6	1:CA:1181:G:C6	2.70	0.45
1:CA:1261:A:C6	1:CA:1275:A:C4	3.05	0.45
2:CB:17:GLY:O	2:CB:39:HIS:O	2.34	0.45
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.16	0.45
22:DA:37:C:H2'	22:DA:38:A:C8	2.51	0.45
22:DA:173:A:H2'	22:DA:174:U:C6	2.51	0.45
22:DA:308:G:H2'	22:DA:309:A:O4'	2.17	0.45
22:DA:494:G:H4'	40:DS:6:LYS:HG3	1.99	0.45
22:DA:600:G:H2'	22:DA:601:C:C6	2.52	0.45
22:DA:1195:G:O2'	22:DA:1226:A:N1	2.46	0.45
22:DA:1276:A:N1	22:DA:1295:C:C2	2.85	0.45
22:DA:1332:G:C6	22:DA:1609:A:C5	3.05	0.45
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.31	0.45
22:DA:2091:C:C3'	22:DA:2092:U:H5"	2.45	0.45
22:DA:2291:U:H2'	22:DA:2292:U:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2298:A:C2	22:DA:2321:U:C5	3.05	0.45
22:DA:2728:U:O2'	22:DA:2729:G:C5'	2.65	0.45
22:DA:2814:A:C6	22:DA:2815:C:C4	3.05	0.45
24:DC:144:VAL:HB	24:DC:154:LEU:HB2	1.98	0.45
27:DF:28:VAL:HG22	27:DF:29:PRO:HD2	1.98	0.45
28:DG:111:HIS:ND1	28:DG:111:HIS:O	2.49	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
34:DM:66:ARG:HB2	34:DM:101:VAL:O	2.15	0.45
40:DS:17:VAL:HG12	40:DS:76:VAL:HG21	1.97	0.45
42:DU:72:ILE:HD11	42:DU:83:VAL:HG23	1.98	0.45
1:AA:15:G:C4	1:AA:16:A:C8	3.05	0.45
1:AA:34:C:H2'	1:AA:35:G:H8	1.81	0.45
1:AA:438:U:N3	1:AA:494:G:C6	2.85	0.45
1:AA:587:G:C2	1:AA:755:G:C5	3.05	0.45
1:AA:624:C:C2	1:AA:625:U:C6	3.05	0.45
1:AA:747:A:H5'	1:AA:748:G:OP2	2.16	0.45
1:AA:995:C:C2	1:AA:1046:A:O2'	2.66	0.45
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.39	0.45
2:AB:87:CYS:HB2	2:AB:89:GLN:CD	2.41	0.45
3:AC:205:GLY:O	3:AC:206:GLU:CG	2.63	0.45
6:AF:1:MET:HG2	6:AF:65:GLU:HG2	1.99	0.45
6:AF:52:ASN:C	6:AF:53:LYS:O	2.56	0.45
6:AF:79:ARG:NE	6:AF:79:ARG:HA	2.32	0.45
7:AG:57:SER:OG	7:AG:58:GLU:N	2.49	0.45
9:AI:24:GLY:H	9:AI:61:LEU:HA	1.82	0.45
9:AI:91:ASP:C	9:AI:91:ASP:OD2	2.59	0.45
12:AL:29:GLN:HB2	12:AL:82:ILE:O	2.16	0.45
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.98	0.45
20:AT:54:MET:HE3	20:AT:58:VAL:CG2	2.46	0.45
22:BA:164:C:H2'	22:BA:165:A:O4'	2.16	0.45
22:BA:877:A:N6	22:BA:899:A:C6	2.85	0.45
22:BA:962:G:N2	22:BA:2250:G:H1	2.14	0.45
22:BA:973:A:C8	22:BA:1188:U:C2	3.05	0.45
22:BA:1085:A:C5	22:BA:1086:A:C6	3.05	0.45
22:BA:1588:G:N1	22:BA:1589:U:C4	2.84	0.45
22:BA:1838:C:C4	22:BA:1899:A:C2	3.05	0.45
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.51	0.45
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.98	0.45
22:BA:2001:C:N3	22:BA:2002:G:C8	2.85	0.45
22:BA:2128:G:OP2	53:B5:37:LYS:HE3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2171:A:O2'	22:BA:2172:U:H5'	2.17	0.45
26:BE:44:ARG:O	26:BE:45:ALA:HB2	2.16	0.45
27:BF:129:SER:OG	27:BF:155:THR:OG1	2.31	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
29:BH:95:GLY:HA3	1:CA:368:U:OP1	2.15	0.45
41:BT:2:ILE:CA	41:BT:3:ARG:HB2	2.47	0.45
42:BU:6:ARG:O	42:BU:7:ARG:C	2.58	0.45
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.17	0.45
49:B1:51:GLU:O	49:B1:52:ALA:HB2	2.16	0.45
52:B4:27:CYS:SG	52:B4:33:HIS:ND1	2.90	0.45
1:CA:72:A:C5	1:CA:73:C:N4	2.84	0.45
1:CA:435:A:C2	1:CA:436:C:N1	2.85	0.45
1:CA:607:A:C2	1:CA:608:A:C4	3.05	0.45
1:CA:968:A:C8	1:CA:1062:U:H4'	2.51	0.45
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.17	0.45
4:CD:177:LYS:O	4:CD:178:MET:HB2	2.16	0.45
11:CK:87:LYS:HA	11:CK:114:THR:HG22	1.99	0.45
18:CR:25:ASP:O	18:CR:26:ILE:C	2.60	0.45
21:CU:15:ALA:O	21:CU:16:LEU:C	2.59	0.45
22:DA:106:C:O2	22:DA:106:C:H2'	2.15	0.45
22:DA:132:G:N2	22:DA:148:U:O2	2.50	0.45
22:DA:185:G:C6	22:DA:212:G:N1	2.85	0.45
22:DA:500:G:C2	22:DA:502:A:C8	3.04	0.45
22:DA:818:G:H2'	22:DA:819:A:H5"	1.98	0.45
22:DA:993:G:C6	22:DA:1162:G:C6	3.04	0.45
22:DA:1532:A:C2	22:DA:1540:G:C6	3.05	0.45
22:DA:1814:G:C6	22:DA:1815:A:N6	2.84	0.45
22:DA:1973:G:C6	22:DA:1974:C:N4	2.84	0.45
24:DC:204:VAL:O	24:DC:206:GLY:N	2.49	0.45
25:DD:103:ASP:O	25:DD:104:VAL:C	2.59	0.45
26:DE:61:ARG:O	26:DE:62:GLN:C	2.60	0.45
26:DE:182:ALA:HB2	33:DL:3:LEU:HD22	1.99	0.45
27:DF:136:ILE:O	27:DF:136:ILE:HG22	2.16	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
30:DI:80:LEU:HD11	30:DI:133:ALA:CB	2.46	0.45
37:DP:106:LYS:HA	37:DP:109:ARG:CD	2.46	0.45
39:DR:5:PHE:O	39:DR:11:GLN:HA	2.16	0.45
41:DT:21:SER:O	41:DT:22:THR:C	2.59	0.45
51:D3:26:HIS:NE2	51:D3:48:ALA:HB2	2.32	0.45
52:D4:25:VAL:HB	52:D4:35:GLN:HG3	1.98	0.45
1:AA:201:G:H2'	1:AA:202:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:283:U:C5	1:AA:284:C:C5	3.05	0.45
1:AA:947:G:C2	1:AA:948:C:C2	3.05	0.45
3:AC:42:TYR:OH	3:AC:90:VAL:HG21	2.16	0.45
7:AG:17:LYS:O	7:AG:17:LYS:HG2	2.16	0.45
8:AH:54:ASP:CG	8:AH:55:THR:H	2.24	0.45
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.17	0.45
9:AI:113:ARG:NH2	14:AN:101:TRP:CZ2	2.85	0.45
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.98	0.45
12:AL:21:VAL:HG22	12:AL:21:VAL:O	2.16	0.45
14:AN:12:LYS:O	14:AN:16:LEU:HG	2.17	0.45
14:AN:83:LYS:CD	14:AN:86:GLU:OE1	2.65	0.45
16:AP:70:ARG:O	16:AP:74:LEU:HG	2.17	0.45
18:AR:32:TYR:CG	18:AR:55:LEU:HD11	2.52	0.45
21:AU:20:LYS:HA	21:AU:20:LYS:NZ	2.32	0.45
22:BA:250:G:P	51:B3:13:ARG:NH1	2.89	0.45
22:BA:493:G:H2'	22:BA:494:G:O4'	2.17	0.45
22:BA:563:A:O2'	22:BA:564:C:H5'	2.17	0.45
22:BA:693:A:O2'	22:BA:694:U:H5'	2.16	0.45
22:BA:713:G:C5	22:BA:714:U:C5	3.05	0.45
22:BA:950:G:H2'	22:BA:951:C:C6	2.51	0.45
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.59	0.45
22:BA:2310:C:C4	27:BF:77:PHE:CE1	3.04	0.45
22:BA:2380:C:H5'	36:BO:17:LYS:NZ	2.31	0.45
22:BA:2550:G:C2	22:BA:2559:C:O2	2.69	0.45
22:BA:2680:U:H3	22:BA:2681:C:N4	2.15	0.45
28:BG:30:ASN:CG	28:BG:30:ASN:O	2.60	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.49	0.45
32:BK:105:ARG:C	32:BK:107:LEU:N	2.72	0.45
32:BK:107:LEU:O	32:BK:108:ARG:C	2.58	0.45
37:BP:27:GLU:O	37:BP:27:GLU:HG2	2.15	0.45
1:CA:121:U:H3'	1:CA:122:G:H5'	1.98	0.45
1:CA:414:A:C2	1:CA:415:A:C4	3.04	0.45
1:CA:519:C:H2'	1:CA:520:A:O4'	2.17	0.45
1:CA:743:A:C5	1:CA:744:C:C5	3.05	0.45
1:CA:754:C:H3'	1:CA:754:C:O2	2.16	0.45
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.51	0.45
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.52	0.45
2:CB:60:ILE:HD12	2:CB:61:ALA:N	2.31	0.45
2:CB:117:LEU:O	2:CB:118:GLU:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:95:PHE:O	5:CE:125:ALA:O	2.35	0.45
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.32	0.45
9:CI:57:MET:O	9:CI:60:LYS:HB2	2.16	0.45
12:CL:18:LYS:HD2	12:CL:18:LYS:C	2.42	0.45
13:CM:19:LEU:HB2	13:CM:30:SER:OG	2.16	0.45
14:CN:26:GLU:C	14:CN:26:GLU:CD	2.85	0.45
15:CO:73:LYS:HA	15:CO:73:LYS:CE	2.47	0.45
20:CT:3:ASN:O	20:CT:4:ILE:C	2.59	0.45
22:DA:7:G:H4'	31:DJ:15:TRP:CZ2	2.52	0.45
22:DA:269:C:O2	22:DA:269:C:H2'	2.17	0.45
22:DA:320:A:H4'	22:DA:322:A:N7	2.30	0.45
22:DA:592:A:C2	22:DA:593:U:C2	3.05	0.45
22:DA:875:G:N2	22:DA:903:C:C2	2.85	0.45
22:DA:949:G:C6	22:DA:950:G:N7	2.85	0.45
22:DA:959:A:H2'	22:DA:960:A:C8	2.51	0.45
22:DA:1309:G:OP1	50:D2:9:VAL:N	2.47	0.45
22:DA:1565:C:C5	22:DA:1567:G:C6	3.05	0.45
22:DA:1568:G:N7	24:DC:28:LYS:HE3	2.32	0.45
22:DA:1604:C:O2'	22:DA:1610:A:N1	2.43	0.45
22:DA:1907:G:C6	22:DA:1924:C:N3	2.85	0.45
22:DA:2069:G:N2	22:DA:2443:C:C2	2.85	0.45
22:DA:2156:G:C6	22:DA:2157:G:C2	3.05	0.45
22:DA:2302:U:O2'	27:DF:123:ASP:O	2.35	0.45
22:DA:2627:G:C6	22:DA:2628:C:C4	3.05	0.45
22:DA:2824:C:C4	22:DA:2825:G:C5	3.05	0.45
23:DB:32:U:C2	23:DB:51:G:N2	2.84	0.45
26:DE:1:MET:HG2	26:DE:14:VAL:HG23	1.99	0.45
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
30:DI:101:ILE:O	30:DI:102:SER:CB	2.64	0.45
35:DN:83:LEU:HD22	35:DN:115:LEU:HD13	1.98	0.45
35:DN:118:ARG:O	35:DN:119:SER:HB2	2.17	0.45
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.15	0.45
50:D2:31:LEU:HD21	50:D2:43:THR:HG22	1.99	0.45
51:D3:15:LYS:HD3	51:D3:23:LYS:HE2	1.99	0.45
1:AA:243:A:C2	1:AA:246:A:C8	3.05	0.45
1:AA:451:A:C2	1:AA:480:U:N3	2.85	0.45
1:AA:725:G:C2	1:AA:726:C:C5	3.04	0.45
1:AA:1237:C:C4	1:AA:1336:C:N3	2.85	0.45
1:AA:1308:U:OP2	13:AM:98:ARG:CG	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:175:GLU:O	2:AB:178:ASN:HB3	2.17	0.45
3:AC:11:ARG:NH1	3:AC:182:ILE:HG13	2.32	0.45
3:AC:23:PHE:CE1	10:AJ:13:PHE:CE2	3.05	0.45
7:AG:88:PRO:C	7:AG:89:VAL:HG12	2.42	0.45
7:AG:103:TRP:CD2	7:AG:137:LYS:HG2	2.52	0.45
8:AH:39:VAL:HG13	8:AH:112:THR:HG22	1.99	0.45
8:AH:83:LEU:HD22	8:AH:85:ILE:HD13	1.99	0.45
15:AO:4:SER:O	15:AO:7:ALA:N	2.50	0.45
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.16	0.45
21:AU:37:PHE:O	21:AU:38:TYR:CB	2.64	0.45
22:BA:90:U:H2'	22:BA:91:A:C8	2.52	0.45
22:BA:189:G:OP1	45:BX:26:LYS:HD2	2.17	0.45
22:BA:570:G:H8	22:BA:570:G:O5'	2.00	0.45
22:BA:572:A:P	57:BA:3570:HOH:O	2.74	0.45
22:BA:706:A:H2'	22:BA:707:G:O4'	2.16	0.45
22:BA:1073:A:H2'	22:BA:1074:G:H5"	1.98	0.45
22:BA:1366:A:C5	22:BA:1367:A:C8	3.05	0.45
22:BA:1791:A:O3'	24:BC:204:VAL:O	2.35	0.45
22:BA:1937:A:C2	22:BA:1939:U:C4	3.05	0.45
22:BA:2310:C:C5	27:BF:77:PHE:CZ	3.04	0.45
22:BA:2498:C:O2'	22:BA:2499:C:H5'	2.16	0.45
22:BA:2754:U:H2'	22:BA:2756:U:OP1	2.16	0.45
23:BB:2:G:C6	23:BB:119:A:C2	3.04	0.45
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.99	0.45
24:BC:209:GLY:O	24:BC:212:ARG:N	2.50	0.45
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.17	0.45
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.99	0.45
26:BE:124:PHE:O	26:BE:125:SER:CB	2.65	0.45
27:BF:133:ARG:O	27:BF:134:GLU:CB	2.65	0.45
30:BI:67:PHE:N	30:BI:67:PHE:HD2	2.14	0.45
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.50	0.45
34:BM:57:VAL:O	34:BM:58:LYS:C	2.60	0.45
38:BQ:24:TYR:HB3	38:BQ:28:ARG:HB3	1.99	0.45
39:BR:68:ARG:HD3	39:BR:92:TRP:CE2	2.52	0.45
46:BY:16:THR:HA	46:BY:19:LEU:HD12	1.98	0.45
47:BZ:45:ARG:HD3	47:BZ:45:ARG:HA	1.76	0.45
51:B3:32:ILE:O	51:B3:32:ILE:HG22	2.15	0.45
51:B3:45:ARG:N	51:B3:46:PRO:CD	2.79	0.45
53:B5:50:ILE:HG23	53:B5:51:ASP:H	1.82	0.45
1:CA:64:G:N2	1:CA:67:C:C4	2.85	0.45
1:CA:117:G:H2'	1:CA:118:U:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:158:G:C6	1:CA:164:G:C5	3.05	0.45
1:CA:376:G:H5"	16:CP:5:ARG:HB2	1.98	0.45
1:CA:501:C:H2'	1:CA:502:A:C8	2.52	0.45
1:CA:563:A:H2'	1:CA:567:G:C8	2.52	0.45
1:CA:1103:C:C4	1:CA:1104:G:N7	2.85	0.45
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.52	0.45
1:CA:1204:A:P	57:CA:1845:HOH:O	2.74	0.45
4:CD:129:VAL:O	4:CD:129:VAL:CG1	2.64	0.45
5:CE:66:LYS:O	5:CE:69:ARG:O	2.35	0.45
5:CE:156:LYS:HA	5:CE:159:LYS:NZ	2.31	0.45
6:CF:1:MET:HG2	6:CF:65:GLU:HG2	1.98	0.45
6:CF:38:ARG:HG2	6:CF:63:ASN:CB	2.46	0.45
6:CF:51:ILE:O	6:CF:51:ILE:HG12	2.17	0.45
22:DA:319:G:H2'	22:DA:320:A:O4'	2.17	0.45
22:DA:482:A:O2'	22:DA:497:A:N1	2.39	0.45
22:DA:538:A:H5"	31:DJ:7:LYS:HE3	1.97	0.45
22:DA:1114:C:H2'	22:DA:1115:G:C8	2.52	0.45
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.47	0.45
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.17	0.45
22:DA:1740:G:H2'	22:DA:1741:C:C6	2.52	0.45
22:DA:1773:A:C2	22:DA:1978:A:C2	3.05	0.45
22:DA:1809:A:C6	22:DA:1810:A:C5	3.05	0.45
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.16	0.45
22:DA:1833:C:N4	22:DA:1834:U:O4	2.50	0.45
22:DA:1858:A:C2	22:DA:1859:U:C2	3.05	0.45
22:DA:2199:A:C5	22:DA:2225:A:N1	2.84	0.45
22:DA:2699:C:O2	22:DA:2709:G:C2	2.70	0.45
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.52	0.45
22:DA:2784:U:C4	22:DA:2785:C:C4	3.05	0.45
22:DA:2804:U:H2'	22:DA:2805:C:C6	2.52	0.45
24:DC:153:GLN:C	24:DC:154:LEU:HD23	2.42	0.45
24:DC:184:VAL:O	24:DC:185:GLU:C	2.58	0.45
27:DF:70:ALA:O	27:DF:72:LYS:N	2.50	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
31:DJ:36:LEU:HG	31:DJ:54:ILE:HD12	1.99	0.45
33:DL:110:VAL:CG2	33:DL:127:VAL:HG22	2.47	0.45
35:DN:45:ARG:O	35:DN:49:GLU:HG3	2.16	0.45
36:DO:26:LEU:HD23	36:DO:117:PHE:CE2	2.51	0.45
38:DQ:88:VAL:CG1	38:DQ:90:ILE:HG13	2.47	0.45
40:DS:66:ILE:O	40:DS:68:ASP:N	2.49	0.45
41:DT:39:THR:HA	41:DT:81:LYS:HZ1	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:3:VAL:O	52:D4:3:VAL:CG2	2.65	0.45
1:AA:409:U:OP1	4:AD:24:GLY:HA3	2.17	0.45
1:AA:591:U:H2'	1:AA:592:G:C8	2.52	0.45
1:AA:1043:G:H3'	1:AA:1044:A:H5"	1.99	0.45
1:AA:1277:C:O2'	1:AA:1279:G:H8	2.00	0.45
1:AA:1378:C:C2'	1:AA:1379:G:O5'	2.64	0.45
2:AB:134:ALA:C	2:AB:136:MET:N	2.74	0.45
4:AD:62:ARG:NH2	4:AD:68:LEU:HD13	2.32	0.45
5:AE:61:GLN:C	5:AE:63:ALA:H	2.25	0.45
7:AG:127:ALA:O	7:AG:128:ALA:C	2.59	0.45
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.47	0.45
11:AK:35:THR:HG23	11:AK:36:ASP:O	2.16	0.45
13:AM:12:HIS:HA	13:AM:44:LYS:NZ	2.32	0.45
22:BA:412:A:H2'	22:BA:413:C:H5'	1.99	0.45
22:BA:475:C:C4	22:BA:481:G:C6	3.05	0.45
22:BA:1056:G:O2'	22:BA:1086:A:H8	2.00	0.45
22:BA:1080:A:C2	22:BA:1081:U:C5	3.05	0.45
22:BA:1153:C:N4	22:BA:1154:G:C6	2.85	0.45
22:BA:1482:G:C6	22:BA:1508:A:C6	3.04	0.45
22:BA:2365:G:H4'	44:BW:60:PHE:CE1	2.52	0.45
22:BA:2495:G:O2'	34:BM:82:MET:HE3	2.17	0.45
22:BA:2520:C:C6	22:BA:2567:G:C1'	3.00	0.45
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.47	0.45
22:BA:2583:G:C5	22:BA:2584:U:C5	3.04	0.45
22:BA:2622:U:O2'	22:BA:2825:G:N7	2.50	0.45
24:BC:266:PHE:N	24:BC:266:PHE:CD1	2.84	0.45
26:BE:180:LEU:HD23	26:BE:180:LEU:HA	1.83	0.45
28:BG:10:VAL:O	28:BG:12:PRO:HD3	2.17	0.45
34:BM:45:GLN:O	34:BM:46:ILE:C	2.59	0.45
38:BQ:40:ILE:HG22	38:BQ:44:GLN:OE1	2.16	0.45
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.97	0.45
40:BS:31:GLN:O	40:BS:32:ALA:C	2.60	0.45
1:CA:165:G:N2	1:CA:166:U:O2	2.50	0.45
1:CA:209:U:C4'	1:CA:210:C:OP2	2.62	0.45
1:CA:295:C:N3	1:CA:296:U:C5	2.85	0.45
1:CA:575:G:C6	1:CA:821:G:N7	2.85	0.45
1:CA:1004:A:C2	1:CA:1026:G:N3	2.85	0.45
1:CA:1126:U:O4	10:CJ:73:LEU:HD12	2.16	0.45
1:CA:1169:A:N6	1:CA:1170:A:N6	2.65	0.45
1:CA:1215:G:C4	1:CA:1216:A:C8	3.05	0.45
2:CB:21:ARG:C	2:CB:22:TYR:CD1	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:111:ILE:O	2:CB:114:LEU:HB3	2.17	0.45
2:CB:169:GLU:O	2:CB:170:HIS:C	2.59	0.45
3:CC:67:THR:OG1	3:CC:102:ASN:ND2	2.50	0.45
3:CC:147:LYS:HG3	3:CC:204:LYS:O	2.17	0.45
7:CG:69:VAL:HG21	7:CG:104:ILE:HD11	1.98	0.45
8:CH:30:SER:O	8:CH:31:LYS:C	2.60	0.45
9:CI:55:VAL:O	9:CI:55:VAL:HG23	2.16	0.45
10:CJ:46:LYS:HG2	10:CJ:68:ARG:HG2	1.99	0.45
14:CN:88:ALA:N	14:CN:93:ILE:HD12	2.32	0.45
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.47	0.45
17:CQ:47:HIS:HB3	17:CQ:74:THR:OG1	2.16	0.45
22:DA:134:G:C2	22:DA:146:A:C2	3.05	0.45
22:DA:168:G:C2	22:DA:169:G:C8	3.06	0.45
22:DA:235:U:N3	22:DA:236:C:C5	2.85	0.45
22:DA:310:A:O2'	22:DA:311:A:P	2.72	0.45
22:DA:498:G:C6	22:DA:499:U:C4	3.05	0.45
22:DA:1129:A:O2'	22:DA:2515:C:O2'	2.30	0.45
22:DA:1430:G:H2'	22:DA:1431:A:O4'	2.17	0.45
22:DA:1604:C:C5'	57:DA:3404:HOH:O	2.64	0.45
22:DA:1654:A:OP2	35:DN:1:MET:HA	2.17	0.45
22:DA:2114:A:C5	22:DA:2167:U:H4'	2.52	0.45
22:DA:2264:C:O2	22:DA:2277:G:C2	2.69	0.45
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.82	0.45
24:DC:125:LYS:HB2	24:DC:126:PRO:HD2	1.99	0.45
26:DE:187:VAL:O	26:DE:187:VAL:CG1	2.65	0.45
28:DG:98:VAL:HG21	28:DG:124:GLU:HA	1.99	0.45
30:DI:9:VAL:C	30:DI:10:LYS:HG2	2.42	0.45
31:DJ:9:GLU:C	31:DJ:10:THR:CG2	2.91	0.45
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.98	0.45
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.32	0.45
37:DP:75:GLN:O	37:DP:78:SER:HB3	2.16	0.45
40:DS:33:LEU:HD21	40:DS:52:GLU:HG2	1.99	0.45
1:AA:102:G:N3	1:AA:103:U:C6	2.85	0.44
1:AA:118:U:O4	1:AA:288:A:H2'	2.17	0.44
1:AA:162:A:H1'	1:AA:348:G:O2'	2.17	0.44
1:AA:195:A:C5	1:AA:196:A:C6	3.05	0.44
1:AA:463:U:H5'	1:AA:464:U:OP2	2.16	0.44
1:AA:948:C:OP2	13:AM:107:ARG:HB2	2.17	0.44
1:AA:957:U:H1'	1:AA:960:U:C4	2.52	0.44
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.18	0.44
1:AA:1503:A:H8	1:AA:1531:A:HO2'	1.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:4:TYR:CE2	4:AD:6:GLY:O	2.70	0.44
5:AE:95:PHE:CD1	5:AE:95:PHE:C	2.95	0.44
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.17	0.44
7:AG:99:LEU:O	7:AG:102:ARG:N	2.50	0.44
9:AI:50:GLN:O	9:AI:52:LEU:N	2.51	0.44
9:AI:71:GLY:O	9:AI:72:ILE:C	2.61	0.44
18:AR:25:ASP:C	18:AR:27:ALA:N	2.72	0.44
22:BA:49:A:C8	22:BA:51:G:N2	2.84	0.44
22:BA:479:A:H4'	22:BA:480:A:OP1	2.16	0.44
22:BA:547:A:H8	22:BA:548:G:N3	2.15	0.44
22:BA:1288:G:C4	22:BA:1327:A:C2	3.05	0.44
22:BA:1324:G:C4	22:BA:1328:A:N6	2.85	0.44
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.52	0.44
22:BA:1846:G:H2'	22:BA:1847:A:C8	2.53	0.44
22:BA:1925:C:H5"	22:BA:1926:U:C4	2.53	0.44
22:BA:2261:C:O2'	22:BA:2262:U:H5'	2.17	0.44
22:BA:2443:C:H2'	22:BA:2444:G:H8	1.82	0.44
22:BA:2880:C:H1'	35:BN:92:GLY:O	2.16	0.44
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	2.00	0.44
41:BT:12:ARG:HD2	41:BT:12:ARG:N	2.32	0.44
41:BT:13:ALA:C	41:BT:14:PRO:O	2.59	0.44
42:BU:74:ASN:O	42:BU:75:ALA:C	2.60	0.44
45:BX:18:ARG:NE	45:BX:24:ALA:HB2	2.32	0.44
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.51	0.44
53:B5:25:GLU:HG2	53:B5:25:GLU:O	2.17	0.44
1:CA:399:G:C6	1:CA:400:C:N4	2.85	0.44
1:CA:403:C:H5'	4:CD:132:ILE:HG23	2.00	0.44
1:CA:839:C:C2'	1:CA:840:C:H5'	2.47	0.44
1:CA:921:U:H2'	1:CA:922:G:O4'	2.16	0.44
1:CA:939:G:C6	1:CA:940:C:C4	3.05	0.44
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.17	0.44
1:CA:1195:C:H2'	1:CA:1197:A:O4'	2.18	0.44
1:CA:1426:G:C4	1:CA:1475:G:C2	3.05	0.44
4:CD:29:ASP:O	4:CD:31:LYS:NZ	2.45	0.44
4:CD:173:VAL:O	4:CD:174:ASP:CB	2.65	0.44
8:CH:30:SER:O	8:CH:33:LYS:HB2	2.17	0.44
11:CK:19:GLY:O	11:CK:82:LEU:HA	2.17	0.44
12:CL:3:THR:O	12:CL:4:VAL:C	2.60	0.44
13:CM:6:GLY:C	13:CM:8:ASN:H	2.24	0.44
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.46	0.44
13:CM:39:ILE:HG13	13:CM:56:LEU:HD21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:59:MET:O	15:CO:60:VAL:C	2.59	0.44
18:CR:48:ARG:N	18:CR:48:ARG:HD2	2.31	0.44
19:CS:51:VAL:O	19:CS:58:VAL:HG12	2.17	0.44
22:DA:265:A:H4'	22:DA:266:G:OP1	2.17	0.44
22:DA:468:G:H2'	22:DA:469:G:O4'	2.16	0.44
22:DA:483:A:C8	42:DU:45:HIS:CD2	3.05	0.44
22:DA:522:A:H2'	22:DA:523:C:O4'	2.17	0.44
22:DA:609:A:H2'	22:DA:610:C:O4'	2.17	0.44
22:DA:973:A:P	39:DR:81:LYS:NZ	2.88	0.44
22:DA:1248:G:O2'	38:DQ:3:ARG:HA	2.17	0.44
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.31	0.44
22:DA:1607:C:N4	22:DA:1622:G:C5	2.85	0.44
22:DA:1644:C:O2	22:DA:1644:C:C2'	2.65	0.44
22:DA:1805:A:C4	22:DA:1813:G:N2	2.85	0.44
22:DA:2029:G:C2	22:DA:2033:A:N7	2.85	0.44
22:DA:2111:U:O2	22:DA:2118:U:H1'	2.17	0.44
22:DA:2453:A:O5'	22:DA:2453:A:H8	2.00	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
31:DJ:6:ALA:O	31:DJ:7:LYS:HG3	2.17	0.44
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.17	0.44
40:DS:79:GLY:HA2	40:DS:102:HIS:NE2	2.32	0.44
41:DT:38:ALA:O	41:DT:39:THR:CB	2.65	0.44
44:DW:19:LYS:O	44:DW:21:LEU:HD23	2.17	0.44
45:DX:52:SER:OG	45:DX:55:GLY:N	2.44	0.44
1:AA:119:A:C4	1:AA:240:G:N7	2.85	0.44
1:AA:119:A:C5	1:AA:240:G:N7	2.85	0.44
1:AA:346:G:P	32:BK:105:ARG:NH1	2.90	0.44
1:AA:410:G:H5"	1:AA:411:A:P	2.57	0.44
1:AA:452:A:C8	1:AA:452:A:C3'	3.01	0.44
1:AA:509:A:C2'	1:AA:543:U:O2'	2.65	0.44
1:AA:650:G:C2'	1:AA:651:C:H5'	2.47	0.44
1:AA:652:U:C2	1:AA:752:G:N2	2.86	0.44
1:AA:987:G:N2	1:AA:988:G:C4	2.85	0.44
1:AA:1061:G:C5	1:AA:1197:A:C2	3.06	0.44
1:AA:1118:U:H5"	9:AI:106:ARG:HG3	1.98	0.44
1:AA:1438:G:C6	1:AA:1439:G:C5	3.06	0.44
4:AD:3:ARG:CZ	4:AD:115:ARG:CD	2.93	0.44
4:AD:168:PRO:HB2	4:AD:171:LEU:CD1	2.47	0.44
5:AE:104:GLY:O	5:AE:105:ILE:CG2	2.63	0.44
16:AP:15:PRO:O	16:AP:16:PHE:HB2	2.17	0.44
22:BA:142:A:H2'	22:BA:143:C:O5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:946:C:P	57:BA:3347:HOH:O	2.75	0.44
22:BA:1405:U:C2	22:BA:1406:U:C5	3.05	0.44
22:BA:1439:A:C2	22:BA:1553:A:C4	3.04	0.44
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.18	0.44
22:BA:1840:G:N1	22:BA:1841:U:C2	2.86	0.44
22:BA:1925:C:C4'	22:BA:1926:U:C4	2.99	0.44
22:BA:1949:G:N2	22:BA:1958:C:C2	2.86	0.44
22:BA:2683:C:O2'	22:BA:2684:U:H5'	2.17	0.44
22:BA:2706:A:N1	22:BA:2707:U:C2	2.85	0.44
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.99	0.44
22:BA:2886:A:C5	22:BA:2887:A:C8	3.06	0.44
24:BC:142:HIS:CD2	24:BC:142:HIS:C	2.94	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
41:BT:1:MET:O	41:BT:2:ILE:HG13	2.17	0.44
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.17	0.44
41:BT:34:VAL:O	41:BT:35:ALA:C	2.58	0.44
43:BV:28:ALA:HA	43:BV:88:HIS:CD2	2.52	0.44
53:B5:50:ILE:CG2	53:B5:51:ASP:H	2.31	0.44
1:CA:32:A:C2	1:CA:33:A:C4	3.05	0.44
1:CA:49:U:C5	1:CA:364:A:C6	3.05	0.44
1:CA:361:G:O6	1:CA:362:G:N1	2.50	0.44
1:CA:402:G:H4'	1:CA:620:C:O2	2.18	0.44
1:CA:714:G:H21	1:CA:777:A:H1'	1.82	0.44
1:CA:840:C:C4	1:CA:842:U:C5'	3.01	0.44
1:CA:949:A:C2'	1:CA:971:G:O6	2.65	0.44
1:CA:1071:C:O2	1:CA:1072:G:C8	2.69	0.44
1:CA:1346:A:C8	1:CA:1348:U:C2	3.05	0.44
7:CG:18:PHE:CZ	7:CG:58:GLU:HG2	2.52	0.44
7:CG:68:ASN:HB3	7:CG:130:ASN:HB3	1.99	0.44
7:CG:78:ARG:HD3	7:CG:80:VAL:CG2	2.48	0.44
9:CI:107:ASP:OD2	9:CI:109:ARG:HG3	2.18	0.44
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.17	0.44
22:DA:1343:G:C5	22:DA:1344:U:O4	2.70	0.44
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.17	0.44
22:DA:1462:C:C2	22:DA:1463:C:C5	3.05	0.44
22:DA:1668:A:C2	22:DA:1670:C:N3	2.85	0.44
22:DA:1773:A:C2'	22:DA:1774:C:H5'	2.48	0.44
22:DA:1889:A:N3	22:DA:2086:U:O2'	2.44	0.44
22:DA:2014:A:H2	22:DA:2613:U:C2	2.36	0.44
22:DA:2093:G:C2	22:DA:2094:A:C5	3.05	0.44
23:DB:52:A:C5	36:DO:33:ARG:NH2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:76:G:H2'	23:DB:77:U:O4'	2.17	0.44
24:DC:108:LYS:HA	24:DC:196:GLY:HA2	1.99	0.44
25:DD:112:THR:O	25:DD:112:THR:HG22	2.17	0.44
30:DI:75:PRO:HG2	30:DI:78:VAL:HG22	2.00	0.44
32:DK:62:VAL:HA	32:DK:84:CYS:HB3	1.98	0.44
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.17	0.44
44:DW:70:GLU:O	44:DW:79:PHE:N	2.45	0.44
47:DZ:10:THR:HG22	47:DZ:54:MET:HA	1.99	0.44
1:AA:658:C:O4'	15:AO:22:THR:OG1	2.30	0.44
1:AA:666:G:C5	1:AA:741:G:C6	3.05	0.44
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.65	0.44
2:AB:103:ASN:O	2:AB:104:TRP:C	2.60	0.44
2:AB:120:GLN:HG2	2:AB:125:THR:O	2.17	0.44
3:AC:27:LYS:H	3:AC:27:LYS:HD2	1.82	0.44
4:AD:132:ILE:HD12	4:AD:135:TYR:N	2.32	0.44
4:AD:157:ALA:HA	4:AD:160:GLU:HB3	1.99	0.44
6:AF:64:VAL:CG1	6:AF:65:GLU:N	2.80	0.44
6:AF:97:THR:O	6:AF:98:GLU:HG2	2.16	0.44
14:AN:83:LYS:NZ	14:AN:86:GLU:OE1	2.35	0.44
15:AO:3:LEU:HD13	15:AO:35:GLN:HG2	2.00	0.44
16:AP:78:VAL:O	16:AP:78:VAL:CG1	2.65	0.44
22:BA:201:C:C2'	22:BA:202:U:H5'	2.47	0.44
22:BA:231:A:C6	22:BA:232:G:C2	3.06	0.44
22:BA:536:G:C6	22:BA:537:G:C4	3.06	0.44
22:BA:595:C:H2'	22:BA:596:U:C6	2.52	0.44
22:BA:975:A:C6	22:BA:990:A:N7	2.85	0.44
22:BA:988:A:H2'	22:BA:989:G:O5'	2.18	0.44
22:BA:1116:G:H2'	22:BA:1116:G:N3	2.31	0.44
22:BA:1209:U:O2'	22:BA:1237:A:N1	2.44	0.44
22:BA:1805:A:O2'	24:BC:50:THR:HA	2.17	0.44
22:BA:1910:G:H2'	22:BA:1911:U:C6	2.53	0.44
22:BA:1935:G:N2	22:BA:1964:G:C8	2.85	0.44
22:BA:2490:G:H4'	22:BA:2491:U:OP1	2.17	0.44
22:BA:2627:G:C5	22:BA:2628:C:C4	3.05	0.44
23:BB:39:A:C2	23:BB:44:G:C4	3.05	0.44
26:BE:119:ILE:HB	26:BE:187:VAL:CG2	2.47	0.44
28:BG:86:LYS:HG2	28:BG:132:VAL:HG13	1.99	0.44
29:BH:75:LEU:C	29:BH:75:LEU:HD22	2.42	0.44
30:BI:58:VAL:HG12	30:BI:59:ILE:H	1.81	0.44
31:BJ:61:LYS:O	31:BJ:62:VAL:C	2.60	0.44
36:BO:79:ALA:HA	36:BO:115:LEU:HD13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:48:ILE:HG22	37:BP:100:LEU:HD12	2.00	0.44
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	2.00	0.44
44:BW:10:THR:O	44:BW:11:ARG:HB2	2.18	0.44
46:BY:26:PHE:CD1	46:BY:26:PHE:C	2.95	0.44
49:B1:40:ASP:CG	49:B1:43:VAL:HG13	2.42	0.44
1:CA:53:A:N3	1:CA:359:G:C2	2.86	0.44
1:CA:458:U:H2'	1:CA:459:A:C8	2.52	0.44
1:CA:708:C:H2'	1:CA:709:U:C6	2.53	0.44
1:CA:1078:U:O2	5:CE:90:THR:HG21	2.17	0.44
1:CA:1328:C:H5"	13:CM:28:THR:CG2	2.47	0.44
1:CA:1409:C:H4'	22:DA:1915:U:O4	2.18	0.44
1:CA:1434:A:N6	1:CA:1435:G:N1	2.65	0.44
3:CC:203:PHE:CE1	3:CC:205:GLY:O	2.71	0.44
5:CE:107:ALA:HA	5:CE:125:ALA:HB3	1.98	0.44
5:CE:133:PRO:O	5:CE:137:VAL:CG1	2.65	0.44
5:CE:153:VAL:HG23	5:CE:157:ARG:CB	2.47	0.44
7:CG:37:SER:OG	9:CI:43:THR:HG23	2.16	0.44
7:CG:78:ARG:O	7:CG:79:ARG:C	2.59	0.44
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.99	0.44
11:CK:108:THR:HG22	11:CK:109:ASN:CG	2.41	0.44
13:CM:83:LEU:N	13:CM:83:LEU:CD2	2.79	0.44
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.32	0.44
22:DA:176:A:C5	22:DA:177:G:C6	3.05	0.44
22:DA:775:G:O6	22:DA:787:C:H2'	2.17	0.44
22:DA:1269:A:H2'	22:DA:1270:C:C6	2.52	0.44
22:DA:1366:A:C2	22:DA:1367:A:N9	2.85	0.44
22:DA:1671:U:O2	22:DA:1673:G:C8	2.70	0.44
22:DA:2038:G:N7	22:DA:2039:U:C5	2.86	0.44
22:DA:2235:G:C5	22:DA:2236:U:C5	3.06	0.44
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.17	0.44
22:DA:2591:C:P	24:DC:238:ARG:HG3	2.56	0.44
22:DA:2597:G:O2'	22:DA:2598:A:H5'	2.18	0.44
22:DA:2718:G:O2'	37:DP:96:LYS:HG3	2.18	0.44
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.16	0.44
23:DB:60:C:N3	23:DB:61:G:N7	2.65	0.44
24:DC:72:ASP:O	24:DC:74:ILE:N	2.45	0.44
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.50	0.44
26:DE:52:VAL:CG2	26:DE:81:GLY:HA2	2.47	0.44
27:DF:36:LEU:HD13	27:DF:36:LEU:N	2.32	0.44
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	2.00	0.44
37:DP:21:ARG:HB3	37:DP:22:PRO:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:13:ARG:O	38:DQ:14:HIS:C	2.61	0.44
45:DX:49:LEU:O	45:DX:51:VAL:HG13	2.17	0.44
1:AA:11:G:C4	1:AA:12:U:C5	3.04	0.44
1:AA:119:A:C5	1:AA:240:G:C8	3.05	0.44
1:AA:339:C:O2'	1:AA:340:U:H5'	2.18	0.44
1:AA:682:G:C2	1:AA:709:U:C2	3.06	0.44
1:AA:977:A:H1'	1:AA:982:U:O4	2.17	0.44
1:AA:1242:G:C2	1:AA:1243:C:C2	3.06	0.44
1:AA:1368:A:OP2	9:AI:114:LYS:O	2.35	0.44
2:AB:73:LYS:HE3	2:AB:205:ASP:HB2	1.99	0.44
4:AD:9:LEU:CD2	4:AD:22:LYS:HB2	2.47	0.44
4:AD:136:GLN:OE1	4:AD:136:GLN:HA	2.17	0.44
8:AH:126:ILE:HG22	8:AH:127:CYS:N	2.32	0.44
9:AI:21:ILE:HG22	9:AI:22:LYS:N	2.32	0.44
9:AI:97:GLU:H	9:AI:97:GLU:CD	2.25	0.44
20:AT:35:VAL:HG11	20:AT:79:LEU:HD13	1.99	0.44
22:BA:736:C:N3	22:BA:737:C:C5	2.85	0.44
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.66	0.44
22:BA:1180:U:O2'	22:BA:1181:U:H5'	2.17	0.44
22:BA:1587:G:C5	22:BA:1588:G:N7	2.86	0.44
22:BA:1674:G:N2	22:BA:1677:A:N1	2.59	0.44
22:BA:1972:G:H2'	22:BA:1973:G:H8	1.81	0.44
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.16	0.44
22:BA:2191:A:N1	22:BA:2192:U:N3	2.65	0.44
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.53	0.44
22:BA:2856:A:C6	22:BA:2857:G:C5	3.05	0.44
24:BC:71:LYS:HB2	24:BC:96:TYR:CE2	2.52	0.44
25:BD:9:VAL:HB	25:BD:26:VAL:O	2.17	0.44
25:BD:12:THR:HG21	37:BP:9:GLU:OE2	2.17	0.44
27:BF:36:LEU:HD22	27:BF:91:LEU:CD1	2.44	0.44
27:BF:94:GLU:HG3	27:BF:98:GLU:OE1	2.18	0.44
27:BF:108:VAL:CG1	27:BF:114:PHE:CE2	3.01	0.44
28:BG:141:ILE:C	28:BG:141:ILE:HD12	2.42	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
34:BM:4:PRO:CG	34:BM:70:ASP:HA	2.46	0.44
41:BT:30:ILE:HD11	41:BT:32:LEU:HD11	2.00	0.44
46:BY:30:MET:O	46:BY:34:SER:OG	2.21	0.44
51:B3:12:LYS:C	51:B3:13:ARG:HG2	2.41	0.44
1:CA:1098:C:C4	1:CA:1099:G:N7	2.85	0.44
1:CA:1124:G:N2	1:CA:1127:G:N2	2.66	0.44
2:CB:131:LYS:HE2	2:CB:131:LYS:HA	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:172:ARG:O	3:CC:174:PRO:HD3	2.17	0.44
4:CD:84:GLY:O	4:CD:85:ASN:C	2.61	0.44
5:CE:103:THR:O	5:CE:122:ASN:HA	2.18	0.44
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.18	0.44
6:CF:21:MET:O	6:CF:25:TYR:CG	2.70	0.44
11:CK:27:PHE:CZ	11:CK:89:PRO:CG	3.00	0.44
11:CK:60:PRO:N	11:CK:91:PRO:HB3	2.32	0.44
11:CK:122:ARG:CZ	21:CU:36:GLU:HG2	2.48	0.44
19:CS:67:VAL:O	19:CS:67:VAL:HG12	2.16	0.44
22:DA:109:C:C2	22:DA:110:G:C8	3.06	0.44
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.17	0.44
22:DA:543:G:C2	22:DA:551:G:C5	3.06	0.44
22:DA:563:A:C2	22:DA:2018:G:N3	2.85	0.44
22:DA:934:U:H2'	22:DA:935:C:C6	2.52	0.44
22:DA:982:C:H5"	22:DA:983:A:OP2	2.17	0.44
22:DA:1082:U:OP1	30:DI:124:ALA:CB	2.65	0.44
22:DA:1095:A:C5	22:DA:1096:A:C2	3.05	0.44
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.86	0.44
22:DA:1364:G:C8	45:DX:2:SER:N	2.86	0.44
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.18	0.44
22:DA:1797:G:O3'	24:DC:256:LYS:HA	2.18	0.44
22:DA:1871:A:O2'	22:DA:1872:A:C8	2.66	0.44
22:DA:2015:A:C5	48:D0:3:VAL:HG21	2.52	0.44
22:DA:2059:A:H4'	26:DE:64:GLY:O	2.18	0.44
22:DA:2440:C:N3	22:DA:2441:U:H1'	2.32	0.44
22:DA:2544:G:H2'	22:DA:2545:G:C8	2.52	0.44
22:DA:2554:U:H2'	22:DA:2555:U:H6	1.82	0.44
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.33	0.44
22:DA:2776:A:C6	22:DA:2778:A:C6	3.05	0.44
22:DA:2807:U:O2	22:DA:2892:G:C2	2.70	0.44
23:DB:13:G:H1	23:DB:69:G:HO2'	1.64	0.44
23:DB:70:C:H2'	23:DB:71:C:C6	2.52	0.44
26:DE:117:ARG:NH1	33:DL:2:ARG:HD3	2.33	0.44
27:DF:38:MET:HB2	27:DF:57:LEU:HD11	1.99	0.44
27:DF:60:ILE:HG23	27:DF:138:PHE:CE1	2.53	0.44
27:DF:117:LEU:HD11	27:DF:130:MET:HE1	2.00	0.44
30:DI:103:ARG:HB3	30:DI:142:ASP:OD2	2.18	0.44
35:DN:85:PRO:C	35:DN:87:PHE:N	2.76	0.44
36:DO:18:LEU:O	36:DO:22:GLY:N	2.50	0.44
36:DO:67:ASN:O	36:DO:69:ASP:N	2.50	0.44
44:DW:46:HIS:NE2	44:DW:77:ARG:HD3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:45:GLN:C	46:DY:47:ARG:N	2.76	0.44
47:DZ:5:ILE:HD11	47:DZ:57:VAL:HG21	1.99	0.44
50:D2:34:ARG:CB	50:D2:42:LEU:HD13	2.48	0.44
1:AA:8:A:H1'	5:AE:108:GLY:HA2	1.99	0.44
1:AA:110:C:O2'	16:AP:25:ARG:O	2.34	0.44
1:AA:537:G:H2'	1:AA:538:G:C8	2.52	0.44
1:AA:542:G:C2	1:AA:543:U:C6	3.06	0.44
1:AA:828:U:C5	1:AA:859:G:C5	3.06	0.44
1:AA:881:G:H2'	1:AA:882:C:O4'	2.17	0.44
1:AA:978:A:C5	1:AA:1319:A:C2	3.06	0.44
2:AB:117:LEU:HG	2:AB:141:LEU:CD1	2.47	0.44
3:AC:28:GLU:O	3:AC:29:PHE:C	2.61	0.44
3:AC:112:ASP:O	3:AC:116:VAL:HG23	2.17	0.44
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.48	0.44
8:AH:34:VAL:O	8:AH:36:ILE:N	2.51	0.44
8:AH:54:ASP:CG	8:AH:55:THR:N	2.76	0.44
8:AH:93:PRO:HG3	8:AH:125:ILE:HD12	1.97	0.44
11:AK:52:PHE:HB3	11:AK:56:ARG:HB3	1.99	0.44
14:AN:13:ARG:O	14:AN:17:ALA:HB2	2.17	0.44
14:AN:90:ARG:HB2	14:AN:92:GLU:HG3	1.99	0.44
17:AQ:14:SER:OG	17:AQ:17:MET:HE1	2.17	0.44
22:BA:102:U:C4	46:BY:2:LYS:HB2	2.52	0.44
22:BA:610:C:H2'	22:BA:611:C:H6	1.82	0.44
22:BA:1369:G:C2'	22:BA:1370:C:O5'	2.66	0.44
22:BA:1731:G:C2	22:BA:1733:G:C4	3.05	0.44
22:BA:1791:A:O2'	24:BC:206:GLY:CA	2.65	0.44
22:BA:1799:G:OP2	24:BC:270:ARG:NH2	2.46	0.44
22:BA:2204:G:C5	22:BA:2221:G:C2	3.06	0.44
22:BA:2312:U:OP1	27:BF:71:ARG:N	2.51	0.44
22:BA:2512:C:H1'	25:BD:145:SER:O	2.17	0.44
22:BA:2513:A:C6	22:BA:2514:U:C4	3.05	0.44
22:BA:2808:G:C2	22:BA:2891:U:C5	3.06	0.44
26:BE:148:ILE:N	26:BE:148:ILE:HD13	2.33	0.44
27:BF:58:ALA:O	27:BF:61:SER:O	2.36	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
30:BI:86:ILE:HD11	30:BI:136:MET:HE2	1.99	0.44
30:BI:117:MET:HE2	30:BI:117:MET:HA	1.99	0.44
1:CA:53:A:C2	1:CA:359:G:C6	3.05	0.44
1:CA:391:G:H2'	1:CA:392:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:436:C:C2	1:CA:437:U:C5	3.05	0.44
1:CA:748:G:H2'	1:CA:749:A:H8	1.83	0.44
1:CA:1000:A:C2	1:CA:1041:G:C2	3.05	0.44
1:CA:1244:G:C2	1:CA:1294:G:C2	3.05	0.44
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.52	0.44
2:CB:213:TYR:O	2:CB:217:VAL:HG23	2.18	0.44
5:CE:101:GLU:O	5:CE:101:GLU:OE2	2.36	0.44
10:CJ:10:LEU:N	10:CJ:10:LEU:HD12	2.32	0.44
11:CK:25:ALA:O	11:CK:88:GLY:HA3	2.17	0.44
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.85	0.44
18:CR:32:TYR:CD2	18:CR:55:LEU:HD21	2.52	0.44
19:CS:11:ILE:HG21	19:CS:41:PHE:CE2	2.52	0.44
20:CT:58:VAL:HG13	20:CT:72:ALA:HA	2.00	0.44
22:DA:822:G:C6	22:DA:836:G:N1	2.85	0.44
22:DA:1596:A:N6	22:DA:1597:A:C6	2.86	0.44
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.82	0.44
22:DA:1806:C:N4	22:DA:1807:G:C5	2.86	0.44
22:DA:2117:A:N1	22:DA:2171:A:N1	2.65	0.44
22:DA:2264:C:C2	22:DA:2277:G:N2	2.86	0.44
22:DA:2303:G:O4'	27:DF:123:ASP:HA	2.18	0.44
22:DA:2799:A:N6	22:DA:2801:G:C6	2.86	0.44
22:DA:2854:G:N2	22:DA:2864:G:C4	2.86	0.44
24:DC:197:ASN:OD1	24:DC:200:HIS:HB2	2.17	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.47	0.44
40:DS:34:ASP:O	40:DS:35:ILE:C	2.60	0.44
49:D1:9:ILE:HB	49:D1:52:ALA:HA	1.99	0.44
49:D1:23:THR:OG1	49:D1:24:THR:N	2.50	0.44
1:AA:64:G:N2	1:AA:67:C:C4	2.86	0.44
1:AA:118:U:H2'	1:AA:119:A:H5"	1.99	0.44
1:AA:215:C:H2'	1:AA:216:U:O4'	2.17	0.44
1:AA:402:G:H4'	1:AA:620:C:O2	2.18	0.44
1:AA:819:A:N7	1:AA:1529:G:C2	2.85	0.44
1:AA:832:G:C6	1:AA:833:G:N7	2.86	0.44
1:AA:908:A:C2	1:AA:909:A:C4	3.05	0.44
1:AA:1351:U:H2'	1:AA:1352:C:H6	1.83	0.44
2:AB:20:THR:HA	2:AB:38:VAL:HA	1.98	0.44
2:AB:28:LYS:HB3	2:AB:29:PRO:HD3	1.99	0.44
3:AC:25:ASN:O	3:AC:27:LYS:HG2	2.17	0.44
4:AD:46:PRO:O	4:AD:48:LEU:HD22	2.17	0.44
4:AD:147:GLU:HA	4:AD:150:LYS:CD	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:83:SER:HB2	7:AG:85:TYR:CD2	2.52	0.44
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.99	0.44
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.17	0.44
11:AK:23:ILE:HD13	11:AK:96:THR:HG21	1.99	0.44
11:AK:97:ILE:HG13	11:AK:98:ARG:N	2.32	0.44
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.17	0.44
17:AQ:5:ILE:N	17:AQ:5:ILE:HD12	2.33	0.44
17:AQ:67:LEU:N	17:AQ:67:LEU:HD12	2.33	0.44
22:BA:18:U:O2'	22:BA:19:A:H5'	2.16	0.44
22:BA:190:A:C5	22:BA:207:A:C2	3.06	0.44
22:BA:573:U:O2'	22:BA:574:A:H3'	2.18	0.44
22:BA:583:G:C2'	22:BA:584:C:O5'	2.65	0.44
22:BA:1079:C:H2'	22:BA:1080:A:O4'	2.17	0.44
22:BA:1190:G:N2	22:BA:1191:G:C4	2.86	0.44
22:BA:1356:G:C2	22:BA:1357:C:N1	2.85	0.44
22:BA:1378:A:O2'	22:BA:1380:G:N7	2.46	0.44
22:BA:1784:A:OP1	57:BA:3698:HOH:O	2.21	0.44
22:BA:2093:G:C6	22:BA:2225:A:C8	3.05	0.44
22:BA:2190:G:H3'	22:BA:2191:A:H8	1.83	0.44
22:BA:2218:G:O2'	22:BA:2219:U:H5'	2.16	0.44
22:BA:2569:G:C2	22:BA:2570:G:C8	3.06	0.44
22:BA:2684:U:H6	22:BA:2684:U:O5'	2.00	0.44
22:BA:2688:G:N7	22:BA:2719:G:C5	2.86	0.44
22:BA:2844:G:H2'	22:BA:2845:U:O4'	2.18	0.44
23:BB:8:C:O2'	36:BO:40:ILE:HD13	2.18	0.44
24:BC:157:SER:O	24:BC:160:THR:HG23	2.16	0.44
25:BD:39:ASP:OD2	25:BD:41:ALA:N	2.43	0.44
25:BD:137:SER:O	25:BD:138:LEU:CB	2.64	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
31:BJ:21:THR:HA	31:BJ:61:LYS:HB3	1.99	0.44
31:BJ:37:ARG:O	31:BJ:37:ARG:HG2	2.17	0.44
33:BL:93:ASN:O	33:BL:94:THR:CB	2.65	0.44
35:BN:33:ILE:CG2	35:BN:118:ARG:HD2	2.47	0.44
38:BQ:68:ALA:CB	38:BQ:99:ALA:HB1	2.48	0.44
43:BV:43:ASP:OD1	43:BV:46:LYS:HG2	2.17	0.44
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.45	0.44
1:CA:28:A:H2'	1:CA:29:U:O4'	2.17	0.44
1:CA:29:U:N3	1:CA:30:U:C5	2.86	0.44
1:CA:179:A:H2'	1:CA:180:U:C6	2.53	0.44
1:CA:476:U:C2'	1:CA:477:C:H5'	2.48	0.44
1:CA:720:C:O2'	18:CR:56:ALA:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:738:C:H2'	1:CA:739:C:H6	1.81	0.44
1:CA:745:G:H5"	1:CA:851:G:O2'	2.17	0.44
1:CA:777:A:C2	1:CA:778:G:H1'	2.52	0.44
1:CA:874:G:C6	1:CA:875:U:C4	3.05	0.44
1:CA:1070:U:C2	1:CA:1071:C:C5	3.06	0.44
1:CA:1074:G:N2	1:CA:1075:U:H1'	2.33	0.44
1:CA:1329:A:H5"	13:CM:25:VAL:HA	2.00	0.44
2:CB:91:PHE:O	2:CB:91:PHE:CD2	2.71	0.44
4:CD:177:LYS:HB2	4:CD:177:LYS:HE2	1.82	0.44
7:CG:27:VAL:HG12	7:CG:43:VAL:HG21	1.99	0.44
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.48	0.44
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.18	0.44
22:DA:8:C:O2'	22:DA:9:G:H5'	2.17	0.44
22:DA:13:A:H4'	22:DA:14:A:OP1	2.16	0.44
22:DA:301:G:C2	22:DA:302:C:N3	2.86	0.44
22:DA:319:G:P	26:DE:132:LYS:HE3	2.58	0.44
22:DA:466:A:N1	22:DA:795:C:O2'	2.48	0.44
22:DA:609:A:N7	22:DA:610:C:C2	2.85	0.44
22:DA:977:G:N7	57:DA:3586:HOH:O	2.36	0.44
22:DA:980:A:C4	22:DA:1136:G:O4'	2.71	0.44
22:DA:1052:C:C2'	22:DA:1053:C:H5'	2.48	0.44
22:DA:1152:C:C3'	57:DA:3360:HOH:O	2.63	0.44
22:DA:1277:G:N1	22:DA:1294:U:C2	2.85	0.44
22:DA:1290:C:N3	22:DA:1291:C:C5	2.85	0.44
22:DA:1422:G:H2'	22:DA:1423:G:O4'	2.17	0.44
22:DA:1651:G:H5"	35:DN:10:LEU:HD23	1.99	0.44
22:DA:1862:G:C2	22:DA:1881:C:C2	3.05	0.44
22:DA:2014:A:H5'	40:DS:94:ASP:OD1	2.18	0.44
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.52	0.44
22:DA:2345:G:H4'	22:DA:2346:A:H5"	1.99	0.44
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.17	0.44
22:DA:2820:A:C8	25:DD:196:ALA:CB	3.01	0.44
24:DC:75:PRO:HB2	24:DC:97:LYS:CG	2.48	0.44
25:DD:42:ASN:O	25:DD:43:ASP:CG	2.61	0.44
26:DE:129:PRO:HG3	26:DE:156:ASN:OD1	2.18	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
34:DM:68:PHE:O	34:DM:69:PRO:O	2.36	0.44
35:DN:2:ARG:HG3	35:DN:3:HIS:N	2.33	0.44
35:DN:54:LEU:CD2	35:DN:66:ALA:HB2	2.48	0.44
35:DN:108:ALA:O	35:DN:109:PRO:C	2.61	0.44
42:DU:44:LYS:O	42:DU:59:VAL:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:31:PRO:O	45:DX:33:LEU:N	2.51	0.44
49:D1:25:LYS:HE2	49:D1:30:LYS:O	2.17	0.44
1:AA:330:C:O2'	1:AA:331:G:H5'	2.18	0.44
1:AA:457:G:C6	1:AA:458:U:N3	2.85	0.44
1:AA:457:G:N2	1:AA:476:U:C2	2.85	0.44
1:AA:602:A:C2	1:AA:603:U:O2	2.71	0.44
1:AA:834:U:C4	1:AA:835:U:C4	3.05	0.44
1:AA:843:U:OP1	1:AA:846:G:N2	2.48	0.44
1:AA:858:G:O2'	1:AA:859:G:C5'	2.66	0.44
1:AA:1157:A:C6	1:AA:1180:A:C5	3.06	0.44
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.82	0.44
1:AA:1333:A:C2	1:AA:1334:G:H1'	2.53	0.44
2:AB:51:ASN:O	2:AB:52:GLU:CB	2.66	0.44
3:AC:85:GLU:OE1	3:AC:88:ARG:CZ	2.66	0.44
3:AC:155:GLY:N	3:AC:164:ARG:O	2.51	0.44
4:AD:83:LYS:C	4:AD:83:LYS:HD3	2.43	0.44
6:AF:69:GLU:C	6:AF:69:GLU:OE1	2.61	0.44
13:AM:85:CYS:SG	13:AM:87:ARG:HG3	2.57	0.44
14:AN:51:LEU:O	14:AN:52:PRO:C	2.60	0.44
15:AO:2:SER:O	15:AO:3:LEU:CB	2.65	0.44
15:AO:62:GLN:O	15:AO:65:LYS:N	2.51	0.44
16:AP:42:ILE:O	16:AP:42:ILE:CG2	2.66	0.44
19:AS:51:VAL:HB	19:AS:58:VAL:HG22	1.99	0.44
22:BA:513:A:C2'	22:BA:514:A:H5'	2.48	0.44
22:BA:563:A:N7	22:BA:2018:G:C6	2.85	0.44
22:BA:597:G:C5	22:BA:598:U:C4	3.05	0.44
22:BA:609:A:H2'	22:BA:610:C:O4'	2.17	0.44
22:BA:1047:G:N2	22:BA:1110:G:C4	2.86	0.44
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.48	0.44
22:BA:1718:G:C2	22:BA:1719:G:C8	3.05	0.44
22:BA:2518:A:H2'	22:BA:2518:A:N3	2.31	0.44
24:BC:187:ASP:N	24:BC:187:ASP:OD1	2.50	0.44
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.18	0.44
1:CA:149:A:C2	1:CA:150:U:C2	3.06	0.44
1:CA:179:A:C5	1:CA:180:U:C4	3.06	0.44
1:CA:246:A:N3	1:CA:279:A:N6	2.66	0.44
1:CA:441:A:C2	1:CA:497:G:C5	3.06	0.44
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.71	0.44
1:CA:1397:C:H3'	1:CA:1398:A:H5"	2.00	0.44
1:CA:1516:G:C2	1:CA:1518:A:OP2	2.71	0.44
3:CC:162:ILE:HD12	3:CC:162:ILE:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.99	0.44
6:CF:38:ARG:NH1	6:CF:63:ASN:HB2	2.33	0.44
6:CF:54:LEU:O	6:CF:55:HIS:O	2.36	0.44
7:CG:108:ALA:HB3	7:CG:116:MET:HE1	1.98	0.44
13:CM:22:ILE:HB	13:CM:25:VAL:CG1	2.48	0.44
15:CO:33:THR:HA	15:CO:63:ARG:HH11	1.82	0.44
18:CR:35:GLU:HB2	21:CU:19:PHE:HZ	1.80	0.44
22:DA:54:G:C6	22:DA:55:G:N7	2.86	0.44
22:DA:78:U:OP2	46:DY:2:LYS:HD3	2.16	0.44
22:DA:543:G:C2	22:DA:551:G:C4	3.06	0.44
22:DA:630:G:H3'	22:DA:631:A:C5'	2.48	0.44
22:DA:633:A:H5"	33:DL:70:LYS:HD3	1.99	0.44
22:DA:1045:C:C4'	22:DA:1046:A:H5'	2.48	0.44
22:DA:1045:C:H41	22:DA:1111:A:H2'	1.81	0.44
22:DA:1096:A:C6	22:DA:1097:U:C5	3.06	0.44
22:DA:1470:A:C2'	22:DA:1471:G:O5'	2.66	0.44
22:DA:1480:C:C4	22:DA:1481:U:C4	3.06	0.44
22:DA:1588:G:H3'	22:DA:1589:U:C6	2.53	0.44
22:DA:1702:G:C6	22:DA:1703:G:C5	3.05	0.44
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.30	0.44
22:DA:2213:U:H4'	22:DA:2214:C:OP2	2.17	0.44
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.51	0.44
22:DA:2325:G:C6	22:DA:2326:C:N4	2.86	0.44
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.18	0.44
22:DA:2430:A:P	57:DA:3344:HOH:O	2.76	0.44
22:DA:2749:A:OP1	28:DG:2:SER:HB3	2.18	0.44
22:DA:2835:A:H4'	22:DA:2836:U:OP1	2.18	0.44
22:DA:2897:U:H2'	22:DA:2898:U:C6	2.52	0.44
25:DD:168:GLU:O	25:DD:170:VAL:HG22	2.18	0.44
26:DE:158:PHE:C	26:DE:158:PHE:CD1	2.95	0.44
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.81	0.44
27:DF:143:TYR:O	27:DF:146:VAL:HG22	2.18	0.44
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.44
31:DJ:29:ALA:HA	31:DJ:105:VAL:HG22	1.98	0.44
35:DN:24:MET:HE3	35:DN:44:LEU:HD22	2.00	0.44
37:DP:43:PHE:CD2	37:DP:72:ARG:HD3	2.53	0.44
39:DR:61:ALA:HB2	39:DR:98:ILE:HA	2.00	0.44
42:DU:53:ASN:OD1	42:DU:53:ASN:N	2.50	0.44
43:DV:30:ILE:HD11	43:DV:63:ILE:HD12	1.99	0.44
1:AA:104:G:O2'	1:AA:105:G:H5'	2.18	0.44
1:AA:511:C:C2	1:AA:512:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:945:G:C2	1:AA:946:A:C8	3.05	0.44
1:AA:956:U:C5	1:AA:957:U:C5	3.05	0.44
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.53	0.44
2:AB:67:ILE:HG21	2:AB:69:PHE:CE2	2.53	0.44
2:AB:90:PHE:CD2	2:AB:90:PHE:N	2.85	0.44
7:AG:133:THR:O	7:AG:136:LYS:HB3	2.18	0.44
9:AI:83:ILE:O	9:AI:87:LEU:HD13	2.17	0.44
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.51	0.44
11:AK:16:VAL:HG12	11:AK:77:TYR:HB3	1.99	0.44
11:AK:21:ALA:HB2	11:AK:82:LEU:HD12	2.00	0.44
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.99	0.44
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.17	0.44
22:BA:109:C:H2'	22:BA:110:G:O4'	2.18	0.44
22:BA:372:G:OP2	45:BX:61:LYS:HD3	2.18	0.44
22:BA:962:G:O2'	22:BA:963:U:H5'	2.17	0.44
22:BA:974:G:O4'	22:BA:1186:G:N2	2.51	0.44
22:BA:991:C:N4	22:BA:1185:G:O6	2.51	0.44
22:BA:1040:A:C2	22:BA:1116:G:N1	2.86	0.44
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.53	0.44
22:BA:1661:G:H2'	22:BA:1662:U:H6	1.82	0.44
22:BA:2267:A:C2	57:BA:3511:HOH:O	2.56	0.44
25:BD:37:VAL:HG12	25:BD:38:LYS:N	2.33	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
30:BI:80:LEU:HD13	30:BI:136:MET:SD	2.57	0.44
32:BK:60:ALA:HB1	32:BK:84:CYS:HB2	2.00	0.44
32:BK:113:MET:O	32:BK:116:ILE:HG13	2.16	0.44
33:BL:30:THR:O	33:BL:31:GLY:C	2.61	0.44
33:BL:81:ASP:C	33:BL:83:ALA:H	2.25	0.44
34:BM:3:GLN:O	34:BM:4:PRO:C	2.61	0.44
42:BU:7:ARG:O	42:BU:8:ASP:O	2.36	0.44
1:CA:309:A:H1'	1:CA:608:A:C2	2.53	0.44
1:CA:375:U:C2	1:CA:376:G:C8	3.06	0.44
1:CA:429:U:H4'	1:CA:430:A:OP1	2.14	0.44
1:CA:663:A:H2'	1:CA:664:G:O4'	2.17	0.44
1:CA:1130:A:C1'	1:CA:1146:A:C2	3.01	0.44
1:CA:1220:G:H4'	19:CS:34:TRP:O	2.17	0.44
2:CB:206:ALA:C	2:CB:208:ARG:H	2.25	0.44
3:CC:121:THR:CB	3:CC:187:SER:OG	2.65	0.44
8:CH:40:LEU:O	8:CH:45:PHE:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:8:GLY:N	9:CI:86:ALA:HB2	2.33	0.44
14:CN:30:ILE:O	14:CN:33:ASP:HB3	2.16	0.44
17:CQ:12:VAL:HG12	17:CQ:13:VAL:N	2.32	0.44
18:CR:45:THR:O	18:CR:45:THR:OG1	2.31	0.44
19:CS:53:ASN:HB3	19:CS:75:ALA:HB1	1.99	0.44
22:DA:118:A:C8	22:DA:119:A:N7	2.85	0.44
22:DA:244:A:H5"	33:DL:67:THR:HG21	1.99	0.44
22:DA:481:G:C4	22:DA:507:A:C2	3.06	0.44
22:DA:693:A:H2'	22:DA:694:U:O4'	2.17	0.44
22:DA:696:G:N1	22:DA:767:U:C2	2.86	0.44
22:DA:747:U:O2	22:DA:2014:A:H1'	2.18	0.44
22:DA:758:C:O2'	22:DA:1981:A:N3	2.38	0.44
22:DA:798:G:C2	22:DA:799:G:C5	3.06	0.44
22:DA:1056:G:C6	22:DA:1102:C:OP2	2.71	0.44
22:DA:1128:G:C4	22:DA:1129:A:C2	3.06	0.44
22:DA:1257:C:N4	22:DA:1258:U:O4	2.51	0.44
22:DA:1286:A:N6	22:DA:1329:U:O2'	2.40	0.44
22:DA:1437:C:N3	22:DA:1438:U:C4	2.86	0.44
22:DA:1691:C:C4	22:DA:1692:U:C4	3.06	0.44
22:DA:2024:G:C2	22:DA:2040:G:N3	2.86	0.44
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.99	0.44
25:DD:173:GLN:O	25:DD:174:SER:C	2.60	0.44
26:DE:40:ARG:NH2	26:DE:92:HIS:CD2	2.86	0.44
27:DF:42:GLU:HB2	27:DF:49:LEU:HD23	1.99	0.44
28:DG:89:LEU:HD13	28:DG:89:LEU:N	2.32	0.44
34:DM:58:LYS:O	34:DM:60:GLN:N	2.46	0.44
35:DN:103:ARG:HB2	35:DN:110:MET:HE3	2.00	0.44
36:DO:70:ALA:O	36:DO:74:VAL:HB	2.17	0.44
36:DO:80:GLU:O	36:DO:84:GLU:HG3	2.17	0.44
41:DT:37:ASP:OD2	41:DT:38:ALA:N	2.51	0.44
41:DT:91:GLN:O	41:DT:91:GLN:NE2	2.48	0.44
42:DU:72:ILE:HG12	42:DU:83:VAL:HG23	2.00	0.44
1:AA:69:G:O6	1:AA:98:A:N6	2.51	0.44
1:AA:221:C:C2	1:AA:222:C:C5	3.06	0.44
1:AA:239:U:H5"	1:AA:240:G:OP2	2.17	0.44
1:AA:307:C:H5"	1:AA:308:C:OP2	2.18	0.44
1:AA:375:U:C2	1:AA:376:G:C8	3.06	0.44
1:AA:417:G:C6	1:AA:418:C:C4	3.06	0.44
1:AA:560:A:H5'	1:AA:566:G:N2	2.33	0.44
1:AA:569:C:O2	1:AA:569:C:H2'	2.17	0.44
1:AA:773:G:H2'	1:AA:774:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:830:G:H2'	1:AA:831:A:H8	1.83	0.44
1:AA:1050:G:C2	1:AA:1209:C:O2	2.71	0.44
1:AA:1093:A:H2'	1:AA:1095:U:OP1	2.18	0.44
1:AA:1302:C:N3	13:AM:17:ILE:HD11	2.33	0.44
2:AB:193:PRO:O	2:AB:195:GLY:N	2.44	0.44
3:AC:14:ILE:O	3:AC:16:LYS:N	2.51	0.44
4:AD:187:GLU:O	4:AD:188:ARG:C	2.61	0.44
7:AG:73:VAL:HG12	7:AG:90:GLU:CG	2.48	0.44
11:AK:108:THR:HG22	11:AK:109:ASN:ND2	2.32	0.44
13:AM:85:CYS:O	13:AM:89:LEU:HD12	2.17	0.44
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.18	0.44
20:AT:57:ILE:HD12	20:AT:60:ARG:HD2	1.98	0.44
22:BA:478:A:C6	22:BA:480:A:N6	2.86	0.44
22:BA:819:A:H1'	22:BA:1189:A:N1	2.33	0.44
22:BA:973:A:H5'	22:BA:1188:U:H1'	2.00	0.44
22:BA:973:A:H5'	22:BA:1188:U:C1'	2.48	0.44
22:BA:1420:A:O2'	22:BA:1421:G:H5'	2.18	0.44
22:BA:1465:G:C6	22:BA:1466:U:N3	2.86	0.44
22:BA:1590:A:C2	22:BA:1591:A:C5	3.05	0.44
22:BA:1627:G:C2	22:BA:1628:G:C8	3.06	0.44
22:BA:1649:G:C6	22:BA:2009:A:N1	2.86	0.44
22:BA:1876:A:N1	22:BA:1877:A:C4	2.86	0.44
22:BA:1915:U:H2'	22:BA:1916:A:O4'	2.18	0.44
22:BA:2403:C:C4	22:BA:2415:G:N1	2.86	0.44
22:BA:2756:U:H5"	52:B4:19:ARG:HG2	2.00	0.44
24:BC:78:VAL:HG21	24:BC:110:LEU:CD2	2.47	0.44
25:BD:100:LEU:O	25:BD:100:LEU:HD12	2.18	0.44
27:BF:17:MET:O	27:BF:21:ASN:HA	2.18	0.44
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.33	0.44
28:BG:52:PHE:CD2	28:BG:52:PHE:N	2.86	0.44
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.98	0.44
31:BJ:68:LYS:O	31:BJ:69:ARG:C	2.61	0.44
33:BL:29:LYS:CG	33:BL:30:THR:HG23	2.47	0.44
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.32	0.44
47:BZ:51:VAL:O	47:BZ:52:SER:C	2.61	0.44
48:B0:13:ARG:O	48:B0:17:ARG:HG3	2.18	0.44
48:B0:48:TYR:CZ	48:B0:53:LYS:HD2	2.53	0.44
50:B2:11:LYS:HE2	57:B2:101:HOH:O	2.17	0.44
1:CA:75:G:C2	1:CA:96:U:C2	3.06	0.44
1:CA:77:A:C2	1:CA:93:U:N3	2.86	0.44
1:CA:517:G:C8	1:CA:531:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:673:A:O3'	6:CF:86:ARG:NH2	2.51	0.44
1:CA:728:A:OP1	15:CO:54:ARG:NH2	2.51	0.44
1:CA:1386:G:C2	1:CA:1387:G:C8	3.05	0.44
2:CB:21:ARG:C	2:CB:23:TRP:H	2.26	0.44
6:CF:40:GLU:HB2	6:CF:42:TRP:HE1	1.83	0.44
6:CF:71:ILE:HG22	6:CF:72:ASP:N	2.33	0.44
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.51	0.44
19:CS:30:PRO:HA	19:CS:48:THR:O	2.18	0.44
22:DA:279:A:N6	22:DA:361:G:H1'	2.33	0.44
22:DA:301:G:N3	22:DA:302:C:C2	2.86	0.44
22:DA:450:G:H2'	22:DA:451:U:H5"	2.00	0.44
22:DA:478:A:C2	22:DA:480:A:C4	3.06	0.44
22:DA:534:U:H5'	38:DQ:42:ALA:HB1	1.99	0.44
22:DA:545:U:O2	22:DA:545:U:O5'	2.35	0.44
22:DA:568:U:H2'	22:DA:570:G:OP2	2.18	0.44
22:DA:630:G:H5"	22:DA:631:A:OP2	2.17	0.44
22:DA:945:A:N7	22:DA:2448:A:C2	2.86	0.44
22:DA:1034:G:C6	22:DA:1035:U:N3	2.86	0.44
22:DA:1262:A:N3	22:DA:1262:A:H2'	2.33	0.44
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.18	0.44
22:DA:1490:A:H2'	22:DA:1490:A:N3	2.32	0.44
22:DA:1651:G:C2	22:DA:2007:U:C2	3.06	0.44
22:DA:1668:A:C4	22:DA:1674:G:N7	2.86	0.44
22:DA:1721:G:H2'	22:DA:1738:G:H22	1.83	0.44
22:DA:2043:C:C2	22:DA:2044:C:C5	3.06	0.44
22:DA:2247:A:H3'	57:DA:3504:HOH:O	2.17	0.44
22:DA:2491:U:H5'	22:DA:2570:G:C5'	2.48	0.44
24:DC:35:GLU:O	24:DC:35:GLU:HG3	2.18	0.44
24:DC:74:ILE:HG22	24:DC:75:PRO:O	2.18	0.44
29:DH:29:PHE:O	29:DH:30:LEU:C	2.61	0.44
30:DI:57:VAL:HG21	30:DI:69:PHE:HB2	2.00	0.44
37:DP:4:ILE:O	37:DP:8:LEU:HB2	2.17	0.44
42:DU:7:ARG:CG	42:DU:8:ASP:H	2.29	0.44
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.18	0.44
46:DY:9:LYS:HG2	46:DY:10:SER:N	2.33	0.44
1:AA:223:A:C6	1:AA:224:U:O4	2.71	0.43
1:AA:439:U:H2'	1:AA:440:C:O5'	2.17	0.43
1:AA:464:U:N3	1:AA:466:A:H5"	2.33	0.43
1:AA:582:C:C4	1:AA:583:A:N7	2.86	0.43
1:AA:818:G:O2'	1:AA:819:A:H5'	2.18	0.43
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1202:U:H1'	14:AN:69:ARG:HD2	1.99	0.43
1:AA:1249:C:H5"	9:AI:38:TYR:OH	2.17	0.43
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.27	0.43
2:AB:208:ARG:C	2:AB:210:VAL:N	2.75	0.43
3:AC:143:ARG:CG	3:AC:144:LEU:HD13	2.48	0.43
7:AG:103:TRP:CH2	7:AG:141:VAL:HG21	2.53	0.43
10:AJ:49:PHE:CD2	14:AN:77:PHE:CE1	3.05	0.43
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.47	0.43
13:AM:107:ARG:HH11	13:AM:107:ARG:CG	2.29	0.43
15:AO:69:TYR:O	15:AO:72:ARG:HB3	2.18	0.43
17:AQ:46:VAL:HG11	17:AQ:61:ILE:HG13	2.00	0.43
18:AR:72:ASP:OD2	21:AU:4:ILE:HG13	2.18	0.43
22:BA:278:A:N1	22:BA:362:A:C8	2.86	0.43
22:BA:587:C:H3'	22:BA:588:U:H5'	2.00	0.43
22:BA:669:G:N3	22:BA:669:G:C2'	2.80	0.43
22:BA:695:G:C6	22:BA:696:G:N7	2.86	0.43
22:BA:813:U:C2	22:BA:1195:G:N2	2.86	0.43
22:BA:864:G:O2'	22:BA:865:C:H5'	2.18	0.43
22:BA:878:A:H5'	22:BA:879:G:OP2	2.18	0.43
22:BA:1047:G:C2	22:BA:1110:G:C4	3.06	0.43
22:BA:1072:C:OP2	22:BA:1075:C:N4	2.51	0.43
22:BA:1250:G:H5'	38:BQ:6:ARG:HD3	2.00	0.43
22:BA:1483:G:C2	22:BA:1484:U:C2	3.06	0.43
22:BA:1492:G:C6	22:BA:1499:C:N3	2.86	0.43
22:BA:1538:G:OP2	22:BA:1538:G:H8	2.00	0.43
22:BA:2392:A:C8	22:BA:2429:G:C6	3.06	0.43
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.18	0.43
22:BA:2619:C:H2'	22:BA:2620:C:H6	1.82	0.43
22:BA:2892:G:H5"	22:BA:2894:G:N2	2.33	0.43
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.57	0.43
24:BC:174:LEU:O	24:BC:181:MET:HA	2.17	0.43
25:BD:101:PHE:CE2	25:BD:203:VAL:CG1	3.00	0.43
28:BG:38:ASN:O	28:BG:39:ASP:CB	2.66	0.43
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.99	0.43
30:BI:64:ASP:O	30:BI:65:ARG:C	2.60	0.43
30:BI:123:GLU:C	30:BI:126:THR:HB	2.43	0.43
37:BP:46:VAL:O	37:BP:61:VAL:HA	2.18	0.43
39:BR:53:PHE:N	39:BR:53:PHE:CD1	2.83	0.43
45:BX:64:ILE:CD1	45:BX:68:LEU:HG	2.48	0.43
1:CA:15:G:C2	1:CA:16:A:C4	3.06	0.43
1:CA:222:C:C2	1:CA:223:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:373:A:N3	1:CA:374:A:C8	2.86	0.43
1:CA:772:U:O2'	1:CA:773:G:H5'	2.17	0.43
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.54	0.43
1:CA:1489:G:C2'	1:CA:1490:U:H5'	2.48	0.43
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.17	0.43
2:CB:97:LEU:HB2	2:CB:100:MET:HE3	1.99	0.43
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.57	0.43
4:CD:188:ARG:O	4:CD:191:LEU:HD12	2.18	0.43
5:CE:35:ALA:O	5:CE:50:TYR:O	2.37	0.43
6:CF:13:ASP:C	6:CF:15:SER:H	2.24	0.43
8:CH:88:ARG:O	8:CH:89:LYS:HB3	2.18	0.43
17:CQ:28:PHE:CE1	17:CQ:37:PHE:O	2.71	0.43
22:DA:562:U:H2'	22:DA:572:A:O4'	2.18	0.43
22:DA:563:A:C6	22:DA:564:C:N3	2.85	0.43
22:DA:630:G:C5'	22:DA:631:A:OP2	2.66	0.43
22:DA:699:A:H2'	22:DA:700:G:C5'	2.47	0.43
22:DA:1064:C:O4'	30:DI:90:SER:HB2	2.18	0.43
22:DA:1361:G:C5	22:DA:1362:C:C5	3.06	0.43
22:DA:1361:G:C6	22:DA:1362:C:C5	3.06	0.43
22:DA:1581:G:C4	22:DA:1582:C:C5	3.06	0.43
22:DA:1655:A:C6	22:DA:1656:C:C2	3.05	0.43
22:DA:2222:C:H2'	22:DA:2223:G:O5'	2.18	0.43
22:DA:2298:A:C4	22:DA:2321:U:C5	3.06	0.43
22:DA:2323:G:C5	22:DA:2324:U:C5	3.06	0.43
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.18	0.43
25:DD:172:VAL:HG23	25:DD:194:PRO:HD3	1.99	0.43
26:DE:131:THR:O	26:DE:135:ALA:N	2.50	0.43
26:DE:147:LEU:HB3	26:DE:186:VAL:HG22	2.00	0.43
30:DI:91:GLY:C	30:DI:93:PRO:HD3	2.43	0.43
37:DP:53:ARG:CB	37:DP:56:HIS:HB2	2.48	0.43
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.48	0.43
38:DQ:71:GLN:OE1	38:DQ:71:GLN:HA	2.17	0.43
44:DW:40:GLN:OE1	44:DW:44:LYS:N	2.51	0.43
1:AA:33:A:H2'	1:AA:34:C:C6	2.53	0.43
1:AA:116:A:H2'	1:AA:117:G:C8	2.53	0.43
1:AA:246:A:N3	1:AA:247:G:H1'	2.32	0.43
1:AA:591:U:H2'	1:AA:592:G:H8	1.83	0.43
1:AA:922:G:C6	1:AA:923:A:C6	3.06	0.43
1:AA:1367:C:P	9:AI:114:LYS:HZ1	2.40	0.43
2:AB:62:SER:O	2:AB:64:LYS:N	2.51	0.43
4:AD:30:THR:C	4:AD:31:LYS:HD3	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:46:VAL:HG11	5:AE:118:ALA:HB2	1.99	0.43
7:AG:65:ALA:HA	7:AG:128:ALA:HA	2.00	0.43
16:AP:71:VAL:O	16:AP:72:ALA:C	2.61	0.43
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.48	0.43
22:BA:547:A:C8	22:BA:548:G:N3	2.86	0.43
22:BA:815:C:C2	22:BA:1193:G:C2	3.05	0.43
22:BA:816:C:C2	22:BA:1192:G:C2	3.06	0.43
22:BA:1845:G:C6	22:BA:1896:G:C6	3.05	0.43
22:BA:1926:U:O2	22:BA:1926:U:C2'	2.66	0.43
22:BA:2343:U:O2	22:BA:2343:U:H2'	2.17	0.43
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.18	0.43
22:BA:2379:G:H4'	36:BO:21:LEU:HD11	2.00	0.43
22:BA:2519:U:C5	22:BA:2541:A:C6	3.06	0.43
22:BA:2718:G:O3'	37:BP:96:LYS:HG3	2.18	0.43
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.47	0.43
24:BC:144:VAL:HG12	24:BC:145:GLU:O	2.17	0.43
24:BC:195:VAL:CG2	24:BC:196:GLY:N	2.81	0.43
25:BD:71:ALA:HA	25:BD:92:VAL:HG11	2.00	0.43
28:BG:173:GLU:HA	28:BG:173:GLU:OE1	2.17	0.43
40:BS:83:LYS:HD2	40:BS:97:LEU:HD11	2.00	0.43
41:BT:19:LYS:C	41:BT:21:SER:H	2.25	0.43
1:CA:190:A:H2'	1:CA:191:G:O4'	2.17	0.43
1:CA:211:G:O2'	1:CA:212:G:O4'	2.36	0.43
1:CA:451:A:H4'	1:CA:452:A:O5'	2.17	0.43
1:CA:575:G:N2	1:CA:881:G:H1'	2.33	0.43
1:CA:802:A:C2	1:CA:803:G:H1'	2.53	0.43
1:CA:823:C:O2'	1:CA:824:G:H5'	2.18	0.43
1:CA:841:C:N3	1:CA:843:U:C5	2.86	0.43
1:CA:844:G:OP1	1:CA:844:G:H3'	2.18	0.43
1:CA:926:G:C6	1:CA:1505:G:C6	3.05	0.43
1:CA:996:A:H2'	1:CA:997:U:C6	2.53	0.43
1:CA:1048:G:H4'	14:CN:3:LYS:CE	2.49	0.43
1:CA:1055:A:C6	1:CA:1206:G:C4	3.06	0.43
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.52	0.43
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.18	0.43
3:CC:34:ASP:O	3:CC:38:LYS:HB2	2.17	0.43
4:CD:73:ARG:O	4:CD:76:TYR:N	2.51	0.43
11:CK:36:ASP:CG	11:CK:40:ASN:HB2	2.43	0.43
11:CK:92:GLY:O	11:CK:94:GLU:N	2.51	0.43
11:CK:109:ASN:HB3	21:CU:6:VAL:O	2.18	0.43
12:CL:63:VAL:HG21	12:CL:95:TYR:CD2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:23:TYR:HA	18:CR:58:ALA:HB1	2.00	0.43
19:CS:58:VAL:CG1	19:CS:75:ALA:HB2	2.48	0.43
21:CU:43:THR:O	21:CU:46:LYS:HB3	2.17	0.43
21:CU:53:VAL:HG13	21:CU:54:LYS:H	1.83	0.43
22:DA:199:A:N6	22:DA:2434:A:C5	2.87	0.43
22:DA:232:G:N1	22:DA:420:C:OP1	2.46	0.43
22:DA:293:U:C5'	22:DA:294:A:OP2	2.66	0.43
22:DA:303:G:H2'	22:DA:304:U:C6	2.53	0.43
22:DA:334:C:OP1	22:DA:335:C:N4	2.51	0.43
22:DA:971:G:H2'	22:DA:972:A:O4'	2.18	0.43
22:DA:1070:A:C2	22:DA:1097:U:O2'	2.70	0.43
22:DA:1801:A:C4	24:DC:262:ARG:NH2	2.85	0.43
22:DA:1936:A:OP1	22:DA:1937:A:H5'	2.18	0.43
22:DA:2100:G:C5	22:DA:2190:G:C6	3.06	0.43
22:DA:2298:A:C4	22:DA:2321:U:H5	2.36	0.43
22:DA:2497:A:N3	22:DA:2498:C:N4	2.66	0.43
22:DA:2551:C:H2'	22:DA:2552:U:C6	2.52	0.43
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.48	0.43
22:DA:2718:G:O3'	37:DP:96:LYS:HG3	2.18	0.43
22:DA:2873:A:H1'	35:DN:4:ARG:O	2.18	0.43
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.71	0.43
25:DD:148:GLN:N	25:DD:148:GLN:CD	2.76	0.43
26:DE:8:ALA:O	26:DE:9:GLN:HB2	2.17	0.43
26:DE:25:GLU:HG2	33:DL:6:LEU:HD23	2.00	0.43
30:DI:80:LEU:HD23	30:DI:84:ALA:CB	2.48	0.43
30:DI:127:ARG:HA	30:DI:130:GLU:HB2	1.98	0.43
31:DJ:7:LYS:O	31:DJ:11:VAL:HG22	2.18	0.43
33:DL:23:ILE:HG12	39:DR:82:HIS:CD2	2.53	0.43
33:DL:56:PRO:O	33:DL:60:ARG:HB3	2.18	0.43
35:DN:31:HIS:O	35:DN:33:ILE:HG22	2.18	0.43
36:DO:110:ALA:HB3	36:DO:117:PHE:HE2	1.84	0.43
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.43	0.43
1:AA:107:G:C2'	1:AA:108:G:H5"	2.48	0.43
1:AA:259:G:N2	1:AA:260:G:H1'	2.33	0.43
1:AA:655:A:C2	1:AA:656:G:C4	3.06	0.43
1:AA:663:A:C6	1:AA:743:A:N1	2.86	0.43
1:AA:698:G:C6	1:AA:699:C:C4	3.06	0.43
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.49	0.43
1:AA:1077:G:N2	1:AA:1081:A:C4	2.87	0.43
1:AA:1098:C:H2'	1:AA:1099:G:O4'	2.18	0.43
1:AA:1140:C:O2	1:AA:1141:C:C5	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1342:C:O2'	9:AI:126:GLN:CG	2.66	0.43
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.99	0.43
2:AB:57:LEU:O	2:AB:60:ILE:HG13	2.18	0.43
2:AB:169:GLU:O	2:AB:170:HIS:C	2.61	0.43
2:AB:184:PHE:N	2:AB:184:PHE:CD2	2.86	0.43
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	2.00	0.43
5:AE:133:PRO:C	5:AE:135:ASN:H	2.26	0.43
7:AG:149:LYS:O	7:AG:150:ALA:C	2.60	0.43
9:AI:50:GLN:NE2	9:AI:103:PHE:CZ	2.86	0.43
10:AJ:65:TYR:HB2	14:AN:96:LEU:HD11	2.00	0.43
14:AN:43:ASN:C	14:AN:45:VAL:H	2.26	0.43
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.18	0.43
17:AQ:61:ILE:CG2	17:AQ:73:TRP:CE3	3.02	0.43
22:BA:13:A:N6	22:BA:525:U:C5	2.86	0.43
22:BA:416:U:H2'	22:BA:417:C:O4'	2.18	0.43
22:BA:554:U:C2'	22:BA:555:G:H5'	2.48	0.43
22:BA:768:G:C2'	22:BA:769:U:O5'	2.66	0.43
22:BA:812:C:O2	22:BA:812:C:H2'	2.19	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	2.00	0.43
22:BA:1225:G:C2	22:BA:1226:A:N1	2.86	0.43
22:BA:1358:G:N2	22:BA:1374:G:C6	2.87	0.43
22:BA:1374:G:C5	22:BA:1375:U:C5	3.06	0.43
22:BA:1505:A:H2'	22:BA:1506:U:O4'	2.18	0.43
22:BA:1665:A:H2'	22:BA:1666:G:O4'	2.18	0.43
22:BA:1915:U:C2	22:BA:1916:A:C8	3.06	0.43
22:BA:2048:G:H2'	22:BA:2049:G:O5'	2.18	0.43
22:BA:2409:G:C6	22:BA:2410:G:C5	3.06	0.43
24:BC:222:GLY:C	24:BC:224:ALA:N	2.76	0.43
25:BD:8:LYS:HE2	25:BD:193:VAL:HG22	2.00	0.43
27:BF:38:MET:CE	27:BF:152:LEU:HD13	2.48	0.43
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.83	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
34:BM:136:MET:HE1	43:BV:57:TYR:HD2	1.82	0.43
39:BR:55:ASP:OD1	39:BR:55:ASP:C	2.61	0.43
39:BR:102:SER:O	39:BR:103:ALA:C	2.61	0.43
47:BZ:3:LYS:HE3	47:BZ:3:LYS:N	2.33	0.43
1:CA:57:G:C5	1:CA:58:C:C4	3.06	0.43
1:CA:81:A:C2	1:CA:89:U:C2	3.06	0.43
1:CA:111:G:C6	1:CA:330:C:N4	2.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:198:G:H2'	1:CA:199:A:C5'	2.48	0.43
1:CA:198:G:N2	1:CA:199:A:H1'	2.33	0.43
1:CA:541:G:H2'	1:CA:542:G:O4'	2.17	0.43
1:CA:867:G:H2'	1:CA:868:C:C6	2.54	0.43
1:CA:976:G:C2	1:CA:1363:A:C2	3.06	0.43
1:CA:1078:U:C2	5:CE:90:THR:HG21	2.53	0.43
1:CA:1078:U:C5	1:CA:1079:G:C5	3.05	0.43
1:CA:1169:A:C2	1:CA:1170:A:C4	3.06	0.43
1:CA:1349:A:C2	1:CA:1374:A:C4	3.06	0.43
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.18	0.43
2:CB:211:THR:O	2:CB:212:LEU:C	2.61	0.43
4:CD:26:ARG:CG	4:CD:27:ALA:N	2.67	0.43
4:CD:97:ARG:O	4:CD:101:VAL:HG23	2.19	0.43
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.80	0.43
7:CG:137:LYS:O	7:CG:141:VAL:HG23	2.18	0.43
9:CI:12:ARG:O	9:CI:12:ARG:HG3	2.16	0.43
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	1.99	0.43
9:CI:44:ALA:HB1	9:CI:47:VAL:HG21	2.00	0.43
15:CO:27:VAL:O	15:CO:31:LEU:HD12	2.18	0.43
22:DA:150:U:H2'	22:DA:151:C:C6	2.54	0.43
22:DA:223:A:C5	22:DA:422:A:C8	3.05	0.43
22:DA:495:G:H4'	40:DS:4:ILE:O	2.18	0.43
22:DA:510:C:C2'	22:DA:511:U:H5'	2.48	0.43
22:DA:947:A:O2'	22:DA:984:A:H2	2.01	0.43
22:DA:952:G:C6	22:DA:966:G:N1	2.87	0.43
22:DA:1208:C:C4	22:DA:1209:U:C5	3.06	0.43
22:DA:1224:U:C4	22:DA:1225:G:C6	3.07	0.43
22:DA:1303:G:H1'	22:DA:1641:A:N1	2.33	0.43
22:DA:1309:G:H2'	22:DA:1310:G:O4'	2.19	0.43
22:DA:1361:G:C5	22:DA:1371:G:N2	2.86	0.43
22:DA:1362:C:C2'	22:DA:1363:C:H5'	2.48	0.43
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.19	0.43
22:DA:2024:G:C4	22:DA:2040:G:N2	2.87	0.43
22:DA:2118:U:H5'	22:DA:2119:A:OP1	2.18	0.43
22:DA:2514:U:H2'	22:DA:2515:C:H6	1.83	0.43
22:DA:2581:G:C1'	22:DA:2582:G:N7	2.81	0.43
27:DF:16:LEU:HA	27:DF:19:GLU:CD	2.44	0.43
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.18	0.43
35:DN:18:GLN:O	35:DN:18:GLN:HG2	2.17	0.43
35:DN:38:LEU:HD11	35:DN:42:LYS:HE3	2.00	0.43
35:DN:85:PRO:C	35:DN:87:PHE:H	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:103:ARG:NE	35:DN:110:MET:CE	2.81	0.43
36:DO:31:THR:HG22	36:DO:33:ARG:O	2.18	0.43
37:DP:65:SER:O	37:DP:66:ASN:C	2.61	0.43
43:DV:55:GLU:CD	43:DV:55:GLU:H	2.26	0.43
1:AA:64:G:N7	1:AA:99:C:C4	2.86	0.43
1:AA:452:A:N7	1:AA:453:G:C4	2.86	0.43
1:AA:971:G:C8	1:AA:1365:G:H4'	2.53	0.43
3:AC:159:GLY:O	3:AC:160:ALA:C	2.61	0.43
6:AF:46:GLN:HB2	6:AF:56:LYS:CE	2.48	0.43
8:AH:59:LEU:HD13	8:AH:59:LEU:C	2.43	0.43
15:AO:70:LEU:O	15:AO:71:LYS:C	2.62	0.43
17:AQ:59:VAL:CG2	17:AQ:60:GLU:N	2.81	0.43
22:BA:13:A:N3	22:BA:15:G:C6	2.86	0.43
22:BA:201:C:H2'	22:BA:202:U:H5'	2.00	0.43
22:BA:632:A:H2'	22:BA:633:A:C8	2.53	0.43
22:BA:1063:G:N3	30:BI:136:MET:HA	2.33	0.43
22:BA:1106:G:C2	22:BA:1107:G:C4	3.06	0.43
22:BA:1132:U:C3'	22:BA:1133:A:H5"	2.48	0.43
22:BA:1237:A:H4'	22:BA:1238:G:OP1	2.19	0.43
22:BA:1429:G:H2'	22:BA:1430:G:C8	2.52	0.43
22:BA:1829:A:C8	22:BA:1830:C:C5	3.07	0.43
22:BA:1863:G:N2	22:BA:1880:U:H1'	2.34	0.43
22:BA:1972:G:H2'	22:BA:1973:G:C8	2.52	0.43
22:BA:2056:G:C5	22:BA:2577:A:C4	3.07	0.43
22:BA:2093:G:H4'	29:BH:25:TYR:N	2.33	0.43
23:BB:81:G:C2'	23:BB:82:U:H5'	2.48	0.43
24:BC:76:ALA:HA	24:BC:95:LEU:O	2.19	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
30:BI:127:ARG:CB	30:BI:130:GLU:CD	2.92	0.43
33:BL:124:GLY:C	33:BL:125:LEU:HD12	2.43	0.43
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.48	0.43
47:BZ:21:LYS:O	47:BZ:22:ALA:C	2.61	0.43
47:BZ:21:LYS:O	47:BZ:24:LEU:N	2.51	0.43
48:B0:12:LYS:HA	48:B0:12:LYS:HD2	1.82	0.43
1:CA:55:A:N6	1:CA:56:U:C2	2.86	0.43
1:CA:130:A:C2	1:CA:264:C:C2	3.06	0.43
1:CA:327:A:N1	1:CA:329:A:C2	2.86	0.43
1:CA:731:G:H5'	1:CA:766:A:H4'	2.00	0.43
1:CA:745:G:H1'	1:CA:836:G:O2'	2.18	0.43
1:CA:756:C:H2'	1:CA:757:U:H5'	2.01	0.43
1:CA:884:U:H4'	1:CA:885:G:H5"	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:978:A:P	1:CA:1362:A:H61	2.41	0.43
1:CA:1137:C:O2	1:CA:1137:C:O4'	2.36	0.43
1:CA:1222:G:H5"	19:CS:78:ARG:NH1	2.34	0.43
1:CA:1359:C:O2'	1:CA:1361:G:N7	2.50	0.43
2:CB:139:ARG:HD2	2:CB:140:GLU:N	2.32	0.43
4:CD:24:GLY:O	4:CD:161:LEU:HD11	2.18	0.43
4:CD:98:LEU:O	4:CD:101:VAL:N	2.51	0.43
4:CD:124:MET:CE	4:CD:146:ARG:HD2	2.47	0.43
4:CD:148:LYS:C	4:CD:150:LYS:H	2.27	0.43
4:CD:206:LYS:O	4:CD:206:LYS:CD	2.66	0.43
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	2.01	0.43
9:CI:19:VAL:HG21	9:CI:83:ILE:N	2.33	0.43
13:CM:3:ARG:HA	13:CM:9:ILE:HG12	2.00	0.43
19:CS:6:LYS:HB2	19:CS:7:LYS:HG2	2.00	0.43
22:DA:89:A:C2	22:DA:90:U:C2	3.06	0.43
22:DA:533:G:H2'	22:DA:534:U:C6	2.53	0.43
22:DA:784:G:C6	22:DA:792:A:C4	3.07	0.43
22:DA:1338:G:O2'	22:DA:1392:A:N6	2.51	0.43
22:DA:1645:G:H5"	22:DA:1646:C:O4'	2.17	0.43
22:DA:1679:A:H2'	22:DA:1680:U:C6	2.53	0.43
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.18	0.43
22:DA:2283:C:H2'	22:DA:2284:A:O4'	2.19	0.43
22:DA:2307:G:N2	22:DA:2312:U:C2	2.86	0.43
22:DA:2787:C:O4'	25:DD:63:PRO:HA	2.19	0.43
24:DC:35:GLU:O	24:DC:36:LYS:C	2.61	0.43
24:DC:207:LYS:HE2	24:DC:213:TRP:CH2	2.54	0.43
25:DD:3:GLY:C	25:DD:82:PHE:CE1	2.96	0.43
25:DD:140:HIS:CD2	57:DD:302:HOH:O	2.66	0.43
26:DE:1:MET:HG3	26:DE:14:VAL:CG2	2.49	0.43
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.43
31:DJ:9:GLU:C	31:DJ:10:THR:HG23	2.42	0.43
33:DL:122:VAL:HB	33:DL:142:ILE:HG12	2.00	0.43
35:DN:59:SER:O	35:DN:63:ARG:HB2	2.19	0.43
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.99	0.43
39:DR:41:ILE:HD13	39:DR:103:ALA:HA	1.99	0.43
42:DU:5:ILE:HD13	42:DU:67:VAL:HG13	2.01	0.43
42:DU:40:ASN:HB3	42:DU:63:ALA:HB3	2.00	0.43
42:DU:44:LYS:CG	42:DU:45:HIS:N	2.81	0.43
43:DV:35:GLU:CD	43:DV:35:GLU:N	2.76	0.43
1:AA:212:G:C2	1:AA:213:G:C5	3.07	0.43
1:AA:373:A:C8	1:AA:482:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:515:G:N2	1:AA:537:G:C4	2.86	0.43
1:AA:616:G:C2	1:AA:617:G:C5	3.06	0.43
1:AA:1078:U:O4'	5:AE:89:HIS:HE1	2.02	0.43
1:AA:1280:A:C3'	1:AA:1281:C:H5'	2.47	0.43
2:AB:33:GLY:HA3	2:AB:39:HIS:HB3	2.00	0.43
2:AB:176:ALA:O	2:AB:177:ASN:C	2.62	0.43
3:AC:36:ASP:C	3:AC:38:LYS:H	2.26	0.43
3:AC:167:TRP:O	3:AC:168:TYR:CD1	2.71	0.43
5:AE:99:ALA:O	5:AE:100:SER:C	2.59	0.43
9:AI:17:ALA:HB2	9:AI:67:VAL:CG2	2.48	0.43
10:AJ:27:GLU:HA	10:AJ:30:LYS:HE2	2.01	0.43
14:AN:23:LYS:O	14:AN:25:ALA:N	2.52	0.43
14:AN:47:LYS:HD3	19:AS:13:LEU:HD21	2.00	0.43
16:AP:3:THR:HG22	16:AP:4:ILE:N	2.34	0.43
17:AQ:21:ILE:HD13	17:AQ:48:ASP:OD1	2.18	0.43
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	2.00	0.43
21:AU:47:ARG:HG3	21:AU:47:ARG:O	2.18	0.43
22:BA:807:U:H2'	22:BA:808:G:O4'	2.18	0.43
22:BA:945:A:P	57:BA:3345:HOH:O	2.68	0.43
22:BA:1022:G:C5	22:BA:1140:C:C4	3.05	0.43
22:BA:1171:G:C2	22:BA:1172:C:C2	3.07	0.43
22:BA:1366:A:C6	22:BA:1367:A:C4	3.06	0.43
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.36	0.43
22:BA:2006:C:O2'	22:BA:2823:A:C2'	2.67	0.43
22:BA:2352:A:H2'	22:BA:2353:G:H5'	2.00	0.43
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.83	0.43
22:BA:2526:G:C2	22:BA:2538:C:O2	2.72	0.43
22:BA:2901:C:C4	22:BA:2902:C:C5	3.06	0.43
22:BA:2901:C:N4	22:BA:2902:C:C4	2.87	0.43
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.63	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
30:BI:96:ASP:CG	30:BI:97:LYS:N	2.77	0.43
32:BK:34:GLY:N	32:BK:37:ASP:OD2	2.50	0.43
33:BL:56:PRO:HB2	33:BL:58:TYR:CD2	2.53	0.43
40:BS:43:ALA:O	40:BS:44:ALA:C	2.60	0.43
42:BU:74:ASN:O	42:BU:77:THR:N	2.48	0.43
43:BV:84:PRO:O	43:BV:85:LYS:HG2	2.18	0.43
45:BX:37:ARG:NH2	45:BX:46:PHE:CD1	2.86	0.43
45:BX:53:ALA:O	45:BX:54:LYS:C	2.61	0.43
1:CA:93:U:C2'	1:CA:94:G:H5"	2.49	0.43
1:CA:407:U:N3	1:CA:408:A:N7	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:552:U:C4'	12:CL:83:ARG:HD2	2.49	0.43
1:CA:590:U:H2'	1:CA:591:U:C6	2.54	0.43
1:CA:939:G:N1	1:CA:940:C:N3	2.67	0.43
1:CA:1261:A:C2	1:CA:1262:C:C5	3.06	0.43
1:CA:1397:C:C3'	1:CA:1398:A:H5"	2.48	0.43
2:CB:206:ALA:O	2:CB:208:ARG:C	2.62	0.43
3:CC:56:VAL:C	3:CC:57:ILE:HD12	2.44	0.43
4:CD:88:GLU:O	4:CD:89:ASN:C	2.61	0.43
6:CF:90:MET:O	6:CF:91:ARG:O	2.37	0.43
11:CK:52:PHE:CE2	11:CK:62:ALA:HB1	2.53	0.43
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.17	0.43
13:CM:73:ILE:HA	13:CM:76:SER:OG	2.18	0.43
15:CO:70:LEU:CD1	15:CO:78:TYR:HA	2.48	0.43
22:DA:622:G:OP2	57:DA:3294:HOH:O	2.21	0.43
22:DA:1142:A:C2	22:DA:1144:A:C1'	3.01	0.43
22:DA:1310:G:N2	22:DA:1605:C:C2	2.87	0.43
22:DA:1606:C:O2'	22:DA:1607:C:P	2.76	0.43
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.54	0.43
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.31	0.43
23:DB:46:A:C5	23:DB:47:C:C5	3.07	0.43
28:DG:129:THR:O	28:DG:130:GLU:HG2	2.19	0.43
31:DJ:142:ILE:OXT	31:DJ:142:ILE:CG2	2.66	0.43
34:DM:64:TRP:C	34:DM:65:ILE:HG13	2.42	0.43
41:DT:39:THR:C	41:DT:41:ALA:N	2.76	0.43
42:DU:82:ARG:O	42:DU:97:LYS:CG	2.66	0.43
1:AA:299:G:H2'	1:AA:300:A:C8	2.53	0.43
1:AA:340:U:C2	1:AA:341:C:C5	3.06	0.43
1:AA:437:U:C4	1:AA:438:U:C5	3.06	0.43
1:AA:821:G:C6	1:AA:822:U:C4	3.06	0.43
1:AA:1079:G:C2	1:AA:1080:A:C6	3.06	0.43
1:AA:1149:C:N4	1:AA:1150:A:N6	2.65	0.43
1:AA:1269:A:H2	1:AA:1312:G:N3	2.16	0.43
1:AA:1370:G:O5'	9:AI:111:VAL:HG21	2.18	0.43
1:AA:1452:C:H4'	1:AA:1453:G:H5"	2.00	0.43
1:AA:1505:G:C5'	1:AA:1506:U:O5'	2.67	0.43
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.91	0.43
2:AB:68:LEU:HD22	2:AB:70:VAL:HG23	2.00	0.43
2:AB:140:GLU:O	2:AB:144:LEU:CD2	2.66	0.43
4:AD:55:LEU:HD23	4:AD:55:LEU:C	2.43	0.43
4:AD:174:ASP:OD1	4:AD:177:LYS:HE2	2.18	0.43
13:AM:15:ALA:O	13:AM:19:LEU:HD23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.18	0.43
16:AP:43:ALA:O	16:AP:44:SER:OG	2.32	0.43
18:AR:22:ASP:OD2	18:AR:24:LYS:HB2	2.19	0.43
19:AS:42:PRO:HD3	19:AS:67:VAL:HG13	2.00	0.43
20:AT:35:VAL:HG12	20:AT:39:ILE:CD1	2.49	0.43
22:BA:243:U:C2'	22:BA:244:A:H5'	2.49	0.43
22:BA:338:G:N2	22:BA:339:U:H1'	2.33	0.43
22:BA:956:G:OP1	34:BM:86:LYS:HG3	2.18	0.43
22:BA:1661:G:C4	22:BA:1662:U:C6	3.07	0.43
22:BA:1837:C:C2	22:BA:1899:A:N6	2.87	0.43
22:BA:1868:C:H2'	22:BA:1869:G:O4'	2.18	0.43
22:BA:1920:C:C6	22:BA:1920:C:H3'	2.54	0.43
22:BA:2456:C:H2'	22:BA:2457:U:H5'	2.01	0.43
22:BA:2722:G:O2'	35:BN:3:HIS:O	2.33	0.43
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.45	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
30:BI:72:LYS:N	30:BI:72:LYS:HD3	2.33	0.43
35:BN:92:GLY:HA2	35:BN:94:TYR:CZ	2.53	0.43
40:BS:40:ASN:O	40:BS:41:LYS:HG2	2.19	0.43
40:BS:69:LEU:HA	40:BS:108:SER:O	2.18	0.43
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.66	0.43
53:B5:46:ALA:HA	53:B5:211:ARG:HA	2.01	0.43
53:B5:212:SER:HA	53:B5:221:PRO:CB	2.48	0.43
1:CA:454:G:N2	1:CA:479:U:O2	2.50	0.43
1:CA:821:G:H2'	1:CA:822:U:C6	2.54	0.43
1:CA:1151:A:C2	1:CA:1152:A:C4	3.07	0.43
1:CA:1211:U:H2'	1:CA:1212:U:OP2	2.18	0.43
1:CA:1495:U:H2'	1:CA:1496:C:O4'	2.18	0.43
3:CC:13:GLY:C	3:CC:14:ILE:HD13	2.44	0.43
4:CD:150:LYS:HG2	4:CD:151:LYS:N	2.32	0.43
14:CN:17:ALA:HA	14:CN:21:PHE:HB2	2.01	0.43
17:CQ:55:ILE:HG12	17:CQ:56:GLY:N	2.33	0.43
21:CU:25:LYS:HD3	21:CU:26:ALA:H	1.84	0.43
22:DA:49:A:N6	22:DA:177:G:C4	2.86	0.43
22:DA:223:A:H2'	22:DA:408:G:N3	2.33	0.43
22:DA:266:G:N2	22:DA:427:U:H1'	2.34	0.43
22:DA:374:A:N6	22:DA:400:G:O2'	2.48	0.43
22:DA:528:A:N1	22:DA:2043:C:O5'	2.51	0.43
22:DA:982:C:H4'	22:DA:983:A:OP1	2.19	0.43
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.54	0.43
22:DA:1262:A:C6	22:DA:1263:U:N3	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1264:A:N7	22:DA:1265:A:C5	2.86	0.43
22:DA:1356:G:C2	22:DA:1357:C:C2	3.07	0.43
22:DA:1492:G:C2	22:DA:1499:C:O2	2.72	0.43
22:DA:1497:U:C2	22:DA:1578:U:OP1	2.71	0.43
22:DA:1973:G:C5	22:DA:1974:C:C5	3.06	0.43
22:DA:2078:C:N4	22:DA:2079:U:O4	2.51	0.43
22:DA:2127:G:O2'	22:DA:2173:A:C2	2.71	0.43
23:DB:78:A:C5	23:DB:99:A:C8	3.06	0.43
24:DC:31:ALA:C	24:DC:33:LEU:H	2.27	0.43
24:DC:265:LYS:O	24:DC:265:LYS:HD3	2.19	0.43
25:DD:55:LYS:NZ	25:DD:77:ARG:O	2.51	0.43
25:DD:151:THR:HG22	25:DD:152:PRO:HD3	1.99	0.43
33:DL:81:ASP:O	33:DL:82:LEU:CB	2.66	0.43
43:DV:51:GLN:C	43:DV:53:LYS:N	2.76	0.43
46:DY:1:MET:N	46:DY:4:LYS:HD3	2.33	0.43
51:D3:34:THR:CG2	51:D3:35:LYS:N	2.81	0.43
1:AA:38:G:N1	1:AA:397:A:C2	2.87	0.43
1:AA:107:G:C3'	1:AA:108:G:H5"	2.48	0.43
1:AA:357:G:N3	1:AA:358:U:C6	2.87	0.43
1:AA:397:A:C6	1:AA:548:G:N7	2.87	0.43
1:AA:403:C:OP1	4:AD:134:SER:OG	2.27	0.43
1:AA:453:G:H2'	1:AA:454:G:O4'	2.18	0.43
1:AA:858:G:O6	1:AA:869:G:C8	2.71	0.43
1:AA:920:U:H1'	1:AA:1080:A:C2	2.54	0.43
1:AA:1050:G:N3	1:AA:1050:G:H2'	2.34	0.43
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.53	0.43
1:AA:1080:A:OP1	5:AE:52:LYS:HE3	2.18	0.43
1:AA:1167:A:N7	1:AA:1169:A:C6	2.87	0.43
1:AA:1277:C:O2'	1:AA:1279:G:H1'	2.18	0.43
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.52	0.43
1:AA:1299:A:C6	1:AA:1301:U:O2	2.72	0.43
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	2.00	0.43
4:AD:3:ARG:O	4:AD:4:TYR:C	2.61	0.43
4:AD:10:LYS:HA	4:AD:13:ARG:HG3	2.01	0.43
4:AD:160:GLU:C	4:AD:162:ALA:N	2.74	0.43
5:AE:65:GLU:HG2	5:AE:69:ARG:NH2	2.33	0.43
7:AG:31:MET:SD	7:AG:36:LYS:HD3	2.58	0.43
9:AI:9:THR:O	9:AI:17:ALA:O	2.36	0.43
10:AJ:90:LEU:C	10:AJ:91:ASP:OD1	2.61	0.43
11:AK:35:THR:OG1	11:AK:40:ASN:N	2.51	0.43
13:AM:20:THR:HA	13:AM:25:VAL:HG23	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:65:VAL:HG23	13:AM:66:GLU:HB2	2.00	0.43
15:AO:25:THR:HG22	15:AO:26:GLU:N	2.33	0.43
21:AU:24:GLU:O	21:AU:25:LYS:C	2.61	0.43
22:BA:116:C:C4	22:BA:117:G:C5	3.07	0.43
22:BA:244:A:OP2	51:B3:8:ARG:NH2	2.47	0.43
22:BA:653:U:H2'	22:BA:654:A:OP1	2.18	0.43
22:BA:685:A:H1'	22:BA:688:U:O4	2.19	0.43
22:BA:975:A:C4	22:BA:990:A:C5	3.07	0.43
22:BA:994:C:H3'	38:BQ:54:LYS:HE3	1.99	0.43
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.19	0.43
22:BA:1142:A:C2	22:BA:1144:A:O4'	2.72	0.43
22:BA:1171:G:N2	22:BA:1179:G:C6	2.86	0.43
22:BA:1430:G:C6	22:BA:1431:A:C5	3.06	0.43
22:BA:1687:G:N1	22:BA:1688:U:C4	2.87	0.43
22:BA:1773:A:N7	22:BA:1829:A:H1'	2.33	0.43
22:BA:2575:C:O2'	22:BA:2578:G:N7	2.40	0.43
22:BA:2627:G:N3	22:BA:2781:A:H2	2.15	0.43
22:BA:2684:U:C2'	22:BA:2685:G:O5'	2.67	0.43
23:BB:61:G:H2'	23:BB:62:C:C6	2.54	0.43
24:BC:8:PRO:CB	24:BC:14:ARG:HB2	2.48	0.43
25:BD:105:LYS:O	25:BD:177:VAL:HG12	2.18	0.43
26:BE:16:GLU:O	26:BE:20:GLY:N	2.52	0.43
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	2.01	0.43
28:BG:5:ALA:HB2	28:BG:66:GLY:CA	2.48	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
33:BL:87:GLY:O	33:BL:89:VAL:HG12	2.18	0.43
35:BN:2:ARG:NH2	35:BN:5:LYS:O	2.52	0.43
35:BN:116:VAL:O	35:BN:116:VAL:HG13	2.18	0.43
36:BO:27:VAL:O	36:BO:27:VAL:CG2	2.65	0.43
38:BQ:41:LYS:HA	38:BQ:44:GLN:CG	2.45	0.43
38:BQ:68:ALA:HB2	38:BQ:99:ALA:HB1	2.01	0.43
38:BQ:91:ASP:O	38:BQ:95:LEU:HD12	2.18	0.43
39:BR:15:SER:O	39:BR:18:GLN:HB2	2.18	0.43
46:BY:35:GLY:O	46:BY:36:GLN:O	2.37	0.43
53:B5:55:SER:OG	53:B5:203:GLU:CB	2.67	0.43
1:CA:102:G:H2'	1:CA:103:U:H6	1.84	0.43
1:CA:356:A:C2'	1:CA:357:G:H5'	2.47	0.43
1:CA:875:U:C4	1:CA:876:C:C5	3.06	0.43
1:CA:878:A:N6	1:CA:879:C:N4	2.67	0.43
1:CA:1072:G:OP1	5:CE:62:LYS:NZ	2.52	0.43
1:CA:1381:U:C5	1:CA:1382:C:H5	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1484:C:H2'	1:CA:1485:U:O4'	2.18	0.43
1:CA:1534:A:H4'	1:CA:1535:C:H2'	2.01	0.43
2:CB:50:PHE:HD1	2:CB:54:LEU:HD23	1.84	0.43
2:CB:208:ARG:O	2:CB:211:THR:N	2.52	0.43
4:CD:22:LYS:O	4:CD:23:SER:C	2.61	0.43
5:CE:105:ILE:H	5:CE:122:ASN:HA	1.84	0.43
7:CG:114:LYS:HB2	7:CG:118:LEU:HD12	2.00	0.43
10:CJ:18:ILE:CG2	10:CJ:19:ASP:N	2.82	0.43
11:CK:122:ARG:NH1	21:CU:36:GLU:CG	2.81	0.43
14:CN:80:SER:O	14:CN:81:ARG:C	2.61	0.43
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.47	0.43
20:CT:24:ARG:O	20:CT:27:MET:HG3	2.17	0.43
22:DA:136:G:H1	22:DA:143:C:H42	1.67	0.43
22:DA:269:C:N4	22:DA:270:A:N7	2.67	0.43
22:DA:503:A:C2	22:DA:506:G:C4	3.07	0.43
22:DA:717:C:N4	22:DA:718:A:N3	2.67	0.43
22:DA:738:G:C6	22:DA:739:A:C6	3.07	0.43
22:DA:1047:G:N2	22:DA:1110:G:O2'	2.52	0.43
22:DA:1290:C:C2	22:DA:1291:C:C6	3.06	0.43
22:DA:1350:C:N3	22:DA:1382:G:C2	2.86	0.43
22:DA:1364:G:C8	45:DX:2:SER:HA	2.54	0.43
22:DA:1801:A:C5	22:DA:2203:U:C5	3.06	0.43
22:DA:1802:A:C2	22:DA:1803:A:C2	3.06	0.43
22:DA:2286:G:H5"	22:DA:2287:A:OP1	2.18	0.43
22:DA:2345:G:C4	22:DA:2347:C:C5	3.06	0.43
22:DA:2550:G:C5	22:DA:2551:C:C5	3.06	0.43
23:DB:27:C:OP1	36:DO:34:HIS:NE2	2.51	0.43
33:DL:90:VAL:N	33:DL:121:THR:O	2.51	0.43
36:DO:38:GLN:HA	36:DO:50:ALA:HA	2.01	0.43
36:DO:71:ALA:O	36:DO:75:GLY:N	2.51	0.43
39:DR:80:ARG:C	39:DR:82:HIS:H	2.27	0.43
42:DU:61:LYS:HD2	42:DU:61:LYS:HA	1.87	0.43
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.19	0.43
1:AA:628:G:H2'	1:AA:629:A:O4'	2.19	0.43
1:AA:692:U:O4	11:AK:54:GLY:HA2	2.19	0.43
1:AA:1130:A:H8	1:AA:1130:A:O5'	2.01	0.43
1:AA:1372:U:C5	1:AA:1373:G:N7	2.87	0.43
2:AB:210:VAL:O	2:AB:211:THR:C	2.62	0.43
3:AC:58:GLU:HG3	3:AC:65:ARG:HB3	2.01	0.43
3:AC:65:ARG:O	3:AC:100:GLN:O	2.36	0.43
6:AF:49:TYR:C	6:AF:49:TYR:CD2	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:90:MET:O	6:AF:91:ARG:O	2.36	0.43
6:AF:92:THR:HG22	6:AF:93:LYS:H	1.78	0.43
7:AG:12:ILE:HD11	7:AG:25:LYS:HG3	2.01	0.43
7:AG:27:VAL:O	7:AG:31:MET:N	2.51	0.43
7:AG:91:VAL:HG23	7:AG:95:ARG:HD3	2.01	0.43
7:AG:138:ARG:O	7:AG:142:HIS:HB2	2.19	0.43
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.34	0.43
12:AL:122:PRO:O	12:AL:124:ALA:N	2.52	0.43
13:AM:22:ILE:HB	13:AM:25:VAL:HG22	2.01	0.43
17:AQ:4:LYS:HG3	17:AQ:7:THR:HG23	2.01	0.43
18:AR:27:ALA:O	18:AR:30:LYS:HG3	2.19	0.43
19:AS:52:HIS:CD2	19:AS:54:GLY:H	2.37	0.43
22:BA:78:U:H2'	22:BA:79:C:H6	1.81	0.43
22:BA:1054:A:C6	22:BA:1055:G:C5	3.07	0.43
22:BA:1087:G:N2	22:BA:1090:A:N7	2.67	0.43
22:BA:1182:G:C6	22:BA:1183:U:C2	3.07	0.43
22:BA:1394:U:H2'	22:BA:1395:A:O4'	2.18	0.43
22:BA:1419:A:C4	22:BA:1421:G:C8	3.06	0.43
22:BA:1929:G:H5"	22:BA:1929:G:N3	2.33	0.43
22:BA:1967:C:H2'	22:BA:1968:G:H5'	2.01	0.43
24:BC:160:THR:H	24:BC:195:VAL:HG13	1.84	0.43
24:BC:269:ARG:HH11	24:BC:269:ARG:HG2	1.84	0.43
26:BE:12:LEU:HD23	26:BE:12:LEU:C	2.43	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
30:BI:101:ILE:HG22	30:BI:105:GLN:HB2	2.00	0.43
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	2.16	0.43
39:BR:69:GLY:C	39:BR:70:GLU:O	2.58	0.43
42:BU:98:SER:OG	42:BU:98:SER:O	2.37	0.43
47:BZ:33:GLY:O	47:BZ:34:HIS:C	2.61	0.43
1:CA:9:G:OP2	5:CE:126:LYS:CE	2.67	0.43
1:CA:158:G:C2'	1:CA:159:G:H5"	2.48	0.43
1:CA:229:U:H2'	1:CA:230:G:O4'	2.19	0.43
1:CA:753:A:H4'	1:CA:754:C:O5'	2.18	0.43
1:CA:764:C:C4	1:CA:765:G:C5	3.06	0.43
1:CA:867:G:H2'	1:CA:868:C:H6	1.83	0.43
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.18	0.43
1:CA:1144:G:N1	1:CA:1145:A:C2	2.87	0.43
1:CA:1191:A:H5"	3:CC:4:LYS:HE3	2.01	0.43
1:CA:1399:C:H4'	1:CA:1400:C:O5'	2.19	0.43
2:CB:69:PHE:O	2:CB:91:PHE:HA	2.19	0.43
2:CB:125:THR:O	2:CB:126:PHE:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:40:GLN:OE1	4:CD:41:HIS:NE2	2.51	0.43
6:CF:17:GLN:O	6:CF:21:MET:HG3	2.19	0.43
7:CG:100:ALA:O	7:CG:104:ILE:HG13	2.18	0.43
8:CH:29:SER:HB2	8:CH:59:LEU:HB2	2.00	0.43
9:CI:99:ARG:HA	9:CI:104:VAL:HG21	2.01	0.43
11:CK:77:TYR:O	11:CK:78:GLY:C	2.62	0.43
22:DA:60:G:C5	22:DA:62:U:C4	3.07	0.43
22:DA:396:G:O3'	45:DX:30:LEU:O	2.35	0.43
22:DA:684:G:C2	22:DA:794:A:C2	3.07	0.43
22:DA:740:C:N4	22:DA:758:C:O2	2.52	0.43
22:DA:792:A:C3'	22:DA:793:A:H5'	2.47	0.43
22:DA:815:C:H2'	22:DA:816:C:C6	2.53	0.43
22:DA:1034:G:C6	22:DA:1035:U:C4	3.06	0.43
22:DA:1153:C:OP1	38:DQ:92:ARG:NH1	2.52	0.43
22:DA:1338:G:H4'	41:DT:18:GLU:OE1	2.18	0.43
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.59	0.43
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.99	0.43
22:DA:1659:G:C6	22:DA:1660:G:C5	3.07	0.43
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.67	0.43
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.49	0.43
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.19	0.43
22:DA:2015:A:C6	48:D0:3:VAL:HG23	2.54	0.43
22:DA:2147:A:H2'	22:DA:2148:G:O4'	2.19	0.43
22:DA:2262:U:C2	22:DA:2279:G:N2	2.86	0.43
22:DA:2298:A:N3	22:DA:2321:U:C5	2.87	0.43
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.53	0.43
22:DA:2591:C:C2	22:DA:2592:G:C8	3.07	0.43
22:DA:2638:G:O2'	22:DA:2775:G:N2	2.38	0.43
22:DA:2772:C:H2'	22:DA:2773:C:H6	1.84	0.43
24:DC:36:LYS:O	24:DC:36:LYS:CG	2.66	0.43
24:DC:225:MET:O	24:DC:233:GLY:HA2	2.19	0.43
25:DD:13:ARG:HD2	25:DD:15:PHE:CZ	2.54	0.43
30:DI:8:TYR:HD2	30:DI:58:VAL:HG13	1.84	0.43
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	2.00	0.43
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.53	0.43
1:AA:47:C:O4'	1:AA:365:U:C5	2.72	0.43
1:AA:114:U:H2'	1:AA:115:G:C8	2.53	0.43
1:AA:126:G:O2'	1:AA:635:A:H4'	2.18	0.43
1:AA:173:U:C2	1:AA:197:A:C6	3.07	0.43
1:AA:829:G:C6	1:AA:858:G:C2	3.07	0.43
1:AA:858:G:O2'	1:AA:859:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:113:ALA:O	3:AC:116:VAL:HB	2.19	0.43
9:AI:35:LEU:HD11	9:AI:48:VAL:HG21	1.99	0.43
10:AJ:25:ILE:HG22	10:AJ:26:VAL:N	2.33	0.43
10:AJ:65:TYR:HB3	14:AN:96:LEU:CD1	2.49	0.43
11:AK:61:PHE:O	11:AK:64:GLN:HB3	2.19	0.43
12:AL:95:TYR:CD2	12:AL:95:TYR:N	2.86	0.43
13:AM:77:ILE:HD13	13:AM:91:HIS:CD2	2.54	0.43
15:AO:26:GLU:HG3	15:AO:81:LEU:HD22	2.01	0.43
15:AO:69:TYR:CZ	15:AO:73:LYS:HG3	2.54	0.43
17:AQ:45:HIS:ND1	17:AQ:70:THR:CG2	2.82	0.43
22:BA:28:A:C5	22:BA:29:U:C5	3.07	0.43
22:BA:517:C:OP1	48:B0:13:ARG:NH2	2.52	0.43
22:BA:1011:G:C5	22:BA:1013:C:C4	3.07	0.43
22:BA:1331:G:C5	22:BA:1333:G:N7	2.87	0.43
22:BA:1670:C:C5	22:BA:1671:U:C4	3.07	0.43
22:BA:1767:G:C2	22:BA:1768:C:C5	3.07	0.43
22:BA:1866:A:C2	22:BA:1876:A:C4	3.06	0.43
22:BA:2510:C:H2'	22:BA:2511:U:H5'	2.01	0.43
22:BA:2690:U:C4	22:BA:2873:A:N1	2.87	0.43
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.54	0.43
23:BB:62:C:H2'	23:BB:63:C:H6	1.82	0.43
24:BC:133:ARG:HG3	24:BC:134:ASN:OD1	2.18	0.43
24:BC:189:ARG:O	24:BC:190:ALA:CB	2.65	0.43
33:BL:28:GLY:O	39:BR:82:HIS:HE1	2.01	0.43
38:BQ:41:LYS:HB2	38:BQ:41:LYS:HE3	1.86	0.43
41:BT:67:VAL:CG1	41:BT:68:LYS:N	2.82	0.43
44:BW:56:ASP:O	44:BW:57:HIS:HB2	2.19	0.43
46:BY:6:LEU:O	46:BY:60:LYS:NZ	2.49	0.43
47:BZ:3:LYS:H	47:BZ:3:LYS:CE	2.31	0.43
48:B0:34:SER:OG	48:B0:36:GLU:CG	2.67	0.43
1:CA:87:C:H2'	1:CA:88:U:C6	2.54	0.43
1:CA:489:C:O2'	1:CA:490:C:H5'	2.19	0.43
1:CA:869:G:H4'	1:CA:872:A:C8	2.54	0.43
1:CA:940:C:H2'	1:CA:941:G:C8	2.54	0.43
1:CA:976:G:N2	1:CA:1363:A:N3	2.67	0.43
1:CA:1074:G:H4'	2:CB:103:ASN:HB2	1.99	0.43
1:CA:1308:U:O3'	13:CM:91:HIS:HE1	2.01	0.43
4:CD:173:VAL:HG13	4:CD:174:ASP:H	1.82	0.43
4:CD:174:ASP:O	4:CD:175:ALA:HB3	2.18	0.43
5:CE:122:ASN:O	5:CE:123:VAL:C	2.61	0.43
9:CI:67:VAL:HG13	9:CI:67:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:87:LEU:C	9:CI:89:GLU:N	2.77	0.43
11:CK:15:GLN:O	11:CK:15:GLN:HG3	2.18	0.43
14:CN:53:ARG:O	14:CN:59:ARG:HD2	2.19	0.43
15:CO:67:LEU:O	15:CO:68:ASP:C	2.62	0.43
17:CQ:29:VAL:O	17:CQ:29:VAL:HG22	2.19	0.43
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD13	2.01	0.43
22:DA:53:A:N7	22:DA:54:G:N7	2.67	0.43
22:DA:200:U:O4	22:DA:248:G:C2	2.72	0.43
22:DA:321:U:C1'	26:DE:159:LEU:HD23	2.49	0.43
22:DA:399:U:C4	22:DA:400:G:C6	3.07	0.43
22:DA:593:U:C2	22:DA:594:U:C5	3.06	0.43
22:DA:673:C:OP1	26:DE:76:PRO:CG	2.67	0.43
22:DA:985:C:C2	22:DA:986:C:C5	3.07	0.43
22:DA:1659:G:C6	22:DA:1660:G:N7	2.87	0.43
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.54	0.43
22:DA:2104:C:C2	22:DA:2186:G:N2	2.87	0.43
22:DA:2799:A:O2'	22:DA:2800:A:H5"	2.19	0.43
23:DB:15:A:H1'	23:DB:109:A:N7	2.33	0.43
24:DC:124:ILE:HD13	24:DC:136:PRO:HD3	2.00	0.43
26:DE:83:VAL:HG11	26:DE:86:ALA:HA	2.00	0.43
26:DE:125:SER:OG	26:DE:126:VAL:N	2.48	0.43
27:DF:40:VAL:O	27:DF:42:GLU:N	2.51	0.43
29:DH:31:VAL:O	29:DH:32:PRO:C	2.61	0.43
30:DI:8:TYR:HB3	30:DI:59:ILE:O	2.18	0.43
30:DI:121:ASP:CG	30:DI:123:GLU:HB3	2.44	0.43
31:DJ:4:PHE:HB3	38:DQ:64:ARG:NH1	2.34	0.43
31:DJ:114:LEU:O	31:DJ:118:MET:HG2	2.19	0.43
39:DR:41:ILE:O	39:DR:47:VAL:N	2.52	0.43
41:DT:23:ALA:O	41:DT:27:SER:HB3	2.19	0.43
43:DV:20:LEU:O	43:DV:25:LYS:HB2	2.18	0.43
45:DX:21:ALA:O	45:DX:22:LEU:HB2	2.17	0.43
46:DY:28:LEU:CD2	46:DY:37:LEU:HD11	2.49	0.43
52:D4:1:MET:HE2	52:D4:34:LYS:HE3	2.01	0.43
1:AA:208:U:H5	1:AA:210:C:C4	2.37	0.43
1:AA:252:U:O4	1:AA:253:A:N6	2.52	0.43
1:AA:768:A:N3	1:AA:1512:U:O2'	2.49	0.43
1:AA:1082:A:H2'	1:AA:1083:U:O4'	2.18	0.43
1:AA:1202:U:H4'	14:AN:69:ARG:HG3	1.99	0.43
1:AA:1449:C:H2'	1:AA:1450:U:O4'	2.19	0.43
3:AC:40:ARG:CZ	3:AC:57:ILE:HD12	2.49	0.43
4:AD:4:TYR:O	4:AD:5:LEU:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:58:LYS:HG2	4:AD:203:LEU:CD2	2.49	0.43
5:AE:45:ARG:CG	5:AE:73:ASN:HB3	2.49	0.43
6:AF:3:HIS:O	6:AF:4:TYR:CD1	2.72	0.43
7:AG:74:GLU:O	7:AG:89:VAL:HG13	2.19	0.43
9:AI:26:GLY:CA	9:AI:59:GLU:HA	2.49	0.43
9:AI:114:LYS:NZ	9:AI:118:LEU:O	2.52	0.43
14:AN:47:LYS:HD3	19:AS:13:LEU:CD2	2.48	0.43
15:AO:87:LEU:N	15:AO:87:LEU:CD2	2.82	0.43
16:AP:64:GLY:O	16:AP:65:ALA:O	2.37	0.43
18:AR:20:GLU:HA	18:AR:55:LEU:CD2	2.48	0.43
20:AT:69:LYS:HB2	20:AT:69:LYS:NZ	2.33	0.43
22:BA:372:G:C4	45:BX:61:LYS:HE3	2.54	0.43
22:BA:463:G:N1	22:BA:467:G:C6	2.87	0.43
22:BA:582:A:C6	22:BA:1259:G:C6	3.07	0.43
22:BA:616:A:H2'	22:BA:617:G:O4'	2.19	0.43
22:BA:920:A:C6	22:BA:921:C:C4	3.07	0.43
22:BA:947:A:H2'	22:BA:948:C:H6	1.82	0.43
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.49	0.43
22:BA:1148:U:C2'	22:BA:1149:G:H5'	2.49	0.43
22:BA:1203:U:C4	22:BA:1204:A:C6	3.06	0.43
22:BA:1301:A:C2	22:BA:1303:G:C6	3.07	0.43
22:BA:1355:G:C2'	22:BA:1356:G:H5'	2.48	0.43
22:BA:1575:C:C2'	22:BA:1576:U:O5'	2.66	0.43
22:BA:2093:G:O2'	29:BH:25:TYR:HB2	2.19	0.43
22:BA:2093:G:O2'	29:BH:25:TYR:CB	2.67	0.43
22:BA:2387:U:H5"	22:BA:2388:A:OP2	2.18	0.43
22:BA:2455:G:C6	22:BA:2456:C:N4	2.87	0.43
22:BA:2577:A:C2'	22:BA:2578:G:OP1	2.67	0.43
27:BF:63:GLN:OE1	27:BF:95:ARG:HD3	2.18	0.43
27:BF:112:ARG:O	27:BF:113:ASP:HB2	2.18	0.43
27:BF:123:ASP:CG	27:BF:127:ASN:HB2	2.44	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
31:BJ:31:GLU:OE2	31:BJ:35:ARG:NH1	2.51	0.43
31:BJ:37:ARG:HG3	31:BJ:118:MET:SD	2.58	0.43
31:BJ:97:PRO:O	31:BJ:98:GLU:C	2.61	0.43
33:BL:37:GLY:O	33:BL:41:ARG:HG2	2.19	0.43
33:BL:129:LYS:O	33:BL:130:GLY:C	2.59	0.43
34:BM:89:VAL:HG12	34:BM:90:GLU:N	2.34	0.43
36:BO:53:THR:HG23	36:BO:74:VAL:HG21	2.01	0.43
37:BP:14:LYS:H	37:BP:77:HIS:CE1	2.37	0.43
38:BQ:21:ALA:HB1	38:BQ:24:TYR:HD1	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:82:TYR:CD2	43:BV:82:TYR:N	2.87	0.43
47:BZ:10:THR:HG22	47:BZ:11:ARG:HG3	2.01	0.43
1:CA:78:A:C6	1:CA:79:G:C6	3.06	0.43
1:CA:282:A:H3'	1:CA:283:U:H6	1.84	0.43
1:CA:409:U:H2'	1:CA:410:G:O4'	2.18	0.43
1:CA:585:G:OP1	17:CQ:39:LYS:HE3	2.18	0.43
1:CA:718:A:N7	1:CA:719:C:C5	2.87	0.43
1:CA:733:G:H4'	1:CA:734:G:OP1	2.19	0.43
1:CA:793:U:O2	1:CA:1516:G:H4'	2.19	0.43
1:CA:1140:C:O2'	1:CA:1141:C:P	2.76	0.43
1:CA:1420:U:H2'	1:CA:1421:G:O4'	2.19	0.43
2:CB:72:THR:O	2:CB:73:LYS:C	2.62	0.43
3:CC:167:TRP:C	3:CC:167:TRP:CE3	2.96	0.43
5:CE:133:PRO:O	5:CE:137:VAL:HG13	2.18	0.43
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	2.00	0.43
8:CH:126:ILE:N	8:CH:126:ILE:HD12	2.34	0.43
10:CJ:36:VAL:HG12	10:CJ:38:GLY:H	1.84	0.43
10:CJ:48:ARG:CG	10:CJ:48:ARG:NH1	2.80	0.43
12:CL:42:PRO:HA	12:CL:89:ASP:O	2.19	0.43
12:CL:90:LEU:HB3	12:CL:93:VAL:CG2	2.49	0.43
16:CP:21:VAL:HG21	16:CP:60:TRP:CD1	2.54	0.43
16:CP:52:LEU:HD21	16:CP:57:ILE:CD1	2.48	0.43
22:DA:120:U:O4	22:DA:177:G:C8	2.72	0.43
22:DA:182:A:H2'	22:DA:183:C:C6	2.54	0.43
22:DA:188:G:C2	22:DA:209:C:N3	2.87	0.43
22:DA:327:G:H21	42:DU:68:SER:HB2	1.84	0.43
22:DA:571:U:C4	22:DA:2030:A:N1	2.87	0.43
22:DA:740:C:C5	22:DA:1981:A:C2	3.07	0.43
22:DA:1113:U:H2'	22:DA:1114:C:C6	2.54	0.43
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.47	0.43
22:DA:1452:G:C6	22:DA:2702:G:C2	3.07	0.43
22:DA:1566:A:C2	24:DC:213:TRP:CD2	3.07	0.43
22:DA:1705:A:C5	22:DA:1706:C:C4	3.07	0.43
22:DA:2597:G:C2	22:DA:2598:A:C2	3.07	0.43
22:DA:2662:A:H2'	22:DA:2663:G:O4'	2.19	0.43
22:DA:2663:G:H2'	22:DA:2664:G:O4'	2.18	0.43
22:DA:2796:U:O4	22:DA:2798:U:C4	2.72	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
35:DN:12:ARG:O	35:DN:17:ARG:NH2	2.47	0.43
35:DN:28:LEU:O	35:DN:32:GLU:HA	2.19	0.43
37:DP:43:PHE:CE2	37:DP:72:ARG:HD3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:106:LYS:HA	37:DP:109:ARG:HD3	2.00	0.43
38:DQ:106:PHE:HA	38:DQ:109:LEU:HD12	2.01	0.43
43:DV:38:LEU:HB3	43:DV:40:ILE:HD11	2.01	0.43
48:D0:17:ARG:HA	48:D0:20:ASP:OD1	2.19	0.43
1:AA:104:G:C2	1:AA:105:G:C8	3.07	0.42
1:AA:451:A:H2	1:AA:480:U:C4	2.37	0.42
1:AA:452:A:N7	1:AA:453:G:N9	2.66	0.42
1:AA:751:U:C5	1:AA:752:G:C5	3.07	0.42
1:AA:844:G:N3	1:AA:845:A:N7	2.67	0.42
1:AA:972:C:H4'	10:AJ:59:LYS:CE	2.49	0.42
1:AA:1068:G:H2'	1:AA:1069:C:H5'	2.01	0.42
1:AA:1371:G:P	9:AI:13:LYS:HD3	2.59	0.42
1:AA:1377:A:C4	7:AG:7:ILE:HD11	2.53	0.42
1:AA:1410:A:C2	1:AA:1411:C:C2	3.07	0.42
1:AA:1503:A:H8	1:AA:1531:A:O2'	1.99	0.42
4:AD:120:HIS:O	4:AD:121:LYS:C	2.61	0.42
6:AF:12:PRO:O	6:AF:15:SER:N	2.51	0.42
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.19	0.42
11:AK:55:SER:O	11:AK:58:SER:N	2.52	0.42
14:AN:21:PHE:C	14:AN:23:LYS:H	2.27	0.42
21:AU:34:ARG:O	21:AU:36:GLU:N	2.52	0.42
22:BA:46:G:N2	22:BA:47:C:C2	2.86	0.42
22:BA:152:A:H2'	22:BA:153:U:C6	2.54	0.42
22:BA:262:A:C2	22:BA:430:A:N3	2.87	0.42
22:BA:661:A:H2'	22:BA:662:G:O4'	2.19	0.42
22:BA:819:A:OP2	22:BA:1187:G:N1	2.52	0.42
22:BA:839:U:H1'	22:BA:1191:G:H1'	2.00	0.42
22:BA:1054:A:C5	22:BA:1055:G:N7	2.86	0.42
22:BA:1301:A:C5	22:BA:1303:G:C8	3.06	0.42
22:BA:1838:C:C4	22:BA:1899:A:N3	2.87	0.42
22:BA:1946:U:C2	22:BA:1947:C:C6	3.07	0.42
22:BA:2217:G:O2'	22:BA:2218:G:H5'	2.19	0.42
22:BA:2345:G:H4'	22:BA:2346:A:O5'	2.19	0.42
22:BA:2637:U:OP1	25:BD:83:ARG:NH2	2.50	0.42
24:BC:44:ASN:OD1	24:BC:44:ASN:C	2.60	0.42
24:BC:168:ASP:CG	24:BC:169:GLY:H	2.27	0.42
24:BC:260:ASN:O	24:BC:261:LYS:HB2	2.19	0.42
25:BD:142:VAL:CB	25:BD:143:PRO:CD	2.96	0.42
27:BF:75:ALA:O	27:BF:76:GLY:C	2.62	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:23:ARG:O	46:BY:27:ASN:HB2	2.19	0.42
53:B5:40:GLU:HA	53:B5:181:PHE:HA	2.01	0.42
1:CA:17:U:O2	1:CA:18:C:C6	2.72	0.42
1:CA:81:A:H61	1:CA:87:C:N4	2.17	0.42
1:CA:89:U:H2'	1:CA:90:C:C6	2.54	0.42
1:CA:410:G:H5"	1:CA:411:A:OP1	2.19	0.42
1:CA:504:C:H1'	1:CA:510:A:C4	2.53	0.42
1:CA:1182:G:H5'	1:CA:1184:G:H5"	2.00	0.42
1:CA:1184:G:C2	1:CA:1185:G:C8	3.06	0.42
1:CA:1491:G:C5	1:CA:1492:A:C5	3.07	0.42
3:CC:100:GLN:O	3:CC:101:ILE:HB	2.18	0.42
5:CE:156:LYS:HG2	8:CH:71:VAL:HG22	2.00	0.42
6:CF:13:ASP:O	6:CF:15:SER:N	2.48	0.42
6:CF:22:ILE:O	6:CF:22:ILE:HG22	2.18	0.42
7:CG:31:MET:O	7:CG:31:MET:HG2	2.19	0.42
7:CG:146:GLU:OE1	7:CG:149:LYS:HE2	2.19	0.42
10:CJ:36:VAL:C	10:CJ:38:GLY:H	2.27	0.42
20:CT:83:ILE:O	20:CT:87:ALA:HB3	2.19	0.42
21:CU:6:VAL:HG11	21:CU:17:ARG:HG3	2.01	0.42
21:CU:53:VAL:HG22	21:CU:54:LYS:H	1.83	0.42
22:DA:1:G:C2	22:DA:2:G:C4	3.07	0.42
22:DA:56:A:C2	22:DA:57:C:O2	2.72	0.42
22:DA:186:G:C2	22:DA:211:C:O2	2.72	0.42
22:DA:579:G:C2	22:DA:1262:A:C5	3.07	0.42
22:DA:798:G:H2'	22:DA:799:G:H8	1.83	0.42
22:DA:858:G:C4	22:DA:2268:A:C2	3.07	0.42
22:DA:1009:A:C6	22:DA:1010:A:N1	2.87	0.42
22:DA:1081:U:O3'	30:DI:124:ALA:HB1	2.19	0.42
22:DA:1351:C:O2'	22:DA:1571:A:N3	2.43	0.42
22:DA:1494:A:H2'	22:DA:1495:A:O4'	2.19	0.42
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.53	0.42
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.54	0.42
22:DA:1819:A:H4'	22:DA:1820:U:H5"	2.01	0.42
22:DA:1858:A:C2	22:DA:1859:U:H1'	2.54	0.42
22:DA:1936:A:C8	22:DA:1945:G:C6	3.07	0.42
22:DA:1984:G:C5	22:DA:1985:C:C5	3.07	0.42
22:DA:1997:C:P	25:DD:129:THR:OG1	2.77	0.42
22:DA:2378:A:N7	22:DA:2379:G:H1'	2.34	0.42
22:DA:2478:A:C8	22:DA:2529:G:N7	2.87	0.42
22:DA:2552:U:O2	22:DA:2554:U:H5'	2.18	0.42
24:DC:159:GLY:HA3	24:DC:198:ALA:HA	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:17:MET:O	27:DF:21:ASN:HA	2.19	0.42
30:DI:76:ALA:HA	30:DI:79:LEU:HB2	2.01	0.42
30:DI:103:ARG:O	30:DI:107:GLN:HB2	2.19	0.42
32:DK:105:ARG:CZ	37:DP:34:GLU:HG3	2.49	0.42
33:DL:77:ILE:CG2	33:DL:81:ASP:OD2	2.66	0.42
34:DM:34:LYS:HD3	43:DV:82:TYR:HA	2.01	0.42
34:DM:73:ILE:HG13	34:DM:91:TYR:CE2	2.54	0.42
51:D3:8:ARG:O	51:D3:12:LYS:HG3	2.19	0.42
52:D4:16:ILE:HG22	52:D4:17:VAL:N	2.34	0.42
1:AA:75:G:N3	1:AA:75:G:H2'	2.34	0.42
1:AA:212:G:C2	1:AA:213:G:C4	3.07	0.42
1:AA:220:G:C2'	1:AA:221:C:H5'	2.49	0.42
1:AA:411:A:C5	1:AA:429:U:C5	3.07	0.42
1:AA:481:G:O2'	1:AA:483:C:N4	2.52	0.42
1:AA:516:U:C4	1:AA:517:G:C6	3.08	0.42
1:AA:540:G:C6	1:AA:541:G:C5	3.07	0.42
1:AA:575:G:C5	1:AA:821:G:C8	3.07	0.42
1:AA:810:C:O2	1:AA:810:C:C2'	2.64	0.42
1:AA:851:G:H2'	1:AA:852:G:H5'	2.01	0.42
1:AA:991:U:C4	1:AA:1212:U:H1'	2.54	0.42
1:AA:1060:U:H5"	10:AJ:53:ILE:HG23	2.02	0.42
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.49	0.42
1:AA:1503:A:C5	1:AA:1531:A:N3	2.87	0.42
5:AE:45:ARG:HA	5:AE:73:ASN:HB3	2.00	0.42
5:AE:111:MET:HE2	5:AE:125:ALA:CB	2.48	0.42
7:AG:71:PRO:HD2	7:AG:96:ARG:HG2	2.01	0.42
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.33	0.42
11:AK:91:PRO:C	11:AK:93:ARG:H	2.27	0.42
13:AM:45:ILE:HG13	13:AM:48:LEU:HD13	2.01	0.42
15:AO:32:LEU:HA	15:AO:32:LEU:HD23	1.82	0.42
15:AO:87:LEU:O	15:AO:88:ARG:HB3	2.18	0.42
22:BA:518:G:H4'	40:BS:18:ARG:CZ	2.48	0.42
22:BA:559:G:H2'	22:BA:560:C:O4'	2.19	0.42
22:BA:716:A:C6	22:BA:717:C:C5	3.08	0.42
22:BA:846:U:O2'	22:BA:847:U:OP2	2.37	0.42
22:BA:1046:A:H3'	22:BA:1047:G:C5'	2.48	0.42
22:BA:1902:C:N4	22:BA:1903:G:C4	2.87	0.42
22:BA:2281:A:N1	22:BA:2282:G:C6	2.86	0.42
22:BA:2297:A:N1	22:BA:2321:U:H5	2.17	0.42
22:BA:2308:G:C5	27:BF:77:PHE:CZ	3.07	0.42
22:BA:2345:G:C4	22:BA:2381:A:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2352:A:C2'	22:BA:2353:G:H5'	2.49	0.42
22:BA:2728:U:O2	22:BA:2729:G:C8	2.72	0.42
24:BC:71:LYS:CB	24:BC:96:TYR:CE2	3.02	0.42
25:BD:136:ASN:ND2	25:BD:136:ASN:C	2.76	0.42
26:BE:41:GLN:NE2	26:BE:43:THR:HG21	2.34	0.42
30:BI:96:ASP:OD1	30:BI:97:LYS:N	2.52	0.42
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.52	0.42
34:BM:18:ARG:HH21	34:BM:18:ARG:CG	2.31	0.42
35:BN:28:LEU:O	35:BN:32:GLU:N	2.52	0.42
35:BN:60:VAL:O	35:BN:61:ALA:C	2.62	0.42
38:BQ:45:TYR:O	38:BQ:46:ALA:C	2.62	0.42
38:BQ:82:GLY:O	38:BQ:83:LEU:C	2.63	0.42
49:B1:17:THR:HG22	49:B1:42:VAL:HG11	2.00	0.42
53:B5:59:VAL:HG12	53:B5:63:VAL:HG21	2.01	0.42
1:CA:327:A:C2	1:CA:329:A:N3	2.87	0.42
1:CA:620:C:C6	4:CD:132:ILE:HD13	2.54	0.42
1:CA:671:G:N2	1:CA:736:C:C2	2.87	0.42
1:CA:707:U:H2'	1:CA:708:C:C6	2.54	0.42
1:CA:822:U:N3	1:CA:823:C:C5	2.87	0.42
1:CA:996:A:H2'	1:CA:997:U:C5	2.53	0.42
2:CB:54:LEU:HA	2:CB:57:LEU:CB	2.42	0.42
2:CB:102:THR:O	2:CB:103:ASN:CB	2.67	0.42
2:CB:192:ASP:O	2:CB:193:PRO:O	2.36	0.42
5:CE:42:GLY:O	5:CE:119:GLY:HA3	2.19	0.42
8:CH:11:LEU:HD11	8:CH:127:CYS:CB	2.50	0.42
8:CH:126:ILE:HG22	8:CH:127:CYS:SG	2.59	0.42
11:CK:85:MET:HA	11:CK:111:THR:O	2.19	0.42
14:CN:69:ARG:HA	14:CN:70:PRO:HD3	1.90	0.42
17:CQ:16:LYS:O	17:CQ:17:MET:SD	2.77	0.42
22:DA:125:A:H3'	50:D2:19:ARG:HG3	2.01	0.42
22:DA:404:A:O4'	22:DA:405:U:OP2	2.37	0.42
22:DA:413:C:N4	57:DA:3564:HOH:O	2.52	0.42
22:DA:567:U:H2'	22:DA:568:U:O5'	2.19	0.42
22:DA:580:U:O2'	22:DA:581:C:H5'	2.19	0.42
22:DA:669:G:H2'	22:DA:670:A:N7	2.34	0.42
22:DA:756:A:C5	22:DA:757:G:C8	3.08	0.42
22:DA:1469:A:C2	22:DA:1470:A:C6	3.07	0.42
22:DA:1604:C:H5"	57:DA:3404:HOH:O	2.19	0.42
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.33	0.42
23:DB:2:G:N3	23:DB:2:G:H2'	2.33	0.42
24:DC:160:THR:H	24:DC:195:VAL:HG13	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:202:LEU:HD12	24:DC:202:LEU:HA	1.80	0.42
25:DD:45:TYR:HB2	25:DD:83:ARG:NH1	2.34	0.42
31:DJ:64:VAL:HG11	31:DJ:89:PHE:CE2	2.55	0.42
35:DN:69:ARG:C	35:DN:70:THR:CG2	2.92	0.42
35:DN:90:ARG:NH1	35:DN:116:VAL:HG11	2.34	0.42
39:DR:54:VAL:O	39:DR:55:ASP:C	2.61	0.42
40:DS:59:GLU:OE1	40:DS:66:ILE:HD11	2.18	0.42
42:DU:22:ARG:CZ	42:DU:73:PHE:CE2	3.02	0.42
42:DU:44:LYS:HG2	42:DU:45:HIS:N	2.34	0.42
42:DU:72:ILE:HD13	42:DU:96:PHE:CE2	2.54	0.42
42:DU:82:ARG:HB2	42:DU:97:LYS:HG3	2.01	0.42
45:DX:32:ASN:ND2	45:DX:53:ALA:HB2	2.34	0.42
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.48	0.42
51:D3:58:VAL:HG12	51:D3:62:LEU:HD12	2.01	0.42
52:D4:33:HIS:CD2	52:D4:33:HIS:N	2.87	0.42
1:AA:71:A:H3'	1:AA:71:A:P	2.59	0.42
1:AA:93:U:C2'	1:AA:94:G:H5"	2.49	0.42
1:AA:230:G:C6	1:AA:231:U:C4	3.06	0.42
1:AA:235:C:H2'	1:AA:236:A:C8	2.54	0.42
1:AA:270:A:C6	1:AA:271:C:N3	2.87	0.42
1:AA:448:A:C5	1:AA:487:A:C2	3.08	0.42
1:AA:522:C:H2'	1:AA:523:A:O4'	2.20	0.42
1:AA:532:A:O4'	1:AA:532:A:OP2	2.38	0.42
1:AA:559:A:H2'	1:AA:559:A:N3	2.33	0.42
1:AA:832:G:C2	1:AA:833:G:C8	3.07	0.42
1:AA:923:A:C6	1:AA:924:C:C4	3.07	0.42
1:AA:1061:G:C6	1:AA:1197:A:C2	3.08	0.42
1:AA:1062:U:C2'	1:AA:1063:C:C6	2.98	0.42
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.84	0.42
2:AB:133:GLU:O	2:AB:136:MET:C	2.62	0.42
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.19	0.42
3:AC:20:SER:OG	3:AC:40:ARG:NH2	2.50	0.42
4:AD:173:VAL:HG22	4:AD:174:ASP:N	2.34	0.42
5:AE:35:ALA:CB	5:AE:60:ILE:HA	2.49	0.42
7:AG:45:SER:HA	7:AG:48:GLU:HB2	2.01	0.42
7:AG:62:PHE:CD1	7:AG:62:PHE:C	2.97	0.42
7:AG:130:ASN:OD1	7:AG:130:ASN:O	2.36	0.42
11:AK:91:PRO:C	11:AK:93:ARG:N	2.77	0.42
12:AL:110:ARG:NH1	12:AL:113:ALA:HB3	2.35	0.42
13:AM:40:ALA:O	13:AM:43:VAL:HG22	2.19	0.42
16:AP:59:HIS:CD2	16:AP:59:HIS:C	2.97	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:81:LYS:CA	17:AQ:81:LYS:HE2	2.48	0.42
22:BA:460:A:H2'	22:BA:461:C:O4'	2.19	0.42
22:BA:585:G:C5'	22:BA:586:A:P	3.05	0.42
22:BA:608:A:C2	22:BA:609:A:N3	2.87	0.42
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.18	0.42
22:BA:1826:G:H2'	22:BA:1827:U:H6	1.85	0.42
22:BA:2094:A:H4'	29:BH:25:TYR:CZ	2.55	0.42
22:BA:2243:U:O2	22:BA:2434:A:C2	2.72	0.42
22:BA:2376:A:H2'	22:BA:2377:A:O4'	2.19	0.42
22:BA:2543:G:H5'	22:BA:2766:A:O3'	2.20	0.42
22:BA:2684:U:H2'	22:BA:2685:G:O5'	2.20	0.42
22:BA:2749:A:OP1	28:BG:2:SER:N	2.52	0.42
22:BA:2761:A:N1	22:BA:2762:C:C2	2.87	0.42
22:BA:2812:G:C2	22:BA:2813:A:H1'	2.55	0.42
25:BD:35:THR:O	25:BD:36:GLN:HB2	2.19	0.42
27:BF:105:THR:HG23	27:BF:106:ILE:HG23	2.00	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.17	0.42
33:BL:110:VAL:O	33:BL:131:ALA:HB2	2.18	0.42
34:BM:72:PRO:HB3	34:BM:92:TRP:CZ3	2.54	0.42
36:BO:35:ILE:HG23	36:BO:35:ILE:O	2.20	0.42
39:BR:25:LEU:H	39:BR:94:THR:HG23	1.84	0.42
53:B5:19:LYS:HG2	53:B5:23:ILE:HD11	2.01	0.42
1:CA:34:C:H2'	1:CA:35:G:C8	2.54	0.42
1:CA:73:C:O2'	1:CA:74:A:P	2.77	0.42
1:CA:264:C:H2'	1:CA:265:G:O4'	2.18	0.42
1:CA:437:U:C4	1:CA:438:U:C5	3.06	0.42
1:CA:442:G:C6	1:CA:443:C:C4	3.07	0.42
1:CA:486:U:C6	1:CA:486:U:OP2	2.73	0.42
1:CA:769:G:C2'	1:CA:770:C:H5'	2.49	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.35	0.42
1:CA:983:A:C2'	1:CA:983:A:N3	2.81	0.42
1:CA:990:C:N3	1:CA:991:U:O4	2.52	0.42
1:CA:1108:G:H5"	3:CC:176:HIS:CD2	2.55	0.42
6:CF:18:VAL:HG12	6:CF:19:PRO:CD	2.50	0.42
8:CH:27:MET:HG2	8:CH:59:LEU:HB3	2.01	0.42
9:CI:115:LYS:HB2	9:CI:118:LEU:HD22	2.01	0.42
11:CK:71:ALA:O	11:CK:75:LYS:HG3	2.18	0.42
11:CK:97:ILE:HD13	11:CK:110:ILE:HD11	2.00	0.42
11:CK:110:ILE:HG22	21:CU:17:ARG:CZ	2.50	0.42
12:CL:25:GLU:C	12:CL:27:CYS:N	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:36:LYS:HG3	17:CQ:37:PHE:N	2.33	0.42
17:CQ:52:GLU:O	17:CQ:53:CYS:C	2.62	0.42
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	2.00	0.42
22:DA:95:A:H4'	46:DY:38:GLN:O	2.19	0.42
22:DA:446:G:H4'	22:DA:447:A:OP1	2.19	0.42
22:DA:958:U:OP2	34:DM:14:LYS:HD2	2.20	0.42
22:DA:1115:G:C2	22:DA:1116:G:C5	3.08	0.42
22:DA:1265:A:C8	22:DA:1267:U:C2	3.06	0.42
22:DA:1464:G:C4	22:DA:1465:G:C8	3.07	0.42
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.18	0.42
22:DA:2047:C:O2'	22:DA:2048:G:H5'	2.19	0.42
22:DA:2147:A:C8	22:DA:2148:G:C8	3.07	0.42
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.49	0.42
22:DA:2266:A:C2	22:DA:2272:U:C5	3.07	0.42
22:DA:2322:A:C5	22:DA:2323:G:C8	3.07	0.42
24:DC:145:GLU:HB2	24:DC:188:CYS:HB3	2.01	0.42
24:DC:161:TYR:C	24:DC:161:TYR:CD1	2.97	0.42
25:DD:99:GLU:HG2	25:DD:182:ALA:HB2	2.01	0.42
28:DG:87:LEU:CD2	28:DG:148:LEU:HB2	2.48	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
30:DI:77:ALA:HA	30:DI:80:LEU:HD12	2.01	0.42
31:DJ:81:ILE:HG12	31:DJ:82:GLY:N	2.34	0.42
35:DN:49:GLU:N	35:DN:50:PRO:HD2	2.35	0.42
37:DP:8:LEU:O	37:DP:8:LEU:HD23	2.19	0.42
37:DP:79:PRO:O	37:DP:80:VAL:C	2.62	0.42
39:DR:3:ALA:HB2	39:DR:101:ILE:CG2	2.49	0.42
39:DR:47:VAL:CG1	39:DR:54:VAL:HG21	2.50	0.42
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.16	0.42
51:D3:45:ARG:N	51:D3:46:PRO:HD2	2.33	0.42
1:AA:4:U:O2	1:AA:4:U:C2'	2.68	0.42
1:AA:749:A:H2'	1:AA:750:C:H6	1.84	0.42
1:AA:1031:C:H4'	1:AA:1032:G:H5"	2.01	0.42
1:AA:1134:G:C2	1:AA:1141:C:N4	2.87	0.42
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.55	0.42
1:AA:1288:A:C2	1:AA:1289:A:C4	3.06	0.42
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.84	0.42
2:AB:164:ILE:HG23	2:AB:165:ASP:H	1.83	0.42
5:AE:77:ASN:HB2	5:AE:82:GLN:CG	2.48	0.42
5:AE:79:GLY:O	5:AE:121:HIS:N	2.48	0.42
5:AE:82:GLN:OE1	5:AE:148:ASN:O	2.37	0.42
9:AI:85:ARG:O	9:AI:88:MET:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:7:ARG:O	10:AJ:100:ILE:O	2.37	0.42
21:AU:14:VAL:CG1	21:AU:16:LEU:HD21	2.50	0.42
22:BA:57:C:H2'	22:BA:58:G:O4'	2.20	0.42
22:BA:120:U:OP2	57:BA:3214:HOH:O	2.21	0.42
22:BA:476:G:O4'	22:BA:505:A:C2	2.73	0.42
22:BA:760:G:H2'	22:BA:761:A:O4'	2.20	0.42
22:BA:975:A:H2'	22:BA:976:G:H5'	2.01	0.42
22:BA:1187:G:H5'	39:BR:83:TYR:CE2	2.54	0.42
22:BA:1934:C:H4'	22:BA:1974:C:O3'	2.20	0.42
22:BA:2021:C:OP1	48:B0:9:THR:CG2	2.66	0.42
22:BA:2242:G:H2'	22:BA:2243:U:O4'	2.18	0.42
22:BA:2732:G:H3'	22:BA:2733:A:C5'	2.49	0.42
22:BA:2733:A:C2	22:BA:2734:A:C4	3.07	0.42
22:BA:2759:G:C5	22:BA:2760:C:C5	3.08	0.42
24:BC:33:LEU:O	24:BC:64:ILE:HG13	2.19	0.42
24:BC:153:GLN:C	24:BC:156:ARG:HD2	2.44	0.42
24:BC:182:ARG:NH2	24:BC:183:LYS:O	2.53	0.42
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	2.01	0.42
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.34	0.42
26:BE:128:ALA:HB1	26:BE:129:PRO:HD2	2.02	0.42
30:BI:54:PRO:O	30:BI:75:PRO:HD2	2.18	0.42
34:BM:16:ARG:HA	34:BM:16:ARG:HD3	1.87	0.42
34:BM:136:MET:CE	43:BV:57:TYR:HD2	2.29	0.42
35:BN:32:GLU:HB3	35:BN:115:LEU:HD12	2.00	0.42
36:BO:24:THR:HG22	36:BO:42:PRO:CD	2.45	0.42
40:BS:84:ARG:HB2	40:BS:96:ILE:CD1	2.49	0.42
41:BT:67:VAL:CG2	41:BT:76:ARG:HG3	2.49	0.42
53:B5:52:PRO:HB2	53:B5:205:ALA:HB3	2.01	0.42
1:CA:108:G:C5'	1:CA:108:G:N3	2.83	0.42
1:CA:151:A:H2'	1:CA:152:A:O4'	2.20	0.42
1:CA:252:U:O4	1:CA:253:A:N6	2.52	0.42
1:CA:282:A:H3'	1:CA:283:U:C6	2.55	0.42
1:CA:408:A:H2'	1:CA:409:U:O4'	2.18	0.42
1:CA:583:A:N7	1:CA:584:G:N7	2.67	0.42
1:CA:676:A:C2	1:CA:677:U:C4	3.08	0.42
1:CA:1072:G:C6	1:CA:1104:G:C2	3.07	0.42
1:CA:1139:G:N2	1:CA:1143:G:C6	2.87	0.42
2:CB:43:LEU:HG	2:CB:44:GLU:HG3	2.01	0.42
3:CC:26:THR:OG1	14:CN:76:LYS:HE3	2.20	0.42
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.34	0.42
14:CN:87:ALA:HA	14:CN:92:GLU:HG3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:58:ALA:O	18:CR:59:ILE:C	2.63	0.42
22:DA:301:G:N2	22:DA:302:C:O2	2.53	0.42
22:DA:305:C:C2	22:DA:313:G:N1	2.87	0.42
22:DA:848:C:H2'	22:DA:849:A:C8	2.54	0.42
22:DA:1050:A:O2'	22:DA:2752:C:H1'	2.18	0.42
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.55	0.42
22:DA:1362:C:H2'	22:DA:1363:C:C5'	2.50	0.42
22:DA:1669:A:C1'	32:DK:5:GLN:HG3	2.50	0.42
22:DA:2045:C:C2'	22:DA:2046:G:O5'	2.68	0.42
22:DA:2204:G:N3	22:DA:2205:A:C8	2.88	0.42
22:DA:2294:G:OP2	36:DO:94:ARG:NH1	2.52	0.42
22:DA:2341:G:C6	22:DA:2342:C:N4	2.88	0.42
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.73	0.42
26:DE:83:VAL:HG12	26:DE:86:ALA:HA	2.02	0.42
26:DE:177:PRO:O	26:DE:181:ILE:HG13	2.20	0.42
28:DG:41:VAL:HG22	28:DG:64:GLN:C	2.44	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
34:DM:136:MET:HE3	43:DV:77:VAL:HG12	2.01	0.42
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	2.02	0.42
37:DP:113:ARG:O	37:DP:114:LEU:C	2.62	0.42
45:DX:54:LYS:O	45:DX:57:ARG:HB2	2.19	0.42
46:DY:46:VAL:O	46:DY:50:VAL:HG23	2.19	0.42
51:D3:47:LYS:HA	51:D3:47:LYS:HD3	1.79	0.42
1:AA:4:U:O2	1:AA:4:U:H2'	2.18	0.42
1:AA:58:C:O2'	1:AA:59:A:H5'	2.19	0.42
1:AA:132:C:H2'	1:AA:133:U:O4'	2.20	0.42
1:AA:144:G:C5	1:AA:179:A:N1	2.87	0.42
1:AA:201:G:H2'	1:AA:202:G:C8	2.55	0.42
1:AA:624:C:C4	1:AA:625:U:C4	3.07	0.42
1:AA:630:A:C2	1:AA:631:C:C2	3.07	0.42
1:AA:683:G:H21	11:AK:40:ASN:HA	1.85	0.42
1:AA:736:C:H2'	1:AA:737:C:H6	1.83	0.42
1:AA:1160:G:O6	1:AA:1181:G:O6	2.37	0.42
1:AA:1216:A:H5"	14:AN:5:SER:HB3	2.01	0.42
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.84	0.42
1:AA:1319:A:C8	1:AA:1323:G:C6	3.07	0.42
1:AA:1350:A:N7	1:AA:1351:U:C5	2.87	0.42
1:AA:1367:C:P	9:AI:114:LYS:NZ	2.93	0.42
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.48	0.42
1:AA:1505:G:H5'	1:AA:1506:U:O5'	2.18	0.42
3:AC:11:ARG:NH1	3:AC:182:ILE:HB	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:6:GLY:O	4:AD:8:LYS:N	2.51	0.42
5:AE:81:LEU:N	5:AE:81:LEU:HD22	2.34	0.42
6:AF:16:GLU:OE2	4:CD:192:SER:HB3	2.19	0.42
6:AF:92:THR:CG2	6:AF:93:LYS:H	2.32	0.42
10:AJ:49:PHE:CD2	14:AN:77:PHE:HE1	2.37	0.42
12:AL:73:ASN:O	12:AL:74:LEU:HD22	2.19	0.42
15:AO:25:THR:O	15:AO:26:GLU:C	2.61	0.42
16:AP:64:GLY:O	16:AP:65:ALA:C	2.62	0.42
17:AQ:4:LYS:HG3	17:AQ:7:THR:HG22	2.01	0.42
17:AQ:5:ILE:C	17:AQ:6:ARG:HG3	2.43	0.42
20:AT:15:GLU:O	20:AT:16:LYS:C	2.63	0.42
20:AT:67:ILE:HG12	20:AT:71:LYS:HG2	2.00	0.42
22:BA:303:G:C4	22:BA:304:U:C6	3.08	0.42
22:BA:451:U:H5'	57:BA:3238:HOH:O	2.18	0.42
22:BA:496:G:C2	22:BA:497:A:H1'	2.55	0.42
22:BA:687:C:H2'	22:BA:688:U:O4'	2.19	0.42
22:BA:729:G:N3	22:BA:729:G:H2'	2.34	0.42
22:BA:929:U:H1'	47:BZ:26:GLY:O	2.20	0.42
22:BA:1000:A:N6	22:BA:1001:A:C6	2.88	0.42
22:BA:1045:C:O5'	22:BA:1046:A:H5'	2.20	0.42
22:BA:1343:G:C4	22:BA:1344:U:C5	3.08	0.42
22:BA:1359:A:C5	22:BA:1373:A:C2	3.08	0.42
22:BA:1444:G:C2	22:BA:1548:A:C2	3.08	0.42
22:BA:1671:U:O2	22:BA:1673:G:C8	2.73	0.42
22:BA:1688:U:H2'	22:BA:1698:A:N6	2.34	0.42
22:BA:1920:C:H6	22:BA:1920:C:O5'	2.02	0.42
22:BA:2291:U:H5"	22:BA:2380:C:O2'	2.19	0.42
22:BA:2318:G:H2'	22:BA:2319:G:O4'	2.20	0.42
22:BA:2511:U:C4	22:BA:2512:C:C4	3.08	0.42
22:BA:2579:C:H2'	22:BA:2580:U:O4'	2.19	0.42
22:BA:2720:U:C2'	22:BA:2721:A:O5'	2.68	0.42
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.35	0.42
23:BB:109:A:C5	23:BB:110:C:C5	3.07	0.42
27:BF:28:VAL:O	27:BF:28:VAL:CG1	2.68	0.42
27:BF:73:SER:HB2	27:BF:81:GLN:H	1.84	0.42
27:BF:77:PHE:C	27:BF:78:LYS:HG3	2.43	0.42
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	2.02	0.42
1:CA:298:A:H2'	1:CA:299:G:O4'	2.20	0.42
1:CA:328:C:O2	1:CA:328:C:H2'	2.20	0.42
1:CA:463:U:H3'	1:CA:464:U:C6	2.54	0.42
1:CA:775:G:C6	1:CA:776:G:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:890:G:N2	1:CA:906:A:H2'	2.35	0.42
1:CA:929:G:C5	1:CA:930:C:C5	3.07	0.42
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.55	0.42
1:CA:1305:G:C6	1:CA:1331:G:C2	3.07	0.42
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.54	0.42
1:CA:1446:A:N6	1:CA:1447:A:N6	2.68	0.42
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.54	0.42
4:CD:85:ASN:CG	4:CD:88:GLU:HG3	2.44	0.42
6:CF:19:PRO:HA	6:CF:22:ILE:HD12	2.01	0.42
8:CH:94:LYS:HD3	8:CH:98:GLY:CA	2.49	0.42
12:CL:21:VAL:N	12:CL:22:PRO:CD	2.82	0.42
13:CM:16:VAL:HG13	13:CM:41:GLU:HA	2.02	0.42
15:CO:85:LEU:HD12	15:CO:85:LEU:HA	1.92	0.42
16:CP:52:LEU:HD21	16:CP:57:ILE:HD12	2.01	0.42
17:CQ:31:HIS:CD2	17:CQ:34:TYR:CD1	3.07	0.42
17:CQ:47:HIS:HA	17:CQ:71:LYS:HE2	2.01	0.42
18:CR:59:ILE:O	18:CR:63:ARG:HD2	2.19	0.42
19:CS:58:VAL:HG11	19:CS:75:ALA:CA	2.50	0.42
22:DA:126:A:C5	22:DA:127:A:C2	3.07	0.42
22:DA:371:A:N6	22:DA:402:A:OP2	2.45	0.42
22:DA:377:G:C6	22:DA:378:C:C5	3.07	0.42
22:DA:693:A:C5	22:DA:694:U:C5	3.07	0.42
22:DA:816:C:C2	22:DA:1192:G:C2	3.08	0.42
22:DA:832:U:H2'	22:DA:833:A:C8	2.55	0.42
22:DA:971:G:OP2	22:DA:974:G:N2	2.52	0.42
22:DA:1120:G:C6	22:DA:1121:C:C4	3.07	0.42
22:DA:1669:A:N3	22:DA:1669:A:H3'	2.35	0.42
22:DA:2127:G:H2'	22:DA:2128:G:C8	2.54	0.42
22:DA:2136:G:C2	22:DA:2156:G:H1'	2.54	0.42
22:DA:2297:A:C2	22:DA:2298:A:C8	3.07	0.42
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.82	0.42
22:DA:2581:G:H8	22:DA:2582:G:O6	2.02	0.42
22:DA:2655:G:O2'	22:DA:2656:U:P	2.78	0.42
22:DA:2741:A:H2'	22:DA:2742:G:H5'	2.02	0.42
22:DA:2776:A:C5	22:DA:2778:A:C6	3.07	0.42
22:DA:2819:G:H5"	57:DA:3808:HOH:O	2.19	0.42
22:DA:2864:G:H2'	22:DA:2865:U:O4'	2.19	0.42
23:DB:29:A:H2'	23:DB:30:C:C6	2.55	0.42
24:DC:160:THR:C	24:DC:195:VAL:HG13	2.45	0.42
26:DE:77:ILE:O	26:DE:77:ILE:CG1	2.67	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:7:MET:HE1	32:DK:44:LYS:HG3	2.00	0.42
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.53	0.42
35:DN:46:ARG:O	35:DN:50:PRO:CG	2.68	0.42
38:DQ:9:ILE:HD12	38:DQ:9:ILE:O	2.20	0.42
40:DS:28:LYS:O	40:DS:29:VAL:C	2.63	0.42
43:DV:63:ILE:HD11	43:DV:91:PHE:CD1	2.54	0.42
45:DX:36:HIS:O	45:DX:48:THR:HA	2.20	0.42
1:AA:142:G:C6	1:AA:143:A:C5	3.07	0.42
1:AA:524:G:C6	1:AA:525:C:N4	2.87	0.42
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.19	0.42
1:AA:1149:C:H6	1:AA:1149:C:O5'	2.03	0.42
1:AA:1322:C:P	19:AS:78:ARG:NH2	2.93	0.42
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.53	0.42
1:AA:1446:A:N6	1:AA:1447:A:N6	2.68	0.42
1:AA:1539:C:H5"	21:AU:18:ARG:CG	2.50	0.42
4:AD:23:SER:O	4:AD:24:GLY:O	2.36	0.42
7:AG:25:LYS:CB	7:AG:101:MET:HE1	2.49	0.42
7:AG:32:VAL:C	7:AG:34:GLY:H	2.28	0.42
11:AK:22:HIS:HD2	11:AK:35:THR:HG22	1.84	0.42
13:AM:64:VAL:O	13:AM:64:VAL:HG12	2.19	0.42
16:AP:76:LYS:HG3	16:AP:76:LYS:O	2.19	0.42
18:AR:23:TYR:CE1	18:AR:24:LYS:HG3	2.54	0.42
21:AU:5:LYS:HD2	21:AU:5:LYS:C	2.45	0.42
22:BA:65:U:H2'	22:BA:66:C:H6	1.84	0.42
22:BA:440:C:O2'	22:BA:441:U:H5'	2.18	0.42
22:BA:567:U:C2'	22:BA:568:U:O5'	2.67	0.42
22:BA:598:U:H2'	22:BA:599:A:C8	2.54	0.42
22:BA:693:A:C2'	22:BA:694:U:H5'	2.49	0.42
22:BA:742:A:C2	22:BA:756:A:C2	3.08	0.42
22:BA:790:U:HO2'	22:BA:791:C:P	2.42	0.42
22:BA:819:A:OP2	22:BA:1187:G:C2	2.72	0.42
22:BA:969:G:C5	22:BA:970:U:C5	3.08	0.42
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.83	0.42
22:BA:1351:C:C4	22:BA:1352:U:C4	3.08	0.42
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.20	0.42
22:BA:1789:A:H2'	22:BA:1790:C:O4'	2.20	0.42
22:BA:1922:G:C5	22:BA:1923:U:C5	3.06	0.42
22:BA:1947:C:N3	22:BA:1960:A:C2	2.87	0.42
22:BA:2590:A:H2'	22:BA:2591:C:C6	2.55	0.42
22:BA:2591:C:P	24:BC:238:ARG:HG3	2.60	0.42
22:BA:2657:A:C2	22:BA:2665:A:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2888:C:O2	22:BA:2888:C:C2'	2.67	0.42
25:BD:67:HIS:CD2	25:BD:67:HIS:O	2.73	0.42
25:BD:122:VAL:HB	25:BD:141:ARG:NH1	2.35	0.42
26:BE:10:SER:O	26:BE:10:SER:OG	2.34	0.42
28:BG:51:THR:C	28:BG:52:PHE:CD2	2.98	0.42
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.85	0.42
30:BI:66:SER:C	30:BI:67:PHE:HD2	2.27	0.42
31:BJ:24:THR:HG21	31:BJ:27:ARG:HD2	2.00	0.42
34:BM:96:ILE:HG21	34:BM:126:ILE:CD1	2.49	0.42
41:BT:25:GLU:O	41:BT:26:LYS:C	2.63	0.42
49:B1:10:LYS:O	49:B1:51:GLU:HG3	2.20	0.42
53:B5:131:ILE:HA	53:B5:135:ARG:CB	2.50	0.42
1:CA:66:A:H5'	1:CA:173:U:O4	2.20	0.42
1:CA:68:G:O4'	1:CA:171:A:H1'	2.19	0.42
1:CA:104:G:H4'	1:CA:174:A:O4'	2.19	0.42
1:CA:208:U:C5	1:CA:210:C:H6	2.38	0.42
1:CA:375:U:OP1	16:CP:70:ARG:HD3	2.20	0.42
1:CA:728:A:C6	1:CA:729:A:C6	3.08	0.42
1:CA:1048:G:P	57:CA:1846:HOH:O	2.75	0.42
1:CA:1105:A:C2	1:CA:1106:G:N7	2.87	0.42
1:CA:1343:G:C6	1:CA:1344:C:N4	2.87	0.42
1:CA:1348:U:OP1	9:CI:112:GLU:N	2.45	0.42
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.68	0.42
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.55	0.42
2:CB:222:ARG:NE	2:CB:223:GLU:HB2	2.35	0.42
4:CD:98:LEU:HB2	4:CD:135:TYR:HB3	2.02	0.42
4:CD:115:ARG:HG3	4:CD:133:ALA:CB	2.49	0.42
4:CD:206:LYS:O	4:CD:206:LYS:CG	2.64	0.42
6:CF:25:TYR:N	6:CF:25:TYR:CD2	2.88	0.42
7:CG:33:ASP:CB	7:CG:35:LYS:HE3	2.50	0.42
9:CI:95:ARG:HA	9:CI:98:LEU:HB3	2.00	0.42
13:CM:46:SER:O	13:CM:47:GLU:HB3	2.19	0.42
15:CO:88:ARG:O	15:CO:89:ARG:C	2.63	0.42
22:DA:16:C:O3'	48:D0:11:SER:OG	2.38	0.42
22:DA:187:G:N2	22:DA:210:C:C2	2.88	0.42
22:DA:201:C:C4	22:DA:202:U:C5	3.08	0.42
22:DA:353:C:H3'	22:DA:354:A:C8	2.55	0.42
22:DA:485:C:C2	22:DA:496:G:C2	3.08	0.42
22:DA:792:A:H3'	22:DA:793:A:H5'	1.99	0.42
22:DA:845:A:H3'	22:DA:845:A:N3	2.33	0.42
22:DA:1230:A:C2	22:DA:1231:U:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1584:U:O2	22:DA:1584:U:C3'	2.68	0.42
22:DA:2208:C:C2	22:DA:2217:G:N2	2.88	0.42
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.53	0.42
22:DA:2504:U:C5	55:DA:3001:VIF:C14	2.99	0.42
22:DA:2671:G:C2	22:DA:2672:U:C2	3.08	0.42
22:DA:2685:G:C4	22:DA:2686:G:C8	3.07	0.42
23:DB:84:G:N2	23:DB:93:C:O2	2.52	0.42
24:DC:246:THR:C	24:DC:248:TRP:N	2.78	0.42
25:DD:179:ARG:HB2	25:DD:188:LEU:HD12	2.02	0.42
28:DG:8:PRO:HG3	28:DG:51:THR:HG22	2.02	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
29:DH:32:PRO:CB	45:DX:39:TRP:HB3	2.46	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
33:DL:122:VAL:HG11	33:DL:127:VAL:HG21	2.00	0.42
35:DN:31:HIS:C	35:DN:33:ILE:H	2.27	0.42
37:DP:53:ARG:HB2	37:DP:56:HIS:HB2	2.02	0.42
43:DV:48:MET:O	43:DV:51:GLN:NE2	2.50	0.42
45:DX:13:VAL:O	45:DX:13:VAL:CG2	2.67	0.42
1:AA:38:G:N2	1:AA:397:A:C4	2.88	0.42
1:AA:141:G:H2'	1:AA:142:G:O4'	2.19	0.42
1:AA:399:G:H2'	1:AA:400:C:C6	2.54	0.42
1:AA:463:U:O2	1:AA:463:U:H2'	2.18	0.42
1:AA:545:C:O2	1:AA:545:C:H2'	2.20	0.42
1:AA:575:G:O2'	1:AA:821:G:H5'	2.19	0.42
1:AA:719:C:O2'	18:AR:38:LYS:HB3	2.19	0.42
1:AA:923:A:N6	1:AA:924:C:N4	2.68	0.42
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.53	0.42
1:AA:1241:G:C2	1:AA:1242:G:C5	3.08	0.42
1:AA:1253:G:H2'	1:AA:1254:A:C8	2.55	0.42
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.19	0.42
1:AA:1503:A:C4	1:AA:1531:A:N3	2.87	0.42
3:AC:130:PHE:CE1	3:AC:131:ARG:HD2	2.54	0.42
4:AD:106:GLY:C	4:AD:108:GLY:N	2.78	0.42
4:AD:197:GLU:O	4:AD:198:HIS:C	2.62	0.42
4:AD:199:LEU:O	4:AD:202:GLU:HB2	2.19	0.42
7:AG:111:ARG:HB3	7:AG:119:ARG:HG2	2.02	0.42
21:AU:41:PRO:HA	21:AU:45:ARG:NH1	2.34	0.42
22:BA:583:G:OP1	38:BQ:7:GLY:HA2	2.20	0.42
22:BA:1060:U:OP1	30:BI:132:THR:HG21	2.20	0.42
22:BA:1090:A:H2'	22:BA:1091:G:C5'	2.49	0.42
22:BA:1374:G:H2'	22:BA:1375:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1505:A:C2	22:BA:1506:U:O2	2.73	0.42
22:BA:1585:C:H2'	22:BA:1586:A:H5'	2.02	0.42
22:BA:2211:A:H1'	22:BA:2212:A:OP1	2.19	0.42
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.42	0.42
23:BB:94:A:H2'	23:BB:95:U:H6	1.85	0.42
24:BC:30:PHE:CE2	24:BC:32:PRO:HB2	2.55	0.42
25:BD:103:ASP:O	25:BD:104:VAL:CG2	2.68	0.42
28:BG:2:SER:O	28:BG:3:ARG:C	2.61	0.42
29:BH:116:ARG:HB3	29:BH:131:SER:O	2.20	0.42
29:BH:118:PRO:O	29:BH:119:ASN:CB	2.68	0.42
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.35	0.42
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	2.02	0.42
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.54	0.42
40:BS:45:VAL:HG12	40:BS:46:LEU:N	2.34	0.42
41:BT:51:PHE:O	41:BT:53:VAL:HG13	2.20	0.42
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.20	0.42
52:B4:11:CYS:SG	52:B4:14:CYS:SG	3.17	0.42
53:B5:48:LEU:HD11	53:B5:174:ALA:HB3	2.01	0.42
1:CA:295:C:C2	1:CA:296:U:C6	3.07	0.42
1:CA:304:U:O2'	1:CA:305:G:H5'	2.19	0.42
1:CA:346:G:H3'	1:CA:346:G:N3	2.34	0.42
1:CA:456:A:C6	1:CA:457:G:C5	3.07	0.42
1:CA:532:A:N6	3:CC:193:TYR:HD2	2.17	0.42
1:CA:615:G:C2	1:CA:616:G:C8	3.07	0.42
1:CA:728:A:C6	1:CA:729:A:N6	2.87	0.42
1:CA:952:U:O4	13:CM:103:LYS:HD3	2.19	0.42
1:CA:1112:C:C4	3:CC:178:LEU:HD23	2.54	0.42
1:CA:1130:A:C8	1:CA:1146:A:N1	2.88	0.42
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.55	0.42
1:CA:1426:G:C5	1:CA:1475:G:C2	3.07	0.42
2:CB:97:LEU:O	2:CB:98:GLY:C	2.63	0.42
6:CF:80:PHE:CD2	6:CF:80:PHE:C	2.97	0.42
6:CF:82:ASP:N	6:CF:82:ASP:OD2	2.52	0.42
11:CK:56:ARG:O	11:CK:59:THR:HG23	2.19	0.42
12:CL:42:PRO:HD3	12:CL:48:ALA:O	2.19	0.42
15:CO:37:ASN:O	15:CO:38:HIS:C	2.63	0.42
19:CS:80:TYR:CD2	19:CS:80:TYR:C	2.97	0.42
20:CT:83:ILE:O	20:CT:87:ALA:CB	2.67	0.42
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.88	0.42
22:DA:56:A:C2	22:DA:115:C:C2	3.07	0.42
22:DA:250:G:H2'	22:DA:251:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:306:U:C5	22:DA:307:G:C5	3.08	0.42
22:DA:310:A:C6	22:DA:330:A:C5	3.08	0.42
22:DA:629:G:H4'	22:DA:650:C:O2	2.19	0.42
22:DA:687:C:C2	22:DA:788:A:O4'	2.73	0.42
22:DA:706:A:C4	22:DA:707:G:C8	3.07	0.42
22:DA:734:A:C4	22:DA:735:A:C8	3.08	0.42
22:DA:1096:A:H2'	22:DA:1097:U:H5"	2.01	0.42
22:DA:1239:G:C6	22:DA:1240:U:C4	3.07	0.42
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.37	0.42
22:DA:1370:C:O4'	22:DA:1810:A:H2	2.02	0.42
22:DA:1526:C:N4	22:DA:1527:G:C6	2.87	0.42
22:DA:1566:A:H5'	24:DC:214:ARG:CZ	2.50	0.42
22:DA:1651:G:O6	22:DA:1652:A:C6	2.72	0.42
22:DA:2037:A:C6	22:DA:2038:G:C5	3.08	0.42
22:DA:2091:C:O2	45:DX:34:HIS:CE1	2.73	0.42
22:DA:2287:A:C8	22:DA:2289:G:C8	3.08	0.42
22:DA:2436:G:N3	22:DA:2437:G:C8	2.88	0.42
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	3.03	0.42
22:DA:2786:U:O2'	25:DD:63:PRO:O	2.34	0.42
24:DC:65:VAL:HB	24:DC:67:PHE:CE1	2.54	0.42
26:DE:108:ILE:HD12	26:DE:108:ILE:O	2.19	0.42
27:DF:12:VAL:O	27:DF:16:LEU:HG	2.18	0.42
29:DH:43:ASN:C	29:DH:45:GLU:H	2.28	0.42
31:DJ:126:ALA:O	31:DJ:127:GLY:O	2.37	0.42
42:DU:51:ALA:O	42:DU:52:LEU:HB2	2.20	0.42
45:DX:5:CYS:O	45:DX:7:VAL:N	2.53	0.42
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.54	0.42
52:D4:30:GLU:CB	52:D4:33:HIS:CD2	3.02	0.42
1:AA:202:G:C2	1:AA:216:U:O2	2.73	0.42
1:AA:389:A:C6	1:AA:390:U:H1'	2.54	0.42
1:AA:666:G:C6	1:AA:741:G:C6	3.08	0.42
1:AA:920:U:H2'	1:AA:921:U:C6	2.54	0.42
1:AA:1308:U:OP2	13:AM:98:ARG:HG2	2.19	0.42
2:AB:17:GLY:HA2	2:AB:41:ILE:HG23	2.02	0.42
2:AB:97:LEU:O	2:AB:100:MET:HB3	2.20	0.42
2:AB:164:ILE:HG23	2:AB:165:ASP:N	2.34	0.42
2:AB:207:ILE:N	2:AB:207:ILE:CD1	2.83	0.42
5:AE:81:LEU:HD21	5:AE:123:VAL:CG1	2.50	0.42
7:AG:21:GLU:C	7:AG:25:LYS:HE2	2.44	0.42
7:AG:95:ARG:O	7:AG:97:ASN:N	2.52	0.42
8:AH:64:LYS:HB2	8:AH:71:VAL:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:109:GLY:O	8:AH:111:MET:HG3	2.19	0.42
9:AI:99:ARG:C	9:AI:101:ALA:N	2.78	0.42
11:AK:53:ARG:O	11:AK:56:ARG:CG	2.67	0.42
12:AL:72:HIS:ND1	12:AL:74:LEU:HB2	2.35	0.42
13:AM:4:ILE:HD11	13:AM:10:PRO:CG	2.49	0.42
14:AN:81:ARG:HA	14:AN:84:VAL:HB	2.01	0.42
15:AO:79:THR:O	15:AO:83:GLU:OE1	2.37	0.42
19:AS:19:VAL:O	19:AS:23:VAL:HG23	2.18	0.42
22:BA:104:A:C5	22:BA:105:C:C5	3.07	0.42
22:BA:634:C:H2'	22:BA:635:C:C6	2.54	0.42
22:BA:961:C:C4	22:BA:2031:A:C4	3.07	0.42
22:BA:1422:G:C6	22:BA:1423:G:N7	2.88	0.42
22:BA:1477:A:N6	22:BA:1514:G:O2'	2.52	0.42
22:BA:1794:A:C4	22:BA:1795:C:C5	3.07	0.42
22:BA:1795:C:C2	22:BA:1796:U:C6	3.08	0.42
22:BA:1897:G:N2	22:BA:1898:U:O2	2.53	0.42
22:BA:1916:A:P	22:BA:1917:U:OP2	2.78	0.42
22:BA:1926:U:H2'	22:BA:1927:A:OP2	2.20	0.42
22:BA:2127:G:N1	22:BA:2161:C:O2	2.53	0.42
22:BA:2198:A:C2	29:BH:29:PHE:HB2	2.55	0.42
22:BA:2517:C:C6	22:BA:2542:A:N7	2.87	0.42
22:BA:2577:A:H2'	22:BA:2578:G:OP1	2.20	0.42
22:BA:2633:G:H2'	22:BA:2634:A:O4'	2.20	0.42
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.20	0.42
25:BD:140:HIS:CE1	57:BD:302:HOH:O	2.52	0.42
30:BI:55:ILE:HG12	30:BI:74:PRO:CA	2.50	0.42
30:BI:80:LEU:HD11	30:BI:133:ALA:HA	2.01	0.42
30:BI:110:ALA:HB1	30:BI:129:ILE:HG13	2.02	0.42
31:BJ:109:LEU:HB3	31:BJ:110:PRO:CD	2.50	0.42
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.50	0.42
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	2.02	0.42
35:BN:52:ILE:HG21	35:BN:94:TYR:CG	2.55	0.42
36:BO:11:ALA:HB2	36:BO:96:GLY:CA	2.50	0.42
37:BP:15:GLN:O	37:BP:16:ASP:CB	2.65	0.42
38:BQ:41:LYS:HG2	38:BQ:45:TYR:CE1	2.55	0.42
39:BR:27:ILE:HG22	39:BR:28:ALA:N	2.33	0.42
39:BR:52:PRO:O	39:BR:53:PHE:C	2.63	0.42
45:BX:59:ILE:HA	45:BX:67:VAL:HG21	2.01	0.42
46:BY:61:ALA:C	46:BY:63:ALA:H	2.28	0.42
1:CA:81:A:H2'	1:CA:82:G:H8	1.84	0.42
1:CA:146:G:N2	1:CA:147:G:H1'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:418:C:H1'	1:CA:540:G:O2'	2.19	0.42
1:CA:577:G:C1'	1:CA:816:A:H2'	2.49	0.42
1:CA:974:A:OP1	14:CN:69:ARG:NH1	2.51	0.42
1:CA:1014:A:N7	1:CA:1015:G:C6	2.88	0.42
1:CA:1130:A:C4	1:CA:1146:A:C2	3.07	0.42
1:CA:1306:A:H1'	1:CA:1332:A:C5	2.55	0.42
2:CB:24:ASN:O	2:CB:26:LYS:N	2.52	0.42
2:CB:187:VAL:HB	2:CB:191:SER:HB2	2.02	0.42
2:CB:222:ARG:HG2	2:CB:223:GLU:N	2.35	0.42
3:CC:121:THR:CB	3:CC:187:SER:HG	2.33	0.42
4:CD:206:LYS:O	4:CD:206:LYS:HD3	2.20	0.42
5:CE:105:ILE:CG1	5:CE:112:ARG:HG3	2.50	0.42
8:CH:83:LEU:O	8:CH:83:LEU:HD13	2.20	0.42
10:CJ:12:ALA:CB	10:CJ:18:ILE:HB	2.50	0.42
11:CK:18:ASP:HA	11:CK:81:ASN:O	2.19	0.42
13:CM:57:ARG:O	13:CM:60:VAL:HG13	2.20	0.42
13:CM:63:PHE:O	13:CM:65:VAL:HG13	2.20	0.42
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	2.01	0.42
16:CP:38:PHE:CE2	16:CP:51:ARG:HD3	2.54	0.42
21:CU:47:ARG:HE	21:CU:47:ARG:HA	1.85	0.42
22:DA:60:G:H1'	22:DA:61:C:OP1	2.19	0.42
22:DA:126:A:OP2	50:D2:19:ARG:HG3	2.20	0.42
22:DA:309:A:H5'	42:DU:17:LYS:HG2	2.00	0.42
22:DA:511:U:H2'	22:DA:512:G:H5'	2.01	0.42
22:DA:581:C:OP1	38:DQ:33:ARG:HB2	2.20	0.42
22:DA:681:G:C2	22:DA:682:G:N9	2.88	0.42
22:DA:1087:G:C6	22:DA:1089:A:C2	3.07	0.42
22:DA:1384:A:O2'	22:DA:1404:C:O2	2.35	0.42
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.55	0.42
22:DA:2452:C:C2	55:DA:3001:VIF:O05	2.73	0.42
22:DA:2657:A:H1'	22:DA:2665:A:N6	2.35	0.42
23:DB:51:G:N7	36:DO:64:TYR:HE2	2.18	0.42
24:DC:126:PRO:HA	24:DC:192:LEU:O	2.20	0.42
26:DE:181:ILE:HG23	33:DL:2:ARG:NH1	2.35	0.42
28:DG:64:GLN:O	28:DG:67:THR:OG1	2.37	0.42
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.42
31:DJ:49:ASP:OD1	31:DJ:121:LYS:HD3	2.20	0.42
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	2.02	0.42
35:DN:17:ARG:O	35:DN:21:PHE:HB2	2.19	0.42
45:DX:33:LEU:C	45:DX:34:HIS:CG	2.96	0.42
52:D4:30:GLU:CG	52:D4:33:HIS:CD2	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:457:G:C6	1:AA:458:U:C4	3.08	0.42
1:AA:725:G:C2	1:AA:726:C:C6	3.08	0.42
1:AA:1234:C:H2'	1:AA:1235:U:H6	1.85	0.42
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.19	0.42
1:AA:1329:A:OP1	13:AM:26:GLY:O	2.38	0.42
2:AB:210:VAL:O	2:AB:214:LEU:CB	2.68	0.42
3:AC:145:GLY:O	3:AC:146:ALA:HB3	2.20	0.42
5:AE:106:ILE:HD11	5:AE:124:LEU:HB3	2.02	0.42
6:AF:68:GLN:O	6:AF:69:GLU:HB2	2.20	0.42
10:AJ:48:ARG:NH1	14:AN:101:TRP:CZ3	2.87	0.42
12:AL:106:GLY:HA3	12:AL:118:GLY:O	2.19	0.42
12:AL:114:ARG:O	12:AL:116:LYS:O	2.37	0.42
13:AM:16:VAL:HG22	13:AM:41:GLU:O	2.19	0.42
19:AS:62:VAL:HG12	19:AS:63:THR:N	2.34	0.42
22:BA:102:U:N1	46:BY:2:LYS:HE3	2.35	0.42
22:BA:909:A:O2'	22:BA:911:A:OP2	2.26	0.42
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.55	0.42
22:BA:1204:A:O4'	22:BA:1206:G:C8	2.73	0.42
22:BA:1644:C:O2	22:BA:1644:C:C2'	2.64	0.42
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.55	0.42
22:BA:1999:C:H5"	22:BA:2723:C:O2'	2.19	0.42
22:BA:2097:A:C2	22:BA:2193:G:C5	3.08	0.42
22:BA:2118:U:O4	22:BA:2149:U:H5'	2.19	0.42
22:BA:2520:C:C5	22:BA:2567:G:C4	3.07	0.42
24:BC:23:GLU:OE1	24:BC:81:LEU:HD12	2.19	0.42
30:BI:29:GLY:O	30:BI:35:ILE:HD11	2.20	0.42
32:BK:41:ILE:HD11	32:BK:86:LEU:CD2	2.49	0.42
1:CA:15:G:O4'	5:CE:29:ARG:NH2	2.52	0.42
1:CA:63:C:O2'	1:CA:380:G:H4'	2.19	0.42
1:CA:295:C:N4	1:CA:296:U:C4	2.88	0.42
1:CA:538:G:H2'	1:CA:539:A:O4'	2.20	0.42
1:CA:919:A:C2	1:CA:920:U:C6	3.08	0.42
1:CA:1377:A:N3	7:CG:2:PRO:HG3	2.35	0.42
2:CB:15:HIS:O	2:CB:16:PHE:C	2.61	0.42
2:CB:91:PHE:CD2	2:CB:150:GLY:HA3	2.54	0.42
2:CB:165:ASP:O	2:CB:168:HIS:HB3	2.19	0.42
3:CC:101:ILE:O	3:CC:101:ILE:HG23	2.20	0.42
4:CD:17:THR:HG22	4:CD:18:ASP:N	2.34	0.42
6:CF:32:ALA:O	6:CF:33:GLU:C	2.63	0.42
6:CF:78:PHE:CD2	6:CF:78:PHE:N	2.87	0.42
9:CI:57:MET:HA	9:CI:60:LYS:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.20	0.42
12:CL:76:GLU:O	12:CL:77:HIS:O	2.37	0.42
13:CM:93:ARG:CZ	13:CM:93:ARG:HB3	2.50	0.42
16:CP:40:ASN:HB3	16:CP:43:ALA:HB2	2.02	0.42
22:DA:160:A:H2'	22:DA:161:A:C8	2.55	0.42
22:DA:189:G:C5	22:DA:205:G:C2	3.08	0.42
22:DA:244:A:H2'	22:DA:245:G:O4'	2.20	0.42
22:DA:319:G:C4	22:DA:333:G:N2	2.88	0.42
22:DA:370:G:C8	57:DA:3559:HOH:O	2.69	0.42
22:DA:468:G:C2'	22:DA:469:G:H5'	2.50	0.42
22:DA:503:A:C2	22:DA:506:G:C5	3.08	0.42
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.19	0.42
22:DA:787:C:C5	22:DA:791:C:C4	3.08	0.42
22:DA:1121:C:N3	22:DA:1122:G:C8	2.87	0.42
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.50	0.42
22:DA:1438:U:C2	22:DA:1555:G:N2	2.87	0.42
22:DA:1713:A:C5	22:DA:1716:U:H1'	2.55	0.42
22:DA:1791:A:H5'	24:DC:207:LYS:O	2.20	0.42
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.55	0.42
22:DA:1998:A:O3'	22:DA:2724:U:H4'	2.19	0.42
22:DA:2055:C:H5'	22:DA:2056:G:OP1	2.20	0.42
22:DA:2142:A:N6	22:DA:2143:C:N4	2.68	0.42
22:DA:2291:U:H5"	22:DA:2380:C:O2	2.20	0.42
22:DA:2503:A:C8	55:DA:3001:VIF:C10	2.99	0.42
22:DA:2634:A:C2	22:DA:2635:A:C4	3.08	0.42
22:DA:2826:A:C5	22:DA:2827:C:C5	3.07	0.42
24:DC:36:LYS:O	24:DC:36:LYS:HG3	2.19	0.42
25:DD:4:LEU:HG	25:DD:32:ASN:OD1	2.20	0.42
25:DD:51:THR:OG1	25:DD:76:GLY:HA3	2.20	0.42
26:DE:23:PHE:CE1	26:DE:28:VAL:HG21	2.55	0.42
27:DF:64:LYS:O	27:DF:64:LYS:HG2	2.19	0.42
31:DJ:89:PHE:CE2	31:DJ:100:VAL:HG11	2.55	0.42
36:DO:36:TYR:HD2	36:DO:52:SER:HB2	1.85	0.42
37:DP:104:THR:O	37:DP:105:GLY:C	2.63	0.42
40:DS:18:ARG:HA	40:DS:21:ALA:HB3	2.01	0.42
41:DT:1:MET:C	41:DT:2:ILE:HD12	2.45	0.42
1:AA:179:A:C6	1:AA:180:U:N3	2.88	0.42
1:AA:877:G:H21	8:AH:2:SER:N	2.18	0.42
1:AA:945:G:C6	1:AA:1337:G:C5	3.08	0.42
1:AA:974:A:H4'	1:AA:975:A:O5'	2.20	0.42
1:AA:1034:G:H2'	1:AA:1035:A:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.42
1:AA:1304:G:C2	1:AA:1305:G:N2	2.87	0.42
1:AA:1356:G:C2	1:AA:1367:C:O2	2.73	0.42
2:AB:99:GLY:O	2:AB:103:ASN:CB	2.68	0.42
3:AC:60:PRO:HD2	3:AC:63:SER:C	2.44	0.42
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.34	0.42
4:AD:139:PRO:O	4:AD:140:ASN:HB2	2.20	0.42
7:AG:98:ALA:O	7:AG:99:LEU:C	2.63	0.42
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.20	0.42
20:AT:79:LEU:O	20:AT:82:GLN:HB2	2.20	0.42
22:BA:393:C:C2	22:BA:394:C:C5	3.08	0.42
22:BA:406:G:C6	22:BA:407:G:N7	2.88	0.42
22:BA:567:U:H2'	22:BA:568:U:O5'	2.19	0.42
22:BA:644:A:H2'	22:BA:645:C:O4'	2.20	0.42
22:BA:723:C:H2'	22:BA:724:U:C6	2.55	0.42
22:BA:976:G:C2	22:BA:977:G:N7	2.88	0.42
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.19	0.42
22:BA:1300:G:N9	22:BA:1626:A:C2	2.87	0.42
22:BA:1422:G:N3	22:BA:1423:G:C8	2.88	0.42
22:BA:1512:C:C2'	22:BA:1513:U:H5'	2.50	0.42
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.72	0.42
22:BA:1607:C:N3	22:BA:1622:G:OP2	2.53	0.42
22:BA:1673:G:H2'	22:BA:1674:G:H5'	2.02	0.42
22:BA:1985:C:H2'	22:BA:1986:C:O5'	2.19	0.42
22:BA:2370:G:C6	22:BA:2371:G:C5	3.08	0.42
26:BE:148:ILE:HG21	26:BE:157:LEU:HD21	2.02	0.42
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.42
30:BI:21:SER:N	30:BI:22:PRO:CD	2.82	0.42
31:BJ:32:LEU:O	31:BJ:36:LEU:HG	2.20	0.42
33:BL:130:GLY:O	33:BL:131:ALA:C	2.63	0.42
34:BM:2:LEU:HD22	34:BM:2:LEU:N	2.35	0.42
34:BM:14:LYS:HE3	34:BM:14:LYS:HB2	1.94	0.42
34:BM:105:MET:CG	34:BM:106:ASP:N	2.83	0.42
34:BM:114:ARG:HA	34:BM:130:PHE:CE1	2.55	0.42
37:BP:73:VAL:HG22	37:BP:73:VAL:O	2.18	0.42
38:BQ:57:PHE:O	38:BQ:58:ARG:C	2.63	0.42
39:BR:21:ARG:O	39:BR:22:LEU:HD23	2.20	0.42
40:BS:65:ASP:OD1	40:BS:67:ASP:HB2	2.19	0.42
42:BU:12:ILE:CG2	42:BU:80:ALA:HB2	2.50	0.42
1:CA:12:U:H4'	1:CA:526:C:H4'	2.02	0.42
1:CA:73:C:O2'	1:CA:74:A:O5'	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:210:C:H5"	1:CA:211:G:OP1	2.19	0.42
1:CA:254:G:O2'	17:CQ:18:GLU:O	2.36	0.42
1:CA:436:C:N3	1:CA:437:U:C4	2.88	0.42
1:CA:582:C:C4	1:CA:760:G:O6	2.72	0.42
1:CA:615:G:C2	1:CA:626:G:C5	3.08	0.42
1:CA:878:A:C5	1:CA:879:C:C5	3.08	0.42
1:CA:971:G:OP1	1:CA:972:C:H5"	2.19	0.42
1:CA:1483:A:N1	22:DA:1959:G:O2'	2.45	0.42
2:CB:96:TRP:CZ3	2:CB:175:GLU:OE2	2.72	0.42
2:CB:100:MET:CA	2:CB:107:VAL:HG21	2.50	0.42
2:CB:208:ARG:O	2:CB:210:VAL:N	2.53	0.42
3:CC:84:VAL:HA	3:CC:87:LEU:HD12	2.01	0.42
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.34	0.42
4:CD:59:GLN:OE1	4:CD:59:GLN:CA	2.67	0.42
4:CD:129:VAL:HG23	4:CD:146:ARG:HD3	2.01	0.42
6:CF:16:GLU:O	6:CF:18:VAL:N	2.52	0.42
8:CH:102:ALA:O	8:CH:112:THR:HA	2.19	0.42
9:CI:51:PRO:HD3	9:CI:80:ARG:HG2	2.02	0.42
9:CI:88:MET:C	9:CI:88:MET:SD	3.03	0.42
11:CK:43:GLY:HA3	11:CK:74:VAL:HG12	2.02	0.42
14:CN:45:VAL:HG23	14:CN:46:LEU:H	1.85	0.42
19:CS:56:GLN:CD	19:CS:57:HIS:H	2.28	0.42
21:CU:9:ASN:N	21:CU:12:PHE:HE2	2.18	0.42
22:DA:328:U:H4'	42:DU:66:GLN:NE2	2.35	0.42
22:DA:363:G:H2'	22:DA:364:C:C6	2.55	0.42
22:DA:503:A:H4'	22:DA:504:A:O5'	2.20	0.42
22:DA:609:A:C6	22:DA:610:C:O2	2.73	0.42
22:DA:957:C:C4	22:DA:2459:A:C1'	3.03	0.42
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.68	0.42
22:DA:1379:U:O2	22:DA:1379:U:H2'	2.20	0.42
22:DA:1581:G:C5	22:DA:1582:C:N4	2.88	0.42
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.54	0.42
22:DA:1665:A:H2'	22:DA:1666:G:O4'	2.20	0.42
22:DA:1745:A:C4	22:DA:1746:A:C8	3.08	0.42
22:DA:2212:A:C2	22:DA:2214:C:N4	2.88	0.42
22:DA:2428:G:C2	33:DL:54:GLN:OE1	2.73	0.42
22:DA:2536:G:C6	22:DA:2537:U:N3	2.88	0.42
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.55	0.42
22:DA:2683:C:OP1	37:DP:56:HIS:CB	2.68	0.42
24:DC:72:ASP:O	24:DC:74:ILE:HD12	2.19	0.42
24:DC:244:PRO:O	24:DC:245:VAL:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:181:ILE:HB	33:DL:3:LEU:HD13	2.01	0.42
27:DF:85:ILE:HG23	27:DF:85:ILE:O	2.18	0.42
35:DN:58:ASP:O	35:DN:59:SER:HB3	2.18	0.42
35:DN:71:ARG:HH21	35:DN:71:ARG:CG	2.32	0.42
37:DP:28:VAL:HG21	37:DP:74:PHE:CE2	2.55	0.42
41:DT:21:SER:O	41:DT:23:ALA:N	2.52	0.42
41:DT:64:LYS:HB3	41:DT:76:ARG:NH2	2.35	0.42
43:DV:51:GLN:C	43:DV:51:GLN:CD	2.88	0.42
46:DY:36:GLN:O	46:DY:37:LEU:C	2.62	0.42
49:D1:10:LYS:O	49:D1:51:GLU:CG	2.66	0.42
1:AA:161:A:C2'	1:AA:162:A:O5'	2.68	0.41
1:AA:212:G:N2	1:AA:213:G:N3	2.67	0.41
1:AA:262:A:N1	1:AA:263:A:C2	2.88	0.41
1:AA:451:A:H4'	1:AA:452:A:O4'	2.19	0.41
1:AA:462:G:H3'	1:AA:463:U:H6	1.85	0.41
1:AA:1048:G:C2	1:AA:1050:G:N7	2.87	0.41
1:AA:1537:U:C4	1:AA:1538:C:C4	3.07	0.41
2:AB:16:PHE:O	2:AB:41:ILE:HD12	2.20	0.41
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.85	0.41
2:AB:40:ILE:N	2:AB:40:ILE:HD13	2.35	0.41
4:AD:28:ILE:O	4:AD:29:ASP:C	2.63	0.41
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.50	0.41
6:AF:90:MET:O	6:AF:91:ARG:C	2.63	0.41
8:AH:32:LEU:C	8:AH:32:LEU:HD12	2.45	0.41
8:AH:32:LEU:O	8:AH:33:LYS:C	2.63	0.41
12:AL:21:VAL:N	12:AL:22:PRO:CD	2.83	0.41
12:AL:108:LYS:O	12:AL:109:ASP:HB2	2.19	0.41
14:AN:63:ARG:O	14:AN:65:ARG:N	2.53	0.41
20:AT:9:LYS:O	20:AT:13:GLN:HB2	2.19	0.41
22:BA:123:G:H2'	22:BA:124:G:O4'	2.19	0.41
22:BA:480:A:OP2	42:BU:44:LYS:NZ	2.43	0.41
22:BA:569:U:OP1	22:BA:945:A:O2'	2.19	0.41
22:BA:1097:U:H1'	30:BI:9:VAL:HG12	2.02	0.41
22:BA:1769:U:C2'	22:BA:1770:G:O5'	2.67	0.41
22:BA:1961:C:C5	22:BA:1962:C:C4	3.08	0.41
22:BA:2070:A:C2	22:BA:2442:C:C2	3.08	0.41
22:BA:2074:U:H2'	22:BA:2075:U:C6	2.55	0.41
22:BA:2152:G:C5	22:BA:2153:C:C5	3.08	0.41
22:BA:2267:A:H5"	22:BA:2268:A:C5'	2.50	0.41
22:BA:2340:A:H2'	22:BA:2341:G:H8	1.84	0.41
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2573:C:H6	22:BA:2573:C:O5'	2.03	0.41
25:BD:84:LEU:HD23	25:BD:84:LEU:HA	1.80	0.41
26:BE:191:ASP:O	26:BE:195:GLN:HG3	2.20	0.41
28:BG:155:GLU:HG2	28:BG:156:PRO:HD2	2.01	0.41
29:BH:41:LYS:O	29:BH:42:LYS:C	2.62	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
35:BN:36:THR:O	35:BN:111:ALA:N	2.51	0.41
38:BQ:8:VAL:C	38:BQ:10:ALA:H	2.27	0.41
38:BQ:90:ILE:HG22	38:BQ:95:LEU:HG	2.00	0.41
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.50	0.41
39:BR:74:ILE:O	39:BR:86:GLN:HA	2.20	0.41
53:B5:42:VAL:O	53:B5:179:ALA:HB3	2.19	0.41
1:CA:128:G:N1	1:CA:129:A:C6	2.88	0.41
1:CA:270:A:H2'	1:CA:271:C:C6	2.54	0.41
1:CA:276:G:H2'	1:CA:277:C:O4'	2.19	0.41
1:CA:406:G:N3	1:CA:407:U:C6	2.88	0.41
1:CA:502:A:C2	1:CA:503:C:C2	3.07	0.41
1:CA:706:A:O2'	11:CK:31:ILE:HD11	2.20	0.41
1:CA:716:A:C2'	1:CA:717:U:O5'	2.68	0.41
1:CA:825:A:O2'	1:CA:826:C:H5'	2.19	0.41
1:CA:978:A:H4'	1:CA:1322:C:C5	2.55	0.41
1:CA:1105:A:N3	1:CA:1106:G:C8	2.88	0.41
1:CA:1179:A:C2'	1:CA:1180:A:H5'	2.50	0.41
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.54	0.41
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.55	0.41
3:CC:134:MET:SD	3:CC:153:VAL:HG13	2.60	0.41
4:CD:34:ILE:O	4:CD:34:ILE:HG23	2.19	0.41
4:CD:106:GLY:O	4:CD:159:LEU:N	2.53	0.41
5:CE:89:HIS:CE1	5:CE:138:ARG:HD3	2.55	0.41
6:CF:16:GLU:C	6:CF:18:VAL:N	2.78	0.41
7:CG:122:ASN:O	7:CG:125:SER:HB2	2.19	0.41
9:CI:47:VAL:O	9:CI:80:ARG:HG2	2.19	0.41
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	2.02	0.41
13:CM:39:ILE:HG13	13:CM:56:LEU:HD11	2.01	0.41
22:DA:192:C:H5'	22:DA:678:C:H1'	2.02	0.41
22:DA:201:C:C5	22:DA:202:U:C5	3.08	0.41
22:DA:335:C:H2'	22:DA:336:C:H6	1.83	0.41
22:DA:360:U:C4	22:DA:361:G:C6	3.08	0.41
22:DA:529:A:H4'	22:DA:530:G:OP1	2.19	0.41
22:DA:604:G:C6	22:DA:605:G:C6	3.08	0.41
22:DA:668:A:H3'	22:DA:669:G:H5"	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:776:G:C8	22:DA:793:A:C5	3.08	0.41
22:DA:788:A:OP1	22:DA:791:C:N4	2.47	0.41
22:DA:846:U:O2'	22:DA:847:U:P	2.77	0.41
22:DA:1002:G:C5	22:DA:1003:G:C8	3.08	0.41
22:DA:1324:G:H1'	22:DA:1616:A:N6	2.35	0.41
22:DA:1623:G:C2	22:DA:1624:U:C6	3.08	0.41
22:DA:1940:U:C2	22:DA:1965:C:OP2	2.73	0.41
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.54	0.41
22:DA:2314:A:C2	22:DA:2315:G:C5	3.08	0.41
22:DA:2321:U:H3'	22:DA:2322:A:H5'	2.01	0.41
22:DA:2549:G:N3	22:DA:2560:A:C2	2.87	0.41
22:DA:2767:C:H2'	22:DA:2768:U:H5'	2.01	0.41
22:DA:2819:G:N3	22:DA:2828:G:C2	2.88	0.41
23:DB:60:C:C2	23:DB:61:G:C8	3.08	0.41
23:DB:97:C:C4	23:DB:98:G:C8	3.08	0.41
24:DC:75:PRO:HB2	24:DC:97:LYS:HG3	2.02	0.41
24:DC:147:LYS:HB2	24:DC:150:LYS:CB	2.47	0.41
27:DF:8:TYR:OH	27:DF:30:ARG:HB3	2.19	0.41
30:DI:4:LYS:HD2	30:DI:5:VAL:H	1.85	0.41
31:DJ:138:GLN:O	31:DJ:138:GLN:HG3	2.20	0.41
33:DL:68:SER:O	33:DL:69:ARG:HG3	2.19	0.41
33:DL:121:THR:O	33:DL:121:THR:HG22	2.19	0.41
34:DM:2:LEU:HD12	34:DM:2:LEU:N	2.35	0.41
35:DN:12:ARG:CZ	35:DN:20:MET:HE3	2.50	0.41
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.20	0.41
41:DT:2:ILE:HA	41:DT:3:ARG:HB2	2.02	0.41
46:DY:9:LYS:O	46:DY:12:GLU:HB2	2.19	0.41
51:D3:31:HIS:O	51:D3:36:LYS:NZ	2.52	0.41
1:AA:35:G:H2'	1:AA:36:C:H6	1.84	0.41
1:AA:57:G:H2'	1:AA:58:C:C6	2.54	0.41
1:AA:209:U:H5"	1:AA:210:C:OP2	2.20	0.41
1:AA:258:G:C4	1:AA:259:G:C8	3.08	0.41
1:AA:603:U:H2'	1:AA:604:G:C8	2.55	0.41
1:AA:693:G:O2'	1:AA:694:A:H5'	2.20	0.41
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.41
1:AA:923:A:C5	1:AA:924:C:C5	3.07	0.41
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.55	0.41
1:AA:1223:C:P	19:AS:78:ARG:NH1	2.93	0.41
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.43	0.41
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.20	0.41
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1538:C:H2'	1:AA:1539:C:H5'	2.02	0.41
6:AF:76:THR:O	6:AF:79:ARG:N	2.49	0.41
7:AG:32:VAL:C	7:AG:34:GLY:N	2.77	0.41
7:AG:47:LEU:HD12	7:AG:47:LEU:HA	1.92	0.41
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	2.02	0.41
13:AM:114:LYS:O	13:AM:115:PRO:OXT	2.38	0.41
18:AR:34:THR:HG22	18:AR:38:LYS:HB2	2.01	0.41
19:AS:4:SER:O	19:AS:6:LYS:N	2.54	0.41
19:AS:31:LEU:HD12	19:AS:31:LEU:HA	1.95	0.41
22:BA:92:U:O2	22:BA:92:U:H2'	2.19	0.41
22:BA:532:A:N3	22:BA:532:A:H2'	2.35	0.41
22:BA:974:G:C8	22:BA:989:G:N3	2.89	0.41
22:BA:1041:G:O2'	22:BA:1042:G:H5'	2.19	0.41
22:BA:1107:G:C4	22:BA:1108:U:C6	3.08	0.41
22:BA:1179:G:N7	22:BA:1180:U:O4'	2.52	0.41
22:BA:1301:A:C2	22:BA:1303:G:C5	3.08	0.41
22:BA:1324:G:N2	22:BA:1328:A:N1	2.69	0.41
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.19	0.41
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.20	0.41
22:BA:1617:C:OP1	57:BA:3644:HOH:O	2.22	0.41
22:BA:1623:G:C2'	22:BA:1624:U:H5'	2.50	0.41
22:BA:1669:A:H5"	22:BA:2550:G:OP1	2.20	0.41
22:BA:2055:C:H5'	22:BA:2056:G:OP1	2.20	0.41
22:BA:2125:G:N2	22:BA:2171:A:O5'	2.48	0.41
22:BA:2346:A:H3'	22:BA:2347:C:H5"	2.02	0.41
22:BA:2418:A:C5	22:BA:2419:U:C5	3.07	0.41
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	2.20	0.41
23:BB:58:A:H2'	23:BB:59:A:O4'	2.20	0.41
24:BC:167:ARG:O	24:BC:168:ASP:HB3	2.19	0.41
25:BD:14:ILE:N	25:BD:14:ILE:HD13	2.35	0.41
25:BD:25:THR:HG22	25:BD:27:ILE:HG13	2.02	0.41
26:BE:58:LYS:HZ2	26:BE:62:GLN:N	2.18	0.41
27:BF:175:PHE:HA	27:BF:176:PRO:HD2	1.84	0.41
35:BN:55:ALA:CB	35:BN:79:LEU:HB3	2.50	0.41
41:BT:1:MET:C	41:BT:2:ILE:HD12	2.45	0.41
43:BV:85:LYS:HE3	43:BV:85:LYS:HB3	1.83	0.41
47:BZ:23:THR:HG21	47:BZ:51:VAL:HG13	2.02	0.41
1:CA:435:A:C2	1:CA:436:C:C1'	3.03	0.41
1:CA:683:G:C6	1:CA:708:C:N3	2.88	0.41
1:CA:690:G:H2'	1:CA:691:G:O4'	2.19	0.41
1:CA:1025:U:H5"	1:CA:1026:G:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1166:G:H2'	1:CA:1168:U:OP2	2.20	0.41
1:CA:1319:A:OP2	19:CS:5:LEU:HD21	2.21	0.41
3:CC:50:ALA:O	3:CC:51:SER:HB2	2.20	0.41
3:CC:53:SER:HB2	3:CC:115:LEU:HG	2.01	0.41
3:CC:120:ILE:HD11	3:CC:137:ALA:CB	2.49	0.41
3:CC:124:LEU:HD13	3:CC:196:ILE:HG21	2.01	0.41
3:CC:184:TYR:CD1	3:CC:201:TRP:CD1	3.07	0.41
4:CD:29:ASP:O	4:CD:31:LYS:N	2.46	0.41
7:CG:13:LEU:HD13	7:CG:14:PRO:HD2	2.02	0.41
7:CG:138:ARG:NH2	7:CG:139:GLU:CD	2.79	0.41
9:CI:26:GLY:HA2	9:CI:61:LEU:O	2.19	0.41
12:CL:24:LEU:HD22	12:CL:59:ASN:OD1	2.20	0.41
15:CO:67:LEU:HD23	15:CO:78:TYR:CE1	2.55	0.41
16:CP:74:LEU:N	16:CP:74:LEU:HD23	2.35	0.41
22:DA:228:C:O2	22:DA:418:C:H4'	2.19	0.41
22:DA:239:C:O2	22:DA:239:C:H2'	2.21	0.41
22:DA:467:G:H4'	22:DA:796:C:O2'	2.19	0.41
22:DA:529:A:C6	22:DA:2023:C:C2	3.08	0.41
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.19	0.41
22:DA:1083:U:H2'	22:DA:1085:A:OP2	2.20	0.41
22:DA:1091:G:N3	22:DA:1092:C:C5	2.88	0.41
22:DA:1299:G:H5'	22:DA:1301:A:O4'	2.20	0.41
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.55	0.41
22:DA:1364:G:OP2	45:DX:50:ARG:NH2	2.52	0.41
22:DA:1475:G:O2'	22:DA:1476:U:P	2.78	0.41
22:DA:2078:C:H1'	22:DA:2434:A:H1'	2.03	0.41
22:DA:2103:C:C2	22:DA:2104:C:C5	3.08	0.41
22:DA:2230:G:O3'	45:DX:30:LEU:HB2	2.20	0.41
22:DA:2323:G:H2'	22:DA:2324:U:C6	2.54	0.41
22:DA:2788:C:H2'	22:DA:2789:C:H6	1.84	0.41
23:DB:65:U:C4	23:DB:108:A:C4	3.08	0.41
23:DB:100:G:H2'	23:DB:101:A:O4'	2.19	0.41
25:DD:32:ASN:N	25:DD:96:ILE:O	2.52	0.41
25:DD:61:THR:O	25:DD:62:LYS:C	2.63	0.41
25:DD:104:VAL:O	25:DD:105:LYS:HB2	2.20	0.41
27:DF:100:PHE:O	27:DF:104:ILE:HG12	2.20	0.41
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
30:DI:75:PRO:HG2	30:DI:78:VAL:CG2	2.50	0.41
30:DI:92:LYS:HB3	30:DI:95:LYS:HE3	2.01	0.41
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:51:ARG:O	37:DP:51:ARG:HG2	2.19	0.41
44:DW:75:LYS:HD2	44:DW:77:ARG:CZ	2.51	0.41
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.68	0.41
46:DY:28:LEU:HD12	46:DY:46:VAL:HG21	2.03	0.41
1:AA:452:A:N6	1:AA:480:U:C2	2.88	0.41
1:AA:523:A:C2	1:AA:527:G:O6	2.73	0.41
1:AA:549:C:C4	1:AA:550:G:N7	2.89	0.41
1:AA:559:A:H4'	1:AA:560:A:O5'	2.21	0.41
1:AA:594:U:O4	1:AA:595:A:N6	2.53	0.41
1:AA:654:G:C2'	1:AA:655:A:H5'	2.50	0.41
1:AA:982:U:H4'	1:AA:983:A:C5'	2.51	0.41
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.20	0.41
1:AA:1143:G:C4	1:AA:1144:G:C8	3.08	0.41
1:AA:1296:C:H5"	1:AA:1297:G:OP2	2.20	0.41
1:AA:1335:U:H5"	1:AA:1336:C:H5'	2.03	0.41
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.20	0.41
1:AA:1408:A:H2'	1:AA:1409:C:C6	2.55	0.41
2:AB:55:ALA:O	2:AB:59:LYS:HB2	2.20	0.41
2:AB:128:LYS:CG	2:AB:129:LEU:N	2.83	0.41
3:AC:108:LYS:O	3:AC:111:LEU:HB2	2.21	0.41
3:AC:156:ARG:NH2	3:AC:161:GLU:HA	2.35	0.41
4:AD:4:TYR:O	4:AD:5:LEU:CB	2.67	0.41
4:AD:44:ARG:O	4:AD:46:PRO:HD3	2.19	0.41
4:AD:123:ILE:HD13	4:AD:123:ILE:H	1.83	0.41
7:AG:144:MET:HA	7:AG:144:MET:HE2	2.02	0.41
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	2.02	0.41
10:AJ:42:LEU:HB3	10:AJ:71:LEU:HB3	2.00	0.41
13:AM:22:ILE:HB	13:AM:25:VAL:CG2	2.50	0.41
13:AM:74:SER:O	13:AM:75:MET:C	2.63	0.41
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	2.01	0.41
17:AQ:29:VAL:O	17:AQ:38:ILE:HD12	2.19	0.41
20:AT:35:VAL:C	20:AT:37:ALA:N	2.78	0.41
22:BA:24:G:C2	22:BA:517:C:C2	3.07	0.41
22:BA:323:C:O2	26:BE:163:ASN:ND2	2.53	0.41
22:BA:616:A:H4'	26:BE:101:TYR:CE2	2.55	0.41
22:BA:818:G:H5'	22:BA:839:U:OP1	2.20	0.41
22:BA:1000:A:N6	22:BA:1001:A:N6	2.68	0.41
22:BA:1434:A:C2	22:BA:1435:G:C5	3.08	0.41
22:BA:1449:G:H2'	22:BA:1450:G:O5'	2.20	0.41
22:BA:1474:U:C4	22:BA:1475:G:N2	2.87	0.41
22:BA:1490:A:N3	22:BA:1490:A:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1813:G:N3	24:BC:50:THR:OG1	2.46	0.41
22:BA:1919:A:N1	22:BA:1920:C:O4'	2.54	0.41
22:BA:2174:C:O2'	22:BA:2175:C:H5'	2.20	0.41
22:BA:2508:G:C2	22:BA:2582:G:C6	3.09	0.41
23:BB:53:A:N3	23:BB:53:A:H2'	2.34	0.41
23:BB:77:U:H2'	23:BB:78:A:H5'	2.01	0.41
25:BD:39:ASP:O	25:BD:43:ASP:N	2.51	0.41
25:BD:142:VAL:HB	25:BD:143:PRO:HD3	2.02	0.41
27:BF:99:PHE:O	27:BF:102:ARG:N	2.53	0.41
30:BI:11:LEU:O	30:BI:24:VAL:HG11	2.20	0.41
31:BJ:53:TYR:C	31:BJ:54:ILE:HG12	2.45	0.41
33:BL:14:LYS:O	33:BL:15:ALA:C	2.64	0.41
39:BR:1:MET:HG3	39:BR:42:ALA:O	2.20	0.41
40:BS:28:LYS:O	40:BS:30:SER:N	2.53	0.41
40:BS:37:THR:HG21	40:BS:38:TYR:CE1	2.54	0.41
41:BT:47:VAL:HG11	41:BT:85:VAL:HG11	2.02	0.41
43:BV:26:PHE:CD1	43:BV:26:PHE:C	2.98	0.41
45:BX:12:PRO:HB3	45:BX:30:LEU:CD2	2.47	0.41
48:B0:13:ARG:HD2	48:B0:17:ARG:CZ	2.50	0.41
1:CA:39:G:N2	1:CA:40:C:C2	2.88	0.41
1:CA:790:A:N6	1:CA:791:G:N1	2.68	0.41
1:CA:965:U:OP1	1:CA:1198:G:H5"	2.20	0.41
1:CA:991:U:H4'	1:CA:992:U:OP1	2.21	0.41
1:CA:1022:A:C5	1:CA:1023:U:C5	3.09	0.41
1:CA:1240:U:H3'	1:CA:1241:G:H5'	2.02	0.41
2:CB:24:ASN:C	2:CB:26:LYS:N	2.75	0.41
2:CB:130:THR:HB	2:CB:132:LYS:HB3	2.02	0.41
2:CB:154:MET:CE	2:CB:158:PRO:HG3	2.51	0.41
2:CB:211:THR:HA	2:CB:214:LEU:HB2	2.02	0.41
4:CD:15:GLU:HA	4:CD:15:GLU:OE1	2.20	0.41
4:CD:195:ILE:O	4:CD:195:ILE:CG1	2.68	0.41
13:CM:54:ASP:HA	13:CM:57:ARG:CB	2.50	0.41
15:CO:45:GLU:O	15:CO:46:HIS:CB	2.67	0.41
17:CQ:11:ARG:CZ	17:CQ:12:VAL:O	2.68	0.41
17:CQ:15:ASP:N	17:CQ:17:MET:HE1	2.36	0.41
22:DA:371:A:H61	22:DA:401:A:H3'	1.85	0.41
22:DA:404:A:H1'	22:DA:405:U:P	2.60	0.41
22:DA:770:G:O4'	22:DA:1379:U:C5	2.73	0.41
22:DA:788:A:H1'	50:D2:4:THR:CG2	2.50	0.41
22:DA:870:U:H5"	34:DM:6:ARG:O	2.20	0.41
22:DA:1096:A:N1	22:DA:1097:U:C5	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1211:C:H5”	22:DA:1212:G:C8	2.55	0.41
22:DA:1365:A:C5	22:DA:1366:A:N7	2.88	0.41
22:DA:1456:G:C4	22:DA:1457:U:C6	3.09	0.41
22:DA:1664:A:C8	22:DA:1664:A:OP2	2.73	0.41
22:DA:2133:G:N3	22:DA:2158:A:C6	2.88	0.41
22:DA:2134:A:N6	22:DA:2157:G:HO2’	2.12	0.41
22:DA:2346:A:C3’	22:DA:2347:C:C5’	2.97	0.41
22:DA:2512:C:H2’	22:DA:2513:A:O4’	2.20	0.41
22:DA:2563:U:O4’	22:DA:2566:A:N6	2.53	0.41
22:DA:2645:G:OP2	22:DA:2645:G:N2	2.46	0.41
24:DC:189:ARG:O	24:DC:190:ALA:HB2	2.21	0.41
25:DD:15:PHE:HA	25:DD:20:VAL:O	2.21	0.41
26:DE:108:ILE:HD11	26:DE:180:LEU:CB	2.50	0.41
28:DG:41:VAL:HG23	28:DG:64:GLN:HB3	2.02	0.41
30:DI:57:VAL:CG2	30:DI:58:VAL:N	2.83	0.41
30:DI:89:GLY:HA2	30:DI:136:MET:HE3	2.02	0.41
34:DM:36:VAL:HG22	34:DM:129:THR:HB	2.02	0.41
35:DN:25:ALA:HA	35:DN:48:VAL:HG22	2.02	0.41
39:DR:23:GLU:O	39:DR:24:LYS:C	2.63	0.41
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	2.03	0.41
42:DU:83:VAL:CG1	42:DU:84:GLY:N	2.83	0.41
47:DZ:13:ALA:HB2	47:DZ:24:LEU:CD1	2.50	0.41
51:D3:31:HIS:ND1	51:D3:31:HIS:C	2.78	0.41
1:AA:192:A:C6	1:AA:193:C:C4	3.08	0.41
1:AA:269:C:N4	1:AA:270:A:N6	2.69	0.41
1:AA:422:C:O4’	1:AA:422:C:OP1	2.38	0.41
1:AA:568:G:H2’	1:AA:569:C:H6	1.84	0.41
1:AA:663:A:H5’	1:AA:836:G:OP1	2.20	0.41
1:AA:670:G:C2’	1:AA:671:G:O5’	2.67	0.41
1:AA:735:C:O2’	6:AF:88:MET:HE1	2.20	0.41
1:AA:821:G:H4’	57:AA:1741:HOH:O	2.19	0.41
1:AA:1160:G:C6	1:AA:1181:G:O6	2.73	0.41
1:AA:1461:G:H2’	1:AA:1462:C:H6	1.85	0.41
2:AB:12:ALA:O	2:AB:13:GLY:C	2.64	0.41
2:AB:68:LEU:CD2	2:AB:92:VAL:HG23	2.51	0.41
3:AC:130:PHE:O	3:AC:134:MET:HG3	2.19	0.41
3:AC:134:MET:HE1	3:AC:166:GLU:O	2.21	0.41
4:AD:90:LEU:HD23	4:AD:200:ILE:HD11	2.01	0.41
5:AE:61:GLN:C	5:AE:63:ALA:N	2.79	0.41
6:AF:38:ARG:HG3	6:AF:39:LEU:H	1.85	0.41
9:AI:22:LYS:HE3	9:AI:22:LYS:HB3	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:5:ARG:HG2	10:AJ:79:PRO:HG3	2.03	0.41
10:AJ:49:PHE:CD1	10:AJ:49:PHE:N	2.88	0.41
11:AK:37:ARG:O	11:AK:39:GLY:N	2.52	0.41
13:AM:6:GLY:O	13:AM:7:ILE:C	2.63	0.41
13:AM:111:GLY:O	13:AM:112:PRO:C	2.63	0.41
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.20	0.41
19:AS:11:ILE:HG13	19:AS:15:LEU:HD23	2.01	0.41
22:BA:563:A:C8	22:BA:2018:G:N1	2.88	0.41
22:BA:931:U:O4	22:BA:1183:U:O2'	2.36	0.41
22:BA:1027:A:N1	22:BA:1126:A:N9	2.68	0.41
22:BA:1489:C:C2	22:BA:1501:G:N2	2.88	0.41
22:BA:1649:G:C2	22:BA:1650:A:C8	3.08	0.41
22:BA:1784:A:P	57:BA:3698:HOH:O	2.77	0.41
22:BA:1838:C:N4	22:BA:1899:A:O4'	2.53	0.41
22:BA:1842:G:C4	22:BA:1901:A:C2	3.08	0.41
22:BA:1914:C:C4	22:BA:1915:U:C4	3.08	0.41
22:BA:2599:G:OP2	24:BC:235:GLY:O	2.39	0.41
22:BA:2648:G:H2'	22:BA:2649:C:O4'	2.21	0.41
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.20	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
30:BI:43:ASN:HA	30:BI:46:THR:HB	2.01	0.41
33:BL:116:VAL:HG13	33:BL:116:VAL:O	2.21	0.41
40:BS:36:LEU:HD13	40:BS:48:LYS:HB2	2.03	0.41
50:B2:31:LEU:HD22	50:B2:42:LEU:HG	2.03	0.41
50:B2:43:THR:O	50:B2:44:VAL:HB	2.20	0.41
53:B5:84:ILE:C	53:B5:85:LYS:HG3	2.45	0.41
53:B5:192:ALA:O	53:B5:196:ALA:HB3	2.20	0.41
1:CA:558:G:O5'	1:CA:558:G:H8	2.03	0.41
1:CA:632:U:H3'	1:CA:633:G:H5'	2.03	0.41
1:CA:851:G:C2	1:CA:852:G:C8	3.08	0.41
1:CA:920:U:H2'	1:CA:921:U:H6	1.85	0.41
1:CA:1036:A:H5'	1:CA:1037:C:OP2	2.20	0.41
1:CA:1232:U:OP1	9:CI:126:GLN:NE2	2.53	0.41
1:CA:1308:U:OP2	13:CM:98:ARG:HG3	2.20	0.41
2:CB:68:LEU:HD13	2:CB:161:LEU:HD11	2.02	0.41
3:CC:64:ILE:HG22	3:CC:97:VAL:HG23	2.02	0.41
7:CG:106:GLU:O	7:CG:110:LYS:HG2	2.20	0.41
8:CH:41:LYS:HD2	8:CH:48:ASP:HA	2.03	0.41
9:CI:57:MET:SD	9:CI:57:MET:N	2.94	0.41
9:CI:100:LYS:C	9:CI:102:GLY:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:114:LYS:HG2	9:CI:115:LYS:N	2.35	0.41
9:CI:118:LEU:HD12	9:CI:118:LEU:N	2.36	0.41
11:CK:88:GLY:H	11:CK:114:THR:HG22	1.85	0.41
12:CL:116:LYS:O	12:CL:117:TYR:CD1	2.73	0.41
13:CM:4:ILE:O	13:CM:6:GLY:N	2.53	0.41
16:CP:55:ASP:O	16:CP:58:ALA:HB3	2.20	0.41
18:CR:27:ALA:O	18:CR:30:LYS:HG2	2.21	0.41
20:CT:44:LYS:HD3	20:CT:87:ALA:HA	2.03	0.41
21:CU:11:PRO:O	21:CU:12:PHE:CB	2.68	0.41
22:DA:16:C:H4'	48:D0:11:SER:OG	2.20	0.41
22:DA:247:G:N7	22:DA:249:C:N1	2.67	0.41
22:DA:475:C:N3	22:DA:481:G:C6	2.89	0.41
22:DA:937:C:H2'	22:DA:938:G:O4'	2.21	0.41
22:DA:976:G:O6	22:DA:988:A:C2	2.73	0.41
22:DA:1313:U:O2	22:DA:1313:U:H2'	2.20	0.41
22:DA:1350:C:C2	22:DA:1382:G:C2	3.08	0.41
22:DA:1364:G:H2'	22:DA:1365:A:H5'	2.02	0.41
22:DA:1366:A:C2	22:DA:1367:A:C1'	3.03	0.41
22:DA:1384:A:H1'	22:DA:1405:U:H1'	2.03	0.41
22:DA:1567:G:O2'	24:DC:63:ARG:NH1	2.54	0.41
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.20	0.41
22:DA:1786:A:H1'	22:DA:1938:A:N6	2.35	0.41
22:DA:1831:G:H2'	22:DA:1832:C:C6	2.55	0.41
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.56	0.41
22:DA:2246:G:H2'	22:DA:2247:A:O4'	2.20	0.41
22:DA:2276:G:C2'	22:DA:2277:G:O5'	2.68	0.41
22:DA:2286:G:H5'	22:DA:2287:A:O4'	2.20	0.41
22:DA:2290:G:H4'	22:DA:2381:A:O2'	2.20	0.41
22:DA:2355:G:OP1	44:DW:25:ARG:NH2	2.53	0.41
22:DA:2444:G:P	26:DE:63:LYS:HD2	2.60	0.41
22:DA:2572:A:N7	25:DD:150:GLN:HB3	2.36	0.41
22:DA:2586:U:O2	22:DA:2586:U:H2'	2.20	0.41
23:DB:40:U:N3	23:DB:44:G:OP2	2.46	0.41
24:DC:2:ALA:O	24:DC:3:VAL:C	2.62	0.41
24:DC:154:LEU:HD13	24:DC:176:LEU:HD21	2.03	0.41
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.36	0.41
27:DF:40:VAL:HG11	27:DF:50:LEU:HD13	2.01	0.41
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.68	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
41:DT:22:THR:HA	41:DT:25:GLU:CG	2.51	0.41
1:AA:119:A:C4	1:AA:240:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:263:A:P	20:AT:74:ARG:HH12	2.42	0.41
1:AA:457:G:N7	1:AA:458:U:C5	2.89	0.41
1:AA:615:G:C2	1:AA:616:G:C8	3.09	0.41
1:AA:838:G:H2'	1:AA:839:C:C6	2.55	0.41
1:AA:872:A:N7	1:AA:874:G:C8	2.87	0.41
1:AA:953:G:H2'	1:AA:954:G:O4'	2.21	0.41
1:AA:1133:G:N2	1:AA:1142:G:C4	2.88	0.41
1:AA:1164:G:C2	1:AA:1173:U:O2	2.74	0.41
1:AA:1299:A:C5	1:AA:1301:U:O2	2.73	0.41
1:AA:1425:U:O2	1:AA:1476:A:C2	2.74	0.41
1:AA:1501:C:N3	1:AA:1504:G:C6	2.89	0.41
3:AC:155:GLY:CA	3:AC:163:ALA:HB1	2.50	0.41
10:AJ:7:ARG:CB	10:AJ:75:ASP:OD1	2.69	0.41
10:AJ:8:ILE:HD11	10:AJ:74:VAL:HG11	2.02	0.41
10:AJ:56:HIS:C	10:AJ:57:VAL:HG12	2.46	0.41
11:AK:63:ALA:HB2	11:AK:92:GLY:HA3	2.03	0.41
14:AN:28:LYS:HG3	14:AN:29:ALA:N	2.35	0.41
14:AN:80:SER:O	14:AN:81:ARG:C	2.64	0.41
21:AU:40:LYS:N	21:AU:41:PRO:HD2	2.36	0.41
22:BA:64:A:H2'	22:BA:65:U:H6	1.77	0.41
22:BA:86:G:C2	22:BA:97:C:C2	3.09	0.41
22:BA:735:A:H3'	22:BA:736:C:H6	1.85	0.41
22:BA:928:A:C2	47:BZ:47:MET:HE1	2.55	0.41
22:BA:966:G:C6	22:BA:967:U:C4	3.08	0.41
22:BA:1056:G:C4'	22:BA:1086:A:C8	3.03	0.41
22:BA:1153:C:N4	22:BA:1154:G:C2	2.88	0.41
22:BA:1244:A:C2'	22:BA:1245:G:H5'	2.51	0.41
22:BA:1300:G:O4'	22:BA:1626:A:H2	2.03	0.41
22:BA:1518:C:C2	22:BA:1519:G:C8	3.08	0.41
22:BA:1983:G:H2'	22:BA:1984:G:O5'	2.21	0.41
22:BA:1983:G:C6	22:BA:1984:G:N7	2.88	0.41
22:BA:2509:G:N2	22:BA:2510:C:H1'	2.36	0.41
22:BA:2687:U:O4	22:BA:2688:G:C2	2.74	0.41
30:BI:33:VAL:CG1	30:BI:34:ASN:N	2.83	0.41
36:BO:93:ASP:OD2	36:BO:93:ASP:C	2.63	0.41
39:BR:46:GLU:OE1	39:BR:46:GLU:CA	2.67	0.41
39:BR:55:ASP:C	39:BR:57:GLY:H	2.27	0.41
41:BT:73:ARG:HB3	41:BT:73:ARG:CZ	2.50	0.41
48:B0:13:ARG:HD2	48:B0:17:ARG:NH1	2.36	0.41
52:B4:7:VAL:HG22	52:B4:38:GLY:HA3	2.02	0.41
52:B4:19:ARG:O	52:B4:20:ASP:C	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:33:HIS:O	52:B4:34:LYS:C	2.63	0.41
53:B5:155:ARG:O	53:B5:156:GLU:C	2.62	0.41
1:CA:213:G:C8	1:CA:214:C:C6	3.08	0.41
1:CA:247:G:O6	1:CA:278:G:C6	2.74	0.41
1:CA:491:G:O2'	1:CA:492:C:H5'	2.20	0.41
1:CA:728:A:N1	1:CA:729:A:C6	2.88	0.41
1:CA:1036:A:N3	1:CA:1036:A:H2'	2.35	0.41
1:CA:1089:G:C5	1:CA:1090:U:C5	3.09	0.41
1:CA:1262:C:C4	1:CA:1263:C:C4	3.09	0.41
1:CA:1318:A:O2'	19:CS:37:ARG:HD3	2.20	0.41
1:CA:1516:G:C2	1:CA:1520:C:O2	2.74	0.41
2:CB:10:LEU:HB2	2:CB:43:LEU:HD22	2.03	0.41
3:CC:71:ALA:O	3:CC:73:PRO:HD3	2.20	0.41
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.67	0.41
3:CC:181:ASP:OD2	3:CC:204:LYS:HB2	2.19	0.41
4:CD:203:LEU:HD12	4:CD:203:LEU:C	2.46	0.41
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.51	0.41
7:CG:40:GLU:HB2	7:CG:44:TYR:CE2	2.56	0.41
9:CI:18:ARG:HG3	9:CI:66:THR:OG1	2.21	0.41
10:CJ:34:ALA:O	10:CJ:78:GLU:HB3	2.20	0.41
13:CM:96:PRO:HB2	13:CM:100:GLN:OE1	2.20	0.41
14:CN:36:ALA:CB	14:CN:41:ARG:HG3	2.50	0.41
18:CR:23:TYR:O	18:CR:23:TYR:CD1	2.74	0.41
19:CS:6:LYS:CB	19:CS:7:LYS:HE3	2.50	0.41
22:DA:526:A:C6	22:DA:2626:C:H4'	2.55	0.41
22:DA:1231:U:O5'	22:DA:1231:U:H6	2.04	0.41
22:DA:1257:C:C4	22:DA:1258:U:C4	3.08	0.41
22:DA:1332:G:N3	22:DA:1332:G:H2'	2.36	0.41
22:DA:1336:A:H2'	22:DA:1337:G:C8	2.54	0.41
22:DA:1362:C:H2'	22:DA:1363:C:H5'	2.02	0.41
22:DA:1475:G:H4'	22:DA:1732:C:C5	2.55	0.41
22:DA:1562:U:C4	22:DA:1563:U:C4	3.09	0.41
22:DA:1570:A:C6	22:DA:1571:A:C6	3.08	0.41
22:DA:1731:G:C6	22:DA:1733:G:C5	3.08	0.41
22:DA:2241:A:H2'	22:DA:2242:G:C8	2.55	0.41
22:DA:2347:C:O2'	49:D1:39:PHE:HB3	2.20	0.41
22:DA:2410:G:C6	22:DA:2411:A:C4	3.09	0.41
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.35	0.41
22:DA:2752:C:C5	22:DA:2753:A:N7	2.89	0.41
23:DB:4:C:H2'	23:DB:5:U:O4'	2.21	0.41
23:DB:94:A:OP1	43:DV:19:ARG:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:95:LEU:HD13	24:DC:101:ARG:CZ	2.51	0.41
26:DE:59:PRO:HB2	26:DE:70:SER:OG	2.20	0.41
27:DF:42:GLU:O	27:DF:44:ILE:N	2.53	0.41
27:DF:70:ALA:O	27:DF:71:ARG:C	2.62	0.41
27:DF:121:SER:O	27:DF:128:TYR:HA	2.21	0.41
30:DI:46:THR:CG2	30:DI:51:LYS:HG3	2.51	0.41
30:DI:80:LEU:HD22	30:DI:138:LEU:HD11	2.02	0.41
30:DI:117:MET:SD	30:DI:125:MET:HG2	2.60	0.41
35:DN:79:LEU:O	35:DN:80:PHE:HB2	2.20	0.41
36:DO:37:ALA:HB2	36:DO:106:LEU:HD11	2.02	0.41
36:DO:66:GLY:HA2	36:DO:102:ARG:NH2	2.36	0.41
43:DV:8:VAL:O	43:DV:9:ARG:C	2.63	0.41
52:D4:1:MET:HB2	52:D4:34:LYS:O	2.21	0.41
1:AA:64:G:C2	1:AA:67:C:C4	3.09	0.41
1:AA:159:G:N2	1:AA:163:C:C4	2.89	0.41
1:AA:883:C:N3	1:AA:884:U:C4	2.88	0.41
1:AA:1058:G:C5	1:AA:1059:C:C5	3.09	0.41
1:AA:1309:G:C6	1:AA:1329:A:C6	3.09	0.41
1:AA:1448:C:O2	1:AA:1448:C:H2'	2.21	0.41
2:AB:49:MET:O	2:AB:53:ALA:CB	2.65	0.41
2:AB:54:LEU:HA	2:AB:57:LEU:HB3	2.02	0.41
3:AC:26:THR:O	3:AC:27:LYS:C	2.63	0.41
3:AC:172:ARG:HB3	3:AC:203:PHE:CD2	2.55	0.41
6:AF:99:ALA:C	6:AF:100:SER:OG	2.63	0.41
7:AG:68:ASN:C	7:AG:70:ARG:H	2.28	0.41
7:AG:79:ARG:NH1	7:AG:82:GLY:O	2.53	0.41
7:AG:125:SER:O	7:AG:128:ALA:HB3	2.21	0.41
9:AI:97:GLU:CD	9:AI:97:GLU:N	2.78	0.41
11:AK:32:VAL:O	11:AK:32:VAL:HG12	2.20	0.41
14:AN:10:GLU:OE2	14:AN:61:ARG:N	2.51	0.41
22:BA:140:C:O2	22:BA:140:C:O4'	2.37	0.41
22:BA:250:G:P	51:B3:13:ARG:HH12	2.44	0.41
22:BA:659:G:C6	22:BA:660:C:C4	3.09	0.41
22:BA:784:G:O2'	22:BA:785:G:C5'	2.68	0.41
22:BA:1047:G:N3	22:BA:1110:G:C2	2.89	0.41
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.21	0.41
22:BA:2192:U:H2'	22:BA:2193:G:O4'	2.21	0.41
22:BA:2443:C:H2'	22:BA:2444:G:C8	2.56	0.41
23:BB:94:A:H2'	23:BB:95:U:O5'	2.20	0.41
24:BC:40:SER:C	24:BC:42:GLY:H	2.28	0.41
24:BC:201:MET:HG3	24:BC:202:LEU:HD13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:164:LEU:HB3	26:BE:167:VAL:HB	2.03	0.41
26:BE:198:GLU:O	26:BE:199:MET:C	2.64	0.41
27:BF:36:LEU:HD11	27:BF:99:PHE:CZ	2.55	0.41
28:BG:124:GLU:OE1	28:BG:124:GLU:HA	2.20	0.41
30:BI:105:GLN:O	30:BI:106:LEU:CB	2.68	0.41
31:BJ:140:LEU:HG	31:BJ:142:ILE:HB	2.02	0.41
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.35	0.41
34:BM:105:MET:HE3	34:BM:105:MET:HB2	1.90	0.41
39:BR:51:VAL:O	39:BR:52:PRO:O	2.38	0.41
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.99	0.41
40:BS:1:MET:HB3	40:BS:1:MET:HE3	1.79	0.41
41:BT:51:PHE:O	41:BT:52:GLU:C	2.64	0.41
42:BU:5:ILE:CD1	42:BU:72:ILE:HG23	2.50	0.41
42:BU:49:VAL:C	42:BU:51:ALA:H	2.29	0.41
43:BV:9:ARG:HD2	43:BV:40:ILE:O	2.21	0.41
1:CA:31:G:C5	1:CA:306:A:H1'	2.55	0.41
1:CA:188:C:O2	1:CA:188:C:H2'	2.18	0.41
1:CA:216:U:C4	1:CA:217:C:N4	2.88	0.41
1:CA:439:U:H4'	4:CD:121:LYS:HG3	2.02	0.41
1:CA:652:U:C5	1:CA:752:G:C2	3.08	0.41
1:CA:942:G:C2	1:CA:1342:C:C2	3.09	0.41
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.20	0.41
1:CA:1178:G:O2'	1:CA:1180:A:N7	2.47	0.41
1:CA:1271:A:H2'	1:CA:1272:G:C8	2.55	0.41
1:CA:1375:A:C5	1:CA:1376:U:C5	3.08	0.41
2:CB:62:SER:C	2:CB:64:LYS:N	2.76	0.41
2:CB:99:GLY:C	2:CB:101:LEU:N	2.78	0.41
3:CC:12:LEU:C	3:CC:14:ILE:N	2.76	0.41
3:CC:23:PHE:CD2	3:CC:24:ALA:N	2.88	0.41
4:CD:130:VAL:HG11	4:CD:135:TYR:CG	2.55	0.41
5:CE:103:THR:O	5:CE:121:HIS:O	2.39	0.41
5:CE:153:VAL:HG23	5:CE:157:ARG:HB2	2.02	0.41
6:CF:10:VAL:HG21	6:CF:18:VAL:CG2	2.50	0.41
10:CJ:53:ILE:HG13	14:CN:85:ARG:HD2	2.02	0.41
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	2.03	0.41
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.88	0.41
13:CM:5:ALA:O	13:CM:7:ILE:N	2.54	0.41
17:CQ:55:ILE:C	17:CQ:55:ILE:HD13	2.46	0.41
22:DA:60:G:H3'	22:DA:60:G:P	2.61	0.41
22:DA:333:G:C5	22:DA:334:C:C5	3.09	0.41
22:DA:425:G:C2	22:DA:426:C:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:491:G:O6	22:DA:492:A:C6	2.74	0.41
22:DA:672:C:H4'	26:DE:84:THR:CG2	2.51	0.41
22:DA:995:C:O2	31:DJ:3:THR:OG1	2.27	0.41
22:DA:1234:U:H2'	22:DA:1235:G:O4'	2.21	0.41
22:DA:1359:A:N7	22:DA:1373:A:C2	2.89	0.41
22:DA:1585:C:C5	22:DA:1586:A:C5	3.08	0.41
22:DA:1707:G:C5	22:DA:1708:C:C4	3.09	0.41
22:DA:1790:C:C5	22:DA:1828:G:C2	3.08	0.41
22:DA:1843:C:H4'	24:DC:251:GLN:OE1	2.21	0.41
22:DA:2118:U:O4	22:DA:2149:U:H1'	2.20	0.41
22:DA:2235:G:C4	22:DA:2236:U:C6	3.08	0.41
22:DA:2242:G:C5	22:DA:2243:U:C5	3.08	0.41
22:DA:2284:A:OP1	49:D1:4:GLY:O	2.39	0.41
22:DA:2323:G:H2'	22:DA:2324:U:O4'	2.21	0.41
23:DB:6:G:C2	23:DB:115:A:C2	3.09	0.41
23:DB:75:G:HO2'	43:DV:88:HIS:HE2	1.67	0.41
26:DE:78:TRP:O	26:DE:79:ARG:C	2.63	0.41
26:DE:126:VAL:HG22	26:DE:133:LEU:HD22	2.03	0.41
27:DF:31:VAL:HG22	27:DF:96:MET:SD	2.60	0.41
27:DF:134:GLU:HB3	27:DF:137:ILE:HG23	2.02	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
30:DI:80:LEU:HD11	30:DI:133:ALA:HB2	2.03	0.41
30:DI:105:GLN:O	30:DI:106:LEU:CB	2.68	0.41
30:DI:105:GLN:O	30:DI:106:LEU:HG	2.21	0.41
33:DL:57:LEU:HD12	33:DL:60:ARG:HD2	2.03	0.41
35:DN:8:ARG:HB3	35:DN:10:LEU:HG	2.03	0.41
42:DU:95:PHE:O	42:DU:95:PHE:CG	2.72	0.41
45:DX:13:VAL:CG2	45:DX:29:PHE:HB2	2.50	0.41
45:DX:43:GLU:O	45:DX:44:LYS:C	2.63	0.41
45:DX:65:ASP:O	45:DX:66:THR:C	2.63	0.41
1:AA:195:A:H1'	1:AA:222:C:O2'	2.20	0.41
1:AA:411:A:C6	1:AA:429:U:C5	3.09	0.41
1:AA:419:C:C5	1:AA:420:U:C5	3.08	0.41
1:AA:675:A:O2'	11:AK:116:ILE:O	2.39	0.41
1:AA:736:C:H4'	6:AF:88:MET:HE2	2.03	0.41
1:AA:771:G:H2'	1:AA:772:U:H5'	2.00	0.41
1:AA:880:C:H2'	1:AA:881:G:H5'	2.03	0.41
1:AA:919:A:O2'	1:AA:1080:A:N1	2.50	0.41
1:AA:968:A:H4'	1:AA:969:A:OP2	2.21	0.41
1:AA:978:A:C5	1:AA:1318:A:C6	3.09	0.41
1:AA:980:C:H2'	1:AA:981:U:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.56	0.41
2:AB:60:ILE:C	2:AB:60:ILE:HD12	2.44	0.41
2:AB:99:GLY:O	2:AB:103:ASN:HB2	2.20	0.41
2:AB:117:LEU:HA	2:AB:120:GLN:OE1	2.20	0.41
2:AB:139:ARG:HG3	2:AB:140:GLU:N	2.36	0.41
5:AE:10:GLU:O	5:AE:11:LEU:C	2.63	0.41
5:AE:81:LEU:CB	5:AE:147:MET:HE1	2.50	0.41
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	2.01	0.41
9:AI:12:ARG:O	9:AI:13:LYS:C	2.63	0.41
9:AI:99:ARG:O	9:AI:100:LYS:C	2.63	0.41
13:AM:3:ARG:HG2	13:AM:4:ILE:N	2.33	0.41
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	2.19	0.41
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.21	0.41
16:AP:16:PHE:C	16:AP:16:PHE:CD1	2.98	0.41
19:AS:7:LYS:HD2	19:AS:7:LYS:HA	1.93	0.41
21:AU:4:ILE:HD13	21:AU:20:LYS:NZ	2.35	0.41
21:AU:41:PRO:HA	21:AU:45:ARG:HH11	1.85	0.41
22:BA:65:U:H2'	22:BA:66:C:C6	2.55	0.41
22:BA:387:U:H4'	22:BA:388:G:O5'	2.21	0.41
22:BA:481:G:N3	22:BA:507:A:C2	2.88	0.41
22:BA:499:U:O4	22:BA:500:G:C6	2.74	0.41
22:BA:585:G:O2'	26:BE:77:ILE:HG23	2.21	0.41
22:BA:589:U:H2'	22:BA:590:A:H8	1.86	0.41
22:BA:839:U:O2'	22:BA:1191:G:N3	2.52	0.41
22:BA:1006:C:C2	22:BA:1138:G:C2	3.08	0.41
22:BA:1258:U:C2	22:BA:1259:G:C8	3.08	0.41
22:BA:1414:C:N3	22:BA:1415:U:H5	2.17	0.41
22:BA:1482:G:C6	22:BA:1508:A:N1	2.89	0.41
22:BA:1607:C:C4	22:BA:1622:G:N7	2.89	0.41
22:BA:1687:G:C6	22:BA:1688:U:O4	2.73	0.41
22:BA:1826:G:C6	22:BA:1827:U:C4	3.09	0.41
22:BA:1832:C:C4	22:BA:1833:C:C5	3.09	0.41
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.35	0.41
22:BA:1961:C:H5	22:BA:1962:C:C4	2.38	0.41
24:BC:121:ASP:O	24:BC:122:ALA:C	2.64	0.41
24:BC:201:MET:HG3	24:BC:202:LEU:CD1	2.50	0.41
25:BD:85:ALA:HB3	25:BD:88:GLU:HG3	2.03	0.41
28:BG:105:LEU:HD13	28:BG:107:LEU:HD11	2.02	0.41
29:BH:10:ALA:C	29:BH:12:LEU:H	2.27	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:111:GLN:CD	30:BI:111:GLN:C	2.88	0.41
31:BJ:135:GLN:N	31:BJ:135:GLN:CD	2.78	0.41
33:BL:4:ASN:ND2	33:BL:4:ASN:O	2.54	0.41
37:BP:16:ASP:C	37:BP:16:ASP:OD1	2.63	0.41
37:BP:22:PRO:HA	37:BP:47:VAL:HG12	2.01	0.41
43:BV:4:ILE:HG13	43:BV:50:MET:HE1	2.03	0.41
44:BW:66:LYS:HG3	44:BW:85:GLU:HB3	2.02	0.41
47:BZ:17:LEU:O	47:BZ:18:PRO:C	2.64	0.41
48:B0:20:ASP:OD2	48:B0:20:ASP:N	2.53	0.41
53:B5:23:ILE:O	53:B5:26:ALA:HB3	2.21	0.41
1:CA:106:C:O2	1:CA:379:C:C5'	2.68	0.41
1:CA:483:C:H2'	1:CA:484:G:C8	2.56	0.41
1:CA:509:A:C6	1:CA:510:A:C6	3.09	0.41
1:CA:755:G:C2	1:CA:756:C:C6	3.09	0.41
1:CA:853:C:C2	1:CA:854:U:C6	3.08	0.41
1:CA:860:A:N6	1:CA:861:G:C2	2.89	0.41
1:CA:1107:C:C4	1:CA:1108:G:N7	2.89	0.41
1:CA:1202:U:H2'	1:CA:1203:C:H5'	2.03	0.41
8:CH:20:ALA:O	8:CH:21:ASN:HB2	2.21	0.41
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.55	0.41
11:CK:126:LYS:C	21:CU:34:ARG:NH2	2.79	0.41
14:CN:3:LYS:HB3	14:CN:6:MET:HG2	2.01	0.41
14:CN:22:ALA:N	14:CN:25:ALA:CB	2.83	0.41
17:CQ:24:ALA:HB1	17:CQ:41:THR:CG2	2.51	0.41
20:CT:35:VAL:HG21	20:CT:54:MET:HG2	2.02	0.41
21:CU:21:ARG:NH1	21:CU:25:LYS:HG3	2.36	0.41
22:DA:352:A:C6	22:DA:353:C:N3	2.89	0.41
22:DA:475:C:H6	22:DA:475:C:O5'	2.04	0.41
22:DA:527:C:OP2	22:DA:2779:U:N3	2.51	0.41
22:DA:833:A:H2'	22:DA:834:G:H8	1.86	0.41
22:DA:892:A:N3	22:DA:892:A:H2'	2.35	0.41
22:DA:942:G:C2'	22:DA:943:A:H5'	2.51	0.41
22:DA:1290:C:C4	22:DA:1291:C:C5	3.09	0.41
22:DA:1352:U:H5	57:DA:3395:HOH:O	2.04	0.41
22:DA:1410:G:C2	22:DA:1593:A:C6	3.09	0.41
22:DA:1525:A:C6	22:DA:1526:C:N3	2.88	0.41
22:DA:1581:G:C6	22:DA:1582:C:N4	2.89	0.41
22:DA:1652:A:C2	22:DA:2006:C:O2	2.74	0.41
22:DA:2044:C:N3	22:DA:2045:C:C5	2.88	0.41
22:DA:2199:A:N7	22:DA:2225:A:C6	2.89	0.41
22:DA:2215:C:H2'	22:DA:2216:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2789:C:H5'	22:DA:2809:A:H1'	2.01	0.41
26:DE:136:GLN:O	26:DE:138:LEU:N	2.53	0.41
28:DG:123:ALA:HB2	28:DG:133:LEU:HB3	2.03	0.41
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.19	0.41
39:DR:6:GLN:O	39:DR:7:SER:HB2	2.20	0.41
39:DR:39:LEU:C	39:DR:49:ILE:HG23	2.46	0.41
47:DZ:38:ARG:HA	47:DZ:38:ARG:HD3	1.86	0.41
1:AA:1079:G:P	57:AA:1791:HOH:O	2.78	0.41
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.55	0.41
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.55	0.41
1:AA:1277:C:C2'	1:AA:1279:G:H8	2.33	0.41
1:AA:1441:A:H2	37:BP:114:LEU:HD22	1.86	0.41
1:AA:1524:C:OP2	11:AK:125:LYS:NZ	2.41	0.41
2:AB:21:ARG:C	2:AB:23:TRP:N	2.65	0.41
2:AB:64:LYS:C	2:AB:64:LYS:HD3	2.45	0.41
3:AC:14:ILE:O	3:AC:15:VAL:HG22	2.21	0.41
3:AC:79:LYS:O	3:AC:82:GLU:HG3	2.20	0.41
3:AC:172:ARG:O	3:AC:173:VAL:HG22	2.20	0.41
7:AG:85:TYR:C	7:AG:87:VAL:H	2.29	0.41
7:AG:118:LEU:O	7:AG:119:ARG:C	2.63	0.41
8:AH:47:GLU:HG2	8:AH:64:LYS:HG2	2.03	0.41
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.36	0.41
9:AI:6:TYR:HB3	9:AI:89:GLU:HG2	2.01	0.41
9:AI:97:GLU:N	9:AI:97:GLU:OE2	2.54	0.41
9:AI:130:ARG:NH1	9:AI:130:ARG:HB3	2.35	0.41
10:AJ:80:THR:C	10:AJ:82:LYS:H	2.28	0.41
11:AK:25:ALA:O	11:AK:88:GLY:HA3	2.21	0.41
14:AN:46:LEU:C	14:AN:48:LEU:H	2.27	0.41
20:AT:79:LEU:O	20:AT:80:THR:C	2.63	0.41
21:AU:29:LEU:C	21:AU:29:LEU:CD2	2.93	0.41
22:BA:190:A:C8	22:BA:207:A:C6	3.09	0.41
22:BA:195:A:C4	22:BA:198:C:N4	2.89	0.41
22:BA:225:C:H2'	22:BA:226:A:O4'	2.21	0.41
22:BA:463:G:N2	22:BA:467:G:C4	2.89	0.41
22:BA:679:C:H2'	22:BA:680:C:C6	2.56	0.41
22:BA:958:U:H2'	23:BB:89:U:C2	2.55	0.41
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.85	0.41
22:BA:1139:G:O3'	31:BJ:26:GLY:HA3	2.21	0.41
22:BA:1189:A:N7	22:BA:1190:G:C8	2.88	0.41
22:BA:1206:G:C6	22:BA:1207:C:C4	3.09	0.41
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1907:G:H3'	22:BA:1908:C:H6	1.85	0.41
22:BA:2541:A:H4'	22:BA:2764:A:N1	2.35	0.41
22:BA:2620:C:N3	22:BA:2621:G:C8	2.88	0.41
24:BC:24:LEU:HD12	24:BC:24:LEU:HA	1.89	0.41
30:BI:45:LYS:HB2	30:BI:45:LYS:HE2	1.90	0.41
35:BN:36:THR:CG2	35:BN:37:THR:N	2.84	0.41
36:BO:77:ALA:O	36:BO:78:VAL:C	2.62	0.41
39:BR:74:ILE:HD12	39:BR:74:ILE:N	2.36	0.41
42:BU:40:ASN:HB3	42:BU:63:ALA:O	2.21	0.41
43:BV:55:GLU:N	43:BV:55:GLU:OE2	2.54	0.41
46:BY:56:LEU:O	46:BY:57:LEU:HB2	2.18	0.41
48:B0:53:LYS:HE2	48:B0:56:ALA:HA	2.01	0.41
49:B1:40:ASP:OD1	49:B1:40:ASP:C	2.64	0.41
49:B1:52:ALA:O	49:B1:53:LYS:OXT	2.38	0.41
50:B2:42:LEU:HD12	50:B2:42:LEU:HA	1.87	0.41
53:B5:65:LEU:HD11	53:B5:191:ARG:HA	2.03	0.41
1:CA:73:C:O2	1:CA:74:A:C8	2.73	0.41
1:CA:174:A:C2	1:CA:175:C:H1'	2.56	0.41
1:CA:250:A:H5'	1:CA:250:A:N3	2.36	0.41
1:CA:355:C:C2	1:CA:356:A:C8	3.08	0.41
1:CA:429:U:H3'	4:CD:9:LEU:CD2	2.47	0.41
1:CA:496:A:H2'	1:CA:496:A:N3	2.34	0.41
1:CA:509:A:N1	1:CA:510:A:N1	2.68	0.41
1:CA:622:A:H5"	1:CA:623:C:OP2	2.21	0.41
1:CA:670:G:N2	1:CA:737:C:C2	2.88	0.41
1:CA:735:C:H2'	1:CA:736:C:C6	2.56	0.41
1:CA:899:C:H6	1:CA:899:C:OP1	2.04	0.41
2:CB:68:LEU:HD12	2:CB:158:PRO:CG	2.50	0.41
4:CD:124:MET:O	4:CD:143:VAL:HA	2.20	0.41
4:CD:155:VAL:O	4:CD:155:VAL:CG2	2.68	0.41
4:CD:173:VAL:CG1	4:CD:174:ASP:N	2.83	0.41
6:CF:6:ILE:O	6:CF:61:LEU:HD12	2.21	0.41
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.20	0.41
7:CG:70:ARG:HG3	7:CG:96:ARG:HG2	2.03	0.41
7:CG:138:ARG:HE	7:CG:138:ARG:HB3	1.69	0.41
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	2.03	0.41
15:CO:55:GLY:O	15:CO:59:MET:HG3	2.21	0.41
15:CO:78:TYR:CD2	15:CO:78:TYR:C	2.97	0.41
18:CR:20:GLU:C	18:CR:22:ASP:N	2.79	0.41
20:CT:6:SER:C	20:CT:8:LYS:H	2.28	0.41
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:80:THR:C	20:CT:82:GLN:N	2.76	0.41
21:CU:12:PHE:HD1	21:CU:13:ASP:N	2.19	0.41
21:CU:18:ARG:O	21:CU:21:ARG:N	2.54	0.41
22:DA:36:G:O2'	22:DA:450:G:O2'	2.35	0.41
22:DA:67:U:C4	22:DA:68:G:N7	2.89	0.41
22:DA:83:A:H5"	22:DA:84:A:OP1	2.21	0.41
22:DA:167:A:H2'	22:DA:168:G:O4'	2.21	0.41
22:DA:197:A:H62	22:DA:2430:A:C2'	2.28	0.41
22:DA:279:A:H61	22:DA:361:G:C2'	2.33	0.41
22:DA:487:C:H1'	40:DS:53:SER:OG	2.21	0.41
22:DA:618:G:C2	22:DA:619:G:H1'	2.55	0.41
22:DA:691:C:H5'	24:DC:217:ARG:HD2	2.03	0.41
22:DA:783:A:C4	22:DA:785:G:H1'	2.56	0.41
22:DA:950:G:C2	22:DA:951:C:C2	3.08	0.41
22:DA:995:C:N3	31:DJ:3:THR:HB	2.36	0.41
22:DA:1109:C:C4	22:DA:1110:G:O6	2.74	0.41
22:DA:1273:U:H4'	22:DA:1275:A:P	2.60	0.41
22:DA:1277:G:H5'	35:DN:20:MET:HE1	2.02	0.41
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.56	0.41
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.36	0.41
22:DA:1683:U:O5'	22:DA:1683:U:H6	2.02	0.41
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.56	0.41
22:DA:2038:G:C5	22:DA:2039:U:C5	3.09	0.41
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.56	0.41
22:DA:2045:C:H2'	22:DA:2046:G:O5'	2.20	0.41
22:DA:2051:A:C2	22:DA:2052:A:N6	2.89	0.41
22:DA:2131:U:H1'	22:DA:2158:A:H61	1.86	0.41
22:DA:2222:C:N3	22:DA:2223:G:C8	2.89	0.41
22:DA:2345:G:C5	22:DA:2347:C:C4	3.09	0.41
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.21	0.41
25:DD:22:ILE:HG22	25:DD:24:VAL:HG13	2.02	0.41
26:DE:59:PRO:HG2	26:DE:70:SER:HB2	2.02	0.41
26:DE:170:ARG:NH1	26:DE:176:ASP:OD1	2.53	0.41
27:DF:106:ILE:HD11	27:DF:139:PRO:HG2	2.02	0.41
28:DG:9:VAL:O	28:DG:49:THR:HA	2.21	0.41
28:DG:91:GLY:HA3	28:DG:160:LYS:CG	2.50	0.41
29:DH:76:GLU:O	29:DH:76:GLU:CD	2.63	0.41
35:DN:55:ALA:CB	35:DN:79:LEU:HB3	2.50	0.41
36:DO:31:THR:HG23	36:DO:32:PRO:HD2	2.02	0.41
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.53	0.41
38:DQ:9:ILE:HG13	38:DQ:10:ALA:N	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:44:ALA:O	40:DS:48:LYS:HB3	2.21	0.41
43:DV:75:GLN:HB2	43:DV:92:VAL:HG23	2.03	0.41
47:DZ:52:SER:HA	47:DZ:55:VAL:CG2	2.51	0.41
51:D3:25:LYS:HG2	51:D3:26:HIS:N	2.36	0.41
1:AA:22:G:C6	1:AA:23:C:C4	3.08	0.41
1:AA:66:A:H4'	1:AA:173:U:C5	2.56	0.41
1:AA:100:G:C6	1:AA:101:A:C6	3.09	0.41
1:AA:100:G:C8	1:AA:101:A:N7	2.89	0.41
1:AA:134:G:H1'	1:AA:325:A:C5	2.56	0.41
1:AA:141:G:C4	1:AA:142:G:C8	3.09	0.41
1:AA:155:A:C2	1:AA:167:A:C2	3.09	0.41
1:AA:251:G:O6	1:AA:266:G:O6	2.39	0.41
1:AA:300:A:H2'	1:AA:301:G:O4'	2.21	0.41
1:AA:338:A:N6	1:AA:339:C:N4	2.69	0.41
1:AA:353:A:H2'	1:AA:354:G:OP2	2.21	0.41
1:AA:624:C:N3	1:AA:625:U:C4	2.89	0.41
1:AA:662:U:H2'	1:AA:663:A:C8	2.55	0.41
1:AA:692:U:O2	1:AA:694:A:C8	2.74	0.41
1:AA:723:U:O2'	1:AA:855:U:H4'	2.21	0.41
1:AA:923:A:N6	1:AA:1392:G:O6	2.53	0.41
1:AA:925:G:C2	1:AA:927:G:C8	3.09	0.41
1:AA:1074:G:N2	1:AA:1075:U:H1'	2.36	0.41
1:AA:1107:C:N3	1:AA:1108:G:C8	2.89	0.41
1:AA:1226:C:O2'	13:AM:102:THR:O	2.36	0.41
1:AA:1270:G:C2	1:AA:1271:A:C4	3.08	0.41
1:AA:1280:A:H5"	10:AJ:42:LEU:HD21	2.03	0.41
1:AA:1317:C:H2'	1:AA:1318:A:C5'	2.51	0.41
1:AA:1350:A:P	9:AI:123:ARG:HD3	2.60	0.41
2:AB:130:THR:HB	2:AB:132:LYS:HB3	2.01	0.41
3:AC:59:ARG:HA	3:AC:63:SER:O	2.21	0.41
3:AC:89:LYS:HG2	3:AC:90:VAL:N	2.36	0.41
4:AD:61:VAL:HA	4:AD:64:ILE:HD12	2.03	0.41
4:AD:126:ASN:HA	4:AD:142:VAL:CG2	2.51	0.41
4:AD:145:ILE:N	4:AD:145:ILE:CD1	2.84	0.41
4:AD:147:GLU:O	4:AD:150:LYS:HB2	2.20	0.41
4:AD:165:ARG:O	4:AD:166:GLU:C	2.63	0.41
4:AD:165:ARG:C	4:AD:167:LYS:N	2.76	0.41
5:AE:57:PRO:O	5:AE:61:GLN:HB2	2.20	0.41
5:AE:151:GLU:O	5:AE:153:VAL:N	2.54	0.41
6:AF:16:GLU:OE1	4:CD:188:ARG:NH2	2.54	0.41
7:AG:88:PRO:HG3	7:AG:145:ALA:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:135:VAL:HB	7:AG:138:ARG:HH21	1.84	0.41
9:AI:39:PHE:CZ	9:AI:76:ALA:HB2	2.56	0.41
11:AK:51:GLY:O	11:AK:52:PHE:CD2	2.74	0.41
11:AK:89:PRO:HB3	21:AU:29:LEU:HD13	2.01	0.41
12:AL:24:LEU:CG	12:AL:25:GLU:H	2.27	0.41
15:AO:33:THR:HG21	15:AO:85:LEU:HG	2.02	0.41
16:AP:36:VAL:O	16:AP:36:VAL:HG22	2.21	0.41
17:AQ:48:ASP:OD2	17:AQ:48:ASP:N	2.54	0.41
20:AT:43:ASP:O	20:AT:44:LYS:C	2.63	0.41
20:AT:58:VAL:O	20:AT:59:ASP:C	2.64	0.41
20:AT:62:ALA:C	20:AT:64:LYS:N	2.79	0.41
22:BA:12:U:O2	22:BA:12:U:C2'	2.65	0.41
22:BA:31:C:O3'	22:BA:1238:G:H5'	2.20	0.41
22:BA:600:G:H2'	22:BA:601:C:C6	2.56	0.41
22:BA:614:A:O2'	22:BA:615:U:P	2.79	0.41
22:BA:709:U:H2'	22:BA:710:U:C6	2.55	0.41
22:BA:825:A:H4'	22:BA:2428:G:C5	2.56	0.41
22:BA:854:C:C2'	22:BA:855:G:H5'	2.51	0.41
22:BA:854:C:O2	22:BA:924:G:C2	2.73	0.41
22:BA:1062:G:N2	22:BA:1077:A:C2	2.89	0.41
22:BA:1178:C:O3'	22:BA:1179:G:C8	2.74	0.41
22:BA:1275:A:C1'	35:BN:16:HIS:CE1	3.04	0.41
22:BA:1392:A:H61	41:BT:18:GLU:CD	2.29	0.41
22:BA:1641:A:H2'	22:BA:1642:G:O4'	2.21	0.41
22:BA:1680:U:C2'	22:BA:1681:G:H5'	2.51	0.41
22:BA:1769:U:O4'	22:BA:1958:C:H5"	2.21	0.41
22:BA:1794:A:H1'	22:BA:1900:A:C2	2.56	0.41
22:BA:1817:G:H2'	22:BA:1818:U:H5'	2.02	0.41
22:BA:1840:G:C6	22:BA:1841:U:C4	3.09	0.41
22:BA:1875:G:HO2'	22:BA:1876:A:P	2.43	0.41
22:BA:1897:G:C2	22:BA:1898:U:C2	3.09	0.41
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.21	0.41
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.56	0.41
22:BA:2284:A:C6	22:BA:2285:C:C4	3.09	0.41
22:BA:2286:G:O6	49:B1:23:THR:OG1	2.27	0.41
22:BA:2343:U:O2	22:BA:2343:U:C2'	2.67	0.41
22:BA:2397:G:C6	22:BA:2398:U:C4	3.09	0.41
22:BA:2414:G:O2'	22:BA:2415:G:H5'	2.21	0.41
22:BA:2451:A:C2	55:BA:3001:VIF:C15	3.03	0.41
22:BA:2810:A:O3'	25:BD:62:LYS:HB2	2.20	0.41
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:7:G:H5'	36:BO:29:HIS:CE1	2.56	0.41
23:BB:36:C:H5"	23:BB:37:C:OP2	2.21	0.41
23:BB:62:C:H2'	23:BB:63:C:C6	2.56	0.41
24:BC:84:ASP:OD1	24:BC:84:ASP:C	2.64	0.41
25:BD:62:LYS:CB	25:BD:63:PRO:HD3	2.51	0.41
26:BE:40:ARG:C	26:BE:41:GLN:O	2.63	0.41
26:BE:79:ARG:O	26:BE:80:SER:CB	2.69	0.41
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.36	0.41
26:BE:176:ASP:OD1	26:BE:176:ASP:C	2.64	0.41
27:BF:38:MET:HE3	27:BF:152:LEU:HD13	2.02	0.41
27:BF:126:GLY:O	27:BF:158:THR:HG22	2.21	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
31:BJ:24:THR:O	31:BJ:25:LEU:C	2.64	0.41
32:BK:68:GLY:HA3	32:BK:77:ILE:O	2.21	0.41
32:BK:105:ARG:C	32:BK:107:LEU:H	2.29	0.41
33:BL:4:ASN:O	33:BL:4:ASN:CG	2.64	0.41
33:BL:130:GLY:O	33:BL:133:ALA:N	2.53	0.41
34:BM:1:MET:HE3	34:BM:1:MET:HB3	1.79	0.41
34:BM:11:LYS:HD3	34:BM:86:LYS:HG2	2.03	0.41
34:BM:50:ARG:O	34:BM:53:MET:HG3	2.20	0.41
35:BN:20:MET:HE3	35:BN:20:MET:HB2	1.81	0.41
35:BN:38:LEU:N	35:BN:109:PRO:O	2.51	0.41
38:BQ:53:ARG:C	38:BQ:55:ARG:N	2.77	0.41
38:BQ:91:ASP:C	38:BQ:91:ASP:OD2	2.64	0.41
39:BR:8:GLY:O	39:BR:10:LYS:NZ	2.40	0.41
39:BR:40:MET:HG2	39:BR:41:ILE:N	2.36	0.41
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	2.02	0.41
39:BR:69:GLY:O	39:BR:70:GLU:C	2.63	0.41
39:BR:76:LYS:CD	39:BR:85:LYS:HD2	2.48	0.41
40:BS:41:LYS:O	40:BS:44:ALA:HB3	2.21	0.41
43:BV:35:GLU:HB2	43:BV:93:ARG:NH1	2.36	0.41
1:CA:130:A:OP1	17:CQ:65:ARG:HD2	2.21	0.41
1:CA:182:A:C8	1:CA:184:G:N7	2.89	0.41
1:CA:358:U:H2'	1:CA:359:G:C8	2.56	0.41
1:CA:374:A:OP1	1:CA:452:A:N1	2.54	0.41
1:CA:421:U:OP1	1:CA:421:U:H4'	2.21	0.41
1:CA:464:U:N3	1:CA:467:U:OP2	2.47	0.41
1:CA:503:C:H2'	1:CA:504:C:H6	1.86	0.41
1:CA:619:U:C2	4:CD:132:ILE:HD11	2.56	0.41
1:CA:684:U:O2'	11:CK:40:ASN:O	2.32	0.41
1:CA:715:A:N6	1:CA:716:A:N6	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.54	0.41
1:CA:756:C:C4	1:CA:757:U:C5	3.08	0.41
1:CA:913:A:H4'	1:CA:914:A:H4'	2.03	0.41
1:CA:977:A:O2'	1:CA:1223:C:N4	2.53	0.41
1:CA:1007:U:C2'	1:CA:1008:U:H5"	2.51	0.41
1:CA:1061:G:C2	1:CA:1197:A:N3	2.89	0.41
1:CA:1085:U:C2	1:CA:1094:G:O6	2.74	0.41
1:CA:1157:A:C5	1:CA:1181:G:C6	3.08	0.41
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.74	0.41
1:CA:1213:A:C5	1:CA:1215:G:C4	3.08	0.41
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.50	0.41
1:CA:1399:C:C2	1:CA:1401:G:C5	3.09	0.41
1:CA:1492:A:H3'	1:CA:1493:A:H8	1.86	0.41
2:CB:60:ILE:HD12	2:CB:60:ILE:C	2.46	0.41
2:CB:117:LEU:HB3	2:CB:141:LEU:HD11	2.03	0.41
3:CC:182:ILE:HD11	3:CC:203:PHE:HB2	2.03	0.41
8:CH:43:GLU:HA	8:CH:43:GLU:OE2	2.21	0.41
9:CI:44:ALA:HB1	9:CI:47:VAL:CG2	2.51	0.41
10:CJ:89:ARG:NH1	10:CJ:89:ARG:HB2	2.36	0.41
11:CK:20:VAL:HB	11:CK:35:THR:CG2	2.49	0.41
11:CK:97:ILE:C	11:CK:97:ILE:HD12	2.46	0.41
12:CL:24:LEU:CD2	12:CL:59:ASN:OD1	2.68	0.41
13:CM:90:ARG:HD2	13:CM:96:PRO:O	2.21	0.41
14:CN:46:LEU:HD12	14:CN:49:GLN:HB2	2.03	0.41
15:CO:29:VAL:O	15:CO:30:ALA:C	2.64	0.41
16:CP:20:VAL:HG21	16:CP:32:PHE:CG	2.56	0.41
17:CQ:31:HIS:CD2	17:CQ:34:TYR:HD1	2.38	0.41
17:CQ:51:ASN:O	17:CQ:51:ASN:ND2	2.54	0.41
18:CR:40:VAL:HA	18:CR:41:PRO:HD2	1.91	0.41
21:CU:14:VAL:C	21:CU:16:LEU:HG	2.45	0.41
22:DA:295:G:C2	22:DA:296:U:C6	3.09	0.41
22:DA:308:G:H4'	42:DU:17:LYS:NZ	2.36	0.41
22:DA:340:A:H2'	22:DA:341:C:O4'	2.20	0.41
22:DA:372:G:O2'	22:DA:400:G:O6	2.37	0.41
22:DA:460:A:H2'	22:DA:461:C:O4'	2.21	0.41
22:DA:566:U:O4	39:DR:80:ARG:HD3	2.20	0.41
22:DA:567:U:C2'	22:DA:568:U:O5'	2.68	0.41
22:DA:595:C:O2	22:DA:663:G:C2	2.74	0.41
22:DA:648:G:H1'	22:DA:2351:G:OP1	2.21	0.41
22:DA:684:G:P	50:D2:16:HIS:HD1	2.40	0.41
22:DA:697:G:C6	22:DA:698:C:N4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:905:A:H2'	22:DA:906:U:H5'	2.01	0.41
22:DA:952:G:C2	22:DA:966:G:C2	3.09	0.41
22:DA:976:G:H5'	22:DA:1156:A:C6	2.56	0.41
22:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.36	0.41
22:DA:1187:G:OP1	39:DR:85:LYS:CE	2.66	0.41
22:DA:1193:G:C2	22:DA:1194:A:C4	3.09	0.41
22:DA:1301:A:H2'	22:DA:1301:A:N3	2.36	0.41
22:DA:1500:G:C6	22:DA:1501:G:C5	3.08	0.41
22:DA:1582:C:H2'	22:DA:1583:A:H1'	2.03	0.41
22:DA:1805:A:O2'	24:DC:50:THR:HA	2.21	0.41
22:DA:1838:C:C5	22:DA:1899:A:C5	3.09	0.41
22:DA:1906:G:C2	22:DA:1907:G:C8	3.09	0.41
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.35	0.41
22:DA:2134:A:C8	22:DA:2158:A:N3	2.89	0.41
22:DA:2199:A:C6	22:DA:2200:C:N3	2.89	0.41
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.51	0.41
22:DA:2261:C:C2	22:DA:2280:G:C2	3.09	0.41
22:DA:2283:C:C4	22:DA:2389:G:C4	3.09	0.41
22:DA:2286:G:OP1	49:D1:30:LYS:HE3	2.20	0.41
22:DA:2297:A:N7	22:DA:2320:U:C4	2.89	0.41
22:DA:2355:G:C6	22:DA:2356:U:N3	2.89	0.41
22:DA:2391:G:H1'	22:DA:2424:C:H41	1.86	0.41
22:DA:2395:C:O5'	22:DA:2395:C:H6	2.03	0.41
22:DA:2460:U:H2'	22:DA:2461:A:O4'	2.21	0.41
22:DA:2508:G:N2	22:DA:2582:G:C6	2.89	0.41
22:DA:2526:G:O2'	52:D4:34:LYS:HE2	2.20	0.41
22:DA:2540:C:C2	22:DA:2541:A:C8	3.09	0.41
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.56	0.41
22:DA:2648:G:H2'	22:DA:2649:C:C6	2.56	0.41
22:DA:2688:G:C8	22:DA:2719:G:C6	3.08	0.41
22:DA:2794:C:H2'	22:DA:2794:C:O2	2.21	0.41
22:DA:2818:U:H2'	22:DA:2819:G:C8	2.55	0.41
22:DA:2899:A:H2'	22:DA:2900:A:H8	1.85	0.41
24:DC:25:HIS:HB2	24:DC:80:ARG:HG3	2.02	0.41
24:DC:92:ALA:HB2	24:DC:106:ALA:HB2	2.02	0.41
24:DC:182:ARG:NH1	24:DC:266:PHE:HB2	2.36	0.41
25:DD:1:MET:SD	25:DD:100:LEU:HD11	2.61	0.41
26:DE:31:VAL:O	26:DE:31:VAL:HG12	2.21	0.41
27:DF:136:ILE:HA	27:DF:141:ILE:HG21	2.03	0.41
28:DG:85:LYS:HG3	28:DG:141:ILE:HD12	2.02	0.41
28:DG:137:ASP:HB3	28:DG:140:VAL:HG23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:148:LEU:HA	28:DG:151:TYR:HD1	1.86	0.41
28:DG:156:PRO:O	28:DG:171:THR:HG22	2.20	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
30:DI:32:GLY:HA3	30:DI:61:VAL:HG11	2.02	0.41
30:DI:57:VAL:HB	30:DI:71:THR:HB	2.03	0.41
32:DK:34:GLY:O	32:DK:35:VAL:C	2.64	0.41
34:DM:1:MET:HE3	34:DM:43:ALA:HB3	2.01	0.41
35:DN:55:ALA:HB1	35:DN:80:PHE:N	2.36	0.41
38:DQ:79:PHE:CE2	38:DQ:110:VAL:HG22	2.56	0.41
38:DQ:81:ASN:ND2	38:DQ:117:LEU:HD11	2.35	0.41
39:DR:52:PRO:C	39:DR:53:PHE:CG	2.98	0.41
40:DS:28:LYS:HD3	40:DS:31:GLN:OE1	2.20	0.41
41:DT:23:ALA:O	41:DT:27:SER:N	2.50	0.41
42:DU:71:ALA:HB3	42:DU:80:ALA:HB1	2.03	0.41
42:DU:72:ILE:H	42:DU:72:ILE:HG13	1.75	0.41
45:DX:69:ALA:O	45:DX:72:ARG:N	2.54	0.41
45:DX:69:ALA:HA	45:DX:72:ARG:HB3	2.03	0.41
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.21	0.41
49:D1:9:ILE:HD11	49:D1:11:LEU:HD21	2.02	0.41
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.54	0.41
1:AA:19:A:C2	1:AA:917:G:C5	3.09	0.41
1:AA:66:A:C6	1:AA:67:C:C5	3.09	0.41
1:AA:139:A:O2'	1:AA:140:U:H5'	2.21	0.41
1:AA:481:G:OP1	1:AA:481:G:H4'	2.20	0.41
1:AA:594:U:C4	1:AA:595:A:N6	2.89	0.41
1:AA:720:C:H5'	18:AR:41:PRO:HA	2.02	0.41
1:AA:721:G:C6	1:AA:733:G:C2	3.09	0.41
1:AA:1370:G:C2	1:AA:1371:G:C8	3.09	0.41
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.51	0.41
2:AB:64:LYS:HD3	2:AB:65:GLY:N	2.36	0.41
2:AB:148:LEU:CA	2:AB:151:ILE:HG22	2.51	0.41
2:AB:151:ILE:HG23	2:AB:152:LYS:H	1.85	0.41
3:AC:12:LEU:O	3:AC:13:GLY:C	2.64	0.41
3:AC:138:VAL:CG1	3:AC:170:GLU:HB3	2.51	0.41
9:AI:12:ARG:O	9:AI:15:SER:HB2	2.21	0.41
9:AI:52:LEU:HA	9:AI:55:VAL:HG23	2.02	0.41
9:AI:57:MET:HB3	9:AI:61:LEU:CD2	2.51	0.41
9:AI:104:VAL:HG23	9:AI:105:THR:N	2.36	0.41
10:AJ:41:PRO:O	10:AJ:42:LEU:CB	2.68	0.41
10:AJ:86:ALA:O	10:AJ:90:LEU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:87:LYS:HE2	11:AK:113:VAL:HG23	2.02	0.41
16:AP:75:ILE:HG13	16:AP:75:ILE:H	1.66	0.41
17:AQ:81:LYS:N	17:AQ:81:LYS:HD3	2.36	0.41
18:AR:20:GLU:HA	18:AR:55:LEU:HD23	2.02	0.41
18:AR:29:LEU:C	18:AR:31:ASN:N	2.79	0.41
20:AT:44:LYS:HE2	20:AT:86:LEU:O	2.21	0.41
22:BA:361:G:OP2	22:BA:361:G:H8	2.04	0.41
22:BA:478:A:N1	22:BA:500:G:H4'	2.36	0.41
22:BA:493:G:O2'	40:BS:7:HIS:HA	2.21	0.41
22:BA:540:C:C2	22:BA:541:A:C8	3.08	0.41
22:BA:747:U:C5	22:BA:2613:U:C6	3.07	0.41
22:BA:753:A:H2'	22:BA:754:U:H6	1.85	0.41
22:BA:783:A:H8	22:BA:784:G:H4'	1.86	0.41
22:BA:812:C:O2	22:BA:812:C:C2'	2.68	0.41
22:BA:832:U:H2'	22:BA:833:A:C8	2.56	0.41
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.54	0.41
22:BA:1067:A:N3	22:BA:1067:A:H2'	2.34	0.41
22:BA:1254:A:N6	26:BE:77:ILE:CG2	2.84	0.41
22:BA:1351:C:H2'	22:BA:1352:U:C1'	2.51	0.41
22:BA:1467:U:C5	22:BA:1546:G:N3	2.89	0.41
22:BA:1846:G:H2'	22:BA:1847:A:N9	2.35	0.41
22:BA:1936:A:C5	22:BA:1945:G:C5	3.09	0.41
22:BA:1985:C:C2'	22:BA:1986:C:O5'	2.69	0.41
22:BA:2176:A:C5	22:BA:2177:C:N4	2.89	0.41
22:BA:2459:A:C5	22:BA:2460:U:C5	3.09	0.41
22:BA:2627:G:C6	22:BA:2628:C:C4	3.09	0.41
24:BC:21:ASN:HB3	24:BC:24:LEU:HD22	2.02	0.41
24:BC:107:PRO:HD2	24:BC:110:LEU:HD22	2.02	0.41
25:BD:4:LEU:HD22	25:BD:100:LEU:HD23	1.99	0.41
25:BD:101:PHE:HE2	25:BD:203:VAL:HG11	1.86	0.41
26:BE:147:LEU:HD23	26:BE:180:LEU:HD23	2.03	0.41
27:BF:41:GLY:C	27:BF:43:ALA:H	2.28	0.41
28:BG:154:PRO:HD3	28:BG:162:VAL:O	2.20	0.41
29:BH:75:LEU:C	29:BH:75:LEU:CD2	2.94	0.41
30:BI:76:ALA:HB1	30:BI:129:ILE:HG23	2.03	0.41
30:BI:136:MET:SD	30:BI:138:LEU:HD11	2.61	0.41
31:BJ:30:THR:HG22	31:BJ:31:GLU:H	1.86	0.41
32:BK:61:VAL:HG12	32:BK:87:LEU:HD11	2.03	0.41
32:BK:63:VAL:HG12	32:BK:107:LEU:HD21	2.02	0.41
33:BL:63:LYS:HA	51:B3:12:LYS:O	2.21	0.41
35:BN:53:THR:O	35:BN:54:LEU:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:113:ALA:O	38:BQ:114:LYS:C	2.64	0.41
46:BY:22:LEU:O	46:BY:23:ARG:C	2.63	0.41
49:B1:34:LEU:H	49:B1:52:ALA:HB3	1.85	0.41
1:CA:49:U:C6	1:CA:364:A:N6	2.89	0.41
1:CA:55:A:C5	1:CA:56:U:C4	3.09	0.41
1:CA:57:G:H2'	1:CA:58:C:C6	2.56	0.41
1:CA:513:C:H2'	1:CA:514:C:C6	2.56	0.41
1:CA:570:G:N3	1:CA:571:U:C6	2.89	0.41
1:CA:662:U:O2	1:CA:662:U:H2'	2.21	0.41
1:CA:676:A:N1	1:CA:677:U:C4	2.89	0.41
1:CA:731:G:OP1	1:CA:766:A:H1'	2.21	0.41
1:CA:815:A:H4'	1:CA:817:C:C5	2.57	0.41
1:CA:842:U:O2	1:CA:845:A:OP1	2.38	0.41
1:CA:857:C:H2'	1:CA:858:G:O4'	2.21	0.41
1:CA:978:A:C5	1:CA:1318:A:N6	2.89	0.41
1:CA:1240:U:H5'	1:CA:1241:G:C8	2.56	0.41
1:CA:1308:U:O3'	13:CM:91:HIS:CE1	2.74	0.41
1:CA:1431:A:C5	1:CA:1432:G:C6	3.09	0.41
1:CA:1479:C:C2	1:CA:1480:A:C8	3.09	0.41
1:CA:1493:A:H8	1:CA:1493:A:OP2	2.04	0.41
2:CB:47:VAL:O	2:CB:50:PHE:HD2	2.04	0.41
2:CB:71:GLY:CA	2:CB:164:ILE:CG2	2.99	0.41
4:CD:42:GLY:C	4:CD:44:ARG:H	2.27	0.41
4:CD:69:GLU:O	4:CD:70:ARG:C	2.61	0.41
6:CF:67:PRO:C	6:CF:69:GLU:N	2.78	0.41
7:CG:66:LEU:HG	7:CG:66:LEU:O	2.20	0.41
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD1	2.21	0.41
10:CJ:15:HIS:CG	10:CJ:16:ARG:N	2.88	0.41
14:CN:51:LEU:HB3	14:CN:52:PRO:HD2	2.01	0.41
17:CQ:13:VAL:HG12	17:CQ:22:VAL:O	2.21	0.41
22:DA:449:A:C5	22:DA:450:G:C8	3.09	0.41
22:DA:1270:C:O2'	22:DA:1648:U:OP2	2.37	0.41
22:DA:1308:A:C6	22:DA:1309:G:C2	3.09	0.41
22:DA:1464:G:H2'	22:DA:1465:G:C8	2.56	0.41
22:DA:1659:G:C5	22:DA:1660:G:C8	3.09	0.41
22:DA:1667:G:H5"	32:DK:5:GLN:O	2.21	0.41
22:DA:1782:U:O2	22:DA:2608:G:O2'	2.19	0.41
22:DA:2210:U:H4'	22:DA:2211:A:H5'	2.02	0.41
22:DA:2531:A:H4'	28:DG:157:TYR:CD1	2.56	0.41
22:DA:2674:G:H2'	22:DA:2675:A:C8	2.56	0.41
22:DA:2784:U:C4	22:DA:2785:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:11:C:H6	23:DB:11:C:O5'	2.03	0.41
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.51	0.41
25:DD:173:GLN:O	25:DD:175:LEU:N	2.54	0.41
30:DI:17:MET:SD	30:DI:23:PRO:HG2	2.61	0.41
36:DO:17:LYS:HA	36:DO:17:LYS:HD3	1.88	0.41
38:DQ:47:TYR:CZ	38:DQ:51:ARG:NH2	2.89	0.41
40:DS:59:GLU:HA	40:DS:64:ALA:HA	2.03	0.41
40:DS:86:MET:HA	40:DS:87:PRO:HD3	1.93	0.41
41:DT:8:LEU:HD21	46:DY:22:LEU:HA	2.03	0.41
42:DU:24:LYS:N	42:DU:37:GLU:HG2	2.35	0.41
43:DV:32:GLY:O	43:DV:93:ARG:HD3	2.21	0.41
44:DW:37:ILE:HG21	44:DW:80:ILE:HG21	2.03	0.41
1:AA:170:U:O2'	1:AA:171:A:H5'	2.21	0.40
1:AA:510:A:H5"	1:AA:511:C:P	2.61	0.40
1:AA:590:U:N3	1:AA:591:U:C4	2.90	0.40
1:AA:604:G:C6	1:AA:635:A:N1	2.89	0.40
1:AA:750:C:O2	15:AO:23:GLY:HA3	2.22	0.40
1:AA:957:U:H4'	19:AS:79:THR:O	2.21	0.40
1:AA:1249:C:O2'	9:AI:71:GLY:HA2	2.20	0.40
1:AA:1359:C:H4'	1:AA:1362:A:N6	2.36	0.40
1:AA:1371:G:C5	1:AA:1372:U:C4	3.10	0.40
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.21	0.40
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.36	0.40
2:AB:87:CYS:C	2:AB:89:GLN:H	2.30	0.40
4:AD:150:LYS:C	4:AD:152:GLN:N	2.79	0.40
4:AD:191:LEU:O	4:AD:192:SER:HB2	2.20	0.40
6:AF:38:ARG:CG	6:AF:39:LEU:N	2.84	0.40
14:AN:14:VAL:O	14:AN:15:ALA:C	2.63	0.40
15:AO:28:GLN:O	15:AO:31:LEU:HD12	2.21	0.40
15:AO:35:GLN:O	15:AO:36:ILE:C	2.64	0.40
16:AP:28:ARG:HG2	16:AP:29:ASN:OD1	2.21	0.40
17:AQ:27:ARG:HG2	17:AQ:40:ARG:O	2.21	0.40
22:BA:271:G:C4'	22:BA:272:A:OP1	2.69	0.40
22:BA:553:G:C5	22:BA:554:U:C5	3.09	0.40
22:BA:669:G:N3	22:BA:669:G:H2'	2.34	0.40
22:BA:832:U:OP1	33:BL:39:LYS:HG2	2.21	0.40
22:BA:945:A:N7	57:BA:3263:HOH:O	2.50	0.40
22:BA:976:G:C2	22:BA:977:G:C8	3.09	0.40
22:BA:1223:G:N2	22:BA:1227:G:C4	2.90	0.40
22:BA:1241:A:H2'	22:BA:1242:U:H5'	2.02	0.40
22:BA:1248:G:O2'	38:BQ:3:ARG:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1334:G:C2	22:BA:1335:C:C2	3.09	0.40
22:BA:1820:U:O2'	24:BC:158:ALA:O	2.16	0.40
22:BA:1842:G:N2	22:BA:1901:A:C4	2.89	0.40
22:BA:1860:G:O2'	22:BA:1861:G:H5'	2.22	0.40
22:BA:1925:C:C5'	22:BA:1926:U:C4	3.05	0.40
22:BA:2051:A:OP2	57:BA:3484:HOH:O	2.22	0.40
22:BA:2796:U:C4	22:BA:2798:U:C5	3.08	0.40
24:BC:29:PRO:HG2	24:BC:34:LEU:HD11	2.02	0.40
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.54	0.40
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.40
45:BX:9:GLY:O	45:BX:10:LYS:C	2.62	0.40
46:BY:12:GLU:O	46:BY:15:ASN:HB2	2.21	0.40
1:CA:15:G:H4'	5:CE:29:ARG:NH1	2.36	0.40
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.40
1:CA:38:G:C2	1:CA:397:A:C2	3.09	0.40
1:CA:55:A:C6	1:CA:56:U:N3	2.89	0.40
1:CA:246:A:C4	1:CA:279:A:C6	3.08	0.40
1:CA:268:U:C4	1:CA:269:C:N4	2.89	0.40
1:CA:289:G:C2	1:CA:290:C:C4	3.09	0.40
1:CA:455:G:C2	1:CA:478:A:C2	3.09	0.40
1:CA:505:G:C2	1:CA:506:G:C5	3.10	0.40
1:CA:570:G:C2	1:CA:571:U:C5	3.09	0.40
1:CA:750:C:H4'	15:CO:21:ASP:HA	2.02	0.40
1:CA:775:G:C2'	1:CA:776:G:H5'	2.51	0.40
1:CA:951:G:C4	1:CA:1231:G:C2	3.09	0.40
1:CA:1249:C:O3'	9:CI:75:GLN:NE2	2.51	0.40
1:CA:1313:U:P	19:CS:6:LYS:HB3	2.62	0.40
2:CB:211:THR:HA	2:CB:214:LEU:CB	2.52	0.40
3:CC:80:LYS:HE3	3:CC:80:LYS:HA	2.02	0.40
5:CE:34:THR:HB	5:CE:50:TYR:CZ	2.56	0.40
7:CG:28:ASN:O	7:CG:31:MET:HB3	2.21	0.40
7:CG:79:ARG:HG2	7:CG:84:THR:HG23	2.03	0.40
9:CI:20:PHE:O	9:CI:63:LEU:HA	2.21	0.40
11:CK:35:THR:HG23	11:CK:36:ASP:O	2.21	0.40
16:CP:38:PHE:CD1	16:CP:38:PHE:C	2.99	0.40
16:CP:53:ASP:C	16:CP:53:ASP:OD1	2.63	0.40
22:DA:36:G:HO2'	22:DA:450:G:C2'	2.33	0.40
22:DA:218:A:C2	22:DA:219:A:C4	3.09	0.40
22:DA:219:A:N3	22:DA:234:U:O2'	2.47	0.40
22:DA:223:A:C4	22:DA:422:A:C8	3.09	0.40
22:DA:286:U:H2'	22:DA:287:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:353:C:H3'	22:DA:354:A:H8	1.86	0.40
22:DA:615:U:O4	26:DE:39:ALA:HB2	2.21	0.40
22:DA:679:C:H2'	22:DA:680:C:H6	1.85	0.40
22:DA:1549:A:C6	22:DA:1550:C:N3	2.89	0.40
22:DA:1668:A:N3	22:DA:1674:G:C8	2.89	0.40
22:DA:1801:A:OP2	24:DC:153:GLN:NE2	2.48	0.40
22:DA:2109:U:H4'	22:DA:2110:G:OP1	2.19	0.40
22:DA:2211:A:H5"	22:DA:2211:A:N3	2.36	0.40
22:DA:2340:A:H2'	22:DA:2341:G:C8	2.56	0.40
22:DA:2370:G:H4'	49:D1:44:ARG:NH1	2.36	0.40
23:DB:15:A:H1'	23:DB:109:A:C5	2.57	0.40
23:DB:23:G:N2	23:DB:61:G:C4	2.89	0.40
23:DB:66:A:H61	23:DB:107:G:H2'	1.86	0.40
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.51	0.40
26:DE:48:THR:HG22	26:DE:86:ALA:HB3	2.02	0.40
26:DE:136:GLN:O	26:DE:137:LYS:C	2.63	0.40
28:DG:131:ILE:HG22	28:DG:132:VAL:N	2.36	0.40
31:DJ:99:ARG:HB3	31:DJ:103:ILE:HD12	2.03	0.40
34:DM:41:LEU:HD21	34:DM:124:LEU:HD13	2.02	0.40
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.87	0.40
38:DQ:90:ILE:HG22	38:DQ:95:LEU:HG	2.04	0.40
41:DT:48:GLN:O	41:DT:52:GLU:HA	2.22	0.40
1:AA:74:A:C2	1:AA:97:G:C5	3.09	0.40
1:AA:125:U:O2'	1:AA:126:G:H5'	2.21	0.40
1:AA:246:A:C6	1:AA:282:A:N7	2.89	0.40
1:AA:291:U:H2'	1:AA:292:G:O4'	2.22	0.40
1:AA:457:G:H5'	1:AA:458:U:OP2	2.20	0.40
1:AA:635:A:H2'	1:AA:636:U:C6	2.56	0.40
1:AA:648:A:H2'	1:AA:649:A:C8	2.56	0.40
1:AA:934:C:OP1	57:AA:1769:HOH:O	2.22	0.40
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.37	0.40
5:AE:111:MET:O	5:AE:115:LEU:HB2	2.21	0.40
7:AG:83:SER:HB2	7:AG:85:TYR:CE2	2.56	0.40
8:AH:76:GLN:O	8:AH:127:CYS:HB2	2.21	0.40
8:AH:111:MET:HE2	8:AH:115:ALA:CB	2.52	0.40
11:AK:37:ARG:C	11:AK:39:GLY:N	2.80	0.40
11:AK:107:ILE:HG23	11:AK:107:ILE:O	2.21	0.40
12:AL:66:TYR:CD2	12:AL:87:VAL:HG21	2.56	0.40
13:AM:27:LYS:O	13:AM:31:LYS:HG3	2.22	0.40
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.56	0.40
17:AQ:81:LYS:N	17:AQ:81:LYS:HE2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:138:U:OP2	22:BA:139:U:H5”	2.21	0.40
22:BA:304:U:H2’	22:BA:305:C:C6	2.56	0.40
22:BA:324:A:N6	22:BA:338:G:O2’	2.48	0.40
22:BA:499:U:C4	22:BA:500:G:C5	3.09	0.40
22:BA:576:U:H2’	22:BA:577:G:H8	1.80	0.40
22:BA:796:C:H2’	22:BA:797:G:H8	1.87	0.40
22:BA:966:G:C6	22:BA:967:U:N3	2.89	0.40
22:BA:1054:A:H3’	22:BA:1055:G:H8	1.87	0.40
22:BA:1113:U:H2’	22:BA:1114:C:H6	1.86	0.40
22:BA:1180:U:C2’	22:BA:1181:U:C5’	2.96	0.40
22:BA:1250:G:H5”	38:BQ:6:ARG:HD3	2.03	0.40
22:BA:1434:A:C2	22:BA:1435:G:C4	3.09	0.40
22:BA:1692:U:H2’	22:BA:1694:C:C5	2.57	0.40
22:BA:1778:U:H2’	22:BA:1784:A:N6	2.36	0.40
22:BA:2114:A:N3	22:BA:2114:A:C2’	2.81	0.40
22:BA:2306:C:C4	22:BA:2307:G:C5	3.09	0.40
22:BA:2318:G:C5	22:BA:2319:G:C6	3.10	0.40
22:BA:2564:A:OP1	22:BA:2648:G:H4’	2.21	0.40
22:BA:2820:A:H2’	22:BA:2821:A:OP1	2.21	0.40
57:BA:3784:HOH:O	31:BJ:39:LYS:HE3	2.20	0.40
23:BB:42:C:OP1	27:BF:64:LYS:HE3	2.21	0.40
24:BC:124:ILE:O	24:BC:124:ILE:HG22	2.21	0.40
27:BF:88:LYS:HG3	27:BF:89:VAL:N	2.36	0.40
28:BG:6:LYS:HD3	28:BG:62:TRP:CH2	2.57	0.40
29:BH:90:LEU:HB2	29:BH:124:THR:C	2.46	0.40
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	2.04	0.40
34:BM:92:TRP:CD1	34:BM:92:TRP:N	2.89	0.40
38:BQ:31:VAL:HB	38:BQ:34:VAL:HG23	2.03	0.40
39:BR:79:ARG:O	39:BR:80:ARG:HB2	2.22	0.40
42:BU:102:THR:HG22	42:BU:103:ILE:N	2.35	0.40
53:B5:63:VAL:O	53:B5:164:PHE:CB	2.69	0.40
1:CA:117:G:O6	1:CA:289:G:H1’	2.21	0.40
1:CA:718:A:H5’	11:CK:119:ASN:CG	2.47	0.40
1:CA:781:A:H4’	1:CA:1522:U:O2’	2.21	0.40
1:CA:805:C:N3	1:CA:806:C:C5	2.89	0.40
1:CA:888:G:H4’	1:CA:1488:G:O2’	2.21	0.40
1:CA:931:C:H2’	1:CA:932:C:H6	1.87	0.40
1:CA:1243:C:N4	1:CA:1244:G:O6	2.54	0.40
1:CA:1253:G:C2	1:CA:1285:A:N6	2.89	0.40
1:CA:1262:C:H2’	1:CA:1263:C:O4’	2.22	0.40
1:CA:1343:G:C5	1:CA:1344:C:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.57	0.40
3:CC:3:GLN:OE1	3:CC:3:GLN:N	2.54	0.40
3:CC:12:LEU:HD23	3:CC:12:LEU:HA	1.84	0.40
3:CC:56:VAL:O	3:CC:66:VAL:HA	2.21	0.40
4:CD:28:ILE:O	4:CD:29:ASP:C	2.63	0.40
4:CD:58:LYS:HG3	4:CD:59:GLN:N	2.33	0.40
5:CE:99:ALA:O	5:CE:100:SER:C	2.63	0.40
7:CG:125:SER:O	7:CG:127:ALA:N	2.54	0.40
14:CN:41:ARG:O	14:CN:42:TRP:C	2.64	0.40
17:CQ:57:ASP:OD2	17:CQ:57:ASP:N	2.55	0.40
22:DA:722:A:H2'	22:DA:723:C:O4'	2.20	0.40
22:DA:1087:G:N9	22:DA:1089:A:H1'	2.36	0.40
22:DA:1121:C:C2	22:DA:1122:G:C8	3.09	0.40
22:DA:1280:G:C6	22:DA:1281:G:C5	3.09	0.40
22:DA:1353:A:C4	22:DA:1378:A:C6	3.10	0.40
22:DA:1439:A:C2	22:DA:1553:A:C5	3.08	0.40
22:DA:1601:G:C6	22:DA:1602:U:C4	3.09	0.40
22:DA:1838:C:C5	22:DA:1899:A:C6	3.09	0.40
22:DA:2290:G:N2	22:DA:2343:U:H1'	2.36	0.40
22:DA:2444:G:OP2	26:DE:63:LYS:HD2	2.20	0.40
22:DA:2571:U:C4	22:DA:2574:G:H8	2.37	0.40
26:DE:118:LEU:HD11	26:DE:188:MET:HG3	2.03	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
30:DI:38:PHE:C	30:DI:42:PHE:HB2	2.46	0.40
31:DJ:58:ASN:HA	31:DJ:126:ALA:O	2.21	0.40
33:DL:58:TYR:O	51:D3:13:ARG:CD	2.69	0.40
34:DM:33:LEU:HB2	34:DM:117:PHE:CD2	2.57	0.40
41:DT:76:ARG:O	41:DT:77:ARG:O	2.40	0.40
43:DV:51:GLN:C	43:DV:53:LYS:H	2.29	0.40
48:D0:26:THR:O	48:D0:28:LEU:HD12	2.21	0.40
50:D2:9:VAL:O	50:D2:13:ASN:ND2	2.43	0.40
52:D4:12:ARG:HB2	52:D4:12:ARG:CZ	2.51	0.40
1:AA:26:A:H5"	1:AA:27:G:OP2	2.21	0.40
1:AA:36:C:H2'	1:AA:37:U:O4'	2.22	0.40
1:AA:97:G:H2'	1:AA:98:A:O5'	2.22	0.40
1:AA:303:A:C5	1:AA:304:U:C5	3.10	0.40
1:AA:390:U:H2'	1:AA:391:G:C8	2.56	0.40
1:AA:712:A:O2'	1:AA:713:G:H5'	2.22	0.40
1:AA:763:G:N2	1:AA:764:C:C2	2.90	0.40
1:AA:895:G:H2'	1:AA:896:C:C6	2.56	0.40
1:AA:1032:G:C2	1:AA:1033:G:H1'	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1033:G:H2'	1:AA:1033:G:N3	2.36	0.40
1:AA:1152:A:H5'	10:AJ:15:HIS:CD2	2.57	0.40
2:AB:23:TRP:HB3	2:AB:39:HIS:HE1	1.87	0.40
2:AB:132:LYS:O	2:AB:136:MET:SD	2.79	0.40
2:AB:184:PHE:N	2:AB:184:PHE:HD2	2.18	0.40
4:AD:125:VAL:HG11	4:AD:135:TYR:CE2	2.56	0.40
5:AE:48:PHE:O	5:AE:70:ASN:ND2	2.55	0.40
20:AT:51:PHE:O	20:AT:54:MET:HG3	2.21	0.40
22:BA:20:C:H2'	22:BA:21:A:H8	1.86	0.40
22:BA:278:A:H2'	22:BA:278:A:N3	2.36	0.40
22:BA:580:U:H2'	22:BA:581:C:C6	2.56	0.40
22:BA:622:G:C6	22:BA:623:C:C4	3.09	0.40
22:BA:747:U:C4	22:BA:2613:U:C6	3.10	0.40
22:BA:987:C:C2'	22:BA:988:A:H5'	2.51	0.40
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	2.04	0.40
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.52	0.40
22:BA:1355:G:N2	22:BA:1377:G:H1'	2.36	0.40
22:BA:1635:A:H2'	22:BA:1635:A:N3	2.35	0.40
22:BA:1638:C:O3'	22:BA:2709:G:N2	2.54	0.40
22:BA:1735:A:C2	22:BA:1736:U:N1	2.89	0.40
22:BA:1769:U:H2'	22:BA:1770:G:O5'	2.22	0.40
22:BA:1844:C:C2	22:BA:1897:G:N2	2.89	0.40
22:BA:1963:U:O5'	22:BA:1963:U:H6	2.04	0.40
22:BA:1964:G:N2	22:BA:1967:C:C6	2.89	0.40
22:BA:2227:A:H2'	22:BA:2228:G:O4'	2.21	0.40
22:BA:2544:G:H2'	22:BA:2545:G:O4'	2.21	0.40
22:BA:2603:G:C5	22:BA:2604:U:C5	3.10	0.40
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.22	0.40
24:BC:141:VAL:CG2	24:BC:192:LEU:HD13	2.52	0.40
24:BC:235:GLY:HA3	24:BC:239:ASN:HB2	2.02	0.40
27:BF:31:VAL:O	27:BF:31:VAL:CG2	2.69	0.40
27:BF:114:PHE:CZ	27:BF:116:GLY:HA2	2.56	0.40
30:BI:113:LYS:HE3	30:BI:116:ASP:HB3	2.04	0.40
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.22	0.40
34:BM:47:GLU:OE2	34:BM:51:ARG:NE	2.55	0.40
34:BM:117:PHE:HD2	34:BM:130:PHE:CE1	2.39	0.40
37:BP:5:ILE:HG22	37:BP:6:LYS:N	2.36	0.40
38:BQ:105:ALA:HA	39:BR:46:GLU:OE2	2.21	0.40
39:BR:8:GLY:C	39:BR:10:LYS:N	2.79	0.40
39:BR:43:ASN:HB3	39:BR:44:GLY:H	1.73	0.40
40:BS:59:GLU:HG3	40:BS:66:ILE:HD11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:9:LYS:C	46:BY:11:VAL:N	2.79	0.40
1:CA:28:A:N7	1:CA:29:U:C5	2.90	0.40
1:CA:178:C:H2'	1:CA:179:A:O4'	2.21	0.40
1:CA:389:A:C6	1:CA:390:U:H1'	2.56	0.40
1:CA:409:U:C4	1:CA:410:G:C5	3.10	0.40
1:CA:652:U:C5	1:CA:752:G:C4	3.09	0.40
1:CA:805:C:H2'	1:CA:806:C:H6	1.87	0.40
1:CA:1044:A:N7	1:CA:1045:C:H1'	2.37	0.40
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.21	0.40
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	2.04	0.40
1:CA:1416:G:C2	1:CA:1485:U:O2	2.73	0.40
1:CA:1520:C:H2'	1:CA:1521:C:H6	1.86	0.40
2:CB:58:ASN:HA	2:CB:61:ALA:HB3	2.03	0.40
4:CD:99:ASP:OD1	4:CD:100:ASN:N	2.53	0.40
5:CE:12:GLN:O	5:CE:12:GLN:HG3	2.20	0.40
5:CE:25:VAL:HG22	5:CE:28:GLY:O	2.22	0.40
5:CE:83:HIS:HB2	5:CE:84:PRO:HD2	2.02	0.40
5:CE:134:ILE:HD12	5:CE:134:ILE:H	1.86	0.40
6:CF:59:TYR:C	6:CF:60:VAL:CG2	2.94	0.40
6:CF:70:VAL:CG2	6:CF:71:ILE:N	2.84	0.40
7:CG:138:ARG:CZ	7:CG:139:GLU:HG2	2.52	0.40
11:CK:112:ASP:OD1	11:CK:114:THR:HG23	2.21	0.40
22:DA:46:G:N3	22:DA:47:C:C6	2.90	0.40
22:DA:105:C:H2'	22:DA:106:C:H6	1.84	0.40
22:DA:319:G:C5	22:DA:333:G:C2	3.09	0.40
22:DA:371:A:N6	22:DA:401:A:H3'	2.36	0.40
22:DA:681:G:N3	22:DA:682:G:C8	2.89	0.40
22:DA:777:G:N7	22:DA:793:A:C2	2.86	0.40
22:DA:948:C:H2'	22:DA:949:G:C8	2.57	0.40
22:DA:950:G:H2'	22:DA:951:C:O4'	2.22	0.40
22:DA:1127:A:C3'	22:DA:1128:G:H5"	2.50	0.40
22:DA:1306:C:C2	22:DA:1307:A:C8	3.09	0.40
22:DA:1385:A:H1'	22:DA:1386:C:C6	2.56	0.40
22:DA:1453:A:C2	35:DN:77:ALA:HB2	2.56	0.40
22:DA:1509:A:HO2'	22:DA:1510:G:P	2.44	0.40
22:DA:2054:A:C2	22:DA:2616:C:O2	2.74	0.40
22:DA:2135:A:H4'	22:DA:2160:C:H4'	2.04	0.40
22:DA:2196:C:N3	22:DA:2197:U:C4	2.89	0.40
22:DA:2261:C:N3	22:DA:2280:G:C2	2.90	0.40
22:DA:2313:C:O4'	27:DF:37:ASN:CG	2.64	0.40
22:DA:2369:A:H2'	22:DA:2370:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2685:G:C2	22:DA:2686:G:C8	3.10	0.40
22:DA:2688:G:N7	22:DA:2719:G:C6	2.89	0.40
22:DA:2756:U:H1'	22:DA:2757:A:H5"	2.02	0.40
22:DA:2862:G:C2	22:DA:2863:C:C2	3.09	0.40
24:DC:29:PRO:HB2	24:DC:30:PHE:H	1.78	0.40
25:DD:31:ALA:HB1	25:DD:96:ILE:O	2.21	0.40
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.84	0.40
32:DK:1:MET:HG2	32:DK:32:TYR:CD1	2.56	0.40
32:DK:73:ASP:OD2	32:DK:75:SER:OG	2.38	0.40
32:DK:76:VAL:CG1	37:DP:73:VAL:CG2	2.97	0.40
35:DN:53:THR:HA	35:DN:56:LYS:CG	2.52	0.40
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.74	0.40
43:DV:9:ARG:CG	43:DV:41:GLU:HB3	2.51	0.40
45:DX:12:PRO:HB3	45:DX:28:ARG:HH21	1.85	0.40
1:AA:155:A:N1	1:AA:167:A:C2	2.90	0.40
1:AA:363:A:C2	1:AA:364:A:C4	3.10	0.40
1:AA:381:C:H2'	1:AA:382:A:O5'	2.22	0.40
1:AA:469:C:N4	1:AA:470:C:N4	2.69	0.40
1:AA:600:A:OP1	8:AH:89:LYS:HG2	2.22	0.40
1:AA:1225:A:N3	1:AA:1225:A:O2'	2.53	0.40
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.55	0.40
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	2.03	0.40
4:AD:84:GLY:O	4:AD:85:ASN:C	2.65	0.40
4:AD:198:HIS:HA	4:AD:201:VAL:HB	2.03	0.40
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	2.04	0.40
8:AH:18:GLN:NE2	8:AH:72:VAL:HG23	2.37	0.40
8:AH:59:LEU:HD11	8:AH:61:LEU:HD21	2.03	0.40
9:AI:11:ARG:HA	9:AI:78:ALA:CB	2.52	0.40
11:AK:21:ALA:HB2	11:AK:34:ILE:CD1	2.50	0.40
11:AK:87:LYS:HG3	11:AK:114:THR:HA	2.02	0.40
17:AQ:14:SER:HB3	17:AQ:22:VAL:HG12	2.02	0.40
22:BA:186:G:O2'	22:BA:187:G:H5'	2.21	0.40
22:BA:950:G:H2'	22:BA:951:C:H6	1.86	0.40
22:BA:1199:U:H5"	57:BA:3707:HOH:O	2.21	0.40
22:BA:1422:G:C2	22:BA:1423:G:C8	3.10	0.40
22:BA:1663:G:H5'	22:BA:2687:U:OP1	2.22	0.40
22:BA:1689:A:C6	22:BA:1700:A:C2	3.10	0.40
22:BA:1744:A:H2'	22:BA:1745:A:O4'	2.20	0.40
22:BA:1946:U:C2	22:BA:1947:C:C5	3.10	0.40
22:BA:2380:C:H2'	22:BA:2381:A:C8	2.56	0.40
22:BA:2544:G:H5'	22:BA:2645:G:C2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2747:G:P	28:BG:138:LYS:HE2	2.61	0.40
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.50	0.40
23:BB:14:U:H3'	23:BB:15:A:H5'	2.04	0.40
27:BF:12:VAL:HG13	27:BF:172:ALA:CB	2.52	0.40
28:BG:37:LEU:O	28:BG:38:ASN:C	2.65	0.40
28:BG:62:TRP:O	28:BG:65:ALA:HB3	2.21	0.40
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.20	0.40
35:BN:108:ALA:O	35:BN:110:MET:N	2.54	0.40
37:BP:27:GLU:O	37:BP:27:GLU:CG	2.70	0.40
38:BQ:112:LYS:O	38:BQ:115:ALA:HB3	2.21	0.40
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.34	0.40
53:B5:179:ALA:O	53:B5:180:SER:C	2.64	0.40
1:CA:64:G:C8	1:CA:99:C:C4	3.09	0.40
1:CA:521:G:O6	1:CA:529:G:C6	2.75	0.40
1:CA:728:A:N6	1:CA:729:A:N6	2.68	0.40
1:CA:765:G:C6	1:CA:812:G:C4	3.10	0.40
1:CA:840:C:C2	1:CA:842:U:H4'	2.57	0.40
1:CA:931:C:H2'	1:CA:932:C:C6	2.56	0.40
1:CA:1071:C:C2	1:CA:1072:G:C8	3.09	0.40
1:CA:1348:U:OP1	9:CI:111:VAL:HA	2.21	0.40
1:CA:1350:A:N6	1:CA:1373:G:N2	2.70	0.40
1:CA:1408:A:N1	1:CA:1494:G:C5	2.89	0.40
1:CA:1415:G:C6	1:CA:1486:G:C6	3.09	0.40
1:CA:1443:C:C2	1:CA:1444:U:C6	3.09	0.40
1:CA:1540:U:H4'	21:CU:18:ARG:HG2	2.04	0.40
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.22	0.40
3:CC:43:LEU:CD2	3:CC:68:ILE:HD11	2.51	0.40
4:CD:57:GLU:HA	4:CD:57:GLU:OE1	2.21	0.40
4:CD:59:GLN:O	4:CD:60:LYS:C	2.64	0.40
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.21	0.40
5:CE:149:SER:CB	5:CE:152:MET:HG3	2.50	0.40
8:CH:80:ARG:O	8:CH:81:PRO:C	2.65	0.40
10:CJ:22:THR:O	10:CJ:22:THR:HG23	2.20	0.40
11:CK:122:ARG:CZ	21:CU:36:GLU:CG	3.00	0.40
12:CL:21:VAL:C	12:CL:23:ALA:N	2.79	0.40
12:CL:102:LEU:HB3	12:CL:103:ASP:H	1.77	0.40
17:CQ:14:SER:HB3	17:CQ:22:VAL:CG1	2.52	0.40
18:CR:32:TYR:C	18:CR:40:VAL:HG23	2.46	0.40
22:DA:84:A:C2	22:DA:98:G:N3	2.89	0.40
22:DA:231:A:N6	22:DA:232:G:N1	2.70	0.40
22:DA:295:G:H2'	22:DA:295:G:N3	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:371:A:N3	45:DX:61:LYS:NZ	2.69	0.40
22:DA:647:G:C5	22:DA:648:G:C5	3.09	0.40
22:DA:686:U:H2'	22:DA:788:A:N1	2.36	0.40
22:DA:775:G:C2	22:DA:794:A:C8	3.10	0.40
22:DA:942:G:H2'	22:DA:943:A:H5'	2.03	0.40
22:DA:1057:A:C2	22:DA:1082:U:N3	2.90	0.40
22:DA:1463:C:H2'	22:DA:1464:G:O4'	2.21	0.40
22:DA:1483:G:N3	22:DA:1483:G:H2'	2.37	0.40
22:DA:1520:U:O4	22:DA:1521:G:C6	2.74	0.40
22:DA:1609:A:O2'	22:DA:1610:A:H5'	2.22	0.40
22:DA:1773:A:H2'	22:DA:1774:C:H5'	2.03	0.40
22:DA:1806:C:O2	24:DC:44:ASN:ND2	2.55	0.40
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.35	0.40
22:DA:2066:C:C2	22:DA:2445:G:N2	2.90	0.40
22:DA:2088:A:C6	22:DA:2089:C:N4	2.90	0.40
22:DA:2189:U:C2'	22:DA:2190:G:H5"	2.51	0.40
22:DA:2347:C:H2'	22:DA:2348:U:C6	2.56	0.40
22:DA:2389:G:C5'	22:DA:2390:U:H5'	2.50	0.40
22:DA:2486:C:N3	22:DA:2487:G:C8	2.90	0.40
22:DA:2529:G:H4'	28:DG:175:LYS:HG3	2.02	0.40
22:DA:2856:A:C6	22:DA:2857:G:C5	3.09	0.40
23:DB:34:A:H2'	23:DB:35:C:OP2	2.21	0.40
26:DE:52:VAL:O	26:DE:74:LYS:HD3	2.21	0.40
29:DH:96:THR:C	29:DH:98:ASP:N	2.79	0.40
30:DI:54:PRO:O	30:DI:75:PRO:CD	2.69	0.40
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.62	0.40
30:DI:114:ALA:O	30:DI:115:ALA:HB2	2.22	0.40
33:DL:109:LYS:CG	33:DL:126:ARG:HB3	2.51	0.40
42:DU:87:PHE:HA	42:DU:91:LYS:O	2.21	0.40
42:DU:97:LYS:O	42:DU:98:SER:OG	2.23	0.40
43:DV:49:ASN:O	43:DV:52:ALA:HB3	2.21	0.40
45:DX:10:LYS:HE3	45:DX:54:LYS:HD2	2.02	0.40
45:DX:42:SER:OG	45:DX:43:GLU:N	2.54	0.40
46:DY:1:MET:CA	46:DY:4:LYS:HD3	2.52	0.40
46:DY:7:ARG:HG3	46:DY:7:ARG:O	2.21	0.40
47:DZ:31:ARG:HG2	47:DZ:34:HIS:HB2	2.03	0.40
48:D0:12:LYS:HD2	48:D0:12:LYS:HA	1.94	0.40
48:D0:55:ILE:CG2	48:D0:56:ALA:N	2.76	0.40
50:D2:25:LYS:O	50:D2:25:LYS:HG3	2.21	0.40
1:AA:587:G:H4'	8:AH:4:GLN:CA	2.51	0.40
1:AA:597:G:C2	1:AA:644:U:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:613:C:N4	1:AA:614:C:N4	2.70	0.40
1:AA:715:A:H2'	1:AA:716:A:C8	2.57	0.40
1:AA:809:G:C6	1:AA:810:C:C5	3.10	0.40
1:AA:1074:G:C6	1:AA:1075:U:C4	3.10	0.40
2:AB:20:THR:HB	2:AB:37:LYS:O	2.22	0.40
2:AB:114:LEU:O	2:AB:118:GLU:HG2	2.22	0.40
3:AC:2:GLY:C	3:AC:3:GLN:HG3	2.46	0.40
3:AC:22:TRP:CZ2	3:AC:32:ASN:HB3	2.56	0.40
3:AC:64:ILE:HG12	3:AC:66:VAL:HG23	2.03	0.40
6:AF:52:ASN:OD1	6:AF:85:ILE:HG22	2.22	0.40
7:AG:27:VAL:CG2	7:AG:28:ASN:N	2.84	0.40
8:AH:6:PRO:O	8:AH:9:ASP:HB3	2.21	0.40
9:AI:12:ARG:NH2	9:AI:107:ASP:OD1	2.54	0.40
9:AI:25:ASN:H	9:AI:62:ASP:CG	2.29	0.40
10:AJ:74:VAL:O	10:AJ:75:ASP:HB2	2.21	0.40
14:AN:87:ALA:O	14:AN:88:ALA:C	2.64	0.40
15:AO:28:GLN:O	15:AO:29:VAL:C	2.64	0.40
17:AQ:16:LYS:C	17:AQ:17:MET:HE3	2.46	0.40
17:AQ:61:ILE:HG23	17:AQ:73:TRP:HE3	1.86	0.40
20:AT:44:LYS:HD3	20:AT:87:ALA:OXT	2.22	0.40
20:AT:74:ARG:O	20:AT:78:ASN:OD1	2.39	0.40
22:BA:63:A:C2	22:BA:64:A:C5	3.10	0.40
22:BA:127:A:H5"	22:BA:128:C:O4'	2.22	0.40
22:BA:277:G:H1'	22:BA:361:G:O6	2.21	0.40
22:BA:354:A:C6	22:BA:355:U:C4	3.10	0.40
22:BA:441:U:H2'	22:BA:442:G:C8	2.56	0.40
22:BA:511:U:O4	22:BA:512:G:N1	2.54	0.40
22:BA:521:U:H2'	22:BA:522:A:C8	2.56	0.40
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.57	0.40
22:BA:1738:G:O2'	22:BA:1739:A:H8	2.05	0.40
22:BA:1907:G:C6	22:BA:1908:C:C4	3.09	0.40
22:BA:2076:U:O2	22:BA:2076:U:C4'	2.70	0.40
22:BA:2186:G:C5	22:BA:2187:U:C4	3.09	0.40
22:BA:2252:G:H2'	22:BA:2253:G:O4'	2.22	0.40
22:BA:2392:A:C8	22:BA:2429:G:N1	2.90	0.40
24:BC:261:LYS:O	24:BC:262:ARG:C	2.64	0.40
25:BD:13:ARG:CD	25:BD:15:PHE:CZ	3.01	0.40
26:BE:5:LEU:HD11	26:BE:12:LEU:HB2	2.03	0.40
26:BE:154:ASP:OD2	26:BE:154:ASP:C	2.64	0.40
27:BF:38:MET:CE	27:BF:57:LEU:HG	2.51	0.40
28:BG:5:ALA:HB2	28:BG:66:GLY:HA2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:24:ILE:CD1	28:BG:72:LEU:HD21	2.51	0.40
30:BI:11:LEU:HD12	30:BI:24:VAL:HG12	2.04	0.40
30:BI:101:ILE:HD11	30:BI:138:LEU:HD13	2.02	0.40
39:BR:42:ALA:CA	39:BR:46:GLU:HB2	2.48	0.40
49:B1:33:LYS:HA	49:B1:52:ALA:HB3	2.03	0.40
1:CA:308:C:H2'	1:CA:309:A:C8	2.56	0.40
1:CA:354:G:C4	1:CA:355:C:C5	3.10	0.40
1:CA:474:G:C6	1:CA:475:C:C4	3.10	0.40
1:CA:496:A:H2'	1:CA:497:G:N7	2.36	0.40
1:CA:570:G:C5	1:CA:873:A:C6	3.09	0.40
1:CA:572:A:H5'	1:CA:573:A:P	2.61	0.40
1:CA:1255:G:C6	1:CA:1279:G:N7	2.89	0.40
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.36	0.40
1:CA:1306:A:H2'	1:CA:1307:U:O4'	2.21	0.40
5:CE:66:LYS:O	5:CE:70:ASN:HB2	2.21	0.40
6:CF:55:HIS:O	6:CF:56:LYS:O	2.40	0.40
6:CF:64:VAL:CG1	6:CF:65:GLU:N	2.83	0.40
8:CH:77:ARG:CZ	8:CH:79:SER:O	2.69	0.40
22:DA:301:G:N2	22:DA:302:C:C2	2.89	0.40
22:DA:478:A:C2	22:DA:480:A:C5	3.10	0.40
22:DA:491:G:C2	22:DA:492:A:C4	3.10	0.40
22:DA:927:A:H2'	22:DA:928:A:C8	2.56	0.40
22:DA:980:A:O2'	22:DA:2037:A:O2'	2.24	0.40
22:DA:1034:G:C5	22:DA:1035:U:C5	3.10	0.40
22:DA:1063:G:H2'	22:DA:1064:C:O4'	2.21	0.40
22:DA:1067:A:C2	22:DA:1068:G:N7	2.89	0.40
22:DA:1082:U:H5"	22:DA:1083:U:OP2	2.22	0.40
22:DA:1344:U:H6	22:DA:1344:U:O5'	2.04	0.40
22:DA:1526:C:H2'	22:DA:1527:G:O4'	2.22	0.40
22:DA:1922:G:H2'	22:DA:1923:U:O4'	2.21	0.40
22:DA:1997:C:OP2	25:DD:129:THR:OG1	2.36	0.40
22:DA:2046:G:OP1	48:D0:12:LYS:NZ	2.54	0.40
22:DA:2728:U:O2'	22:DA:2729:G:H5'	2.22	0.40
23:DB:21:G:N2	23:DB:63:C:C2	2.89	0.40
23:DB:51:G:C8	36:DO:64:TYR:HE2	2.39	0.40
24:DC:31:ALA:O	24:DC:33:LEU:N	2.53	0.40
25:DD:51:THR:HB	25:DD:79:LEU:HD23	2.04	0.40
26:DE:147:LEU:HB3	26:DE:186:VAL:HG13	2.02	0.40
31:DJ:113:PRO:HA	31:DJ:116:ARG:NH2	2.36	0.40
32:DK:104:THR:HB	32:DK:106:GLU:OE1	2.21	0.40
37:DP:55:LEU:HA	37:DP:77:HIS:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:36:LEU:HD13	40:DS:48:LYS:HB2	2.04	0.40
41:DT:22:THR:HA	41:DT:25:GLU:HG2	2.03	0.40
44:DW:57:HIS:CD2	44:DW:57:HIS:N	2.90	0.40
46:DY:20:ASN:CB	46:DY:50:VAL:HG22	2.51	0.40
46:DY:45:GLN:O	46:DY:48:ARG:N	2.54	0.40

All (5) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:368:U:OP2	29:DH:123:ARG:NE[4_455]	1.71	0.49
1:AA:368:U:OP2	29:DH:123:ARG:CZ[4_455]	1.89	0.31
1:AA:368:U:OP2	29:DH:123:ARG:NH2[4_455]	2.04	0.16
1:AA:368:U:OP1	29:DH:93:SER:OG[4_455]	2.10	0.10
1:CA:204:G:OP1	22:DA:289:G:O2'[3_545]	2.12	0.08

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	125 (58%)	36 (17%)	55 (26%)	0	0
2	CB	216/218 (99%)	126 (58%)	54 (25%)	36 (17%)	0	0
3	AC	204/206 (99%)	144 (71%)	48 (24%)	12 (6%)	1	4
3	CC	204/206 (99%)	146 (72%)	41 (20%)	17 (8%)	0	1
4	AD	203/205 (99%)	140 (69%)	38 (19%)	25 (12%)	0	0
4	CD	203/205 (99%)	148 (73%)	35 (17%)	20 (10%)	0	1
5	AE	148/150 (99%)	107 (72%)	24 (16%)	17 (12%)	0	1
5	CE	148/150 (99%)	100 (68%)	25 (17%)	23 (16%)	0	0
6	AF	98/100 (98%)	67 (68%)	17 (17%)	14 (14%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
6	CF	98/100 (98%)	65 (66%)	16 (16%)	17 (17%)	0 0
7	AG	149/151 (99%)	101 (68%)	33 (22%)	15 (10%)	0 1
7	CG	149/151 (99%)	120 (80%)	19 (13%)	10 (7%)	1 3
8	AH	127/129 (98%)	88 (69%)	29 (23%)	10 (8%)	1 2
8	CH	127/129 (98%)	101 (80%)	19 (15%)	7 (6%)	1 4
9	AI	125/127 (98%)	87 (70%)	23 (18%)	15 (12%)	0 1
9	CI	125/127 (98%)	91 (73%)	25 (20%)	9 (7%)	1 2
10	AJ	96/98 (98%)	63 (66%)	12 (12%)	21 (22%)	0 0
10	CJ	96/98 (98%)	72 (75%)	15 (16%)	9 (9%)	0 1
11	AK	115/117 (98%)	85 (74%)	17 (15%)	13 (11%)	0 1
11	CK	115/117 (98%)	83 (72%)	23 (20%)	9 (8%)	1 2
12	AL	121/123 (98%)	96 (79%)	15 (12%)	10 (8%)	0 1
12	CL	121/123 (98%)	92 (76%)	17 (14%)	12 (10%)	0 1
13	AM	112/114 (98%)	83 (74%)	17 (15%)	12 (11%)	0 1
13	CM	112/114 (98%)	80 (71%)	21 (19%)	11 (10%)	0 1
14	AN	92/100 (92%)	55 (60%)	25 (27%)	12 (13%)	0 0
14	CN	92/100 (92%)	57 (62%)	20 (22%)	15 (16%)	0 0
15	AO	86/88 (98%)	63 (73%)	18 (21%)	5 (6%)	1 4
15	CO	86/88 (98%)	63 (73%)	19 (22%)	4 (5%)	2 7
16	AP	80/82 (98%)	44 (55%)	17 (21%)	19 (24%)	0 0
16	CP	80/82 (98%)	57 (71%)	18 (22%)	5 (6%)	1 3
17	AQ	78/80 (98%)	53 (68%)	16 (20%)	9 (12%)	0 1
17	CQ	78/80 (98%)	55 (70%)	14 (18%)	9 (12%)	0 1
18	AR	53/55 (96%)	44 (83%)	7 (13%)	2 (4%)	2 10
18	CR	53/55 (96%)	42 (79%)	7 (13%)	4 (8%)	1 2
19	AS	77/79 (98%)	53 (69%)	16 (21%)	8 (10%)	0 1
19	CS	77/79 (98%)	61 (79%)	13 (17%)	3 (4%)	2 10
20	AT	83/85 (98%)	57 (69%)	20 (24%)	6 (7%)	1 2
20	CT	83/85 (98%)	62 (75%)	13 (16%)	8 (10%)	0 1
21	AU	49/51 (96%)	27 (55%)	10 (20%)	12 (24%)	0 0
21	CU	49/51 (96%)	24 (49%)	12 (24%)	13 (26%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
24	BC	269/271 (99%)	213 (79%)	39 (14%)	17 (6%)	1 3
24	DC	269/271 (99%)	200 (74%)	49 (18%)	20 (7%)	1 2
25	BD	207/209 (99%)	167 (81%)	33 (16%)	7 (3%)	3 12
25	DD	207/209 (99%)	165 (80%)	33 (16%)	9 (4%)	2 8
26	BE	199/201 (99%)	153 (77%)	39 (20%)	7 (4%)	3 12
26	DE	199/201 (99%)	146 (73%)	40 (20%)	13 (6%)	1 3
27	BF	175/177 (99%)	136 (78%)	30 (17%)	9 (5%)	1 6
27	DF	175/177 (99%)	136 (78%)	26 (15%)	13 (7%)	1 2
28	BG	174/176 (99%)	145 (83%)	19 (11%)	10 (6%)	1 4
28	DG	174/176 (99%)	129 (74%)	30 (17%)	15 (9%)	0 1
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0 0
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	0 1
30	BI	139/141 (99%)	71 (51%)	44 (32%)	24 (17%)	0 0
30	DI	139/141 (99%)	75 (54%)	49 (35%)	15 (11%)	0 1
31	BJ	140/142 (99%)	124 (89%)	12 (9%)	4 (3%)	3 15
31	DJ	140/142 (99%)	123 (88%)	12 (9%)	5 (4%)	2 11
32	BK	120/122 (98%)	96 (80%)	16 (13%)	8 (7%)	1 3
32	DK	120/122 (98%)	97 (81%)	16 (13%)	7 (6%)	1 4
33	BL	141/143 (99%)	106 (75%)	20 (14%)	15 (11%)	0 1
33	DL	141/143 (99%)	104 (74%)	27 (19%)	10 (7%)	1 2
34	BM	134/136 (98%)	117 (87%)	15 (11%)	2 (2%)	8 28
34	DM	134/136 (98%)	111 (83%)	17 (13%)	6 (4%)	2 8
35	BN	118/120 (98%)	92 (78%)	19 (16%)	7 (6%)	1 4
35	DN	118/120 (98%)	91 (77%)	19 (16%)	8 (7%)	1 2
36	BO	114/116 (98%)	91 (80%)	19 (17%)	4 (4%)	3 12
36	DO	114/116 (98%)	97 (85%)	11 (10%)	6 (5%)	1 5
37	BP	112/114 (98%)	101 (90%)	6 (5%)	5 (4%)	2 8
37	DP	112/114 (98%)	89 (80%)	16 (14%)	7 (6%)	1 3
38	BQ	115/117 (98%)	93 (81%)	16 (14%)	6 (5%)	1 5
38	DQ	115/117 (98%)	104 (90%)	10 (9%)	1 (1%)	14 41
39	BR	101/103 (98%)	83 (82%)	9 (9%)	9 (9%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
39	DR	101/103 (98%)	80 (79%)	14 (14%)	7 (7%)	1 2
40	BS	108/110 (98%)	83 (77%)	18 (17%)	7 (6%)	1 3
40	DS	108/110 (98%)	88 (82%)	13 (12%)	7 (6%)	1 3
41	BT	91/93 (98%)	69 (76%)	8 (9%)	14 (15%)	0 0
41	DT	91/93 (98%)	65 (71%)	14 (15%)	12 (13%)	0 0
42	BU	100/102 (98%)	75 (75%)	16 (16%)	9 (9%)	0 1
42	DU	100/102 (98%)	70 (70%)	19 (19%)	11 (11%)	0 1
43	BV	92/94 (98%)	85 (92%)	6 (6%)	1 (1%)	11 36
43	DV	92/94 (98%)	76 (83%)	14 (15%)	2 (2%)	5 20
44	BW	74/76 (97%)	70 (95%)	4 (5%)	0	100 100
44	DW	73/76 (96%)	59 (81%)	11 (15%)	3 (4%)	2 9
45	BX	75/77 (97%)	66 (88%)	6 (8%)	3 (4%)	2 9
45	DX	75/77 (97%)	57 (76%)	14 (19%)	4 (5%)	1 5
46	BY	61/63 (97%)	35 (57%)	19 (31%)	7 (12%)	0 1
46	DY	61/63 (97%)	42 (69%)	14 (23%)	5 (8%)	0 2
47	BZ	56/58 (97%)	47 (84%)	9 (16%)	0	100 100
47	DZ	56/58 (97%)	53 (95%)	1 (2%)	2 (4%)	2 11
48	B0	54/56 (96%)	44 (82%)	7 (13%)	3 (6%)	1 4
48	D0	54/56 (96%)	38 (70%)	12 (22%)	4 (7%)	1 2
49	B1	48/50 (96%)	39 (81%)	5 (10%)	4 (8%)	0 1
49	D1	48/50 (96%)	40 (83%)	5 (10%)	3 (6%)	1 3
50	B2	44/46 (96%)	36 (82%)	7 (16%)	1 (2%)	5 19
50	D2	44/46 (96%)	36 (82%)	6 (14%)	2 (4%)	2 8
51	B3	62/64 (97%)	54 (87%)	7 (11%)	1 (2%)	7 27
51	D3	62/64 (97%)	49 (79%)	10 (16%)	3 (5%)	2 7
52	B4	36/38 (95%)	31 (86%)	5 (14%)	0	100 100
52	D4	36/38 (95%)	28 (78%)	4 (11%)	4 (11%)	0 1
53	B5	183/228 (80%)	100 (55%)	49 (27%)	34 (19%)	0 0
All	All	11418/11672 (98%)	8486 (74%)	1941 (17%)	991 (9%)	0 1

All (991) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	12	ALA
2	AB	16	PHE
2	AB	22	TYR
2	AB	34	ALA
2	AB	64	LYS
2	AB	73	LYS
2	AB	74	ARG
2	AB	75	ALA
2	AB	76	ALA
2	AB	83	ALA
2	AB	87	CYS
2	AB	107	VAL
2	AB	116	ASP
2	AB	120	GLN
2	AB	129	LEU
2	AB	133	GLU
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	201	PRO
2	AB	207	ILE
2	AB	212	LEU
2	AB	220	THR
3	AC	3	GLN
3	AC	17	PRO
3	AC	18	TRP
3	AC	26	THR
3	AC	139	GLN
3	AC	140	ASN
4	AD	7	PRO
4	AD	23	SER
4	AD	29	ASP
4	AD	33	LYS
4	AD	35	GLU
4	AD	49	SER
4	AD	126	ASN
4	AD	151	LYS
4	AD	153	SER
4	AD	160	GLU
4	AD	168	PRO
4	AD	191	LEU
4	AD	192	SER
5	AE	26	LYS

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Mol	Chain	Res	Type
5	AE	43	ASN
5	AE	100	SER
5	AE	105	ILE
5	AE	122	ASN
5	AE	138	ARG
6	AF	68	GLN
6	AF	91	ARG
6	AF	92	THR
6	AF	99	ALA
7	AG	51	ALA
7	AG	130	ASN
8	AH	3	MET
8	AH	67	GLN
8	AH	88	ARG
9	AI	41	ARG
9	AI	44	ALA
9	AI	91	ASP
10	AJ	33	GLY
10	AJ	34	ALA
10	AJ	57	VAL
10	AJ	101	SER
11	AK	14	LYS
11	AK	52	PHE
11	AK	73	ALA
12	AL	23	ALA
12	AL	24	LEU
12	AL	44	LYS
13	AM	4	ILE
13	AM	5	ALA
13	AM	11	ASP
13	AM	12	HIS
13	AM	27	LYS
13	AM	100	GLN
13	AM	114	LYS
14	AN	21	PHE
14	AN	28	LYS
14	AN	47	LYS
14	AN	49	GLN
14	AN	52	PRO
14	AN	62	ASN
14	AN	64	CYS
14	AN	92	GLU

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Mol	Chain	Res	Type
16	AP	8	ARG
16	AP	43	ALA
16	AP	46	LYS
16	AP	53	ASP
16	AP	65	ALA
16	AP	79	ASN
17	AQ	13	VAL
17	AQ	51	ASN
17	AQ	69	LYS
18	AR	50	LYS
19	AS	5	LEU
19	AS	29	LYS
19	AS	65	GLU
20	AT	4	ILE
20	AT	6	SER
21	AU	11	PRO
21	AU	24	GLU
21	AU	36	GLU
21	AU	38	TYR
21	AU	40	LYS
24	BC	71	LYS
24	BC	122	ALA
24	BC	196	GLY
25	BD	152	PRO
26	BE	86	ALA
27	BF	41	GLY
27	BF	42	GLU
27	BF	73	SER
27	BF	176	PRO
28	BG	119	ALA
29	BH	10	ALA
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	118	PRO
29	BH	121	VAL
29	BH	140	ALA
30	BI	6	GLN
30	BI	19	ASN
30	BI	45	LYS
30	BI	60	THR

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Mol	Chain	Res	Type
30	BI	63	ALA
30	BI	90	SER
30	BI	117	MET
30	BI	134	ARG
31	BJ	81	ILE
32	BK	35	VAL
32	BK	91	SER
32	BK	108	ARG
33	BL	15	ALA
33	BL	29	LYS
33	BL	30	THR
33	BL	31	GLY
33	BL	88	GLY
33	BL	94	THR
33	BL	111	ILE
33	BL	115	GLU
34	BM	69	PRO
36	BO	77	ALA
36	BO	87	ILE
36	BO	88	LYS
37	BP	16	ASP
37	BP	94	LYS
37	BP	105	GLY
38	BQ	25	TYR
38	BQ	83	LEU
38	BQ	102	ASP
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE
39	BR	55	ASP
40	BS	29	VAL
40	BS	64	ALA
41	BT	25	GLU
41	BT	72	GLN
41	BT	88	LYS
41	BT	89	GLU
42	BU	8	ASP
42	BU	100	SER
43	BV	24	ASN
45	BX	3	ARG
46	BY	22	LEU
46	BY	24	GLU

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Mol	Chain	Res	Type
46	BY	36	GLN
46	BY	46	VAL
48	B0	56	ALA
49	B1	17	THR
49	B1	52	ALA
53	B5	41	THR
53	B5	53	ARG
53	B5	62	THR
53	B5	134	PRO
53	B5	141	PRO
53	B5	154	ILE
53	B5	174	ALA
53	B5	175	PRO
53	B5	205	ALA
53	B5	210	LEU
53	B5	221	PRO
2	CB	16	PHE
2	CB	36	ASN
2	CB	73	LYS
2	CB	74	ARG
2	CB	86	SER
2	CB	87	CYS
2	CB	100	MET
2	CB	126	PHE
2	CB	136	MET
2	CB	170	HIS
2	CB	193	PRO
2	CB	207	ILE
2	CB	220	THR
2	CB	222	ARG
3	CC	17	PRO
3	CC	146	ALA
4	CD	29	ASP
4	CD	33	LYS
4	CD	35	GLU
4	CD	36	GLN
5	CE	45	ARG
5	CE	98	PRO
5	CE	101	GLU
5	CE	103	THR
5	CE	111	MET
5	CE	123	VAL

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Mol	Chain	Res	Type
5	CE	158	GLY
6	CF	27	ALA
6	CF	55	HIS
6	CF	56	LYS
6	CF	86	ARG
6	CF	91	ARG
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
7	CG	56	LYS
7	CG	130	ASN
7	CG	146	GLU
8	CH	66	PHE
9	CI	41	ARG
9	CI	120	LYS
9	CI	129	LYS
10	CJ	57	VAL
10	CJ	86	ALA
10	CJ	93	ALA
11	CK	52	PHE
11	CK	91	PRO
11	CK	127	ARG
12	CL	4	VAL
12	CL	17	ALA
12	CL	34	CYS
12	CL	44	LYS
12	CL	76	GLU
12	CL	77	HIS
12	CL	89	ASP
12	CL	117	TYR
13	CM	7	ILE
13	CM	11	ASP
13	CM	41	GLU
13	CM	114	LYS
14	CN	22	ALA
14	CN	52	PRO
14	CN	59	ARG
14	CN	92	GLU
17	CQ	5	ILE
17	CQ	51	ASN
17	CQ	52	GLU
17	CQ	53	CYS

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Mol	Chain	Res	Type
18	CR	21	ILE
18	CR	47	THR
19	CS	5	LEU
20	CT	4	ILE
20	CT	6	SER
20	CT	41	ALA
20	CT	68	HIS
21	CU	9	ASN
21	CU	12	PHE
21	CU	24	GLU
21	CU	36	GLU
21	CU	37	PHE
21	CU	40	LYS
21	CU	46	LYS
21	CU	52	ALA
24	DC	10	SER
24	DC	29	PRO
24	DC	35	GLU
24	DC	36	LYS
24	DC	58	HIS
24	DC	71	LYS
24	DC	239	ASN
24	DC	255	LYS
25	DD	104	VAL
25	DD	151	THR
25	DD	152	PRO
25	DD	174	SER
26	DE	6	LYS
26	DE	86	ALA
26	DE	122	GLU
27	DF	9	LYS
27	DF	123	ASP
27	DF	176	PRO
28	DG	61	GLY
28	DG	92	VAL
28	DG	119	ALA
28	DG	159	GLY
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS

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Mol	Chain	Res	Type
29	DH	53	GLU
29	DH	54	LEU
29	DH	83	LYS
29	DH	109	GLU
30	DI	7	ALA
30	DI	19	ASN
30	DI	93	PRO
30	DI	102	SER
31	DJ	81	ILE
32	DK	92	GLU
32	DK	108	ARG
34	DM	3	GLN
34	DM	69	PRO
35	DN	2	ARG
35	DN	88	ALA
35	DN	104	ALA
35	DN	119	SER
36	DO	34	HIS
36	DO	116	GLN
37	DP	66	ASN
39	DR	31	GLU
39	DR	102	SER
40	DS	28	LYS
40	DS	29	VAL
40	DS	62	ASP
41	DT	18	GLU
41	DT	39	THR
41	DT	52	GLU
41	DT	73	ARG
41	DT	77	ARG
41	DT	88	LYS
42	DU	7	ARG
42	DU	19	LYS
42	DU	53	ASN
42	DU	55	PRO
42	DU	89	ASP
45	DX	3	ARG
45	DX	62	LYS
46	DY	61	ALA
47	DZ	4	THR
47	DZ	14	ILE
48	D0	56	ALA

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Mol	Chain	Res	Type
49	D1	5	ILE
50	D2	44	VAL
50	D2	45	SER
2	AB	14	VAL
2	AB	52	GLU
2	AB	68	LEU
2	AB	97	LEU
2	AB	117	LEU
2	AB	126	PHE
2	AB	143	LYS
2	AB	150	GLY
2	AB	170	HIS
2	AB	183	VAL
2	AB	203	ASN
2	AB	210	VAL
3	AC	15	VAL
3	AC	80	LYS
3	AC	141	ALA
4	AD	24	GLY
4	AD	101	VAL
4	AD	107	PHE
4	AD	175	ALA
5	AE	12	GLN
5	AE	45	ARG
5	AE	51	GLY
5	AE	78	ASN
5	AE	88	VAL
5	AE	110	ALA
6	AF	6	ILE
6	AF	7	VAL
6	AF	69	GLU
6	AF	95	ALA
7	AG	15	ASP
7	AG	59	LEU
7	AG	69	VAL
7	AG	81	GLY
7	AG	96	ARG
8	AH	35	ALA
9	AI	72	ILE
9	AI	116	VAL
10	AJ	17	LEU
10	AJ	38	GLY

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Mol	Chain	Res	Type
10	AJ	41	PRO
10	AJ	61	ALA
10	AJ	74	VAL
10	AJ	81	GLU
11	AK	72	ASP
11	AK	103	ALA
11	AK	125	LYS
11	AK	126	LYS
12	AL	25	GLU
12	AL	89	ASP
12	AL	98	VAL
12	AL	123	LYS
13	AM	67	GLY
14	AN	4	GLN
14	AN	34	VAL
14	AN	53	ARG
15	AO	25	THR
16	AP	16	PHE
16	AP	31	ARG
16	AP	68	SER
16	AP	78	VAL
16	AP	80	LYS
17	AQ	10	GLY
17	AQ	18	GLU
17	AQ	70	THR
19	AS	4	SER
20	AT	68	HIS
21	AU	35	ARG
21	AU	37	PHE
24	BC	13	ARG
24	BC	190	ALA
24	BC	223	THR
24	BC	233	GLY
25	BD	114	LYS
26	BE	8	ALA
26	BE	110	SER
27	BF	3	LYS
27	BF	21	ASN
28	BG	32	GLU
28	BG	39	ASP
28	BG	61	GLY
28	BG	80	THR

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Mol	Chain	Res	Type
28	BG	82	GLY
28	BG	173	GLU
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	66	ASN
29	BH	119	ASN
30	BI	24	VAL
30	BI	65	ARG
30	BI	75	PRO
30	BI	83	ALA
30	BI	98	VAL
30	BI	106	LEU
33	BL	69	ARG
33	BL	86	GLU
35	BN	52	ILE
38	BQ	7	GLY
38	BQ	46	ALA
39	BR	31	GLU
39	BR	102	SER
40	BS	89	ALA
41	BT	20	ALA
41	BT	71	GLY
42	BU	19	LYS
42	BU	99	ASN
46	BY	10	SER
46	BY	62	GLY
50	B2	44	VAL
51	B3	28	ASN
53	B5	36	ALA
53	B5	51	ASP
53	B5	90	ALA
53	B5	136	GLY
53	B5	144	GLY
53	B5	146	VAL
53	B5	171	ALA
53	B5	180	SER
53	B5	185	LYS
2	CB	33	GLY
2	CB	34	ALA
2	CB	51	ASN

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Mol	Chain	Res	Type
2	CB	82	ASP
2	CB	103	ASN
2	CB	120	GLN
2	CB	124	GLY
2	CB	141	LEU
3	CC	80	LYS
3	CC	82	GLU
3	CC	84	VAL
3	CC	101	ILE
3	CC	127	ARG
4	CD	4	TYR
4	CD	27	ALA
4	CD	32	CYS
4	CD	34	ILE
4	CD	47	ARG
4	CD	85	ASN
4	CD	174	ASP
4	CD	175	ALA
5	CE	51	GLY
5	CE	70	ASN
5	CE	99	ALA
5	CE	102	GLY
5	CE	138	ARG
5	CE	150	PRO
6	CF	14	GLN
6	CF	68	GLN
7	CG	9	GLN
7	CG	140	ASP
8	CH	89	LYS
9	CI	55	VAL
9	CI	72	ILE
10	CJ	17	LEU
10	CJ	35	GLN
10	CJ	36	VAL
11	CK	17	SER
11	CK	92	GLY
11	CK	93	ARG
12	CL	102	LEU
12	CL	123	LYS
13	CM	6	GLY
13	CM	82	ASP
14	CN	11	VAL

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Mol	Chain	Res	Type
14	CN	16	LEU
14	CN	23	LYS
14	CN	29	ALA
14	CN	31	ILE
14	CN	62	ASN
16	CP	77	GLU
16	CP	80	LYS
18	CR	25	ASP
18	CR	26	ILE
19	CS	6	LYS
20	CT	7	ALA
21	CU	13	ASP
24	DC	218	PRO
24	DC	240	PHE
24	DC	251	GLN
25	DD	105	LYS
26	DE	7	ASP
26	DE	8	ALA
26	DE	61	ARG
26	DE	69	ARG
26	DE	81	GLY
26	DE	84	THR
26	DE	144	GLU
27	DF	21	ASN
27	DF	71	ARG
27	DF	103	LEU
27	DF	150	ARG
28	DG	20	ASN
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	72	LYS
30	DI	88	SER
30	DI	90	SER
30	DI	106	LEU
30	DI	115	ALA
31	DJ	6	ALA
31	DJ	25	LEU
31	DJ	127	GLY
32	DK	35	VAL
32	DK	105	ARG
33	DL	9	ALA

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Mol	Chain	Res	Type
33	DL	17	LYS
33	DL	111	ILE
35	DN	3	HIS
35	DN	106	ASP
37	DP	80	VAL
37	DP	94	LYS
37	DP	105	GLY
38	DQ	87	SER
39	DR	7	SER
39	DR	50	GLY
40	DS	63	GLY
41	DT	21	SER
41	DT	72	GLN
42	DU	57	GLY
43	DV	65	VAL
46	DY	57	LEU
49	D1	16	GLY
52	D4	20	ASP
2	AB	115	LYS
2	AB	128	LYS
2	AB	147	SER
2	AB	182	PRO
2	AB	188	ASP
2	AB	209	ALA
3	AC	61	ALA
4	AD	161	LEU
4	AD	167	LYS
4	AD	169	THR
5	AE	24	THR
5	AE	76	LEU
5	AE	134	ILE
5	AE	157	ARG
6	AF	56	LYS
7	AG	14	PRO
7	AG	50	LEU
8	AH	54	ASP
9	AI	88	MET
9	AI	99	ARG
9	AI	100	LYS
10	AJ	32	THR
10	AJ	36	VAL
10	AJ	91	ASP

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Mol	Chain	Res	Type
10	AJ	92	LEU
10	AJ	93	ALA
11	AK	36	ASP
11	AK	38	GLN
11	AK	56	ARG
11	AK	127	ARG
12	AL	22	PRO
12	AL	26	ALA
13	AM	112	PRO
15	AO	20	ASN
15	AO	46	HIS
15	AO	73	LYS
16	AP	10	GLY
16	AP	24	SER
16	AP	49	GLY
17	AQ	82	ALA
18	AR	30	LYS
19	AS	30	PRO
21	AU	10	GLU
21	AU	25	LYS
21	AU	31	GLU
24	BC	131	PRO
24	BC	137	VAL
24	BC	189	ARG
25	BD	86	GLU
25	BD	159	LYS
26	BE	125	SER
28	BG	12	PRO
28	BG	79	VAL
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	4	LYS
30	BI	7	ALA
30	BI	31	GLN
30	BI	113	LYS
32	BK	93	GLN
33	BL	68	SER
34	BM	58	LYS
35	BN	109	PRO

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Mol	Chain	Res	Type
35	BN	118	ARG
36	BO	60	GLU
37	BP	111	LYS
38	BQ	82	GLY
39	BR	24	LYS
39	BR	52	PRO
39	BR	70	GLU
41	BT	26	LYS
41	BT	52	GLU
42	BU	7	ARG
42	BU	98	SER
46	BY	23	ARG
48	B0	55	ILE
53	B5	46	ALA
53	B5	86	GLU
53	B5	133	GLY
53	B5	183	PRO
53	B5	203	GLU
53	B5	214	TYR
2	CB	21	ARG
2	CB	75	ALA
2	CB	102	THR
2	CB	129	LEU
2	CB	135	LEU
3	CC	54	ARG
3	CC	89	LYS
3	CC	166	GLU
4	CD	10	LYS
4	CD	26	ARG
4	CD	154	ARG
4	CD	165	ARG
5	CE	24	THR
5	CE	26	LYS
5	CE	68	ARG
5	CE	100	SER
5	CE	155	ALA
6	CF	13	ASP
6	CF	17	GLN
6	CF	53	LYS
6	CF	54	LEU
6	CF	63	ASN
7	CG	10	ARG

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Mol	Chain	Res	Type
7	CG	84	THR
8	CH	22	LYS
8	CH	31	LYS
9	CI	91	ASP
10	CJ	92	LEU
11	CK	15	GLN
12	CL	22	PRO
12	CL	23	ALA
13	CM	24	GLY
14	CN	34	VAL
14	CN	42	TRP
15	CO	18	ASP
15	CO	20	ASN
15	CO	46	HIS
15	CO	60	VAL
16	CP	10	GLY
16	CP	26	ASN
17	CQ	13	VAL
19	CS	32	ARG
20	CT	20	HIS
21	CU	11	PRO
24	DC	13	ARG
24	DC	205	LEU
24	DC	238	ARG
25	DD	36	GLN
25	DD	43	ASP
26	DE	18	THR
27	DF	27	GLN
27	DF	43	ALA
27	DF	174	ASP
28	DG	8	PRO
28	DG	46	ALA
28	DG	175	LYS
29	DH	16	GLY
29	DH	40	THR
30	DI	101	ILE
32	DK	109	SER
33	DL	4	ASN
33	DL	115	GLU
34	DM	59	ARG
35	DN	70	THR
35	DN	118	ARG

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Mol	Chain	Res	Type
36	DO	68	LYS
36	DO	99	TYR
37	DP	111	LYS
37	DP	114	LEU
41	DT	22	THR
41	DT	37	ASP
41	DT	40	LYS
42	DU	9	ASP
42	DU	98	SER
44	DW	21	LEU
44	DW	35	SER
45	DX	6	GLN
45	DX	32	ASN
46	DY	37	LEU
48	D0	55	ILE
52	D4	29	ALA
2	AB	25	PRO
2	AB	53	ALA
2	AB	88	ASP
2	AB	95	ARG
2	AB	132	LYS
2	AB	161	LEU
2	AB	224	GLY
4	AD	26	ARG
4	AD	85	ASN
4	AD	149	ALA
5	AE	69	ARG
7	AG	18	PHE
7	AG	77	SER
7	AG	78	ARG
7	AG	113	ASP
8	AH	97	ALA
9	AI	57	MET
10	AJ	42	LEU
10	AJ	58	ASN
10	AJ	62	ARG
10	AJ	95	GLY
11	AK	41	ALA
11	AK	89	PRO
13	AM	41	GLU
14	AN	24	ARG
15	AO	26	GLU

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Mol	Chain	Res	Type
16	AP	11	ALA
16	AP	50	THR
17	AQ	12	VAL
17	AQ	81	LYS
19	AS	6	LYS
20	AT	20	HIS
21	AU	27	GLY
24	BC	36	LYS
24	BC	37	ASN
24	BC	236	GLU
25	BD	104	VAL
26	BE	104	ALA
29	BH	83	LYS
30	BI	58	VAL
30	BI	66	SER
30	BI	72	LYS
30	BI	84	ALA
32	BK	72	PRO
32	BK	119	ALA
33	BL	12	SER
35	BN	2	ARG
35	BN	119	SER
37	BP	35	GLY
40	BS	55	ILE
41	BT	17	SER
41	BT	19	LYS
49	B1	23	THR
53	B5	65	LEU
53	B5	202	PRO
2	CB	88	ASP
2	CB	152	LYS
2	CB	166	ALA
2	CB	205	ASP
3	CC	12	LEU
3	CC	191	THR
5	CE	151	GLU
6	CF	60	VAL
9	CI	57	MET
9	CI	58	VAL
10	CJ	41	PRO
13	CM	12	HIS
14	CN	3	LYS

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Mol	Chain	Res	Type
17	CQ	20	SER
17	CQ	49	GLU
20	CT	73	ALA
20	CT	74	ARG
21	CU	35	ARG
21	CU	53	VAL
26	DE	200	LEU
27	DF	116	GLY
28	DG	17	VAL
28	DG	47	ASP
28	DG	80	THR
29	DH	9	VAL
30	DI	9	VAL
30	DI	84	ALA
32	DK	93	GLN
32	DK	110	GLU
36	DO	57	ALA
40	DS	67	ASP
41	DT	24	MET
44	DW	20	ARG
48	D0	26	THR
51	D3	18	GLY
2	AB	63	ARG
2	AB	124	GLY
2	AB	157	LEU
2	AB	193	PRO
3	AC	66	VAL
6	AF	16	GLU
6	AF	42	TRP
6	AF	54	LEU
6	AF	82	ASP
9	AI	9	THR
9	AI	37	GLN
10	AJ	43	PRO
10	AJ	75	ASP
12	AL	85	GLY
13	AM	66	GLU
16	AP	15	PRO
16	AP	77	GLU
19	AS	76	PRO
20	AT	9	LYS
24	BC	29	PRO

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Mol	Chain	Res	Type
25	BD	18	ASP
25	BD	88	GLU
26	BE	6	LYS
26	BE	105	LEU
27	BF	134	GLU
27	BF	146	VAL
27	BF	175	PHE
29	BH	120	GLY
30	BI	101	ILE
31	BJ	25	LEU
31	BJ	39	LYS
31	BJ	60	ASP
32	BK	48	PRO
35	BN	30	ARG
35	BN	51	LEU
40	BS	15	GLN
40	BS	30	SER
45	BX	60	ASP
53	B5	104	ILE
53	B5	126	SER
2	CB	134	ALA
2	CB	209	ALA
3	CC	14	ILE
4	CD	149	ALA
5	CE	113	ALA
5	CE	122	ASN
5	CE	126	LYS
5	CE	143	GLY
7	CG	126	ASP
8	CH	67	GLN
11	CK	89	PRO
13	CM	5	ALA
13	CM	94	GLY
14	CN	50	THR
14	CN	81	ARG
16	CP	11	ALA
17	CQ	17	MET
17	CQ	70	THR
21	CU	38	TYR
24	DC	66	ASP
24	DC	260	ASN
26	DE	72	SER

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Mol	Chain	Res	Type
31	DJ	93	ILE
33	DL	30	THR
33	DL	42	SER
33	DL	69	ARG
36	DO	77	ALA
39	DR	53	PHE
46	DY	55	THR
51	D3	57	LEU
52	D4	23	ILE
52	D4	37	GLN
4	AD	156	LYS
7	AG	87	VAL
8	AH	31	LYS
8	AH	57	PRO
9	AI	24	GLY
16	AP	36	VAL
20	AT	67	ILE
32	BK	92	GLU
33	BL	71	ALA
40	BS	66	ILE
41	BT	14	PRO
41	BT	18	GLU
41	BT	57	VAL
42	BU	50	PRO
53	B5	50	ILE
53	B5	66	PRO
53	B5	215	VAL
2	CB	17	GLY
2	CB	19	GLN
6	CF	33	GLU
7	CG	8	GLY
7	CG	80	VAL
8	CH	44	GLY
13	CM	10	PRO
24	DC	57	GLY
27	DF	41	GLY
27	DF	175	PHE
28	DG	154	PRO
30	DI	5	VAL
30	DI	13	VAL
33	DL	29	LYS
34	DM	53	MET

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Mol	Chain	Res	Type
42	DU	41	LEU
42	DU	52	LEU
46	DY	36	GLN
49	D1	27	LYS
2	AB	202	GLY
7	AG	71	PRO
8	AH	14	ILE
9	AI	51	PRO
24	BC	136	PRO
24	BC	169	GLY
49	B1	47	VAL
3	CC	66	VAL
3	CC	103	ILE
9	CI	10	GLY
11	CK	120	GLY
34	DM	23	GLY
34	DM	77	PRO
40	DS	35	ILE
40	DS	74	ILE
2	AB	41	ILE
4	AD	125	VAL
6	AF	36	ILE
21	AU	28	VAL
24	BC	227	PRO
28	BG	54	PRO
41	BT	2	ILE
2	CB	180	GLY
24	DC	73	GLY
24	DC	245	VAL
25	DD	120	GLY
28	DG	4	VAL
33	DL	103	ILE
39	DR	47	VAL
48	D0	43	ILE
2	AB	155	GLY
3	AC	101	ILE
9	AI	50	GLN
19	AS	11	ILE
30	BI	52	GLY
33	BL	114	GLY
42	BU	16	GLY
42	BU	54	GLN

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Mol	Chain	Res	Type
4	CD	37	ALA
4	CD	167	LYS
8	CH	78	VAL
10	CJ	42	LEU
24	DC	235	GLY
30	DI	24	VAL
42	DU	25	VAL
8	AH	25	VAL
9	AI	23	PRO
33	BL	130	GLY
48	B0	54	VAL
53	B5	181	PHE
3	CC	64	ILE
3	CC	174	PRO
4	CD	28	ILE
28	DG	12	PRO
28	DG	79	VAL
37	DP	32	VAL
39	DR	49	ILE
43	DV	81	PRO
51	D3	20	GLY
13	AM	65	VAL
45	BX	64	ILE
25	DD	2	ILE

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	180/180 (100%)	115 (64%)	65 (36%)	0 0
2	CB	180/180 (100%)	126 (70%)	54 (30%)	0 1
3	AC	170/170 (100%)	131 (77%)	39 (23%)	1 3
3	CC	170/170 (100%)	133 (78%)	37 (22%)	1 3
4	AD	172/172 (100%)	131 (76%)	41 (24%)	1 2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	CD	172/172 (100%)	132 (77%)	40 (23%)	1	3
5	AE	113/113 (100%)	80 (71%)	33 (29%)	0	1
5	CE	113/113 (100%)	82 (73%)	31 (27%)	0	1
6	AF	87/87 (100%)	57 (66%)	30 (34%)	0	0
6	CF	87/87 (100%)	58 (67%)	29 (33%)	0	0
7	AG	124/124 (100%)	88 (71%)	36 (29%)	0	1
7	CG	124/124 (100%)	90 (73%)	34 (27%)	0	1
8	AH	104/104 (100%)	77 (74%)	27 (26%)	0	2
8	CH	104/104 (100%)	79 (76%)	25 (24%)	1	2
9	AI	105/105 (100%)	79 (75%)	26 (25%)	1	2
9	CI	105/105 (100%)	73 (70%)	32 (30%)	0	1
10	AJ	86/86 (100%)	62 (72%)	24 (28%)	0	1
10	CJ	86/86 (100%)	63 (73%)	23 (27%)	0	1
11	AK	90/90 (100%)	65 (72%)	25 (28%)	0	1
11	CK	90/90 (100%)	69 (77%)	21 (23%)	1	3
12	AL	103/103 (100%)	81 (79%)	22 (21%)	1	4
12	CL	103/103 (100%)	75 (73%)	28 (27%)	0	1
13	AM	92/92 (100%)	76 (83%)	16 (17%)	2	7
13	CM	92/92 (100%)	70 (76%)	22 (24%)	1	3
14	AN	79/83 (95%)	62 (78%)	17 (22%)	1	3
14	CN	79/83 (95%)	69 (87%)	10 (13%)	4	14
15	AO	75/76 (99%)	56 (75%)	19 (25%)	0	2
15	CO	75/76 (99%)	61 (81%)	14 (19%)	1	5
16	AP	65/65 (100%)	47 (72%)	18 (28%)	0	1
16	CP	65/65 (100%)	50 (77%)	15 (23%)	1	3
17	AQ	74/74 (100%)	48 (65%)	26 (35%)	0	0
17	CQ	74/74 (100%)	51 (69%)	23 (31%)	0	1
18	AR	48/48 (100%)	43 (90%)	5 (10%)	7	23
18	CR	48/48 (100%)	39 (81%)	9 (19%)	1	5
19	AS	70/70 (100%)	58 (83%)	12 (17%)	2	7
19	CS	70/70 (100%)	55 (79%)	15 (21%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
20	AT	65/65 (100%)	47 (72%)	18 (28%)	0 1
20	CT	65/65 (100%)	46 (71%)	19 (29%)	0 1
21	AU	44/44 (100%)	29 (66%)	15 (34%)	0 0
21	CU	44/44 (100%)	28 (64%)	16 (36%)	0 0
24	BC	216/216 (100%)	181 (84%)	35 (16%)	2 8
24	DC	216/216 (100%)	179 (83%)	37 (17%)	2 7
25	BD	164/164 (100%)	142 (87%)	22 (13%)	4 12
25	DD	164/164 (100%)	143 (87%)	21 (13%)	4 14
26	BE	165/165 (100%)	131 (79%)	34 (21%)	1 4
26	DE	165/165 (100%)	131 (79%)	34 (21%)	1 4
27	BF	148/148 (100%)	119 (80%)	29 (20%)	1 5
27	DF	148/148 (100%)	120 (81%)	28 (19%)	1 5
28	BG	137/137 (100%)	115 (84%)	22 (16%)	2 8
28	DG	137/137 (100%)	120 (88%)	17 (12%)	4 15
29	BH	114/114 (100%)	81 (71%)	33 (29%)	0 1
29	DH	114/114 (100%)	89 (78%)	25 (22%)	1 3
30	BI	109/109 (100%)	76 (70%)	33 (30%)	0 1
30	DI	109/109 (100%)	83 (76%)	26 (24%)	1 3
31	BJ	116/116 (100%)	92 (79%)	24 (21%)	1 4
31	DJ	116/116 (100%)	96 (83%)	20 (17%)	2 7
32	BK	103/103 (100%)	86 (84%)	17 (16%)	2 8
32	DK	103/103 (100%)	88 (85%)	15 (15%)	3 10
33	BL	102/102 (100%)	79 (78%)	23 (22%)	1 3
33	DL	102/102 (100%)	75 (74%)	27 (26%)	0 2
34	BM	109/109 (100%)	93 (85%)	16 (15%)	3 10
34	DM	109/109 (100%)	97 (89%)	12 (11%)	6 20
35	BN	100/100 (100%)	84 (84%)	16 (16%)	2 8
35	DN	100/100 (100%)	82 (82%)	18 (18%)	2 6
36	BO	86/86 (100%)	62 (72%)	24 (28%)	0 1
36	DO	86/86 (100%)	70 (81%)	16 (19%)	1 5
37	BP	99/99 (100%)	86 (87%)	13 (13%)	4 13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
37	DP	99/99 (100%)	79 (80%)	20 (20%)	1 4
38	BQ	89/89 (100%)	74 (83%)	15 (17%)	2 7
38	DQ	89/89 (100%)	75 (84%)	14 (16%)	2 9
39	BR	84/84 (100%)	70 (83%)	14 (17%)	2 7
39	DR	84/84 (100%)	69 (82%)	15 (18%)	2 6
40	BS	93/93 (100%)	71 (76%)	22 (24%)	1 2
40	DS	93/93 (100%)	79 (85%)	14 (15%)	3 10
41	BT	80/80 (100%)	69 (86%)	11 (14%)	3 12
41	DT	80/80 (100%)	64 (80%)	16 (20%)	1 4
42	BU	83/83 (100%)	70 (84%)	13 (16%)	2 9
42	DU	83/83 (100%)	62 (75%)	21 (25%)	0 2
43	BV	78/78 (100%)	58 (74%)	20 (26%)	0 2
43	DV	78/78 (100%)	66 (85%)	12 (15%)	2 9
44	BW	57/58 (98%)	48 (84%)	9 (16%)	2 8
44	DW	56/58 (97%)	50 (89%)	6 (11%)	6 22
45	BX	67/67 (100%)	56 (84%)	11 (16%)	2 8
45	DX	67/67 (100%)	53 (79%)	14 (21%)	1 4
46	BY	55/55 (100%)	46 (84%)	9 (16%)	2 8
46	DY	55/55 (100%)	43 (78%)	12 (22%)	1 3
47	BZ	48/48 (100%)	36 (75%)	12 (25%)	0 2
47	DZ	48/48 (100%)	35 (73%)	13 (27%)	0 1
48	B0	47/47 (100%)	38 (81%)	9 (19%)	1 5
48	D0	47/47 (100%)	41 (87%)	6 (13%)	4 14
49	B1	45/45 (100%)	39 (87%)	6 (13%)	4 12
49	D1	45/45 (100%)	35 (78%)	10 (22%)	1 3
50	B2	38/38 (100%)	32 (84%)	6 (16%)	2 8
50	D2	38/38 (100%)	30 (79%)	8 (21%)	1 4
51	B3	51/51 (100%)	44 (86%)	7 (14%)	3 12
51	D3	51/51 (100%)	45 (88%)	6 (12%)	5 17
52	B4	34/34 (100%)	29 (85%)	5 (15%)	3 10
52	D4	34/34 (100%)	27 (79%)	7 (21%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
53	B5	61/180 (34%)	46 (75%)	15 (25%)	1 2
All	All	9386/9518 (99%)	7360 (78%)	2026 (22%)	1 3

All (2026) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LEU
2	AB	14	VAL
2	AB	15	HIS
2	AB	19	GLN
2	AB	20	THR
2	AB	21	ARG
2	AB	24	ASN
2	AB	27	MET
2	AB	31	ILE
2	AB	32	PHE
2	AB	38	VAL
2	AB	39	HIS
2	AB	40	ILE
2	AB	41	ILE
2	AB	43	LEU
2	AB	44	GLU
2	AB	46	THR
2	AB	49	MET
2	AB	50	PHE
2	AB	52	GLU
2	AB	56	GLU
2	AB	57	LEU
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	70	VAL
2	AB	82	ASP
2	AB	85	LEU
2	AB	89	GLN
2	AB	90	PHE
2	AB	91	PHE
2	AB	95	ARG
2	AB	100	MET
2	AB	101	LEU
2	AB	107	VAL
2	AB	111	ILE

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Mol	Chain	Res	Type
2	AB	112	LYS
2	AB	117	LEU
2	AB	126	PHE
2	AB	129	LEU
2	AB	130	THR
2	AB	131	LYS
2	AB	132	LYS
2	AB	133	GLU
2	AB	135	LEU
2	AB	136	MET
2	AB	140	GLU
2	AB	141	LEU
2	AB	144	LEU
2	AB	151	ILE
2	AB	152	LYS
2	AB	161	LEU
2	AB	163	VAL
2	AB	164	ILE
2	AB	174	LYS
2	AB	181	ILE
2	AB	186	ILE
2	AB	188	ASP
2	AB	199	VAL
2	AB	205	ASP
2	AB	207	ILE
2	AB	208	ARG
2	AB	210	VAL
2	AB	220	THR
2	AB	225	ARG
3	AC	3	GLN
3	AC	14	ILE
3	AC	15	VAL
3	AC	16	LYS
3	AC	18	TRP
3	AC	19	ASN
3	AC	26	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	33	LEU
3	AC	35	SER
3	AC	37	PHE
3	AC	43	LEU

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Mol	Chain	Res	Type
3	AC	51	SER
3	AC	52	VAL
3	AC	55	ILE
3	AC	58	GLU
3	AC	59	ARG
3	AC	62	LYS
3	AC	64	ILE
3	AC	82	GLU
3	AC	86	LYS
3	AC	103	ILE
3	AC	119	SER
3	AC	121	THR
3	AC	128	VAL
3	AC	131	ARG
3	AC	140	ASN
3	AC	142	MET
3	AC	144	LEU
3	AC	151	VAL
3	AC	157	LEU
3	AC	162	ILE
3	AC	165	THR
3	AC	166	GLU
3	AC	167	TRP
3	AC	173	VAL
3	AC	185	ASN
3	AC	200	VAL
4	AD	5	LEU
4	AD	9	LEU
4	AD	13	ARG
4	AD	17	THR
4	AD	23	SER
4	AD	26	ARG
4	AD	31	LYS
4	AD	32	CYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG
4	AD	45	LYS
4	AD	53	VAL
4	AD	55	LEU
4	AD	58	LYS
4	AD	60	LYS

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Mol	Chain	Res	Type
4	AD	63	ARG
4	AD	69	GLU
4	AD	86	THR
4	AD	104	ARG
4	AD	110	THR
4	AD	111	ARG
4	AD	116	GLN
4	AD	123	ILE
4	AD	128	ARG
4	AD	138	SER
4	AD	143	VAL
4	AD	152	GLN
4	AD	161	LEU
4	AD	163	GLU
4	AD	164	GLN
4	AD	167	LYS
4	AD	171	LEU
4	AD	183	LYS
4	AD	190	ASP
4	AD	194	ASP
4	AD	195	ILE
4	AD	197	GLU
4	AD	198	HIS
4	AD	199	LEU
4	AD	206	LYS
5	AE	10	GLU
5	AE	15	LEU
5	AE	18	VAL
5	AE	19	ASN
5	AE	21	VAL
5	AE	22	SER
5	AE	29	ARG
5	AE	32	SER
5	AE	38	VAL
5	AE	46	VAL
5	AE	54	ARG
5	AE	56	VAL
5	AE	65	GLU
5	AE	69	ARG
5	AE	73	ASN
5	AE	83	HIS
5	AE	88	VAL

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Mol	Chain	Res	Type
5	AE	92	SER
5	AE	93	ARG
5	AE	103	THR
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	141	ILE
5	AE	149	SER
5	AE	153	VAL
6	AF	1	MET
6	AF	2	ARG
6	AF	5	GLU
6	AF	7	VAL
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG
6	AF	35	LYS
6	AF	39	LEU
6	AF	44	ARG
6	AF	51	ILE
6	AF	52	ASN
6	AF	54	LEU
6	AF	55	HIS
6	AF	62	MET
6	AF	63	ASN
6	AF	68	GLN
6	AF	74	LEU
6	AF	77	THR
6	AF	82	ASP
6	AF	84	VAL
6	AF	85	ILE
6	AF	86	ARG
6	AF	87	SER
6	AF	89	VAL

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Mol	Chain	Res	Type
6	AF	93	LYS
6	AF	96	VAL
6	AF	97	THR
6	AF	100	SER
7	AG	4	ARG
7	AG	5	ARG
7	AG	6	VAL
7	AG	7	ILE
7	AG	9	GLN
7	AG	13	LEU
7	AG	22	LEU
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	37	SER
7	AG	40	GLU
7	AG	42	ILE
7	AG	43	VAL
7	AG	47	LEU
7	AG	48	GLU
7	AG	49	THR
7	AG	52	GLN
7	AG	59	LEU
7	AG	62	PHE
7	AG	63	GLU
7	AG	75	VAL
7	AG	76	LYS
7	AG	78	ARG
7	AG	79	ARG
7	AG	80	VAL
7	AG	89	VAL
7	AG	91	VAL
7	AG	95	ARG
7	AG	113	ASP
7	AG	115	SER
7	AG	120	LEU
7	AG	135	VAL
7	AG	136	LYS
7	AG	142	HIS
7	AG	144	MET
8	AH	3	MET
8	AH	11	LEU

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Mol	Chain	Res	Type
8	AH	13	ARG
8	AH	22	LYS
8	AH	26	THR
8	AH	30	SER
8	AH	32	LEU
8	AH	38	ASN
8	AH	42	GLU
8	AH	47	GLU
8	AH	49	PHE
8	AH	55	THR
8	AH	64	LYS
8	AH	77	ARG
8	AH	79	SER
8	AH	83	LEU
8	AH	89	LYS
8	AH	90	ASP
8	AH	99	LEU
8	AH	104	VAL
8	AH	107	SER
8	AH	111	MET
8	AH	112	THR
8	AH	117	ARG
8	AH	125	ILE
8	AH	126	ILE
8	AH	129	VAL
9	AI	11	ARG
9	AI	18	ARG
9	AI	29	VAL
9	AI	30	ILE
9	AI	36	GLU
9	AI	43	THR
9	AI	46	MET
9	AI	48	VAL
9	AI	49	ARG
9	AI	50	GLN
9	AI	55	VAL
9	AI	57	MET
9	AI	60	LYS
9	AI	61	LEU
9	AI	63	LEU
9	AI	68	LYS
9	AI	85	ARG

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Mol	Chain	Res	Type
9	AI	88	MET
9	AI	89	GLU
9	AI	94	LEU
9	AI	97	GLU
9	AI	116	VAL
9	AI	119	ARG
9	AI	127	PHE
9	AI	129	LYS
9	AI	130	ARG
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	17	LEU
10	AJ	25	ILE
10	AJ	27	GLU
10	AJ	28	THR
10	AJ	35	GLN
10	AJ	40	ILE
10	AJ	42	LEU
10	AJ	44	THR
10	AJ	47	GLU
10	AJ	50	THR
10	AJ	52	LEU
10	AJ	53	ILE
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	67	ILE
10	AJ	71	LEU
10	AJ	73	LEU
10	AJ	83	THR
10	AJ	84	VAL
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	101	SER
11	AK	16	VAL
11	AK	17	SER
11	AK	23	ILE
11	AK	31	ILE
11	AK	32	VAL
11	AK	38	GLN
11	AK	40	ASN
11	AK	50	SER
11	AK	52	PHE

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Mol	Chain	Res	Type
11	AK	58	SER
11	AK	65	VAL
11	AK	74	VAL
11	AK	76	GLU
11	AK	79	ILE
11	AK	81	ASN
11	AK	97	ILE
11	AK	100	LEU
11	AK	107	ILE
11	AK	111	THR
11	AK	112	ASP
11	AK	114	THR
11	AK	119	ASN
11	AK	126	LYS
11	AK	127	ARG
11	AK	129	VAL
12	AL	4	VAL
12	AL	5	ASN
12	AL	10	LYS
12	AL	21	VAL
12	AL	25	GLU
12	AL	29	GLN
12	AL	44	LYS
12	AL	54	ARG
12	AL	58	THR
12	AL	62	GLU
12	AL	63	VAL
12	AL	74	LEU
12	AL	76	GLU
12	AL	80	ILE
12	AL	86	ARG
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	110	ARG
12	AL	114	ARG
12	AL	116	LYS
12	AL	121	ARG
13	AM	4	ILE
13	AM	7	ILE
13	AM	11	ASP
13	AM	13	LYS

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Mol	Chain	Res	Type
13	AM	16	VAL
13	AM	25	VAL
13	AM	27	LYS
13	AM	29	ARG
13	AM	55	THR
13	AM	60	VAL
13	AM	65	VAL
13	AM	72	GLU
13	AM	87	ARG
13	AM	89	LEU
13	AM	107	ARG
13	AM	108	THR
14	AN	4	GLN
14	AN	7	LYS
14	AN	24	ARG
14	AN	26	GLU
14	AN	28	LYS
14	AN	41	ARG
14	AN	43	ASN
14	AN	46	LEU
14	AN	49	GLN
14	AN	51	LEU
14	AN	59	ARG
14	AN	69	ARG
14	AN	76	LYS
14	AN	84	VAL
14	AN	85	ARG
14	AN	98	LYS
14	AN	100	SER
15	AO	4	SER
15	AO	6	GLU
15	AO	17	ARG
15	AO	18	ASP
15	AO	22	THR
15	AO	31	LEU
15	AO	39	LEU
15	AO	40	GLN
15	AO	48	LYS
15	AO	57	LEU
15	AO	58	ARG
15	AO	59	MET
15	AO	63	ARG

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Mol	Chain	Res	Type
15	AO	67	LEU
15	AO	70	LEU
15	AO	75	VAL
15	AO	79	THR
15	AO	85	LEU
15	AO	87	LEU
16	AP	2	VAL
16	AP	5	ARG
16	AP	6	LEU
16	AP	8	ARG
16	AP	18	GLN
16	AP	19	VAL
16	AP	20	VAL
16	AP	28	ARG
16	AP	31	ARG
16	AP	33	ILE
16	AP	46	LYS
16	AP	51	ARG
16	AP	63	GLN
16	AP	67	ILE
16	AP	71	VAL
16	AP	75	ILE
16	AP	76	LYS
16	AP	78	VAL
17	AQ	4	LYS
17	AQ	13	VAL
17	AQ	14	SER
17	AQ	16	LYS
17	AQ	19	LYS
17	AQ	21	ILE
17	AQ	22	VAL
17	AQ	26	GLU
17	AQ	28	PHE
17	AQ	29	VAL
17	AQ	38	ILE
17	AQ	42	THR
17	AQ	51	ASN
17	AQ	52	GLU
17	AQ	53	CYS
17	AQ	55	ILE
17	AQ	59	VAL
17	AQ	61	ILE

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Mol	Chain	Res	Type
17	AQ	64	CYS
17	AQ	67	LEU
17	AQ	75	LEU
17	AQ	76	VAL
17	AQ	77	ARG
17	AQ	78	VAL
17	AQ	81	LYS
17	AQ	83	VAL
18	AR	29	LEU
18	AR	36	SER
18	AR	43	ARG
18	AR	55	LEU
18	AR	71	THR
19	AS	6	LYS
19	AS	11	ILE
19	AS	15	LEU
19	AS	21	LYS
19	AS	27	ASP
19	AS	55	ARG
19	AS	58	VAL
19	AS	63	THR
19	AS	65	GLU
19	AS	70	LYS
19	AS	71	LEU
19	AS	79	THR
20	AT	3	ASN
20	AT	4	ILE
20	AT	5	LYS
20	AT	8	LYS
20	AT	12	ILE
20	AT	27	MET
20	AT	30	THR
20	AT	32	ILE
20	AT	34	LYS
20	AT	49	LYS
20	AT	54	MET
20	AT	67	ILE
20	AT	68	HIS
20	AT	69	LYS
20	AT	70	ASN
20	AT	76	LYS
20	AT	84	ASN

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Mol	Chain	Res	Type
20	AT	86	LEU
21	AU	9	ASN
21	AU	10	GLU
21	AU	12	PHE
21	AU	16	LEU
21	AU	18	ARG
21	AU	20	LYS
21	AU	25	LYS
21	AU	28	VAL
21	AU	29	LEU
21	AU	33	ARG
21	AU	34	ARG
21	AU	37	PHE
21	AU	44	GLU
21	AU	53	VAL
21	AU	54	LYS
24	BC	5	LYS
24	BC	6	CYS
24	BC	14	ARG
24	BC	18	LYS
24	BC	20	VAL
24	BC	24	LEU
24	BC	39	LYS
24	BC	50	THR
24	BC	64	ILE
24	BC	94	VAL
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	117	GLN
24	BC	121	ASP
24	BC	125	LYS
24	BC	130	LEU
24	BC	139	SER
24	BC	141	VAL
24	BC	156	ARG
24	BC	164	ILE
24	BC	174	LEU
24	BC	187	ASP
24	BC	195	VAL
24	BC	197	ASN
24	BC	199	GLU

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Mol	Chain	Res	Type
24	BC	204	VAL
24	BC	205	LEU
24	BC	245	VAL
24	BC	256	LYS
24	BC	257	THR
24	BC	258	ARG
24	BC	265	LYS
24	BC	267	ILE
24	BC	268	VAL
25	BD	8	LYS
25	BD	12	THR
25	BD	13	ARG
25	BD	25	THR
25	BD	48	ILE
25	BD	52	THR
25	BD	62	LYS
25	BD	73	VAL
25	BD	77	ARG
25	BD	83	ARG
25	BD	89	GLU
25	BD	95	SER
25	BD	114	LYS
25	BD	116	LYS
25	BD	121	THR
25	BD	136	ASN
25	BD	142	VAL
25	BD	150	GLN
25	BD	157	LYS
25	BD	177	VAL
25	BD	180	VAL
25	BD	204	LYS
26	BE	4	VAL
26	BE	40	ARG
26	BE	44	ARG
26	BE	49	ARG
26	BE	55	SER
26	BE	72	SER
26	BE	77	ILE
26	BE	80	SER
26	BE	88	ARG
26	BE	90	GLN
26	BE	93	SER

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Mol	Chain	Res	Type
26	BE	95	LYS
26	BE	107	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	114	ARG
26	BE	115	GLN
26	BE	116	ASP
26	BE	120	VAL
26	BE	122	GLU
26	BE	123	LYS
26	BE	126	VAL
26	BE	136	GLN
26	BE	149	ILE
26	BE	159	LEU
26	BE	162	ARG
26	BE	163	ASN
26	BE	167	VAL
26	BE	171	ASP
26	BE	181	ILE
26	BE	187	VAL
26	BE	189	THR
26	BE	196	VAL
26	BE	198	GLU
27	BF	3	LYS
27	BF	14	LYS
27	BF	17	MET
27	BF	25	VAL
27	BF	27	GLN
27	BF	31	VAL
27	BF	35	THR
27	BF	36	LEU
27	BF	44	ILE
27	BF	48	LYS
27	BF	49	LEU
27	BF	50	LEU
27	BF	51	ASP
27	BF	57	LEU
27	BF	61	SER
27	BF	78	LYS
27	BF	79	ILE
27	BF	89	VAL
27	BF	92	ARG

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Mol	Chain	Res	Type
27	BF	95	ARG
27	BF	105	THR
27	BF	108	VAL
27	BF	113	ASP
27	BF	141	ILE
27	BF	142	ASP
27	BF	147	ASP
27	BF	155	THR
27	BF	158	THR
27	BF	176	PRO
28	BG	10	VAL
28	BG	11	VAL
28	BG	20	ASN
28	BG	23	VAL
28	BG	24	ILE
28	BG	27	LYS
28	BG	39	ASP
28	BG	67	THR
28	BG	77	ILE
28	BG	80	THR
28	BG	87	LEU
28	BG	92	VAL
28	BG	104	ASN
28	BG	121	ILE
28	BG	124	GLU
28	BG	139	GLN
28	BG	149	ARG
28	BG	152	ARG
28	BG	155	GLU
28	BG	160	LYS
28	BG	166	ASP
28	BG	170	ARG
29	BH	1	MET
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	15	LEU
29	BH	27	ARG
29	BH	54	LEU
29	BH	60	GLU
29	BH	62	LEU
29	BH	66	ASN

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Mol	Chain	Res	Type
29	BH	72	ILE
29	BH	75	LEU
29	BH	76	GLU
29	BH	77	THR
29	BH	79	THR
29	BH	86	ASP
29	BH	91	PHE
29	BH	108	VAL
29	BH	112	LYS
29	BH	117	LEU
29	BH	119	ASN
29	BH	121	VAL
29	BH	122	LEU
29	BH	123	ARG
29	BH	125	THR
29	BH	127	GLU
29	BH	129	GLU
29	BH	131	SER
29	BH	137	GLU
29	BH	142	VAL
29	BH	143	ILE
29	BH	145	ASN
29	BH	146	VAL
30	BI	4	LYS
30	BI	8	TYR
30	BI	9	VAL
30	BI	11	LEU
30	BI	17	MET
30	BI	28	LEU
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	40	LYS
30	BI	45	LYS
30	BI	47	ASP
30	BI	50	GLU
30	BI	57	VAL
30	BI	60	THR
30	BI	62	TYR
30	BI	67	PHE
30	BI	69	PHE
30	BI	72	LYS

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Mol	Chain	Res	Type
30	BI	82	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	96	ASP
30	BI	97	LYS
30	BI	100	LYS
30	BI	101	ILE
30	BI	102	SER
30	BI	103	ARG
30	BI	108	GLU
30	BI	111	GLN
30	BI	132	THR
30	BI	135	SER
30	BI	136	MET
31	BJ	1	MET
31	BJ	11	VAL
31	BJ	13	ARG
31	BJ	17	VAL
31	BJ	23	LYS
31	BJ	27	ARG
31	BJ	30	THR
31	BJ	39	LYS
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	54	ILE
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	65	THR
31	BJ	70	THR
31	BJ	78	THR
31	BJ	81	ILE
31	BJ	84	ILE
31	BJ	100	VAL
31	BJ	101	ILE
31	BJ	109	LEU
31	BJ	124	VAL
31	BJ	135	GLN
31	BJ	142	ILE
32	BK	8	LEU
32	BK	20	MET
32	BK	21	CYS
32	BK	38	ILE

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Mol	Chain	Res	Type
32	BK	41	ILE
32	BK	49	ARG
32	BK	58	LEU
32	BK	61	VAL
32	BK	66	LYS
32	BK	70	ARG
32	BK	77	ILE
32	BK	80	ASP
32	BK	88	ASN
32	BK	91	SER
32	BK	92	GLU
32	BK	107	LEU
32	BK	117	SER
33	BL	2	ARG
33	BL	7	SER
33	BL	19	LEU
33	BL	21	ARG
33	BL	23	ILE
33	BL	27	LEU
33	BL	39	LYS
33	BL	40	SER
33	BL	47	ARG
33	BL	48	ARG
33	BL	76	GLU
33	BL	82	LEU
33	BL	85	VAL
33	BL	86	GLU
33	BL	89	VAL
33	BL	93	ASN
33	BL	99	ASN
33	BL	100	ILE
33	BL	110	VAL
33	BL	115	GLU
33	BL	116	VAL
33	BL	142	ILE
33	BL	144	GLU
34	BM	1	MET
34	BM	10	ARG
34	BM	18	ARG
34	BM	24	THR
34	BM	41	LEU
34	BM	46	ILE

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Mol	Chain	Res	Type
34	BM	47	GLU
34	BM	58	LYS
34	BM	69	PRO
34	BM	70	ASP
34	BM	100	LYS
34	BM	106	ASP
34	BM	110	GLU
34	BM	115	GLU
34	BM	134	THR
34	BM	135	VAL
35	BN	2	ARG
35	BN	15	SER
35	BN	20	MET
35	BN	24	MET
35	BN	27	SER
35	BN	32	GLU
35	BN	36	THR
35	BN	60	VAL
35	BN	69	ARG
35	BN	70	THR
35	BN	71	ARG
35	BN	89	SER
35	BN	96	ARG
35	BN	116	VAL
35	BN	117	ASP
35	BN	120	GLU
36	BO	2	ASP
36	BO	4	LYS
36	BO	5	SER
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	27	VAL
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	45	SER
36	BO	47	VAL
36	BO	49	VAL
36	BO	58	ILE
36	BO	65	THR
36	BO	74	VAL

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Mol	Chain	Res	Type
36	BO	78	VAL
36	BO	83	LEU
36	BO	85	LYS
36	BO	87	ILE
36	BO	88	LYS
36	BO	89	ASP
36	BO	102	ARG
36	BO	115	LEU
37	BP	2	SER
37	BP	5	ILE
37	BP	27	GLU
37	BP	63	LYS
37	BP	68	GLU
37	BP	72	ARG
37	BP	73	VAL
37	BP	84	ILE
37	BP	96	LYS
37	BP	103	ARG
37	BP	109	ARG
37	BP	110	ILE
37	BP	114	LEU
38	BQ	6	ARG
38	BQ	8	VAL
38	BQ	9	ILE
38	BQ	17	ILE
38	BQ	18	LEU
38	BQ	29	SER
38	BQ	34	VAL
38	BQ	51	ARG
38	BQ	52	GLN
38	BQ	58	ARG
38	BQ	74	ILE
38	BQ	78	LYS
38	BQ	87	SER
38	BQ	92	ARG
38	BQ	112	LYS
39	BR	10	LYS
39	BR	14	VAL
39	BR	16	GLU
39	BR	20	VAL
39	BR	38	VAL
39	BR	41	ILE

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Mol	Chain	Res	Type
39	BR	48	LYS
39	BR	49	ILE
39	BR	54	VAL
39	BR	58	VAL
39	BR	64	VAL
39	BR	85	LYS
39	BR	94	THR
39	BR	102	SER
40	BS	1	MET
40	BS	4	ILE
40	BS	6	LYS
40	BS	15	GLN
40	BS	19	LEU
40	BS	28	LYS
40	BS	29	VAL
40	BS	30	SER
40	BS	35	ILE
40	BS	47	VAL
40	BS	69	LEU
40	BS	76	VAL
40	BS	78	GLU
40	BS	81	SER
40	BS	82	MET
40	BS	83	LYS
40	BS	95	ARG
40	BS	97	LEU
40	BS	101	SER
40	BS	107	VAL
40	BS	108	SER
40	BS	109	ASP
41	BT	1	MET
41	BT	5	GLU
41	BT	10	VAL
41	BT	11	LEU
41	BT	22	THR
41	BT	30	ILE
41	BT	36	LYS
41	BT	39	THR
41	BT	49	LYS
41	BT	50	LEU
41	BT	74	ILE
42	BU	9	ASP

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Mol	Chain	Res	Type
42	BU	12	ILE
42	BU	14	LEU
42	BU	21	LYS
42	BU	24	LYS
42	BU	26	LYS
42	BU	29	LEU
42	BU	35	ILE
42	BU	52	LEU
42	BU	61	LYS
42	BU	68	SER
42	BU	72	ILE
42	BU	100	SER
43	BV	1	MET
43	BV	3	THR
43	BV	7	GLU
43	BV	8	VAL
43	BV	10	LYS
43	BV	11	GLU
43	BV	14	LYS
43	BV	17	SER
43	BV	18	ARG
43	BV	20	LEU
43	BV	29	ILE
43	BV	42	LEU
43	BV	53	LYS
43	BV	58	SER
43	BV	61	LEU
43	BV	64	VAL
43	BV	65	VAL
43	BV	70	ILE
43	BV	77	VAL
43	BV	85	LYS
44	BW	20	ARG
44	BW	44	LYS
44	BW	60	PHE
44	BW	64	ASP
44	BW	66	LYS
44	BW	72	LYS
44	BW	77	ARG
44	BW	81	SER
44	BW	82	ILE
45	BX	2	SER

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Mol	Chain	Res	Type
45	BX	5	CYS
45	BX	18	ARG
45	BX	25	THR
45	BX	28	ARG
45	BX	40	VAL
45	BX	44	LYS
45	BX	48	THR
45	BX	51	VAL
45	BX	71	LEU
45	BX	77	LYS
46	BY	6	LEU
46	BY	12	GLU
46	BY	13	GLU
46	BY	16	THR
46	BY	17	GLU
46	BY	22	LEU
46	BY	37	LEU
46	BY	39	GLN
46	BY	59	GLU
47	BZ	3	LYS
47	BZ	8	THR
47	BZ	10	THR
47	BZ	19	LYS
47	BZ	23	THR
47	BZ	25	LEU
47	BZ	31	ARG
47	BZ	32	ILE
47	BZ	37	GLU
47	BZ	45	ARG
47	BZ	57	VAL
47	BZ	59	GLU
48	B0	15	MET
48	B0	17	ARG
48	B0	20	ASP
48	B0	23	THR
48	B0	29	SER
48	B0	36	GLU
48	B0	40	ARG
48	B0	53	LYS
48	B0	57	LYS
49	B1	33	LYS
49	B1	35	GLU

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Mol	Chain	Res	Type
49	B1	43	VAL
49	B1	46	HIS
49	B1	47	VAL
49	B1	51	GLU
50	B2	1	MET
50	B2	8	SER
50	B2	11	LYS
50	B2	15	SER
50	B2	42	LEU
50	B2	45	SER
51	B3	5	LYS
51	B3	16	LYS
51	B3	17	THR
51	B3	30	ARG
51	B3	31	HIS
51	B3	41	LYS
51	B3	47	LYS
52	B4	2	LYS
52	B4	3	VAL
52	B4	6	SER
52	B4	18	LYS
52	B4	26	ILE
53	B5	21	TYR
53	B5	23	ILE
53	B5	35	THR
53	B5	38	PHE
53	B5	39	ASP
53	B5	47	LYS
53	B5	48	LEU
53	B5	58	ASN
53	B5	59	VAL
53	B5	63	VAL
53	B5	64	SER
53	B5	65	LEU
53	B5	73	VAL
53	B5	78	ILE
53	B5	86	GLU
2	CB	9	MET
2	CB	14	VAL
2	CB	15	HIS
2	CB	16	PHE
2	CB	19	GLN

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Mol	Chain	Res	Type
2	CB	20	THR
2	CB	24	ASN
2	CB	27	MET
2	CB	28	LYS
2	CB	35	ARG
2	CB	40	ILE
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	62	SER
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	77	SER
2	CB	80	VAL
2	CB	81	LYS
2	CB	87	CYS
2	CB	88	ASP
2	CB	89	GLN
2	CB	92	VAL
2	CB	95	ARG
2	CB	96	TRP
2	CB	103	ASN
2	CB	106	THR
2	CB	111	ILE
2	CB	117	LEU
2	CB	119	THR
2	CB	122	GLN
2	CB	125	THR
2	CB	126	PHE
2	CB	130	THR
2	CB	133	GLU
2	CB	136	MET
2	CB	140	GLU
2	CB	141	LEU
2	CB	142	GLU
2	CB	143	LYS
2	CB	144	LEU
2	CB	148	LEU
2	CB	163	VAL
2	CB	164	ILE
2	CB	174	LYS

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Mol	Chain	Res	Type
2	CB	188	ASP
2	CB	205	ASP
2	CB	207	ILE
2	CB	210	VAL
2	CB	220	THR
2	CB	222	ARG
2	CB	223	GLU
3	CC	3	GLN
3	CC	15	VAL
3	CC	16	LYS
3	CC	18	TRP
3	CC	25	ASN
3	CC	26	THR
3	CC	27	LYS
3	CC	33	LEU
3	CC	36	ASP
3	CC	37	PHE
3	CC	43	LEU
3	CC	45	LYS
3	CC	56	VAL
3	CC	64	ILE
3	CC	70	THR
3	CC	80	LYS
3	CC	82	GLU
3	CC	102	ASN
3	CC	103	ILE
3	CC	111	LEU
3	CC	119	SER
3	CC	120	ILE
3	CC	121	THR
3	CC	128	VAL
3	CC	129	MET
3	CC	131	ARG
3	CC	132	ARG
3	CC	144	LEU
3	CC	151	VAL
3	CC	153	VAL
3	CC	167	TRP
3	CC	175	LEU
3	CC	179	ARG
3	CC	190	HIS
3	CC	192	THR

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Mol	Chain	Res	Type
3	CC	193	TYR
3	CC	200	VAL
4	CD	8	LYS
4	CD	9	LEU
4	CD	10	LYS
4	CD	12	SER
4	CD	23	SER
4	CD	28	ILE
4	CD	29	ASP
4	CD	32	CYS
4	CD	33	LYS
4	CD	48	LEU
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	60	LYS
4	CD	63	ARG
4	CD	69	GLU
4	CD	83	LYS
4	CD	86	THR
4	CD	125	VAL
4	CD	128	ARG
4	CD	129	VAL
4	CD	132	ILE
4	CD	138	SER
4	CD	152	GLN
4	CD	153	SER
4	CD	155	VAL
4	CD	159	LEU
4	CD	161	LEU
4	CD	163	GLU
4	CD	167	LYS
4	CD	177	LYS
4	CD	179	GLU
4	CD	184	ARG
4	CD	191	LEU
4	CD	199	LEU
4	CD	200	ILE
4	CD	203	LEU
4	CD	206	LYS

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Mol	Chain	Res	Type
5	CE	10	GLU
5	CE	15	LEU
5	CE	26	LYS
5	CE	32	SER
5	CE	39	VAL
5	CE	46	VAL
5	CE	52	LYS
5	CE	65	GLU
5	CE	74	VAL
5	CE	77	ASN
5	CE	81	LEU
5	CE	88	VAL
5	CE	92	SER
5	CE	93	ARG
5	CE	96	MET
5	CE	101	GLU
5	CE	106	ILE
5	CE	112	ARG
5	CE	114	VAL
5	CE	115	LEU
5	CE	117	VAL
5	CE	120	VAL
5	CE	124	LEU
5	CE	126	LYS
5	CE	131	THR
5	CE	137	VAL
5	CE	140	THR
5	CE	149	SER
5	CE	151	GLU
5	CE	152	MET
5	CE	156	LYS
6	CF	1	MET
6	CF	7	VAL
6	CF	8	PHE
6	CF	9	MET
6	CF	10	VAL
6	CF	15	SER
6	CF	18	VAL
6	CF	23	GLU
6	CF	24	ARG
6	CF	26	THR
6	CF	29	ILE

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Mol	Chain	Res	Type
6	CF	35	LYS
6	CF	36	ILE
6	CF	38	ARG
6	CF	51	ILE
6	CF	54	LEU
6	CF	55	HIS
6	CF	63	ASN
6	CF	68	GLN
6	CF	69	GLU
6	CF	71	ILE
6	CF	73	GLU
6	CF	75	GLU
6	CF	80	PHE
6	CF	82	ASP
6	CF	85	ILE
6	CF	86	ARG
6	CF	87	SER
6	CF	97	THR
7	CG	4	ARG
7	CG	5	ARG
7	CG	6	VAL
7	CG	7	ILE
7	CG	9	GLN
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	53	ARG
7	CG	59	LEU
7	CG	60	GLU
7	CG	62	PHE
7	CG	66	LEU
7	CG	69	VAL
7	CG	70	ARG
7	CG	75	VAL
7	CG	78	ARG
7	CG	84	THR
7	CG	87	VAL
7	CG	91	VAL

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Mol	Chain	Res	Type
7	CG	95	ARG
7	CG	120	LEU
7	CG	123	GLU
7	CG	129	GLU
7	CG	133	THR
7	CG	135	VAL
7	CG	138	ARG
7	CG	139	GLU
7	CG	140	ASP
7	CG	146	GLU
8	CH	3	MET
8	CH	13	ARG
8	CH	22	LYS
8	CH	25	VAL
8	CH	31	LYS
8	CH	36	ILE
8	CH	42	GLU
8	CH	47	GLU
8	CH	49	PHE
8	CH	54	ASP
8	CH	55	THR
8	CH	59	LEU
8	CH	75	ILE
8	CH	77	ARG
8	CH	80	ARG
8	CH	87	LYS
8	CH	90	ASP
8	CH	92	LEU
8	CH	94	LYS
8	CH	101	ILE
8	CH	104	VAL
8	CH	111	MET
8	CH	112	THR
8	CH	121	LEU
8	CH	125	ILE
9	CI	9	THR
9	CI	11	ARG
9	CI	18	ARG
9	CI	19	VAL
9	CI	28	ILE
9	CI	29	VAL
9	CI	32	GLN

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Mol	Chain	Res	Type
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	54	LEU
9	CI	56	ASP
9	CI	57	MET
9	CI	68	LYS
9	CI	85	ARG
9	CI	88	MET
9	CI	89	GLU
9	CI	90	TYR
9	CI	94	LEU
9	CI	96	SER
9	CI	97	GLU
9	CI	99	ARG
9	CI	100	LYS
9	CI	105	THR
9	CI	112	GLU
9	CI	116	VAL
9	CI	126	GLN
9	CI	127	PHE
9	CI	129	LYS
10	CJ	9	ARG
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	26	VAL
10	CJ	27	GLU
10	CJ	32	THR
10	CJ	35	GLN
10	CJ	45	ARG
10	CJ	48	ARG
10	CJ	51	VAL
10	CJ	57	VAL
10	CJ	59	LYS
10	CJ	63	ASP
10	CJ	66	GLU
10	CJ	77	VAL
10	CJ	78	GLU
10	CJ	80	THR

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Mol	Chain	Res	Type
10	CJ	83	THR
10	CJ	84	VAL
10	CJ	87	LEU
10	CJ	89	ARG
10	CJ	92	LEU
10	CJ	96	VAL
11	CK	13	ARG
11	CK	14	LYS
11	CK	15	GLN
11	CK	31	ILE
11	CK	33	THR
11	CK	50	SER
11	CK	64	GLN
11	CK	65	VAL
11	CK	74	VAL
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	96	THR
11	CK	100	LEU
11	CK	101	ASN
11	CK	105	PHE
11	CK	106	ARG
11	CK	107	ILE
11	CK	125	LYS
11	CK	126	LYS
11	CK	127	ARG
12	CL	3	THR
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	21	VAL
12	CL	29	GLN
12	CL	33	VAL
12	CL	44	LYS
12	CL	58	THR
12	CL	59	ASN
12	CL	62	GLU
12	CL	63	VAL

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Mol	Chain	Res	Type
12	CL	82	ILE
12	CL	83	ARG
12	CL	89	ASP
12	CL	90	LEU
12	CL	93	VAL
12	CL	94	ARG
12	CL	105	SER
12	CL	107	VAL
12	CL	110	ARG
12	CL	111	LYS
12	CL	114	ARG
12	CL	116	LYS
12	CL	121	ARG
13	CM	7	ILE
13	CM	19	LEU
13	CM	25	VAL
13	CM	27	LYS
13	CM	29	ARG
13	CM	30	SER
13	CM	31	LYS
13	CM	33	ILE
13	CM	34	LEU
13	CM	41	GLU
13	CM	48	LEU
13	CM	53	ILE
13	CM	56	LEU
13	CM	59	GLU
13	CM	60	VAL
13	CM	63	PHE
13	CM	68	ASP
13	CM	80	LEU
13	CM	83	LEU
13	CM	90	ARG
13	CM	91	HIS
13	CM	101	ARG
14	CN	4	GLN
14	CN	23	LYS
14	CN	26	GLU
14	CN	28	LYS
14	CN	35	ASN
14	CN	48	LEU
14	CN	53	ARG

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Mol	Chain	Res	Type
14	CN	71	HIS
14	CN	80	SER
14	CN	82	ILE
15	CO	6	GLU
15	CO	17	ARG
15	CO	18	ASP
15	CO	22	THR
15	CO	35	GLN
15	CO	39	LEU
15	CO	58	ARG
15	CO	66	LEU
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	5	ARG
16	CP	19	VAL
16	CP	20	VAL
16	CP	26	ASN
16	CP	31	ARG
16	CP	36	VAL
16	CP	46	LYS
16	CP	63	GLN
16	CP	66	THR
16	CP	74	LEU
16	CP	77	GLU
16	CP	80	LYS
17	CQ	5	ILE
17	CQ	11	ARG
17	CQ	14	SER
17	CQ	17	MET
17	CQ	18	GLU
17	CQ	23	VAL
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	29	VAL
17	CQ	40	ARG

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Mol	Chain	Res	Type
17	CQ	48	ASP
17	CQ	50	ASN
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	59	VAL
17	CQ	60	GLU
17	CQ	61	ILE
17	CQ	75	LEU
17	CQ	76	VAL
17	CQ	78	VAL
17	CQ	79	VAL
17	CQ	81	LYS
17	CQ	83	VAL
18	CR	29	LEU
18	CR	33	ILE
18	CR	42	SER
18	CR	45	THR
18	CR	47	THR
18	CR	57	ARG
18	CR	59	ILE
18	CR	67	LEU
18	CR	68	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	11	ILE
19	CS	13	LEU
19	CS	14	HIS
19	CS	16	LEU
19	CS	19	VAL
19	CS	23	VAL
19	CS	27	ASP
19	CS	28	LYS
19	CS	33	THR
19	CS	49	ILE
19	CS	56	GLN
19	CS	73	GLU
20	CT	5	LYS
20	CT	6	SER
20	CT	8	LYS
20	CT	10	ARG
20	CT	14	SER

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Mol	Chain	Res	Type
20	CT	15	GLU
20	CT	24	ARG
20	CT	27	MET
20	CT	29	ARG
20	CT	36	TYR
20	CT	49	LYS
20	CT	58	VAL
20	CT	64	LYS
20	CT	67	ILE
20	CT	69	LYS
20	CT	71	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	17	ARG
21	CU	20	LYS
21	CU	24	GLU
21	CU	25	LYS
21	CU	28	VAL
21	CU	34	ARG
21	CU	36	GLU
21	CU	37	PHE
21	CU	43	THR
21	CU	47	ARG
21	CU	49	LYS
24	DC	3	VAL
24	DC	6	CYS
24	DC	20	VAL
24	DC	40	SER
24	DC	48	ARG
24	DC	52	ARG
24	DC	54	ILE
24	DC	59	LYS
24	DC	64	ILE
24	DC	80	ARG
24	DC	103	TYR
24	DC	104	ILE

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Mol	Chain	Res	Type
24	DC	105	LEU
24	DC	110	LEU
24	DC	111	LYS
24	DC	116	ILE
24	DC	130	LEU
24	DC	139	SER
24	DC	156	ARG
24	DC	157	SER
24	DC	160	THR
24	DC	164	ILE
24	DC	174	LEU
24	DC	175	ARG
24	DC	189	ARG
24	DC	191	THR
24	DC	195	VAL
24	DC	202	LEU
24	DC	205	LEU
24	DC	216	VAL
24	DC	221	ARG
24	DC	236	GLU
24	DC	250	VAL
24	DC	256	LYS
24	DC	259	SER
24	DC	266	PHE
24	DC	267	ILE
25	DD	1	MET
25	DD	4	LEU
25	DD	12	THR
25	DD	28	GLU
25	DD	33	ARG
25	DD	50	VAL
25	DD	73	VAL
25	DD	84	LEU
25	DD	86	GLU
25	DD	91	THR
25	DD	95	SER
25	DD	100	LEU
25	DD	104	VAL
25	DD	146	ILE
25	DD	150	GLN
25	DD	154	LYS
25	DD	168	GLU

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Mol	Chain	Res	Type
25	DD	170	VAL
25	DD	172	VAL
25	DD	175	LEU
25	DD	189	VAL
26	DE	6	LYS
26	DE	22	ASP
26	DE	25	GLU
26	DE	32	VAL
26	DE	33	VAL
26	DE	40	ARG
26	DE	41	GLN
26	DE	53	THR
26	DE	63	LYS
26	DE	69	ARG
26	DE	77	ILE
26	DE	83	VAL
26	DE	84	THR
26	DE	91	ASP
26	DE	102	ARG
26	DE	107	SER
26	DE	108	ILE
26	DE	114	ARG
26	DE	118	LEU
26	DE	120	VAL
26	DE	125	SER
26	DE	127	GLU
26	DE	131	THR
26	DE	133	LEU
26	DE	149	ILE
26	DE	159	LEU
26	DE	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	10	ASP
27	DF	14	LYS

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Mol	Chain	Res	Type
27	DF	26	MET
27	DF	28	VAL
27	DF	32	GLU
27	DF	35	THR
27	DF	36	LEU
27	DF	44	ILE
27	DF	52	ASN
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	81	GLN
27	DF	87	CYS
27	DF	95	ARG
27	DF	104	ILE
27	DF	106	ILE
27	DF	125	ARG
27	DF	133	ARG
27	DF	141	ILE
27	DF	147	ASP
27	DF	149	VAL
27	DF	157	THR
27	DF	162	SER
27	DF	174	ASP
27	DF	178	ARG
28	DG	11	VAL
28	DG	29	LYS
28	DG	30	ASN
28	DG	42	GLU
28	DG	44	LYS
28	DG	51	THR
28	DG	74	SER
28	DG	89	LEU
28	DG	95	ARG
28	DG	113	VAL
28	DG	127	THR
28	DG	129	THR
28	DG	132	VAL
28	DG	141	ILE
28	DG	155	GLU
28	DG	160	LYS
28	DG	172	LYS
29	DH	7	ASP

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Mol	Chain	Res	Type
29	DH	12	LEU
29	DH	41	LYS
29	DH	42	LYS
29	DH	48	GLU
29	DH	53	GLU
29	DH	54	LEU
29	DH	62	LEU
29	DH	77	THR
29	DH	78	VAL
29	DH	87	GLU
29	DH	89	LYS
29	DH	94	ILE
29	DH	103	VAL
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	142	VAL
29	DH	146	VAL
29	DH	149	GLU
30	DI	3	LYS
30	DI	4	LYS
30	DI	8	TYR
30	DI	11	LEU
30	DI	12	GLN
30	DI	17	MET
30	DI	24	VAL
30	DI	31	GLN
30	DI	40	LYS
30	DI	49	ILE
30	DI	51	LYS
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS
30	DI	87	LYS
30	DI	95	LYS
30	DI	96	ASP
30	DI	97	LYS

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Mol	Chain	Res	Type
30	DI	105	GLN
30	DI	107	GLN
30	DI	117	MET
30	DI	125	MET
30	DI	127	ARG
30	DI	128	SER
30	DI	134	ARG
30	DI	136	MET
31	DJ	1	MET
31	DJ	3	THR
31	DJ	11	VAL
31	DJ	17	VAL
31	DJ	30	THR
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	64	VAL
31	DJ	72	LYS
31	DJ	73	VAL
31	DJ	81	ILE
31	DJ	86	GLN
31	DJ	90	GLU
31	DJ	92	MET
31	DJ	103	ILE
31	DJ	131	ASN
31	DJ	138	GLN
31	DJ	139	VAL
31	DJ	140	LEU
31	DJ	142	ILE
32	DK	41	ILE
32	DK	42	THR
32	DK	49	ARG
32	DK	67	LYS
32	DK	70	ARG
32	DK	86	LEU
32	DK	90	ASN
32	DK	92	GLU
32	DK	95	ILE
32	DK	97	THR
32	DK	104	THR
32	DK	110	GLU
32	DK	114	LYS
32	DK	121	GLU

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Mol	Chain	Res	Type
32	DK	122	VAL
33	DL	6	LEU
33	DL	12	SER
33	DL	19	LEU
33	DL	27	LEU
33	DL	29	LYS
33	DL	42	SER
33	DL	46	VAL
33	DL	47	ARG
33	DL	59	ARG
33	DL	60	ARG
33	DL	74	THR
33	DL	78	ARG
33	DL	80	SER
33	DL	82	LEU
33	DL	85	VAL
33	DL	90	VAL
33	DL	91	ASP
33	DL	94	THR
33	DL	95	LEU
33	DL	100	ILE
33	DL	103	ILE
33	DL	107	PHE
33	DL	116	VAL
33	DL	118	THR
33	DL	121	THR
33	DL	126	ARG
33	DL	143	GLU
34	DM	14	LYS
34	DM	46	ILE
34	DM	57	VAL
34	DM	70	ASP
34	DM	74	THR
34	DM	100	LYS
34	DM	108	VAL
34	DM	124	LEU
34	DM	126	ILE
34	DM	127	LYS
34	DM	128	THR
34	DM	132	THR
35	DN	2	ARG
35	DN	6	SER

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Mol	Chain	Res	Type
35	DN	8	ARG
35	DN	14	SER
35	DN	20	MET
35	DN	22	ARG
35	DN	33	ILE
35	DN	53	THR
35	DN	70	THR
35	DN	71	ARG
35	DN	76	VAL
35	DN	79	LEU
35	DN	82	GLU
35	DN	96	ARG
35	DN	100	CYS
35	DN	114	GLU
35	DN	115	LEU
35	DN	116	VAL
36	DO	9	ARG
36	DO	18	LEU
36	DO	26	LEU
36	DO	31	THR
36	DO	47	VAL
36	DO	48	LEU
36	DO	67	ASN
36	DO	74	VAL
36	DO	78	VAL
36	DO	88	LYS
36	DO	89	ASP
36	DO	95	SER
36	DO	100	HIS
36	DO	102	ARG
36	DO	103	VAL
36	DO	116	GLN
37	DP	7	GLN
37	DP	19	SER
37	DP	26	VAL
37	DP	32	VAL
37	DP	34	GLU
37	DP	36	SER
37	DP	37	LYS
37	DP	51	ARG
37	DP	64	ILE
37	DP	65	SER

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Mol	Chain	Res	Type
37	DP	66	ASN
37	DP	70	VAL
37	DP	80	VAL
37	DP	81	VAL
37	DP	85	SER
37	DP	93	ARG
37	DP	94	LYS
37	DP	109	ARG
37	DP	110	ILE
37	DP	114	LEU
38	DQ	5	LYS
38	DQ	8	VAL
38	DQ	9	ILE
38	DQ	11	ARG
38	DQ	13	ARG
38	DQ	17	ILE
38	DQ	22	LYS
38	DQ	33	ARG
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	53	ARG
38	DQ	92	ARG
38	DQ	94	ILE
38	DQ	100	VAL
39	DR	1	MET
39	DR	10	LYS
39	DR	12	HIS
39	DR	18	GLN
39	DR	38	VAL
39	DR	43	ASN
39	DR	46	GLU
39	DR	47	VAL
39	DR	48	LYS
39	DR	51	VAL
39	DR	58	VAL
39	DR	76	LYS
39	DR	81	LYS
39	DR	86	GLN
39	DR	94	THR
40	DS	3	THR
40	DS	4	ILE
40	DS	6	LYS

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Mol	Chain	Res	Type
40	DS	13	SER
40	DS	19	LEU
40	DS	23	LEU
40	DS	41	LYS
40	DS	66	ILE
40	DS	67	ASP
40	DS	78	GLU
40	DS	86	MET
40	DS	96	ILE
40	DS	97	LEU
40	DS	104	THR
41	DT	2	ILE
41	DT	3	ARG
41	DT	7	LEU
41	DT	16	VAL
41	DT	18	GLU
41	DT	30	ILE
41	DT	31	VAL
41	DT	44	LYS
41	DT	49	LYS
41	DT	52	GLU
41	DT	57	VAL
41	DT	70	HIS
41	DT	74	ILE
41	DT	77	ARG
41	DT	86	THR
41	DT	91	GLN
42	DU	7	ARG
42	DU	11	VAL
42	DU	15	THR
42	DU	21	LYS
42	DU	28	VAL
42	DU	29	LEU
42	DU	31	SER
42	DU	40	ASN
42	DU	41	LEU
42	DU	45	HIS
42	DU	46	GLN
42	DU	47	LYS
42	DU	49	VAL
42	DU	53	ASN
42	DU	54	GLN

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Mol	Chain	Res	Type
42	DU	67	VAL
42	DU	68	SER
42	DU	72	ILE
42	DU	81	ASP
42	DU	99	ASN
42	DU	102	THR
43	DV	3	THR
43	DV	8	VAL
43	DV	29	ILE
43	DV	35	GLU
43	DV	40	ILE
43	DV	42	LEU
43	DV	45	ASP
43	DV	50	MET
43	DV	53	LYS
43	DV	61	LEU
43	DV	65	VAL
43	DV	66	ASP
44	DW	16	SER
44	DW	20	ARG
44	DW	38	VAL
44	DW	39	ARG
44	DW	41	ARG
44	DW	77	ARG
45	DX	4	VAL
45	DX	11	ARG
45	DX	18	ARG
45	DX	23	ASN
45	DX	25	THR
45	DX	33	LEU
45	DX	37	ARG
45	DX	40	VAL
45	DX	46	PHE
45	DX	48	THR
45	DX	54	LYS
45	DX	64	ILE
45	DX	66	THR
45	DX	71	LEU
46	DY	2	LYS
46	DY	6	LEU
46	DY	8	GLU
46	DY	13	GLU

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Mol	Chain	Res	Type
46	DY	16	THR
46	DY	37	LEU
46	DY	39	GLN
46	DY	44	LYS
46	DY	49	ASP
46	DY	56	LEU
46	DY	57	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	4	THR
47	DZ	5	ILE
47	DZ	10	THR
47	DZ	11	ARG
47	DZ	16	ARG
47	DZ	25	LEU
47	DZ	31	ARG
47	DZ	36	VAL
47	DZ	41	THR
47	DZ	45	ARG
47	DZ	57	VAL
47	DZ	58	GLU
48	D0	23	THR
48	D0	25	VAL
48	D0	28	LEU
48	D0	37	LYS
48	D0	46	ASP
48	D0	52	ARG
49	D1	6	ARG
49	D1	9	ILE
49	D1	10	LYS
49	D1	12	VAL
49	D1	19	HIS
49	D1	25	LYS
49	D1	30	LYS
49	D1	38	LYS
49	D1	43	VAL
49	D1	46	HIS
50	D2	1	MET
50	D2	4	THR
50	D2	10	LEU
50	D2	24	THR
50	D2	34	ARG

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Mol	Chain	Res	Type
50	D2	41	ARG
50	D2	42	LEU
50	D2	44	VAL
51	D3	6	THR
51	D3	8	ARG
51	D3	13	ARG
51	D3	30	ARG
51	D3	31	HIS
51	D3	47	LYS
52	D4	2	LYS
52	D4	3	VAL
52	D4	4	ARG
52	D4	11	CYS
52	D4	17	VAL
52	D4	26	ILE
52	D4	35	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (102) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	15	HIS
3	AC	6	HIS
4	AD	198	HIS
5	AE	19	ASN
5	AE	70	ASN
5	AE	82	GLN
5	AE	122	ASN
7	AG	130	ASN
7	AG	148	ASN
8	AH	18	GLN
10	AJ	56	HIS
10	AJ	58	ASN
10	AJ	70	HIS
11	AK	22	HIS
11	AK	64	GLN
11	AK	119	ASN
13	AM	14	HIS
14	AN	4	GLN
15	AO	46	HIS
15	AO	50	HIS
16	AP	79	ASN
17	AQ	31	HIS

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Mol	Chain	Res	Type
20	AT	61	GLN
20	AT	68	HIS
24	BC	142	HIS
24	BC	239	ASN
24	BC	243	HIS
25	BD	136	ASN
26	BE	156	ASN
27	BF	81	GLN
28	BG	38	ASN
28	BG	143	GLN
29	BH	20	ASN
29	BH	28	ASN
29	BH	119	ASN
29	BH	135	HIS
30	BI	94	ASN
30	BI	105	GLN
31	BJ	47	HIS
31	BJ	86	GLN
31	BJ	130	HIS
32	BK	3	GLN
32	BK	9	ASN
32	BK	90	ASN
35	BN	107	ASN
36	BO	19	GLN
36	BO	104	GLN
41	BT	70	HIS
49	B1	19	HIS
2	CB	18	HIS
2	CB	42	ASN
2	CB	103	ASN
3	CC	6	HIS
3	CC	69	HIS
3	CC	123	GLN
3	CC	176	HIS
4	CD	152	GLN
5	CE	77	ASN
5	CE	89	HIS
6	CF	37	HIS
7	CG	97	ASN
8	CH	21	ASN
8	CH	67	GLN
10	CJ	56	HIS

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Mol	Chain	Res	Type
10	CJ	70	HIS
13	CM	91	HIS
13	CM	105	ASN
14	CN	43	ASN
15	CO	46	HIS
16	CP	26	ASN
17	CQ	31	HIS
18	CR	74	HIS
20	CT	3	ASN
20	CT	48	GLN
20	CT	84	ASN
25	DD	150	GLN
26	DE	92	HIS
27	DF	21	ASN
27	DF	37	ASN
28	DG	115	HIS
28	DG	128	GLN
28	DG	139	GLN
28	DG	143	GLN
29	DH	20	ASN
29	DH	28	ASN
29	DH	128	HIS
31	DJ	80	HIS
37	DP	56	HIS
39	DR	89	HIS
40	DS	7	HIS
40	DS	15	GLN
41	DT	28	ASN
42	DU	40	ASN
43	DV	24	ASN
44	DW	76	ASN
46	DY	39	GLN
46	DY	41	HIS
48	D0	38	HIS
49	D1	19	HIS
49	D1	26	ASN
51	D3	31	HIS
52	D4	37	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	350 (22%)	15 (0%)
1	CA	1538/1539 (99%)	333 (21%)	9 (0%)
22	BA	2895/2903 (99%)	647 (22%)	30 (1%)
22	DA	2895/2903 (99%)	637 (22%)	29 (1%)
23	BB	118/119 (99%)	21 (17%)	0
23	DB	117/119 (98%)	25 (21%)	0
All	All	9100/9122 (99%)	2013 (22%)	83 (0%)

All (2013) RNA backbone outliers are listed below:

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

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Mol	Chain	Res	Type
1	AA	108	G
1	AA	109	A
1	AA	111	G
1	AA	115	G
1	AA	116	A
1	AA	117	G
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	131	A
1	AA	137	U
1	AA	138	G
1	AA	141	G
1	AA	142	G
1	AA	143	A
1	AA	144	G
1	AA	149	A
1	AA	159	G
1	AA	162	A
1	AA	168	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	185	U
1	AA	195	A
1	AA	204	G
1	AA	205	A
1	AA	209	U
1	AA	210	C
1	AA	214	C
1	AA	226	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	260	G
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	292	G

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Mol	Chain	Res	Type
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	331	G
1	AA	332	G
1	AA	338	A
1	AA	341	C
1	AA	346	G
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	382	A
1	AA	384	G
1	AA	406	G
1	AA	408	A
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	439	U
1	AA	440	C
1	AA	445	G
1	AA	453	G
1	AA	454	G
1	AA	456	A
1	AA	457	G
1	AA	458	U
1	AA	459	A
1	AA	462	G
1	AA	463	U
1	AA	465	A

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Mol	Chain	Res	Type
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	474	G
1	AA	479	U
1	AA	481	G
1	AA	482	A
1	AA	485	U
1	AA	486	U
1	AA	491	G
1	AA	492	C
1	AA	495	A
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	570	G
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	615	G
1	AA	650	G
1	AA	653	U
1	AA	654	G
1	AA	661	G
1	AA	665	A
1	AA	671	G
1	AA	702	A
1	AA	703	G
1	AA	720	C
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G

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Mol	Chain	Res	Type
1	AA	733	G
1	AA	753	A
1	AA	755	G
1	AA	766	A
1	AA	772	U
1	AA	773	G
1	AA	777	A
1	AA	778	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	815	A
1	AA	817	C
1	AA	828	U
1	AA	829	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	849	G
1	AA	859	G
1	AA	860	A
1	AA	870	U
1	AA	910	C
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	938	A
1	AA	960	U
1	AA	963	G
1	AA	964	A
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	975	A
1	AA	976	G
1	AA	977	A

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Mol	Chain	Res	Type
1	AA	983	A
1	AA	986	U
1	AA	987	G
1	AA	988	G
1	AA	989	U
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	995	C
1	AA	1002	G
1	AA	1004	A
1	AA	1007	U
1	AA	1008	U
1	AA	1009	U
1	AA	1016	A
1	AA	1017	U
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1035	A
1	AA	1036	A
1	AA	1037	C
1	AA	1039	G
1	AA	1042	A
1	AA	1043	G
1	AA	1044	A
1	AA	1047	G
1	AA	1049	U
1	AA	1050	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1061	G
1	AA	1065	U
1	AA	1066	C

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Mol	Chain	Res	Type
1	AA	1069	C
1	AA	1086	U
1	AA	1089	G
1	AA	1094	G
1	AA	1098	C
1	AA	1101	A
1	AA	1103	C
1	AA	1104	G
1	AA	1124	G
1	AA	1125	U
1	AA	1127	G
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1145	A
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1168	U
1	AA	1169	A
1	AA	1171	A
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1188	A
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1227	A
1	AA	1228	C

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Mol	Chain	Res	Type
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1260	G
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1299	A
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1317	C
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1325	C
1	AA	1328	C
1	AA	1329	A
1	AA	1332	A
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1368	A
1	AA	1370	G
1	AA	1378	C
1	AA	1379	G
1	AA	1398	A
1	AA	1401	G
1	AA	1418	A
1	AA	1419	G

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Mol	Chain	Res	Type
1	AA	1425	U
1	AA	1426	G
1	AA	1429	A
1	AA	1430	A
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1493	A
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1526	G
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
1	AA	1535	C
1	AA	1539	C
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	19	A
22	BA	23	G
22	BA	26	G
22	BA	31	C
22	BA	34	U
22	BA	35	G
22	BA	46	G
22	BA	58	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	72	U
22	BA	74	A
22	BA	75	G
22	BA	87	U

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Mol	Chain	Res	Type
22	BA	98	G
22	BA	101	A
22	BA	103	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	128	C
22	BA	131	A
22	BA	137	U
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	143	C
22	BA	148	U
22	BA	158	U
22	BA	180	G
22	BA	181	A
22	BA	196	A
22	BA	199	A
22	BA	200	U
22	BA	207	A
22	BA	208	C
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	248	G
22	BA	255	A
22	BA	265	A
22	BA	266	G
22	BA	267	C
22	BA	272	A
22	BA	273	G
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	279	A
22	BA	302	C
22	BA	310	A
22	BA	311	A

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Mol	Chain	Res	Type
22	BA	329	G
22	BA	330	A
22	BA	331	C
22	BA	339	U
22	BA	343	C
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G
22	BA	389	G
22	BA	404	A
22	BA	405	U
22	BA	406	G
22	BA	411	G
22	BA	424	G
22	BA	429	A
22	BA	443	A
22	BA	451	U
22	BA	455	C
22	BA	457	A
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	489	G
22	BA	491	G
22	BA	504	A
22	BA	505	A
22	BA	508	A
22	BA	509	C
22	BA	514	A
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	538	A
22	BA	543	G
22	BA	544	C
22	BA	546	U
22	BA	547	A

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Mol	Chain	Res	Type
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	557	C
22	BA	560	C
22	BA	563	A
22	BA	571	U
22	BA	573	U
22	BA	575	A
22	BA	576	U
22	BA	581	C
22	BA	585	G
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	618	G
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	644	A
22	BA	645	C
22	BA	647	G
22	BA	648	G
22	BA	654	A
22	BA	655	A
22	BA	668	A
22	BA	670	A
22	BA	671	C
22	BA	686	U
22	BA	702	U
22	BA	713	G
22	BA	716	A
22	BA	730	A
22	BA	731	C
22	BA	738	G
22	BA	740	C
22	BA	744	U
22	BA	747	U
22	BA	756	A

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Mol	Chain	Res	Type
22	BA	757	G
22	BA	762	U
22	BA	764	A
22	BA	765	C
22	BA	769	U
22	BA	775	G
22	BA	776	G
22	BA	778	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	791	C
22	BA	792	A
22	BA	801	G
22	BA	805	G
22	BA	806	C
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	831	G
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	855	G
22	BA	858	G
22	BA	859	G
22	BA	861	A
22	BA	866	A
22	BA	869	G
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	900	A
22	BA	910	A
22	BA	913	U
22	BA	914	G
22	BA	915	C
22	BA	919	U
22	BA	932	U
22	BA	941	A

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Mol	Chain	Res	Type
22	BA	946	C
22	BA	961	C
22	BA	974	G
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	990	A
22	BA	991	C
22	BA	992	C
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	999	U
22	BA	1005	C
22	BA	1012	U
22	BA	1013	C
22	BA	1023	U
22	BA	1024	G
22	BA	1026	G
22	BA	1033	U
22	BA	1046	A
22	BA	1047	G
22	BA	1051	G
22	BA	1057	A
22	BA	1061	U
22	BA	1062	G
22	BA	1066	U
22	BA	1068	G
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1081	U
22	BA	1087	G
22	BA	1088	A
22	BA	1089	A
22	BA	1092	C
22	BA	1098	A
22	BA	1099	G
22	BA	1100	C

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Mol	Chain	Res	Type
22	BA	1101	U
22	BA	1104	C
22	BA	1106	G
22	BA	1112	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1138	G
22	BA	1139	G
22	BA	1141	U
22	BA	1142	A
22	BA	1145	C
22	BA	1150	C
22	BA	1168	G
22	BA	1170	C
22	BA	1171	G
22	BA	1172	C
22	BA	1173	U
22	BA	1174	U
22	BA	1175	A
22	BA	1176	U
22	BA	1178	C
22	BA	1179	G
22	BA	1180	U
22	BA	1181	U
22	BA	1185	G
22	BA	1186	G
22	BA	1187	G
22	BA	1205	A
22	BA	1211	C
22	BA	1212	G
22	BA	1222	U
22	BA	1238	G
22	BA	1247	A
22	BA	1249	U
22	BA	1252	G
22	BA	1253	A
22	BA	1255	U
22	BA	1256	G
22	BA	1258	U
22	BA	1265	A

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Mol	Chain	Res	Type
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1311	G
22	BA	1321	A
22	BA	1325	U
22	BA	1329	U
22	BA	1332	G
22	BA	1345	C
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1367	A
22	BA	1368	G
22	BA	1370	C
22	BA	1374	G
22	BA	1378	A
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1407	G
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1428	C
22	BA	1435	G
22	BA	1450	G
22	BA	1452	G
22	BA	1453	A
22	BA	1460	U
22	BA	1461	C
22	BA	1482	G
22	BA	1483	G
22	BA	1493	C
22	BA	1494	A
22	BA	1495	A

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Mol	Chain	Res	Type
22	BA	1504	A
22	BA	1508	A
22	BA	1509	A
22	BA	1510	G
22	BA	1515	A
22	BA	1523	U
22	BA	1528	A
22	BA	1529	G
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1554	U
22	BA	1558	C
22	BA	1561	C
22	BA	1566	A
22	BA	1569	A
22	BA	1575	C
22	BA	1576	U
22	BA	1578	U
22	BA	1582	C
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1597	A
22	BA	1607	C
22	BA	1608	A
22	BA	1609	A
22	BA	1610	A
22	BA	1616	A
22	BA	1619	G
22	BA	1632	A
22	BA	1634	A
22	BA	1646	C
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1651	G
22	BA	1652	A
22	BA	1674	G
22	BA	1677	A

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Mol	Chain	Res	Type
22	BA	1695	G
22	BA	1714	U
22	BA	1715	G
22	BA	1717	A
22	BA	1718	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1755	A
22	BA	1758	U
22	BA	1764	C
22	BA	1773	A
22	BA	1782	U
22	BA	1786	A
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1804	C
22	BA	1806	C
22	BA	1808	A
22	BA	1813	G
22	BA	1816	C
22	BA	1828	G
22	BA	1829	A
22	BA	1842	G
22	BA	1844	C
22	BA	1859	U
22	BA	1865	U
22	BA	1870	C
22	BA	1873	G
22	BA	1876	A
22	BA	1884	G
22	BA	1885	A
22	BA	1897	G
22	BA	1902	C
22	BA	1906	G
22	BA	1909	C
22	BA	1910	G
22	BA	1911	U

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Mol	Chain	Res	Type
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1920	C
22	BA	1921	G
22	BA	1923	U
22	BA	1925	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1935	G
22	BA	1936	A
22	BA	1937	A
22	BA	1938	A
22	BA	1944	U
22	BA	1951	U
22	BA	1955	U
22	BA	1960	A
22	BA	1965	C
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1983	G
22	BA	1986	C
22	BA	1991	U
22	BA	1993	U
22	BA	1997	C
22	BA	2001	C
22	BA	2008	C
22	BA	2009	A
22	BA	2021	C
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A

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Mol	Chain	Res	Type
22	BA	2035	G
22	BA	2043	C
22	BA	2051	A
22	BA	2053	G
22	BA	2054	A
22	BA	2055	C
22	BA	2056	G
22	BA	2059	A
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2064	C
22	BA	2066	C
22	BA	2067	G
22	BA	2069	G
22	BA	2072	C
22	BA	2077	A
22	BA	2092	U
22	BA	2093	G
22	BA	2096	C
22	BA	2101	A
22	BA	2102	G
22	BA	2107	G
22	BA	2110	G
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U
22	BA	2119	A
22	BA	2122	U
22	BA	2123	G
22	BA	2126	A
22	BA	2128	G
22	BA	2132	U
22	BA	2133	G
22	BA	2136	G
22	BA	2145	C
22	BA	2147	A

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Mol	Chain	Res	Type
22	BA	2148	G
22	BA	2149	U
22	BA	2157	G
22	BA	2158	A
22	BA	2159	G
22	BA	2162	G
22	BA	2164	C
22	BA	2165	C
22	BA	2167	U
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U
22	BA	2173	A
22	BA	2178	C
22	BA	2179	C
22	BA	2183	A
22	BA	2187	U
22	BA	2188	U
22	BA	2190	G
22	BA	2195	U
22	BA	2198	A
22	BA	2203	U
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2220	U
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2242	G
22	BA	2243	U
22	BA	2258	C
22	BA	2267	A
22	BA	2268	A
22	BA	2278	A
22	BA	2280	G
22	BA	2282	G
22	BA	2283	C
22	BA	2286	G

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Mol	Chain	Res	Type
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2311	A
22	BA	2312	U
22	BA	2322	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2331	G
22	BA	2333	A
22	BA	2335	A
22	BA	2340	A
22	BA	2345	G
22	BA	2347	C
22	BA	2350	C
22	BA	2354	C
22	BA	2357	G
22	BA	2361	G
22	BA	2376	A
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2391	G
22	BA	2392	A
22	BA	2393	U
22	BA	2396	G
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2410	G
22	BA	2412	A
22	BA	2421	G
22	BA	2422	C
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U

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Mol	Chain	Res	Type
22	BA	2435	A
22	BA	2441	U
22	BA	2443	C
22	BA	2448	A
22	BA	2465	C
22	BA	2474	U
22	BA	2476	A
22	BA	2478	A
22	BA	2491	U
22	BA	2496	C
22	BA	2497	A
22	BA	2498	C
22	BA	2499	C
22	BA	2500	U
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2516	A
22	BA	2518	A
22	BA	2520	C
22	BA	2525	G
22	BA	2529	G
22	BA	2554	U
22	BA	2555	U
22	BA	2566	A
22	BA	2567	G
22	BA	2572	A
22	BA	2573	C
22	BA	2574	G
22	BA	2578	G
22	BA	2584	U
22	BA	2599	G
22	BA	2601	C
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U
22	BA	2627	G
22	BA	2629	U
22	BA	2662	A

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Mol	Chain	Res	Type
22	BA	2685	G
22	BA	2689	U
22	BA	2690	U
22	BA	2700	A
22	BA	2702	G
22	BA	2714	G
22	BA	2721	A
22	BA	2725	A
22	BA	2726	A
22	BA	2729	G
22	BA	2733	A
22	BA	2748	A
22	BA	2751	G
22	BA	2752	C
22	BA	2756	U
22	BA	2757	A
22	BA	2778	A
22	BA	2791	G
22	BA	2792	A
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2811	G
22	BA	2818	U
22	BA	2820	A
22	BA	2821	A
22	BA	2827	C
22	BA	2836	U
22	BA	2837	A
22	BA	2858	C
22	BA	2862	G
22	BA	2867	G
22	BA	2873	A
22	BA	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	2903	U
23	BB	2	G

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Mol	Chain	Res	Type
23	BB	4	C
23	BB	9	G
23	BB	13	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	36	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	56	G
23	BB	66	A
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	98	G
23	BB	99	A
23	BB	109	A
23	BB	119	A
1	CA	5	U
1	CA	9	G
1	CA	17	U
1	CA	19	A
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	56	U
1	CA	67	C
1	CA	68	G
1	CA	70	U
1	CA	71	A
1	CA	74	A
1	CA	81	A
1	CA	83	C
1	CA	84	U
1	CA	85	U
1	CA	87	C
1	CA	88	U

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Mol	Chain	Res	Type
1	CA	91	U
1	CA	94	G
1	CA	95	C
1	CA	108	G
1	CA	115	G
1	CA	116	A
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	129	A
1	CA	130	A
1	CA	131	A
1	CA	137	U
1	CA	142	G
1	CA	143	A
1	CA	144	G
1	CA	154	U
1	CA	155	A
1	CA	159	G
1	CA	163	C
1	CA	181	A
1	CA	182	A
1	CA	183	C
1	CA	184	G
1	CA	187	G
1	CA	189	A
1	CA	197	A
1	CA	200	G
1	CA	201	G
1	CA	204	G
1	CA	206	C
1	CA	207	C
1	CA	208	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	240	G
1	CA	241	G
1	CA	245	U
1	CA	247	G
1	CA	249	U
1	CA	251	G

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Mol	Chain	Res	Type
1	CA	266	G
1	CA	267	C
1	CA	269	C
1	CA	280	C
1	CA	289	G
1	CA	298	A
1	CA	308	C
1	CA	309	A
1	CA	320	A
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	333	U
1	CA	337	G
1	CA	347	G
1	CA	352	C
1	CA	354	G
1	CA	357	G
1	CA	358	U
1	CA	359	G
1	CA	367	U
1	CA	370	C
1	CA	372	C
1	CA	373	A
1	CA	377	G
1	CA	378	G
1	CA	384	G
1	CA	389	A
1	CA	398	U
1	CA	399	G
1	CA	406	G
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	429	U

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Mol	Chain	Res	Type
1	CA	430	A
1	CA	458	U
1	CA	459	A
1	CA	463	U
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	474	G
1	CA	477	C
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	482	A
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	495	A
1	CA	498	A
1	CA	499	A
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	519	C
1	CA	524	G
1	CA	527	G
1	CA	532	A
1	CA	533	A
1	CA	545	C
1	CA	547	A
1	CA	550	G
1	CA	559	A
1	CA	560	A
1	CA	564	C
1	CA	568	G
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	581	G
1	CA	582	C
1	CA	619	U

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Mol	Chain	Res	Type
1	CA	622	A
1	CA	650	G
1	CA	653	U
1	CA	654	G
1	CA	665	A
1	CA	666	G
1	CA	687	A
1	CA	695	A
1	CA	719	C
1	CA	720	C
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	734	G
1	CA	747	A
1	CA	752	G
1	CA	754	C
1	CA	755	G
1	CA	758	C
1	CA	765	G
1	CA	777	A
1	CA	778	G
1	CA	785	G
1	CA	793	U
1	CA	794	A
1	CA	802	A
1	CA	804	U
1	CA	809	G
1	CA	814	A
1	CA	815	A
1	CA	817	C
1	CA	821	G
1	CA	827	U
1	CA	828	U
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	874	G

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Mol	Chain	Res	Type
1	CA	876	C
1	CA	914	A
1	CA	922	G
1	CA	926	G
1	CA	931	C
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	966	G
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	983	A
1	CA	987	G
1	CA	989	U
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	996	A
1	CA	1004	A
1	CA	1005	A
1	CA	1008	U
1	CA	1009	U
1	CA	1017	U
1	CA	1018	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1039	G
1	CA	1043	G
1	CA	1044	A
1	CA	1047	G

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Mol	Chain	Res	Type
1	CA	1050	G
1	CA	1054	C
1	CA	1055	A
1	CA	1056	U
1	CA	1065	U
1	CA	1072	G
1	CA	1073	U
1	CA	1084	G
1	CA	1086	U
1	CA	1088	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1124	G
1	CA	1125	U
1	CA	1129	C
1	CA	1132	C
1	CA	1133	G
1	CA	1134	G
1	CA	1136	C
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1145	A
1	CA	1154	G
1	CA	1155	A
1	CA	1156	G
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1167	A
1	CA	1183	U
1	CA	1184	G
1	CA	1192	C
1	CA	1196	A
1	CA	1202	U
1	CA	1203	C
1	CA	1212	U
1	CA	1213	A

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Mol	Chain	Res	Type
1	CA	1227	A
1	CA	1238	A
1	CA	1240	U
1	CA	1243	C
1	CA	1253	G
1	CA	1260	G
1	CA	1275	A
1	CA	1280	A
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1292	G
1	CA	1293	C
1	CA	1299	A
1	CA	1300	G
1	CA	1302	C
1	CA	1304	G
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1322	C
1	CA	1324	A
1	CA	1331	G
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1370	G
1	CA	1377	A
1	CA	1378	C
1	CA	1379	G
1	CA	1394	A
1	CA	1398	A
1	CA	1419	G
1	CA	1440	U
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1452	C
1	CA	1454	G

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Mol	Chain	Res	Type
1	CA	1480	A
1	CA	1491	G
1	CA	1492	A
1	CA	1497	G
1	CA	1503	A
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1509	C
1	CA	1517	G
1	CA	1528	U
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
1	CA	1533	C
1	CA	1535	C
1	CA	1537	U
22	DA	10	A
22	DA	12	U
22	DA	15	G
22	DA	30	G
22	DA	31	C
22	DA	34	U
22	DA	41	C
22	DA	42	A
22	DA	46	G
22	DA	55	G
22	DA	57	C
22	DA	58	G
22	DA	61	C
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	82	U
22	DA	84	A
22	DA	91	A
22	DA	98	G
22	DA	101	A
22	DA	102	U
22	DA	118	A
22	DA	119	A

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Mol	Chain	Res	Type
22	DA	120	U
22	DA	128	C
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	149	A
22	DA	155	A
22	DA	162	U
22	DA	163	C
22	DA	166	U
22	DA	181	A
22	DA	196	A
22	DA	197	A
22	DA	199	A
22	DA	206	U
22	DA	212	G
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	225	C
22	DA	248	G
22	DA	249	C
22	DA	250	G
22	DA	255	A
22	DA	264	C
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	279	A
22	DA	280	U
22	DA	281	C
22	DA	285	G
22	DA	294	A
22	DA	299	A
22	DA	311	A
22	DA	329	G
22	DA	330	A

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Mol	Chain	Res	Type
22	DA	350	G
22	DA	353	C
22	DA	354	A
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	385	C
22	DA	386	G
22	DA	396	G
22	DA	399	U
22	DA	405	U
22	DA	411	G
22	DA	412	A
22	DA	417	C
22	DA	424	G
22	DA	447	A
22	DA	449	A
22	DA	451	U
22	DA	455	C
22	DA	478	A
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	504	A
22	DA	505	A
22	DA	508	A
22	DA	509	C
22	DA	510	C
22	DA	511	U
22	DA	526	A
22	DA	529	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	538	A
22	DA	543	G
22	DA	544	C
22	DA	546	U

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Mol	Chain	Res	Type
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	573	U
22	DA	575	A
22	DA	586	A
22	DA	587	C
22	DA	593	U
22	DA	603	A
22	DA	613	A
22	DA	615	U
22	DA	622	G
22	DA	627	A
22	DA	630	G
22	DA	631	A
22	DA	637	A
22	DA	641	U
22	DA	642	U
22	DA	645	C
22	DA	646	U
22	DA	647	G
22	DA	648	G
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	663	G
22	DA	664	G
22	DA	676	A
22	DA	686	U
22	DA	695	G
22	DA	702	U
22	DA	715	A
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	740	C
22	DA	746	U

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Mol	Chain	Res	Type
22	DA	747	U
22	DA	749	A
22	DA	751	A
22	DA	752	A
22	DA	755	U
22	DA	764	A
22	DA	771	G
22	DA	775	G
22	DA	776	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	802	A
22	DA	805	G
22	DA	812	C
22	DA	819	A
22	DA	820	A
22	DA	827	U
22	DA	828	U
22	DA	829	A
22	DA	830	G
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	878	A
22	DA	880	G
22	DA	881	G
22	DA	882	G
22	DA	885	C
22	DA	896	A
22	DA	897	C
22	DA	902	C
22	DA	910	A
22	DA	914	G
22	DA	915	C
22	DA	931	U
22	DA	932	U
22	DA	934	U
22	DA	941	A
22	DA	946	C

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Mol	Chain	Res	Type
22	DA	953	G
22	DA	961	C
22	DA	974	G
22	DA	982	C
22	DA	983	A
22	DA	995	C
22	DA	996	A
22	DA	997	G
22	DA	998	C
22	DA	1005	C
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1023	U
22	DA	1025	G
22	DA	1026	G
22	DA	1033	U
22	DA	1041	G
22	DA	1046	A
22	DA	1047	G
22	DA	1053	C
22	DA	1058	U
22	DA	1060	U
22	DA	1061	U
22	DA	1062	G
22	DA	1065	U
22	DA	1066	U
22	DA	1067	A
22	DA	1068	G
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1074	G
22	DA	1075	C
22	DA	1077	A
22	DA	1079	C
22	DA	1082	U
22	DA	1088	A
22	DA	1089	A
22	DA	1090	A
22	DA	1092	C
22	DA	1094	U

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Mol	Chain	Res	Type
22	DA	1097	U
22	DA	1098	A
22	DA	1100	C
22	DA	1104	C
22	DA	1105	U
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1119	U
22	DA	1122	G
22	DA	1128	G
22	DA	1132	U
22	DA	1133	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1141	U
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1156	A
22	DA	1168	G
22	DA	1171	G
22	DA	1172	C
22	DA	1173	U
22	DA	1175	A
22	DA	1176	U
22	DA	1178	C
22	DA	1179	G
22	DA	1180	U
22	DA	1186	G
22	DA	1197	G
22	DA	1205	A
22	DA	1208	C
22	DA	1212	G
22	DA	1221	C
22	DA	1230	A
22	DA	1231	U
22	DA	1232	G
22	DA	1236	G
22	DA	1238	G
22	DA	1241	A

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Mol	Chain	Res	Type
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1257	C
22	DA	1262	A
22	DA	1264	A
22	DA	1266	G
22	DA	1269	A
22	DA	1271	G
22	DA	1272	A
22	DA	1275	A
22	DA	1276	A
22	DA	1300	G
22	DA	1301	A
22	DA	1305	C
22	DA	1318	U
22	DA	1325	U
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1365	A
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1386	C
22	DA	1387	A
22	DA	1390	U
22	DA	1391	U
22	DA	1395	A
22	DA	1411	U
22	DA	1414	C
22	DA	1416	G
22	DA	1419	A
22	DA	1420	A
22	DA	1423	G
22	DA	1426	G
22	DA	1428	C
22	DA	1434	A
22	DA	1436	G

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Mol	Chain	Res	Type
22	DA	1452	G
22	DA	1455	G
22	DA	1456	G
22	DA	1458	U
22	DA	1462	C
22	DA	1471	G
22	DA	1478	G
22	DA	1482	G
22	DA	1493	C
22	DA	1495	A
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1515	A
22	DA	1523	U
22	DA	1527	G
22	DA	1530	G
22	DA	1531	C
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1565	C
22	DA	1566	A
22	DA	1569	A
22	DA	1576	U
22	DA	1578	U
22	DA	1581	G
22	DA	1582	C
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1603	A
22	DA	1604	C
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1613	G
22	DA	1616	A

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Mol	Chain	Res	Type
22	DA	1623	G
22	DA	1625	C
22	DA	1639	C
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1651	G
22	DA	1660	G
22	DA	1664	A
22	DA	1665	A
22	DA	1674	G
22	DA	1690	A
22	DA	1694	C
22	DA	1705	A
22	DA	1714	U
22	DA	1715	G
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1735	A
22	DA	1738	G
22	DA	1739	A
22	DA	1740	G
22	DA	1744	A
22	DA	1756	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1774	C
22	DA	1776	G
22	DA	1782	U
22	DA	1800	C
22	DA	1801	A
22	DA	1802	A
22	DA	1808	A
22	DA	1811	G
22	DA	1816	C
22	DA	1823	G
22	DA	1829	A

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Mol	Chain	Res	Type
22	DA	1847	A
22	DA	1848	A
22	DA	1858	A
22	DA	1859	U
22	DA	1869	G
22	DA	1870	C
22	DA	1871	A
22	DA	1874	C
22	DA	1876	A
22	DA	1880	U
22	DA	1884	G
22	DA	1893	C
22	DA	1903	G
22	DA	1906	G
22	DA	1907	G
22	DA	1913	A
22	DA	1914	C
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1935	G
22	DA	1937	A
22	DA	1947	C
22	DA	1955	U
22	DA	1961	C
22	DA	1964	G
22	DA	1965	C
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1991	U
22	DA	1992	G
22	DA	1993	U
22	DA	1997	C
22	DA	2020	A
22	DA	2021	C
22	DA	2022	U
22	DA	2023	C
22	DA	2030	A
22	DA	2031	A

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Mol	Chain	Res	Type
22	DA	2033	A
22	DA	2043	C
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2069	G
22	DA	2072	C
22	DA	2073	C
22	DA	2080	A
22	DA	2083	G
22	DA	2092	U
22	DA	2093	G
22	DA	2095	A
22	DA	2102	G
22	DA	2103	C
22	DA	2107	G
22	DA	2108	A
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A
22	DA	2137	U
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G

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Mol	Chain	Res	Type
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2173	A
22	DA	2177	C
22	DA	2178	C
22	DA	2181	U
22	DA	2184	A
22	DA	2189	U
22	DA	2190	G
22	DA	2194	U
22	DA	2198	A
22	DA	2203	U
22	DA	2204	G
22	DA	2211	A
22	DA	2212	A
22	DA	2225	A
22	DA	2226	C
22	DA	2230	G
22	DA	2238	G
22	DA	2239	G
22	DA	2241	A
22	DA	2242	G
22	DA	2243	U
22	DA	2268	A
22	DA	2269	G
22	DA	2273	A
22	DA	2278	A
22	DA	2280	G
22	DA	2283	C
22	DA	2287	A
22	DA	2297	A
22	DA	2305	U
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2311	A
22	DA	2312	U

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Mol	Chain	Res	Type
22	DA	2320	U
22	DA	2322	A
22	DA	2324	U
22	DA	2325	G
22	DA	2327	A
22	DA	2333	A
22	DA	2344	U
22	DA	2347	C
22	DA	2350	C
22	DA	2354	C
22	DA	2356	U
22	DA	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2402	U
22	DA	2403	C
22	DA	2406	A
22	DA	2407	A
22	DA	2410	G
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2441	U
22	DA	2446	G
22	DA	2447	G
22	DA	2448	A
22	DA	2449	U
22	DA	2455	G
22	DA	2476	A
22	DA	2484	G
22	DA	2491	U
22	DA	2498	C
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G

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Mol	Chain	Res	Type
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G
22	DA	2534	A
22	DA	2535	G
22	DA	2547	A
22	DA	2554	U
22	DA	2566	A
22	DA	2567	G
22	DA	2572	A
22	DA	2573	C
22	DA	2580	U
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2586	U
22	DA	2589	A
22	DA	2600	A
22	DA	2602	A
22	DA	2603	G
22	DA	2606	C
22	DA	2609	U
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2624	G
22	DA	2629	U
22	DA	2630	G
22	DA	2646	C
22	DA	2663	G
22	DA	2682	A
22	DA	2689	U
22	DA	2690	U
22	DA	2703	C
22	DA	2714	G
22	DA	2716	C
22	DA	2718	G
22	DA	2726	A
22	DA	2729	G
22	DA	2748	A
22	DA	2757	A
22	DA	2758	A

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Mol	Chain	Res	Type
22	DA	2764	A
22	DA	2765	A
22	DA	2768	U
22	DA	2770	G
22	DA	2778	A
22	DA	2791	G
22	DA	2794	C
22	DA	2798	U
22	DA	2799	A
22	DA	2818	U
22	DA	2820	A
22	DA	2826	A
22	DA	2833	U
22	DA	2835	A
22	DA	2861	U
22	DA	2867	G
22	DA	2872	A
22	DA	2873	A
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2891	U
22	DA	2894	G
22	DA	2901	C
23	DB	13	G
23	DB	15	A
23	DB	16	G
23	DB	22	U
23	DB	24	G
23	DB	25	U
23	DB	35	C
23	DB	36	C
23	DB	40	U
23	DB	44	G
23	DB	51	G
23	DB	54	G
23	DB	56	G
23	DB	58	A
23	DB	64	G
23	DB	66	A
23	DB	67	G
23	DB	73	A

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Mol	Chain	Res	Type
23	DB	88	C
23	DB	89	U
23	DB	90	C
23	DB	91	C
23	DB	99	A
23	DB	105	G
23	DB	109	A

All (83) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	115	G
1	AA	148	G
1	AA	209	U
1	AA	351	G
1	AA	353	A
1	AA	429	U
1	AA	653	U
1	AA	772	U
1	AA	793	U
1	AA	1031	C
1	AA	1049	U
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U
1	AA	1533	C
22	BA	70	G
22	BA	196	A
22	BA	199	A
22	BA	271	G
22	BA	310	A
22	BA	404	A
22	BA	479	A
22	BA	585	G
22	BA	764	A
22	BA	800	A
22	BA	960	A
22	BA	984	A
22	BA	1185	G
22	BA	1344	U
22	BA	1378	A
22	BA	1494	A

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Mol	Chain	Res	Type
22	BA	1606	C
22	BA	1610	A
22	BA	1738	G
22	BA	1757	A
22	BA	1875	G
22	BA	2062	A
22	BA	2127	G
22	BA	2211	A
22	BA	2282	G
22	BA	2286	G
22	BA	2324	U
22	BA	2326	C
22	BA	2425	A
22	BA	2873	A
1	CA	115	G
1	CA	209	U
1	CA	429	U
1	CA	559	A
1	CA	733	G
1	CA	793	U
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
22	DA	60	G
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	503	A
22	DA	614	A
22	DA	846	U
22	DA	982	C
22	DA	1240	U
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1606	C
22	DA	1738	G
22	DA	2109	U
22	DA	2127	G
22	DA	2146	C
22	DA	2162	G
22	DA	2211	A

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Mol	Chain	Res	Type
22	DA	2225	A
22	DA	2286	G
22	DA	2296	U
22	DA	2308	G
22	DA	2311	A
22	DA	2326	C
22	DA	2425	A
22	DA	2585	U
22	DA	2602	A
22	DA	2756	U

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
55	VIF	DA	3001	-	38,40,40	2.48	14 (36%)	47,55,55	2.40	18 (38%)
55	VIF	BA	3001	-	38,40,40	2.48	15 (39%)	47,55,55	2.20	14 (29%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	VIF	DA	3001	-	-	10/48/58/58	0/2/3/3
55	VIF	BA	3001	-	-	9/48/58/58	0/2/3/3

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3001	VIF	C15-N01	6.89	1.44	1.34
55	BA	3001	VIF	C15-N01	6.57	1.44	1.34
55	BA	3001	VIF	O01-C06	-5.01	1.37	1.44
55	DA	3001	VIF	O04-C22	-4.55	1.35	1.43
55	BA	3001	VIF	O01-C08	-4.48	1.24	1.34
55	BA	3001	VIF	C11-C09	-4.47	1.43	1.53
55	DA	3001	VIF	O01-C06	-4.37	1.38	1.44
55	DA	3001	VIF	C11-C09	-4.13	1.43	1.53
55	DA	3001	VIF	O01-C08	-4.10	1.25	1.34
55	BA	3001	VIF	C09-N01	-3.87	1.39	1.47
55	DA	3001	VIF	C23-N	-3.86	1.30	1.38
55	BA	3001	VIF	C03-N02	3.75	1.41	1.34
55	BA	3001	VIF	C23-N	-3.70	1.30	1.38
55	DA	3001	VIF	C27-N	3.32	1.32	1.29
55	DA	3001	VIF	C03-N02	3.18	1.40	1.34
55	BA	3001	VIF	C09-C08	-3.17	1.46	1.52
55	DA	3001	VIF	F-C07	-3.13	1.25	1.40
55	DA	3001	VIF	C09-N01	-3.09	1.40	1.47
55	BA	3001	VIF	F-C07	-2.94	1.26	1.40
55	BA	3001	VIF	O04-C22	-2.89	1.38	1.43
55	DA	3001	VIF	C26-C05	-2.78	1.46	1.53
55	BA	3001	VIF	C26-C05	-2.66	1.46	1.53
55	BA	3001	VIF	C27-N	2.57	1.32	1.29
55	DA	3001	VIF	C14-C22	-2.52	1.48	1.52
55	BA	3001	VIF	C13-N01	-2.43	1.42	1.47
55	DA	3001	VIF	C13-N01	-2.25	1.43	1.47
55	BA	3001	VIF	C14-C22	-2.13	1.49	1.52
55	BA	3001	VIF	O-C03	-2.10	1.20	1.24
55	DA	3001	VIF	C09-C08	-2.04	1.48	1.52

All (32) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	DA	3001	VIF	C02-C01-C03	-8.04	103.77	122.67
55	BA	3001	VIF	C02-C01-C03	-6.08	108.38	122.67
55	BA	3001	VIF	C14-C07-C04	-5.13	106.67	113.89
55	BA	3001	VIF	C18-C10-C20	-4.96	118.40	125.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	DA	3001	VIF	C06-O01-C08	4.84	125.80	117.76
55	BA	3001	VIF	C06-O01-C08	4.59	125.39	117.76
55	DA	3001	VIF	C18-C10-C20	-4.50	119.09	125.89
55	DA	3001	VIF	C14-C07-C04	-4.40	107.70	113.89
55	DA	3001	VIF	C17-N02-C03	-4.12	115.49	122.17
55	DA	3001	VIF	O01-C08-C09	3.89	118.88	110.80
55	BA	3001	VIF	C25-C23-N	3.68	111.89	109.15
55	BA	3001	VIF	O01-C08-C09	3.68	118.43	110.80
55	BA	3001	VIF	C18-C17-N02	-3.27	100.43	112.01
55	BA	3001	VIF	O04-C22-C21	3.18	115.89	109.03
55	DA	3001	VIF	O-C03-N02	-3.18	117.31	122.29
55	BA	3001	VIF	C14-C22-C21	-3.15	106.66	111.28
55	DA	3001	VIF	C25-C23-N	3.14	111.48	109.15
55	DA	3001	VIF	C26-C05-C02	-3.00	103.11	109.91
55	DA	3001	VIF	C10-C20-C21	-2.94	110.95	118.82
55	BA	3001	VIF	C26-C05-C02	-2.88	103.38	109.91
55	DA	3001	VIF	C19-C-C16	-2.77	102.97	110.58
55	DA	3001	VIF	C01-C03-N02	2.54	120.64	115.07
55	DA	3001	VIF	C26-C05-C06	2.53	115.56	111.11
55	DA	3001	VIF	O01-C08-O02	-2.45	119.53	123.95
55	DA	3001	VIF	C24-C20-C10	2.38	121.72	118.09
55	DA	3001	VIF	O01-C06-C05	2.25	110.83	107.12
55	DA	3001	VIF	O05-C27-N	-2.24	111.67	114.09
55	BA	3001	VIF	C11-C09-N01	2.23	106.28	103.02
55	BA	3001	VIF	C15-C23-N	-2.12	119.99	123.70
55	BA	3001	VIF	C24-C20-C10	2.09	121.28	118.09
55	BA	3001	VIF	C17-N02-C03	2.07	125.53	122.17
55	DA	3001	VIF	C07-C04-C27	2.07	116.30	110.53

There are no chirality outliers.

All (19) torsion outliers are listed below:

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

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

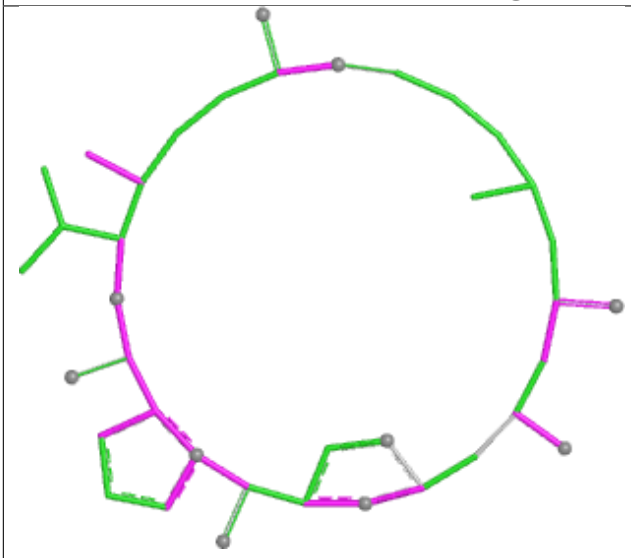
There are no ring outliers.

2 monomers are involved in 16 short contacts:

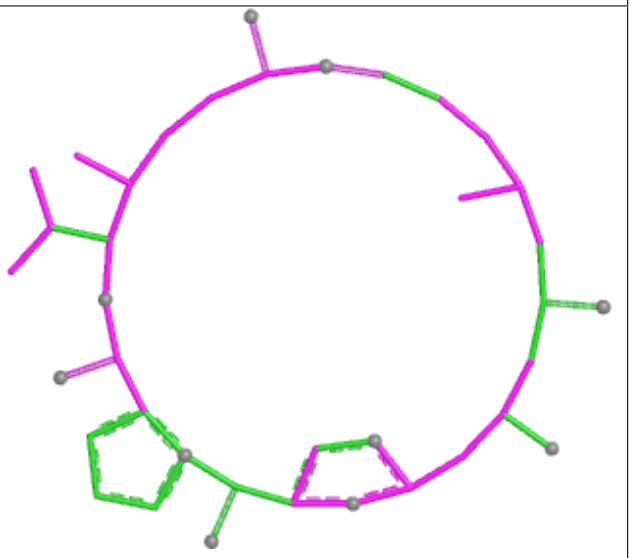
Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	DA	3001	VIF	11	0
55	BA	3001	VIF	5	0

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

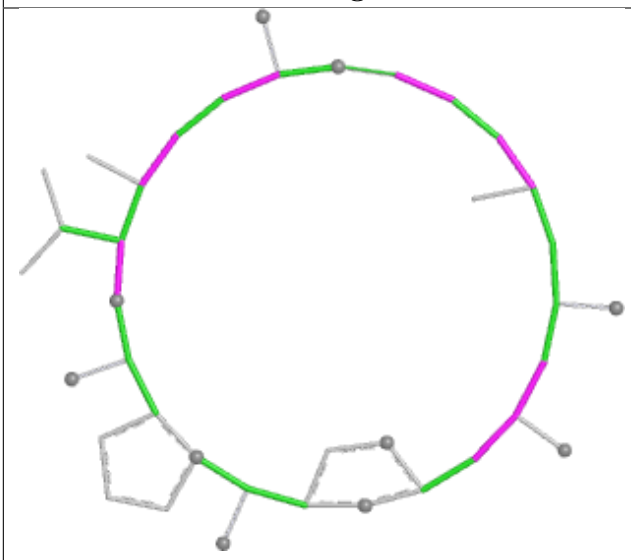
Ligand VIF DA 3001



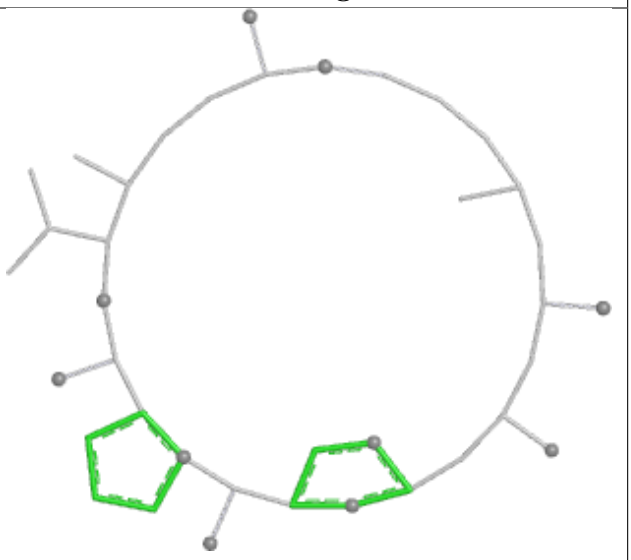
Bond lengths



Bond angles

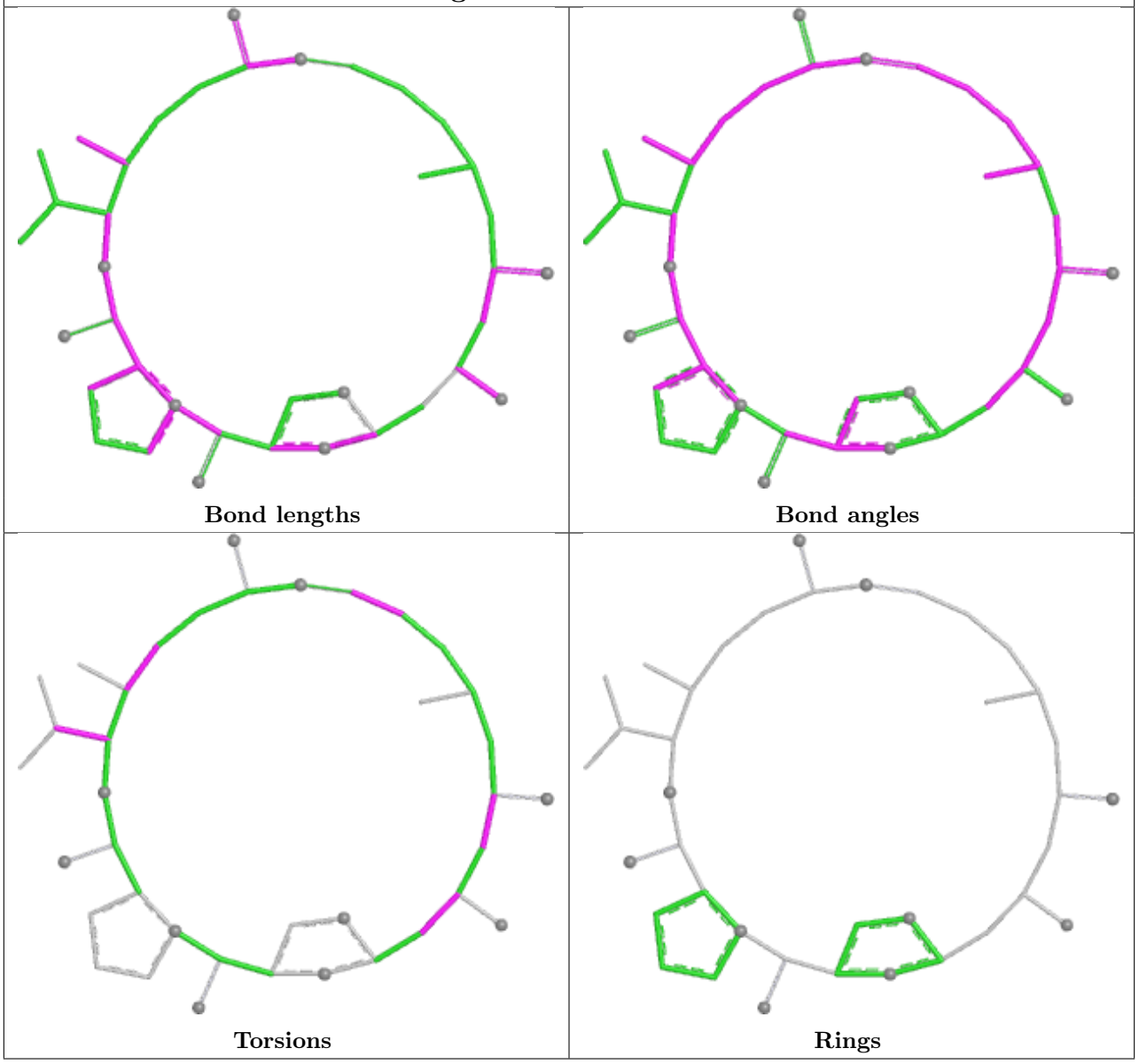


Torsions



Rings

Ligand VIF BA 3001



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1538/1539 (99%)	0.14	70 (4%) 37 29	13, 51, 135, 177	0
1	CA	1539/1539 (100%)	0.61	125 (8%) 18 15	27, 71, 143, 176	0
2	AB	218/218 (100%)	1.06	30 (13%) 6 5	40, 71, 99, 129	0
2	CB	218/218 (100%)	1.44	58 (26%) 1 1	57, 81, 107, 126	0
3	AC	206/206 (100%)	0.41	6 (2%) 53 45	36, 57, 81, 94	0
3	CC	206/206 (100%)	0.77	16 (7%) 19 16	53, 75, 93, 113	0
4	AD	205/205 (100%)	0.61	17 (8%) 17 14	33, 55, 79, 108	0
4	CD	205/205 (100%)	0.50	14 (6%) 23 18	21, 40, 74, 90	0
5	AE	150/150 (100%)	0.61	10 (6%) 24 19	28, 50, 82, 111	0
5	CE	150/150 (100%)	0.89	19 (12%) 8 6	33, 57, 84, 105	0
6	AF	100/100 (100%)	0.47	5 (5%) 34 27	33, 56, 75, 84	0
6	CF	100/100 (100%)	0.88	9 (9%) 15 13	47, 72, 95, 105	0
7	AG	151/151 (100%)	1.18	28 (18%) 3 3	49, 74, 98, 107	0
7	CG	151/151 (100%)	2.02	65 (43%) 0 0	77, 94, 106, 113	0
8	AH	129/129 (100%)	0.35	3 (2%) 61 52	29, 48, 71, 80	0
8	CH	129/129 (100%)	0.80	11 (8%) 16 14	47, 63, 82, 88	0
9	AI	127/127 (100%)	1.19	25 (19%) 3 2	45, 70, 95, 115	0
9	CI	127/127 (100%)	2.04	60 (47%) 0 0	68, 88, 106, 130	0
10	AJ	98/98 (100%)	1.08	13 (13%) 7 6	44, 64, 93, 121	0
10	CJ	98/98 (100%)	2.00	46 (46%) 0 0	68, 90, 109, 123	0
11	AK	117/117 (100%)	0.86	13 (11%) 10 9	27, 61, 87, 107	0
11	CK	117/117 (100%)	0.51	2 (1%) 69 61	37, 65, 83, 90	0
12	AL	123/123 (100%)	0.45	9 (7%) 21 17	24, 37, 71, 101	0
12	CL	123/123 (100%)	0.91	15 (12%) 8 7	38, 51, 79, 102	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/114 (100%)	0.80	8 (7%) 22 18	46, 67, 90, 104	0
13	CM	114/114 (100%)	2.29	63 (55%) 0 0	84, 100, 114, 118	0
14	AN	96/100 (96%)	1.15	20 (20%) 2 2	41, 58, 92, 107	0
14	CN	96/100 (96%)	1.78	36 (37%) 1 0	64, 88, 107, 118	0
15	AO	88/88 (100%)	0.65	10 (11%) 10 8	31, 50, 66, 98	0
15	CO	88/88 (100%)	0.68	7 (7%) 18 15	39, 62, 84, 105	0
16	AP	82/82 (100%)	0.67	7 (8%) 16 14	33, 45, 80, 103	0
16	CP	82/82 (100%)	1.20	14 (17%) 4 3	44, 62, 89, 105	0
17	AQ	80/80 (100%)	1.06	11 (13%) 6 5	29, 54, 83, 123	0
17	CQ	80/80 (100%)	1.27	18 (22%) 2 2	41, 70, 96, 108	0
18	AR	55/55 (100%)	0.52	5 (9%) 15 12	37, 51, 76, 113	0
18	CR	55/55 (100%)	0.60	5 (9%) 15 12	39, 54, 82, 112	0
19	AS	79/79 (100%)	1.04	13 (16%) 4 3	46, 67, 92, 97	0
19	CS	79/79 (100%)	2.33	42 (53%) 0 0	82, 100, 113, 125	0
20	AT	85/85 (100%)	0.81	7 (8%) 17 14	33, 48, 72, 115	0
20	CT	85/85 (100%)	1.48	24 (28%) 1 1	53, 69, 91, 97	0
21	AU	51/51 (100%)	1.89	17 (33%) 1 1	45, 71, 92, 105	0
21	CU	51/51 (100%)	1.80	14 (27%) 1 1	42, 69, 92, 107	0
22	BA	2897/2903 (99%)	-0.24	163 (5%) 30 23	2, 18, 128, 195	0
22	DA	2897/2903 (99%)	0.96	245 (8%) 16 14	44, 82, 142, 183	0
23	BB	119/119 (100%)	-0.51	0 100 100	5, 27, 53, 94	0
23	DB	118/119 (99%)	0.86	3 (2%) 58 48	68, 110, 132, 142	0
24	BC	271/271 (100%)	0.08	8 (2%) 52 43	6, 24, 44, 62	0
24	DC	271/271 (100%)	1.23	64 (23%) 2 2	40, 61, 75, 83	0
25	BD	209/209 (100%)	-0.22	2 (0%) 79 73	2, 14, 42, 69	0
25	DD	209/209 (100%)	1.17	32 (15%) 5 4	47, 65, 84, 98	0
26	BE	201/201 (100%)	-0.08	2 (0%) 79 73	4, 27, 55, 94	0
26	DE	201/201 (100%)	1.63	59 (29%) 1 1	38, 78, 97, 108	0
27	BF	177/177 (100%)	0.57	19 (10%) 11 9	23, 45, 85, 101	0
27	DF	177/177 (100%)	1.60	51 (28%) 1 1	80, 99, 114, 125	0
28	BG	176/176 (100%)	0.11	6 (3%) 48 39	21, 40, 66, 93	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	176/176 (100%)	1.63	54 (30%) 1 1	68, 87, 103, 118	0
29	BH	149/149 (100%)	2.56	91 (61%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	2.04	73 (48%) 0 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	2.52	77 (54%) 0 0	82, 105, 120, 135	0
30	DI	141/141 (100%)	2.81	98 (69%) 0 0	95, 111, 121, 124	0
31	BJ	142/142 (100%)	-0.18	5 (3%) 47 38	2, 11, 33, 52	0
31	DJ	142/142 (100%)	1.07	25 (17%) 4 3	50, 65, 81, 97	0
32	BK	122/122 (100%)	-0.28	2 (1%) 70 62	6, 18, 37, 68	0
32	DK	122/122 (100%)	0.92	14 (11%) 9 8	46, 61, 80, 94	0
33	BL	143/143 (100%)	0.10	1 (0%) 84 79	3, 24, 50, 81	0
33	DL	143/143 (100%)	1.70	48 (33%) 1 1	45, 74, 91, 111	0
34	BM	136/136 (100%)	-0.24	2 (1%) 72 64	3, 14, 33, 93	0
34	DM	136/136 (100%)	0.88	13 (9%) 13 11	44, 66, 82, 109	0
35	BN	120/120 (100%)	-0.22	1 (0%) 82 77	6, 13, 25, 68	0
35	DN	120/120 (100%)	1.61	40 (33%) 1 1	53, 71, 88, 111	0
36	BO	116/116 (100%)	0.01	1 (0%) 81 75	19, 29, 51, 57	0
36	DO	116/116 (100%)	1.46	31 (26%) 1 1	70, 88, 102, 113	0
37	BP	114/114 (100%)	-0.06	1 (0%) 81 75	11, 21, 49, 73	0
37	DP	114/114 (100%)	1.18	16 (14%) 6 5	54, 67, 84, 91	0
38	BQ	117/117 (100%)	-0.28	0 100 100	3, 8, 19, 51	0
38	DQ	117/117 (100%)	1.30	28 (23%) 2 2	51, 65, 79, 82	0
39	BR	103/103 (100%)	0.06	2 (1%) 66 58	3, 17, 36, 65	0
39	DR	103/103 (100%)	1.33	21 (20%) 3 2	52, 73, 87, 96	0
40	BS	110/110 (100%)	-0.34	1 (0%) 81 75	3, 8, 28, 88	0
40	DS	110/110 (100%)	1.53	33 (30%) 1 1	56, 70, 88, 96	0
41	BT	93/93 (100%)	0.41	8 (8%) 16 13	13, 30, 83, 101	0
41	DT	93/93 (100%)	2.03	40 (43%) 0 0	62, 81, 103, 109	0
42	BU	102/102 (100%)	0.15	2 (1%) 65 56	13, 31, 60, 95	0
42	DU	102/102 (100%)	2.25	55 (53%) 0 0	66, 84, 105, 111	0
43	BV	94/94 (100%)	-0.24	1 (1%) 78 71	10, 24, 47, 58	0
43	DV	94/94 (100%)	1.03	9 (9%) 13 11	65, 79, 94, 97	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BW	76/76 (100%)	-0.06	2 (2%) 57 48	9, 16, 38, 57	0
44	DW	75/76 (98%)	1.40	18 (24%) 2 1	51, 77, 88, 108	0
45	BX	77/77 (100%)	0.01	2 (2%) 57 48	10, 26, 52, 79	0
45	DX	77/77 (100%)	1.63	26 (33%) 1 1	47, 67, 84, 89	0
46	BY	63/63 (100%)	0.49	4 (6%) 26 20	20, 44, 71, 96	0
46	DY	63/63 (100%)	2.08	30 (47%) 0 0	68, 88, 96, 103	0
47	BZ	58/58 (100%)	-0.13	0 100 100	6, 11, 36, 41	0
47	DZ	58/58 (100%)	1.12	7 (12%) 8 7	52, 70, 83, 88	0
48	B0	56/56 (100%)	-0.28	0 100 100	3, 14, 40, 75	0
48	D0	56/56 (100%)	1.61	16 (28%) 1 1	51, 71, 91, 105	0
49	B1	50/50 (100%)	0.15	1 (2%) 65 56	20, 32, 58, 92	0
49	D1	50/50 (100%)	1.65	15 (30%) 1 1	64, 80, 92, 104	0
50	B2	46/46 (100%)	-0.14	1 (2%) 62 53	7, 13, 20, 95	0
50	D2	46/46 (100%)	2.01	16 (34%) 1 1	51, 66, 79, 99	0
51	B3	64/64 (100%)	-0.15	0 100 100	9, 15, 25, 33	0
51	D3	64/64 (100%)	2.33	35 (54%) 0 0	54, 68, 79, 83	0
52	B4	38/38 (100%)	0.10	1 (2%) 57 48	15, 22, 37, 55	0
52	D4	38/38 (100%)	1.62	14 (36%) 1 0	59, 72, 84, 97	0
53	B5	191/228 (83%)	2.33	120 (62%) 0 0	78, 108, 120, 133	0
All	All	20734/20794 (99%)	0.70	2745 (13%) 7 6	2, 62, 117, 195	0

All (2745) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	CD	25	VAL	11.0
30	BI	53	LEU	10.6
50	D2	46	LYS	9.5
20	AT	68	HIS	8.5
1	AA	1017	U	7.8
21	AU	38	TYR	7.6
7	CG	62	PHE	7.5
30	DI	2	ALA	7.4
7	AG	88	PRO	7.4
7	AG	147	ALA	7.3
30	BI	115	ALA	7.2

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Mol	Chain	Res	Type	RSRZ
22	BA	2189	U	7.2
30	DI	11	LEU	7.1
22	BA	2184	A	7.1
22	BA	2100	G	7.0
22	BA	2158	A	7.0
30	DI	53	LEU	7.0
10	CJ	74	VAL	6.9
22	BA	1926	U	6.9
22	BA	2190	G	6.9
12	AL	25	GLU	6.9
30	DI	78	VAL	6.8
21	CU	38	TYR	6.8
22	BA	2145	C	6.8
1	AA	994	A	6.7
9	CI	64	TYR	6.6
22	BA	2193	G	6.6
30	DI	4	LYS	6.5
49	D1	36	LEU	6.5
29	BH	119	ASN	6.5
9	CI	20	PHE	6.4
22	BA	2159	G	6.4
29	BH	120	GLY	6.3
1	AA	1535	C	6.3
22	DA	2150	C	6.3
30	BI	118	THR	6.3
22	BA	2104	C	6.3
22	BA	715	A	6.3
22	BA	2144	G	6.3
22	BA	2135	A	6.2
17	AQ	20	SER	6.2
42	DU	58	ILE	6.2
29	BH	110	VAL	6.1
29	BH	123	ARG	6.1
29	BH	121	VAL	6.1
20	AT	4	ILE	6.1
19	CS	74	PHE	6.0
22	BA	2175	C	6.0
2	CB	151	ILE	6.0
1	AA	1018	G	6.0
22	BA	2136	G	6.0
50	B2	46	LYS	6.0
21	AU	32	VAL	5.9

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Mol	Chain	Res	Type	RSRZ
22	BA	2140	G	5.9
30	DI	54	PRO	5.9
29	DH	124	THR	5.9
12	CL	14	ARG	5.9
10	AJ	102	LEU	5.8
19	CS	10	PHE	5.8
2	AB	157	LEU	5.8
29	BH	122	LEU	5.8
48	D0	27	SER	5.8
1	AA	121	U	5.8
22	BA	2112	G	5.7
21	CU	35	ARG	5.7
41	DT	36	LYS	5.7
22	BA	2174	C	5.7
19	CS	37	ARG	5.7
22	BA	2150	C	5.7
30	BI	79	LEU	5.6
53	B5	216	THR	5.6
18	AR	20	GLU	5.6
1	AA	1538	C	5.6
34	DM	56	ALA	5.6
22	DA	2172	U	5.6
4	CD	24	GLY	5.6
11	CK	126	LYS	5.6
22	BA	2142	A	5.6
22	BA	2143	C	5.6
24	DC	238	ARG	5.6
17	AQ	83	VAL	5.6
14	CN	2	ALA	5.6
22	BA	2192	U	5.5
21	CU	37	PHE	5.5
29	BH	96	THR	5.5
19	CS	8	GLY	5.5
53	B5	35	THR	5.5
30	DI	5	VAL	5.5
1	AA	990	C	5.5
7	AG	5	ARG	5.5
30	DI	68	THR	5.4
30	DI	10	LYS	5.4
41	DT	76	ARG	5.4
1	AA	1016	A	5.4
22	BA	2113	U	5.4

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Mol	Chain	Res	Type	RSRZ
8	AH	2	SER	5.4
13	CM	98	ARG	5.4
21	CU	47	ARG	5.4
1	CA	994	A	5.4
7	CG	39	ALA	5.3
29	DH	123	ARG	5.3
14	AN	21	PHE	5.3
22	BA	2185	U	5.3
41	DT	12	ARG	5.3
22	DA	2149	U	5.3
29	BH	115	VAL	5.3
1	CA	1535	C	5.3
22	BA	2160	C	5.3
27	DF	82	GLY	5.3
1	AA	993	G	5.3
42	DU	80	ALA	5.2
51	D3	37	ALA	5.2
22	BA	2138	G	5.2
22	BA	2172	U	5.2
22	BA	2127	G	5.2
22	BA	2152	G	5.1
30	DI	28	LEU	5.1
33	DL	92	LEU	5.1
29	DH	92	GLY	5.1
22	BA	2102	G	5.1
51	D3	48	ALA	5.1
29	BH	118	PRO	5.1
22	BA	1918	A	5.1
29	BH	146	VAL	5.1
1	AA	995	C	5.1
30	DI	79	LEU	5.1
22	BA	1921	G	5.0
22	BA	1922	G	5.0
22	BA	1919	A	5.0
28	DG	157	TYR	5.0
30	DI	82	LYS	5.0
40	DS	84	ARG	5.0
29	DH	142	VAL	5.0
29	BH	97	ARG	5.0
38	DQ	11	ARG	5.0
22	DA	333	G	5.0
7	CG	66	LEU	5.0

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Mol	Chain	Res	Type	RSRZ
30	BI	80	LEU	5.0
1	AA	1534	A	5.0
30	BI	14	ALA	5.0
1	CA	1536	C	4.9
22	BA	2130	U	4.9
22	BA	2183	A	4.9
28	DG	45	HIS	4.9
1	CA	1539	C	4.9
22	BA	2114	A	4.9
30	DI	38	PHE	4.9
22	BA	2098	U	4.9
20	CT	4	ILE	4.9
29	DH	125	THR	4.9
22	BA	1094	U	4.9
29	BH	130	VAL	4.8
22	BA	2103	C	4.8
22	BA	2191	A	4.8
49	B1	53	LYS	4.8
28	DG	4	VAL	4.8
25	DD	128	ARG	4.8
29	BH	91	PHE	4.8
13	CM	84	GLY	4.8
29	BH	67	ALA	4.8
22	BA	2099	U	4.8
24	DC	237	GLY	4.8
17	AQ	5	ILE	4.7
22	BA	2101	A	4.7
30	BI	11	LEU	4.7
30	BI	75	PRO	4.7
7	CG	27	VAL	4.7
19	CS	12	ASP	4.7
33	DL	34	GLY	4.7
31	DJ	97	PRO	4.7
21	AU	14	VAL	4.7
3	CC	192	THR	4.7
13	CM	99	GLY	4.7
30	DI	58	VAL	4.7
16	CP	3	THR	4.7
45	DX	49	LEU	4.7
9	CI	32	GLN	4.7
37	DP	102	GLU	4.7
29	BH	94	ILE	4.7

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Mol	Chain	Res	Type	RSRZ
41	DT	34	VAL	4.7
42	DU	13	VAL	4.7
2	AB	154	MET	4.6
1	AA	1536	C	4.6
11	AK	126	LYS	4.6
17	AQ	6	ARG	4.6
4	CD	152	GLN	4.6
7	CG	6	VAL	4.6
29	BH	147	VAL	4.6
51	D3	61	CYS	4.6
41	DT	73	ARG	4.6
2	AB	156	GLY	4.6
24	DC	27	GLY	4.6
36	DO	58	ILE	4.6
26	BE	7	ASP	4.6
22	BA	2123	G	4.6
30	BI	23	PRO	4.6
30	DI	3	LYS	4.6
19	CS	66	MET	4.5
1	AA	1019	A	4.5
22	BA	2176	A	4.5
5	AE	65	GLU	4.5
21	AU	28	VAL	4.5
22	BA	885	C	4.5
24	DC	18	LYS	4.5
19	AS	9	PRO	4.5
4	AD	151	LYS	4.5
9	CI	129	LYS	4.5
30	DI	13	VAL	4.5
38	DQ	15	LYS	4.5
1	AA	1493	A	4.5
22	BA	1925	C	4.5
20	AT	36	TYR	4.5
27	DF	156	ILE	4.5
42	DU	26	LYS	4.5
22	BA	2149	U	4.5
22	BA	2182	U	4.5
22	BA	2188	U	4.5
13	CM	89	LEU	4.5
7	CG	5	ARG	4.5
30	BI	78	VAL	4.5
30	DI	70	VAL	4.5

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Mol	Chain	Res	Type	RSRZ
14	CN	21	PHE	4.5
41	DT	11	LEU	4.5
30	BI	81	LYS	4.4
29	DH	84	ALA	4.4
30	BI	52	GLY	4.4
30	BI	12	GLN	4.4
1	AA	1030	U	4.4
22	BA	1093	G	4.4
35	DN	28	LEU	4.4
51	D3	57	LEU	4.4
46	DY	47	ARG	4.4
4	AD	28	ILE	4.4
10	CJ	41	PRO	4.4
13	CM	106	ALA	4.4
22	DA	2585	U	4.4
10	CJ	76	ILE	4.4
22	BA	549	G	4.4
30	BI	15	ALA	4.4
29	DH	85	GLY	4.4
13	CM	80	LEU	4.4
9	AI	43	THR	4.4
2	AB	155	GLY	4.4
36	DO	64	TYR	4.4
2	CB	135	LEU	4.4
38	DQ	22	LYS	4.4
30	BI	13	VAL	4.3
30	DI	140	VAL	4.3
7	CG	103	TRP	4.3
12	CL	25	GLU	4.3
22	BA	2157	G	4.3
22	DA	2126	A	4.3
2	CB	164	ILE	4.3
22	DA	2000	C	4.3
29	BH	68	ARG	4.3
41	BT	69	ARG	4.3
13	CM	96	PRO	4.3
30	DI	55	ILE	4.3
30	DI	74	PRO	4.3
29	BH	69	ALA	4.3
2	CB	132	LYS	4.3
22	BA	2141	G	4.3
22	BA	2885	G	4.3

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Mol	Chain	Res	Type	RSRZ
29	DH	93	SER	4.3
13	CM	109	ARG	4.3
16	AP	80	LYS	4.3
22	BA	2147	A	4.2
22	BA	2125	G	4.2
26	DE	73	ILE	4.2
22	BA	2146	C	4.2
5	AE	159	LYS	4.2
13	CM	97	VAL	4.2
19	CS	76	PRO	4.2
3	AC	37	PHE	4.2
51	D3	24	HIS	4.2
53	B5	28	ARG	4.2
7	AG	75	VAL	4.2
29	BH	117	LEU	4.2
29	DH	90	LEU	4.2
30	DI	27	ALA	4.2
24	DC	254	GLY	4.2
30	DI	67	PHE	4.2
13	CM	86	TYR	4.2
41	BT	70	HIS	4.2
4	AD	25	VAL	4.2
29	BH	144	VAL	4.2
30	BI	86	ILE	4.2
14	CN	56	SER	4.2
22	BA	2139	U	4.2
28	DG	2	SER	4.2
22	BA	1847	A	4.2
28	DG	9	VAL	4.2
29	DH	144	VAL	4.2
40	DS	46	LEU	4.2
50	D2	42	LEU	4.2
52	D4	10	LEU	4.2
30	DI	14	ALA	4.2
24	DC	12	GLY	4.2
49	D1	53	LYS	4.1
26	DE	88	ARG	4.1
20	CT	67	ILE	4.1
24	DC	49	ILE	4.1
41	BT	2	ILE	4.1
53	B5	23	ILE	4.1
13	CM	101	ARG	4.1

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Mol	Chain	Res	Type	RSRZ
46	BY	23	ARG	4.1
22	DA	1092	C	4.1
3	AC	193	TYR	4.1
53	B5	87	ALA	4.1
38	DQ	29	SER	4.1
26	DE	42	GLY	4.1
28	DG	6	LYS	4.1
17	AQ	7	THR	4.1
19	CS	39	THR	4.1
25	DD	25	THR	4.1
3	CC	193	TYR	4.1
14	AN	36	ALA	4.1
16	AP	81	ALA	4.1
22	BA	2153	C	4.1
22	BA	2402	U	4.1
31	DJ	1	MET	4.1
26	DE	94	GLN	4.1
50	D2	33	ARG	4.1
10	CJ	102	LEU	4.1
29	DH	12	LEU	4.1
7	AG	73	VAL	4.1
10	AJ	74	VAL	4.1
14	CN	34	VAL	4.1
30	DI	86	ILE	4.1
42	DU	12	ILE	4.1
22	BA	138	U	4.1
22	DA	2690	U	4.1
22	DA	1537	G	4.1
53	B5	218	THR	4.0
7	AG	69	VAL	4.0
29	BH	74	ALA	4.0
9	CI	68	LYS	4.0
2	CB	186	ILE	4.0
9	CI	39	PHE	4.0
26	DE	96	VAL	4.0
42	DU	67	VAL	4.0
30	BI	54	PRO	4.0
22	DA	1093	G	4.0
19	CS	49	ILE	4.0
30	DI	129	ILE	4.0
37	DP	110	ILE	4.0
18	CR	20	GLU	4.0

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Mol	Chain	Res	Type	RSRZ
21	CU	45	ARG	4.0
13	CM	63	PHE	4.0
10	CJ	46	LYS	4.0
42	DU	47	LYS	4.0
30	DI	133	ALA	4.0
36	DO	57	ALA	4.0
13	CM	93	ARG	4.0
1	AA	1020	G	4.0
1	CA	1032	G	4.0
22	BA	2156	G	4.0
7	CG	73	VAL	4.0
31	DJ	111	LYS	4.0
41	DT	15	HIS	4.0
2	CB	136	MET	4.0
14	CN	57	PRO	4.0
22	DA	331	C	4.0
1	AA	1492	A	4.0
19	CS	71	LEU	4.0
24	DC	251	GLN	4.0
49	D1	10	LYS	4.0
43	DV	94	ALA	3.9
7	AG	109	ARG	3.9
7	CG	112	GLY	3.9
33	DL	28	GLY	3.9
26	DE	158	PHE	3.9
13	CM	103	LYS	3.9
26	DE	34	ALA	3.9
22	DA	75	G	3.9
31	DJ	37	ARG	3.9
51	D3	14	PHE	3.9
19	CS	15	LEU	3.9
33	DL	27	LEU	3.9
53	B5	142	LYS	3.9
22	BA	2164	C	3.9
22	DA	2300	C	3.9
6	CF	79	ARG	3.9
7	CG	4	ARG	3.9
7	CG	72	THR	3.9
24	BC	238	ARG	3.9
26	DE	135	ALA	3.9
30	BI	114	ALA	3.9
39	DR	103	ALA	3.9

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Mol	Chain	Res	Type	RSRZ
45	DX	11	ARG	3.9
1	CA	987	G	3.9
45	DX	22	LEU	3.9
2	CB	213	TYR	3.9
53	B5	120	VAL	3.9
9	CI	44	ALA	3.9
40	DS	99	ARG	3.9
1	AA	78	A	3.9
1	AA	1021	A	3.9
22	BA	2163	A	3.9
29	DH	88	GLY	3.9
42	DU	20	GLY	3.9
7	CG	23	LEU	3.9
26	DE	153	LEU	3.9
30	BI	38	PHE	3.9
40	DS	83	LYS	3.9
53	B5	137	LEU	3.9
9	AI	123	ARG	3.9
30	DI	59	ILE	3.9
45	DX	50	ARG	3.9
29	BH	81	ALA	3.9
35	DN	105	GLY	3.8
9	AI	54	LEU	3.8
9	CI	54	LEU	3.8
51	D3	49	MET	3.8
9	CI	111	VAL	3.8
9	CI	31	ASN	3.8
24	DC	64	ILE	3.8
26	DE	119	ILE	3.8
29	BH	56	ALA	3.8
22	BA	1171	G	3.8
22	BA	2133	G	3.8
52	D4	3	VAL	3.8
30	DI	35	ILE	3.8
30	BI	83	ALA	3.8
14	CN	48	LEU	3.8
33	DL	19	LEU	3.8
25	DD	135	GLY	3.8
30	DI	42	PHE	3.8
35	DN	47	VAL	3.8
46	DY	29	ARG	3.8
7	CG	12	ILE	3.8

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Mol	Chain	Res	Type	RSRZ
30	BI	20	PRO	3.8
30	DI	83	ALA	3.8
29	BH	58	LEU	3.8
29	BH	90	LEU	3.8
33	DL	61	LEU	3.8
24	DC	235	GLY	3.8
46	DY	59	GLU	3.8
53	B5	44	VAL	3.8
1	AA	1031	C	3.8
10	CJ	39	PRO	3.8
1	AA	991	U	3.8
4	AD	27	ALA	3.8
9	CI	7	TYR	3.8
30	DI	7	ALA	3.8
29	DH	15	LEU	3.8
46	DY	56	LEU	3.8
2	CB	32	PHE	3.8
2	CB	92	VAL	3.7
15	AO	89	ARG	3.7
30	BI	113	LYS	3.7
45	BX	77	LYS	3.7
19	AS	14	HIS	3.7
30	BI	22	PRO	3.7
51	D3	46	PRO	3.7
1	AA	989	U	3.7
1	CA	1317	C	3.7
22	BA	884	U	3.7
29	BH	11	ASN	3.7
1	CA	1033	G	3.7
7	CG	151	PHE	3.7
11	AK	19	GLY	3.7
42	DU	78	GLY	3.7
9	CI	104	VAL	3.7
24	BC	272	SER	3.7
29	BH	108	VAL	3.7
4	CD	28	ILE	3.7
45	DX	77	LYS	3.7
53	B5	52	PRO	3.7
51	D3	26	HIS	3.7
36	DO	2	ASP	3.7
2	CB	129	LEU	3.7
7	CG	150	ALA	3.7

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Mol	Chain	Res	Type	RSRZ
27	DF	117	LEU	3.7
29	BH	52	ALA	3.7
46	DY	61	ALA	3.7
10	CJ	45	ARG	3.7
22	BA	2168	G	3.7
22	DA	329	G	3.7
22	DA	1382	G	3.7
31	DJ	120	ARG	3.7
1	AA	412	A	3.7
13	CM	110	LYS	3.7
22	BA	2134	A	3.7
13	CM	4	ILE	3.7
38	DQ	8	VAL	3.7
35	DN	25	ALA	3.7
35	DN	83	LEU	3.7
2	CB	13	GLY	3.7
53	B5	148	PHE	3.7
29	BH	60	GLU	3.7
30	DI	98	VAL	3.7
53	B5	50	ILE	3.7
1	AA	988	G	3.7
10	CJ	42	LEU	3.7
29	BH	148	ALA	3.7
33	DL	72	ALA	3.7
2	CB	88	ASP	3.7
5	AE	31	PHE	3.7
13	CM	85	CYS	3.7
53	B5	224	ARG	3.7
10	CJ	59	LYS	3.7
7	CG	38	THR	3.7
22	DA	2151	U	3.7
10	CJ	71	LEU	3.6
22	BA	2177	C	3.6
53	B5	76	LEU	3.6
2	CB	104	TRP	3.6
7	AG	151	PHE	3.6
27	DF	72	LYS	3.6
12	CL	38	TYR	3.6
46	DY	13	GLU	3.6
30	DI	24	VAL	3.6
9	CI	66	THR	3.6
30	DI	118	THR	3.6

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Mol	Chain	Res	Type	RSRZ
22	BA	139	U	3.6
19	CS	5	LEU	3.6
47	DZ	29	LEU	3.6
4	AD	36	GLN	3.6
29	BH	131	SER	3.6
22	DA	76	C	3.6
13	CM	113	ARG	3.6
31	DJ	119	PHE	3.6
9	CI	21	ILE	3.6
1	CA	993	G	3.6
22	BA	2121	G	3.6
22	BA	2124	G	3.6
53	B5	124	VAL	3.6
1	CA	632	U	3.6
10	AJ	87	LEU	3.6
30	DI	75	PRO	3.6
42	DU	71	ALA	3.6
24	DC	265	LYS	3.6
52	D4	15	LYS	3.6
53	B5	180	SER	3.6
21	AU	13	ASP	3.6
22	BA	2165	C	3.6
22	BA	716	A	3.6
22	BA	2117	A	3.6
29	DH	99	ILE	3.6
31	DJ	81	ILE	3.6
52	D4	23	ILE	3.6
24	DC	245	VAL	3.6
24	DC	239	ASN	3.6
41	DT	32	LEU	3.6
22	BA	2148	G	3.6
22	DA	1217	U	3.6
29	BH	92	GLY	3.6
10	CJ	40	ILE	3.6
2	CB	107	VAL	3.6
14	AN	42	TRP	3.6
29	DH	147	VAL	3.6
22	BA	2129	C	3.6
22	BA	2178	C	3.6
1	AA	1014	A	3.6
22	BA	1913	A	3.6
22	DA	1205	A	3.6

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Mol	Chain	Res	Type	RSRZ
46	DY	19	LEU	3.6
53	B5	217	THR	3.6
30	DI	26	PRO	3.6
12	AL	15	LYS	3.5
19	CS	14	HIS	3.5
24	DC	242	LYS	3.5
19	AS	55	ARG	3.5
21	AU	17	ARG	3.5
51	D3	40	ARG	3.5
8	CH	2	SER	3.5
31	DJ	73	VAL	3.5
46	DY	46	VAL	3.5
9	AI	46	MET	3.5
36	DO	4	LYS	3.5
37	DP	111	LYS	3.5
22	BA	1912	A	3.5
29	DH	128	HIS	3.5
20	CT	63	ALA	3.5
53	B5	77	ALA	3.5
30	DI	69	PHE	3.5
2	CB	155	GLY	3.5
42	DU	103	ILE	3.5
30	BI	17	MET	3.5
41	DT	68	LYS	3.5
14	CN	20	TYR	3.5
29	DH	96	THR	3.5
46	DY	16	THR	3.5
29	BH	111	ALA	3.5
27	DF	67	ILE	3.5
33	DL	11	GLY	3.5
26	DE	33	VAL	3.5
8	CH	3	MET	3.5
46	DY	10	SER	3.5
19	CS	18	LYS	3.5
25	DD	154	LYS	3.5
25	DD	157	LYS	3.5
53	B5	37	LYS	3.5
30	BI	116	ASP	3.5
2	CB	139	ARG	3.5
9	CI	90	TYR	3.5
18	AR	73	ARG	3.5
30	BI	73	THR	3.5

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Mol	Chain	Res	Type	RSRZ
3	CC	190	HIS	3.5
30	DI	109	ILE	3.5
22	DA	267	C	3.5
22	DA	345	A	3.5
29	BH	88	GLY	3.5
42	DU	25	VAL	3.5
7	CG	118	LEU	3.5
52	D4	9	LYS	3.5
9	CI	119	ARG	3.5
2	AB	88	ASP	3.5
26	DE	168	ASP	3.5
41	DT	60	THR	3.5
29	BH	10	ALA	3.5
7	CG	7	ILE	3.4
29	DH	47	PHE	3.4
30	BI	55	ILE	3.4
51	D3	32	ILE	3.4
10	AJ	59	LYS	3.4
14	CN	11	VAL	3.4
21	CU	14	VAL	3.4
30	BI	39	CYS	3.4
30	DI	106	LEU	3.4
40	DS	98	LYS	3.4
1	CA	532	A	3.4
22	BA	654	A	3.4
22	DA	1808	A	3.4
22	BA	1920	C	3.4
22	DA	1606	C	3.4
10	CJ	48	ARG	3.4
14	AN	44	ALA	3.4
29	DH	100	ALA	3.4
48	D0	21	ALA	3.4
53	B5	187	ALA	3.4
33	DL	100	ILE	3.4
24	DC	240	PHE	3.4
35	DN	21	PHE	3.4
24	DC	220	VAL	3.4
28	DG	21	GLY	3.4
38	DQ	39	VAL	3.4
40	DS	36	LEU	3.4
42	DU	14	LEU	3.4
50	D2	10	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
13	CM	87	ARG	3.4
22	BA	2115	G	3.4
22	BA	2186	G	3.4
22	BA	1098	A	3.4
22	DA	505	A	3.4
20	CT	38	ALA	3.4
30	DI	120	ALA	3.4
37	DP	108	ALA	3.4
6	AF	92	THR	3.4
42	DU	15	THR	3.4
42	DU	77	THR	3.4
2	CB	128	LYS	3.4
9	CI	120	LYS	3.4
28	DG	52	PHE	3.4
30	DI	81	LYS	3.4
51	D3	25	LYS	3.4
13	CM	69	LEU	3.4
13	CM	95	LEU	3.4
53	B5	97	GLY	3.4
29	BH	70	GLU	3.4
19	CS	3	ARG	3.4
30	BI	134	ARG	3.4
22	BA	1923	U	3.4
1	CA	1305	G	3.4
22	BA	2120	G	3.4
22	BA	2162	G	3.4
25	DD	31	ALA	3.4
29	BH	99	ILE	3.4
53	B5	208	THR	3.4
1	CA	1538	C	3.4
22	BA	1092	C	3.4
28	DG	172	LYS	3.4
51	D3	52	LYS	3.4
53	B5	94	TYR	3.4
10	CJ	58	ASN	3.4
2	AB	221	VAL	3.4
6	CF	54	LEU	3.4
15	AO	57	LEU	3.4
32	BK	35	VAL	3.4
53	B5	20	VAL	3.4
26	DE	49	ARG	3.4
1	CA	121	U	3.4

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Mol	Chain	Res	Type	RSRZ
2	AB	131	LYS	3.4
45	DX	26	LYS	3.4
2	CB	90	PHE	3.4
7	CG	26	PHE	3.4
41	BT	93	LEU	3.3
1	AA	844	G	3.3
20	CT	3	ASN	3.3
30	BI	5	VAL	3.3
33	DL	49	GLY	3.3
38	DQ	7	GLY	3.3
53	B5	134	PRO	3.3
53	B5	202	PRO	3.3
19	CS	7	LYS	3.3
31	DJ	106	LYS	3.3
9	CI	30	ILE	3.3
17	CQ	25	ILE	3.3
45	DX	20	HIS	3.3
14	CN	101	TRP	3.3
19	CS	41	PHE	3.3
22	BA	2132	U	3.3
17	AQ	48	ASP	3.3
29	BH	98	ASP	3.3
8	CH	122	GLY	3.3
39	DR	50	GLY	3.3
53	B5	166	ASN	3.3
22	BA	2171	A	3.3
22	DA	332	A	3.3
22	DA	504	A	3.3
22	DA	1278	C	3.3
30	BI	74	PRO	3.3
13	CM	13	LYS	3.3
20	CT	33	LYS	3.3
24	DC	5	LYS	3.3
41	DT	33	LYS	3.3
2	AB	151	ILE	3.3
24	DC	106	ALA	3.3
30	BI	49	ILE	3.3
5	AE	11	LEU	3.3
9	CI	63	LEU	3.3
13	AM	63	PHE	3.3
29	DH	117	LEU	3.3
42	DU	85	PHE	3.3

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Mol	Chain	Res	Type	RSRZ
9	CI	43	THR	3.3
19	CS	34	TRP	3.3
6	AF	91	ARG	3.3
9	CI	130	ARG	3.3
22	BA	2122	U	3.3
45	DX	15	GLY	3.3
21	CU	44	GLU	3.3
7	CG	42	ILE	3.3
26	DE	128	ALA	3.3
30	BI	27	ALA	3.3
30	DI	44	ALA	3.3
3	CC	37	PHE	3.3
14	CN	46	LEU	3.3
53	B5	193	PHE	3.3
30	BI	24	VAL	3.3
40	DS	95	ARG	3.3
41	DT	10	VAL	3.3
53	B5	22	THR	3.3
29	BH	93	SER	3.3
29	BH	107	GLY	3.3
32	DK	68	GLY	3.3
1	CA	209	U	3.3
22	BA	2166	U	3.3
49	D1	21	TYR	3.3
24	DC	26	LYS	3.3
26	DE	98	LYS	3.3
40	DS	73	LYS	3.3
44	DW	24	LYS	3.3
42	DU	55	PRO	3.3
10	CJ	100	ILE	3.3
13	CM	7	ILE	3.3
27	BF	154	ILE	3.3
35	DN	97	ILE	3.3
12	CL	2	ALA	3.3
37	DP	95	ALA	3.3
28	DG	105	LEU	3.3
42	DU	41	LEU	3.3
35	DN	102	PHE	3.3
21	AU	35	ARG	3.3
9	CI	9	THR	3.3
26	DE	131	THR	3.3
1	CA	1020	G	3.3

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Mol	Chain	Res	Type	RSRZ
1	CA	1331	G	3.3
53	B5	122	GLY	3.3
9	CI	128	SER	3.3
14	CN	32	SER	3.3
53	B5	55	SER	3.3
22	BA	2111	U	3.2
46	DY	44	LYS	3.2
48	D0	20	ASP	3.2
51	D3	23	LYS	3.2
29	DH	118	PRO	3.2
30	DI	22	PRO	3.2
10	CJ	67	ILE	3.2
48	D0	55	ILE	3.2
16	AP	22	ALA	3.2
26	DE	86	ALA	3.2
28	DG	136	ALA	3.2
29	BH	49	ALA	3.2
29	BH	63	ALA	3.2
29	DH	140	ALA	3.2
53	B5	79	ALA	3.2
27	DF	66	LEU	3.2
30	BI	106	LEU	3.2
53	B5	69	LEU	3.2
7	AG	4	ARG	3.2
22	BA	2169	A	3.2
24	DC	30	PHE	3.2
26	DE	67	ARG	3.2
48	D0	52	ARG	3.2
53	B5	38	PHE	3.2
42	DU	59	VAL	3.2
22	BA	2161	C	3.2
30	BI	16	GLY	3.2
9	CI	100	LYS	3.2
29	BH	83	LYS	3.2
27	DF	83	TYR	3.2
53	B5	126	SER	3.2
53	B5	110	ASP	3.2
7	CG	71	PRO	3.2
22	BA	2128	G	3.2
30	BI	26	PRO	3.2
30	BI	56	PRO	3.2
33	DL	8	PRO	3.2

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Mol	Chain	Res	Type	RSRZ
43	DV	84	PRO	3.2
27	DF	44	ILE	3.2
28	DG	26	ILE	3.2
41	DT	43	ILE	3.2
12	AL	124	ALA	3.2
13	CM	34	LEU	3.2
21	AU	16	LEU	3.2
36	BO	50	ALA	3.2
41	DT	61	LEU	3.2
44	DW	63	ALA	3.2
16	AP	14	ARG	3.2
2	AB	90	PHE	3.2
7	CG	135	VAL	3.2
30	DI	139	VAL	3.2
19	AS	56	GLN	3.2
22	DA	2406	A	3.2
7	AG	38	THR	3.2
8	CH	123	GLY	3.2
30	BI	71	THR	3.2
42	DU	60	GLU	3.2
1	AA	1027	C	3.2
9	CI	38	TYR	3.2
22	DA	268	C	3.2
36	DO	32	PRO	3.2
30	DI	122	ILE	3.2
22	BA	1058	U	3.2
7	AG	142	HIS	3.2
13	CM	29	ARG	3.2
15	AO	17	ARG	3.2
19	CS	78	ARG	3.2
30	BI	63	ALA	3.2
30	BI	110	ALA	3.2
33	DL	71	ALA	3.2
38	DQ	2	ALA	3.2
20	CT	68	HIS	3.2
45	DX	3	ARG	3.2
1	CA	1047	G	3.2
22	DA	801	G	3.2
32	DK	112	PHE	3.2
29	DH	146	VAL	3.2
30	DI	9	VAL	3.2
39	DR	73	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
30	DI	52	GLY	3.2
33	DL	53	GLY	3.2
49	D1	24	THR	3.2
22	DA	501	A	3.2
22	DA	1237	A	3.2
20	CT	36	TYR	3.2
30	DI	8	TYR	3.2
1	AA	1539	C	3.2
22	BA	2179	C	3.2
22	DA	2008	C	3.2
24	DC	205	LEU	3.2
17	AQ	82	ALA	3.2
35	DN	2	ARG	3.2
13	CM	16	VAL	3.2
20	AT	69	LYS	3.2
48	D0	54	VAL	3.2
1	AA	987	G	3.2
22	DA	289	G	3.2
41	BT	1	MET	3.2
4	CD	160	GLU	3.2
26	DE	149	ILE	3.2
27	DF	79	ILE	3.2
29	DH	143	ILE	3.2
22	BA	2154	A	3.1
22	DA	1175	A	3.1
28	DG	33	LEU	3.1
29	BH	12	LEU	3.1
30	BI	8	TYR	3.1
30	DI	62	TYR	3.1
33	DL	3	LEU	3.1
10	CJ	61	ALA	3.1
16	CP	27	ALA	3.1
27	DF	54	ALA	3.1
28	BG	166	ASP	3.1
53	B5	123	ALA	3.1
53	B5	143	ALA	3.1
19	CS	69	HIS	3.1
53	B5	149	ASN	3.1
31	BJ	111	LYS	3.1
42	DU	73	PHE	3.1
44	DW	75	LYS	3.1
51	D3	15	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
22	BA	1072	C	3.1
22	BA	2096	C	3.1
21	CU	24	GLU	3.1
42	DU	39	ILE	3.1
3	CC	167	TRP	3.1
22	DA	474	G	3.1
12	CL	15	LYS	3.1
14	CN	8	ALA	3.1
20	CT	69	LYS	3.1
39	DR	71	LYS	3.1
1	CA	1021	A	3.1
22	BA	1073	A	3.1
9	CI	67	VAL	3.1
28	DG	168	VAL	3.1
29	DH	61	VAL	3.1
32	DK	35	VAL	3.1
1	CA	1321	U	3.1
5	CE	152	MET	3.1
3	CC	162	ILE	3.1
27	DF	155	THR	3.1
31	DJ	103	ILE	3.1
40	DS	37	THR	3.1
40	DS	80	PRO	3.1
5	CE	157	ARG	3.1
10	CJ	52	LEU	3.1
11	AK	82	LEU	3.1
33	DL	2	ARG	3.1
42	DU	52	LEU	3.1
46	DY	18	LEU	3.1
53	B5	211	ARG	3.1
28	DG	62	TRP	3.1
51	D3	47	LYS	3.1
12	AL	38	TYR	3.1
51	D3	60	ALA	3.1
29	BH	134	VAL	3.1
37	DP	92	VAL	3.1
50	D2	13	ASN	3.1
53	B5	73	VAL	3.1
53	B5	95	VAL	3.1
1	CA	1332	A	3.1
1	CA	1537	U	3.1
30	BI	119	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
29	BH	44	ILE	3.1
1	AA	1001	C	3.1
14	CN	61	ARG	3.1
9	AI	129	LYS	3.1
13	CM	31	LYS	3.1
27	BF	72	LYS	3.1
41	DT	9	LYS	3.1
51	D3	36	LYS	3.1
2	CB	209	ALA	3.1
19	AS	34	TRP	3.1
29	DH	106	ALA	3.1
29	DH	148	ALA	3.1
21	AU	19	PHE	3.1
45	DX	4	VAL	3.1
27	BF	116	GLY	3.1
29	DH	126	GLY	3.1
22	BA	879	G	3.1
14	CN	30	ILE	3.1
39	BR	49	ILE	3.1
41	DT	2	ILE	3.1
16	CP	51	ARG	3.1
2	CB	148	LEU	3.1
4	CD	177	LYS	3.1
19	CS	9	PRO	3.1
28	DG	37	LEU	3.1
36	DO	63	LYS	3.1
44	DW	44	LYS	3.1
1	CA	995	C	3.1
1	CA	1218	C	3.1
2	AB	209	ALA	3.0
22	BA	1914	C	3.1
22	DA	2174	C	3.1
53	B5	36	ALA	3.0
7	CG	75	VAL	3.0
24	DC	4	VAL	3.0
27	DF	40	VAL	3.0
28	DG	23	VAL	3.0
29	DH	108	VAL	3.0
51	D3	58	VAL	3.0
19	CS	44	MET	3.0
35	DN	1	MET	3.0
2	CB	110	SER	3.0

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Mol	Chain	Res	Type	RSRZ
25	DD	126	ASN	3.0
9	CI	10	GLY	3.0
6	CF	91	ARG	3.0
1	AA	1537	U	3.0
21	CU	41	PRO	3.0
40	DS	97	LEU	3.0
53	B5	186	LEU	3.0
24	DC	9	THR	3.0
53	B5	62	THR	3.0
53	B5	145	THR	3.0
31	DJ	47	HIS	3.0
1	CA	1302	C	3.0
22	DA	336	C	3.0
29	BH	113	SER	3.0
9	AI	119	ARG	3.0
13	AM	7	ILE	3.0
30	DI	111	GLN	3.0
27	BF	71	ARG	3.0
28	DG	175	LYS	3.0
26	DE	143	LEU	3.0
53	B5	132	LEU	3.0
42	DU	48	PRO	3.0
3	CC	165	THR	3.0
19	CS	33	THR	3.0
22	BA	846	U	3.0
22	BA	2155	U	3.0
50	D2	43	THR	3.0
12	AL	23	ALA	3.0
24	DC	112	ALA	3.0
29	BH	84	ALA	3.0
35	DN	55	ALA	3.0
5	CE	18	VAL	3.0
7	CG	142	HIS	3.0
13	CM	60	VAL	3.0
18	AR	74	HIS	3.0
29	BH	132	PHE	3.0
46	DY	41	HIS	3.0
2	CB	96	TRP	3.0
22	BA	1063	G	3.0
22	DA	1068	G	3.0
22	DA	1530	G	3.0
27	DF	97	TRP	3.0

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Mol	Chain	Res	Type	RSRZ
3	AC	127	ARG	3.0
4	CD	151	LYS	3.0
11	AK	43	GLY	3.0
13	CM	33	ILE	3.0
14	CN	95	GLY	3.0
18	AR	21	ILE	3.0
29	BH	71	LYS	3.0
30	BI	101	ILE	3.0
36	DO	16	ARG	3.0
39	DR	78	ARG	3.0
39	DR	80	ARG	3.0
53	B5	19	LYS	3.0
29	DH	82	SER	3.0
30	DI	12	GLN	3.0
6	AF	54	LEU	3.0
12	CL	24	LEU	3.0
15	AO	31	LEU	3.0
16	CP	52	LEU	3.0
34	DM	119	LEU	3.0
41	DT	79	ASP	3.0
46	DY	43	LEU	3.0
30	DI	60	THR	3.0
36	DO	24	THR	3.0
13	CM	40	ALA	3.0
29	BH	140	ALA	3.0
30	BI	117	MET	3.0
53	B5	196	ALA	3.0
29	DH	132	PHE	3.0
6	CF	93	LYS	3.0
42	DU	79	LYS	3.0
35	DN	63	ARG	3.0
50	D2	35	ARG	3.0
2	CB	71	GLY	3.0
24	DC	241	GLY	3.0
46	DY	22	LEU	3.0
22	DA	51	G	3.0
22	DA	1215	G	3.0
4	CD	23	SER	3.0
33	DL	68	SER	3.0
46	DY	24	GLU	3.0
2	CB	55	ALA	3.0
27	DF	75	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
53	B5	169	THR	3.0
2	AB	50	PHE	3.0
9	AI	19	VAL	3.0
29	DH	78	VAL	3.0
33	DL	116	VAL	3.0
42	DU	36	VAL	3.0
1	CA	1224	U	3.0
30	DI	113	LYS	2.9
4	CD	73	ARG	2.9
10	CJ	9	ARG	2.9
45	DX	18	ARG	2.9
22	BA	892	A	2.9
42	DU	5	ILE	2.9
31	DJ	74	TYR	2.9
41	DT	93	LEU	2.9
53	B5	21	TYR	2.9
12	CL	92	GLY	2.9
13	AM	99	GLY	2.9
26	DE	41	GLN	2.9
51	D3	56	GLY	2.9
9	AI	89	GLU	2.9
2	CB	100	MET	2.9
22	BA	1068	G	2.9
22	DA	1311	G	2.9
30	DI	125	MET	2.9
13	AM	5	ALA	2.9
29	BH	106	ALA	2.9
30	BI	84	ALA	2.9
48	D0	2	ALA	2.9
29	BH	103	VAL	2.9
33	DL	107	PHE	2.9
53	B5	63	VAL	2.9
40	DS	9	HIS	2.9
27	DF	71	ARG	2.9
29	BH	116	ARG	2.9
25	DD	27	ILE	2.9
42	DU	35	ILE	2.9
30	DI	138	LEU	2.9
53	B5	108	TRP	2.9
19	CS	68	GLY	2.9
29	BH	13	GLY	2.9
33	DL	20	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
48	D0	5	GLN	2.9
22	DA	482	A	2.9
3	CC	102	ASN	2.9
29	DH	66	ASN	2.9
32	DK	82	ASN	2.9
30	BI	88	SER	2.9
7	CG	134	ALA	2.9
13	CM	43	VAL	2.9
21	AU	53	VAL	2.9
25	DD	170	VAL	2.9
30	BI	41	ALA	2.9
30	BI	76	ALA	2.9
30	DI	15	ALA	2.9
30	DI	77	ALA	2.9
26	DE	53	THR	2.9
26	DE	132	LYS	2.9
30	DI	46	THR	2.9
21	AU	33	ARG	2.9
22	DA	335	C	2.9
22	BA	1087	G	2.9
13	CM	77	ILE	2.9
33	DL	101	ILE	2.9
39	DR	49	ILE	2.9
40	DS	96	ILE	2.9
1	AA	842	U	2.9
2	CB	157	LEU	2.9
3	AC	175	LEU	2.9
22	BA	2181	U	2.9
29	DH	58	LEU	2.9
26	DE	90	GLN	2.9
14	CN	70	PRO	2.9
2	CB	145	GLU	2.9
31	DJ	9	GLU	2.9
22	DA	477	A	2.9
26	DE	97	ASN	2.9
15	AO	2	SER	2.9
25	DD	137	SER	2.9
26	DE	55	SER	2.9
30	BI	128	SER	2.9
42	DU	31	SER	2.9
19	CS	60	VAL	2.9
28	DG	10	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
28	DG	17	VAL	2.9
30	BI	70	VAL	2.9
41	DT	63	VAL	2.9
46	BY	2	LYS	2.9
26	DE	79	ARG	2.9
26	DE	162	ARG	2.9
34	DM	6	ARG	2.9
6	CF	39	LEU	2.9
30	DI	80	LEU	2.9
51	D3	44	LEU	2.9
1	CA	1533	C	2.9
22	DA	795	C	2.9
1	AA	992	U	2.9
1	AA	997	U	2.9
22	BA	1917	U	2.9
30	DI	25	GLY	2.9
1	AA	1002	G	2.9
1	CA	82	G	2.9
1	CA	1002	G	2.9
1	CA	1222	G	2.9
9	CI	5	GLN	2.9
22	BA	1179	G	2.9
22	BA	2110	G	2.9
22	DA	88	G	2.9
22	DA	805	G	2.9
35	DN	18	GLN	2.9
3	AC	168	TYR	2.9
27	BF	143	TYR	2.9
53	B5	66	PRO	2.9
21	AU	36	GLU	2.9
30	BI	82	LYS	2.9
32	DK	67	LYS	2.9
42	DU	44	LYS	2.9
7	AG	148	ASN	2.9
12	CL	20	ASN	2.9
4	AD	67	VAL	2.9
7	CG	141	VAL	2.9
9	AI	44	ALA	2.9
9	CI	108	ALA	2.9
25	DD	132	ALA	2.9
29	DH	134	VAL	2.9
30	BI	142	ASP	2.9

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Mol	Chain	Res	Type	RSRZ
33	DL	83	ALA	2.9
49	D1	52	ALA	2.9
20	CT	31	PHE	2.9
27	DF	122	PHE	2.9
2	AB	139	ARG	2.9
22	DA	1073	A	2.9
22	DA	1247	A	2.9
38	DQ	13	ARG	2.9
7	CG	30	LEU	2.9
16	CP	4	ILE	2.9
6	CF	12	PRO	2.8
10	CJ	43	PRO	2.8
30	DI	23	PRO	2.8
22	BA	2106	U	2.8
5	CE	159	LYS	2.8
14	CN	3	LYS	2.8
27	BF	69	LYS	2.8
27	DF	128	TYR	2.8
29	BH	129	GLU	2.8
33	DL	106	GLU	2.8
38	DQ	25	TYR	2.8
49	D1	37	LYS	2.8
2	AB	14	VAL	2.8
4	CD	37	ALA	2.8
10	CJ	57	VAL	2.8
11	AK	66	ALA	2.8
16	CP	2	VAL	2.8
22	DA	1099	G	2.8
33	DL	89	VAL	2.8
40	DS	20	VAL	2.8
45	DX	21	ALA	2.8
53	B5	146	VAL	2.8
28	DG	166	ASP	2.8
26	DE	165	HIS	2.8
28	BG	111	HIS	2.8
48	D0	42	HIS	2.8
19	CS	13	LEU	2.8
30	DI	49	ILE	2.8
34	DM	2	LEU	2.8
38	DQ	65	ILE	2.8
38	DQ	23	GLY	2.8
12	CL	44	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
24	DC	256	LYS	2.8
30	BI	45	LYS	2.8
2	CB	199	VAL	2.8
24	DC	92	ALA	2.8
28	DG	11	VAL	2.8
45	DX	28	ARG	2.8
53	B5	111	PHE	2.8
35	DN	73	ASN	2.8
2	CB	10	LEU	2.8
9	CI	83	ILE	2.8
19	CS	11	ILE	2.8
21	CU	16	LEU	2.8
29	DH	6	LEU	2.8
29	DH	80	ILE	2.8
1	CA	94	G	2.8
1	CA	211	G	2.8
22	BA	2107	G	2.8
22	DA	93	G	2.8
22	DA	356	G	2.8
22	DA	669	G	2.8
7	AG	144	MET	2.8
7	CG	81	GLY	2.8
9	CI	55	VAL	2.8
10	CJ	77	VAL	2.8
14	AN	53	ARG	2.8
14	CN	59	ARG	2.8
20	CT	24	ARG	2.8
27	BF	148	ARG	2.8
41	BT	3	ARG	2.8
42	DU	70	VAL	2.8
4	CD	149	ALA	2.8
13	CM	22	ILE	2.8
19	CS	47	LEU	2.8
26	DE	134	LEU	2.8
27	BF	34	ILE	2.8
28	DG	107	LEU	2.8
30	DI	126	THR	2.8
29	BH	112	LYS	2.8
30	DI	100	LYS	2.8
38	DQ	41	LYS	2.8
41	DT	66	LYS	2.8
24	BC	235	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
53	B5	91	GLY	2.8
22	DA	39	G	2.8
22	DA	70	G	2.8
28	DG	8	PRO	2.8
1	CA	1362	A	2.8
1	CA	1441	A	2.8
1	CA	1534	A	2.8
21	AU	24	GLU	2.8
9	AI	11	ARG	2.8
9	AI	41	ARG	2.8
7	CG	32	VAL	2.8
10	CJ	26	VAL	2.8
29	DH	103	VAL	2.8
30	BI	140	VAL	2.8
7	AG	26	PHE	2.8
17	CQ	82	ALA	2.8
44	DW	60	PHE	2.8
1	AA	1008	U	2.8
1	CA	4	U	2.8
1	CA	1017	U	2.8
2	AB	129	LEU	2.8
2	AB	170	HIS	2.8
53	B5	106	ASP	2.8
1	CA	940	C	2.8
20	AT	6	SER	2.8
22	BA	1924	C	2.8
22	DA	1117	C	2.8
25	DD	111	GLY	2.8
4	AD	152	GLN	2.7
33	DL	18	ARG	2.7
53	B5	161	ARG	2.7
14	AN	34	VAL	2.7
53	B5	75	VAL	2.7
1	AA	977	A	2.7
1	AA	1003	G	2.7
1	CA	1219	A	2.7
1	CA	1297	G	2.7
22	DA	2173	A	2.7
24	DC	213	TRP	2.7
53	B5	179	ALA	2.7
7	CG	59	LEU	2.7
10	CJ	10	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
14	AN	27	LEU	2.7
22	BA	1065	U	2.7
22	DA	2796	U	2.7
4	AD	22	LYS	2.7
29	DH	35	LYS	2.7
30	DI	136	MET	2.7
39	DR	76	LYS	2.7
42	DU	4	LYS	2.7
30	BI	68	THR	2.7
24	DC	249	GLY	2.7
25	DD	6	GLY	2.7
7	CG	2	PRO	2.7
25	DD	23	PRO	2.7
31	DJ	110	PRO	2.7
29	DH	97	ARG	2.7
33	DL	21	ARG	2.7
9	CI	112	GLU	2.7
21	CU	8	GLU	2.7
22	DA	357	C	2.7
29	DH	87	GLU	2.7
53	B5	156	GLU	2.7
24	DC	172	VAL	2.7
30	BI	61	VAL	2.7
7	AG	150	ALA	2.7
13	CM	32	ALA	2.7
2	CB	67	ILE	2.7
16	AP	6	LEU	2.7
24	DC	105	LEU	2.7
40	DS	5	ALA	2.7
46	DY	42	LEU	2.7
53	B5	157	ILE	2.7
16	CP	17	TYR	2.7
1	AA	1043	G	2.7
22	DA	12	U	2.7
22	DA	388	G	2.7
27	DF	157	THR	2.7
13	CM	94	GLY	2.7
24	DC	209	GLY	2.7
29	DH	13	GLY	2.7
40	DS	94	ASP	2.7
44	DW	13	GLY	2.7
53	B5	96	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
53	B5	151	GLY	2.7
53	B5	207	GLY	2.7
4	AD	70	ARG	2.7
5	CE	112	ARG	2.7
21	AU	11	PRO	2.7
26	DE	177	PRO	2.7
31	DJ	95	ARG	2.7
4	CD	163	GLU	2.7
21	AU	31	GLU	2.7
37	DP	68	GLU	2.7
19	CS	67	VAL	2.7
39	DR	72	VAL	2.7
9	CI	98	LEU	2.7
13	CM	2	ALA	2.7
22	DA	318	C	2.7
29	BH	102	ALA	2.7
29	DH	39	ALA	2.7
29	DH	139	PHE	2.7
30	BI	67	PHE	2.7
30	DI	101	ILE	2.7
37	DP	84	ILE	2.7
53	B5	78	ILE	2.7
32	DK	66	LYS	2.7
33	DL	13	LYS	2.7
34	DM	118	LYS	2.7
42	DU	43	LYS	2.7
43	DV	82	TYR	2.7
22	BA	613	A	2.7
22	BA	2109	U	2.7
22	DA	280	U	2.7
26	DE	69	ARG	2.7
27	DF	80	ARG	2.7
28	DG	80	THR	2.7
29	DH	73	ASN	2.7
33	DL	26	GLY	2.7
53	B5	133	GLY	2.7
22	DA	2112	G	2.7
5	CE	10	GLU	2.7
15	AO	6	GLU	2.7
35	DN	15	SER	2.7
17	CQ	46	VAL	2.7
30	BI	9	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
38	DQ	89	GLU	2.7
41	DT	62	VAL	2.7
26	DE	77	ILE	2.7
29	BH	62	LEU	2.7
31	BJ	81	ILE	2.7
38	DQ	9	ILE	2.7
46	DY	6	LEU	2.7
2	AB	134	ALA	2.7
4	CD	27	ALA	2.7
6	CF	28	ALA	2.7
9	AI	17	ALA	2.7
19	CS	75	ALA	2.7
9	CI	27	LYS	2.7
13	AM	27	LYS	2.7
21	CU	54	LYS	2.7
41	DT	19	LYS	2.7
48	D0	57	LYS	2.7
53	B5	201	LYS	2.7
52	D4	33	HIS	2.7
1	CA	1129	C	2.7
22	DA	228	C	2.7
22	DA	334	C	2.7
35	DN	4	ARG	2.7
53	B5	60	ARG	2.7
53	B5	74	ARG	2.7
17	CQ	50	ASN	2.7
24	BC	233	GLY	2.7
35	DN	11	ASN	2.7
44	DW	74	PRO	2.7
53	B5	140	ASN	2.7
22	BA	1069	A	2.7
22	BA	2131	U	2.7
22	DA	654	A	2.7
10	CJ	19	ASP	2.7
14	CN	33	ASP	2.7
29	BH	114	GLU	2.7
30	DI	31	GLN	2.7
2	CB	14	VAL	2.7
9	CI	19	VAL	2.7
27	DF	31	VAL	2.7
39	DR	37	GLU	2.7
40	DS	105	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
42	DU	37	GLU	2.7
42	DU	93	VAL	2.7
9	CI	118	LEU	2.7
13	CM	17	ILE	2.6
14	CN	58	SER	2.7
32	DK	2	ILE	2.6
37	DP	50	ILE	2.6
46	DY	40	SER	2.7
4	AD	72	PHE	2.6
26	DE	95	LYS	2.6
29	BH	8	LYS	2.6
51	D3	39	LYS	2.6
28	DG	174	ALA	2.6
30	DI	104	ALA	2.6
42	DU	51	ALA	2.6
22	DA	214	G	2.6
53	B5	67	HIS	2.6
7	CG	85	TYR	2.6
19	CS	80	TYR	2.6
17	AQ	11	ARG	2.6
51	D3	30	ARG	2.6
1	CA	1322	C	2.6
22	DA	41	C	2.6
22	DA	343	C	2.6
22	DA	2073	C	2.6
13	CM	10	PRO	2.6
19	CS	30	PRO	2.6
10	CJ	83	THR	2.6
19	CS	51	VAL	2.6
22	BA	2194	U	2.6
22	DA	2118	U	2.6
3	CC	94	ILE	2.6
6	AF	93	LYS	2.6
7	CG	80	VAL	2.6
8	CH	110	VAL	2.6
9	CI	35	LEU	2.6
24	BC	265	LYS	2.6
26	DE	57	LYS	2.6
27	DF	25	VAL	2.6
29	DH	86	ASP	2.6
40	DS	47	VAL	2.6
41	DT	4	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
41	DT	87	LEU	2.6
22	DA	1383	A	2.6
53	B5	150	ILE	2.6
2	AB	136	MET	2.6
9	AI	20	PHE	2.6
25	DD	156	PHE	2.6
27	BF	73	SER	2.6
30	DI	84	ALA	2.6
33	DL	15	ALA	2.6
1	CA	1312	G	2.6
21	AU	47	ARG	2.6
22	DA	215	G	2.6
22	DA	953	G	2.6
47	DZ	11	ARG	2.6
5	CE	158	GLY	2.6
30	BI	32	GLY	2.6
2	AB	130	THR	2.6
13	CM	28	THR	2.6
1	CA	1031	C	2.6
1	CA	1314	C	2.6
5	CE	23	LYS	2.6
40	DS	104	THR	2.6
41	BT	26	LYS	2.6
14	CN	10	GLU	2.6
21	CU	53	VAL	2.6
26	DE	133	LEU	2.6
26	DE	186	VAL	2.6
29	BH	19	VAL	2.6
41	DT	57	VAL	2.6
51	D3	33	LEU	2.6
1	CA	219	U	2.6
14	CN	6	MET	2.6
2	CB	206	ALA	2.6
9	CI	103	PHE	2.6
11	AK	105	PHE	2.6
19	CS	61	PHE	2.6
22	DA	790	U	2.6
31	DJ	118	MET	2.6
33	DL	50	PHE	2.6
46	DY	30	MET	2.6
50	D2	32	ALA	2.6
1	CA	1145	A	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	74	A	2.6
22	DA	111	A	2.6
30	DI	21	SER	2.6
53	B5	212	SER	2.6
29	DH	135	HIS	2.6
31	DJ	76	HIS	2.6
24	DC	212	ARG	2.6
5	AE	102	GLY	2.6
9	CI	82	GLY	2.6
19	CS	72	GLY	2.6
28	DG	57	GLY	2.6
29	BH	95	GLY	2.6
43	DV	37	PRO	2.6
44	DW	52	GLY	2.6
53	B5	61	GLY	2.6
14	CN	12	LYS	2.6
17	CQ	53	CYS	2.6
24	DC	28	LYS	2.6
24	DC	255	LYS	2.6
28	DG	177	LYS	2.6
29	BH	22	LYS	2.6
44	DW	62	LYS	2.6
1	AA	1033	G	2.6
1	CA	1034	G	2.6
1	CA	1215	G	2.6
1	CA	1241	G	2.6
8	CH	32	LEU	2.6
14	CN	51	LEU	2.6
11	AK	94	GLU	2.6
13	CM	45	ILE	2.6
17	CQ	13	VAL	2.6
27	DF	13	VAL	2.6
29	BH	3	VAL	2.6
29	DH	79	THR	2.6
33	BL	115	GLU	2.6
35	DN	113	ILE	2.6
37	DP	73	VAL	2.6
46	DY	55	THR	2.6
49	D1	11	LEU	2.6
38	DQ	44	GLN	2.6
38	DQ	59	GLN	2.6
7	CG	18	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
7	CG	61	ALA	2.6
1	CA	83	C	2.6
1	CA	999	C	2.6
10	CJ	60	ASP	2.6
10	CJ	94	ALA	2.6
25	DD	118	PHE	2.6
26	DE	124	PHE	2.6
25	DD	131	ASP	2.6
30	DI	114	ALA	2.6
22	BA	1064	C	2.6
22	DA	22	C	2.6
22	DA	1536	C	2.6
22	BA	1101	U	2.6
22	BA	2151	U	2.6
22	DA	288	U	2.6
5	CE	93	ARG	2.6
10	CJ	5	ARG	2.6
30	DI	134	ARG	2.6
36	DO	15	ARG	2.6
36	DO	25	ARG	2.6
50	D2	12	ARG	2.6
22	DA	2749	A	2.6
2	AB	104	TRP	2.6
2	CB	45	LYS	2.6
7	CG	88	PRO	2.6
13	CM	112	PRO	2.6
24	DC	36	LYS	2.6
24	DC	59	LYS	2.6
26	DE	130	LYS	2.6
30	DI	56	PRO	2.6
50	D2	2	LYS	2.6
3	CC	33	LEU	2.6
6	AF	61	LEU	2.6
9	AI	21	ILE	2.6
13	CM	9	ILE	2.6
24	DC	104	ILE	2.6
26	DE	108	ILE	2.6
30	BI	129	ILE	2.6
41	DT	30	ILE	2.6
45	DX	7	VAL	2.6
20	CT	13	GLN	2.6
29	DH	18	GLN	2.6

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Mol	Chain	Res	Type	RSRZ
20	AT	7	ALA	2.6
35	DN	107	ASN	2.6
46	DY	32	ALA	2.6
1	AA	1015	G	2.5
1	CA	102	G	2.5
22	BA	2308	G	2.5
22	DA	1071	G	2.5
22	DA	2325	G	2.5
22	DA	2621	G	2.5
1	CA	843	U	2.5
22	DA	290	U	2.5
22	DA	1325	U	2.5
1	AA	1028	C	2.5
22	BA	1100	C	2.5
22	DA	1600	C	2.5
30	BI	66	SER	2.5
30	DI	92	LYS	2.5
22	DA	1246	A	2.5
10	CJ	92	LEU	2.5
13	CM	83	LEU	2.5
30	DI	32	GLY	2.5
33	DL	114	GLY	2.5
13	CM	81	MET	2.5
29	DH	110	VAL	2.5
32	BK	122	VAL	2.5
19	CS	65	GLU	2.5
30	DI	50	GLU	2.5
53	B5	41	THR	2.5
13	CM	18	ALA	2.5
26	DE	85	PHE	2.5
36	DO	6	ALA	2.5
42	DU	87	PHE	2.5
53	B5	159	ALA	2.5
24	DC	37	ASN	2.5
2	AB	153	ASP	2.5
7	CG	78	ARG	2.5
24	DC	232	HIS	2.5
27	DF	10	ASP	2.5
37	BP	109	ARG	2.5
13	CM	12	HIS	2.5
1	AA	1286	U	2.5
7	AG	110	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
17	CQ	20	SER	2.5
22	DA	102	U	2.5
42	DU	33	LYS	2.5
1	CA	1304	G	2.5
22	DA	325	G	2.5
22	DA	583	G	2.5
1	CA	1243	C	2.5
22	DA	509	C	2.5
14	AN	52	PRO	2.5
17	AQ	8	LEU	2.5
32	DK	101	GLY	2.5
35	DN	51	LEU	2.5
53	B5	141	PRO	2.5
2	CB	49	MET	2.5
2	CB	154	MET	2.5
5	CE	30	ILE	2.5
3	CC	168	TYR	2.5
5	AE	123	VAL	2.5
7	CG	91	VAL	2.5
9	CI	65	ILE	2.5
40	DS	86	MET	2.5
16	AP	20	VAL	2.5
29	DH	130	VAL	2.5
35	DN	76	VAL	2.5
36	DO	103	VAL	2.5
53	B5	131	ILE	2.5
1	AA	1046	A	2.5
1	AA	1167	A	2.5
1	CA	1019	A	2.5
22	BA	2097	A	2.5
22	BA	2108	A	2.5
22	BA	2173	A	2.5
22	DA	320	A	2.5
22	DA	2309	A	2.5
22	DA	2600	A	2.5
10	CJ	49	PHE	2.5
7	CG	152	ALA	2.5
12	CL	124	ALA	2.5
7	CG	10	ARG	2.5
13	AM	101	ARG	2.5
17	CQ	65	ARG	2.5
37	DP	93	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
40	BS	110	ARG	2.5
52	D4	12	ARG	2.5
25	DD	140	HIS	2.5
9	CI	115	LYS	2.5
10	CJ	30	LYS	2.5
12	CL	88	LYS	2.5
14	CN	54	ASP	2.5
25	DD	62	LYS	2.5
35	DN	40	LYS	2.5
36	DO	56	LYS	2.5
45	DX	61	LYS	2.5
52	B4	20	ASP	2.5
53	B5	83	LYS	2.5
53	B5	188	ASP	2.5
1	CA	1313	U	2.5
22	BA	1066	U	2.5
12	CL	81	LEU	2.5
14	CN	27	LEU	2.5
19	AS	30	PRO	2.5
19	CS	16	LEU	2.5
26	DE	164	LEU	2.5
29	DH	95	GLY	2.5
30	BI	136	MET	2.5
30	DI	20	PRO	2.5
33	DL	57	LEU	2.5
35	DN	109	PRO	2.5
46	DY	28	LEU	2.5
19	CS	40	ILE	2.5
39	BR	50	GLY	2.5
41	BT	90	GLY	2.5
28	DG	92	VAL	2.5
49	D1	42	VAL	2.5
1	AA	998	C	2.5
22	DA	1172	C	2.5
22	DA	1644	C	2.5
22	DA	2143	C	2.5
22	DA	2145	C	2.5
22	BA	1074	G	2.5
22	DA	1091	G	2.5
22	DA	1381	G	2.5
22	DA	1407	G	2.5
24	DC	83	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
24	BC	240	PHE	2.5
26	DE	144	GLU	2.5
29	BH	109	GLU	2.5
15	AO	80	GLN	2.5
30	BI	69	PHE	2.5
40	DS	3	THR	2.5
1	AA	996	A	2.5
1	CA	65	A	2.5
9	CI	124	ARG	2.5
22	DA	1067	A	2.5
14	AN	43	ASN	2.5
15	AO	48	LYS	2.5
38	DQ	14	HIS	2.5
27	BF	113	ASP	2.5
29	DH	7	ASP	2.5
2	CB	212	LEU	2.5
4	AD	21	LEU	2.5
29	BH	54	LEU	2.5
35	DN	24	MET	2.5
53	B5	65	LEU	2.5
9	CI	125	PRO	2.5
1	CA	1183	U	2.5
5	AE	158	GLY	2.5
9	CI	28	ILE	2.5
22	DA	2797	U	2.5
27	DF	154	ILE	2.5
30	BI	135	SER	2.5
22	DA	72	U	2.5
22	DA	931	U	2.5
52	D4	21	GLY	2.5
7	AG	105	VAL	2.5
7	CG	94	VAL	2.5
17	CQ	83	VAL	2.5
25	DD	155	VAL	2.5
7	AG	106	GLU	2.5
7	CG	44	TYR	2.5
7	CG	139	GLU	2.5
27	DF	32	GLU	2.5
29	DH	91	PHE	2.5
53	B5	203	GLU	2.5
9	CI	18	ARG	2.5
26	DE	36	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
26	DE	39	ALA	2.5
26	DE	161	ALA	2.5
33	DL	38	GLN	2.5
38	DQ	3	ARG	2.5
15	CO	25	THR	2.5
41	DT	46	ALA	2.5
8	CH	69	LYS	2.5
9	CI	13	LYS	2.5
20	AT	5	LYS	2.5
22	DA	281	C	2.5
1	CA	1300	G	2.5
22	DA	266	G	2.5
22	DA	291	G	2.5
22	DA	1429	G	2.5
22	DA	1475	G	2.5
22	DA	2156	G	2.5
22	DA	2250	G	2.5
22	DA	2303	G	2.5
22	DA	2782	G	2.5
23	DB	41	G	2.5
1	AA	1022	A	2.5
1	CA	1236	A	2.5
1	CA	1375	A	2.5
22	BA	1057	A	2.5
22	BA	1067	A	2.5
22	BA	1090	A	2.5
22	BA	2126	A	2.5
22	DA	311	A	2.5
42	DU	53	ASN	2.5
53	B5	189	ASN	2.5
10	AJ	75	ASP	2.4
28	DG	148	LEU	2.4
35	DN	10	LEU	2.4
46	DY	57	LEU	2.4
48	D0	39	LEU	2.4
10	CJ	25	ILE	2.4
17	CQ	5	ILE	2.4
26	DE	175	ILE	2.4
13	CM	64	VAL	2.4
24	DC	228	VAL	2.4
30	DI	57	VAL	2.4
30	DI	61	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
42	DU	83	VAL	2.4
51	D3	18	GLY	2.4
33	DL	80	SER	2.4
36	DO	5	SER	2.4
53	B5	42	VAL	2.4
1	CA	1307	U	2.4
22	BA	546	U	2.4
22	DA	2109	U	2.4
9	AI	45	ARG	2.4
24	DC	270	ARG	2.4
52	D4	36	ARG	2.4
13	CM	27	LYS	2.4
13	CM	114	LYS	2.4
14	AN	19	LYS	2.4
29	BH	36	ALA	2.4
29	DH	141	LYS	2.4
30	DI	110	ALA	2.4
38	DQ	27	ALA	2.4
7	CG	49	THR	2.4
30	DI	132	THR	2.4
35	DN	62	ASN	2.4
42	DU	27	ASN	2.4
26	DE	159	LEU	2.4
29	DH	54	LEU	2.4
49	D1	34	LEU	2.4
51	D3	29	LEU	2.4
1	AA	1042	A	2.4
22	BA	1088	A	2.4
22	DA	340	A	2.4
1	CA	1220	G	2.4
22	DA	2152	G	2.4
22	DA	2157	G	2.4
27	DF	84	PRO	2.4
28	DG	19	ILE	2.4
41	DT	74	ILE	2.4
51	D3	2	PRO	2.4
52	D4	16	ILE	2.4
53	B5	172	ILE	2.4
7	CG	87	VAL	2.4
27	DF	76	GLY	2.4
31	DJ	100	VAL	2.4
51	D3	20	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
53	B5	81	GLY	2.4
5	AE	22	SER	2.4
27	BF	80	ARG	2.4
27	DF	30	ARG	2.4
31	DJ	13	ARG	2.4
32	DK	17	ARG	2.4
48	D0	34	SER	2.4
1	AA	209	U	2.4
7	CG	36	LYS	2.4
7	CG	76	LYS	2.4
7	CG	114	LYS	2.4
9	CI	114	LYS	2.4
22	DA	193	U	2.4
22	DA	387	U	2.4
22	DA	427	U	2.4
22	DA	665	U	2.4
25	DD	88	GLU	2.4
28	DG	27	LYS	2.4
30	BI	72	LYS	2.4
42	DU	91	LYS	2.4
5	CE	110	ALA	2.4
24	DC	61	ALA	2.4
27	BF	81	GLN	2.4
29	BH	39	ALA	2.4
30	BI	2	ALA	2.4
51	D3	64	TYR	2.4
11	AK	108	THR	2.4
28	DG	36	THR	2.4
7	CG	50	LEU	2.4
10	AJ	90	LEU	2.4
30	BI	138	LEU	2.4
42	BU	52	LEU	2.4
9	AI	28	ILE	2.4
36	DO	35	ILE	2.4
40	DS	85	ILE	2.4
53	B5	153	ILE	2.4
9	AI	58	VAL	2.4
25	DD	26	VAL	2.4
53	B5	223	VAL	2.4
1	CA	223	A	2.4
1	CA	977	A	2.4
22	DA	213	A	2.4

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Mol	Chain	Res	Type	RSRZ
22	DA	586	A	2.4
2	CB	95	ARG	2.4
7	CG	109	ARG	2.4
15	CO	72	ARG	2.4
24	DC	101	ARG	2.4
25	DD	123	LYS	2.4
36	DO	9	ARG	2.4
42	DU	97	LYS	2.4
22	DA	682	G	2.4
22	DA	914	G	2.4
29	BH	149	GLU	2.4
30	DI	128	SER	2.4
10	AJ	34	ALA	2.4
25	DD	209	ALA	2.4
36	DO	70	ALA	2.4
1	CA	1235	U	2.4
22	BA	1082	U	2.4
30	BI	62	TYR	2.4
10	CJ	44	THR	2.4
14	AN	50	THR	2.4
45	DX	48	THR	2.4
7	CG	22	LEU	2.4
19	AS	5	LEU	2.4
27	DF	50	LEU	2.4
34	DM	20	LEU	2.4
36	DO	40	ILE	2.4
47	DZ	14	ILE	2.4
49	D1	48	ILE	2.4
4	AD	24	GLY	2.4
14	AN	45	VAL	2.4
16	CP	10	GLY	2.4
28	DG	53	GLY	2.4
28	DG	76	VAL	2.4
29	DH	121	VAL	2.4
30	DI	85	GLY	2.4
42	DU	11	VAL	2.4
32	DK	111	LYS	2.4
33	DL	65	GLY	2.4
42	DU	92	LYS	2.4
49	D1	18	GLY	2.4
4	AD	63	ARG	2.4
14	AN	24	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
28	BG	170	ARG	2.4
28	DG	16	ASP	2.4
29	BH	17	ASP	2.4
35	DN	8	ARG	2.4
35	DN	22	ARG	2.4
1	CA	1226	C	2.4
22	BA	893	C	2.4
23	DB	3	C	2.4
16	CP	39	PHE	2.4
22	DA	631	A	2.4
45	DX	46	PHE	2.4
30	DI	130	GLU	2.4
53	B5	25	GLU	2.4
18	CR	62	ALA	2.4
27	DF	2	ALA	2.4
30	BI	44	ALA	2.4
30	DI	76	ALA	2.4
33	DL	113	ALA	2.4
1	CA	1240	U	2.4
9	AI	90	TYR	2.4
22	BA	1071	G	2.4
22	DA	506	G	2.4
29	BH	1	MET	2.4
33	DL	67	THR	2.4
40	DS	38	TYR	2.4
49	D1	22	THR	2.4
37	DP	97	LEU	2.4
2	CB	222	ARG	2.3
8	AH	69	LYS	2.3
11	AK	69	ARG	2.3
34	DM	10	ARG	2.3
38	DQ	6	ARG	2.3
39	DR	21	ARG	2.3
40	DS	40	ASN	2.3
29	BH	16	GLY	2.3
46	DY	48	ARG	2.3
50	D2	14	ARG	2.3
53	B5	147	GLY	2.3
28	DG	5	ALA	2.3
36	DO	60	GLU	2.3
14	CN	49	GLN	2.3
1	AA	702	A	2.3

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Mol	Chain	Res	Type	RSRZ
1	CA	983	A	2.3
24	DC	272	SER	2.3
53	B5	109	MET	2.3
13	CM	20	THR	2.3
26	DE	92	HIS	2.3
37	DP	60	THR	2.3
1	CA	1040	U	2.3
22	DA	546	U	2.3
2	CB	40	ILE	2.3
14	CN	97	LYS	2.3
29	BH	89	LYS	2.3
11	CK	13	ARG	2.3
22	DA	2127	G	2.3
24	DC	250	VAL	2.3
7	CG	8	GLY	2.3
7	CG	68	ASN	2.3
51	D3	28	ASN	2.3
9	CI	127	PHE	2.3
36	DO	97	PHE	2.3
7	AG	140	ASP	2.3
10	CJ	47	GLU	2.3
15	CO	6	GLU	2.3
17	CQ	26	GLU	2.3
31	DJ	94	ALA	2.3
53	B5	98	GLU	2.3
5	AE	152	MET	2.3
12	CL	29	GLN	2.3
17	CQ	9	GLN	2.3
2	CB	161	LEU	2.3
2	CB	191	SER	2.3
7	CG	41	SER	2.3
10	CJ	87	LEU	2.3
24	DC	93	LEU	2.3
27	DF	73	SER	2.3
31	DJ	109	LEU	2.3
35	DN	54	LEU	2.3
40	DS	19	LEU	2.3
45	DX	35	SER	2.3
1	CA	984	C	2.3
13	CM	14	HIS	2.3
2	AB	213	TYR	2.3
4	AD	4	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
22	DA	680	C	2.3
22	DA	1072	C	2.3
22	DA	1100	C	2.3
22	DA	1330	C	2.3
22	DA	502	A	2.3
22	DA	1057	A	2.3
22	DA	1098	A	2.3
22	DA	1420	A	2.3
22	DA	1626	A	2.3
22	DA	2117	A	2.3
53	B5	190	ILE	2.3
20	CT	9	LYS	2.3
30	BI	4	LYS	2.3
30	DI	72	LYS	2.3
36	DO	3	LYS	2.3
44	DW	78	LYS	2.3
46	DY	2	LYS	2.3
10	CJ	16	ARG	2.3
13	CM	79	ARG	2.3
22	DA	1406	U	2.3
22	DA	1468	U	2.3
22	DA	2402	U	2.3
24	DC	29	PRO	2.3
35	DN	90	ARG	2.3
45	DX	31	PRO	2.3
46	DY	23	ARG	2.3
24	DC	3	VAL	2.3
41	DT	58	VAL	2.3
8	CH	44	GLY	2.3
9	AI	102	GLY	2.3
10	AJ	33	GLY	2.3
11	AK	52	PHE	2.3
33	DL	64	PHE	2.3
1	CA	942	G	2.3
1	CA	1006	G	2.3
1	CA	1039	G	2.3
7	CG	65	ALA	2.3
10	AJ	81	GLU	2.3
22	DA	498	G	2.3
22	DA	774	G	2.3
24	BC	236	GLU	2.3
28	BG	124	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
33	DL	10	GLU	2.3
33	DL	134	ALA	2.3
2	CB	9	MET	2.3
20	CT	66	LEU	2.3
27	DF	4	LEU	2.3
42	DU	46	GLN	2.3
28	DG	74	SER	2.3
30	DI	95	LYS	2.3
32	DK	28	SER	2.3
33	DL	73	ILE	2.3
47	DZ	32	ILE	2.3
5	CE	103	THR	2.3
13	CM	102	THR	2.3
44	BW	10	THR	2.3
27	DF	8	TYR	2.3
31	BJ	95	ARG	2.3
44	DW	41	ARG	2.3
51	D3	42	ARG	2.3
1	AA	841	C	2.3
1	AA	1044	A	2.3
1	CA	101	A	2.3
1	CA	1132	C	2.3
22	DA	394	C	2.3
22	DA	517	C	2.3
1	CA	1364	U	2.3
1	CA	1493	A	2.3
22	DA	613	A	2.3
22	DA	675	A	2.3
22	DA	2602	A	2.3
28	DG	41	VAL	2.3
30	BI	98	VAL	2.3
36	DO	54	VAL	2.3
39	DR	54	VAL	2.3
51	D3	7	VAL	2.3
22	DA	2903	U	2.3
26	DE	56	GLY	2.3
30	DI	99	GLY	2.3
27	DF	100	PHE	2.3
36	DO	92	PHE	2.3
14	CN	44	ALA	2.3
31	BJ	1	MET	2.3
40	DS	1	MET	2.3

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Mol	Chain	Res	Type	RSRZ
43	DV	22	ALA	2.3
50	D2	1	MET	2.3
53	B5	88	GLU	2.3
15	CO	80	GLN	2.3
34	DM	124	LEU	2.3
36	DO	18	LEU	2.3
2	AB	11	LYS	2.3
28	DG	158	LYS	2.3
29	BH	42	LYS	2.3
29	DH	83	LYS	2.3
29	DH	89	LYS	2.3
33	DL	29	LYS	2.3
39	DR	97	LYS	2.3
40	DS	16	LYS	2.3
45	DX	10	LYS	2.3
1	AA	211	G	2.3
22	DA	729	G	2.3
22	DA	1171	G	2.3
22	DA	1300	G	2.3
22	DA	2128	G	2.3
29	BH	72	ILE	2.3
36	DO	29	HIS	2.3
45	BX	20	HIS	2.3
53	B5	162	ILE	2.3
10	CJ	54	SER	2.3
16	CP	24	SER	2.3
42	DU	82	ARG	2.3
24	DC	103	TYR	2.3
39	DR	83	TYR	2.3
3	CC	173	VAL	2.3
27	BF	132	VAL	2.3
31	DJ	11	VAL	2.3
9	CI	102	GLY	2.3
41	DT	71	GLY	2.3
44	DW	28	GLY	2.3
1	AA	88	U	2.3
1	AA	1000	A	2.2
1	CA	48	C	2.2
1	CA	1028	C	2.2
1	CA	1492	A	2.2
15	CO	15	PHE	2.2
22	DA	57	C	2.2

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Mol	Chain	Res	Type	RSRZ
47	DZ	53	PHE	2.2
2	CB	34	ALA	2.2
10	CJ	66	GLU	2.2
13	CM	8	ASN	2.2
14	AN	22	ALA	2.2
29	BH	64	ALA	2.2
30	DI	63	ALA	2.2
37	DP	9	GLU	2.2
53	B5	171	ALA	2.2
10	CJ	11	LYS	2.2
13	CM	44	LYS	2.2
26	DE	139	LYS	2.2
36	DO	17	LYS	2.2
41	DT	49	LYS	2.2
42	DU	17	LYS	2.2
41	DT	37	ASP	2.2
14	AN	30	ILE	2.2
24	DC	91	ILE	2.2
7	CG	95	ARG	2.2
19	AS	3	ARG	2.2
21	CU	33	ARG	2.2
28	DG	153	ARG	2.2
14	CN	50	THR	2.2
36	DO	65	THR	2.2
7	AG	6	VAL	2.2
8	AH	25	VAL	2.2
16	CP	20	VAL	2.2
27	DF	28	VAL	2.2
35	DN	60	VAL	2.2
36	DO	28	VAL	2.2
39	DR	102	SER	2.2
45	DX	47	VAL	2.2
48	D0	3	VAL	2.2
50	D2	9	VAL	2.2
53	B5	59	VAL	2.2
1	CA	1279	G	2.2
22	BA	1062	G	2.2
22	DA	974	G	2.2
22	DA	2162	G	2.2
22	DA	2697	G	2.2
23	DB	44	G	2.2
2	AB	9	MET	2.2

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Mol	Chain	Res	Type	RSRZ
9	CI	46	MET	2.2
35	DN	20	MET	2.2
46	DY	1	MET	2.2
1	AA	632	U	2.2
22	BA	2105	U	2.2
2	CB	12	ALA	2.2
7	AG	65	ALA	2.2
7	AG	146	GLU	2.2
13	AM	41	GLU	2.2
14	AN	26	GLU	2.2
26	DE	104	ALA	2.2
29	DH	122	LEU	2.2
29	DH	129	GLU	2.2
33	DL	51	GLU	2.2
38	DQ	38	ALA	2.2
1	CA	1038	C	2.2
1	CA	1150	A	2.2
1	CA	1216	A	2.2
2	AB	57	LEU	2.2
2	CB	152	LYS	2.2
9	CI	60	LYS	2.2
16	CP	29	ASN	2.2
17	CQ	8	LEU	2.2
22	DA	344	A	2.2
22	DA	866	A	2.2
25	DD	185	ASN	2.2
29	BH	41	LYS	2.2
36	DO	48	LEU	2.2
48	D0	37	LYS	2.2
10	CJ	8	ILE	2.2
26	DE	148	ILE	2.2
39	DR	41	ILE	2.2
18	CR	74	HIS	2.2
19	AS	32	ARG	2.2
29	DH	27	ARG	2.2
42	DU	45	HIS	2.2
9	AI	48	VAL	2.2
27	DF	158	THR	2.2
28	DG	15	VAL	2.2
29	BH	21	VAL	2.2
29	DH	9	VAL	2.2
42	BU	49	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
45	DX	8	THR	2.2
18	CR	64	TYR	2.2
3	CC	159	GLY	2.2
32	DK	26	GLY	2.2
41	DT	75	GLY	2.2
38	DQ	106	PHE	2.2
1	CA	963	G	2.2
1	CA	1003	G	2.2
4	AD	159	LEU	2.2
9	CI	52	LEU	2.2
14	CN	16	LEU	2.2
27	DF	88	LYS	2.2
28	BG	177	LYS	2.2
31	DJ	85	LYS	2.2
33	DL	84	LYS	2.2
35	DN	99	LYS	2.2
22	DA	674	G	2.2
22	DA	1227	G	2.2
40	DS	54	ALA	2.2
41	DT	7	LEU	2.2
44	BW	17	GLU	2.2
46	DY	21	LEU	2.2
52	D4	5	ALA	2.2
22	BA	2118	U	2.2
22	BA	2180	U	2.2
22	DA	810	U	2.2
20	CT	78	ASN	2.2
24	DC	90	ASN	2.2
4	CD	36	GLN	2.2
14	AN	63	ARG	2.2
24	DC	133	ARG	2.2
27	DF	137	ILE	2.2
41	DT	6	ARG	2.2
44	DW	37	ILE	2.2
53	B5	195	ARG	2.2
22	BA	2886	A	2.2
22	DA	1509	A	2.2
1	CA	1320	C	2.2
22	DA	302	C	2.2
22	DA	672	C	2.2
29	BH	38	PRO	2.2
29	BH	61	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
31	DJ	8	PRO	2.2
48	D0	25	VAL	2.2
30	DI	71	THR	2.2
30	DI	17	MET	2.2
24	DC	40	SER	2.2
37	DP	98	TYR	2.2
53	B5	49	GLY	2.2
26	BE	6	LYS	2.2
28	DG	85	LYS	2.2
45	DX	54	LYS	2.2
2	AB	135	LEU	2.2
2	CB	43	LEU	2.2
8	CH	63	LEU	2.2
26	DE	118	LEU	2.2
34	DM	112	LEU	2.2
2	AB	12	ALA	2.2
10	CJ	86	ALA	2.2
27	DF	55	ALA	2.2
28	DG	68	ALA	2.2
29	DH	111	ALA	2.2
10	AJ	8	ILE	2.2
27	BF	136	ILE	2.2
28	BG	24	ILE	2.2
1	AA	1029	U	2.2
22	BA	1060	U	2.2
38	DQ	28	ARG	2.2
28	DG	20	ASN	2.2
28	DG	22	GLN	2.2
35	DN	9	GLN	2.2
1	CA	1018	G	2.2
1	CA	1343	G	2.2
22	BA	880	G	2.2
22	DA	559	G	2.2
22	DA	1026	G	2.2
22	DA	1339	G	2.2
22	DA	2124	G	2.2
24	DC	15	HIS	2.2
22	DA	73	A	2.2
22	DA	2062	A	2.2
22	DA	2829	A	2.2
29	BH	9	VAL	2.2
29	DH	32	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
30	BI	93	PRO	2.2
40	DS	76	VAL	2.2
53	B5	213	VAL	2.2
1	CA	1149	C	2.2
22	DA	1306	C	2.2
13	CM	108	THR	2.2
15	CO	22	THR	2.2
45	DX	56	MET	2.2
7	AG	11	LYS	2.2
13	CM	6	GLY	2.2
24	DC	248	TRP	2.2
17	CQ	16	LYS	2.2
25	DD	53	GLY	2.2
25	DD	117	GLY	2.2
29	DH	41	LYS	2.2
40	DS	6	LYS	2.2
51	D3	19	LYS	2.2
52	D4	8	LYS	2.2
53	B5	85	LYS	2.2
53	B5	177	GLY	2.2
19	AS	41	PHE	2.2
27	DF	177	PHE	2.2
33	DL	58	TYR	2.2
43	DV	56	PHE	2.2
11	AK	42	LEU	2.2
14	AN	51	LEU	2.2
27	DF	91	LEU	2.2
7	AG	98	ALA	2.2
9	AI	121	ALA	2.2
14	CN	22	ALA	2.2
25	BD	85	ALA	2.2
33	DL	133	ALA	2.2
44	DW	83	GLU	2.2
53	B5	199	ALA	2.2
7	CG	143	ARG	2.1
12	CL	82	ILE	2.1
13	CM	92	ARG	2.1
24	DC	43	ARG	2.1
31	BJ	96	ARG	2.1
34	DM	126	ILE	2.1
53	B5	165	ARG	2.1
17	AQ	9	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
1	CA	1030	U	2.1
1	CA	1540	U	2.1
7	AG	68	ASN	2.1
12	AL	73	ASN	2.1
22	DA	355	U	2.1
22	DA	588	U	2.1
9	CI	23	PRO	2.1
27	DF	74	VAL	2.1
28	DG	43	VAL	2.1
32	DK	122	VAL	2.1
25	DD	181	ASP	2.1
29	BH	86	ASP	2.1
39	DR	55	ASP	2.1
53	B5	167	ASP	2.1
7	AG	149	LYS	2.1
8	CH	22	LYS	2.1
11	AK	80	LYS	2.1
20	CT	71	LYS	2.1
1	AA	978	A	2.1
1	CA	1043	G	2.1
1	CA	1242	G	2.1
1	CA	1255	G	2.1
1	CA	1280	A	2.1
22	BA	1059	G	2.1
22	DA	408	G	2.1
22	DA	614	A	2.1
22	DA	1206	G	2.1
27	DF	69	LYS	2.1
53	B5	71	LYS	2.1
53	B5	80	LYS	2.1
53	B5	127	LYS	2.1
22	DA	2314	A	2.1
24	DC	41	GLY	2.1
25	BD	87	GLY	2.1
28	DG	78	GLY	2.1
30	BI	137	GLY	2.1
53	B5	204	GLY	2.1
16	CP	60	TRP	2.1
1	AA	999	C	2.1
1	AA	1359	C	2.1
1	CA	948	C	2.1
1	CA	1296	C	2.1

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Mol	Chain	Res	Type	RSRZ
15	CO	39	LEU	2.1
22	DA	385	C	2.1
22	DA	486	C	2.1
22	DA	1076	C	2.1
22	DA	1625	C	2.1
29	BH	139	PHE	2.1
53	B5	105	LEU	2.1
26	DE	101	TYR	2.1
2	CB	83	ALA	2.1
27	DF	119	ALA	2.1
30	BI	120	ALA	2.1
35	DN	27	SER	2.1
53	B5	90	ALA	2.1
53	B5	222	SER	2.1
2	AB	225	ARG	2.1
26	DE	155	GLU	2.1
27	BF	115	ARG	2.1
27	BF	134	GLU	2.1
28	DG	173	GLU	2.1
34	BM	59	ARG	2.1
35	DN	12	ARG	2.1
17	CQ	21	ILE	2.1
29	BH	4	ILE	2.1
29	DH	94	ILE	2.1
10	AJ	35	GLN	2.1
27	DF	135	GLN	2.1
50	D2	29	GLN	2.1
7	CG	69	VAL	2.1
22	DA	224	U	2.1
29	DH	138	VAL	2.1
53	B5	121	MET	2.1
20	CT	85	LYS	2.1
28	DG	18	LYS	2.1
30	DI	51	LYS	2.1
34	BM	5	LYS	2.1
30	DI	116	ASP	2.1
19	AS	39	THR	2.1
24	DC	99	GLY	2.1
24	DC	234	GLY	2.1
26	DE	17	THR	2.1
30	DI	112	THR	2.1
7	CG	99	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
17	CQ	28	PHE	2.1
33	DL	79	LEU	2.1
44	DW	26	PHE	2.1
49	D1	39	PHE	2.1
1	AA	1441	A	2.1
1	CA	77	A	2.1
1	CA	109	A	2.1
1	CA	1046	A	2.1
5	CE	54	ARG	2.1
7	CG	145	ALA	2.1
9	AI	85	ARG	2.1
9	CI	121	ALA	2.1
10	CJ	72	ARG	2.1
17	CQ	6	ARG	2.1
18	CR	51	TYR	2.1
22	BA	1175	A	2.1
22	DA	1054	A	2.1
38	DQ	30	ARG	2.1
39	DR	84	ARG	2.1
46	BY	63	ALA	2.1
1	AA	79	G	2.1
2	AB	164	ILE	2.1
22	DA	180	G	2.1
22	DA	205	G	2.1
22	DA	425	G	2.1
22	DA	1063	G	2.1
22	DA	1210	G	2.1
22	DA	1248	G	2.1
1	CA	979	C	2.1
9	AI	128	SER	2.1
10	CJ	101	SER	2.1
46	BY	13	GLU	2.1
53	B5	101	ILE	2.1
22	DA	275	C	2.1
30	DI	6	GLN	2.1
10	CJ	56	HIS	2.1
2	CB	143	LYS	2.1
2	CB	187	VAL	2.1
4	AD	31	LYS	2.1
7	CG	144	MET	2.1
15	AO	60	VAL	2.1
9	CI	51	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
20	CT	34	LYS	2.1
28	DG	132	VAL	2.1
35	DN	78	LYS	2.1
38	DQ	88	VAL	2.1
40	DS	45	VAL	2.1
41	DT	24	MET	2.1
42	DU	42	VAL	2.1
1	AA	1023	U	2.1
1	CA	1029	U	2.1
22	BA	2167	U	2.1
22	DA	99	U	2.1
22	DA	589	U	2.1
22	DA	1094	U	2.1
2	CB	98	GLY	2.1
19	AS	26	GLY	2.1
28	DG	82	GLY	2.1
34	DM	61	GLY	2.1
36	DO	62	LEU	2.1
47	DZ	24	LEU	2.1
2	CB	91	PHE	2.1
10	AJ	89	ARG	2.1
13	CM	90	ARG	2.1
14	CN	9	ARG	2.1
29	DH	116	ARG	2.1
39	DR	79	ARG	2.1
2	CB	61	ALA	2.1
13	CM	37	ALA	2.1
14	AN	25	ALA	2.1
14	CN	36	ALA	2.1
16	AP	82	ALA	2.1
20	CT	7	ALA	2.1
20	CT	87	ALA	2.1
27	BF	83	TYR	2.1
27	DF	136	ILE	2.1
28	DG	150	ALA	2.1
41	DT	83	ALA	2.1
42	DU	64	ALA	2.1
50	D2	23	ALA	2.1
53	B5	27	ALA	2.1
5	AE	50	TYR	2.1
5	CE	55	GLU	2.1
42	DU	62	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
1	AA	532	A	2.1
2	CB	87	CYS	2.1
22	DA	38	A	2.1
22	DA	71	A	2.1
22	DA	203	A	2.1
22	DA	2108	A	2.1
6	CF	14	GLN	2.1
7	CG	86	GLN	2.1
12	AL	29	GLN	2.1
30	BI	31	GLN	2.1
1	AA	1133	G	2.1
1	AA	1166	G	2.1
1	CA	207	C	2.1
1	CA	985	C	2.1
1	CA	1361	G	2.1
5	CE	114	VAL	2.1
9	CI	58	VAL	2.1
14	CN	45	VAL	2.1
22	DA	45	G	2.1
22	DA	107	G	2.1
22	DA	287	G	2.1
22	DA	549	G	2.1
22	DA	880	G	2.1
22	DA	1064	C	2.1
22	DA	1136	G	2.1
22	DA	1251	C	2.1
22	DA	1348	C	2.1
22	DA	2601	C	2.1
26	DE	169	VAL	2.1
27	DF	146	VAL	2.1
29	DH	21	VAL	2.1
30	DI	45	LYS	2.1
33	DL	14	LYS	2.1
33	DL	122	VAL	2.1
41	DT	31	VAL	2.1
51	D3	12	LYS	2.1
48	D0	8	PRO	2.1
5	CE	70	ASN	2.1
29	BH	73	ASN	2.1
10	CJ	73	LEU	2.1
35	DN	38	LEU	2.1
38	DQ	60	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
51	D3	62	LEU	2.1
1	AA	1168	U	2.1
1	CA	1381	U	2.1
5	CE	104	GLY	2.1
9	AI	39	PHE	2.1
22	DA	59	U	2.1
22	DA	448	U	2.1
22	DA	2213	U	2.1
22	DA	2491	U	2.1
27	DF	99	PHE	2.1
29	BH	85	GLY	2.1
37	DP	105	GLY	2.1
9	CI	113	ARG	2.1
25	DD	200	ASP	2.1
27	BF	147	ASP	2.1
27	DF	35	THR	2.1
34	DM	81	ARG	2.1
35	DN	103	ARG	2.1
43	DV	76	ASP	2.1
3	CC	92	ALA	2.1
3	CC	207	ILE	2.1
8	CH	130	ALA	2.1
29	DH	69	ALA	2.1
34	DM	43	ALA	2.1
41	DT	13	ALA	2.1
41	DT	20	ALA	2.1
42	DU	63	ALA	2.1
47	DZ	48	ILE	2.1
53	B5	100	ILE	2.1
7	AG	139	GLU	2.1
43	BV	69	GLU	2.1
3	CC	80	LYS	2.0
4	AD	153	SER	2.0
19	CS	35	SER	2.0
25	DD	8	LYS	2.0
30	DI	102	SER	2.0
35	BN	119	SER	2.0
13	CM	100	GLN	2.0
49	D1	45	GLN	2.0
50	D2	6	GLN	2.0
1	CA	1014	A	2.0
1	CA	1227	A	2.0

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Mol	Chain	Res	Type	RSRZ
1	CA	1252	A	2.0
1	CA	1318	A	2.0
2	AB	210	VAL	2.0
7	CG	43	VAL	2.0
10	AJ	84	VAL	2.0
22	BA	142	A	2.0
22	BA	1916	A	2.0
22	BA	2170	A	2.0
22	DA	89	A	2.0
22	DA	354	A	2.0
22	DA	632	A	2.0
22	DA	2274	A	2.0
22	DA	2503	A	2.0
29	BH	138	VAL	2.0
27	DF	176	PRO	2.0
1	AA	1011	C	2.0
1	CA	1112	C	2.0
1	CA	1217	C	2.0
1	CA	1228	C	2.0
7	AG	23	LEU	2.0
16	CP	54	LEU	2.0
22	BA	143	C	2.0
22	BA	1172	C	2.0
22	DA	393	C	2.0
45	DX	30	LEU	2.0
2	CB	50	PHE	2.0
2	CB	108	ARG	2.0
2	CB	126	PHE	2.0
13	CM	24	GLY	2.0
17	CQ	11	ARG	2.0
21	AU	12	PHE	2.0
22	DA	308	G	2.0
22	DA	338	G	2.0
22	DA	879	G	2.0
22	DA	942	G	2.0
22	DA	1216	G	2.0
22	DA	1271	G	2.0
22	DA	1984	G	2.0
42	DU	22	ARG	2.0
2	CB	60	ILE	2.0
13	CM	73	ILE	2.0
19	AS	33	THR	2.0

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Mol	Chain	Res	Type	RSRZ
19	CS	45	ILE	2.0
22	BA	714	U	2.0
22	BA	1083	U	2.0
22	DA	2506	U	2.0
24	DC	50	THR	2.0
30	BI	109	ILE	2.0
43	DV	70	ILE	2.0
12	AL	17	ALA	2.0
27	BF	70	ALA	2.0
7	CG	90	GLU	2.0
5	CE	26	LYS	2.0
14	AN	3	LYS	2.0
17	AQ	16	LYS	2.0
18	AR	51	TYR	2.0
20	CT	5	LYS	2.0
20	CT	16	LYS	2.0
53	B5	206	LYS	2.0
40	DS	82	MET	2.0
6	CF	17	GLN	2.0
9	AI	111	VAL	2.0
9	CI	29	VAL	2.0
9	CI	47	VAL	2.0
12	CL	98	VAL	2.0
15	AO	29	VAL	2.0
20	CT	20	HIS	2.0
26	DE	4	VAL	2.0
27	DF	5	HIS	2.0
29	BH	37	VAL	2.0
29	BH	78	VAL	2.0
29	BH	128	HIS	2.0
35	DN	48	VAL	2.0
38	DQ	71	GLN	2.0
39	DR	47	VAL	2.0
39	DR	96	VAL	2.0
52	D4	17	VAL	2.0
1	CA	996	A	2.0
7	CG	120	LEU	2.0
12	AL	24	LEU	2.0
22	DA	101	A	2.0
22	DA	1591	A	2.0
24	DC	176	LEU	2.0
29	DH	75	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
44	DW	21	LEU	2.0
46	DY	37	LEU	2.0
14	CN	69	ARG	2.0
19	CS	32	ARG	2.0
20	CT	84	ASN	2.0
25	DD	59	ARG	2.0
40	DS	92	ARG	2.0
44	DW	39	ARG	2.0
24	BC	237	GLY	2.0
25	DD	153	GLY	2.0
30	DI	119	GLY	2.0
31	DJ	107	GLY	2.0
1	AA	87	C	2.0
22	DA	341	C	2.0
22	DA	1345	C	2.0
22	DA	1843	C	2.0
2	CB	20	THR	2.0
11	AK	33	THR	2.0
24	DC	211	ALA	2.0
28	DG	7	ALA	2.0
42	DU	102	THR	2.0
43	DV	74	ALA	2.0
1	CA	218	U	2.0
1	CA	986	U	2.0
1	CA	1007	U	2.0
1	CA	1049	U	2.0
22	DA	235	U	2.0
22	DA	2011	U	2.0
1	CA	86	G	2.0
1	CA	113	G	2.0
1	CA	973	G	2.0
2	AB	140	GLU	2.0
5	CE	156	LYS	2.0
10	CJ	27	GLU	2.0
19	CS	70	LYS	2.0
22	DA	110	G	2.0
22	DA	389	G	2.0
22	DA	2410	G	2.0
32	DK	110	GLU	2.0
44	DW	29	GLU	2.0
52	D4	32	LYS	2.0
3	AC	167	TRP	2.0

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Mol	Chain	Res	Type	RSRZ
9	CI	57	MET	2.0
13	AM	97	VAL	2.0
29	DH	31	VAL	2.0
45	DX	51	VAL	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3132	1/1	0.31	0.41	83,83,83,83	0
54	MG	DA	3062	1/1	0.41	0.73	73,73,73,73	0
54	MG	DA	3042	1/1	0.43	0.20	67,67,67,67	0
54	MG	CA	1635	1/1	0.53	0.12	91,91,91,91	0
54	MG	DA	3134	1/1	0.61	0.37	75,75,75,75	0
54	MG	BA	3057	1/1	0.64	0.28	37,37,37,37	0
54	MG	DA	3073	1/1	0.65	0.37	76,76,76,76	0
54	MG	DA	3041	1/1	0.67	0.13	62,62,62,62	0
54	MG	BA	3104	1/1	0.67	0.19	16,16,16,16	0
54	MG	DA	3160	1/1	0.68	0.12	47,47,47,47	0
54	MG	DA	3078	1/1	0.69	0.17	64,64,64,64	0
54	MG	BA	3062	1/1	0.69	0.34	36,36,36,36	0
54	MG	DA	3145	1/1	0.71	0.16	60,60,60,60	0
54	MG	DA	3049	1/1	0.72	0.15	84,84,84,84	0
54	MG	DA	3016	1/1	0.72	0.30	65,65,65,65	0
54	MG	DA	3144	1/1	0.74	0.37	57,57,57,57	0
54	MG	DA	3129	1/1	0.75	0.11	65,65,65,65	0
54	MG	AA	1655	1/1	0.75	0.27	50,50,50,50	0
54	MG	AA	1645	1/1	0.75	0.12	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1647	1/1	0.76	0.09	40,40,40,40	0
54	MG	CA	1633	1/1	0.76	0.29	61,61,61,61	0
54	MG	CA	1627	1/1	0.77	0.26	69,69,69,69	0
54	MG	DA	3136	1/1	0.78	0.22	67,67,67,67	0
54	MG	CA	1649	1/1	0.78	0.19	48,48,48,48	0
54	MG	DA	3020	1/1	0.79	0.18	75,75,75,75	0
54	MG	DA	3127	1/1	0.79	0.12	59,59,59,59	0
54	MG	AA	1658	1/1	0.79	0.14	47,47,47,47	0
54	MG	CA	1650	1/1	0.80	0.09	45,45,45,45	0
54	MG	DA	3043	1/1	0.80	0.22	68,68,68,68	0
54	MG	DA	3094	1/1	0.80	0.20	78,78,78,78	0
54	MG	DA	3120	1/1	0.80	0.26	80,80,80,80	0
54	MG	DA	3035	1/1	0.80	0.18	52,52,52,52	0
54	MG	BA	3155	1/1	0.80	0.29	37,37,37,37	0
54	MG	CA	1655	1/1	0.81	0.08	53,53,53,53	0
54	MG	DA	3100	1/1	0.81	0.28	68,68,68,68	0
54	MG	DA	3146	1/1	0.81	0.12	54,54,54,54	0
54	MG	DA	3152	1/1	0.81	0.20	54,54,54,54	0
54	MG	DA	3153	1/1	0.81	0.12	56,56,56,56	0
54	MG	DA	3104	1/1	0.81	0.20	59,59,59,59	0
54	MG	DA	3147	1/1	0.82	0.07	45,45,45,45	0
54	MG	BA	3016	1/1	0.82	0.19	67,67,67,67	0
54	MG	BA	3171	1/1	0.82	0.22	34,34,34,34	0
54	MG	AA	1660	1/1	0.82	0.24	38,38,38,38	0
54	MG	BA	3059	1/1	0.83	0.25	23,23,23,23	0
54	MG	DA	3072	1/1	0.83	0.16	63,63,63,63	0
54	MG	AA	1661	1/1	0.83	0.20	49,49,49,49	0
54	MG	DA	3029	1/1	0.83	0.29	63,63,63,63	0
54	MG	CA	1645	1/1	0.83	0.16	50,50,50,50	0
54	MG	DA	3125	1/1	0.84	0.18	76,76,76,76	0
54	MG	CA	1641	1/1	0.84	0.33	59,59,59,59	0
54	MG	DA	3030	1/1	0.84	0.17	61,61,61,61	0
54	MG	DA	3011	1/1	0.84	0.14	65,65,65,65	0
54	MG	DA	3151	1/1	0.84	0.15	53,53,53,53	0
54	MG	BA	3177	1/1	0.84	0.10	13,13,13,13	0
54	MG	CA	1654	1/1	0.84	0.11	40,40,40,40	0
54	MG	DA	3141	1/1	0.84	0.19	39,39,39,39	0
54	MG	DA	3027	1/1	0.85	0.25	60,60,60,60	0
54	MG	DA	3149	1/1	0.85	0.20	53,53,53,53	0
54	MG	DA	3154	1/1	0.85	0.08	63,63,63,63	0
54	MG	BA	3193	1/1	0.85	0.47	10,10,10,10	0
54	MG	D2	101	1/1	0.85	0.12	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1643	1/1	0.86	0.28	54,54,54,54	0
54	MG	DA	3138	1/1	0.86	0.20	42,42,42,42	0
54	MG	CA	1628	1/1	0.86	0.20	70,70,70,70	0
54	MG	CA	1630	1/1	0.86	0.22	81,81,81,81	0
54	MG	BA	3121	1/1	0.86	0.18	50,50,50,50	0
54	MG	DA	3155	1/1	0.86	0.10	43,43,43,43	0
54	MG	CA	1611	1/1	0.86	0.18	68,68,68,68	0
54	MG	AA	1665	1/1	0.86	0.13	48,48,48,48	0
54	MG	DA	3038	1/1	0.87	0.11	74,74,74,74	0
54	MG	AA	1638	1/1	0.87	0.10	57,57,57,57	0
54	MG	CM	201	1/1	0.87	0.23	50,50,50,50	0
54	MG	AA	1652	1/1	0.87	0.23	28,28,28,28	0
54	MG	DA	3095	1/1	0.87	0.09	75,75,75,75	0
54	MG	BA	3157	1/1	0.87	0.08	7,7,7,7	0
54	MG	DA	3139	1/1	0.87	0.22	35,35,35,35	0
54	MG	DA	3059	1/1	0.87	0.31	63,63,63,63	0
54	MG	DA	3159	1/1	0.87	0.14	57,57,57,57	0
54	MG	DA	3019	1/1	0.87	0.14	66,66,66,66	0
54	MG	DA	3070	1/1	0.87	0.17	69,69,69,69	0
54	MG	DA	3048	1/1	0.88	0.13	59,59,59,59	0
54	MG	AA	1659	1/1	0.88	0.07	43,43,43,43	0
54	MG	DA	3106	1/1	0.88	0.18	61,61,61,61	0
54	MG	DA	3058	1/1	0.88	0.18	65,65,65,65	0
54	MG	BA	3183	1/1	0.88	0.13	20,20,20,20	0
54	MG	DA	3003	1/1	0.88	0.18	65,65,65,65	0
54	MG	DA	3007	1/1	0.88	0.11	84,84,84,84	0
54	MG	BA	3108	1/1	0.88	0.07	0,0,0,0	0
54	MG	BA	3161	1/1	0.88	0.12	19,19,19,19	0
54	MG	CA	1652	1/1	0.88	0.14	45,45,45,45	0
54	MG	DA	3157	1/1	0.88	0.25	42,42,42,42	0
54	MG	DA	3093	1/1	0.88	0.21	79,79,79,79	0
54	MG	AA	1671	1/1	0.88	0.21	37,37,37,37	0
54	MG	DA	3166	1/1	0.88	0.31	41,41,41,41	0
54	MG	DA	3046	1/1	0.88	0.09	72,72,72,72	0
54	MG	DA	3061	1/1	0.89	0.21	69,69,69,69	0
54	MG	CA	1642	1/1	0.89	0.16	31,31,31,31	0
54	MG	AA	1663	1/1	0.89	0.10	51,51,51,51	0
54	MG	BA	3048	1/1	0.89	0.10	25,25,25,25	0
54	MG	AA	1653	1/1	0.89	0.22	40,40,40,40	0
54	MG	DA	3142	1/1	0.89	0.17	30,30,30,30	0
54	MG	CA	1604	1/1	0.89	0.12	80,80,80,80	0
54	MG	DA	3086	1/1	0.89	0.09	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3148	1/1	0.89	0.11	0,0,0,0	0
54	MG	CA	1653	1/1	0.89	0.05	48,48,48,48	0
54	MG	BA	3153	1/1	0.89	0.07	15,15,15,15	0
54	MG	BA	3154	1/1	0.89	0.08	11,11,11,11	0
54	MG	AA	1649	1/1	0.89	0.09	34,34,34,34	0
54	MG	BA	3015	1/1	0.89	0.09	22,22,22,22	0
54	MG	DA	3109	1/1	0.89	0.09	54,54,54,54	0
54	MG	DA	3113	1/1	0.89	0.20	56,56,56,56	0
54	MG	DA	3005	1/1	0.89	0.21	76,76,76,76	0
54	MG	BA	3073	1/1	0.89	0.14	30,30,30,30	0
54	MG	BA	3078	1/1	0.89	0.17	26,26,26,26	0
54	MG	DA	3165	1/1	0.89	0.12	46,46,46,46	0
54	MG	DA	3012	1/1	0.89	0.25	54,54,54,54	0
54	MG	DA	3167	1/1	0.89	0.11	39,39,39,39	0
54	MG	DA	3015	1/1	0.89	0.14	57,57,57,57	0
54	MG	BA	3174	1/1	0.90	0.07	24,24,24,24	0
54	MG	BA	3042	1/1	0.90	0.22	7,7,7,7	0
54	MG	BA	3180	1/1	0.90	0.18	10,10,10,10	0
54	MG	AA	1617	1/1	0.90	0.19	55,55,55,55	0
54	MG	CA	1636	1/1	0.90	0.17	92,92,92,92	0
54	MG	BA	3191	1/1	0.90	0.15	43,43,43,43	0
54	MG	BA	3116	1/1	0.90	0.10	29,29,29,29	0
54	MG	DA	3107	1/1	0.90	0.08	47,47,47,47	0
54	MG	BA	3049	1/1	0.90	0.10	37,37,37,37	0
54	MG	AA	1632	1/1	0.90	0.09	41,41,41,41	0
54	MG	DA	3116	1/1	0.90	0.18	64,64,64,64	0
54	MG	CA	1615	1/1	0.90	0.19	38,38,38,38	0
54	MG	BA	3152	1/1	0.90	0.08	27,27,27,27	0
54	MG	BA	3151	1/1	0.91	0.09	44,44,44,44	0
54	MG	AA	1614	1/1	0.91	0.20	52,52,52,52	0
54	MG	DA	3014	1/1	0.91	0.14	59,59,59,59	0
54	MG	DA	3047	1/1	0.91	0.08	60,60,60,60	0
54	MG	BA	3172	1/1	0.91	0.09	22,22,22,22	0
54	MG	AA	1669	1/1	0.91	0.13	28,28,28,28	0
54	MG	DA	3148	1/1	0.91	0.10	47,47,47,47	0
54	MG	BA	3031	1/1	0.91	0.10	10,10,10,10	0
54	MG	BA	3178	1/1	0.91	0.10	27,27,27,27	0
54	MG	DA	3114	1/1	0.91	0.09	57,57,57,57	0
54	MG	DA	3026	1/1	0.91	0.08	43,43,43,43	0
54	MG	BA	3126	1/1	0.91	0.24	25,25,25,25	0
54	MG	DA	3065	1/1	0.91	0.16	46,46,46,46	0
54	MG	CA	1646	1/1	0.91	0.09	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3158	1/1	0.91	0.14	46,46,46,46	0
54	MG	DA	3006	1/1	0.91	0.09	76,76,76,76	0
54	MG	AA	1650	1/1	0.91	0.08	31,31,31,31	0
54	MG	DA	3036	1/1	0.91	0.12	65,65,65,65	0
54	MG	DA	3080	1/1	0.91	0.07	79,79,79,79	0
54	MG	DA	3008	1/1	0.91	0.23	70,70,70,70	0
54	MG	DA	3009	1/1	0.91	0.20	62,62,62,62	0
55	VIF	DA	3001	38/38	0.91	0.15	40,51,59,60	0
54	MG	AA	1672	1/1	0.92	0.14	40,40,40,40	0
54	MG	BA	3192	1/1	0.92	0.12	22,22,22,22	0
54	MG	DA	3140	1/1	0.92	0.17	36,36,36,36	0
54	MG	DA	3028	1/1	0.92	0.07	62,62,62,62	0
54	MG	DA	3079	1/1	0.92	0.09	74,74,74,74	0
54	MG	BA	3035	1/1	0.92	0.10	4,4,4,4	0
54	MG	BB	204	1/1	0.92	0.21	15,15,15,15	0
54	MG	DA	3033	1/1	0.92	0.18	53,53,53,53	0
54	MG	BA	3038	1/1	0.92	0.19	30,30,30,30	0
54	MG	BA	3065	1/1	0.92	0.17	2,2,2,2	0
54	MG	BA	3162	1/1	0.92	0.10	17,17,17,17	0
54	MG	BA	3133	1/1	0.92	0.19	48,48,48,48	0
54	MG	BA	3143	1/1	0.92	0.12	7,7,7,7	0
54	MG	AA	1602	1/1	0.92	0.14	40,40,40,40	0
54	MG	BA	3176	1/1	0.92	0.09	15,15,15,15	0
54	MG	BA	3150	1/1	0.92	0.11	0,0,0,0	0
54	MG	AA	1635	1/1	0.92	0.12	49,49,49,49	0
54	MG	BA	3081	1/1	0.92	0.10	28,28,28,28	0
54	MG	DA	3057	1/1	0.92	0.29	62,62,62,62	0
54	MG	BA	3181	1/1	0.92	0.15	8,8,8,8	0
54	MG	DA	3162	1/1	0.92	0.06	56,56,56,56	0
54	MG	DA	3164	1/1	0.92	0.10	50,50,50,50	0
54	MG	BA	3027	1/1	0.92	0.13	47,47,47,47	0
54	MG	CA	1644	1/1	0.92	0.11	38,38,38,38	0
54	MG	BA	3186	1/1	0.92	0.08	10,10,10,10	0
54	MG	BA	3190	1/1	0.92	0.09	19,19,19,19	0
54	MG	CA	1648	1/1	0.92	0.24	45,45,45,45	0
54	MG	BA	3146	1/1	0.93	0.06	12,12,12,12	0
54	MG	DA	3031	1/1	0.93	0.18	49,49,49,49	0
54	MG	AA	1612	1/1	0.93	0.06	33,33,33,33	0
54	MG	DA	3143	1/1	0.93	0.13	28,28,28,28	0
54	MG	CA	1621	1/1	0.93	0.08	63,63,63,63	0
54	MG	BA	3149	1/1	0.93	0.14	26,26,26,26	0
54	MG	BA	3113	1/1	0.93	0.07	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3114	1/1	0.93	0.09	18,18,18,18	0
54	MG	CA	1631	1/1	0.93	0.17	76,76,76,76	0
54	MG	DA	3105	1/1	0.93	0.09	57,57,57,57	0
54	MG	BA	3050	1/1	0.93	0.06	15,15,15,15	0
54	MG	CA	1634	1/1	0.93	0.07	55,55,55,55	0
54	MG	AA	1643	1/1	0.93	0.10	12,12,12,12	0
54	MG	AA	1627	1/1	0.93	0.14	50,50,50,50	0
54	MG	BA	3085	1/1	0.93	0.16	29,29,29,29	0
54	MG	BA	3189	1/1	0.93	0.10	25,25,25,25	0
54	MG	DA	3117	1/1	0.93	0.07	54,54,54,54	0
54	MG	BA	3140	1/1	0.93	0.13	0,0,0,0	0
54	MG	BA	3142	1/1	0.93	0.22	1,1,1,1	0
54	MG	BA	3012	1/1	0.93	0.10	17,17,17,17	0
54	MG	DA	3163	1/1	0.93	0.27	49,49,49,49	0
54	MG	BA	3163	1/1	0.93	0.11	31,31,31,31	0
54	MG	DA	3025	1/1	0.93	0.11	40,40,40,40	0
54	MG	BA	3195	1/1	0.93	0.08	31,31,31,31	0
54	MG	BA	3167	1/1	0.93	0.13	35,35,35,35	0
54	MG	DB	201	1/1	0.93	0.07	83,83,83,83	0
54	MG	BA	3145	1/1	0.93	0.18	37,37,37,37	0
54	MG	CA	1608	1/1	0.93	0.17	56,56,56,56	0
54	MG	DA	3074	1/1	0.94	0.12	49,49,49,49	0
54	MG	BA	3100	1/1	0.94	0.14	52,52,52,52	0
54	MG	CA	1639	1/1	0.94	0.07	32,32,32,32	0
54	MG	AA	1626	1/1	0.94	0.07	24,24,24,24	0
54	MG	DA	3150	1/1	0.94	0.35	41,41,41,41	0
54	MG	DA	3121	1/1	0.94	0.06	54,54,54,54	0
54	MG	DA	3124	1/1	0.94	0.07	52,52,52,52	0
54	MG	BA	3034	1/1	0.94	0.07	20,20,20,20	0
54	MG	DA	3089	1/1	0.94	0.07	57,57,57,57	0
54	MG	DA	3092	1/1	0.94	0.08	60,60,60,60	0
54	MG	DA	3156	1/1	0.94	0.09	44,44,44,44	0
54	MG	AA	1656	1/1	0.94	0.09	43,43,43,43	0
54	MG	DA	3133	1/1	0.94	0.14	51,51,51,51	0
54	MG	BA	3009	1/1	0.94	0.05	10,10,10,10	0
54	MG	DA	3135	1/1	0.94	0.07	41,41,41,41	0
54	MG	BA	3165	1/1	0.94	0.19	9,9,9,9	0
54	MG	AA	1666	1/1	0.94	0.14	25,25,25,25	0
54	MG	DA	3101	1/1	0.94	0.12	54,54,54,54	0
54	MG	CA	1629	1/1	0.94	0.06	67,67,67,67	0
54	MG	AA	1667	1/1	0.94	0.17	47,47,47,47	0
54	MG	AA	1668	1/1	0.94	0.06	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1628	1/1	0.94	0.06	45,45,45,45	0
54	MG	BA	3139	1/1	0.94	0.24	0,0,0,0	0
54	MG	BA	3092	1/1	0.94	0.06	20,20,20,20	0
54	MG	AA	1662	1/1	0.95	0.05	25,25,25,25	0
54	MG	DA	3090	1/1	0.95	0.22	66,66,66,66	0
54	MG	BA	3137	1/1	0.95	0.18	44,44,44,44	0
54	MG	CA	1632	1/1	0.95	0.08	66,66,66,66	0
54	MG	BA	3168	1/1	0.95	0.15	32,32,32,32	0
54	MG	BA	3169	1/1	0.95	0.07	25,25,25,25	0
54	MG	BA	3138	1/1	0.95	0.23	8,8,8,8	0
54	MG	BA	3006	1/1	0.95	0.09	46,46,46,46	0
54	MG	DA	3102	1/1	0.95	0.08	49,49,49,49	0
54	MG	DA	3103	1/1	0.95	0.07	45,45,45,45	0
54	MG	CA	1637	1/1	0.95	0.16	52,52,52,52	0
54	MG	AA	1644	1/1	0.95	0.10	41,41,41,41	0
54	MG	BN	201	1/1	0.95	0.10	6,6,6,6	0
54	MG	DA	3050	1/1	0.95	0.13	58,58,58,58	0
54	MG	DA	3055	1/1	0.95	0.12	48,48,48,48	0
54	MG	DA	3112	1/1	0.95	0.15	67,67,67,67	0
54	MG	BA	3141	1/1	0.95	0.05	8,8,8,8	0
54	MG	CA	1605	1/1	0.95	0.11	57,57,57,57	0
54	MG	BA	3115	1/1	0.95	0.08	11,11,11,11	0
54	MG	AA	1670	1/1	0.95	0.09	50,50,50,50	0
54	MG	CA	1614	1/1	0.95	0.05	45,45,45,45	0
54	MG	DA	3022	1/1	0.95	0.09	50,50,50,50	0
54	MG	CA	1647	1/1	0.95	0.16	19,19,19,19	0
54	MG	DA	3161	1/1	0.95	0.07	39,39,39,39	0
54	MG	BA	3159	1/1	0.95	0.12	25,25,25,25	0
54	MG	CA	1616	1/1	0.95	0.07	31,31,31,31	0
54	MG	BA	3117	1/1	0.95	0.12	40,40,40,40	0
54	MG	DA	3076	1/1	0.95	0.10	55,55,55,55	0
54	MG	CA	1651	1/1	0.95	0.07	54,54,54,54	0
54	MG	AA	1664	1/1	0.95	0.07	30,30,30,30	0
54	MG	BA	3184	1/1	0.95	0.12	21,21,21,21	0
54	MG	BA	3075	1/1	0.95	0.09	3,3,3,3	0
54	MG	DA	3137	1/1	0.95	0.13	69,69,69,69	0
54	MG	AA	1630	1/1	0.96	0.08	53,53,53,53	0
54	MG	BA	3123	1/1	0.96	0.05	17,17,17,17	0
54	MG	AA	1609	1/1	0.96	0.09	28,28,28,28	0
54	MG	BA	3127	1/1	0.96	0.08	7,7,7,7	0
54	MG	BA	3080	1/1	0.96	0.04	50,50,50,50	0
54	MG	BA	3134	1/1	0.96	0.09	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3135	1/1	0.96	0.18	46,46,46,46	0
54	MG	DA	3082	1/1	0.96	0.05	42,42,42,42	0
54	MG	DA	3084	1/1	0.96	0.09	50,50,50,50	0
54	MG	DA	3085	1/1	0.96	0.08	72,72,72,72	0
54	MG	CA	1601	1/1	0.96	0.06	34,34,34,34	0
54	MG	AA	1625	1/1	0.96	0.06	35,35,35,35	0
54	MG	BA	3082	1/1	0.96	0.07	12,12,12,12	0
54	MG	AA	1601	1/1	0.96	0.06	53,53,53,53	0
54	MG	DA	3034	1/1	0.96	0.09	54,54,54,54	0
54	MG	BA	3086	1/1	0.96	0.15	10,10,10,10	0
54	MG	BA	3170	1/1	0.96	0.10	29,29,29,29	0
54	MG	BA	3090	1/1	0.96	0.12	28,28,28,28	0
54	MG	BA	3002	1/1	0.96	0.04	15,15,15,15	0
54	MG	CA	1618	1/1	0.96	0.06	38,38,38,38	0
54	MG	AA	1640	1/1	0.96	0.09	41,41,41,41	0
54	MG	DA	3044	1/1	0.96	0.06	54,54,54,54	0
54	MG	DA	3045	1/1	0.96	0.13	68,68,68,68	0
54	MG	DA	3002	1/1	0.96	0.06	52,52,52,52	0
54	MG	BA	3101	1/1	0.96	0.06	8,8,8,8	0
54	MG	AA	1654	1/1	0.96	0.12	25,25,25,25	0
54	MG	BA	3147	1/1	0.96	0.27	25,25,25,25	0
54	MG	AA	1605	1/1	0.96	0.09	36,36,36,36	0
54	MG	DA	3053	1/1	0.96	0.04	44,44,44,44	0
54	MG	AA	1616	1/1	0.96	0.06	57,57,57,57	0
54	MG	AA	1657	1/1	0.96	0.08	28,28,28,28	0
54	MG	AA	1629	1/1	0.96	0.08	42,42,42,42	0
54	MG	BA	3185	1/1	0.96	0.07	16,16,16,16	0
54	MG	DA	3060	1/1	0.96	0.05	43,43,43,43	0
54	MG	BA	3029	1/1	0.96	0.21	38,38,38,38	0
54	MG	BA	3188	1/1	0.96	0.05	19,19,19,19	0
54	MG	DB	203	1/1	0.96	0.05	70,70,70,70	0
54	MG	BA	3030	1/1	0.96	0.05	4,4,4,4	0
55	VIF	BA	3001	38/38	0.96	0.08	3,9,14,18	0
54	MG	DA	3017	1/1	0.96	0.20	65,65,65,65	0
54	MG	BA	3164	1/1	0.97	0.08	27,27,27,27	0
54	MG	DA	3111	1/1	0.97	0.14	45,45,45,45	0
54	MG	CA	1602	1/1	0.97	0.06	69,69,69,69	0
54	MG	CA	1603	1/1	0.97	0.07	43,43,43,43	0
54	MG	AA	1603	1/1	0.97	0.14	48,48,48,48	0
54	MG	DA	3115	1/1	0.97	0.07	45,45,45,45	0
54	MG	BA	3004	1/1	0.97	0.06	24,24,24,24	0
54	MG	CA	1607	1/1	0.97	0.07	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3119	1/1	0.97	0.12	52,52,52,52	0
54	MG	DA	3052	1/1	0.97	0.04	32,32,32,32	0
54	MG	BA	3061	1/1	0.97	0.17	22,22,22,22	0
54	MG	AA	1610	1/1	0.97	0.11	53,53,53,53	0
54	MG	DA	3056	1/1	0.97	0.08	52,52,52,52	0
54	MG	BA	3105	1/1	0.97	0.04	9,9,9,9	0
54	MG	DA	3128	1/1	0.97	0.08	61,61,61,61	0
54	MG	BA	3107	1/1	0.97	0.07	1,1,1,1	0
54	MG	BA	3033	1/1	0.97	0.05	15,15,15,15	0
54	MG	BA	3173	1/1	0.97	0.13	24,24,24,24	0
54	MG	CA	1620	1/1	0.97	0.07	49,49,49,49	0
54	MG	BA	3144	1/1	0.97	0.13	14,14,14,14	0
54	MG	DA	3063	1/1	0.97	0.22	52,52,52,52	0
54	MG	CA	1623	1/1	0.97	0.07	42,42,42,42	0
54	MG	DA	3068	1/1	0.97	0.05	43,43,43,43	0
54	MG	DA	3069	1/1	0.97	0.04	56,56,56,56	0
54	MG	CA	1624	1/1	0.97	0.05	33,33,33,33	0
54	MG	CA	1626	1/1	0.97	0.06	48,48,48,48	0
54	MG	BA	3175	1/1	0.97	0.05	11,11,11,11	0
54	MG	BA	3111	1/1	0.97	0.06	0,0,0,0	0
54	MG	BA	3112	1/1	0.97	0.05	16,16,16,16	0
54	MG	DA	3077	1/1	0.97	0.12	56,56,56,56	0
54	MG	BA	3069	1/1	0.97	0.06	2,2,2,2	0
54	MG	BA	3179	1/1	0.97	0.18	7,7,7,7	0
54	MG	AA	1636	1/1	0.97	0.13	31,31,31,31	0
54	MG	DA	3081	1/1	0.97	0.05	67,67,67,67	0
54	MG	BA	3010	1/1	0.97	0.06	3,3,3,3	0
54	MG	DA	3083	1/1	0.97	0.06	52,52,52,52	0
54	MG	BA	3182	1/1	0.97	0.04	26,26,26,26	0
54	MG	BA	3076	1/1	0.97	0.09	29,29,29,29	0
54	MG	BA	3036	1/1	0.97	0.24	9,9,9,9	0
54	MG	DA	3087	1/1	0.97	0.04	48,48,48,48	0
54	MG	DA	3088	1/1	0.97	0.04	53,53,53,53	0
54	MG	BA	3118	1/1	0.97	0.07	7,7,7,7	0
54	MG	CA	1638	1/1	0.97	0.06	54,54,54,54	0
54	MG	BA	3120	1/1	0.97	0.07	24,24,24,24	0
54	MG	DA	3032	1/1	0.97	0.06	46,46,46,46	0
54	MG	AA	1646	1/1	0.97	0.07	39,39,39,39	0
54	MG	AA	1606	1/1	0.97	0.04	36,36,36,36	0
54	MG	DA	3099	1/1	0.97	0.06	37,37,37,37	0
54	MG	BA	3156	1/1	0.97	0.05	17,17,17,17	0
54	MG	AA	1639	1/1	0.97	0.06	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3021	1/1	0.97	0.14	0,0,0,0	0
54	MG	DA	3039	1/1	0.97	0.06	54,54,54,54	0
54	MG	BA	3160	1/1	0.97	0.15	16,16,16,16	0
54	MG	AA	1608	1/1	0.97	0.04	20,20,20,20	0
54	MG	DQ	201	1/1	0.97	0.23	36,36,36,36	0
54	MG	BA	3088	1/1	0.97	0.10	8,8,8,8	0
54	MG	BA	3054	1/1	0.97	0.04	6,6,6,6	0
54	MG	DA	3108	1/1	0.97	0.05	60,60,60,60	0
54	MG	BA	3067	1/1	0.98	0.04	4,4,4,4	0
54	MG	CA	1617	1/1	0.98	0.08	33,33,33,33	0
54	MG	BA	3068	1/1	0.98	0.06	8,8,8,8	0
54	MG	DA	3118	1/1	0.98	0.04	56,56,56,56	0
54	MG	AA	1631	1/1	0.98	0.06	39,39,39,39	0
54	MG	DA	3010	1/1	0.98	0.04	57,57,57,57	0
54	MG	BA	3071	1/1	0.98	0.06	45,45,45,45	0
54	MG	DA	3064	1/1	0.98	0.07	43,43,43,43	0
54	MG	BA	3072	1/1	0.98	0.04	6,6,6,6	0
54	MG	DA	3126	1/1	0.98	0.09	51,51,51,51	0
54	MG	DA	3066	1/1	0.98	0.04	40,40,40,40	0
54	MG	AA	1604	1/1	0.98	0.04	43,43,43,43	0
54	MG	CA	1625	1/1	0.98	0.06	26,26,26,26	0
54	MG	DA	3131	1/1	0.98	0.04	58,58,58,58	0
54	MG	BA	3017	1/1	0.98	0.10	9,9,9,9	0
54	MG	DA	3071	1/1	0.98	0.04	75,75,75,75	0
54	MG	BA	3046	1/1	0.98	0.05	13,13,13,13	0
54	MG	DA	3018	1/1	0.98	0.04	53,53,53,53	0
54	MG	BA	3077	1/1	0.98	0.07	11,11,11,11	0
54	MG	DA	3075	1/1	0.98	0.04	47,47,47,47	0
54	MG	BA	3047	1/1	0.98	0.07	19,19,19,19	0
54	MG	DA	3021	1/1	0.98	0.10	50,50,50,50	0
54	MG	BA	3079	1/1	0.98	0.04	30,30,30,30	0
54	MG	DA	3024	1/1	0.98	0.04	63,63,63,63	0
54	MG	AA	1634	1/1	0.98	0.04	40,40,40,40	0
54	MG	BA	3187	1/1	0.98	0.18	16,16,16,16	0
54	MG	BA	3119	1/1	0.98	0.04	9,9,9,9	0
54	MG	BA	3025	1/1	0.98	0.05	4,4,4,4	0
54	MG	AA	1641	1/1	0.98	0.04	16,16,16,16	0
54	MG	BA	3122	1/1	0.98	0.05	10,10,10,10	0
54	MG	BA	3005	1/1	0.98	0.06	32,32,32,32	0
54	MG	BA	3124	1/1	0.98	0.14	0,0,0,0	0
54	MG	BA	3194	1/1	0.98	0.04	4,4,4,4	0
54	MG	BA	3125	1/1	0.98	0.09	6,6,6,6	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BB	202	1/1	0.98	0.04	12,12,12,12	0
54	MG	DA	3091	1/1	0.98	0.09	55,55,55,55	0
54	MG	AA	1651	1/1	0.98	0.24	36,36,36,36	0
54	MG	AA	1620	1/1	0.98	0.04	51,51,51,51	0
54	MG	BA	3129	1/1	0.98	0.04	7,7,7,7	0
54	MG	DA	3040	1/1	0.98	0.04	39,39,39,39	0
54	MG	DA	3097	1/1	0.98	0.04	49,49,49,49	0
54	MG	BA	3131	1/1	0.98	0.05	0,0,0,0	0
54	MG	BA	3089	1/1	0.98	0.10	13,13,13,13	0
54	MG	AA	1623	1/1	0.98	0.04	42,42,42,42	0
54	MG	AA	1637	1/1	0.98	0.04	17,17,17,17	0
54	MG	CA	1606	1/1	0.98	0.07	49,49,49,49	0
54	MG	BA	3093	1/1	0.98	0.03	43,43,43,43	0
54	MG	BA	3094	1/1	0.98	0.12	23,23,23,23	0
54	MG	CA	1609	1/1	0.98	0.05	57,57,57,57	0
54	MG	CA	1610	1/1	0.98	0.04	57,57,57,57	0
54	MG	BA	3095	1/1	0.98	0.05	26,26,26,26	0
54	MG	DB	202	1/1	0.98	0.04	49,49,49,49	0
54	MG	CA	1612	1/1	0.98	0.09	43,43,43,43	0
54	MG	CA	1613	1/1	0.98	0.06	16,16,16,16	0
54	MG	BA	3063	1/1	0.98	0.18	41,41,41,41	0
54	MG	DA	3004	1/1	0.98	0.04	58,58,58,58	0
54	MG	BA	3014	1/1	0.98	0.09	0,0,0,0	0
56	ZN	B4	101	1/1	0.98	0.05	102,102,102,102	0
56	ZN	D4	101	1/1	0.98	0.03	78,78,78,78	0
54	MG	DA	3054	1/1	0.99	0.07	40,40,40,40	0
54	MG	BA	3110	1/1	0.99	0.11	4,4,4,4	0
54	MG	BA	3007	1/1	0.99	0.07	17,17,17,17	0
54	MG	BA	3008	1/1	0.99	0.06	29,29,29,29	0
54	MG	BA	3158	1/1	0.99	0.15	17,17,17,17	0
54	MG	BA	3032	1/1	0.99	0.14	6,6,6,6	0
54	MG	AA	1621	1/1	0.99	0.06	30,30,30,30	0
54	MG	AA	1648	1/1	0.99	0.04	54,54,54,54	0
54	MG	DA	3122	1/1	0.99	0.06	42,42,42,42	0
54	MG	DA	3123	1/1	0.99	0.08	35,35,35,35	0
54	MG	AA	1622	1/1	0.99	0.16	17,17,17,17	0
54	MG	BA	3074	1/1	0.99	0.04	3,3,3,3	0
54	MG	BA	3013	1/1	0.99	0.05	3,3,3,3	0
54	MG	BA	3037	1/1	0.99	0.05	1,1,1,1	0
54	MG	BA	3166	1/1	0.99	0.03	6,6,6,6	0
54	MG	DA	3067	1/1	0.99	0.04	48,48,48,48	0
54	MG	DA	3130	1/1	0.99	0.07	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1613	1/1	0.99	0.03	25,25,25,25	0
54	MG	BA	3040	1/1	0.99	0.04	3,3,3,3	0
54	MG	DA	3013	1/1	0.99	0.09	40,40,40,40	0
54	MG	BA	3041	1/1	0.99	0.02	7,7,7,7	0
54	MG	AA	1624	1/1	0.99	0.03	30,30,30,30	0
54	MG	CA	1619	1/1	0.99	0.05	30,30,30,30	0
54	MG	BA	3043	1/1	0.99	0.07	11,11,11,11	0
54	MG	AA	1642	1/1	0.99	0.03	21,21,21,21	0
54	MG	CA	1622	1/1	0.99	0.03	53,53,53,53	0
54	MG	BA	3083	1/1	0.99	0.06	0,0,0,0	0
54	MG	BA	3084	1/1	0.99	0.09	10,10,10,10	0
54	MG	BA	3128	1/1	0.99	0.10	5,5,5,5	0
54	MG	DA	3023	1/1	0.99	0.08	36,36,36,36	0
54	MG	AA	1607	1/1	0.99	0.02	47,47,47,47	0
54	MG	BA	3130	1/1	0.99	0.08	4,4,4,4	0
54	MG	BA	3018	1/1	0.99	0.06	4,4,4,4	0
54	MG	BA	3087	1/1	0.99	0.04	0,0,0,0	0
54	MG	BA	3019	1/1	0.99	0.05	17,17,17,17	0
54	MG	BA	3020	1/1	0.99	0.04	24,24,24,24	0
54	MG	BA	3136	1/1	0.99	0.05	1,1,1,1	0
54	MG	BA	3052	1/1	0.99	0.03	8,8,8,8	0
54	MG	BA	3053	1/1	0.99	0.06	6,6,6,6	0
54	MG	BA	3003	1/1	0.99	0.08	19,19,19,19	0
54	MG	BA	3022	1/1	0.99	0.03	3,3,3,3	0
54	MG	BA	3058	1/1	0.99	0.07	11,11,11,11	0
54	MG	BA	3096	1/1	0.99	0.03	17,17,17,17	0
54	MG	DA	3037	1/1	0.99	0.04	46,46,46,46	0
54	MG	BA	3097	1/1	0.99	0.04	18,18,18,18	0
54	MG	DA	3096	1/1	0.99	0.08	62,62,62,62	0
54	MG	CA	1640	1/1	0.99	0.12	22,22,22,22	0
54	MG	DA	3098	1/1	0.99	0.08	46,46,46,46	0
54	MG	BA	3098	1/1	0.99	0.05	5,5,5,5	0
54	MG	BA	3099	1/1	0.99	0.04	5,5,5,5	0
54	MG	BA	3024	1/1	0.99	0.05	5,5,5,5	0
54	MG	AA	1618	1/1	0.99	0.03	41,41,41,41	0
54	MG	BA	3102	1/1	0.99	0.04	10,10,10,10	0
54	MG	BA	3103	1/1	0.99	0.06	0,0,0,0	0
54	MG	BB	201	1/1	0.99	0.04	20,20,20,20	0
54	MG	BA	3026	1/1	0.99	0.05	9,9,9,9	0
54	MG	BB	203	1/1	0.99	0.03	6,6,6,6	0
54	MG	AA	1619	1/1	0.99	0.15	44,44,44,44	0
54	MG	BA	3106	1/1	0.99	0.07	3,3,3,3	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3110	1/1	0.99	0.11	36,36,36,36	0
54	MG	DA	3051	1/1	0.99	0.05	43,43,43,43	0
54	MG	AA	1615	1/1	0.99	0.05	43,43,43,43	0
54	MG	BA	3066	1/1	0.99	0.03	6,6,6,6	0
54	MG	BA	3023	1/1	1.00	0.06	0,0,0,0	0
54	MG	BA	3044	1/1	1.00	0.03	4,4,4,4	0
54	MG	BA	3045	1/1	1.00	0.02	14,14,14,14	0
54	MG	BA	3055	1/1	1.00	0.04	5,5,5,5	0
54	MG	BA	3056	1/1	1.00	0.04	7,7,7,7	0
54	MG	BA	3070	1/1	1.00	0.03	0,0,0,0	0
54	MG	BA	3132	1/1	1.00	0.06	2,2,2,2	0
54	MG	BA	3028	1/1	1.00	0.03	4,4,4,4	0
54	MG	BA	3039	1/1	1.00	0.10	2,2,2,2	0
54	MG	BA	3011	1/1	1.00	0.03	3,3,3,3	0
54	MG	BA	3060	1/1	1.00	0.03	16,16,16,16	0
54	MG	AA	1611	1/1	1.00	0.03	25,25,25,25	0
54	MG	AA	1633	1/1	1.00	0.05	29,29,29,29	0
54	MG	BA	3091	1/1	1.00	0.02	4,4,4,4	0
54	MG	BA	3051	1/1	1.00	0.06	11,11,11,11	0
54	MG	BA	3064	1/1	1.00	0.05	0,0,0,0	0
54	MG	BA	3109	1/1	1.00	0.04	20,20,20,20	0

6.5 Other polymers (i)

There are no such residues in this entry.