Full wwPDB X-ray Structure Validation Report ⓘ

Sep 26, 2023 – 11:50 PM EDT

PDB ID	:	6BY1
Title	:	E. coli pH03H9 complex
Authors	:	Amiri, H.; Noller, H.F.
Deposited on	:	2017-12-19
Resolution	:	3.94 Å(reported)

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

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

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

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

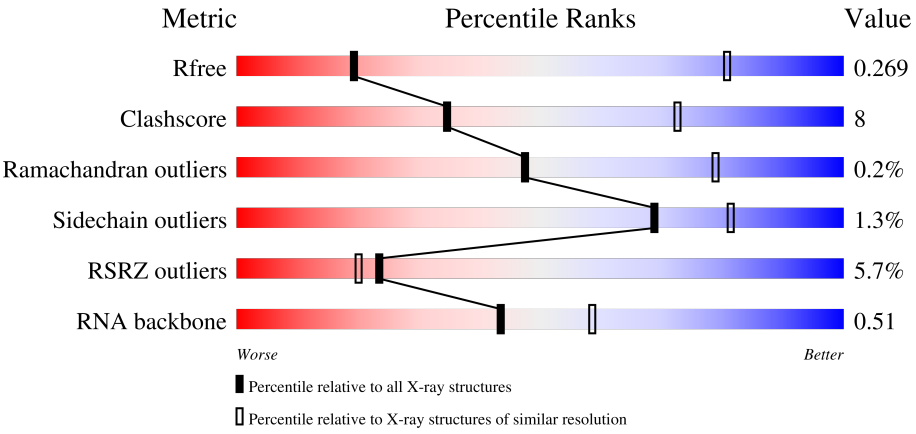
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.94 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1036 (4.20-3.68)
Clashscore	141614	1009 (4.18-3.70)
Ramachandran outliers	138981	1057 (4.20-3.68)
Sidechain outliers	138945	1049 (4.20-3.68)
RSRZ outliers	127900	1007 (4.24-3.64)
RNA backbone	3102	1041 (4.84-3.00)

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

Mol	Chain	Length	Quality of chain
1	AA	1541	45% 44% 10%
1	BA	1541	44% 45% 9%
2	CA	2904	52% 39% 8%
2	DA	2904	48% 42% 9%

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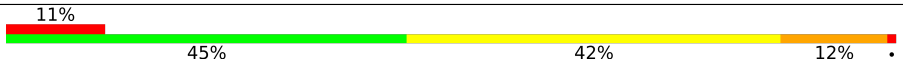
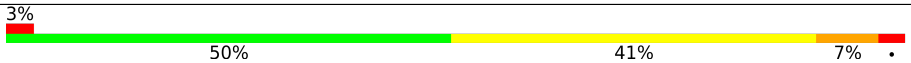
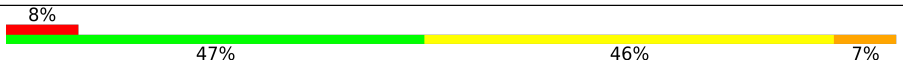
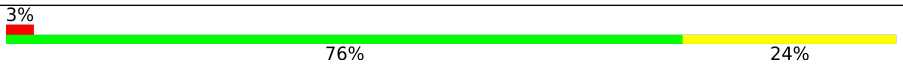
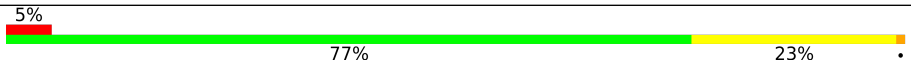
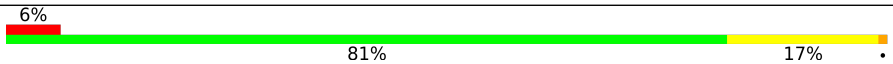
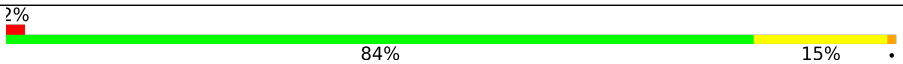
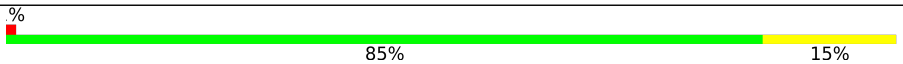
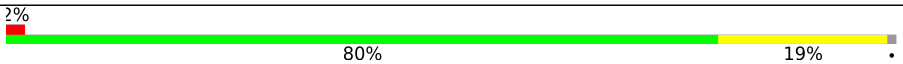
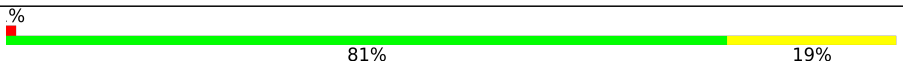
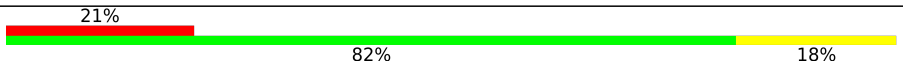
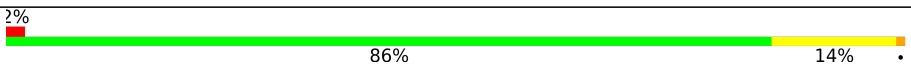
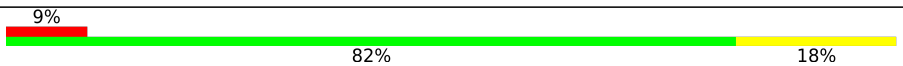
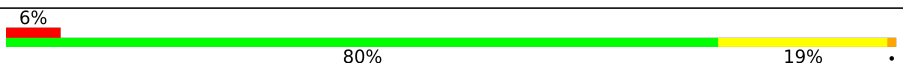
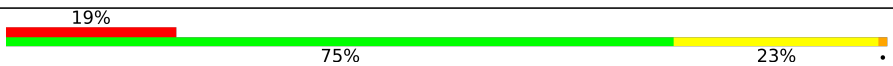
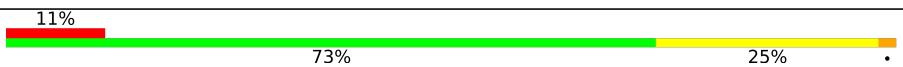
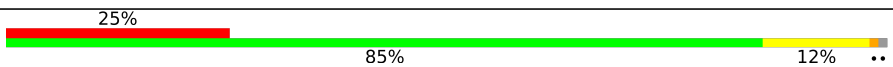
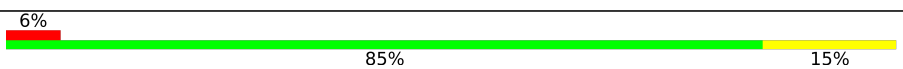
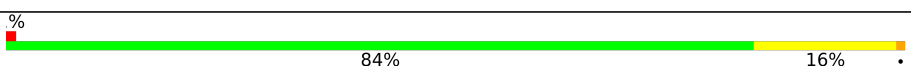
Mol	Chain	Length	Quality of chain
3	CB	118	
3	DB	118	
4	AV	76	
4	AW	76	
4	AY	76	
4	BV	76	
4	BW	76	
5	CC	271	
5	DC	271	
6	CD	209	
6	DD	209	
7	CE	181	
7	DE	181	
8	CF	177	
8	DF	177	
9	CG	176	
9	DG	176	
10	CH	149	
10	DH	149	
11	C5	109	
12	CI	72	
12	DI	72	
13	CJ	142	
13	DJ	142	
14	CK	122	

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Mol	Chain	Length	Quality of chain
14	DK	122	6% 77% 23%
15	CL	143	6% 75% 24%
15	DL	143	5% 80% 20%
16	CM	136	90% 8%
16	DM	136	18% 79% 21%
17	CN	121	73% 26%
17	DN	121	2% 81% 17%
18	CO	116	3% 76% 23%
18	DO	116	25% 79% 20%
19	CP	114	5% 82% 18%
19	DP	114	4% 73% 26%
20	CQ	117	87% 13%
20	DQ	117	82% 18%
21	CR	103	86% 13%
21	DR	103	2% 80% 20%
22	CS	110	5% 85% 15%
22	DS	110	7% 85% 15%
23	CT	93	9% 80% 16%
23	DT	93	3% 90% 9%
24	CU	102	2% 85% 15%
24	DU	102	13% 79% 20%
25	CV	94	6% 78% 22%
25	DV	94	3% 82% 18%
26	CW	75	5% 77% 21%
26	DW	75	17% 79% 21%

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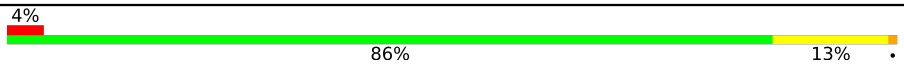
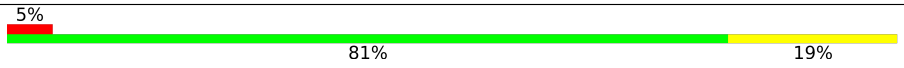
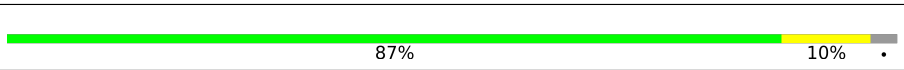
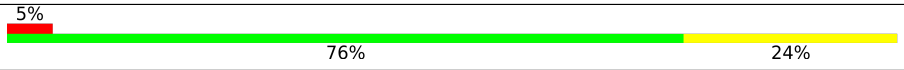
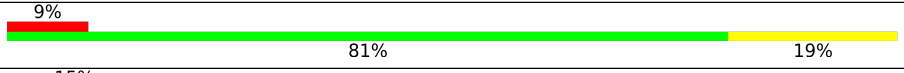
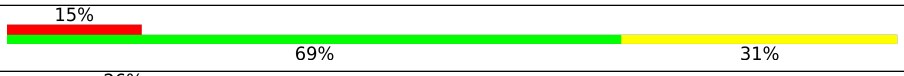
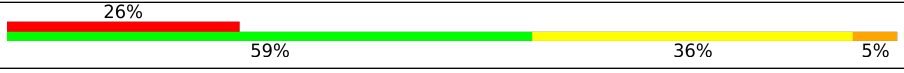
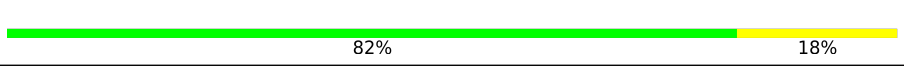
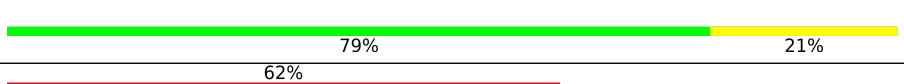
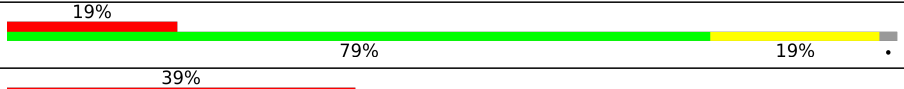
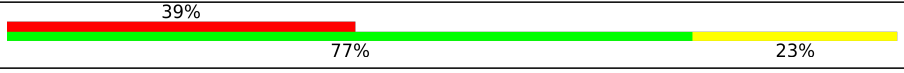
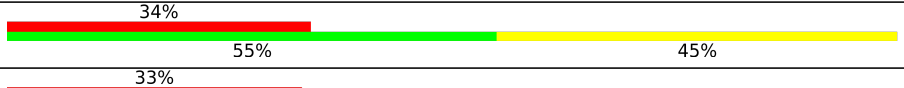
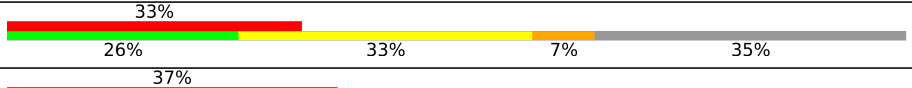
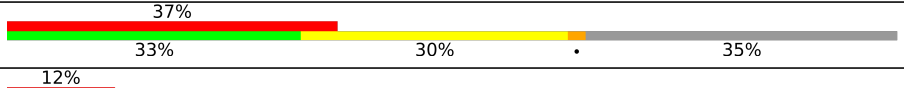
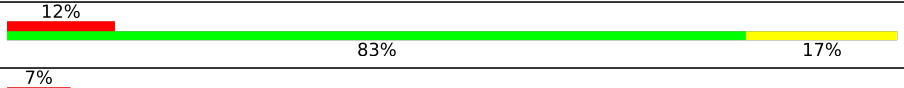
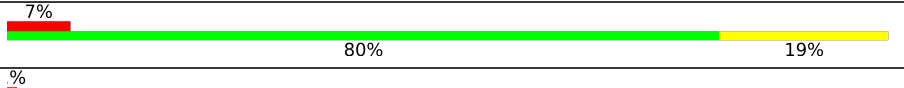
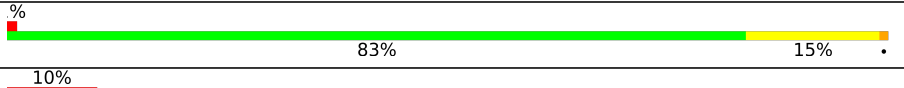
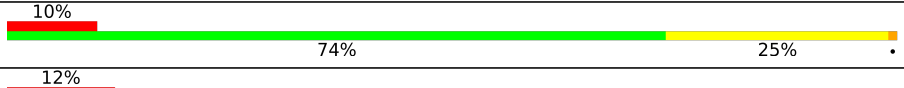
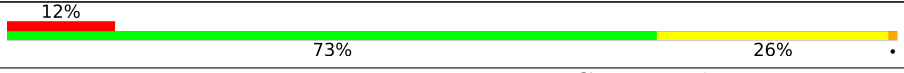
Mol	Chain	Length	Quality of chain
27	CX	77	
27	DX	77	
28	CY	63	
28	DY	63	
29	CZ	58	
29	DZ	58	
30	C0	39	
30	D0	39	
31	C1	56	
31	D1	56	
32	C2	50	
32	D2	50	
33	C3	46	
33	D3	46	
34	C4	62	
34	D4	62	
35	C6	38	
35	D6	38	
36	AX	46	
36	BX	46	
37	AB	225	
37	BB	225	
38	AC	206	
38	BC	206	
39	AD	205	

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Mol	Chain	Length	Quality of chain
39	BD	205	2% 72% 27%
40	AE	150	11% 76% 24%
40	BE	150	7% 77% 21%
41	AF	100	% 72% 28%
41	BF	100	15% 72% 26%
42	AG	179	8% 61% 15% 25%
42	BG	179	13% 62% 12% 26%
43	AH	129	6% 86% 13%
43	BH	129	3% 81% 19%
44	AI	130	14% 75% 19% 5%
44	BI	130	9% 58% 38%
45	AJ	98	16% 62% 37%
45	BJ	98	12% 71% 27%
46	AK	117	74% 25%
46	BK	117	14% 73% 26%
47	AL	123	16% 73% 26%
47	BL	123	7% 64% 34%
48	AM	114	10% 75% 24%
48	BM	114	7% 71% 28%
49	AN	101	12% 78% 17% 5%
49	BN	101	7% 72% 23% 5%
50	AO	89	80% 17%
50	BO	89	9% 85% 11%
51	AP	82	43% 85% 12%
51	BP	82	30% 78% 21%

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Mol	Chain	Length	Quality of chain
52	AQ	80	10% 71% 25%
52	BQ	80	20% 78% 21%
53	AR	55	7% 67% 31%
53	BR	55	15% 87% 13%
54	AS	79	10% 81% 19%
54	BS	79	20% 80% 20%
55	AT	85	4% 79% 20%
55	BT	85	6% 86% 14%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	AA	1640	-	-	-	X
56	MG	AA	1644	-	-	-	X
56	MG	BA	1608	-	-	-	X
56	MG	BA	1620	-	-	-	X
56	MG	BA	1628	-	-	-	X
56	MG	CA	3068	-	-	-	X
56	MG	DA	3094	-	-	-	X

2 Entry composition (i)

There are 58 unique types of molecules in this entry. The entry contains 296390 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 ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1540	Total	C	N	O	P	0	1	0
			33037	14735	6057	10705	1540			
1	BA	1541	Total	C	N	O	P	0	0	0
			33057	14744	6059	10713	1541			

- Molecule 2 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	CA	2867	Total	C	N	O	P	0	0	0
			61550	27457	11328	19898	2867			
2	DA	2869	Total	C	N	O	P	0	0	0
			61593	27477	11339	19908	2869			

- Molecule 3 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	CB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
3	DB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 4 is a RNA chain called Valine-specific transfer RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AV	76	Total	C	N	O	P	0	0	0
			1623	723	292	532	76			
4	AY	76	Total	C	N	O	P	0	0	0
			1623	723	292	532	76			
4	AW	76	Total	C	N	O	P	0	0	0
			1623	723	292	532	76			
4	BV	76	Total	C	N	O	P	0	0	0
			1623	723	292	532	76			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	BW	76	Total	C	N	O	P	0	0	0
			1623	723	292	532	76			

- Molecule 5 is a protein called 50S ribosomal protein L2.

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

- Molecule 6 is a protein called 50S ribosomal protein L3.

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

- Molecule 7 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	CE	181	Total	C	N	O	S	0	0	0
			1404	881	261	258	4			
7	DE	180	Total	C	N	O	S	0	0	0
			1393	875	257	257	4			

- Molecule 8 is a protein called 50S ribosomal protein L5.

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

- Molecule 9 is a protein called 50S ribosomal protein L6.

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

- Molecule 10 is a protein called 50S ribosomal protein L9.

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

- Molecule 11 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	C5	109	Total	C	N	O	S	0	0	0
			825	521	149	151	4			

- Molecule 12 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	CI	71	Total	C	N	O	S	0	0	0
			511	313	93	102	3			
12	DI	72	Total	C	N	O	S	0	0	0
			518	317	94	104	3			

- Molecule 13 is a protein called 50S ribosomal protein L13.

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

- Molecule 14 is a protein called 50S ribosomal protein L14.

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

- Molecule 15 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	CL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

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

- Molecule 16 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	CM	135	Total	C	N	O	S	0	0	0
			1065	681	204	175	5			
16	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 17 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	CN	121	Total	C	N	O	S	0	0	0
			969	599	198	167	5			
17	DN	121	Total	C	N	O	S	0	0	0
			969	599	198	167	5			

- Molecule 18 is a protein called 50S ribosomal protein L18.

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

- Molecule 19 is a protein called 50S ribosomal protein L19.

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

- Molecule 20 is a protein called 50S ribosomal protein L20.

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

- Molecule 21 is a protein called 50S ribosomal protein L21.

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

- Molecule 22 is a protein called 50S ribosomal protein L22.

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

- Molecule 23 is a protein called 50S ribosomal protein L23.

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

- Molecule 24 is a protein called 50S ribosomal protein L24.

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

- Molecule 25 is a protein called 50S ribosomal protein L25.

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

- Molecule 26 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	CW	75	Total	C	N	O	S	0	0	0
			574	356	116	101	1			
26	DW	75	Total	C	N	O	S	0	0	0
			574	356	116	101	1			

- Molecule 27 is a protein called 50S ribosomal protein L28.

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

- Molecule 28 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	CY	61	Total	C	N	O	S	0	0	0
			499	308	97	92	2			
28	DY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 29 is a protein called 50S ribosomal protein L30.

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

- Molecule 30 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	C0	39	Total	C	N	O	S	0	0	0
			293	179	52	57	5			
30	D0	39	Total	C	N	O	S	0	0	0
			293	179	52	57	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	C1	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	D1	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 32 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
32	C2	50	Total	C	N	O	0	0	0
			410	263	75	72			
32	D2	50	Total	C	N	O	0	0	0
			410	263	75	72			

- Molecule 33 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	C3	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
33	D3	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	C4	61	Total	C	N	O	S	0	0	0
			479	306	102	69	2			
34	D4	62	Total	C	N	O	S	0	0	0
			486	311	103	70	2			

- Molecule 35 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	C6	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
35	D6	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 36 is a RNA chain called Messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	AX	30	Total	C	N	O	P	0	0	0
			653	293	130	200	30			
36	BX	30	Total	C	N	O	P	0	0	0
			653	293	130	200	30			

- Molecule 37 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	AB	225	Total	C	N	O	S	0	0	0
			1757	1111	315	323	8			
37	BB	225	Total	C	N	O	S	0	0	0
			1757	1111	315	323	8			

- Molecule 38 is a protein called 30S ribosomal protein S3.

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

- Molecule 39 is a protein called 30S ribosomal protein S4.

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

- Molecule 40 is a protein called 30S ribosomal protein S5.

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

- Molecule 41 is a protein called 30S ribosomal protein S6.

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

- Molecule 42 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	AG	135	Total	C	N	O	S	0	0	0
			1058	659	203	192	4			
42	BG	132	Total	C	N	O	S	0	0	0
			1035	644	200	187	4			

- Molecule 43 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	AH	128	Total	C	N	O	S	0	0	0
			973	613	172	182	6			
43	BH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 44 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	AI	124	Total	C	N	O	S	0	0	0
			995	619	199	174	3			
44	BI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 45 is a protein called 30S ribosomal protein S10.

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

- Molecule 46 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	AK	116	Total	C	N	O	S	0	0	0
			869	535	173	158	3			
46	BK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 47 is a protein called 30S ribosomal protein S12.

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 48 is a protein called 30S ribosomal protein S13.

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

- Molecule 49 is a protein called 30S ribosomal protein S14.

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

- Molecule 50 is a protein called 30S ribosomal protein S15.

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

- Molecule 51 is a protein called 30S ribosomal protein S16.

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

- Molecule 52 is a protein called 30S ribosomal protein S17.

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

- Molecule 53 is a protein called 30S ribosomal protein S18.

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

- Molecule 54 is a protein called 30S ribosomal protein S19.

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

- Molecule 55 is a protein called 30S ribosomal protein S20.

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

- Molecule 56 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	50	Total 50	Mg 50	0	0
56	CA	167	Total 167	Mg 167	0	0
56	CB	3	Total 3	Mg 3	0	0
56	CC	1	Total 1	Mg 1	0	0
56	CN	2	Total 2	Mg 2	0	0
56	CQ	1	Total 1	Mg 1	0	0
56	C4	1	Total 1	Mg 1	0	0
56	BA	49	Total 49	Mg 49	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	DA	166	Total Mg 166 166	0	0
56	DB	3	Total Mg 3 3	0	0
56	DN	1	Total Mg 1 1	0	0
56	DQ	1	Total Mg 1 1	0	0

- Molecule 57 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	C0	1	Total Zn 1 1	0	0
57	C6	1	Total Zn 1 1	0	0
57	D0	1	Total Zn 1 1	0	0
57	D6	1	Total Zn 1 1	0	0

- Molecule 58 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AA	481	Total O 481 481	0	0
58	CA	1106	Total O 1106 1106	0	0
58	CB	49	Total O 49 49	0	0
58	AV	28	Total O 28 28	0	0
58	AY	5	Total O 5 5	0	0
58	CC	13	Total O 13 13	0	0
58	CD	10	Total O 10 10	0	0
58	CE	16	Total O 16 16	0	0
58	CF	14	Total O 14 14	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	CG	18	Total O 18 18	0	0
58	CH	8	Total O 8 8	0	0
58	C5	7	Total O 7 7	0	0
58	CI	4	Total O 4 4	0	0
58	CJ	9	Total O 9 9	0	0
58	CK	7	Total O 7 7	0	0
58	CL	8	Total O 8 8	0	0
58	CM	4	Total O 4 4	0	0
58	CN	6	Total O 6 6	0	0
58	CO	8	Total O 8 8	0	0
58	CP	8	Total O 8 8	0	0
58	CQ	2	Total O 2 2	0	0
58	CR	7	Total O 7 7	0	0
58	CS	3	Total O 3 3	0	0
58	CT	7	Total O 7 7	0	0
58	CU	13	Total O 13 13	0	0
58	CV	10	Total O 10 10	0	0
58	CW	4	Total O 4 4	0	0
58	CX	3	Total O 3 3	0	0
58	CY	3	Total O 3 3	0	0
58	CZ	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	C1	5	Total O 5 5	0	0
58	C2	1	Total O 1 1	0	0
58	C3	2	Total O 2 2	0	0
58	C4	2	Total O 2 2	0	0
58	C6	3	Total O 3 3	0	0
58	AX	4	Total O 4 4	0	0
58	AW	32	Total O 32 32	0	0
58	AB	7	Total O 7 7	0	0
58	AC	15	Total O 15 15	0	0
58	AD	10	Total O 10 10	0	0
58	AE	12	Total O 12 12	0	0
58	AF	6	Total O 6 6	0	0
58	AG	5	Total O 5 5	0	0
58	AH	7	Total O 7 7	0	0
58	AI	6	Total O 6 6	0	0
58	AJ	4	Total O 4 4	0	0
58	AK	10	Total O 10 10	0	0
58	AL	9	Total O 9 9	0	0
58	AM	6	Total O 6 6	0	0
58	AN	3	Total O 3 3	0	0
58	AO	7	Total O 7 7	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AP	4	Total O 4 4	0	0
58	AQ	8	Total O 8 8	0	0
58	AR	1	Total O 1 1	0	0
58	AS	4	Total O 4 4	0	0
58	AT	4	Total O 4 4	0	0
58	BA	461	Total O 461 461	0	0
58	DA	1005	Total O 1005 1005	0	0
58	DB	32	Total O 32 32	0	0
58	BV	13	Total O 13 13	0	0
58	DC	28	Total O 28 28	0	0
58	DD	15	Total O 15 15	0	0
58	DE	12	Total O 12 12	0	0
58	DF	4	Total O 4 4	0	0
58	DG	6	Total O 6 6	0	0
58	DH	4	Total O 4 4	0	0
58	DJ	3	Total O 3 3	0	0
58	DK	5	Total O 5 5	0	0
58	DL	10	Total O 10 10	0	0
58	DM	6	Total O 6 6	0	0
58	DN	6	Total O 6 6	0	0
58	DO	4	Total O 4 4	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	DP	6	Total O 6 6	0	0
58	DQ	5	Total O 5 5	0	0
58	DR	13	Total O 13 13	0	0
58	DS	9	Total O 9 9	0	0
58	DT	10	Total O 10 10	0	0
58	DU	14	Total O 14 14	0	0
58	DV	7	Total O 7 7	0	0
58	DW	3	Total O 3 3	0	0
58	DX	3	Total O 3 3	0	0
58	DY	7	Total O 7 7	0	0
58	DZ	2	Total O 2 2	0	0
58	D0	2	Total O 2 2	0	0
58	D1	11	Total O 11 11	0	0
58	D2	2	Total O 2 2	0	0
58	D3	2	Total O 2 2	0	0
58	D6	1	Total O 1 1	0	0
58	BX	5	Total O 5 5	0	0
58	BW	23	Total O 23 23	0	0
58	BB	2	Total O 2 2	0	0
58	BC	8	Total O 8 8	0	0
58	BD	24	Total O 24 24	0	0

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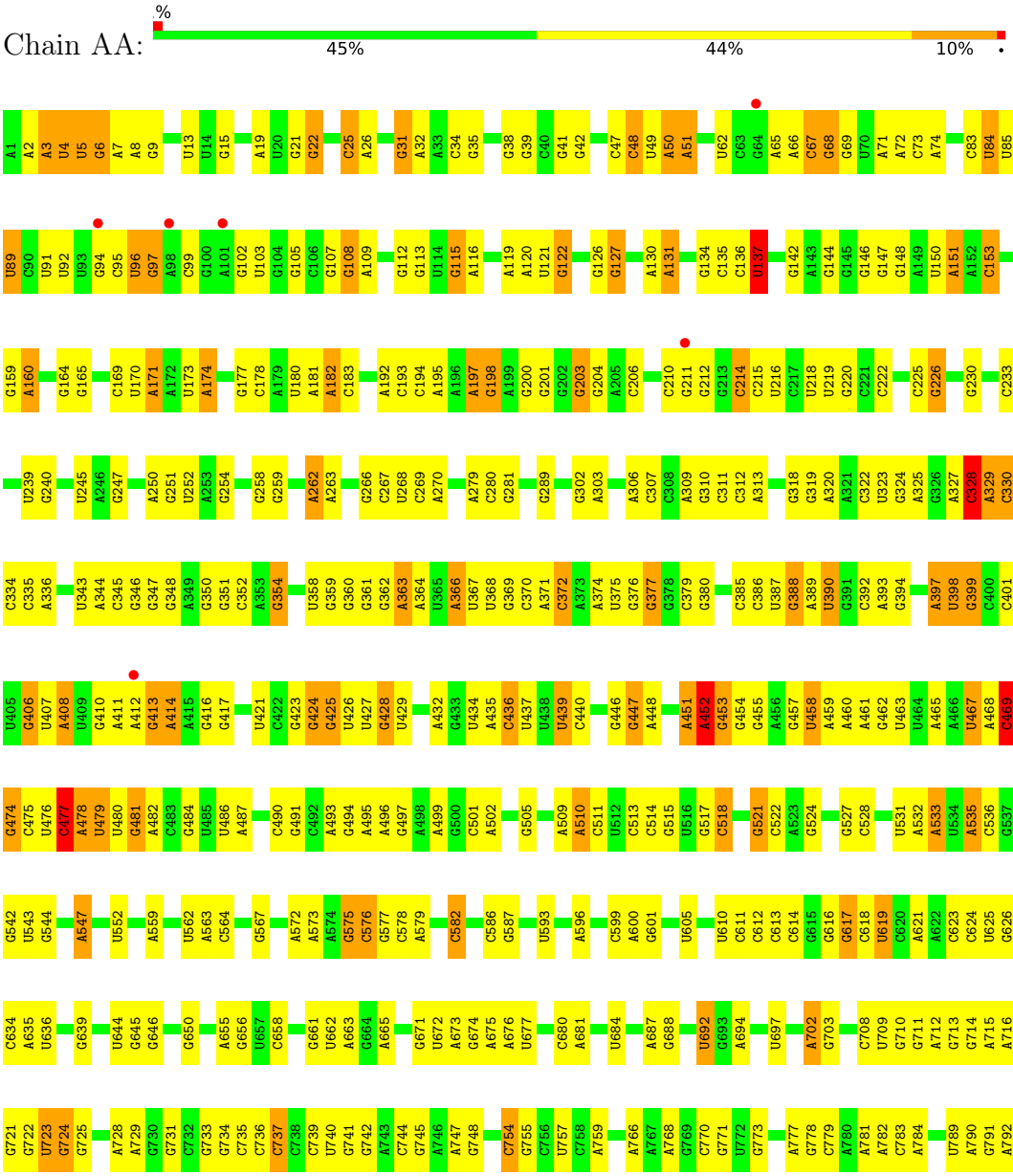
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	BE	18	Total O 18 18	0	0
58	BF	6	Total O 6 6	0	0
58	BG	4	Total O 4 4	0	0
58	BH	12	Total O 12 12	0	0
58	BI	9	Total O 9 9	0	0
58	BJ	8	Total O 8 8	0	0
58	BK	5	Total O 5 5	0	0
58	BL	8	Total O 8 8	0	0
58	BM	6	Total O 6 6	0	0
58	BN	5	Total O 5 5	0	0
58	BO	2	Total O 2 2	0	0
58	BP	5	Total O 5 5	0	0
58	BQ	10	Total O 10 10	0	0
58	BR	1	Total O 1 1	0	0
58	BS	3	Total O 3 3	0	0
58	BT	2	Total O 2 2	0	0

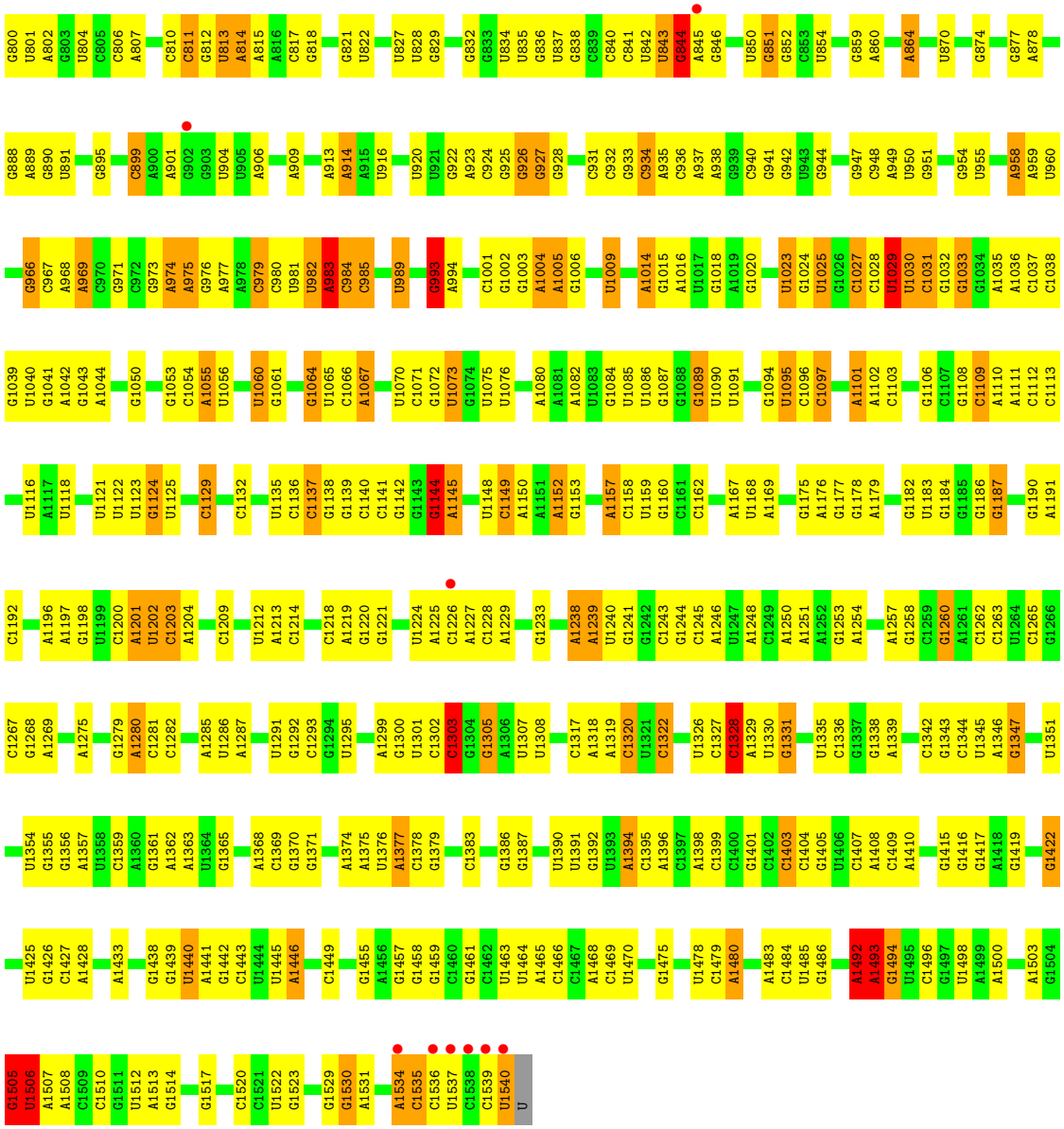
3 Residue-property plots (i)

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

- Molecule 1: 16S ribosomal RNA

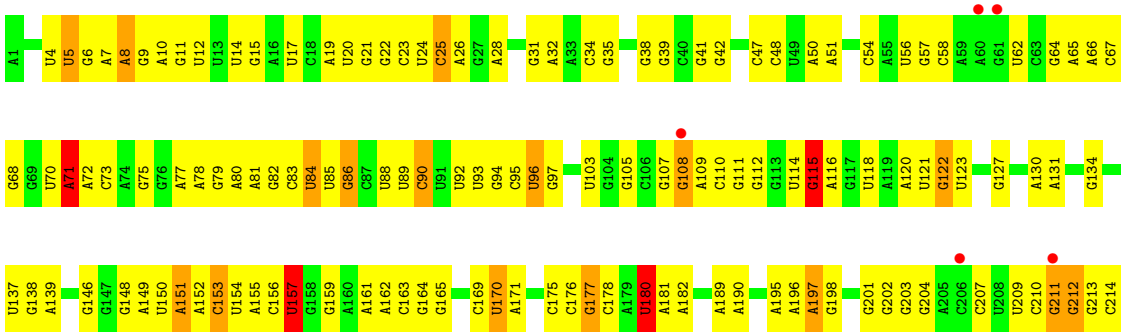
Chain AA:

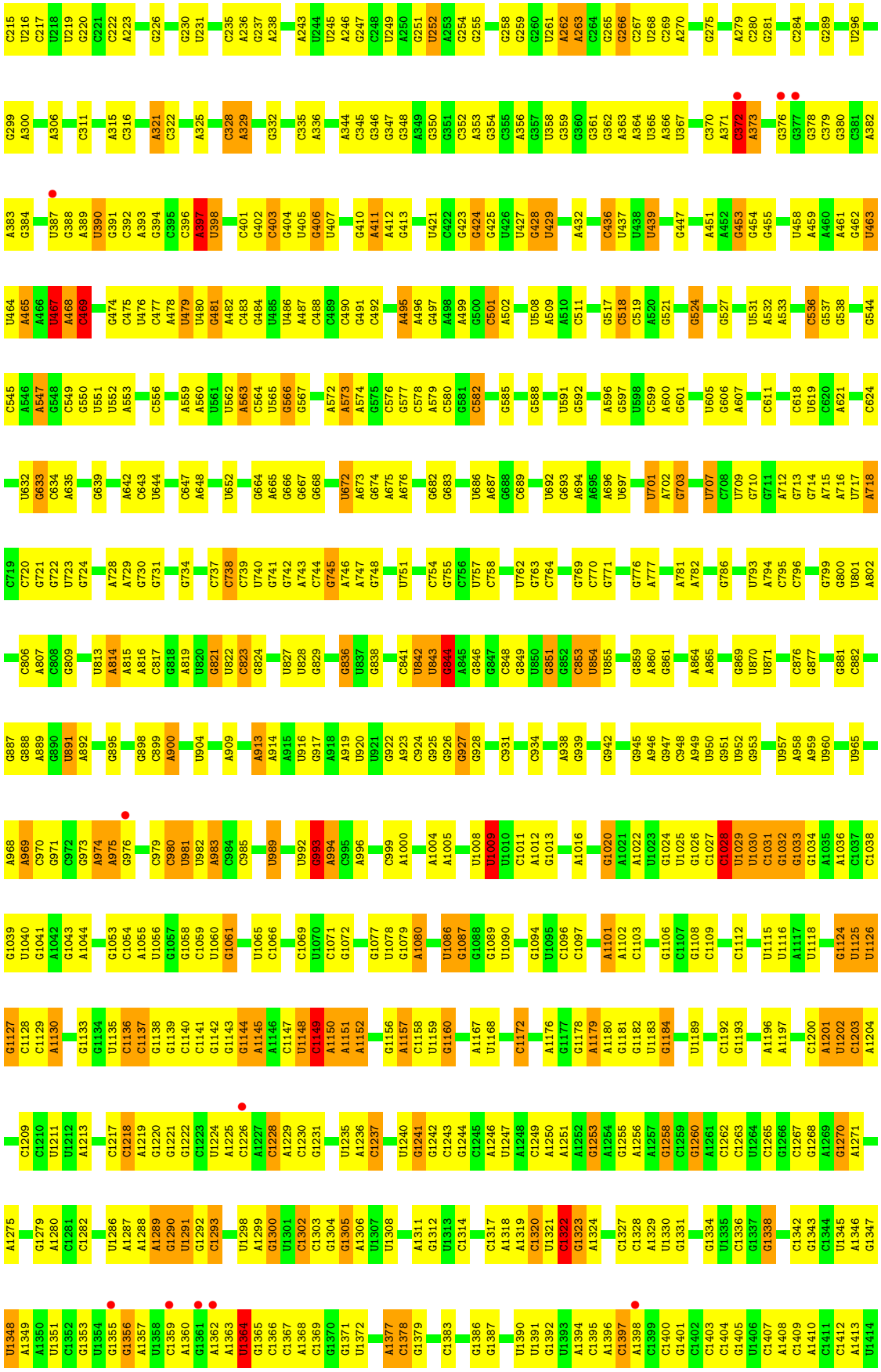


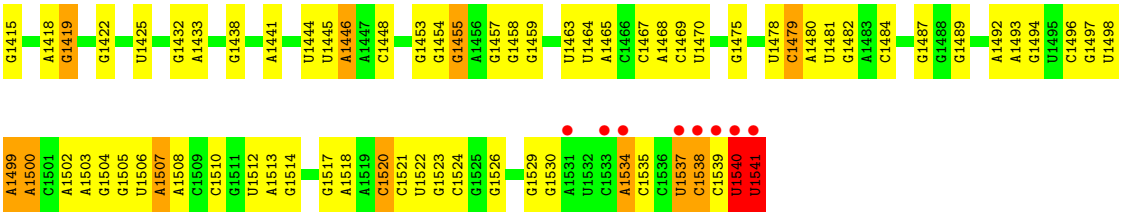


• Molecule 1: 16S ribosomal RNA

Chain BA:

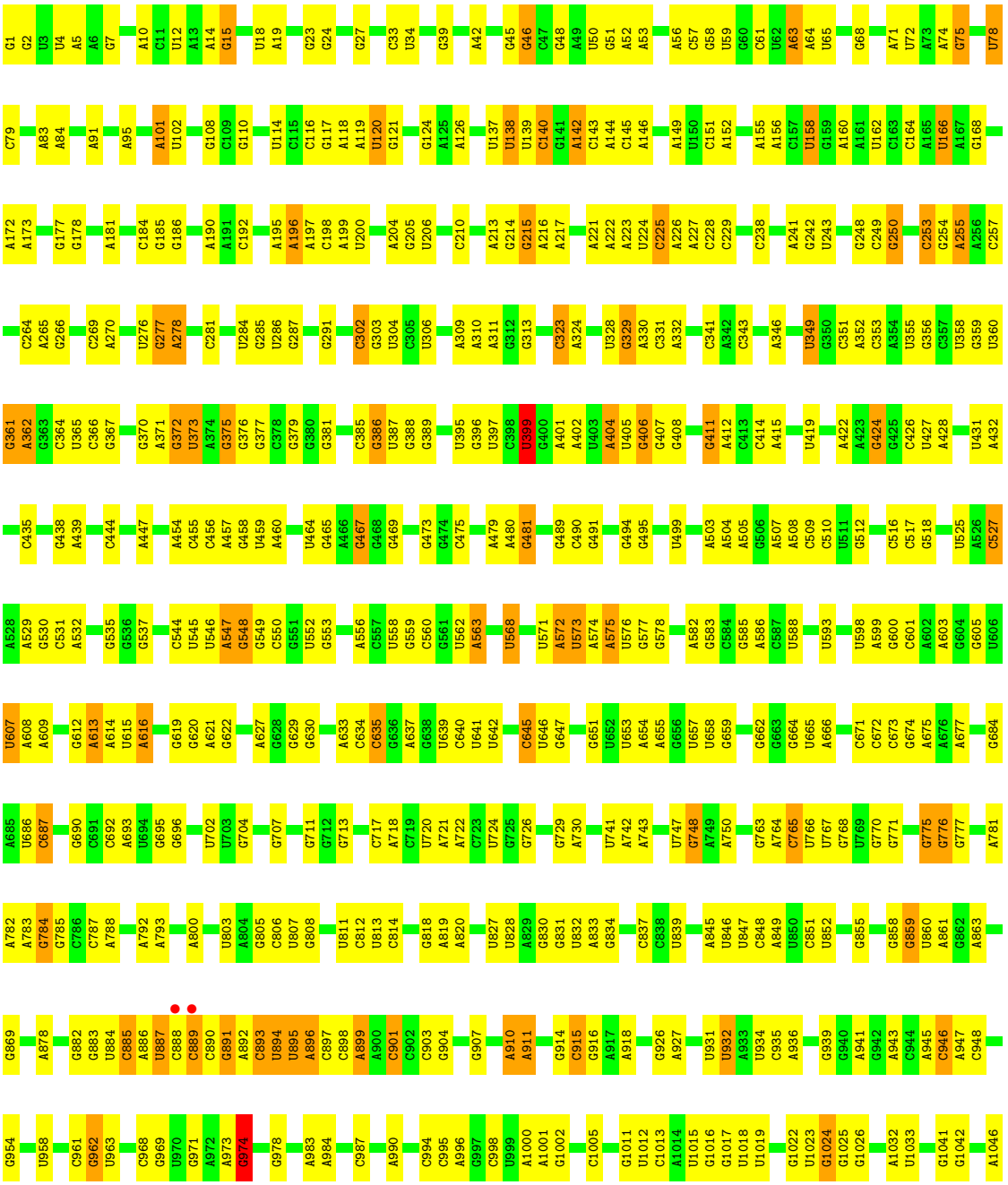


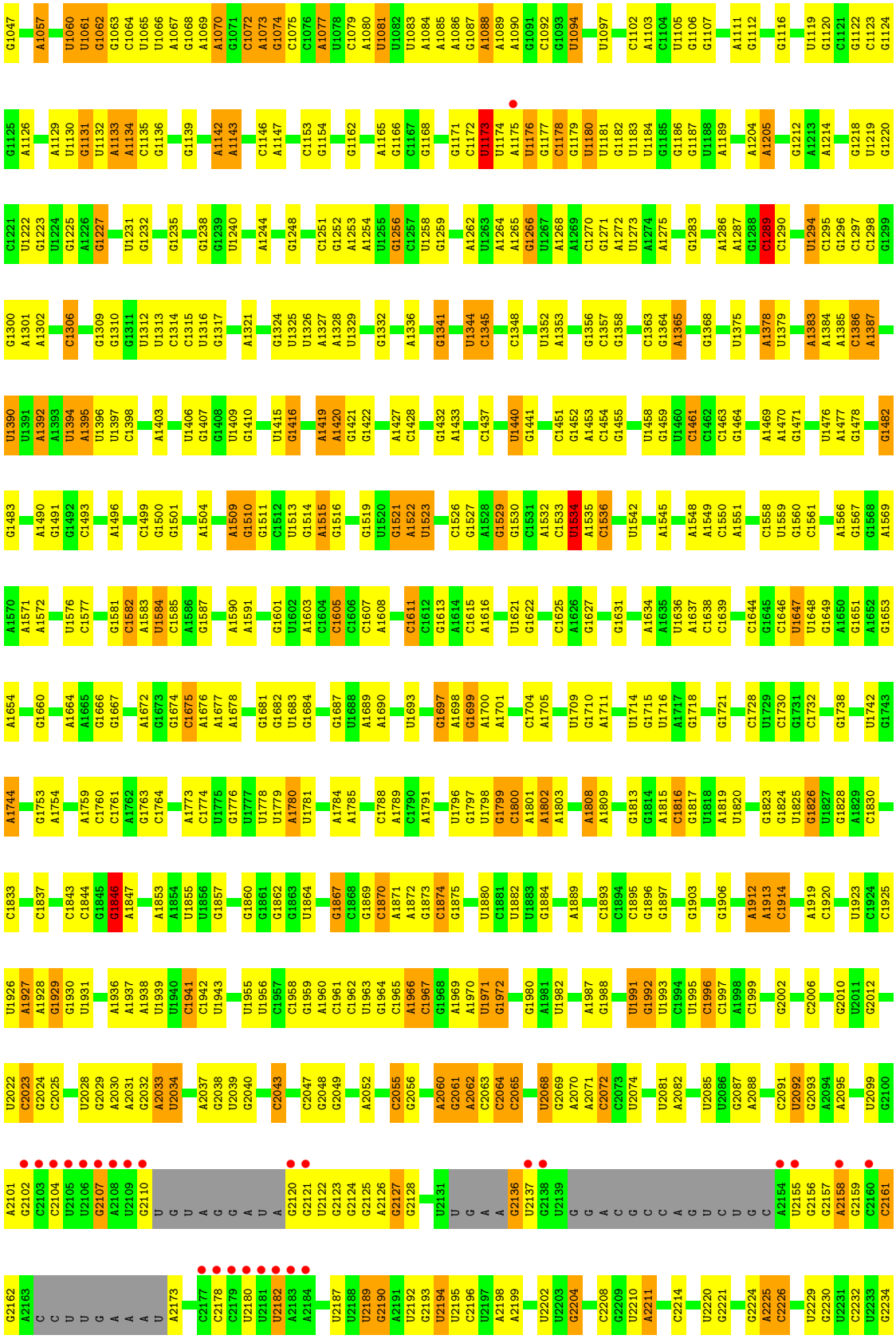


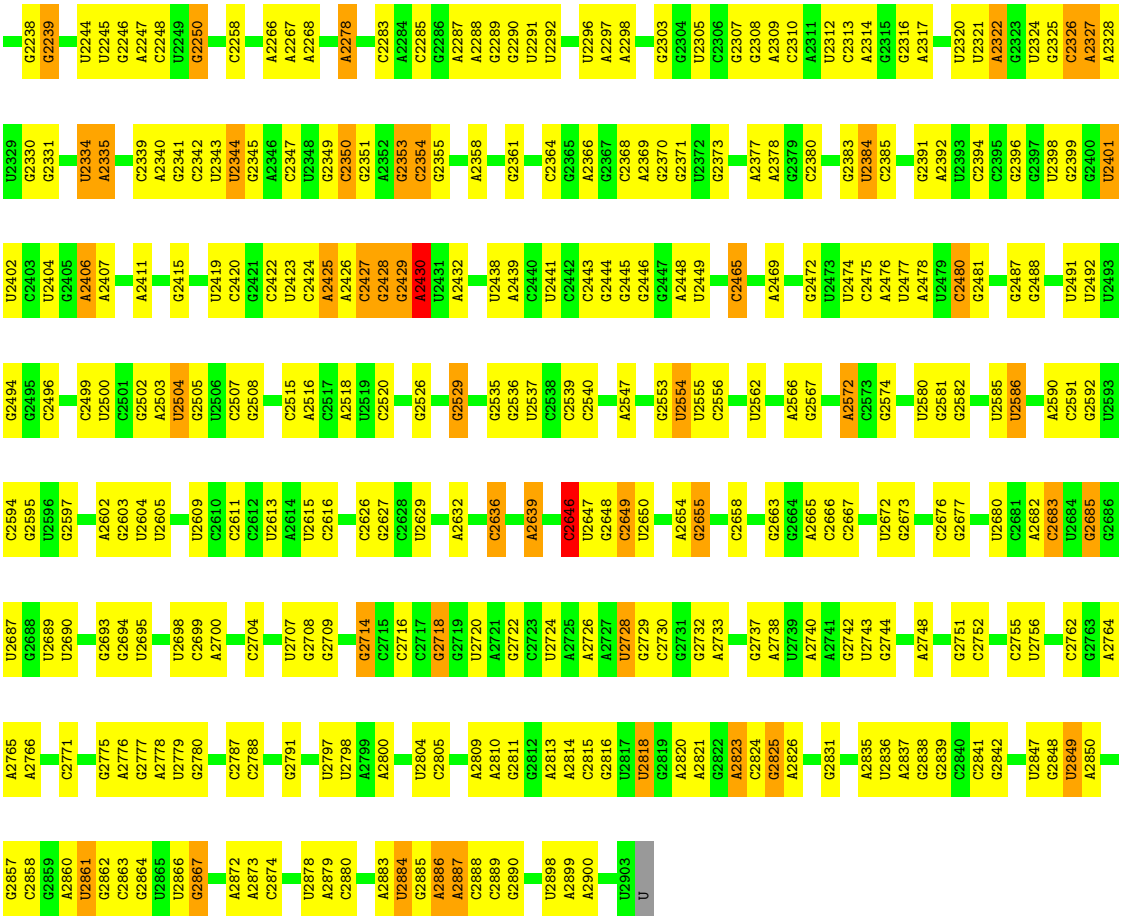


• Molecule 2: 23S ribosomal RNA

Chain CA:

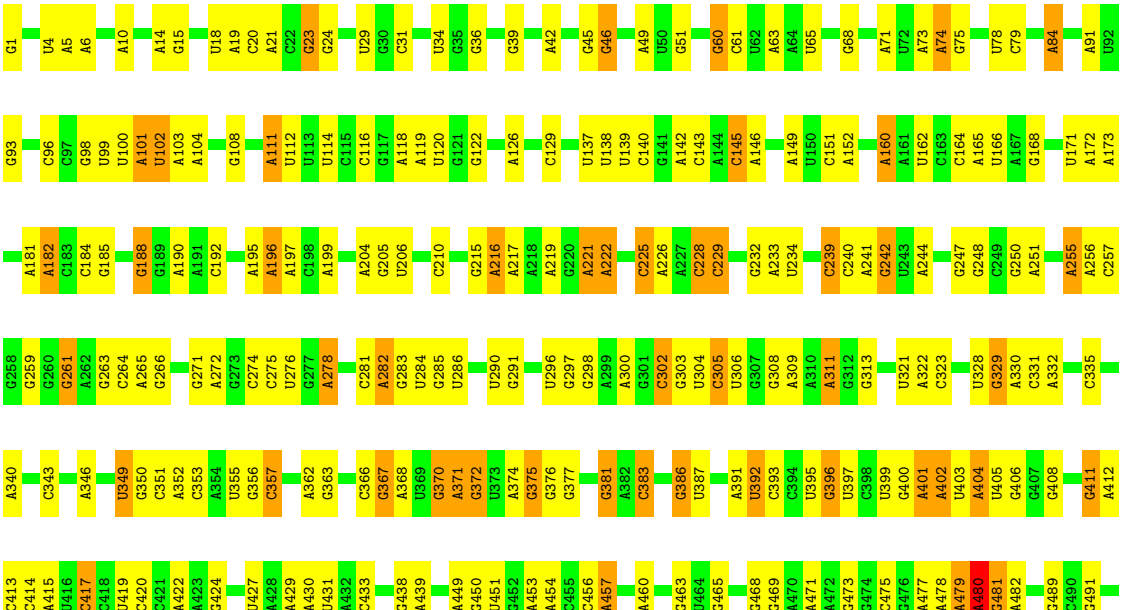


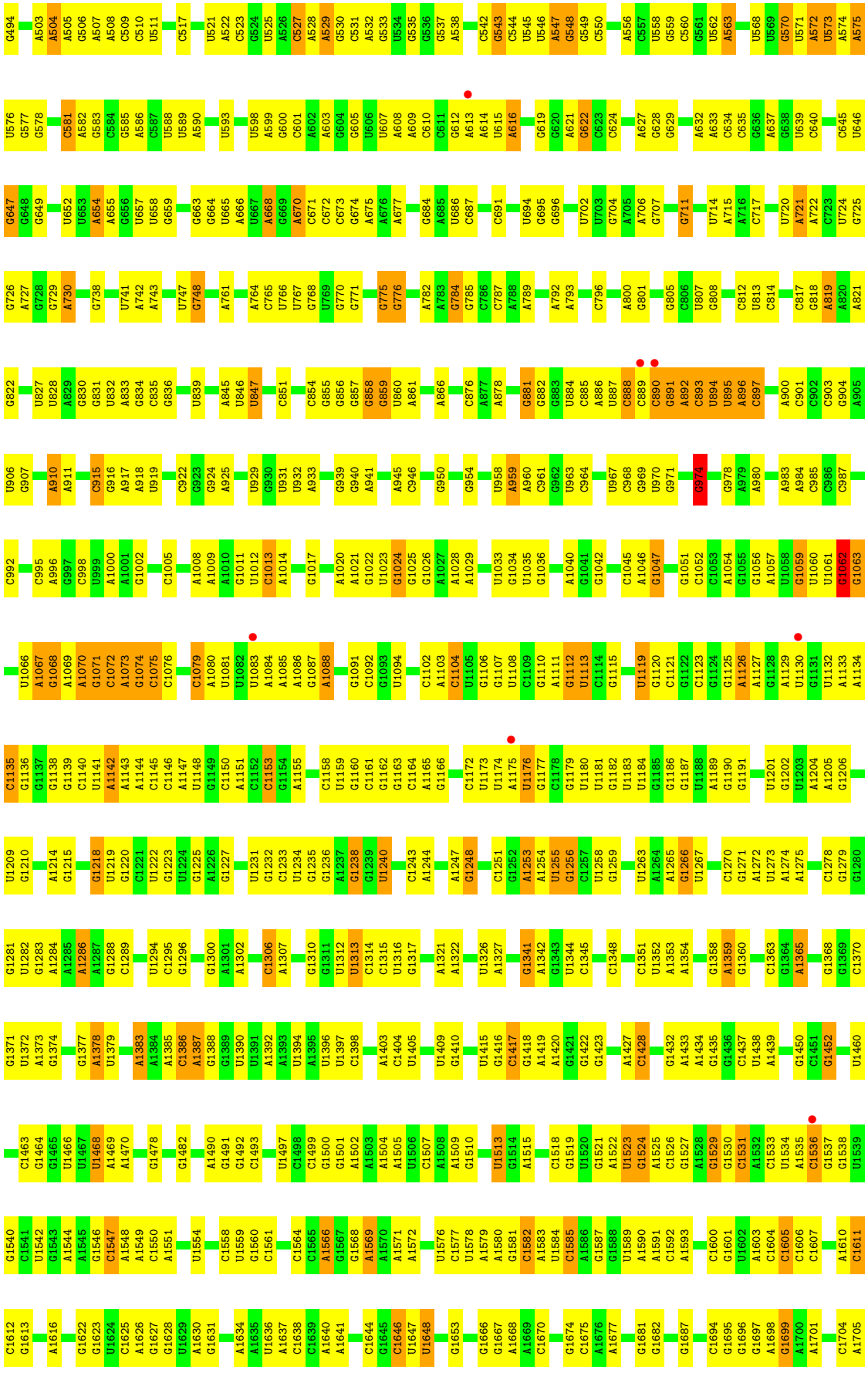




• Molecule 2: 23S ribosomal RNA

Chain DA:

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U576 G577 G578 C581 A582 G583 C584 G585 A586 C587 U588 U589 A590 U593 U598 A599 G600 C601 A602 A603 G604 G605 U606 U607 A608 A609 C610 C611 G612 A613 A614 U615 A616 G619 G620 A621 G622 C623 C624 A627 G628 G629 A632 A633 C634 C635 G636 A637 G638 U639 C640 C645 U646
G647 G648 G649 U652 U653 A654 A655 G656 U657 U658 G659 G663 G664 U665 A666 U667 A668 G669 A670 C671 C672 C673 G674 A675 A676 A677 G684 A685 U686 C687 C691 U694 G695 G696 U702 U703 G704 A705 A706 G707 G711 U714 A715 A716 C717 U720 A721 A722 C723 U724 G725
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G822 U827 U828 A829 G830 G831 U832 A833 G834 C835 G836 U839 A845 U846 U847 C851 C854 G855 G856 G857 G858 C859 U860 A861 A866 C876 A877 A878 G881 G882 G883 U884 C885 A886 U887 C888 C889 C890 G891 A892 C893 U894 U895 A896 C897 A900 C901 C902 C903 G904 A905
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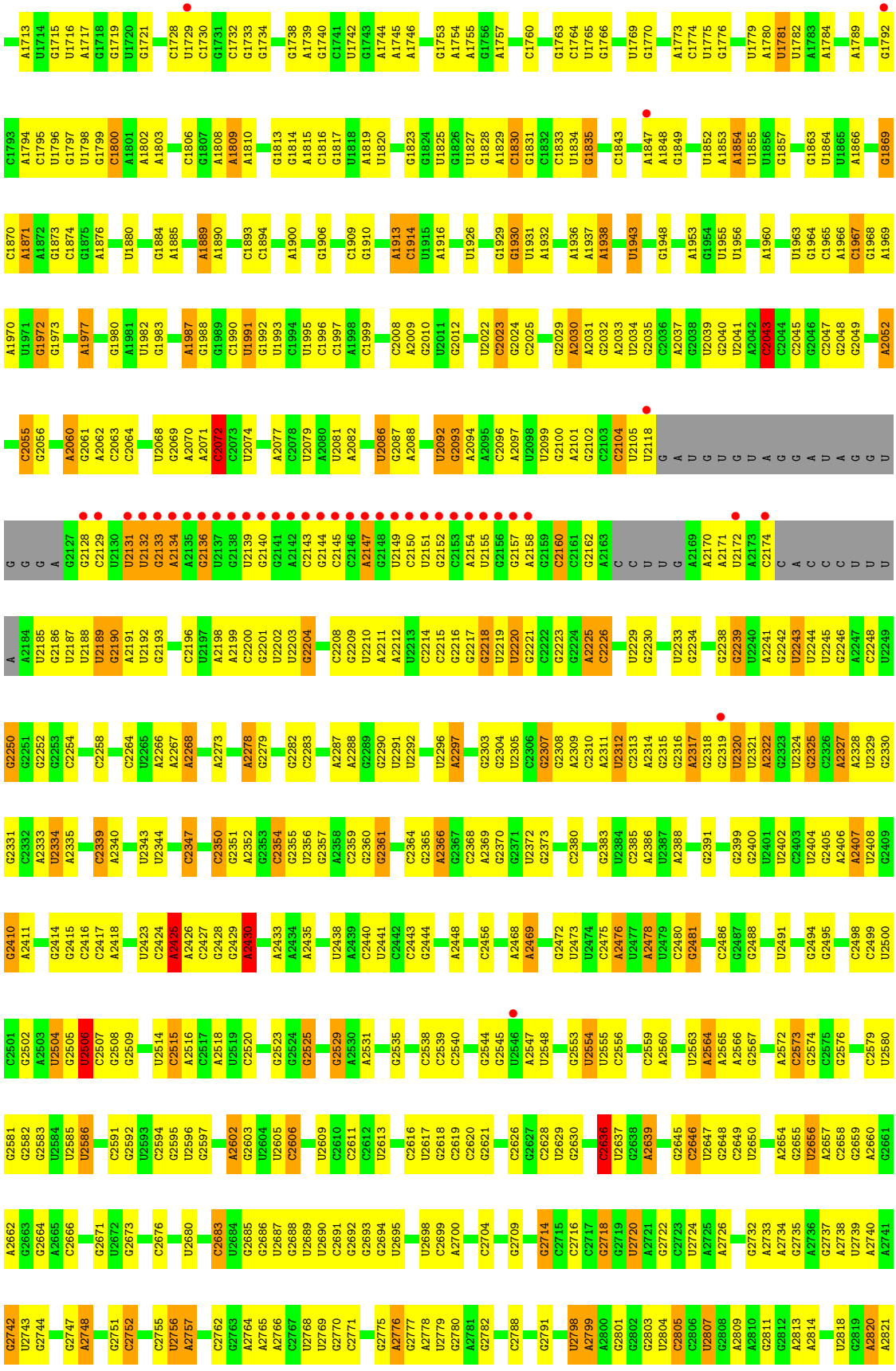
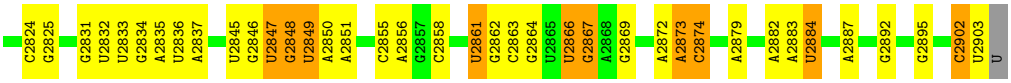
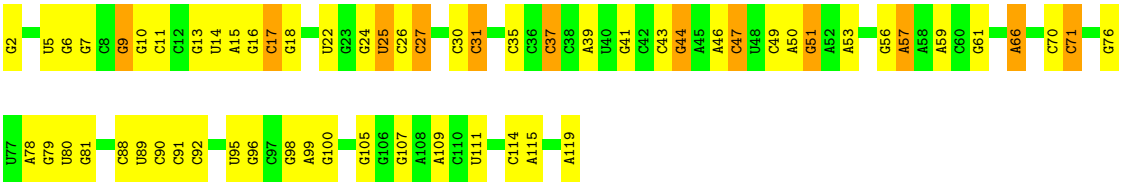




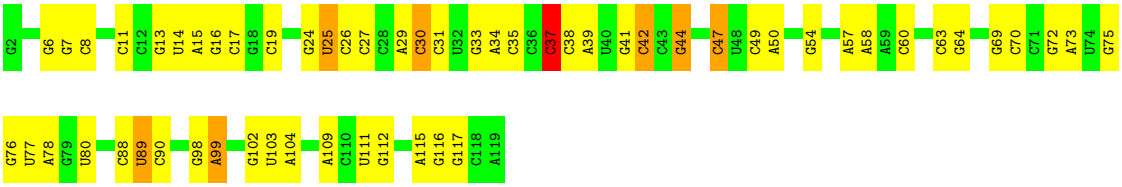
• Molecule 3: 5S ribosomal RNA

Chain CB:



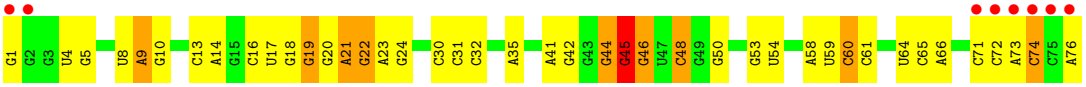
• Molecule 3: 5S ribosomal RNA

Chain DB:



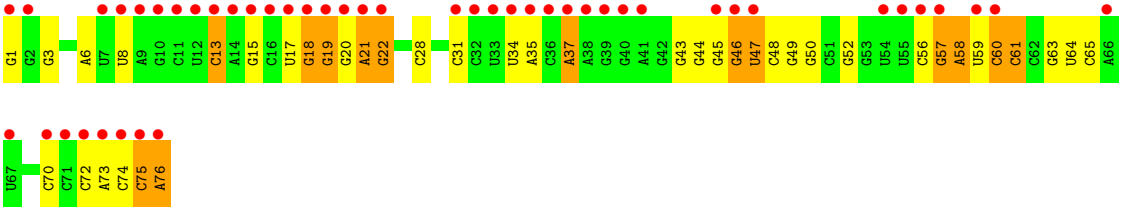
• Molecule 4: Valine-specific transfer RNA

Chain AV:



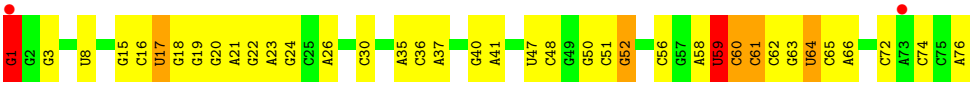
• Molecule 4: Valine-specific transfer RNA

Chain AY:



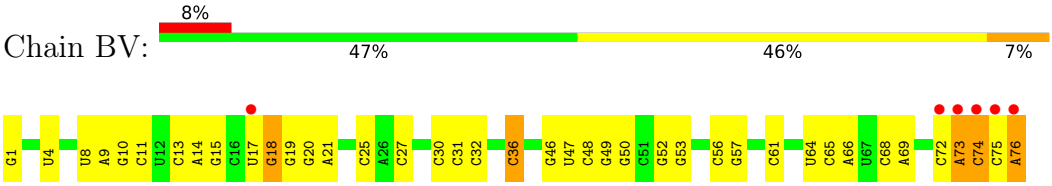
• Molecule 4: Valine-specific transfer RNA

Chain AW:



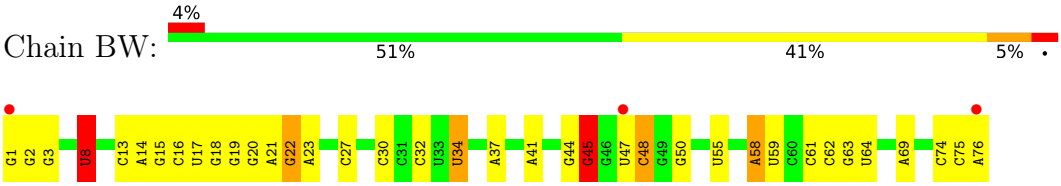
• Molecule 4: Valine-specific transfer RNA

Chain BV:



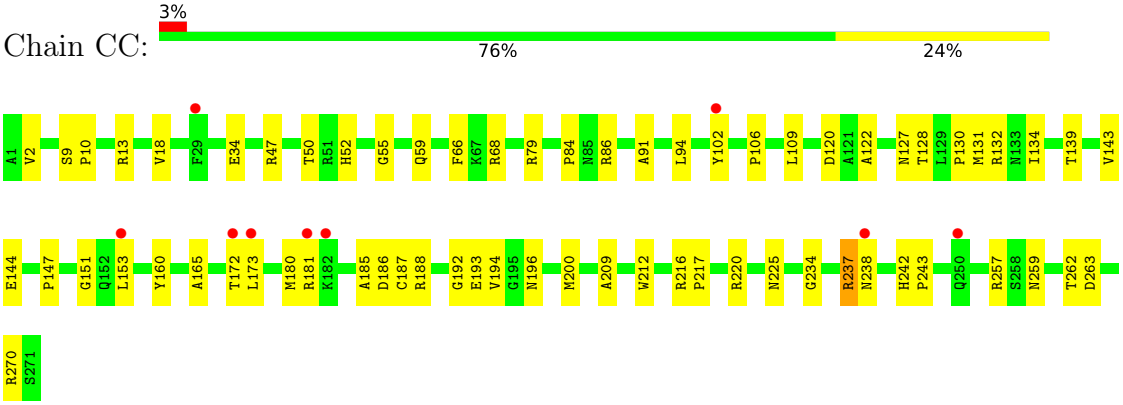
• Molecule 4: Valine-specific transfer RNA

Chain BW:



• Molecule 5: 50S ribosomal protein L2

Chain CC:



• Molecule 5: 50S ribosomal protein L2

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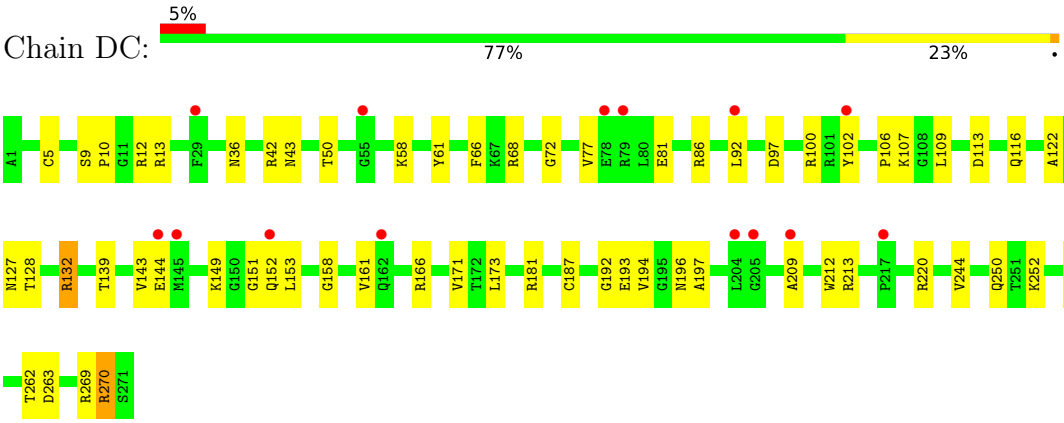
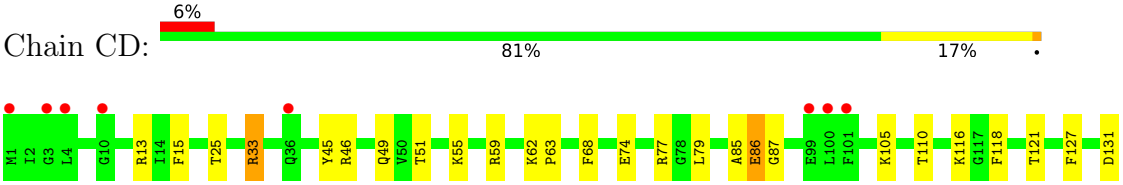
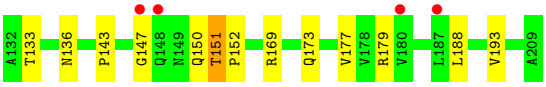


• Molecule 6: 50S ribosomal protein L3

Chain CD:





• Molecule 6: 50S ribosomal protein L3

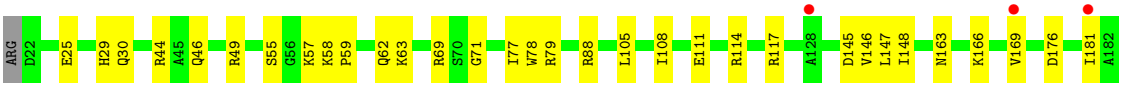
Chain DD:

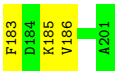
• Molecule 7: 50S ribosomal protein L4

Chain CE:

• Molecule 7: 50S ribosomal protein L4

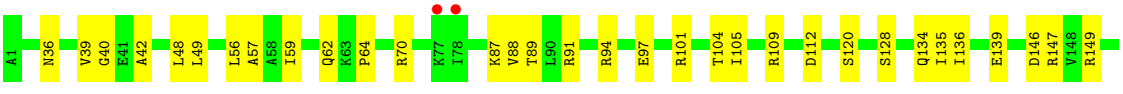
Chain DE:





• Molecule 8: 50S ribosomal protein L5

Chain CF:



• Molecule 8: 50S ribosomal protein L5

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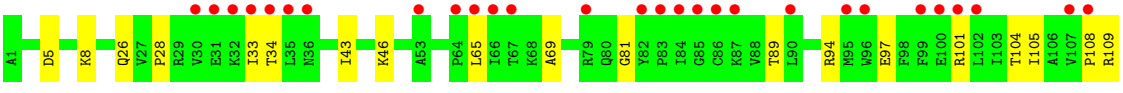
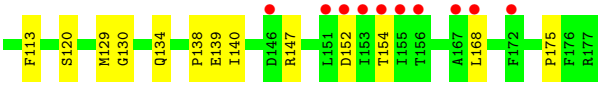
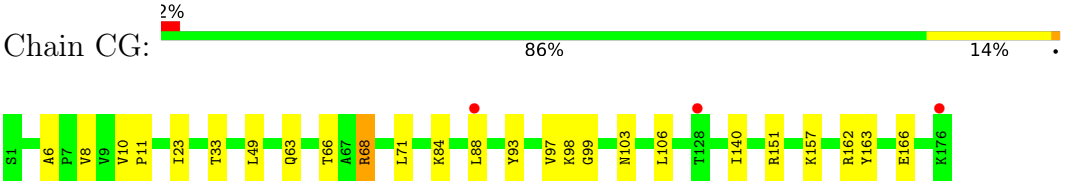
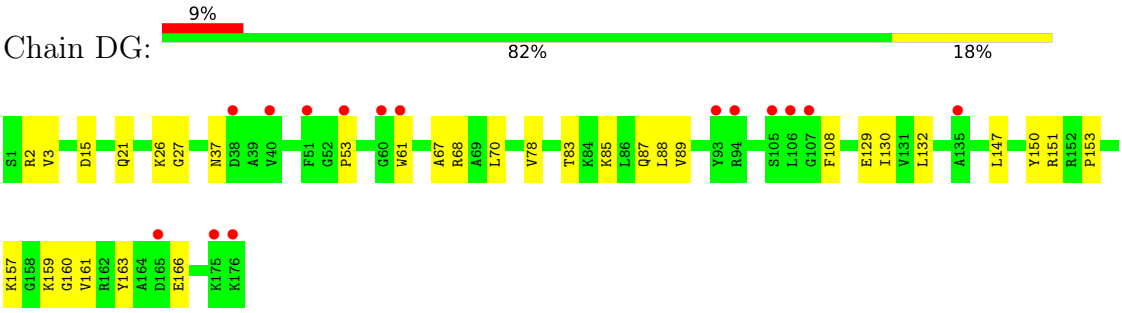




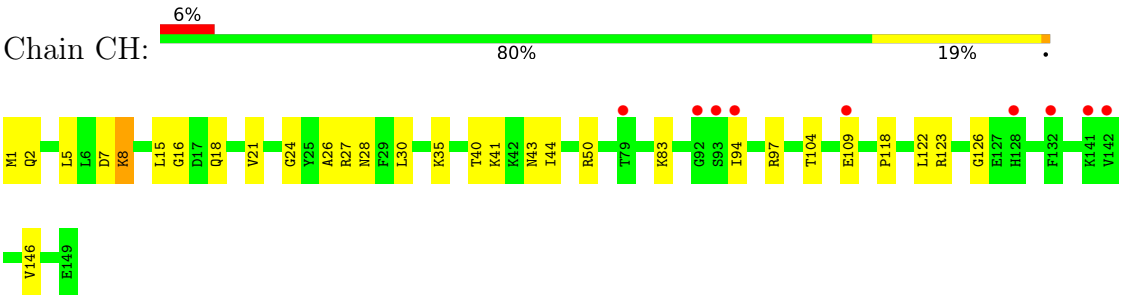
• Molecule 9: 50S ribosomal protein L6



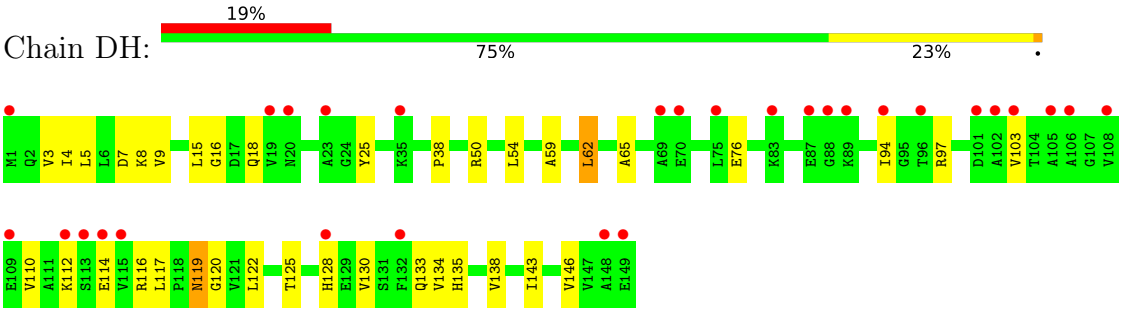
• Molecule 9: 50S ribosomal protein L6



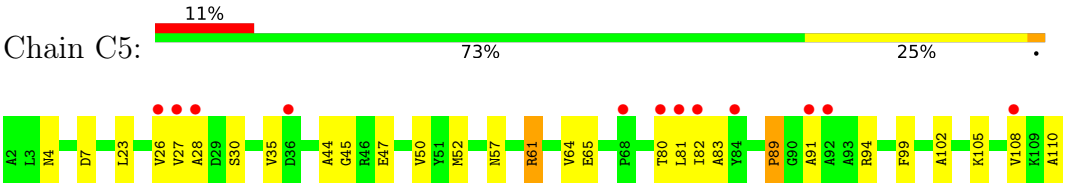
• Molecule 10: 50S ribosomal protein L9



• Molecule 10: 50S ribosomal protein L9

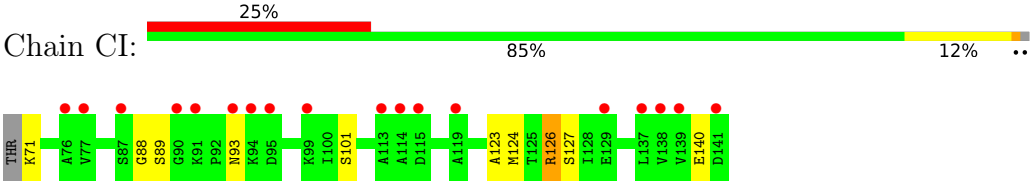


• Molecule 11: 50S ribosomal protein L10



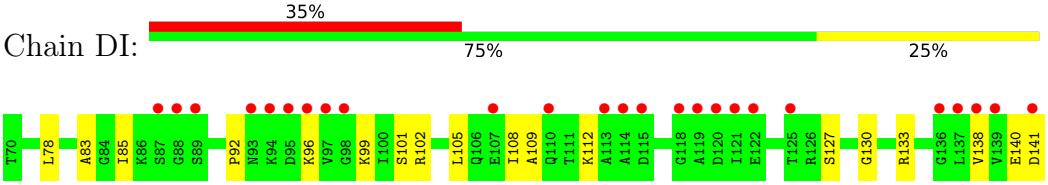
• Molecule 12: 50S ribosomal protein L11

Chain CI:



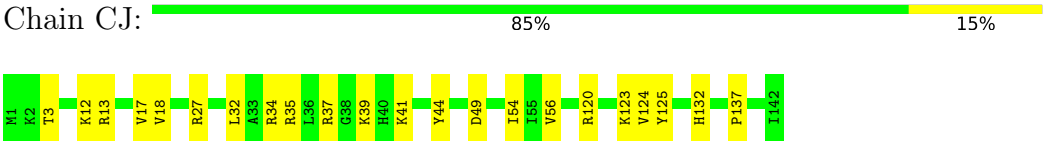
• Molecule 12: 50S ribosomal protein L11

Chain DI:



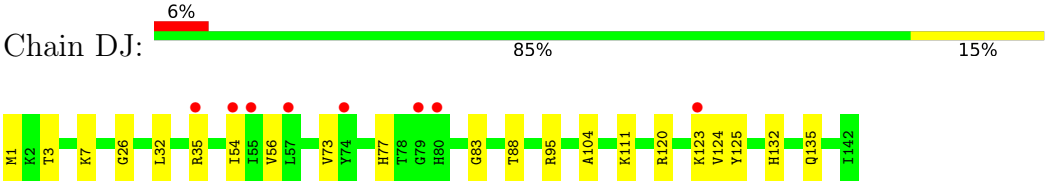
• Molecule 13: 50S ribosomal protein L13

Chain CJ:



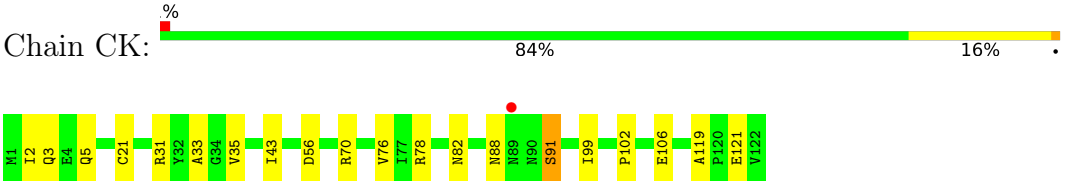
• Molecule 13: 50S ribosomal protein L13

Chain DJ:



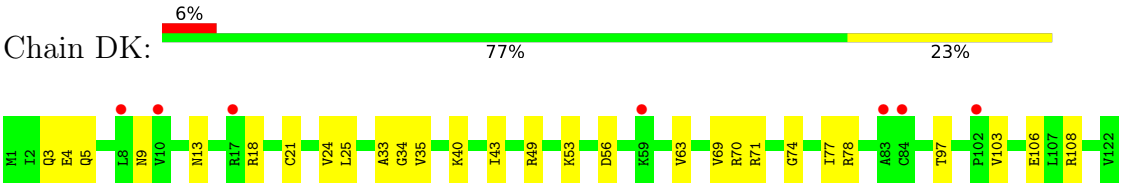
• Molecule 14: 50S ribosomal protein L14

Chain CK:



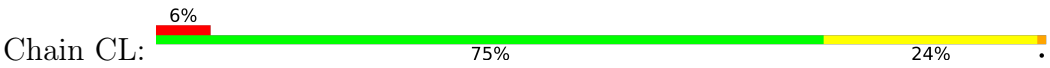
• Molecule 14: 50S ribosomal protein L14

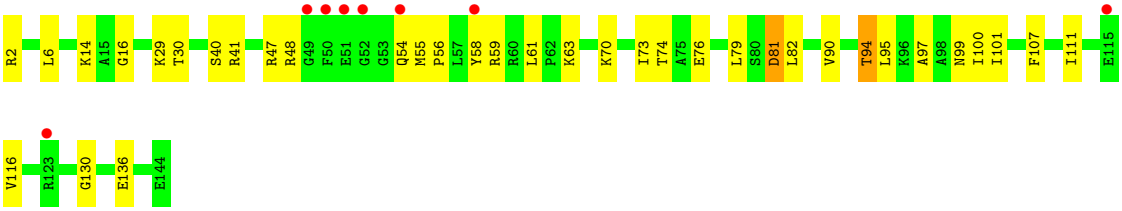
Chain DK:



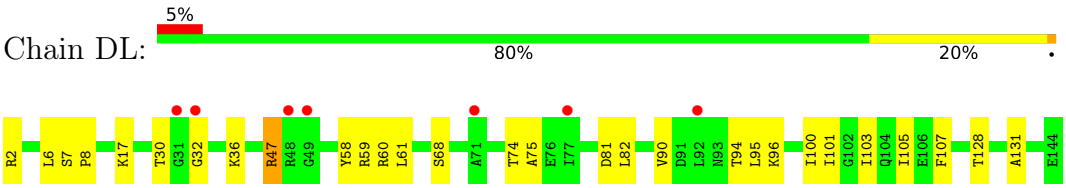
• Molecule 15: 50S ribosomal protein L15

Chain CL:

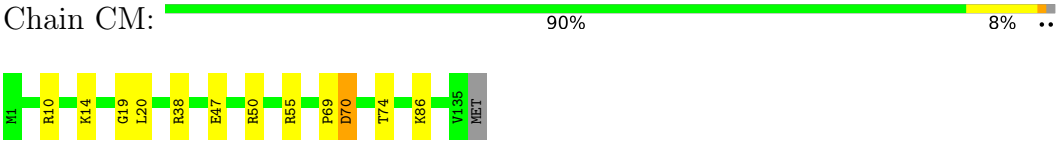




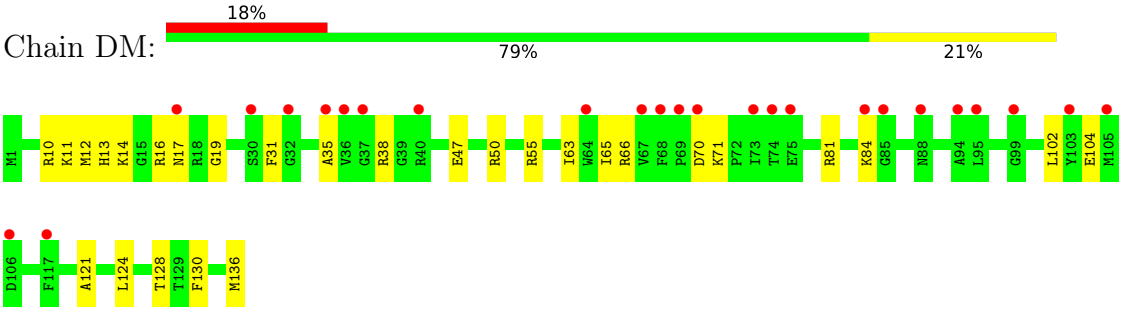
• Molecule 15: 50S ribosomal protein L15



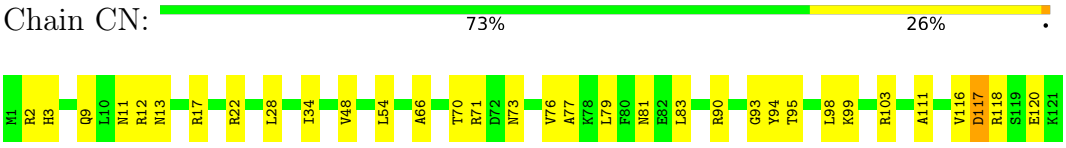
• Molecule 16: 50S ribosomal protein L16



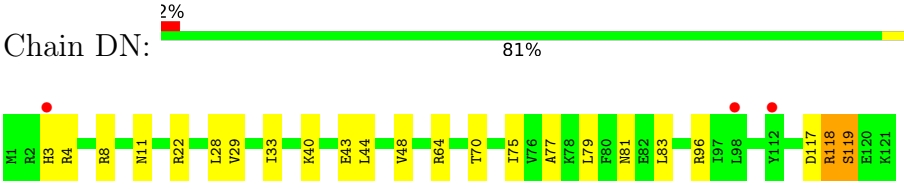
• Molecule 16: 50S ribosomal protein L16



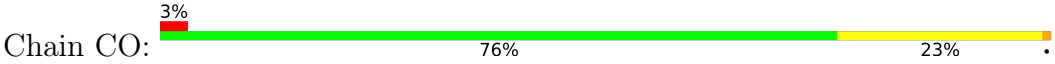
• Molecule 17: 50S ribosomal protein L17

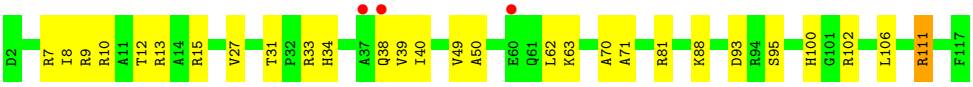


• Molecule 17: 50S ribosomal protein L17

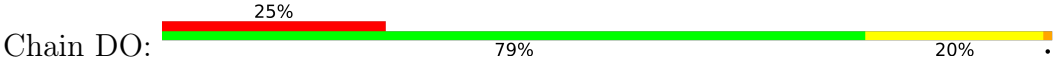


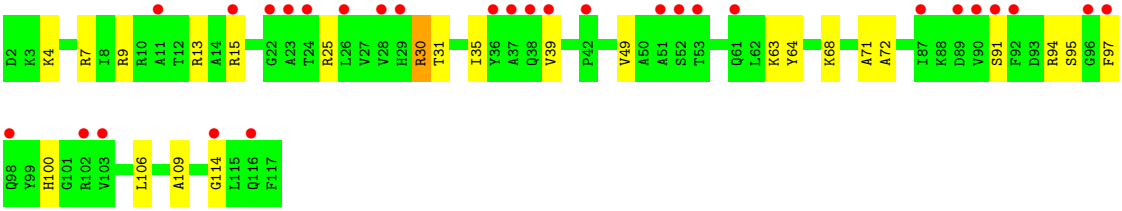
• Molecule 18: 50S ribosomal protein L18



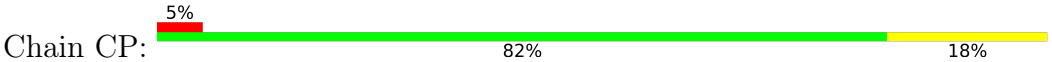


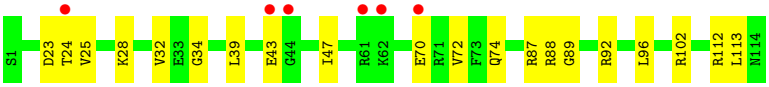
• Molecule 18: 50S ribosomal protein L18



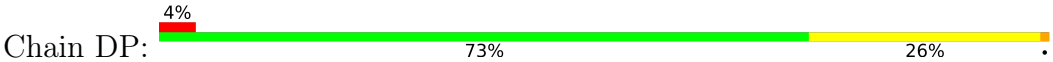


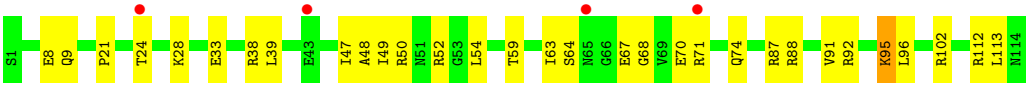
• Molecule 19: 50S ribosomal protein L19



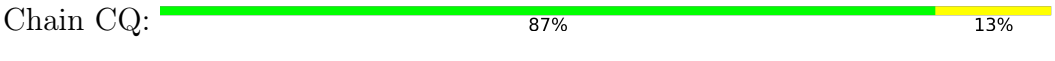


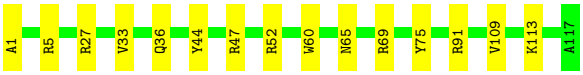
• Molecule 19: 50S ribosomal protein L19



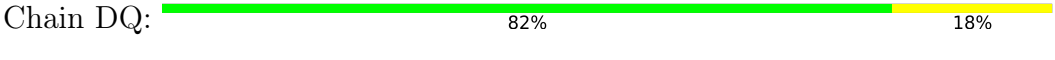


• Molecule 20: 50S ribosomal protein L20

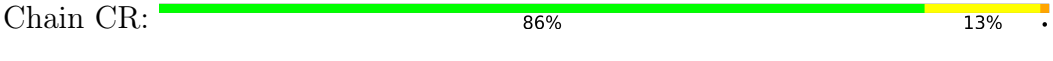


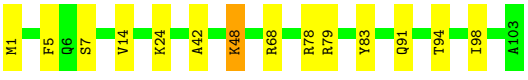


• Molecule 20: 50S ribosomal protein L20



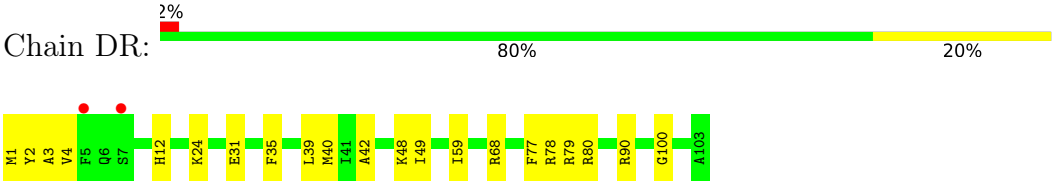
• Molecule 21: 50S ribosomal protein L21





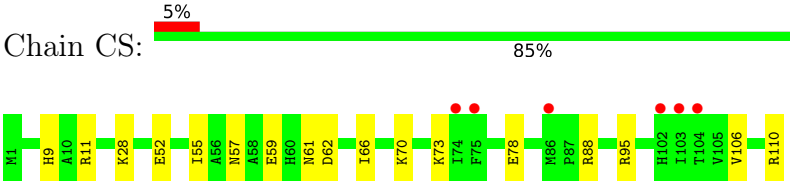
• Molecule 21: 50S ribosomal protein L21

Chain DR:



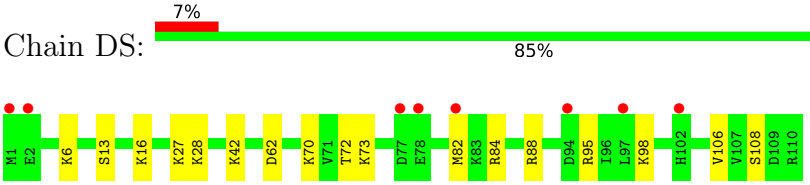
• Molecule 22: 50S ribosomal protein L22

Chain CS:



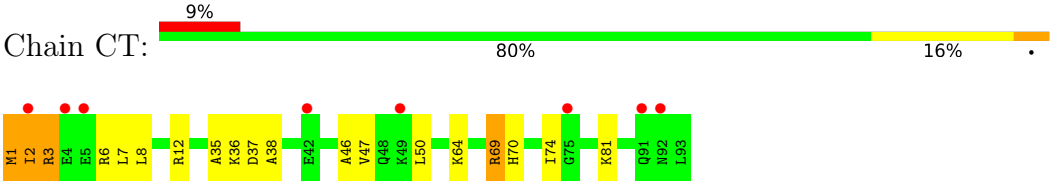
• Molecule 22: 50S ribosomal protein L22

Chain DS:



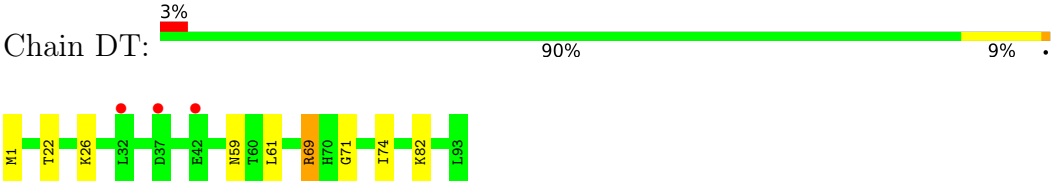
• Molecule 23: 50S ribosomal protein L23

Chain CT:



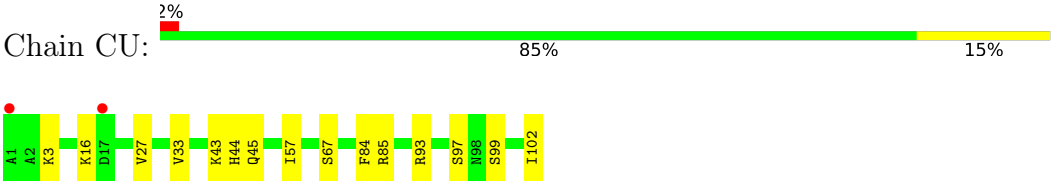
• Molecule 23: 50S ribosomal protein L23

Chain DT:



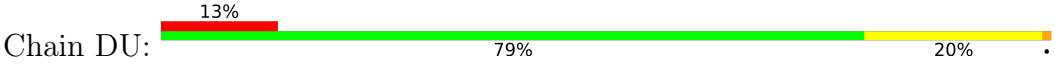
• Molecule 24: 50S ribosomal protein L24

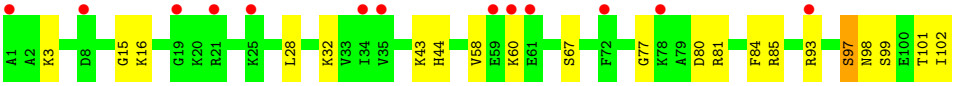
Chain CU:



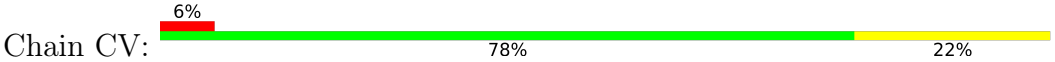
• Molecule 24: 50S ribosomal protein L24

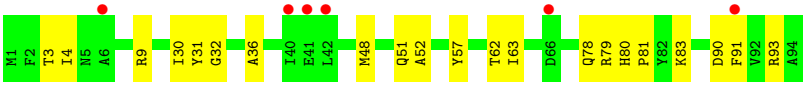
Chain DU:



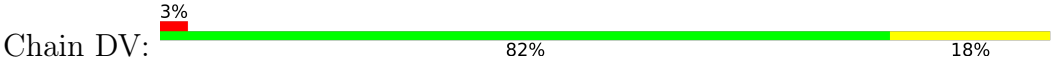


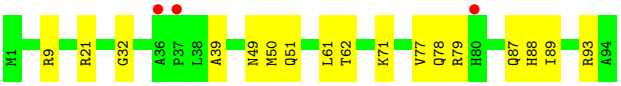
• Molecule 25: 50S ribosomal protein L25



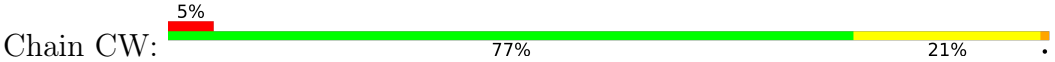


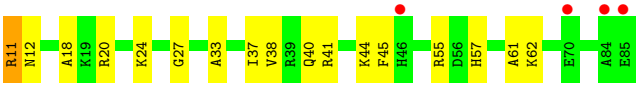
• Molecule 25: 50S ribosomal protein L25



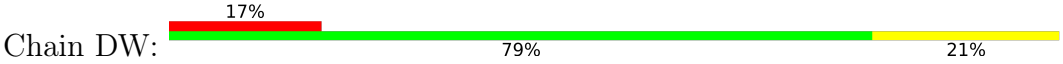


• Molecule 26: 50S ribosomal protein L27

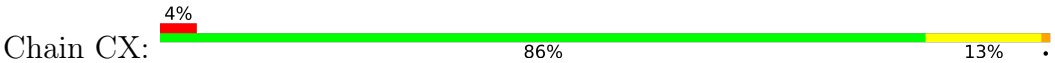


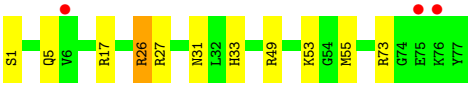


• Molecule 26: 50S ribosomal protein L27

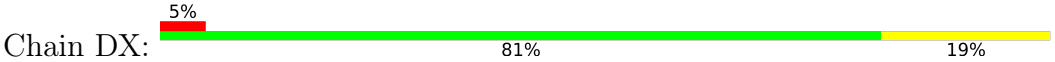


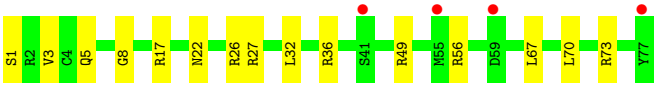
• Molecule 27: 50S ribosomal protein L28





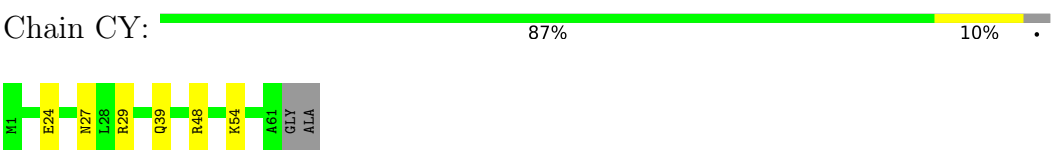
• Molecule 27: 50S ribosomal protein L28





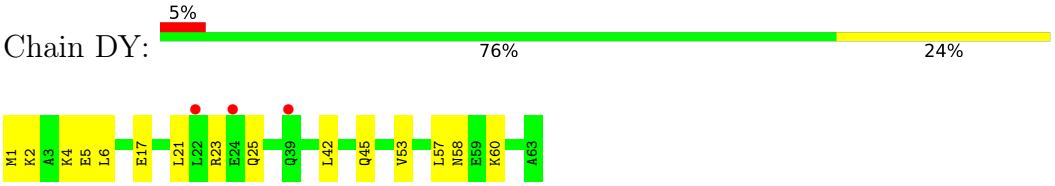
• Molecule 28: 50S ribosomal protein L29

Chain CY:



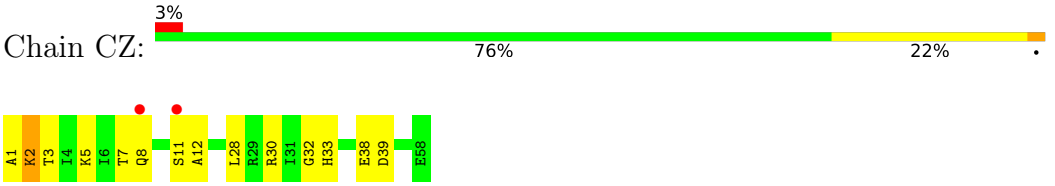
• Molecule 28: 50S ribosomal protein L29

Chain DY:



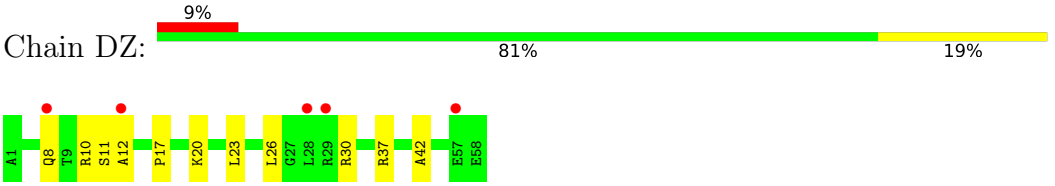
• Molecule 29: 50S ribosomal protein L30

Chain CZ:



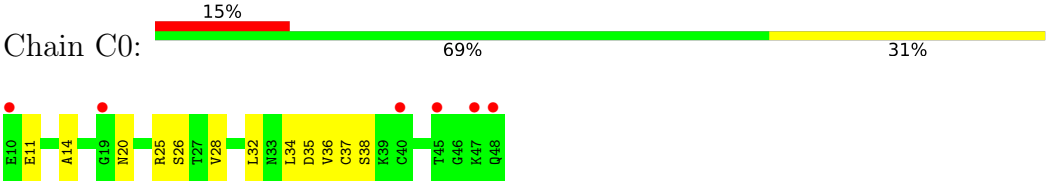
• Molecule 29: 50S ribosomal protein L30

Chain DZ:



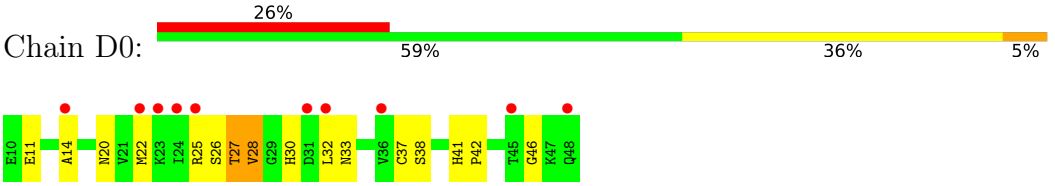
• Molecule 30: 50S ribosomal protein L31

Chain C0:



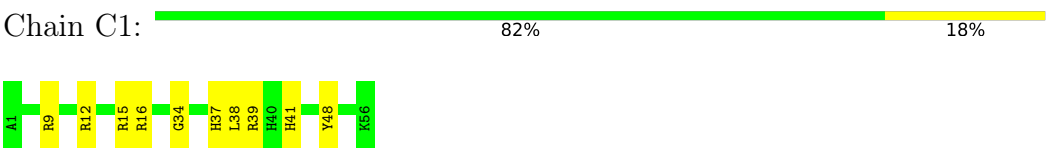
• Molecule 30: 50S ribosomal protein L31

Chain D0:



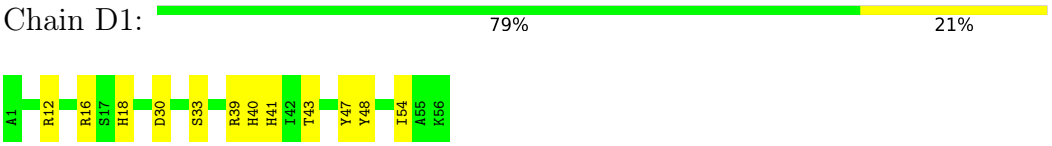
• Molecule 31: 50S ribosomal protein L32

Chain C1:



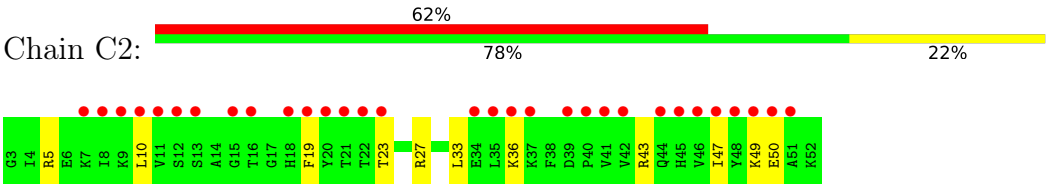
• Molecule 31: 50S ribosomal protein L32

Chain D1:



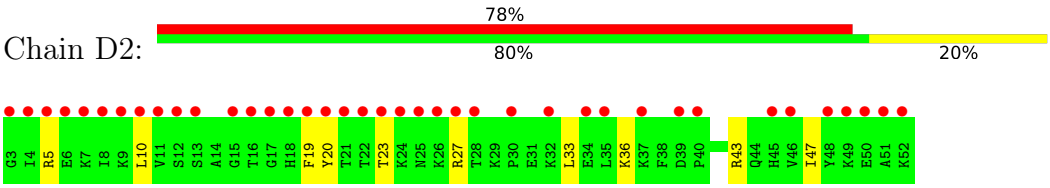
• Molecule 32: 50S ribosomal protein L33

Chain C2:



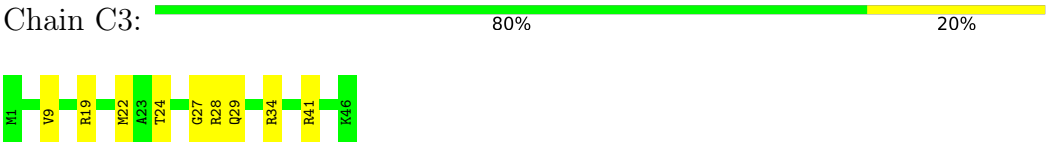
• Molecule 32: 50S ribosomal protein L33

Chain D2:



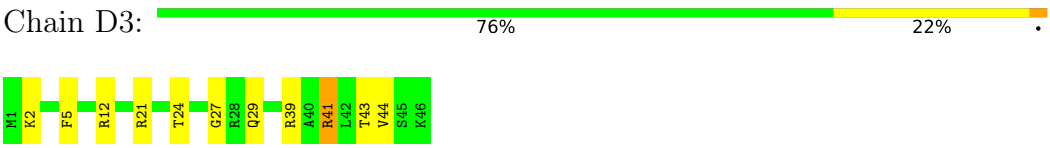
• Molecule 33: 50S ribosomal protein L34

Chain C3:



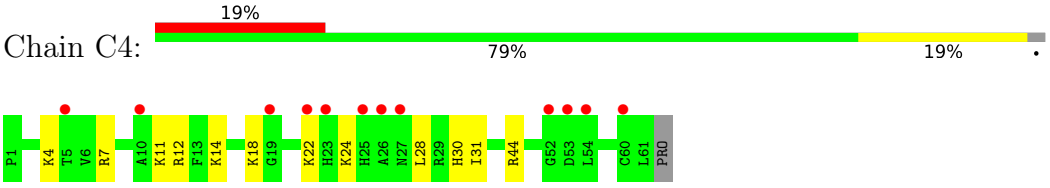
• Molecule 33: 50S ribosomal protein L34

Chain D3:



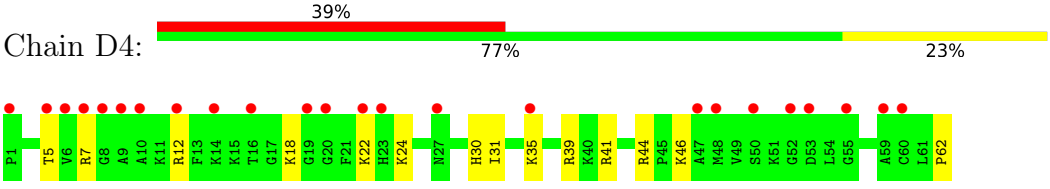
• Molecule 34: 50S ribosomal protein L35

Chain C4:



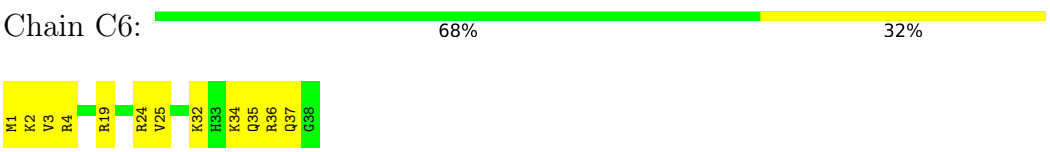
• Molecule 34: 50S ribosomal protein L35

Chain D4:



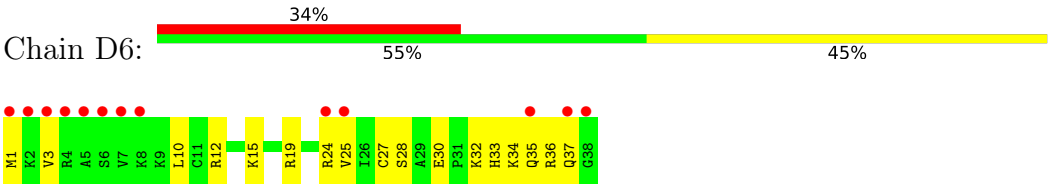
• Molecule 35: 50S ribosomal protein L36

Chain C6:



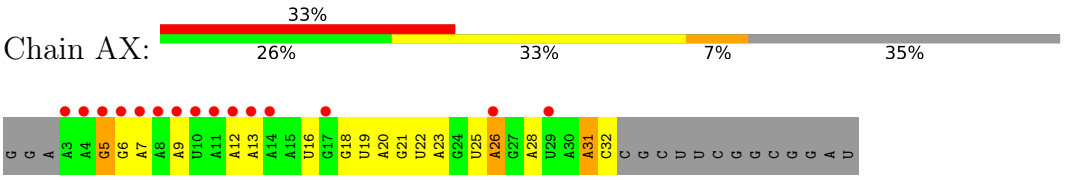
• Molecule 35: 50S ribosomal protein L36

Chain D6:



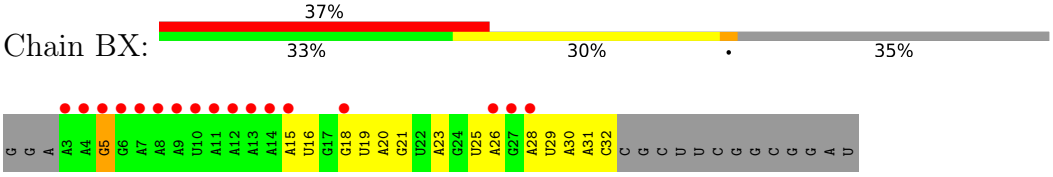
• Molecule 36: Messenger RNA

Chain AX:



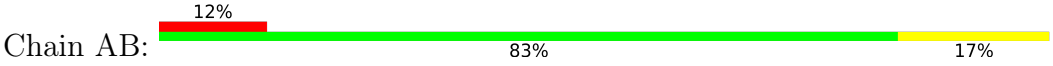
• Molecule 36: Messenger RNA

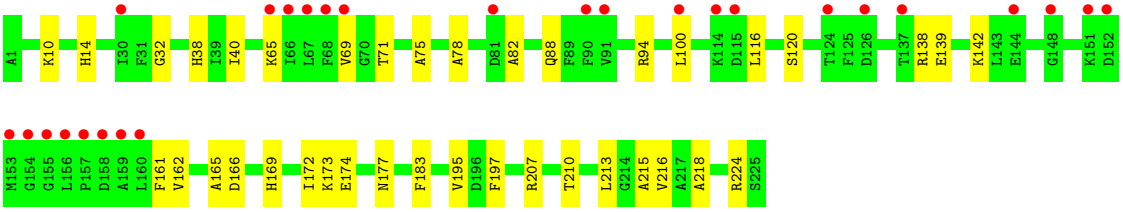
Chain BX:



• Molecule 37: 30S ribosomal protein S2

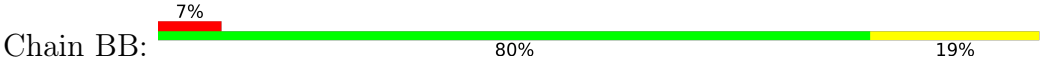
Chain AB:

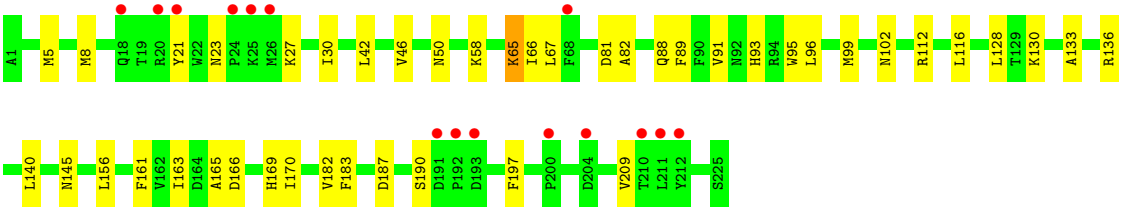




• Molecule 37: 30S ribosomal protein S2

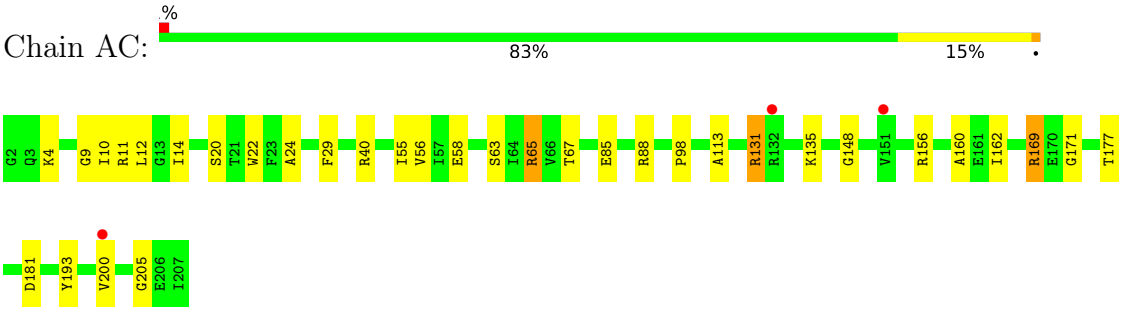
Chain BB:





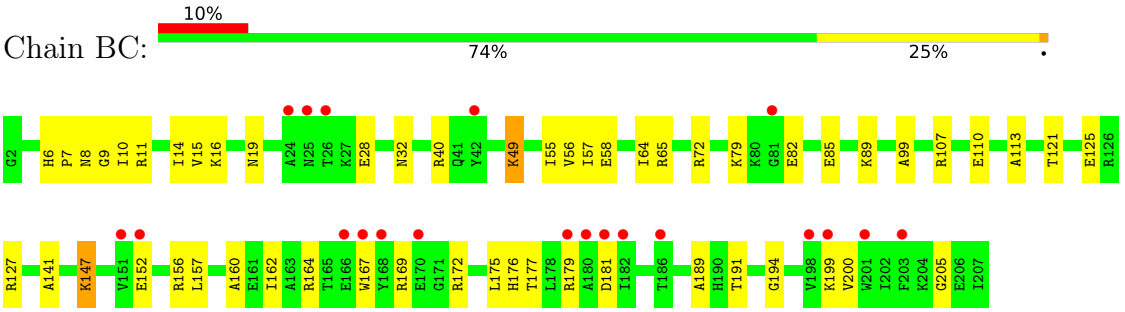
• Molecule 38: 30S ribosomal protein S3

Chain AC:



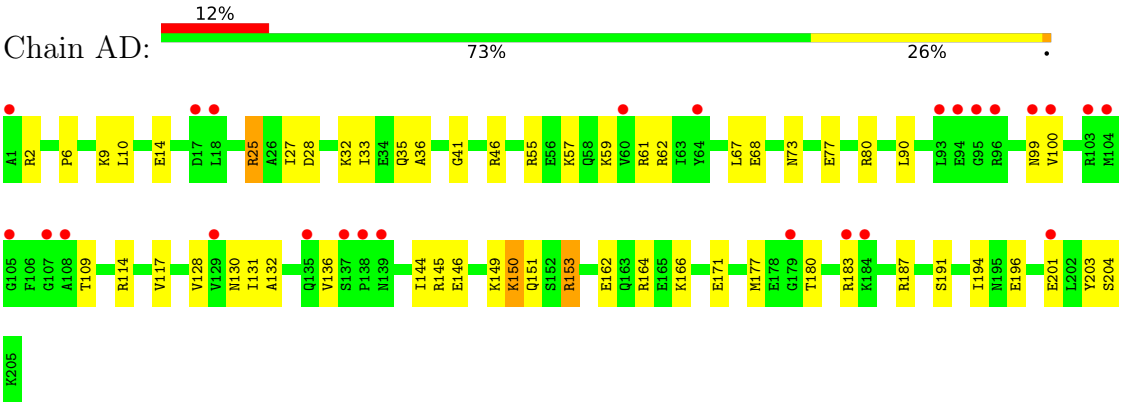
• Molecule 38: 30S ribosomal protein S3

Chain BC:



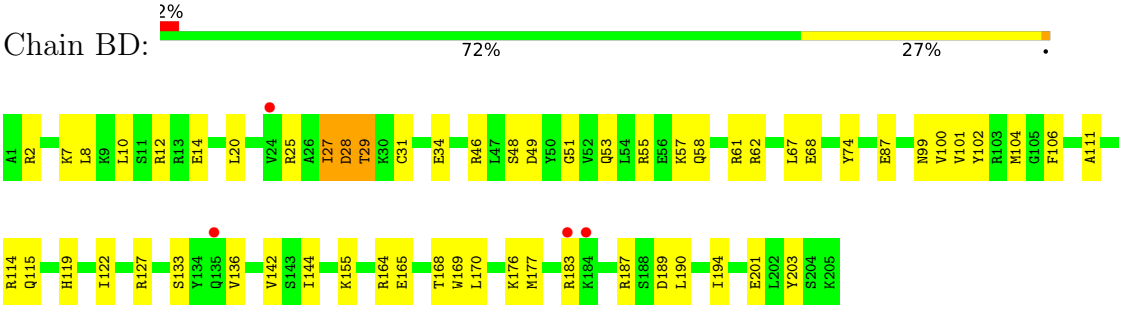
• Molecule 39: 30S ribosomal protein S4

Chain AD:



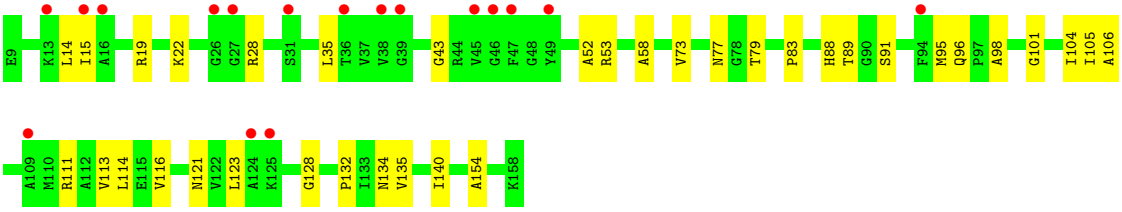
• Molecule 39: 30S ribosomal protein S4

Chain BD:

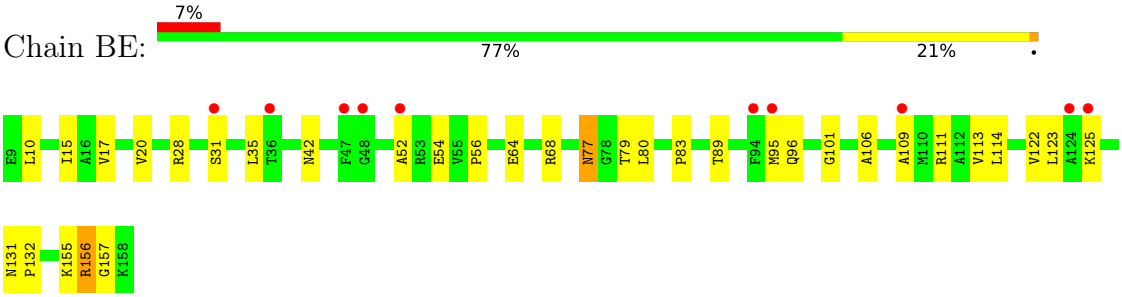


• Molecule 40: 30S ribosomal protein S5

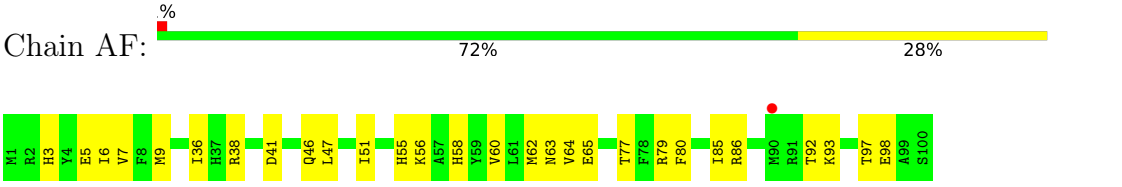
Chain AE:



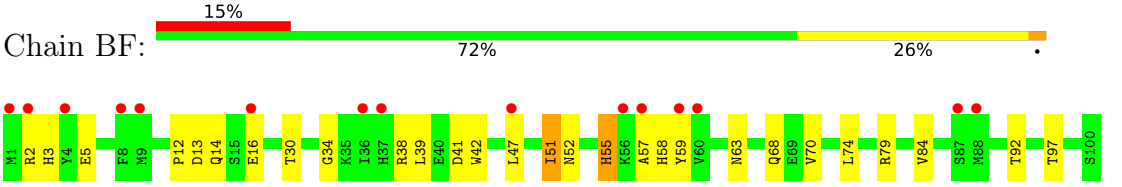
• Molecule 40: 30S ribosomal protein S5



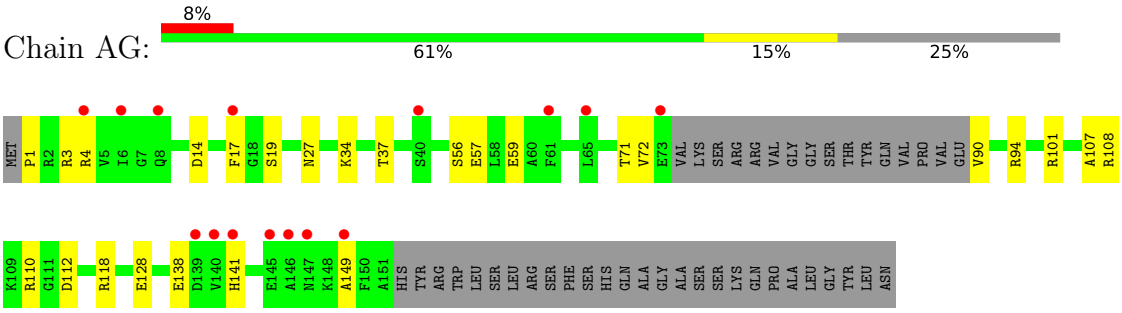
• Molecule 41: 30S ribosomal protein S6



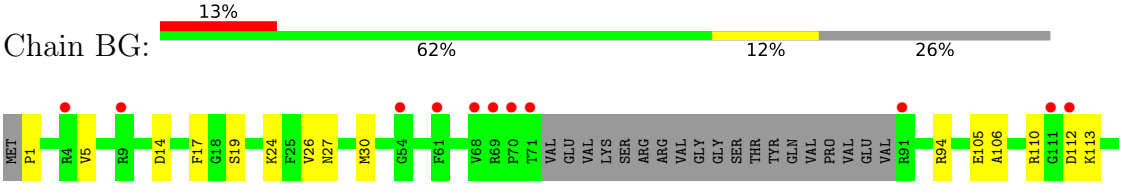
• Molecule 41: 30S ribosomal protein S6

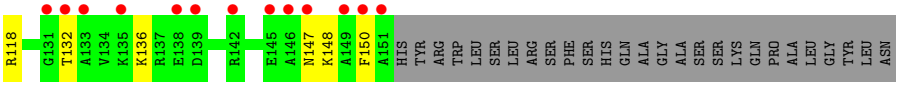


• Molecule 42: 30S ribosomal protein S7

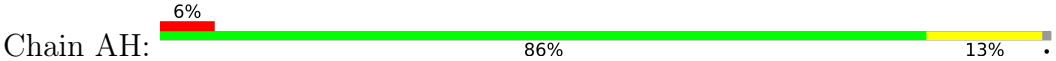


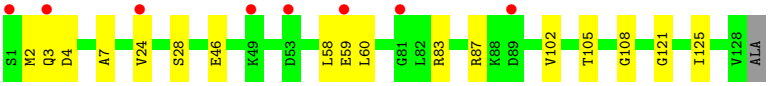
• Molecule 42: 30S ribosomal protein S7



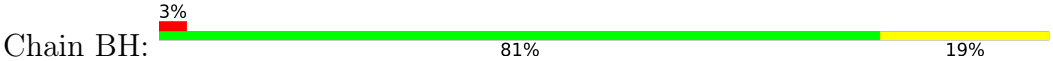


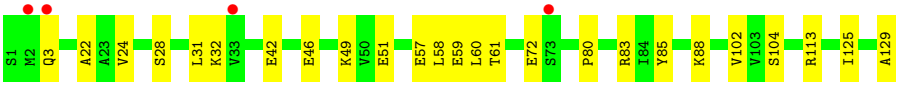
• Molecule 43: 30S ribosomal protein S8



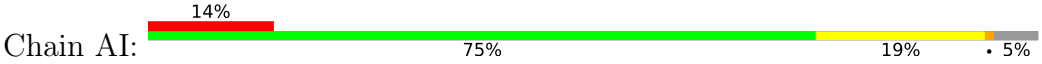


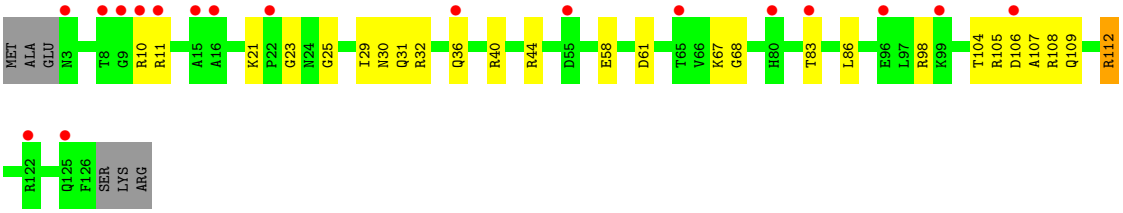
• Molecule 43: 30S ribosomal protein S8



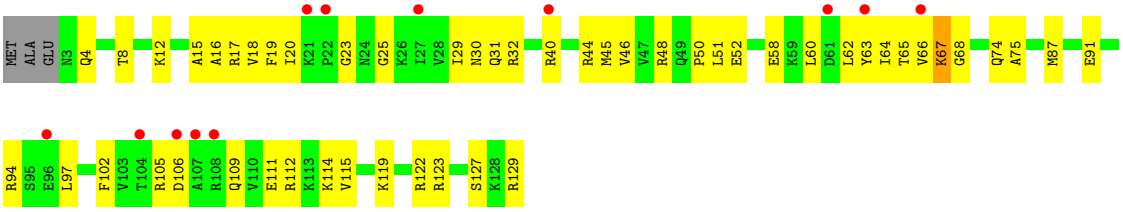


• Molecule 44: 30S ribosomal protein S9





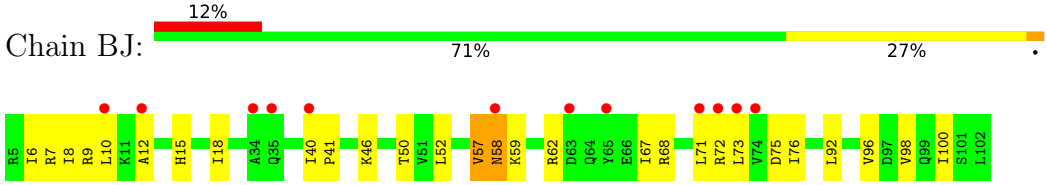
• Molecule 44: 30S ribosomal protein S9



• Molecule 45: 30S ribosomal protein S10

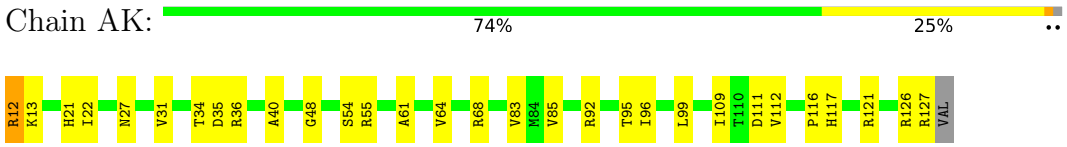
• Molecule 45: 30S ribosomal protein S10

Chain BJ:



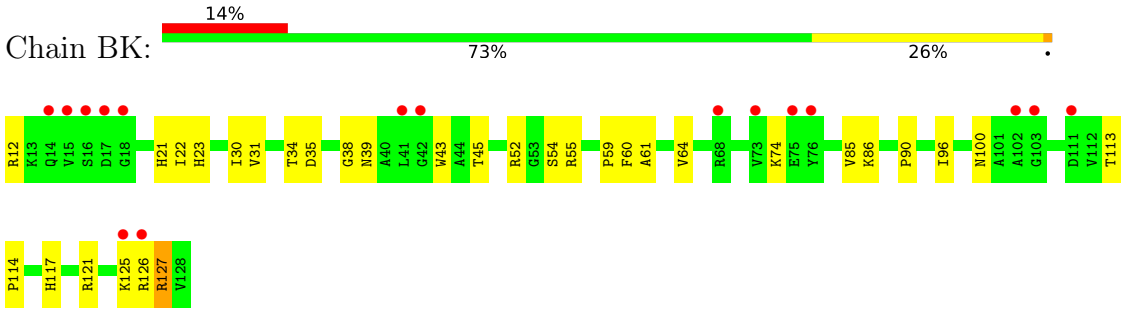
• Molecule 46: 30S ribosomal protein S11

Chain AK:



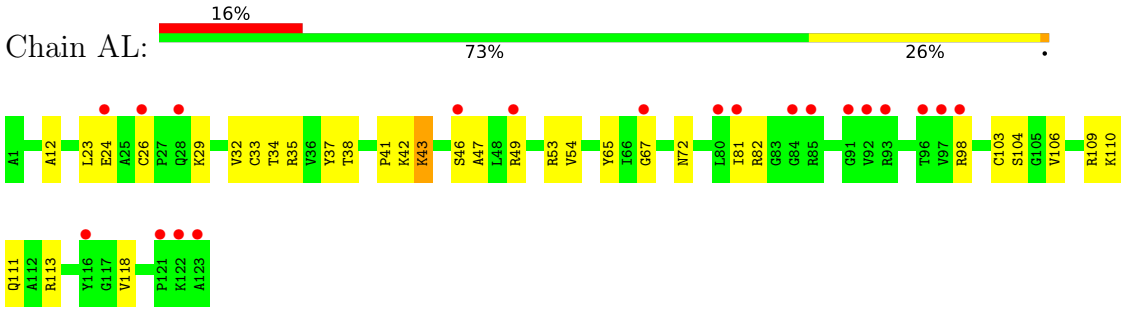
• Molecule 46: 30S ribosomal protein S11

Chain BK:



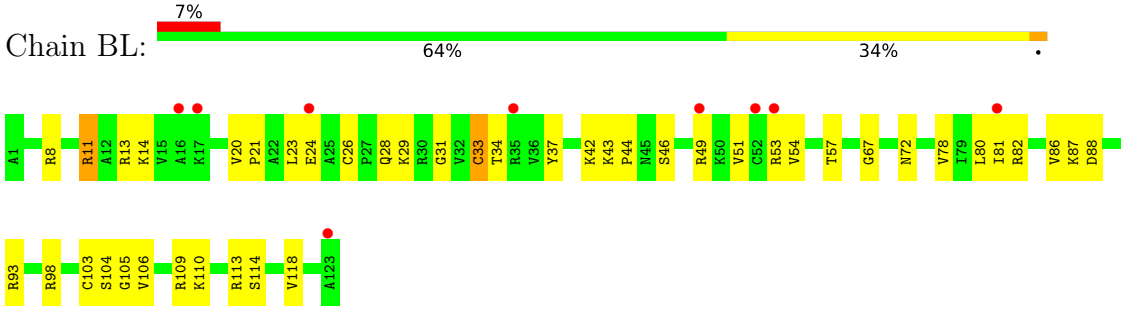
• Molecule 47: 30S ribosomal protein S12

Chain AL:



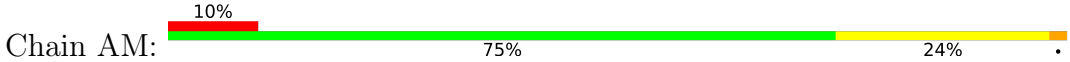
• Molecule 47: 30S ribosomal protein S12

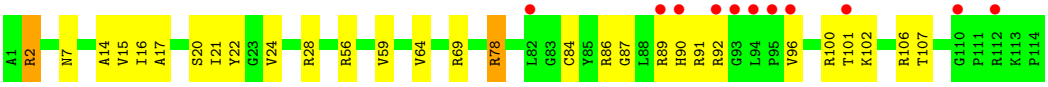
Chain BL:



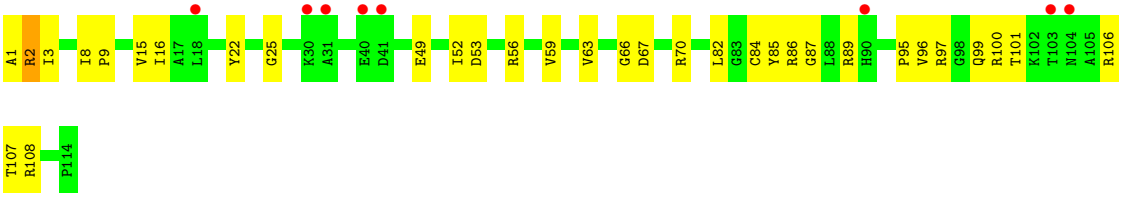
• Molecule 48: 30S ribosomal protein S13

Chain AM:

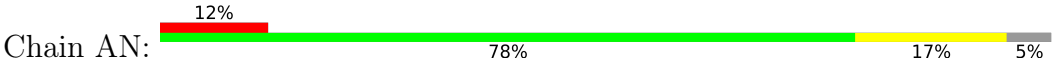


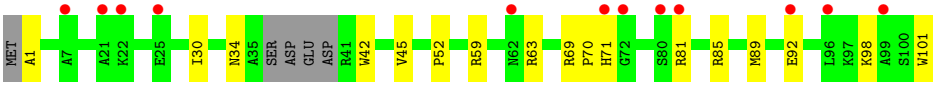


• Molecule 48: 30S ribosomal protein S13

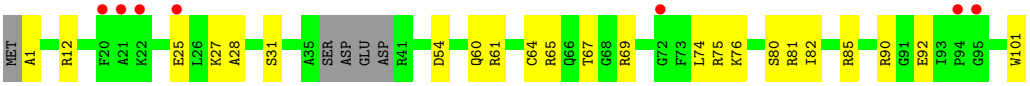


• Molecule 49: 30S ribosomal protein S14

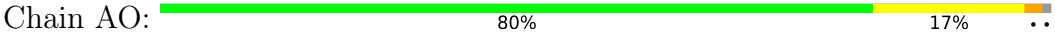


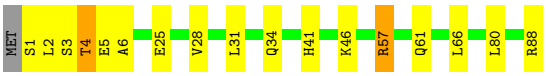


• Molecule 49: 30S ribosomal protein S14

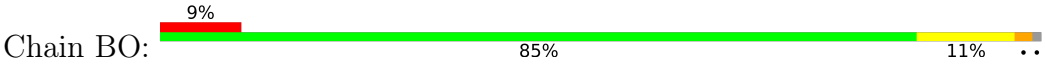


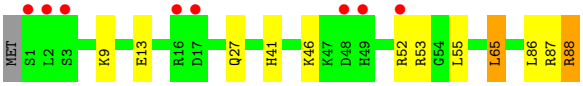
• Molecule 50: 30S ribosomal protein S15



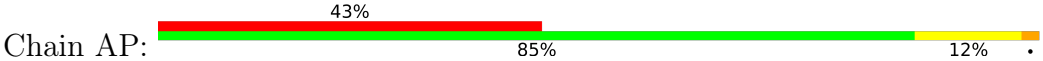


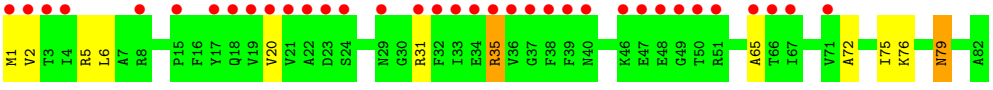
• Molecule 50: 30S ribosomal protein S15





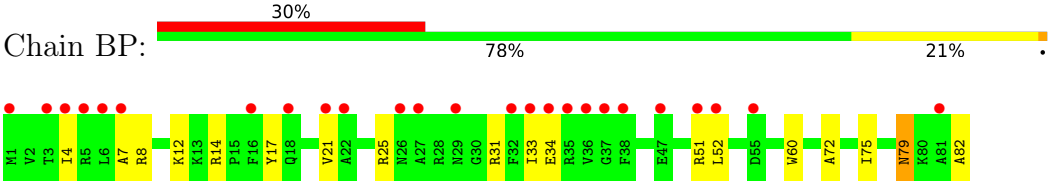
• Molecule 51: 30S ribosomal protein S16





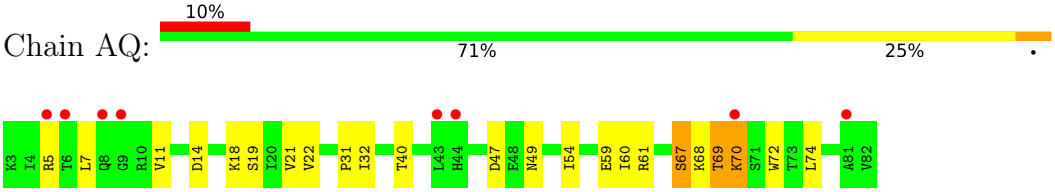
• Molecule 51: 30S ribosomal protein S16

Chain BP:



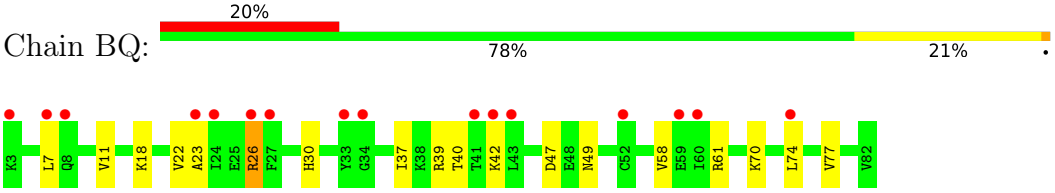
• Molecule 52: 30S ribosomal protein S17

Chain AQ:



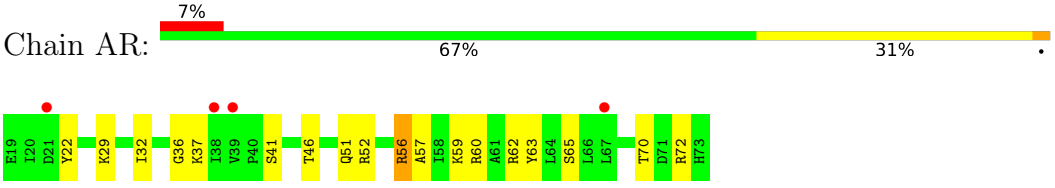
• Molecule 52: 30S ribosomal protein S17

Chain BQ:



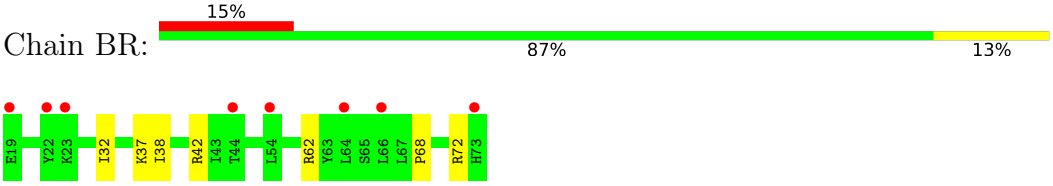
• Molecule 53: 30S ribosomal protein S18

Chain AR:



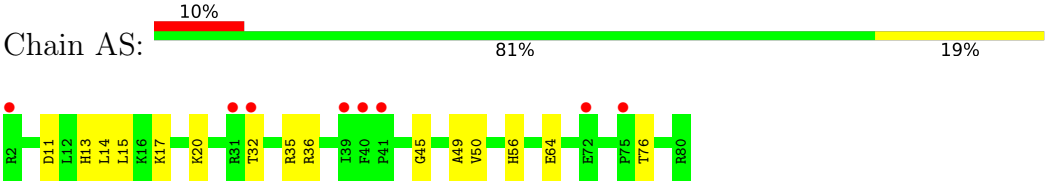
• Molecule 53: 30S ribosomal protein S18

Chain BR:



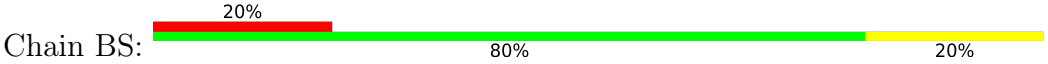
• Molecule 54: 30S ribosomal protein S19

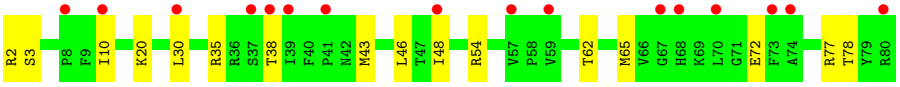
Chain AS:



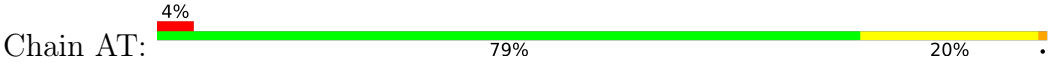
• Molecule 54: 30S ribosomal protein S19

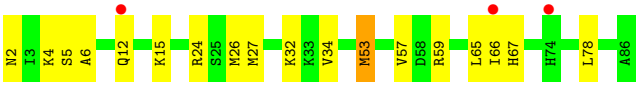
Chain BS:



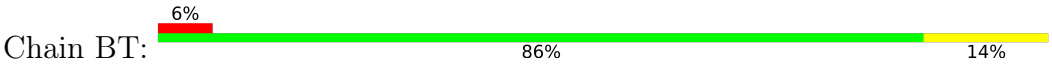


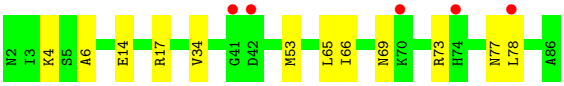
• Molecule 55: 30S ribosomal protein S20





• Molecule 55: 30S ribosomal protein S20





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.66Å 433.91Å 623.53Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	59.99 – 3.94 59.99 – 3.94	Depositor EDS
% Data completeness (in resolution range)	99.9 (59.99-3.94) 99.9 (59.99-3.94)	Depositor EDS
R_{merge}	0.57	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.21 (at 3.88Å)	Xtriage
Refinement program	PHENIX 1.12_2829	Depositor
R, R_{free}	0.249 , 0.269 0.249 , 0.269	Depositor DCC
R_{free} test set	10092 reflections (2.01%)	wwPDB-VP
Wilson B-factor (Å^2)	137.5	Xtriage
Anisotropy	0.118	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.16 , 71.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.37$, $< L^2 > = 0.20$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	296390	wwPDB-VP
Average B, all atoms (Å^2)	136.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.47% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.44	0/36967	1.12	179/57663 (0.3%)
1	BA	0.47	0/37009	1.18	224/57723 (0.4%)
2	CA	0.49	2/68933 (0.0%)	1.10	263/107532 (0.2%)
2	DA	0.45	1/68974 (0.0%)	1.11	303/107576 (0.3%)
3	CB	0.47	0/2828	1.14	19/4410 (0.4%)
3	DB	0.39	0/2828	1.14	21/4410 (0.5%)
4	AV	0.47	1/1813 (0.1%)	1.16	18/2823 (0.6%)
4	AW	0.51	1/1813 (0.1%)	1.22	21/2823 (0.7%)
4	AY	0.42	1/1813 (0.1%)	1.06	5/2823 (0.2%)
4	BV	0.47	1/1813 (0.1%)	1.10	10/2823 (0.4%)
4	BW	0.48	1/1813 (0.1%)	1.18	13/2823 (0.5%)
5	CC	0.32	0/2122	0.60	0/2852
5	DC	0.31	0/2122	0.61	0/2852
6	CD	0.36	0/1586	0.60	0/2134
6	DD	0.33	0/1586	0.59	0/2134
7	CE	0.31	0/1422	0.57	0/1911
7	DE	0.30	0/1411	0.53	0/1897
8	CF	0.35	0/1435	0.64	0/1926
8	DF	0.36	0/1435	0.63	0/1926
9	CG	0.33	0/1343	0.55	0/1816
9	DG	0.30	0/1343	0.55	0/1816
10	CH	0.30	0/1121	0.62	0/1515
10	DH	0.32	0/1121	0.65	1/1515 (0.1%)
11	C5	0.31	0/835	0.63	0/1123
12	CI	0.29	0/513	0.54	0/684
12	DI	0.30	0/520	0.62	0/694
13	CJ	0.33	0/1152	0.55	0/1551
13	DJ	0.32	0/1152	0.53	0/1551
14	CK	0.33	0/948	0.61	0/1268
14	DK	0.33	0/948	0.63	0/1268
15	CL	0.32	0/1054	0.68	1/1403 (0.1%)
15	DL	0.30	0/1054	0.65	1/1403 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
16	CM	0.34	0/1084	0.66	1/1450 (0.1%)
16	DM	0.33	0/1093	0.65	1/1460 (0.1%)
17	CN	0.31	0/982	0.61	0/1312
17	DN	0.31	0/982	0.62	0/1312
18	CO	0.30	0/902	0.57	0/1209
18	DO	0.31	0/902	0.65	0/1209
19	CP	0.32	0/929	0.57	1/1242 (0.1%)
19	DP	0.31	0/929	0.59	1/1242 (0.1%)
20	CQ	0.34	0/960	0.50	0/1278
20	DQ	0.30	0/960	0.47	0/1278
21	CR	0.33	0/829	0.62	0/1107
21	DR	0.30	0/829	0.60	0/1107
22	CS	0.32	0/864	0.56	0/1156
22	DS	0.29	0/864	0.54	0/1156
23	CT	0.32	0/745	0.59	0/994
23	DT	0.29	0/745	0.57	0/994
24	CU	0.35	0/788	0.65	1/1051 (0.1%)
24	DU	0.33	0/788	0.63	1/1051 (0.1%)
25	CV	0.33	0/766	0.58	0/1025
25	DV	0.29	0/766	0.56	0/1025
26	CW	0.32	0/581	0.53	0/769
26	DW	0.31	0/581	0.55	0/769
27	CX	0.34	0/635	0.57	0/848
27	DX	0.29	0/635	0.53	0/848
28	CY	0.30	0/500	0.64	0/665
28	DY	0.29	0/510	0.61	0/677
29	CZ	0.30	0/453	0.56	0/605
29	DZ	0.30	0/453	0.58	0/605
30	C0	0.54	0/297	1.05	2/398 (0.5%)
30	D0	0.65	1/297 (0.3%)	0.89	1/398 (0.3%)
31	C1	0.32	0/450	0.61	0/599
31	D1	0.28	0/450	0.59	0/599
32	C2	0.30	0/417	0.61	0/554
32	D2	0.28	0/417	0.60	0/554
33	C3	0.30	0/380	0.53	0/498
33	D3	0.30	0/380	0.54	0/498
34	C4	0.30	0/486	0.57	0/639
34	D4	0.29	0/494	0.59	0/651
35	C6	0.36	0/303	0.65	0/397
35	D6	0.33	0/303	0.61	0/397
36	AX	0.43	0/735	1.26	7/1145 (0.6%)
36	BX	0.55	1/735 (0.1%)	1.34	9/1145 (0.8%)
37	AB	0.31	0/1788	0.60	0/2408

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
37	BB	0.31	0/1788	0.64	1/2408 (0.0%)
38	AC	0.31	0/1652	0.60	1/2225 (0.0%)
38	BC	0.30	0/1652	0.56	0/2225
39	AD	0.31	0/1665	0.65	1/2227 (0.0%)
39	BD	0.34	0/1665	0.65	0/2227
40	AE	0.33	0/1119	0.68	0/1504
40	BE	0.34	0/1119	0.69	0/1504
41	AF	0.32	0/836	0.64	0/1128
41	BF	0.32	0/836	0.69	1/1128 (0.1%)
42	AG	0.29	0/1069	0.54	0/1430
42	BG	0.28	0/1046	0.56	0/1398
43	AH	0.30	0/983	0.55	0/1319
43	BH	0.30	0/989	0.54	0/1326
44	AI	0.29	0/1007	0.60	0/1342
44	BI	0.29	0/1034	0.62	0/1375
45	AJ	0.29	0/797	0.70	1/1077 (0.1%)
45	BJ	0.29	0/797	0.67	1/1077 (0.1%)
46	AK	0.31	0/885	0.58	0/1195
46	BK	0.29	0/893	0.60	0/1205
47	AL	0.30	0/969	0.67	1/1300 (0.1%)
47	BL	0.32	0/969	0.65	1/1300 (0.1%)
48	AM	0.36	0/893	0.73	2/1193 (0.2%)
48	BM	0.44	1/893 (0.1%)	0.68	1/1193 (0.1%)
49	AN	0.29	0/785	0.60	0/1043
49	BN	0.28	0/785	0.60	0/1043
50	AO	0.30	0/722	0.63	0/964
50	BO	0.27	0/722	0.62	1/964 (0.1%)
51	AP	0.29	0/659	0.64	0/884
51	BP	0.30	0/659	0.62	0/884
52	AQ	0.35	0/658	0.75	1/881 (0.1%)
52	BQ	0.32	0/658	0.69	0/881
53	AR	0.28	0/463	0.56	0/621
53	BR	0.27	0/463	0.55	0/621
54	AS	0.30	0/653	0.59	0/877
54	BS	0.28	0/653	0.58	0/877
55	AT	0.29	0/671	0.57	0/888
55	BT	0.30	0/671	0.55	0/888
All	All	0.43	11/317592 (0.0%)	1.02	1117/475614 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
5	CC	0	2
6	CD	0	1
6	DD	0	1
8	CF	0	1
10	DH	0	2
11	C5	0	1
14	CK	0	1
14	DK	0	1
15	CL	0	1
19	DP	0	1
23	CT	0	1
23	DT	0	1
25	DV	0	1
33	D3	0	1
34	C4	0	1
34	D4	0	1
37	AB	0	1
38	AC	0	1
39	AD	0	2
39	BD	0	2
40	BE	0	2
41	AF	0	1
41	BF	0	1
42	AG	0	1
45	BJ	0	1
48	AM	0	1
49	AN	0	1
52	AQ	0	1
52	BQ	0	1
All	All	0	34

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	BW	1	G	OP3-P	-10.75	1.48	1.61
4	BV	1	G	OP3-P	-10.71	1.48	1.61
4	AV	1	G	OP3-P	-10.67	1.48	1.61
4	AY	1	G	OP3-P	-10.64	1.48	1.61
4	AW	1	G	OP3-P	-10.49	1.48	1.61
2	CA	899	A	O3'-P	-9.52	1.49	1.61
36	BX	30	A	N9-C4	7.46	1.42	1.37
48	BM	2	ARG	CG-CD	-7.21	1.33	1.51
2	CA	896	A	N9-C4	6.62	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	DA	896	A	N9-C4	5.55	1.41	1.37
30	D0	28	VAL	CB-CG2	-5.18	1.42	1.52

All (1117) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	BA	71	A	OP2-P-O3'	-33.97	30.46	105.20
2	DA	2219	U	O5'-P-OP1	-27.34	77.89	110.70
2	DA	2219	U	OP1-P-OP2	-24.36	83.07	119.60
2	DA	2219	U	O5'-P-OP2	19.93	134.61	110.70
2	CA	1521	G	OP2-P-O3'	-15.81	70.41	105.20
2	DA	2218	G	OP1-P-O3'	15.73	139.81	105.20
1	BA	980	C	N1-C2-O2	14.75	127.75	118.90
1	BA	71	A	O3'-P-O5'	14.31	131.19	104.00
2	DA	2218	G	OP2-P-O3'	-13.66	75.16	105.20
2	DA	896	A	C2-N3-C4	13.34	117.27	110.60
1	BA	980	C	N3-C2-O2	-12.42	113.21	121.90
2	CA	897	C	C5-C6-N1	12.33	127.16	121.00
1	AA	1506	U	O5'-P-OP2	-12.29	94.64	105.70
1	BA	980	C	C2-N1-C1'	12.28	132.31	118.80
30	C0	34	LEU	CB-CG-CD1	-11.94	90.70	111.00
2	CA	898	C	C6-N1-C2	-11.91	115.54	120.30
2	CA	898	C	C5-C6-N1	11.86	126.93	121.00
2	CA	897	C	C6-N1-C2	-11.82	115.57	120.30
2	CA	896	A	C2-N3-C4	11.76	116.48	110.60
1	AA	210	C	N1-C2-O2	11.74	125.95	118.90
2	CA	1914	C	N1-C2-O2	10.98	125.49	118.90
2	CA	1956	U	N3-C2-O2	-10.66	114.74	122.20
2	CA	2887	A	O5'-P-OP2	-10.60	96.17	105.70
2	DA	897	C	C5-C6-N1	10.54	126.27	121.00
2	DA	357	C	N1-C2-O2	10.42	125.15	118.90
1	AA	210	C	C2-N1-C1'	10.29	130.12	118.80
2	CA	1774	C	N1-C2-O2	10.23	125.04	118.90
36	BX	30	A	C2-N3-C4	10.22	115.71	110.60
2	DA	2248	C	N1-C2-O2	10.16	125.00	118.90
2	CA	1774	C	N3-C2-O2	-10.04	114.87	121.90
2	DA	888	C	N1-C2-O2	9.93	124.86	118.90
2	DA	1584	U	C2-N1-C1'	9.90	129.58	117.70
2	CA	2173	A	N1-C6-N6	-9.80	112.72	118.60
48	AM	2	ARG	CG-CD-NE	-9.67	91.49	111.80
2	DA	1076	C	N3-C2-O2	-9.62	115.17	121.90
1	AA	1148	U	N3-C2-O2	-9.55	115.51	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	210	C	N3-C2-O2	-9.48	115.27	121.90
1	AA	1066	C	N1-C2-O2	9.35	124.51	118.90
1	BA	980	C	C6-N1-C2	-9.28	116.59	120.30
2	CA	1914	C	N3-C2-O2	-9.27	115.41	121.90
2	DA	1584	U	N1-C2-O2	9.26	129.28	122.80
2	CA	2887	A	O5'-P-OP1	9.17	121.70	110.70
2	DA	1893	C	N1-C2-O2	9.16	124.40	118.90
2	DA	2683	C	N1-C2-O2	9.15	124.39	118.90
1	AA	1148	U	N1-C2-O2	9.12	129.18	122.80
2	DA	357	C	N3-C2-O2	-9.06	115.56	121.90
2	CA	1313	U	N3-C2-O2	-9.05	115.86	122.20
1	AA	1028	C	C6-N1-C2	-8.98	116.71	120.30
2	CA	1313	U	N1-C2-O2	8.94	129.06	122.80
2	DA	847	U	N3-C2-O2	-8.87	115.99	122.20
1	AA	203	G	C5-C6-O6	-8.80	123.32	128.60
2	DA	2063	C	N1-C2-O2	8.77	124.16	118.90
1	BA	1448	C	N1-C2-O2	8.75	124.15	118.90
2	CA	1313	U	C2-N1-C1'	8.70	128.14	117.70
1	AA	1493	A	N1-C2-N3	8.68	133.64	129.30
2	DA	1893	C	N3-C2-O2	-8.63	115.86	121.90
2	DA	1914	C	C2-N1-C1'	8.63	128.29	118.80
2	CA	1314	C	C2-N1-C1'	8.61	128.27	118.80
36	AX	25	U	N3-C2-O2	-8.58	116.19	122.20
1	BA	463	U	N1-C2-O2	8.57	128.80	122.80
2	CA	837	C	N1-C2-O2	8.55	124.03	118.90
36	AX	25	U	N1-C2-O2	8.52	128.76	122.80
1	BA	1541	U	C5-C6-N1	8.49	126.95	122.70
2	DA	1584	U	N3-C2-O2	-8.48	116.27	122.20
2	DA	1914	C	N1-C2-O2	8.46	123.97	118.90
1	BA	463	U	C2-N1-C1'	8.44	127.83	117.70
1	BA	611	C	N1-C2-O2	8.40	123.94	118.90
1	BA	1203	C	C5-C6-N1	8.37	125.19	121.00
1	AA	528	C	N1-C2-O2	8.36	123.91	118.90
2	CA	1521	G	OP1-P-O3'	-8.35	86.83	105.20
4	AV	32	C	N1-C2-O2	8.34	123.91	118.90
3	DB	26	C	N1-C2-O2	8.33	123.90	118.90
2	DA	1348	C	N1-C2-O2	8.33	123.90	118.90
2	DA	1314	C	C2-N1-C1'	8.29	127.92	118.80
2	DA	357	C	C2-N1-C1'	8.29	127.91	118.80
2	DA	357	C	C6-N1-C2	-8.28	116.99	120.30
2	CA	1956	U	N1-C2-O2	8.25	128.58	122.80
1	BA	980	C	C6-N1-C1'	-8.24	110.91	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	1390	U	N3-C2-O2	-8.24	116.43	122.20
30	C0	36	VAL	CG1-CB-CG2	-8.22	97.75	110.90
2	DA	1956	U	N3-C2-O2	-8.19	116.47	122.20
1	AA	1383	C	N1-C2-O2	8.18	123.81	118.90
2	DA	1390	U	N1-C2-O2	8.16	128.51	122.80
1	BA	463	U	N3-C2-O2	-8.15	116.49	122.20
2	CA	1522	A	O3'-P-O5'	-8.15	88.52	104.00
15	CL	82	LEU	CA-CB-CG	8.14	134.03	115.30
2	CA	1348	C	N1-C2-O2	8.13	123.78	118.90
2	DA	1993	U	N3-C2-O2	-8.11	116.52	122.20
2	CA	2556	C	N1-C2-O2	8.11	123.76	118.90
48	BM	2	ARG	NE-CZ-NH1	-8.10	116.25	120.30
2	DA	2248	C	N3-C2-O2	-8.09	116.24	121.90
1	BA	1158	C	C2-N1-C1'	8.08	127.69	118.80
2	DA	891	G	C4-N9-C1'	8.06	136.98	126.50
2	CA	1180	U	C2-N1-C1'	8.03	127.33	117.70
2	CA	2683	C	N1-C2-O2	7.99	123.69	118.90
2	DA	895	U	C5-C6-N1	7.97	126.68	122.70
1	AA	330	C	N1-C2-O2	7.94	123.66	118.90
2	DA	367	G	N3-C4-C5	-7.91	124.65	128.60
1	BA	1144	G	C8-N9-C4	-7.89	103.24	106.40
2	DA	1313	U	C2-N1-C1'	7.84	127.11	117.70
4	AV	45	G	C4-N9-C1'	7.73	136.54	126.50
1	BA	853	C	N3-C2-O2	-7.72	116.49	121.90
2	DA	2063	C	N3-C2-O2	-7.72	116.49	121.90
2	DA	1076	C	N1-C2-O2	7.72	123.53	118.90
16	DM	70	ASP	CB-CG-OD1	7.72	125.25	118.30
2	DA	1675	C	N1-C2-O2	7.71	123.53	118.90
2	CA	1582	C	C6-N1-C2	-7.70	117.22	120.30
39	AD	28	ASP	CB-CG-OD1	7.67	125.20	118.30
2	CA	1509	A	O4'-C1'-N9	7.66	114.33	108.20
2	CA	2226	C	N1-C2-O2	7.62	123.47	118.90
2	CA	1895	C	N3-C2-O2	-7.61	116.57	121.90
1	AA	1066	C	N3-C2-O2	-7.59	116.58	121.90
15	DL	82	LEU	CA-CB-CG	7.59	132.77	115.30
1	AA	1028	C	N1-C2-O2	7.59	123.45	118.90
3	CB	31	C	C2-N1-C1'	7.59	127.15	118.80
3	DB	11	C	N1-C2-O2	7.58	123.45	118.90
1	AA	611	C	N1-C2-O2	7.58	123.45	118.90
2	CA	1914	C	C2-N1-C1'	7.55	127.11	118.80
2	DA	1956	U	N1-C2-O2	7.55	128.08	122.80
1	AA	522	C	N1-C2-O2	7.54	123.42	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	CA	2180	U	N1-C2-O2	7.54	128.07	122.80
2	CA	1065	U	C2-N1-C1'	7.53	126.74	117.70
2	CA	1582	C	N1-C2-O2	7.52	123.41	118.90
2	DA	888	C	N3-C2-O2	-7.51	116.64	121.90
1	AA	203	G	N1-C6-O6	7.50	124.40	119.90
4	AW	64	U	N1-C2-O2	7.49	128.04	122.80
1	AA	926	G	C4-C5-N7	7.49	113.80	110.80
3	CB	31	C	N1-C2-O2	7.47	123.38	118.90
2	DA	1313	U	N1-C2-O2	7.46	128.02	122.80
1	AA	210	C	C6-N1-C2	-7.41	117.34	120.30
2	CA	1314	C	C6-N1-C2	-7.40	117.34	120.30
1	BA	1203	C	C2-N1-C1'	7.38	126.92	118.80
2	DA	897	C	C6-N1-C2	-7.38	117.35	120.30
1	BA	1322	C	C6-N1-C2	-7.37	117.35	120.30
2	DA	891	G	C8-N9-C1'	-7.36	117.43	127.00
16	CM	70	ASP	CB-CG-OD1	7.34	124.91	118.30
2	DA	888	C	C2-N1-C1'	7.32	126.86	118.80
1	AA	989	U	N3-C2-O2	-7.30	117.09	122.20
2	CA	1390	U	N1-C2-O2	7.30	127.91	122.80
2	CA	2342	C	N3-C2-O2	-7.29	116.79	121.90
2	DA	2683	C	N3-C2-O2	-7.29	116.80	121.90
2	CA	257	C	N1-C2-O2	7.28	123.27	118.90
2	CA	1534	U	N1-C2-O2	7.28	127.89	122.80
2	CA	2180	U	N3-C2-O2	-7.26	117.12	122.20
2	CA	2178	C	N3-C2-O2	-7.24	116.83	121.90
2	DA	1855	U	N1-C2-O2	7.24	127.87	122.80
2	CA	2072	C	C6-N1-C2	-7.23	117.41	120.30
2	DA	1914	C	N3-C2-O2	-7.23	116.84	121.90
2	DA	1062	G	N3-C4-N9	7.21	130.33	126.00
1	BA	611	C	N3-C2-O2	-7.18	116.87	121.90
2	DA	896	A	N1-C2-N3	-7.18	125.71	129.30
2	DA	2072	C	C2-N1-C1'	7.18	126.70	118.80
1	BA	1203	C	C6-N1-C2	-7.16	117.43	120.30
2	CA	1523	U	P-O5'-C5'	7.14	132.33	120.90
2	CA	1523	U	O5'-P-OP1	7.14	119.27	110.70
2	DA	367	G	C2-N3-C4	7.14	115.47	111.90
36	BX	30	A	N3-C4-C5	-7.13	121.81	126.80
4	AW	17	U	P-O3'-C3'	7.13	128.25	119.70
2	CA	1893	C	N3-C2-O2	-7.12	116.92	121.90
3	DB	26	C	N3-C2-O2	-7.11	116.92	121.90
1	AA	1073	U	C2-N1-C1'	7.11	126.23	117.70
1	AA	1109	C	N1-C2-O2	7.11	123.16	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	891	G	N3-C4-N9	7.10	130.26	126.00
2	CA	1993	U	N1-C2-O2	7.10	127.77	122.80
1	AA	436	C	N1-C2-O2	7.09	123.16	118.90
1	BA	1448	C	N3-C2-O2	-7.09	116.93	121.90
2	CA	2752	C	N1-C2-O2	7.08	123.15	118.90
2	DA	847	U	N1-C2-O2	7.07	127.75	122.80
2	CA	1893	C	N1-C2-O2	7.06	123.13	118.90
2	CA	2666	C	N1-C2-O2	7.05	123.13	118.90
1	BA	697	U	N1-C2-O2	7.05	127.73	122.80
1	BA	751	U	C2-N1-C1'	7.04	126.14	117.70
1	BA	316	C	C2-N1-C1'	7.03	126.53	118.80
4	AW	59	U	N1-C2-O2	7.02	127.72	122.80
1	BA	519	C	N1-C2-O2	7.02	123.11	118.90
2	DA	1313	U	N3-C2-O2	-7.01	117.29	122.20
2	DA	2248	C	C2-N1-C1'	7.01	126.51	118.80
2	CA	2136	G	C4-N9-C1'	7.00	135.60	126.50
1	AA	4	U	N1-C2-O2	6.98	127.69	122.80
1	AA	811	C	N1-C2-O2	6.98	123.09	118.90
1	BA	1364	U	N3-C4-C5	6.98	118.79	114.60
1	AA	1066	C	C2-N1-C1'	6.97	126.47	118.80
1	AA	844	G	C4-N9-C1'	6.97	135.56	126.50
2	CA	896	A	N3-C4-C5	-6.96	121.93	126.80
2	CA	1534	U	N3-C2-O2	-6.96	117.33	122.20
1	BA	1097	C	C6-N1-C2	-6.95	117.52	120.30
1	AA	1028	C	C2-N1-C1'	6.95	126.44	118.80
1	BA	1469	C	N1-C2-O2	6.95	123.07	118.90
2	CA	2342	C	N1-C2-O2	6.94	123.06	118.90
2	DA	1314	C	C6-N1-C2	-6.94	117.53	120.30
36	AX	25	U	C2-N1-C1'	6.93	126.01	117.70
2	DA	2072	C	N1-C2-O2	6.93	123.06	118.90
1	BA	1027	C	N1-C2-O2	6.92	123.05	118.90
1	AA	989	U	N1-C2-O2	6.92	127.64	122.80
1	AA	4	U	N3-C2-O2	-6.91	117.36	122.20
2	DA	1774	C	N1-C2-O2	6.91	123.04	118.90
1	BA	1109	C	N1-C2-O2	6.90	123.04	118.90
2	CA	1874	C	N1-C2-O2	6.90	123.04	118.90
2	CA	837	C	N3-C2-O2	-6.90	117.07	121.90
1	AA	469	C	N1-C2-O2	6.89	123.04	118.90
2	CA	2072	C	C5-C6-N1	6.89	124.44	121.00
2	DA	1582	C	N3-C2-O2	-6.89	117.08	121.90
1	AA	210	C	C6-N1-C1'	-6.88	112.54	120.80
1	BA	54	C	N1-C2-O2	6.87	123.02	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	311	C	N1-C2-O2	6.87	123.02	118.90
1	BA	469	C	N1-C2-O2	6.87	123.02	118.90
1	BA	1541	U	C6-N1-C2	-6.87	116.88	121.00
2	CA	2556	C	N3-C2-O2	-6.87	117.09	121.90
1	AA	1466	C	N1-C2-O2	6.84	123.00	118.90
1	BA	853	C	N1-C2-O2	6.83	123.00	118.90
2	CA	1870	C	P-O3'-C3'	6.83	127.90	119.70
2	DA	1582	C	N1-C2-O2	6.83	123.00	118.90
1	AA	1383	C	N3-C2-O2	-6.82	117.13	121.90
2	DA	974	G	C4-N9-C1'	6.82	135.36	126.50
1	BA	1101	A	P-O3'-C3'	6.81	127.87	119.70
1	BA	1303	C	C2-N1-C1'	6.80	126.28	118.80
1	AA	470	C	N1-C2-O2	6.80	122.98	118.90
1	BA	1149	C	C6-N1-C2	-6.80	117.58	120.30
2	DA	2196	C	N1-C2-O2	6.79	122.97	118.90
3	DB	30	C	N1-C2-O2	6.79	122.97	118.90
4	AV	32	C	N3-C2-O2	-6.78	117.15	121.90
1	BA	1320	C	N1-C2-O2	6.78	122.97	118.90
1	BA	411	A	P-O3'-C3'	6.78	127.83	119.70
2	CA	2884	U	N1-C2-O2	6.77	127.54	122.80
2	CA	1378	A	OP1-P-O3'	6.76	120.08	105.20
1	BA	178	C	C6-N1-C2	-6.76	117.59	120.30
2	DA	2666	C	N1-C2-O2	6.75	122.95	118.90
1	AA	623	C	N1-C2-O2	6.75	122.95	118.90
2	DA	776	G	C4-N9-C1'	6.75	135.28	126.50
4	AW	36	C	N1-C2-O2	6.74	122.95	118.90
1	BA	754	C	N1-C2-O2	6.74	122.95	118.90
1	AA	1267	C	N1-C2-O2	6.74	122.94	118.90
3	CB	26	C	N1-C2-O2	6.74	122.94	118.90
1	AA	1201	A	P-O3'-C3'	6.73	127.78	119.70
2	DA	1775	U	C5-C4-O4	-6.73	121.86	125.90
1	BA	403	C	N1-C2-O2	6.73	122.94	118.90
2	CA	140	C	N1-C2-O2	6.73	122.94	118.90
1	BA	980	C	C5-C6-N1	6.73	124.36	121.00
2	DA	323	C	N1-C2-O2	6.72	122.93	118.90
1	AA	436	C	C2-N1-C1'	6.72	126.19	118.80
4	BW	45	G	N3-C4-C5	-6.72	125.24	128.60
1	BA	1538	C	C5-C6-N1	6.71	124.36	121.00
1	AA	984	C	C5-C6-N1	6.71	124.36	121.00
2	DA	1855	U	N3-C2-O2	-6.70	117.51	122.20
2	CA	1522	A	OP1-P-OP2	6.70	129.65	119.60
2	CA	2062	A	C2-N3-C4	6.67	113.94	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	367	G	N3-C4-N9	6.66	130.00	126.00
2	DA	634	C	N1-C2-O2	6.66	122.89	118.90
2	CA	1993	U	N3-C2-O2	-6.65	117.54	122.20
1	AA	1066	C	C6-N1-C2	-6.65	117.64	120.30
2	CA	1760	C	N1-C2-O2	6.65	122.89	118.90
3	CB	25	U	N1-C2-O2	6.65	127.46	122.80
1	BA	697	U	N3-C2-O2	-6.65	117.55	122.20
4	AV	31	C	N1-C2-O2	6.65	122.89	118.90
2	DA	367	G	N1-C6-O6	-6.64	115.92	119.90
3	CB	71	C	N1-C2-O2	6.63	122.88	118.90
2	CA	1914	C	C6-N1-C2	-6.63	117.65	120.30
2	CA	974	G	C4-N9-C1'	6.63	135.12	126.50
1	AA	1028	C	C5-C6-N1	6.63	124.31	121.00
2	DA	343	C	N1-C2-O2	6.61	122.87	118.90
45	BJ	92	LEU	CA-CB-CG	6.61	130.50	115.30
2	DA	2656	U	N1-C2-O2	6.61	127.42	122.80
2	CA	323	C	N1-C2-O2	6.60	122.86	118.90
2	CA	1830	C	N1-C2-O2	6.60	122.86	118.90
2	CA	2884	U	N3-C2-O2	-6.60	117.58	122.20
2	CA	1390	U	C2-N1-C1'	6.59	125.61	117.70
4	AW	72	C	N1-C2-O2	6.59	122.85	118.90
2	CA	2072	C	C2-N1-C1'	6.58	126.04	118.80
2	CA	2354	C	C6-N1-C2	-6.58	117.67	120.30
1	BA	745	G	N3-C4-N9	6.57	129.94	126.00
1	BA	1356	G	C6-C5-N7	-6.57	126.45	130.40
1	AA	1073	U	C5-C6-N1	6.57	125.98	122.70
2	CA	343	C	N1-C2-O2	6.57	122.84	118.90
4	AW	64	U	N3-C2-O2	-6.57	117.60	122.20
1	BA	1263	C	N1-C2-O2	6.57	122.84	118.90
2	CA	1065	U	N1-C2-O2	6.57	127.40	122.80
4	AV	45	G	N3-C4-C5	-6.56	125.32	128.60
2	DA	1499	C	N3-C2-O2	-6.55	117.31	121.90
2	DA	1675	C	N3-C2-O2	-6.55	117.31	121.90
2	DA	1993	U	N1-C2-O2	6.55	127.39	122.80
1	BA	1136	C	N1-C2-O2	6.54	122.83	118.90
1	AA	1009	U	N1-C2-O2	6.54	127.38	122.80
1	BA	1080	A	N7-C8-N9	6.54	117.07	113.80
2	CA	1728	C	C2-N1-C1'	6.54	125.99	118.80
2	CA	1625	C	N1-C2-O2	6.53	122.82	118.90
2	CA	2884	U	C2-N1-C1'	6.53	125.54	117.70
2	CA	404	A	P-O3'-C3'	6.52	127.53	119.70
1	BA	1203	C	N1-C2-O2	6.51	122.81	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	2063	C	C6-N1-C2	-6.51	117.69	120.30
2	CA	1605	C	N1-C2-O2	6.51	122.81	118.90
4	AW	59	U	N3-C2-O2	-6.50	117.65	122.20
4	AV	31	C	N3-C2-O2	-6.50	117.35	121.90
1	AA	470	C	C6-N1-C2	-6.50	117.70	120.30
2	DA	305	C	C6-N1-C2	-6.49	117.70	120.30
2	CA	1760	C	N3-C2-O2	-6.49	117.36	121.90
2	CA	1941	C	N1-C2-O2	6.49	122.79	118.90
2	DA	2225	A	P-O3'-C3'	6.49	127.48	119.70
4	AV	45	G	N3-C4-N9	6.49	129.89	126.00
2	DA	1584	U	C6-N1-C1'	-6.49	112.12	121.20
2	DA	2354	C	C6-N1-C2	-6.48	117.71	120.30
2	CA	1348	C	N3-C2-O2	-6.47	117.37	121.90
2	DA	2556	C	N1-C2-O2	6.47	122.78	118.90
2	DA	635	C	C6-N1-C2	-6.46	117.71	120.30
2	CA	2465	C	C2-N1-C1'	6.46	125.91	118.80
1	BA	1080	A	C8-N9-C4	-6.46	103.22	105.80
2	DA	1378	A	P-O3'-C3'	6.46	127.45	119.70
3	DB	25	U	N1-C2-O2	6.46	127.32	122.80
47	AL	33	CYS	CA-CB-SG	6.46	125.62	114.00
2	DA	1774	C	N3-C2-O2	-6.46	117.38	121.90
1	BA	844	G	N3-C4-C5	-6.45	125.37	128.60
2	CA	1874	C	N3-C2-O2	-6.45	117.39	121.90
4	AV	30	C	C2-N1-C1'	6.45	125.89	118.80
1	BA	1028	C	N1-C2-O2	6.45	122.77	118.90
3	CB	25	U	N3-C2-O2	-6.45	117.69	122.20
2	CA	1178	C	C5-C6-N1	6.44	124.22	121.00
2	CA	12	U	N3-C2-O2	-6.44	117.69	122.20
1	BA	177	G	C4-N9-C1'	6.44	134.87	126.50
1	BA	1448	C	C2-N1-C1'	6.43	125.88	118.80
36	BX	30	A	N3-C4-N9	6.43	132.54	127.40
4	AV	45	G	C8-N9-C1'	-6.42	118.65	127.00
1	AA	210	C	C5-C6-N1	6.42	124.21	121.00
2	DA	1774	C	C6-N1-C2	-6.42	117.73	120.30
2	DA	1760	C	N1-C2-O2	6.42	122.75	118.90
2	DA	1348	C	N3-C2-O2	-6.42	117.41	121.90
1	AA	1101	A	P-O3'-C3'	6.41	127.39	119.70
2	DA	2254	C	N1-C2-O2	6.41	122.75	118.90
1	AA	754	C	C2-N1-C1'	6.40	125.84	118.80
2	DA	1314	C	C5-C6-N1	6.40	124.20	121.00
2	DA	2072	C	C6-N1-C2	-6.40	117.74	120.30
2	DA	1625	C	N1-C2-O2	6.39	122.73	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	BA	403	C	C2-N1-C1'	6.38	125.82	118.80
2	DA	1390	U	C2-N1-C1'	6.38	125.36	117.70
4	BW	59	U	N1-C2-O2	6.38	127.26	122.80
1	BA	524	G	N3-C4-N9	6.38	129.83	126.00
2	DA	1378	A	OP1-P-O3'	6.37	119.22	105.20
1	AA	522	C	C6-N1-C2	-6.37	117.75	120.30
2	CA	1582	C	N3-C2-O2	-6.37	117.44	121.90
2	DA	2196	C	N3-C2-O2	-6.36	117.45	121.90
1	AA	1328	C	C5-C6-N1	6.36	124.18	121.00
2	CA	1314	C	N1-C2-O2	6.36	122.71	118.90
2	CA	1378	A	P-O3'-C3'	6.35	127.32	119.70
2	DA	392	U	C2-N3-C4	6.35	130.81	127.00
2	CA	2065	C	C5-C6-N1	6.34	124.17	121.00
4	AW	30	C	C2-N1-C1'	6.34	125.78	118.80
2	DA	2656	U	N3-C2-O2	-6.34	117.76	122.20
2	CA	893	C	P-O3'-C3'	6.34	127.31	119.70
2	CA	896	A	N3-C4-N9	6.33	132.47	127.40
1	AA	658	C	N1-C2-O2	6.32	122.69	118.90
2	CA	2225	A	P-O3'-C3'	6.32	127.28	119.70
1	BA	844	G	C2-N3-C4	6.32	115.06	111.90
2	CA	2173	A	C5-C6-N1	6.32	120.86	117.70
2	DA	1314	C	N1-C2-O2	6.31	122.69	118.90
2	CA	1582	C	C5-C6-N1	6.31	124.16	121.00
1	BA	563	A	C4-N9-C1'	6.31	137.66	126.30
1	BA	1356	G	N3-C4-N9	6.31	129.78	126.00
1	AA	477	C	N3-C2-O2	-6.30	117.49	121.90
1	AA	624	C	N3-C2-O2	-6.30	117.49	121.90
2	CA	891	G	P-O3'-C3'	6.30	127.26	119.70
1	AA	1493	A	C6-N1-C2	-6.29	114.83	118.60
1	AA	811	C	C2-N1-C1'	6.28	125.71	118.80
1	AA	1009	U	N3-C2-O2	-6.28	117.80	122.20
2	DA	2480	C	C2-N1-C1'	6.27	125.69	118.80
2	CA	2326	C	P-O3'-C3'	6.25	127.20	119.70
2	CA	2430	A	C2-N3-C4	6.25	113.72	110.60
3	CB	37	C	N3-C2-O2	-6.24	117.53	121.90
2	DA	2150	C	C5-C6-N1	6.24	124.12	121.00
1	BA	328	C	N1-C2-O2	6.23	122.64	118.90
1	AA	926	G	N9-C4-C5	-6.23	102.91	105.40
1	BA	1009	U	N1-C2-O2	6.22	127.16	122.80
1	AA	470	C	C5-C6-N1	6.22	124.11	121.00
4	AV	32	C	C6-N1-C2	-6.22	117.81	120.30
1	BA	580	C	C5-C6-N1	6.21	124.11	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1466	C	N3-C2-O2	-6.20	117.56	121.90
2	CA	1314	C	C5-C6-N1	6.20	124.10	121.00
3	DB	47	C	N1-C2-O2	6.20	122.62	118.90
2	CA	2586	U	N1-C2-O2	6.19	127.13	122.80
1	BA	1136	C	N3-C2-O2	-6.19	117.57	121.90
38	AC	131	ARG	NE-CZ-NH2	-6.19	117.21	120.30
1	BA	115	G	P-O3'-C3'	6.19	127.12	119.70
1	BA	1496	C	N1-C2-O2	6.19	122.61	118.90
1	AA	513	C	N1-C2-O2	6.19	122.61	118.90
1	AA	1109	C	N3-C2-O2	-6.19	117.57	121.90
1	BA	1158	C	N1-C2-O2	6.19	122.61	118.90
1	BA	1109	C	N3-C2-O2	-6.18	117.57	121.90
1	BA	177	G	C8-N9-C1'	-6.18	118.96	127.00
1	AA	137	U	N1-C2-O2	6.18	127.13	122.80
4	AV	30	C	N1-C2-O2	6.17	122.60	118.90
1	AA	528	C	N3-C2-O2	-6.17	117.58	121.90
4	BV	30	C	C6-N1-C2	-6.16	117.84	120.30
2	CA	2888	C	C5-C6-N1	6.15	124.07	121.00
2	DA	896	A	N3-C4-C5	-6.15	122.50	126.80
1	BA	1293	C	C5-C6-N1	6.14	124.07	121.00
2	CA	2226	C	N3-C2-O2	-6.14	117.60	121.90
1	AA	439	U	N1-C2-O2	6.14	127.10	122.80
2	CA	361	G	C5-C6-O6	-6.13	124.92	128.60
2	CA	901	C	N1-C2-O2	6.13	122.58	118.90
2	DA	367	G	C4-N9-C1'	6.13	134.47	126.50
2	DA	1582	C	C6-N1-C2	-6.13	117.85	120.30
4	BV	25	C	N3-C2-O2	-6.13	117.61	121.90
4	AV	16	C	N1-C2-O2	6.13	122.58	118.90
1	AA	1449	C	C5-C6-N1	6.12	124.06	121.00
2	DA	1079	C	N1-C2-O2	6.12	122.57	118.90
1	AA	307	C	C6-N1-C2	-6.12	117.85	120.30
1	AA	611	C	N3-C2-O2	-6.12	117.61	121.90
2	DA	2425	A	P-O3'-C3'	6.12	127.04	119.70
45	AJ	92	LEU	CA-CB-CG	6.12	129.37	115.30
4	AW	52	G	O5'-P-OP1	6.11	118.03	110.70
1	BA	467	U	C2-N1-C1'	6.11	125.03	117.70
1	BA	157	U	N1-C2-O2	6.11	127.08	122.80
19	DP	113	LEU	CA-CB-CG	6.11	129.34	115.30
2	DA	1062	G	N3-C4-C5	-6.10	125.55	128.60
1	BA	1538	C	C5-C4-N4	-6.09	115.93	120.20
2	DA	2072	C	C5-C6-N1	6.09	124.05	121.00
2	DA	1267	U	N1-C2-O2	6.09	127.06	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	993	G	C4-N9-C1'	6.09	134.42	126.50
3	DB	60	C	C6-N1-C2	-6.09	117.87	120.30
2	DA	2586	U	N1-C2-O2	6.07	127.05	122.80
2	DA	96	C	N1-C2-O2	6.07	122.54	118.90
2	DA	2656	U	C2-N1-C1'	6.07	124.98	117.70
3	DB	31	C	N1-C2-O2	6.07	122.54	118.90
2	DA	1538	G	N1-C6-O6	-6.07	116.26	119.90
1	BA	1534	A	P-O3'-C3'	6.07	126.98	119.70
1	AA	1073	U	N1-C2-O2	6.06	127.05	122.80
4	AV	30	C	C6-N1-C2	-6.06	117.88	120.30
1	BA	1097	C	C5-C6-N1	6.06	124.03	121.00
1	AA	1030	U	N1-C2-O2	6.05	127.04	122.80
1	BA	1265	C	C5-C6-N1	6.05	124.03	121.00
1	AA	923	A	N7-C8-N9	6.05	116.83	113.80
1	AA	1535	C	N1-C2-O2	6.05	122.53	118.90
2	DA	143	C	C2-N1-C1'	6.05	125.45	118.80
2	DA	1075	C	N1-C2-O2	6.05	122.53	118.90
2	CA	1961	C	N1-C2-O2	6.04	122.53	118.90
1	AA	153	C	N1-C2-O2	6.04	122.52	118.90
1	BA	519	C	N3-C2-O2	-6.04	117.67	121.90
1	BA	1383	C	C6-N1-C2	-6.04	117.89	120.30
2	CA	2136	G	N3-C4-C5	-6.03	125.58	128.60
2	DA	2752	C	N1-C2-O2	6.03	122.52	118.90
1	AA	4	U	C2-N1-C1'	6.03	124.93	117.70
2	DA	544	C	N1-C2-O2	6.03	122.52	118.90
2	CA	1534	U	C2-N1-C1'	6.02	124.93	117.70
1	BA	563	A	C8-N9-C1'	-6.02	116.86	127.70
2	DA	2408	U	C5-C6-N1	6.02	125.71	122.70
1	AA	1492	A	N1-C2-N3	6.01	132.31	129.30
1	AA	467	U	N1-C2-O2	6.01	127.01	122.80
1	AA	1030	U	C2-N1-C1'	6.00	124.90	117.70
3	CB	11	C	N1-C2-O2	6.00	122.50	118.90
4	BW	32	C	N1-C2-O2	6.00	122.50	118.90
2	DA	884	U	O4'-C1'-N1	6.00	113.00	108.20
1	BA	1027	C	C2-N1-C1'	6.00	125.40	118.80
2	CA	1294	U	C5-C6-N1	6.00	125.70	122.70
1	BA	436	C	N1-C2-O2	6.00	122.50	118.90
2	DA	974	G	C8-N9-C1'	-6.00	119.20	127.00
1	BA	1149	C	C5-C6-N1	5.99	124.00	121.00
1	BA	1328	C	N1-C2-O2	5.99	122.50	118.90
47	BL	33	CYS	CA-CB-SG	5.99	124.78	114.00
1	BA	176	C	N3-C2-O2	-5.99	117.71	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	1775	U	N3-C4-O4	5.99	123.59	119.40
2	CA	225	C	C2-N1-C1'	5.99	125.39	118.80
1	BA	436	C	C2-N1-C1'	5.99	125.38	118.80
2	DA	305	C	C5-C6-N1	5.98	123.99	121.00
1	BA	1348	U	N1-C2-O2	5.98	126.98	122.80
1	AA	1493	A	N1-C6-N6	-5.98	115.02	118.60
2	CA	2136	G	N3-C4-N9	5.97	129.58	126.00
1	BA	175	C	N3-C2-O2	-5.97	117.72	121.90
2	CA	860	U	N1-C2-O2	5.97	126.98	122.80
2	DA	343	C	C2-N1-C1'	5.97	125.37	118.80
1	BA	823	C	C6-N1-C2	-5.97	117.91	120.30
2	DA	776	G	C8-N9-C1'	-5.97	119.24	127.00
4	AW	52	G	O5'-P-OP2	-5.96	100.33	105.70
3	DB	11	C	N3-C2-O2	-5.96	117.72	121.90
2	CA	687	C	N1-C2-O2	5.96	122.47	118.90
2	CA	2136	G	C8-N9-C1'	-5.96	119.25	127.00
1	BA	1541	U	O5'-P-OP2	5.96	117.85	110.70
2	DA	60	G	P-O3'-C3'	5.96	126.85	119.70
1	BA	1009	U	C2-N1-C1'	5.95	124.84	117.70
2	DA	1914	C	C6-N1-C1'	-5.95	113.66	120.80
2	DA	897	C	C4-C5-C6	-5.95	114.42	117.40
2	DA	2150	C	N1-C2-O2	5.95	122.47	118.90
1	AA	330	C	N3-C2-O2	-5.95	117.74	121.90
2	DA	1372	U	N3-C2-O2	-5.95	118.04	122.20
2	DA	1523	U	P-O3'-C3'	5.95	126.84	119.70
1	BA	321	A	C6-N1-C2	-5.94	115.03	118.60
2	DA	1913	A	P-O3'-C3'	5.94	126.83	119.70
2	DA	404	A	P-O3'-C3'	5.93	126.82	119.70
2	DA	2884	U	N3-C2-O2	-5.93	118.05	122.20
3	DB	17	C	N1-C2-O2	5.93	122.46	118.90
1	BA	176	C	C6-N1-C1'	5.93	127.92	120.80
1	AA	115	G	P-O3'-C3'	5.93	126.81	119.70
1	BA	153	C	N1-C2-O2	5.93	122.46	118.90
2	CA	1913	A	P-O3'-C3'	5.92	126.81	119.70
1	AA	697	U	N3-C2-O2	-5.92	118.06	122.20
2	DA	137	U	N3-C2-O2	-5.92	118.06	122.20
2	DA	137	U	N1-C2-O2	5.91	126.94	122.80
1	AA	5	U	P-O3'-C3'	5.91	126.80	119.70
1	AA	469	C	N3-C2-O2	-5.91	117.76	121.90
2	CA	1728	C	C5-C6-N1	5.91	123.95	121.00
2	CA	2465	C	N1-C2-O2	5.91	122.44	118.90
1	AA	522	C	C2-N1-C1'	5.90	125.29	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	737	C	C5-C6-N1	5.90	123.95	121.00
4	AW	30	C	C6-N1-C2	-5.90	117.94	120.30
2	DA	2214	C	N1-C2-O2	5.90	122.44	118.90
2	CA	1625	C	N3-C2-O2	-5.89	117.78	121.90
4	AY	13	C	C6-N1-C2	-5.89	117.94	120.30
2	CA	1728	C	C6-N1-C2	-5.89	117.94	120.30
4	AW	72	C	N3-C2-O2	-5.88	117.78	121.90
2	CA	166	U	N1-C2-O2	5.88	126.92	122.80
2	DA	1533	C	C6-N1-C2	-5.88	117.95	120.30
2	DA	1728	C	C6-N1-C2	-5.88	117.95	120.30
4	AW	36	C	N3-C2-O2	-5.88	117.79	121.90
1	BA	1265	C	C6-N1-C2	-5.87	117.95	120.30
2	DA	876	C	N1-C2-O2	5.87	122.42	118.90
4	BV	25	C	N1-C2-O2	5.87	122.42	118.90
1	AA	844	G	C8-N9-C1'	-5.87	119.38	127.00
2	DA	1267	U	N3-C2-O2	-5.87	118.09	122.20
2	DA	353	C	C2-N1-C1'	5.86	125.25	118.80
3	DB	30	C	N3-C2-O2	-5.86	117.80	121.90
2	CA	1390	U	N3-C2-O2	-5.86	118.10	122.20
1	BA	1496	C	C6-N1-C2	-5.86	117.96	120.30
1	AA	477	C	N1-C2-O2	5.86	122.41	118.90
1	AA	697	U	N1-C2-O2	5.86	126.90	122.80
2	CA	323	C	C2-N1-C1'	5.85	125.24	118.80
2	CA	765	C	C2-N1-C1'	5.85	125.24	118.80
1	BA	467	U	N1-C2-O2	5.85	126.90	122.80
2	DA	889	C	N1-C2-O2	5.85	122.41	118.90
2	DA	1256	G	C4-N9-C1'	5.85	134.11	126.50
2	DA	1605	C	N1-C2-O2	5.85	122.41	118.90
1	BA	316	C	C6-N1-C2	-5.85	117.96	120.30
2	DA	1052	C	N1-C2-O2	5.85	122.41	118.90
2	DA	2149	U	C2-N1-C1'	5.84	124.71	117.70
1	BA	1496	C	C2-N1-C1'	5.84	125.22	118.80
4	BW	30	C	C2-N1-C1'	5.84	125.22	118.80
4	BW	45	G	N3-C4-N9	5.84	129.50	126.00
2	CA	1993	U	C2-N1-C1'	5.83	124.70	117.70
2	DA	357	C	C5-C6-N1	5.83	123.92	121.00
2	DA	2063	C	C2-N1-C1'	5.83	125.21	118.80
1	AA	1028	C	N3-C2-O2	-5.83	117.82	121.90
2	CA	1390	U	C5-C6-N1	5.83	125.61	122.70
1	AA	754	C	N1-C2-O2	5.81	122.39	118.90
2	CA	1313	U	C6-N1-C1'	-5.81	113.06	121.20
2	CA	2683	C	N3-C2-O2	-5.81	117.83	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	CP	113	LEU	CA-CB-CG	5.81	128.67	115.30
1	BA	214	C	N1-C2-O2	5.81	122.39	118.90
2	DA	1893	C	C6-N1-C2	-5.81	117.98	120.30
2	CA	1644	C	N3-C2-O2	-5.81	117.83	121.90
2	DA	305	C	N1-C2-O2	5.81	122.39	118.90
2	CA	1843	C	N1-C2-O2	5.81	122.38	118.90
2	DA	702	U	C2-N1-C1'	5.81	124.67	117.70
2	DA	2043	C	N1-C2-O2	5.81	122.38	118.90
1	AA	926	G	C6-N1-C2	5.80	128.58	125.10
1	BA	1356	G	N9-C4-C5	-5.80	103.08	105.40
2	DA	2506	U	N1-C2-O2	5.80	126.86	122.80
1	AA	1505	G	OP2-P-O3'	5.80	117.96	105.20
1	BA	754	C	C2-N1-C1'	5.80	125.18	118.80
2	CA	1855	U	N1-C2-O2	5.80	126.86	122.80
2	CA	137	U	N1-C2-O2	5.79	126.86	122.80
4	AY	13	C	C5-C6-N1	5.79	123.90	121.00
1	BA	1293	C	C2-N1-C1'	5.79	125.17	118.80
2	CA	1675	C	N1-C2-O2	5.79	122.38	118.90
24	CU	97	SER	C-N-CA	5.79	136.18	121.70
1	BA	993	G	N3-C4-N9	5.79	129.47	126.00
3	CB	71	C	C2-N1-C1'	5.78	125.16	118.80
2	CA	1644	C	N1-C2-O2	5.77	122.36	118.90
1	AA	467	U	N3-C2-O2	-5.77	118.16	122.20
2	CA	2214	C	N1-C2-O2	5.77	122.36	118.90
1	BA	993	G	C4-N9-C1'	5.77	134.00	126.50
2	DA	2473	U	N1-C2-O2	5.77	126.84	122.80
36	BX	5	G	C4-N9-C1'	5.77	134.00	126.50
1	AA	522	C	N3-C2-O2	-5.77	117.86	121.90
2	CA	1005	C	C6-N1-C2	-5.76	118.00	120.30
2	CA	2173	A	C2-N3-C4	5.76	113.48	110.60
1	AA	985	C	C5-C6-N1	5.76	123.88	121.00
2	CA	2425	A	P-O3'-C3'	5.76	126.61	119.70
2	CA	2480	C	C5-C6-N1	5.76	123.88	121.00
1	BA	488	C	C2-N1-C1'	5.76	125.13	118.80
2	DA	1076	C	C6-N1-C2	-5.75	118.00	120.30
1	AA	1137	C	N1-C2-O2	5.75	122.35	118.90
2	DA	1079	C	N3-C2-O2	-5.75	117.88	121.90
1	AA	328	C	N1-C2-O2	5.75	122.35	118.90
1	AA	811	C	C6-N1-C2	-5.75	118.00	120.30
1	BA	54	C	N3-C2-O2	-5.75	117.88	121.90
36	BX	5	G	N3-C4-N9	5.75	129.45	126.00
1	AA	582	C	N1-C2-O2	5.74	122.34	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	CA	1065	U	N3-C2-O2	-5.74	118.18	122.20
2	CA	1830	C	C2-N1-C1'	5.74	125.11	118.80
1	BA	1158	C	C6-N1-C2	-5.74	118.00	120.30
1	AA	311	C	N3-C2-O2	-5.74	117.88	121.90
1	BA	439	U	N3-C2-O2	-5.74	118.18	122.20
2	DA	2254	C	N3-C2-O2	-5.74	117.89	121.90
1	BA	1009	U	N3-C2-O2	-5.73	118.19	122.20
2	DA	323	C	C2-N1-C1'	5.73	125.10	118.80
2	DA	2606	C	N1-C2-O2	5.73	122.34	118.90
2	CA	140	C	N3-C2-O2	-5.73	117.89	121.90
2	CA	1344	U	P-O3'-C3'	5.73	126.57	119.70
1	BA	1293	C	C6-N1-C2	-5.72	118.01	120.30
3	DB	25	U	N3-C2-O2	-5.72	118.19	122.20
2	CA	1844	C	N1-C2-O2	5.71	122.33	118.90
2	CA	2401	U	OP1-P-O3'	5.71	117.77	105.20
2	DA	129	C	N1-C2-O2	5.71	122.33	118.90
1	BA	1172	C	N1-C2-O2	5.71	122.33	118.90
3	DB	37	C	N3-C2-O2	-5.71	117.90	121.90
1	AA	811	C	N3-C2-O2	-5.70	117.91	121.90
2	CA	459	U	N1-C2-O2	5.70	126.79	122.80
2	DA	542	C	C2-N1-C1'	5.70	125.07	118.80
1	BA	745	G	C4-N9-C1'	5.70	133.91	126.50
1	BA	738	C	C5-C6-N1	5.70	123.85	121.00
2	DA	2586	U	C2-N1-C1'	5.70	124.54	117.70
1	BA	580	C	C6-N1-C2	-5.70	118.02	120.30
1	BA	582	C	N1-C2-O2	5.70	122.32	118.90
1	AA	522	C	C5-C6-N1	5.69	123.85	121.00
2	CA	2072	C	N1-C2-O2	5.69	122.32	118.90
2	DA	1956	U	C2-N1-C1'	5.69	124.53	117.70
1	BA	439	U	N1-C2-O2	5.69	126.78	122.80
2	DA	145	C	C5-C6-N1	5.68	123.84	121.00
1	AA	467	U	C2-N1-C1'	5.68	124.52	117.70
1	BA	71	A	P-O3'-C3'	-5.68	112.89	119.70
4	AV	30	C	C5-C6-N1	5.68	123.84	121.00
1	BA	1366	C	N1-C2-O2	5.67	122.31	118.90
1	BA	1201	A	P-O3'-C3'	5.67	126.50	119.70
1	BA	178	C	C5-C6-N1	5.67	123.83	121.00
1	BA	207	C	N1-C2-O2	5.67	122.30	118.90
2	DA	2683	C	C2-N1-C1'	5.67	125.03	118.80
2	DA	2160	C	N1-C2-O2	5.67	122.30	118.90
3	CB	17	C	C6-N1-C2	-5.66	118.03	120.30
1	BA	1172	C	C2-N1-C1'	5.66	125.03	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	635	C	C5-C6-N1	5.66	123.83	121.00
2	CA	1561	C	N1-C2-O2	5.66	122.29	118.90
2	DA	2498	C	N1-C2-O2	5.66	122.29	118.90
3	CB	37	C	N1-C2-O2	5.66	122.29	118.90
2	CA	2616	C	N1-C2-O2	5.65	122.29	118.90
1	BA	1144	G	N7-C8-N9	5.65	115.92	113.10
2	DA	896	A	C8-N9-C4	-5.65	103.54	105.80
1	AA	469	C	C6-N1-C2	-5.64	118.04	120.30
2	DA	1914	C	C6-N1-C2	-5.64	118.04	120.30
4	BW	27	C	N1-C2-O2	5.64	122.28	118.90
1	BA	156	C	C5-C6-N1	5.64	123.82	121.00
1	BA	316	C	C5-C6-N1	5.64	123.82	121.00
2	DA	901	C	N1-C2-O2	5.64	122.28	118.90
1	BA	252	U	C2-N1-C1'	5.64	124.47	117.70
30	D0	28	VAL	CG1-CB-CG2	5.64	119.92	110.90
2	DA	229	C	N1-C2-O2	5.63	122.28	118.90
1	AA	89	U	C5-C6-N1	5.63	125.52	122.70
1	BA	207	C	C5-C6-N1	5.63	123.81	121.00
2	DA	1993	U	C2-N1-C1'	5.63	124.45	117.70
2	CA	899	A	P-O3'-C3'	5.62	126.45	119.70
1	AA	67	C	N1-C2-O2	5.62	122.27	118.90
52	AQ	68	LYS	CD-CE-NZ	5.62	124.62	111.70
2	CA	1398	C	N1-C2-O2	5.62	122.27	118.90
4	AW	59	U	C2-N1-C1'	5.62	124.44	117.70
3	DB	37	C	N1-C2-O2	5.62	122.27	118.90
2	CA	1289	C	N1-C2-O2	5.61	122.27	118.90
1	BA	316	C	N1-C2-O2	5.61	122.27	118.90
2	DA	2616	C	N1-C2-O2	5.61	122.27	118.90
1	AA	1144	G	C8-N9-C4	-5.61	104.16	106.40
4	BW	45	G	C4-N9-C1'	5.61	133.80	126.50
2	DA	353	C	C6-N1-C2	-5.61	118.06	120.30
1	BA	1303	C	C6-N1-C1'	-5.61	114.07	120.80
36	BX	5	G	N3-C4-C5	-5.60	125.80	128.60
1	AA	1470	U	N3-C2-O2	-5.60	118.28	122.20
1	AA	1109	C	C6-N1-C2	-5.60	118.06	120.30
2	CA	2646	C	N1-C2-O2	5.60	122.26	118.90
1	BA	983	A	C4-N9-C1'	5.60	136.38	126.30
2	DA	1584	U	C5-C6-N1	5.60	125.50	122.70
2	DA	1760	C	N3-C2-O2	-5.60	117.98	121.90
2	CA	1956	U	C6-N1-C2	-5.59	117.64	121.00
2	CA	2586	U	C2-N1-C1'	5.59	124.41	117.70
1	BA	1348	U	N3-C2-O2	-5.59	118.28	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	2704	C	N1-C2-O2	5.59	122.26	118.90
4	BV	30	C	C2-N1-C1'	5.59	124.95	118.80
2	DA	60	G	OP1-P-O3'	5.59	117.50	105.20
2	CA	1065	U	C5-C6-N1	5.59	125.49	122.70
2	CA	166	U	N3-C2-O2	-5.59	118.29	122.20
2	DA	2248	C	C6-N1-C2	-5.58	118.07	120.30
37	BB	128	LEU	CA-CB-CG	5.58	128.13	115.30
1	AA	1496	C	N1-C2-O2	5.58	122.25	118.90
36	AX	21	G	C4-N9-C1'	5.57	133.75	126.50
1	AA	1267	C	N3-C2-O2	-5.57	118.00	121.90
2	DA	2506	U	N3-C2-O2	-5.57	118.30	122.20
2	DA	897	C	OP1-P-OP2	-5.57	111.25	119.60
2	CA	2752	C	N3-C2-O2	-5.57	118.00	121.90
2	CA	399	U	N1-C2-O2	5.56	126.69	122.80
1	BA	1279	G	C8-N9-C4	-5.56	104.18	106.40
2	CA	257	C	N3-C2-O2	-5.56	118.01	121.90
1	BA	754	C	N3-C2-O2	-5.55	118.01	121.90
2	DA	544	C	N3-C2-O2	-5.55	118.01	121.90
1	AA	610	U	N1-C2-O2	5.55	126.69	122.80
2	DA	1063	G	N1-C2-N2	-5.55	111.20	116.20
1	BA	1027	C	N3-C2-O2	-5.54	118.02	121.90
1	BA	519	C	C6-N1-C2	-5.54	118.08	120.30
2	CA	1728	C	N1-C2-O2	5.54	122.22	118.90
2	CA	1761	C	N1-C2-O2	5.54	122.22	118.90
1	BA	844	G	N3-C4-N9	5.54	129.32	126.00
2	DA	2150	C	C2-N1-C1'	5.54	124.89	118.80
3	DB	17	C	C2-N1-C1'	5.54	124.89	118.80
3	CB	26	C	N3-C2-O2	-5.54	118.03	121.90
3	DB	26	C	C6-N1-C2	-5.53	118.09	120.30
1	AA	397	A	C2-N3-C4	5.53	113.37	110.60
4	AW	56	C	C2-N1-C1'	5.53	124.88	118.80
2	DA	1855	U	C2-N1-C1'	5.53	124.34	117.70
2	DA	974	G	N3-C4-N9	5.53	129.32	126.00
2	DA	278	A	C2-N3-C4	5.53	113.36	110.60
1	BA	180	U	N3-C2-O2	-5.53	118.33	122.20
2	DA	1526	C	C6-N1-C2	-5.52	118.09	120.30
2	CA	544	C	N1-C2-O2	5.52	122.21	118.90
1	BA	1290	G	C4-N9-C1'	5.52	133.68	126.50
24	DU	97	SER	C-N-CA	5.52	135.50	121.70
1	AA	610	U	N3-C2-O2	-5.52	118.34	122.20
1	AA	737	C	C6-N1-C2	-5.52	118.09	120.30
1	BA	1137	C	C6-N1-C2	-5.52	118.09	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	2104	C	N1-C2-O2	5.52	122.21	118.90
4	BW	45	G	C2-N3-C4	5.51	114.66	111.90
2	CA	341	C	N1-C2-O2	5.51	122.21	118.90
2	DA	915	C	N1-C2-O2	5.51	122.20	118.90
2	DA	1372	U	N1-C2-O2	5.51	126.66	122.80
2	CA	776	G	C4-N9-C1'	5.51	133.66	126.50
3	CB	47	C	N1-C2-O2	5.51	122.20	118.90
2	DA	2456	C	C6-N1-C2	-5.51	118.10	120.30
4	BW	59	U	N3-C2-O2	-5.51	118.34	122.20
3	CB	31	C	N3-C2-O2	-5.50	118.05	121.90
2	DA	2617	U	N3-C2-O2	-5.50	118.35	122.20
4	BW	8	U	C5-C4-O4	-5.50	122.60	125.90
2	CA	2065	C	C6-N1-C2	-5.50	118.10	120.30
2	CA	2756	U	OP1-P-O3'	5.49	117.29	105.20
1	AA	1470	U	N1-C2-O2	5.49	126.64	122.80
1	AA	470	C	N3-C2-O2	-5.49	118.06	121.90
2	DA	393	C	N1-C2-O2	5.49	122.19	118.90
1	AA	916	U	N3-C2-O2	-5.49	118.36	122.20
2	CA	1398	C	C2-N1-C1'	5.49	124.83	118.80
2	DA	2086	U	N3-C2-O2	-5.49	118.36	122.20
2	DA	2297	A	C2-N3-C4	5.49	113.34	110.60
2	CA	1314	C	C6-N1-C1'	-5.48	114.22	120.80
2	CA	353	C	C2-N1-C1'	5.48	124.83	118.80
2	CA	673	C	N1-C2-O2	5.48	122.19	118.90
1	BA	536	C	C2-N1-C1'	5.48	124.83	118.80
2	CA	510	C	N1-C2-O2	5.48	122.19	118.90
2	CA	634	C	N1-C2-O2	5.48	122.19	118.90
2	CA	1846	G	N3-C4-N9	-5.48	122.71	126.00
1	BA	217	C	N3-C2-O2	-5.48	118.07	121.90
2	CA	897	C	C4-C5-C6	-5.48	114.66	117.40
2	DA	1526	C	C5-C6-N1	5.47	123.74	121.00
1	AA	252	U	C5-C6-N1	5.47	125.44	122.70
1	AA	993	G	C8-N9-C1'	-5.47	119.89	127.00
2	CA	974	G	C8-N9-C1'	-5.47	119.89	127.00
4	BV	27	C	N1-C2-O2	5.47	122.18	118.90
2	CA	2507	C	N1-C2-O2	5.47	122.18	118.90
2	DA	1611	C	N1-C2-O2	5.47	122.18	118.90
2	DA	1625	C	N3-C2-O2	-5.47	118.07	121.90
2	CA	2666	C	N3-C2-O2	-5.47	118.07	121.90
2	CA	2886	A	OP2-P-O3'	-5.47	93.17	105.20
2	DA	1108	U	N1-C2-O2	5.47	126.63	122.80
1	AA	926	G	C6-C5-N7	-5.46	127.12	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	CA	765	C	N1-C2-O2	5.46	122.18	118.90
1	BA	463	U	C6-N1-C1'	-5.46	113.55	121.20
2	CA	837	C	C6-N1-C2	-5.46	118.11	120.30
2	CA	2180	U	C2-N1-C1'	5.46	124.25	117.70
2	DA	417	C	C5-C6-N1	5.46	123.73	121.00
2	DA	1894	C	N1-C2-O2	5.46	122.18	118.90
2	DA	2586	U	N3-C2-O2	-5.46	118.38	122.20
1	BA	1538	C	N3-C4-N4	5.46	121.82	118.00
2	DA	776	G	N3-C4-N9	5.46	129.27	126.00
2	DA	1644	C	N1-C2-O2	5.45	122.17	118.90
2	CA	366	C	C6-N1-C2	-5.45	118.12	120.30
2	CA	896	A	N1-C2-N3	-5.44	126.58	129.30
1	BA	1267	C	N1-C2-O2	5.44	122.17	118.90
1	BA	1279	G	N7-C8-N9	5.44	115.82	113.10
1	AA	440	C	N1-C2-O2	5.44	122.16	118.90
2	DA	985	C	N1-C2-O2	5.44	122.16	118.90
4	BV	30	C	C5-C6-N1	5.43	123.72	121.00
1	AA	225	C	N1-C2-O2	5.43	122.16	118.90
1	AA	916	U	N1-C2-O2	5.43	126.60	122.80
2	CA	353	C	N1-C2-O2	5.43	122.16	118.90
1	BA	1469	C	N3-C2-O2	-5.43	118.10	121.90
1	AA	403	C	N1-C2-O2	5.43	122.16	118.90
4	BW	13	C	C6-N1-C2	-5.43	118.13	120.30
2	CA	702	U	C2-N1-C1'	5.42	124.21	117.70
2	DA	2220	U	N3-C2-O2	-5.42	118.40	122.20
1	AA	563	A	C4-N9-C1'	5.42	136.06	126.30
2	DA	1728	C	C5-C6-N1	5.42	123.71	121.00
2	DA	2803	G	C4-N9-C1'	5.42	133.55	126.50
2	CA	1584	U	N1-C2-O2	5.42	126.59	122.80
1	BA	1158	C	C6-N1-C1'	-5.42	114.30	120.80
2	DA	1830	C	N1-C2-O2	5.42	122.15	118.90
1	BA	397	A	C4-N9-C1'	5.42	136.05	126.30
2	CA	137	U	N3-C2-O2	-5.41	118.41	122.20
2	DA	1585	C	N1-C2-O2	5.41	122.15	118.90
50	BO	65	LEU	CB-CG-CD2	-5.41	101.80	111.00
2	CA	1180	U	C6-N1-C1'	-5.41	113.62	121.20
2	DA	893	C	P-O3'-C3'	5.41	126.19	119.70
36	BX	31	A	C5'-C4'-O4'	5.41	115.59	109.10
1	AA	1148	U	C2-N1-C1'	5.41	124.19	117.70
1	BA	177	G	N3-C4-N9	5.41	129.24	126.00
2	DA	915	C	C5-C6-N1	5.41	123.70	121.00
1	AA	983	A	C2-N3-C4	5.40	113.30	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1265	C	N1-C2-O2	5.40	122.14	118.90
1	AA	1158	C	C2-N1-C1'	5.40	124.74	118.80
1	BA	745	G	C8-N9-C1'	-5.40	119.98	127.00
2	DA	164	C	N1-C2-O2	5.40	122.14	118.90
4	BW	34	U	C5-C6-N1	5.40	125.40	122.70
1	AA	1267	C	C6-N1-C2	-5.40	118.14	120.30
1	BA	217	C	N1-C2-O2	5.40	122.14	118.90
1	BA	989	U	N3-C2-O2	-5.39	118.42	122.20
1	AA	1303	C	N3-C2-O2	-5.39	118.13	121.90
1	BA	1520	C	C2-N1-C1'	5.39	124.73	118.80
2	DA	1561	C	N1-C2-O2	5.39	122.13	118.90
2	CA	1294	U	C2-N1-C1'	5.38	124.16	117.70
2	CA	1584	U	C2-N1-C1'	5.38	124.16	117.70
1	AA	993	G	N3-C4-N9	5.38	129.23	126.00
1	BA	1364	U	C5-C4-O4	-5.38	122.67	125.90
2	DA	919	U	N1-C2-O2	5.38	126.56	122.80
4	AW	30	C	N1-C2-O2	5.38	122.12	118.90
1	AA	1202	U	N1-C2-O2	5.37	126.56	122.80
1	AA	1449	C	C6-N1-C2	-5.37	118.15	120.30
1	BA	1202	U	N1-C2-O2	5.37	126.56	122.80
1	BA	156	C	C6-N1-C2	-5.37	118.15	120.30
2	DA	510	C	N1-C2-O2	5.37	122.12	118.90
1	AA	1383	C	C6-N1-C2	-5.36	118.16	120.30
2	DA	1507	C	C5-C6-N1	5.36	123.68	121.00
1	BA	58	C	C6-N1-C2	-5.36	118.16	120.30
4	AW	30	C	C5-C6-N1	5.36	123.68	121.00
2	DA	1492	G	N3-C4-N9	-5.36	122.79	126.00
2	CA	2394	C	N1-C2-O2	5.35	122.11	118.90
2	DA	2149	U	N3-C2-O2	-5.35	118.46	122.20
36	BX	31	A	O4'-C1'-N9	5.35	112.48	108.20
2	DA	890	C	P-O3'-C3'	5.35	126.12	119.70
2	DA	2430	A	C2-N3-C4	5.35	113.27	110.60
2	CA	225	C	N1-C2-O2	5.34	122.11	118.90
1	BA	1356	G	C4-C5-N7	5.34	112.94	110.80
1	BA	1470	U	N3-C2-O2	-5.34	118.46	122.20
2	CA	635	C	C6-N1-C2	-5.34	118.16	120.30
48	AM	2	ARG	NE-CZ-NH1	-5.34	117.63	120.30
2	DA	1313	U	C6-N1-C1'	-5.34	113.72	121.20
2	DA	2218	G	O3'-P-O5'	-5.34	93.85	104.00
2	CA	860	U	N3-C2-O2	-5.34	118.46	122.20
1	BA	993	G	C8-N9-C1'	-5.34	120.06	127.00
2	CA	915	C	N1-C2-O2	5.34	122.10	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AW	56	C	N1-C2-O2	5.34	122.10	118.90
1	AA	844	G	N3-C4-C5	-5.34	125.93	128.60
1	AA	980	C	N1-C2-O2	5.34	122.10	118.90
2	DA	343	C	C5-C6-N1	5.34	123.67	121.00
2	DA	1108	U	N3-C2-O2	-5.34	118.47	122.20
1	BA	492	C	N1-C2-O2	5.33	122.10	118.90
1	AA	1103	C	C5-C6-N1	5.33	123.67	121.00
1	BA	1524	C	C5-C6-N1	5.33	123.67	121.00
1	BA	1540	U	O4'-C1'-N1	5.33	112.47	108.20
2	DA	1670	C	C5-C6-N1	5.33	123.67	121.00
2	DA	2226	C	N1-C2-O2	5.33	122.10	118.90
1	AA	137	U	N3-C2-O2	-5.33	118.47	122.20
1	AA	439	U	N3-C2-O2	-5.33	118.47	122.20
2	CA	1584	U	N3-C2-O2	-5.33	118.47	122.20
10	DH	62	LEU	CA-CB-CG	5.33	127.56	115.30
2	CA	459	U	N3-C2-O2	-5.33	118.47	122.20
1	BA	153	C	N3-C2-O2	-5.33	118.17	121.90
1	AA	614	C	C5-C6-N1	5.32	123.66	121.00
1	BA	563	A	N3-C4-N9	5.32	131.66	127.40
1	BA	157	U	N3-C2-O2	-5.32	118.48	122.20
1	BA	672	U	N3-C2-O2	-5.32	118.48	122.20
1	BA	844	G	C4-N9-C1'	5.32	133.41	126.50
2	DA	1417	C	N1-C2-O2	5.32	122.09	118.90
1	AA	528	C	C2-N1-C1'	5.32	124.65	118.80
2	CA	253	C	N1-C2-O2	5.32	122.09	118.90
2	CA	1855	U	N3-C2-O2	-5.32	118.48	122.20
2	DA	192	C	N1-C2-O2	5.32	122.09	118.90
2	DA	2515	C	C5-C6-N1	5.32	123.66	121.00
2	CA	1461	C	N1-C2-O2	5.31	122.09	118.90
2	DA	1564	C	N1-C2-O2	5.31	122.09	118.90
1	BA	1364	U	C4-C5-C6	-5.31	116.51	119.70
2	DA	366	C	C5-C6-N1	5.31	123.65	121.00
2	DA	1314	C	C6-N1-C1'	-5.31	114.43	120.80
4	BV	30	C	N1-C2-O2	5.31	122.08	118.90
1	BA	985	C	C6-N1-C2	-5.30	118.18	120.30
1	BA	1129	C	N1-C2-O2	5.30	122.08	118.90
4	AW	36	C	C6-N1-C2	-5.30	118.18	120.30
1	BA	492	C	C6-N1-C2	-5.30	118.18	120.30
1	BA	1158	C	N3-C2-O2	-5.30	118.19	121.90
2	DA	1398	C	C2-N1-C1'	5.30	124.62	118.80
1	AA	1534	A	P-O3'-C3'	5.29	126.05	119.70
2	CA	2401	U	P-O3'-C3'	5.29	126.05	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	588	U	N1-C2-O2	5.29	126.50	122.80
2	CA	2586	U	N3-C2-O2	-5.29	118.50	122.20
1	BA	1137	C	N1-C2-O2	5.29	122.07	118.90
2	DA	891	G	N3-C4-C5	-5.29	125.96	128.60
2	DA	2556	C	N3-C2-O2	-5.29	118.20	121.90
2	DA	1398	C	N1-C2-O2	5.29	122.07	118.90
1	AA	214	C	N3-C4-C5	5.28	124.01	121.90
1	AA	658	C	N3-C2-O2	-5.28	118.20	121.90
2	DA	1507	C	C6-N1-C2	-5.28	118.19	120.30
2	CA	2704	C	N1-C2-O2	5.28	122.07	118.90
2	DA	2884	U	C2-N1-C1'	5.28	124.03	117.70
1	AA	1344	C	N3-C2-O2	-5.28	118.20	121.90
1	BA	1356	G	N1-C6-O6	5.28	123.07	119.90
3	DB	19	C	C6-N1-C2	-5.28	118.19	120.30
1	AA	1097	C	N1-C2-O2	5.28	122.06	118.90
2	CA	2226	C	C6-N1-C2	-5.28	118.19	120.30
1	BA	764	C	C2-N1-C1'	5.28	124.60	118.80
2	DA	847	U	C2-N1-C1'	5.28	124.03	117.70
3	DB	26	C	C2-N1-C1'	5.28	124.60	118.80
3	CB	31	C	C6-N1-C1'	-5.27	114.47	120.80
2	DA	1605	C	C5-C6-N1	5.27	123.63	121.00
2	DA	2507	C	C6-N1-C2	-5.27	118.19	120.30
1	BA	1202	U	N3-C2-O2	-5.27	118.51	122.20
1	AA	99	C	C5-C6-N1	5.27	123.63	121.00
2	CA	323	C	C6-N1-C1'	-5.26	114.48	120.80
2	CA	2196	C	N1-C2-O2	5.26	122.06	118.90
2	DA	2064	C	N1-C2-O2	5.26	122.06	118.90
2	DA	1135	C	N1-C2-O2	5.26	122.06	118.90
2	DA	1513	U	N1-C2-O2	5.26	126.48	122.80
2	DA	1526	C	C2-N1-C1'	5.26	124.59	118.80
36	AX	25	U	C5-C6-N1	5.26	125.33	122.70
2	DA	1153	C	C2-N1-C1'	5.26	124.58	118.80
2	DA	2507	C	N1-C2-O2	5.26	122.05	118.90
1	BA	1364	U	C6-N1-C2	5.25	124.15	121.00
2	CA	2043	C	C2-N1-C1'	5.25	124.58	118.80
1	AA	252	U	C2-N1-C1'	5.25	124.00	117.70
1	BA	176	C	C2-N1-C1'	-5.25	113.03	118.80
4	AW	51	C	P-O3'-C3'	5.25	126.00	119.70
2	DA	1728	C	C2-N1-C1'	5.25	124.57	118.80
1	BA	563	A	N9-C4-C5	-5.24	103.70	105.80
4	BV	31	C	N1-C2-O2	5.24	122.05	118.90
2	DA	2149	U	N1-C2-O2	5.24	126.47	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	2480	C	N1-C2-O2	5.24	122.05	118.90
1	AA	1066	C	C5-C6-N1	5.24	123.62	121.00
4	AY	13	C	C2-N1-C1'	5.24	124.56	118.80
4	AV	32	C	C5-C6-N1	5.24	123.62	121.00
2	DA	888	C	C6-N1-C1'	-5.24	114.51	120.80
2	CA	2248	C	N1-C2-O2	5.24	122.04	118.90
1	BA	207	C	C2-N1-C1'	5.23	124.56	118.80
1	BA	989	U	N1-C2-O2	5.23	126.46	122.80
2	DA	892	A	OP1-P-O3'	5.23	116.71	105.20
2	DA	1172	C	N1-C2-O2	5.23	122.04	118.90
2	CA	1639	C	N1-C2-O2	5.23	122.04	118.90
4	AY	31	C	N1-C2-O2	5.23	122.04	118.90
2	CA	12	U	N1-C2-O2	5.23	126.46	122.80
1	BA	1320	C	C2-N1-C1'	5.22	124.55	118.80
2	CA	702	U	C5-C6-N1	5.22	125.31	122.70
1	BA	372	C	C5-C6-N1	5.22	123.61	121.00
2	DA	2189	U	P-O3'-C3'	5.22	125.97	119.70
2	CA	1005	C	C5-C6-N1	5.22	123.61	121.00
41	BF	39	LEU	CA-CB-CG	5.22	127.30	115.30
1	AA	1097	C	C6-N1-C2	-5.21	118.22	120.30
36	AX	25	U	C6-N1-C2	-5.21	117.87	121.00
1	AA	1202	U	N3-C2-O2	-5.21	118.55	122.20
2	CA	2507	C	C5-C6-N1	5.21	123.61	121.00
2	DA	2617	U	N1-C2-O2	5.21	126.45	122.80
2	DA	2874	C	N1-C2-O2	5.21	122.03	118.90
2	CA	2062	A	N3-C4-N9	5.21	131.57	127.40
36	AX	31	A	C4-N9-C1'	5.21	135.68	126.30
1	BA	672	U	N1-C2-O2	5.21	126.45	122.80
1	AA	692	U	P-O5'-C5'	-5.21	112.57	120.90
1	BA	1356	G	C8-N9-C1'	-5.21	120.23	127.00
2	CA	2248	C	C2-N1-C1'	5.20	124.52	118.80
2	CA	2480	C	N1-C2-O2	5.20	122.02	118.90
2	DA	1145	C	N1-C2-O2	5.20	122.02	118.90
2	CA	78	U	N1-C2-O2	5.20	126.44	122.80
2	CA	1526	C	C2-N1-C1'	5.20	124.52	118.80
2	CA	362	A	C4-N9-C1'	5.20	135.65	126.30
1	BA	983	A	N3-C4-N9	5.20	131.56	127.40
2	DA	2666	C	N3-C2-O2	-5.20	118.26	121.90
1	AA	1030	U	N3-C2-O2	-5.19	118.56	122.20
1	AA	1149	C	N1-C2-O2	5.19	122.02	118.90
2	CA	1523	U	O5'-P-OP2	5.19	116.93	110.70
1	BA	1524	C	C6-N1-C2	-5.19	118.22	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	BV	56	C	C6-N1-C2	-5.19	118.22	120.30
1	BA	397	A	C2-N3-C4	5.19	113.19	110.60
2	DA	1267	U	C2-N1-C1'	5.19	123.92	117.70
1	BA	180	U	N1-C2-O2	5.19	126.43	122.80
1	AA	754	C	C6-N1-C1'	-5.18	114.58	120.80
2	DA	545	U	C2-N1-C1'	5.18	123.92	117.70
2	DA	896	A	C5-C6-N1	5.18	120.29	117.70
2	CA	426	C	N1-C2-O2	5.18	122.01	118.90
2	DA	480	A	OP1-P-O3'	5.18	116.60	105.20
1	AA	153	C	N3-C2-O2	-5.18	118.27	121.90
2	CA	192	C	N1-C2-O2	5.18	122.01	118.90
4	AV	71	C	N1-C2-O2	5.18	122.00	118.90
1	BA	25	C	C5-C6-N1	5.18	123.59	121.00
1	BA	213	G	C4-N9-C1'	5.18	133.23	126.50
2	CA	2507	C	C6-N1-C2	-5.17	118.23	120.30
2	DA	370	G	O4'-C1'-N9	-5.17	104.06	108.20
2	CA	140	C	C2-N1-C1'	5.17	124.49	118.80
3	CB	11	C	N3-C2-O2	-5.17	118.28	121.90
2	DA	1843	C	N1-C2-O2	5.17	122.00	118.90
1	BA	397	A	N3-C4-N9	5.17	131.53	127.40
3	CB	17	C	C2-N1-C1'	5.16	124.48	118.80
3	DB	31	C	C2-N1-C1'	5.16	124.48	118.80
4	AV	45	G	C2-N3-C4	5.16	114.48	111.90
1	BA	524	G	C4-N9-C1'	5.16	133.21	126.50
1	BA	1496	C	C5-C6-N1	5.16	123.58	121.00
2	DA	1404	C	C5-C6-N1	5.16	123.58	121.00
2	CA	278	A	C4-N9-C1'	5.16	135.58	126.30
1	BA	180	U	C2-N1-C1'	5.16	123.89	117.70
2	DA	919	U	N3-C2-O2	-5.16	118.59	122.20
1	BA	1383	C	C5-C6-N1	5.16	123.58	121.00
2	CA	361	G	N1-C6-O6	5.15	122.99	119.90
2	DA	523	C	C5-C6-N1	5.15	123.58	121.00
2	DA	889	C	C2-N1-C1'	5.15	124.47	118.80
1	BA	214	C	N3-C2-O2	-5.15	118.30	121.90
1	AA	1263	C	C5-C6-N1	5.15	123.57	121.00
1	BA	96	U	P-O3'-C3'	5.15	125.88	119.70
1	BA	207	C	C6-N1-C2	-5.15	118.24	120.30
1	BA	501	C	C6-N1-C2	-5.14	118.24	120.30
36	BX	29	U	O4'-C1'-N1	5.14	112.31	108.20
2	CA	2887	A	P-O5'-C5'	5.14	129.12	120.90
2	DA	2884	U	N1-C2-O2	5.14	126.40	122.80
2	CA	2667	C	N1-C2-O2	5.14	121.98	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	BA	151	A	C4-N9-C1'	5.14	135.54	126.30
2	DA	787	C	N1-C2-O2	5.14	121.98	118.90
2	DA	817	C	C6-N1-C2	-5.13	118.25	120.30
2	DA	2636	C	N1-C2-O2	5.13	121.98	118.90
2	DA	353	C	C5-C6-N1	5.13	123.57	121.00
2	DA	876	C	N3-C2-O2	-5.13	118.31	121.90
2	DA	1398	C	C5-C6-N1	5.13	123.57	121.00
2	DA	2473	U	N3-C2-O2	-5.13	118.61	122.20
4	BW	16	C	C6-N1-C2	-5.13	118.25	120.30
2	DA	2626	C	C5-C6-N1	5.13	123.56	121.00
2	DA	2805	C	C6-N1-C2	-5.13	118.25	120.30
2	CA	343	C	N3-C2-O2	-5.12	118.31	121.90
1	BA	284	C	C5-C6-N1	5.12	123.56	121.00
2	DA	1256	G	C8-N9-C1'	-5.12	120.34	127.00
2	CA	1760	C	C6-N1-C2	-5.12	118.25	120.30
1	BA	536	C	C5-C6-N1	5.12	123.56	121.00
2	DA	2043	C	C2-N1-C1'	5.12	124.43	118.80
2	CA	158	U	N1-C2-O2	5.12	126.38	122.80
2	CA	2888	C	O5'-P-OP2	-5.12	101.09	105.70
1	BA	1290	G	N3-C4-N9	5.12	129.07	126.00
2	CA	1173	U	P-O3'-C3'	5.12	125.84	119.70
2	DA	776	G	N3-C4-C5	-5.11	126.04	128.60
1	AA	617	G	N3-C4-N9	-5.10	122.94	126.00
1	AA	984	C	C6-N1-C2	-5.10	118.26	120.30
1	AA	1097	C	C5-C6-N1	5.10	123.55	121.00
1	BA	536	C	N1-C2-O2	5.10	121.96	118.90
4	BV	32	C	N1-C2-O2	5.10	121.96	118.90
1	AA	1203	C	O5'-P-OP2	-5.10	101.11	105.70
1	AA	1265	C	C5-C6-N1	5.10	123.55	121.00
2	CA	1416	G	O4'-C1'-N9	5.10	112.28	108.20
2	CA	2465	C	C5-C6-N1	5.10	123.55	121.00
1	BA	477	C	N1-C2-O2	5.09	121.96	118.90
4	AY	75	C	C6-N1-C2	-5.09	118.26	120.30
1	BA	1262	C	N1-C2-O2	5.09	121.95	118.90
2	DA	343	C	C6-N1-C2	-5.09	118.26	120.30
2	DA	2354	C	C2-N1-C1'	5.09	124.40	118.80
2	CA	1306	C	N1-C2-O2	5.09	121.95	118.90
2	CA	2889	C	C2-N1-C1'	5.09	124.40	118.80
3	CB	27	C	N1-C2-O2	5.09	121.95	118.90
1	AA	452	A	C2-N3-C4	5.09	113.14	110.60
2	CA	399	U	N3-C2-O2	-5.09	118.64	122.20
2	DA	2752	C	N3-C2-O2	-5.09	118.34	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	CA	2064	C	N1-C2-O2	5.09	121.95	118.90
1	BA	611	C	C2-N1-C1'	5.08	124.39	118.80
1	BA	1356	G	C4-N9-C1'	5.08	133.11	126.50
2	CA	373	U	N3-C2-O2	-5.08	118.64	122.20
2	CA	847	U	N3-C2-O2	-5.08	118.64	122.20
2	DA	1062	G	C4-N9-C1'	5.08	133.10	126.50
2	DA	2507	C	C5-C6-N1	5.08	123.54	121.00
2	CA	343	C	C2-N1-C1'	5.08	124.38	118.80
1	BA	1479	C	C5-C6-N1	5.08	123.54	121.00
1	BA	1230	C	N1-C2-O2	5.07	121.94	118.90
1	AA	1027	C	C6-N1-C2	-5.07	118.27	120.30
1	BA	1448	C	C6-N1-C2	-5.07	118.27	120.30
3	CB	31	C	C6-N1-C2	-5.07	118.27	120.30
1	BA	1209	C	N1-C2-O2	5.07	121.94	118.90
2	DA	545	U	N3-C2-O2	-5.06	118.66	122.20
3	DB	89	U	N3-C2-O2	-5.06	118.66	122.20
1	AA	1443	C	N1-C2-O2	5.06	121.94	118.90
2	CA	459	U	C2-N1-C1'	5.06	123.77	117.70
2	DA	1091	G	O4'-C1'-N9	5.06	112.25	108.20
1	AA	377	G	C4-N9-C1'	5.06	133.08	126.50
2	CA	164	C	N1-C2-O2	5.06	121.93	118.90
2	CA	885	C	OP1-P-O3'	5.06	116.32	105.20
1	BA	707	U	N3-C2-O2	-5.05	118.66	122.20
1	AA	811	C	C5-C6-N1	5.05	123.53	121.00
2	CA	158	U	C2-N1-C1'	5.05	123.76	117.70
2	CA	1967	C	N1-C2-O2	5.05	121.93	118.90
1	BA	1218	C	C5-C6-N1	5.05	123.53	121.00
1	BA	1383	C	N1-C2-O2	5.05	121.93	118.90
1	AA	1029	U	N1-C2-O2	5.05	126.33	122.80
2	CA	1837	C	C6-N1-C2	-5.05	118.28	120.30
2	CA	1920	C	C2-N1-C1'	5.05	124.35	118.80
2	CA	2649	C	N1-C2-O2	5.05	121.93	118.90
2	CA	1348	C	C2-N1-C1'	5.04	124.35	118.80
3	DB	17	C	C6-N1-C2	-5.04	118.28	120.30
2	DA	2676	C	N1-C2-O2	5.04	121.92	118.90
2	CA	607	U	N1-C2-O2	5.04	126.33	122.80
2	CA	1289	C	C2-N1-C1'	5.04	124.34	118.80
2	CA	1345	C	N1-C2-O2	5.04	121.92	118.90
2	CA	1920	C	N1-C2-O2	5.04	121.92	118.90
1	BA	1290	G	N3-C4-C5	-5.04	126.08	128.60
2	CA	373	U	N1-C2-O2	5.04	126.33	122.80
2	DA	813	U	N1-C2-O2	5.03	126.32	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	DA	2104	C	C6-N1-C2	-5.03	118.29	120.30
2	CA	2496	C	N1-C2-O2	5.03	121.92	118.90
2	DA	367	G	C8-N9-C1'	-5.03	120.46	127.00
2	DA	581	C	C5-C6-N1	5.03	123.52	121.00
2	CA	673	C	N3-C2-O2	-5.03	118.38	121.90
1	AA	623	C	C2-N1-C1'	5.03	124.33	118.80
2	CA	2889	C	N1-C2-O2	5.03	121.92	118.90
2	DA	114	U	C2-N1-C1'	5.03	123.73	117.70
1	AA	334	C	N1-C2-O2	5.02	121.92	118.90
2	DA	702	U	N1-C2-O2	5.02	126.32	122.80
2	DA	1289	C	C2-N1-C1'	5.02	124.32	118.80
2	CA	846	U	N3-C2-O2	-5.02	118.69	122.20
1	BA	467	U	N3-C2-O2	-5.02	118.69	122.20
1	AA	1023	U	N3-C2-O2	-5.02	118.69	122.20
4	AW	36	C	C2-N1-C1'	5.01	124.32	118.80
2	DA	2515	C	C6-N1-C2	-5.01	118.29	120.30
1	AA	25	C	C5-C6-N1	5.01	123.50	121.00
1	AA	624	C	C6-N1-C2	-5.01	118.30	120.30
2	CA	2874	C	C2-N1-C1'	5.01	124.31	118.80
2	DA	1644	C	N3-C2-O2	-5.01	118.39	121.90
1	AA	407	U	N1-C2-O2	5.01	126.30	122.80
2	CA	114	U	C2-N1-C1'	5.01	123.71	117.70
2	CA	137	U	C2-N1-C1'	5.01	123.71	117.70
2	DA	96	C	N3-C2-O2	-5.01	118.39	121.90
2	DA	2243	U	N3-C2-O2	-5.01	118.70	122.20
1	AA	1469	C	N1-C2-O2	5.00	121.90	118.90
1	BA	745	G	C6-C5-N7	-5.00	127.40	130.40
2	DA	225	C	C2-N1-C1'	5.00	124.30	118.80
4	AV	13	C	N1-C2-O2	5.00	121.90	118.90
1	BA	1253	G	N3-C4-N9	5.00	129.00	126.00
1	BA	1521	C	N1-C2-O2	5.00	121.90	118.90

There are no chirality outliers.

All (34) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
37	AB	65	LYS	Peptide
38	AC	65	ARG	Peptide
39	AD	183	ARG	Peptide
39	AD	46	ARG	Peptide
41	AF	51	ILE	Peptide
42	AG	128	GLU	Peptide

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Mol	Chain	Res	Type	Group
48	AM	64	VAL	Peptide
49	AN	52	PRO	Peptide
52	AQ	67	SER	Peptide
39	BD	29	THR	Peptide
39	BD	34	GLU	Peptide
40	BE	101	GLY	Peptide
40	BE	156	ARG	Peptide
41	BF	52	ASN	Peptide
45	BJ	57	VAL	Peptide
52	BQ	7	LEU	Peptide
34	C4	30	HIS	Peptide
11	C5	89	PRO	Peptide
5	CC	120	ASP	Peptide
5	CC	237	ARG	Peptide
6	CD	151	THR	Peptide
8	CF	174	PHE	Peptide
14	CK	91	SER	Peptide
15	CL	81	ASP	Peptide
23	CT	2	ILE	Peptide
33	D3	43	THR	Peptide
34	D4	30	HIS	Peptide
6	DD	151	THR	Peptide
10	DH	8	LYS	Peptide
10	DH	9	VAL	Peptide
14	DK	34	GLY	Peptide
19	DP	9	GLN	Peptide
23	DT	1	MET	Peptide
25	DV	50	MET	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	33037	0	16628	487	3
1	BA	33057	0	16640	516	0
2	CA	61550	0	30959	698	0
2	DA	61593	0	30990	812	3
3	CB	2529	0	1281	36	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	DB	2529	0	1281	34	0
4	AV	1623	0	823	18	0
4	AW	1623	0	823	28	0
4	AY	1623	0	823	12	0
4	BV	1623	0	823	19	0
4	BW	1623	0	823	20	0
5	CC	2083	0	2157	48	0
5	DC	2083	0	2157	46	0
6	CD	1565	0	1616	30	2
6	DD	1565	0	1616	25	0
7	CE	1404	0	1466	22	0
7	DE	1393	0	1453	24	0
8	CF	1411	0	1447	27	0
8	DF	1411	0	1447	23	0
9	CG	1323	0	1374	15	0
9	DG	1323	0	1374	17	0
10	CH	1110	0	1148	17	0
10	DH	1110	0	1148	24	3
11	C5	825	0	856	17	0
12	CI	511	0	544	7	0
12	DI	518	0	551	12	0
13	CJ	1129	0	1162	15	0
13	DJ	1129	0	1162	15	0
14	CK	939	0	1012	14	0
14	DK	939	0	1012	16	0
15	CL	1045	0	1117	24	1
15	DL	1045	0	1117	23	0
16	CM	1065	0	1148	7	0
16	DM	1074	0	1157	20	0
17	CN	969	0	1012	32	0
17	DN	969	0	1013	20	0
18	CO	892	0	923	21	2
18	DO	892	0	923	15	0
19	CP	917	0	965	14	0
19	DP	917	0	965	22	0
20	CQ	947	0	1022	13	0
20	DQ	947	0	1022	20	0
21	CR	816	0	839	10	0
21	DR	816	0	839	17	2
22	CS	857	0	922	12	0
22	DS	857	0	922	12	0
23	CT	739	0	807	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	DT	739	0	807	5	0
24	CU	780	0	834	10	0
24	DU	780	0	834	16	0
25	CV	753	0	780	16	0
25	DV	753	0	780	12	0
26	CW	574	0	592	16	0
26	DW	574	0	592	14	0
27	CX	625	0	655	10	0
27	DX	625	0	655	11	0
28	CY	499	0	535	6	0
28	DY	509	0	543	9	0
29	CZ	449	0	491	16	1
29	DZ	449	0	491	8	0
30	C0	293	0	283	9	0
30	D0	293	0	284	18	0
31	C1	444	0	461	9	1
31	D1	444	0	461	9	0
32	C2	410	0	440	7	0
32	D2	410	0	440	7	0
33	C3	377	0	418	6	0
33	D3	377	0	418	8	0
34	C4	479	0	553	10	0
34	D4	486	0	560	10	0
35	C6	302	0	340	8	0
35	D6	302	0	340	11	0
36	AX	653	0	325	29	0
36	BX	653	0	325	24	0
37	AB	1757	0	1787	23	0
37	BB	1757	0	1787	25	0
38	AC	1625	0	1696	28	0
38	BC	1625	0	1696	40	0
39	AD	1643	0	1710	46	3
39	BD	1643	0	1710	41	0
40	AE	1106	0	1148	24	0
40	BE	1106	0	1148	21	0
41	AF	818	0	808	18	0
41	BF	818	0	808	13	3
42	AG	1058	0	1111	19	0
42	BG	1035	0	1087	16	0
43	AH	973	0	1029	11	0
43	BH	979	0	1034	20	0
44	AI	995	0	1039	42	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BI	1022	0	1070	51	0
45	AJ	787	0	828	27	0
45	BJ	787	0	828	19	0
46	AK	869	0	878	23	0
46	BK	877	0	887	23	0
47	AL	955	0	1019	21	0
47	BL	955	0	1019	33	0
48	AM	884	0	944	23	0
48	BM	884	0	944	34	0
49	AN	774	0	827	12	0
49	BN	774	0	827	19	0
50	AO	714	0	737	23	0
50	BO	714	0	737	7	0
51	AP	649	0	666	9	0
51	BP	649	0	666	12	0
52	AQ	649	0	691	13	0
52	BQ	649	0	691	11	0
53	AR	456	0	478	15	0
53	BR	456	0	478	5	0
54	AS	638	0	665	16	0
54	BS	638	0	665	16	0
55	AT	665	0	714	14	0
55	BT	665	0	714	7	0
56	AA	50	0	0	0	0
56	BA	49	0	0	0	0
56	C4	1	0	0	0	0
56	CA	167	0	0	0	0
56	CB	3	0	0	0	0
56	CC	1	0	0	0	0
56	CN	2	0	0	0	0
56	CQ	1	0	0	0	0
56	DA	166	0	0	0	0
56	DB	3	0	0	0	0
56	DN	1	0	0	0	0
56	DQ	1	0	0	0	0
57	C0	1	0	0	0	0
57	C6	1	0	0	0	0
57	D0	1	0	0	0	0
57	D6	1	0	0	0	0
58	AA	481	0	0	8	0
58	AB	7	0	0	0	0
58	AC	15	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	AD	10	0	0	1	0
58	AE	12	0	0	1	0
58	AF	6	0	0	0	0
58	AG	5	0	0	0	0
58	AH	7	0	0	1	0
58	AI	6	0	0	0	0
58	AJ	4	0	0	0	0
58	AK	10	0	0	2	0
58	AL	9	0	0	0	0
58	AM	6	0	0	0	0
58	AN	3	0	0	0	0
58	AO	7	0	0	1	0
58	AP	4	0	0	0	0
58	AQ	8	0	0	1	0
58	AR	1	0	0	0	0
58	AS	4	0	0	1	0
58	AT	4	0	0	1	0
58	AV	28	0	0	0	0
58	AW	32	0	0	0	0
58	AX	4	0	0	0	0
58	AY	5	0	0	0	0
58	BA	461	0	0	14	0
58	BB	2	0	0	0	0
58	BC	8	0	0	1	0
58	BD	24	0	0	2	0
58	BE	18	0	0	0	0
58	BF	6	0	0	0	0
58	BG	4	0	0	0	0
58	BH	12	0	0	2	0
58	BI	9	0	0	0	0
58	BJ	8	0	0	1	0
58	BK	5	0	0	0	0
58	BL	8	0	0	0	0
58	BM	6	0	0	1	0
58	BN	5	0	0	0	0
58	BO	2	0	0	1	0
58	BP	5	0	0	1	0
58	BQ	10	0	0	0	0
58	BR	1	0	0	1	0
58	BS	3	0	0	0	0
58	BT	2	0	0	0	0
58	BV	13	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	BW	23	0	0	0	0
58	BX	5	0	0	0	0
58	C1	5	0	0	0	0
58	C2	1	0	0	0	0
58	C3	2	0	0	0	0
58	C4	2	0	0	0	0
58	C5	7	0	0	0	0
58	C6	3	0	0	0	0
58	CA	1106	0	0	22	0
58	CB	49	0	0	1	0
58	CC	13	0	0	0	0
58	CD	10	0	0	0	0
58	CE	16	0	0	0	0
58	CF	14	0	0	2	0
58	CG	18	0	0	0	0
58	CH	8	0	0	1	0
58	CI	4	0	0	0	0
58	CJ	9	0	0	0	0
58	CK	7	0	0	0	0
58	CL	8	0	0	1	0
58	CM	4	0	0	0	0
58	CN	6	0	0	2	0
58	CO	8	0	0	2	0
58	CP	8	0	0	0	0
58	CQ	2	0	0	0	0
58	CR	7	0	0	0	0
58	CS	3	0	0	0	0
58	CT	7	0	0	1	0
58	CU	13	0	0	0	0
58	CV	10	0	0	5	0
58	CW	4	0	0	0	0
58	CX	3	0	0	0	0
58	CY	3	0	0	0	0
58	CZ	1	0	0	0	0
58	D0	2	0	0	2	0
58	D1	11	0	0	0	0
58	D2	2	0	0	0	0
58	D3	2	0	0	0	0
58	D6	1	0	0	0	0
58	DA	1005	0	0	22	0
58	DB	32	0	0	1	0
58	DC	28	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	DD	15	0	0	0	0
58	DE	12	0	0	0	0
58	DF	4	0	0	0	0
58	DG	6	0	0	0	0
58	DH	4	0	0	0	0
58	DJ	3	0	0	0	0
58	DK	5	0	0	0	0
58	DL	10	0	0	0	0
58	DM	6	0	0	1	0
58	DN	6	0	0	0	0
58	DO	4	0	0	0	0
58	DP	6	0	0	0	0
58	DQ	5	0	0	0	0
58	DR	13	0	0	0	0
58	DS	9	0	0	0	0
58	DT	10	0	0	0	0
58	DU	14	0	0	1	0
58	DV	7	0	0	0	0
58	DW	3	0	0	0	0
58	DX	3	0	0	1	0
58	DY	7	0	0	0	0
58	DZ	2	0	0	0	0
All	All	296390	0	195117	3829	12

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 8.

All (3829) 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)
1:BA:1029:U:O2'	1:BA:1033:G:N2	1.59	1.29
30:D0:46:GLY:HA2	58:D0:201:HOH:O	1.29	1.28
2:CA:2278:A:OP2	26:CW:12:ASN:ND2	1.73	1.19
50:AO:2:LEU:HD13	50:AO:34:GLN:NE2	1.58	1.18
17:CN:94:TYR:C	17:CN:116:VAL:HG23	1.72	1.08
17:DN:33:ILE:HD13	17:DN:118:ARG:HH12	1.19	1.08
1:BA:246:A:H62	1:BA:281:G:N2	1.55	1.04
2:DA:2469:A:H62	2:DA:2481:G:H21	1.05	1.03
2:DA:2747:G:N2	2:DA:2757:A:H62	1.57	1.03
17:CN:93:GLY:O	17:CN:116:VAL:HG21	1.60	1.01
1:AA:1498:U:O2'	36:AX:19:U:OP1	1.79	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CZ:1:ALA:HB3	29:CZ:39:ASP:HB3	1.40	1.01
1:BA:180:U:H3	1:BA:195:A:H62	1.05	1.01
1:AA:1260:G:H21	1:AA:1275:A:H62	1.05	1.01
1:BA:1538:C:N3	36:BX:5:G:N1	2.08	1.01
44:AI:10:ARG:HG3	44:AI:105:ARG:HH21	1.25	1.00
1:BA:888:G:N2	1:BA:909:A:H62	1.58	1.00
1:BA:672:U:H3	1:BA:734:G:H1	1.07	1.00
2:CA:2695:U:H3	2:CA:2714:G:H1	1.10	1.00
3:DB:72:G:N2	3:DB:104:A:H62	1.58	0.99
1:BA:683:G:H1	1:BA:707:U:H3	1.03	0.99
4:BW:15:G:N2	4:BW:48:C:H42	1.57	0.99
1:AA:926:G:N1	36:AX:18:G:OP2	1.95	0.98
1:BA:950:U:H3	1:BA:1231:G:H1	1.09	0.98
2:DA:1218:G:H1	2:DA:1231:U:H3	1.12	0.98
17:DN:117:ASP:O	17:DN:119:SER:N	1.95	0.98
1:AA:895:G:H1	1:AA:904:U:H3	1.07	0.98
3:CB:9:G:H1	3:CB:111:U:H3	1.00	0.97
1:AA:1055:A:H62	1:AA:1200:C:H42	1.06	0.97
2:CA:2810:A:H62	2:CA:2890:G:H21	1.05	0.97
2:CA:2685:G:H1	2:CA:2724:U:H3	1.12	0.97
3:DB:72:G:H21	3:DB:104:A:N6	1.62	0.97
2:DA:2136:G:H1	2:DA:2155:U:H3	1.03	0.97
2:CA:158:U:H3	2:CA:168:G:H1	0.98	0.96
1:BA:888:G:H21	1:BA:909:A:N6	1.62	0.96
2:DA:2099:U:H3	2:DA:2190:G:H1	0.99	0.96
1:AA:582:C:N4	1:AA:759:A:H62	1.63	0.96
2:DA:1418:G:H21	2:DA:1580:A:N6	1.64	0.96
1:AA:109:A:H62	1:AA:324:G:N2	1.62	0.96
2:CA:2099:U:H3	2:CA:2190:G:H1	1.14	0.96
23:CT:46:ALA:O	23:CT:50:LEU:HB2	1.66	0.96
1:BA:246:A:N6	1:BA:281:G:H21	1.64	0.96
2:DA:2747:G:H21	2:DA:2757:A:N6	1.64	0.96
1:BA:1538:C:O2	36:BX:5:G:N2	1.98	0.95
2:DA:375:G:H1	2:DA:399:U:H3	1.14	0.95
2:CA:2639:A:H62	2:CA:2775:G:H21	1.05	0.95
2:DA:861:A:N6	2:DA:916:G:H21	1.64	0.95
2:DA:2068:U:H3	2:DA:2430:A:H62	1.13	0.95
2:DA:2657:A:N6	2:DA:2664:G:H21	1.63	0.95
4:AW:1:G:H5"	4:AW:1:G:H8	1.29	0.95
2:DA:1215:G:H1	2:DA:1234:U:H3	0.96	0.95
29:CZ:1:ALA:N	29:CZ:39:ASP:H	1.64	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:672:U:H3	1:AA:734:G:H1	0.95	0.94
2:DA:1166:G:H1	2:DA:1183:U:H3	1.03	0.94
2:DA:2639:A:H62	2:DA:2775:G:N2	1.64	0.94
2:DA:377:G:H1	2:DA:397:U:H3	1.08	0.94
2:DA:839:U:H3	2:DA:939:G:H1	0.95	0.94
1:BA:372:C:N4	1:BA:389:A:H62	1.64	0.94
1:BA:1357:A:H61	1:BA:1365:G:H1	1.14	0.94
2:DA:954:G:H1	2:DA:963:U:H3	1.07	0.94
2:DA:2657:A:H62	2:DA:2664:G:N2	1.63	0.94
2:CA:15:G:H1	2:CA:525:U:H3	1.00	0.94
2:DA:861:A:H62	2:DA:916:G:N2	1.64	0.94
1:AA:832:G:H1	1:AA:854:U:H3	1.10	0.94
2:CA:2136:G:H1	2:CA:2155:U:H3	1.08	0.94
2:CA:2202:U:H3	2:CA:2221:G:H1	1.02	0.94
17:DN:33:ILE:HD13	17:DN:118:ARG:NH1	1.82	0.93
1:BA:1009:U:H3	1:BA:1020:G:H1	1.11	0.93
44:AI:10:ARG:O	44:AI:105:ARG:CZ	2.17	0.93
2:DA:15:G:H1	2:DA:525:U:H3	0.94	0.93
2:DA:706:A:H62	2:DA:725:G:N2	1.66	0.93
2:DA:711:G:H1	2:DA:720:U:H3	0.93	0.93
2:CA:499:U:H3	2:CA:503:A:H62	0.97	0.93
2:DA:1418:G:N2	2:DA:1580:A:H62	1.66	0.93
2:CA:1356:G:H1	2:CA:1375:U:H3	1.03	0.93
1:AA:1116:U:H3	1:AA:1184:G:H1	1.11	0.92
2:DA:2139:U:H3	2:DA:2152:G:H1	0.99	0.92
2:DA:2735:G:H1	2:DA:2769:U:H3	0.96	0.92
2:CA:408:G:H1	2:CA:419:U:H3	1.09	0.92
2:CA:2472:G:H21	2:CA:2478:A:H62	1.15	0.92
1:AA:582:C:H42	1:AA:759:A:N6	1.67	0.92
4:AW:1:G:H5"	4:AW:1:G:C8	2.04	0.92
4:BW:15:G:H22	4:BW:48:C:N4	1.65	0.92
2:CA:1415:U:H3	2:CA:1587:G:H1	1.18	0.92
1:AA:180:U:H3	1:AA:195:A:H62	1.05	0.92
4:AW:15:G:H22	4:AW:48:C:H42	1.14	0.92
2:CA:285:G:H1	2:CA:355:U:H3	0.92	0.92
2:CA:2028:U:H3	2:CA:2033:A:H62	1.15	0.92
2:CA:707:G:H1	2:CA:724:U:H3	0.92	0.92
4:AW:15:G:N2	4:AW:48:C:H42	1.68	0.92
44:AI:32:ARG:HA	44:AI:32:ARG:HE	1.34	0.92
2:DA:1792:G:H1	2:DA:1827:U:H3	0.99	0.92
2:DA:2639:A:N6	2:DA:2775:G:H21	1.68	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:78:U:H3	2:DA:108:G:H1	0.98	0.92
29:CZ:1:ALA:H2	29:CZ:39:ASP:H	1.09	0.91
1:BA:372:C:H42	1:BA:389:A:H62	1.15	0.91
2:DA:706:A:N6	2:DA:725:G:H21	1.69	0.91
1:AA:1055:A:H62	1:AA:1200:C:N4	1.66	0.91
2:DA:304:U:H3	2:DA:313:G:H1	1.18	0.91
1:AA:416:G:H1	1:AA:427:U:H3	1.10	0.91
2:CA:1422:G:H1	2:CA:1576:U:H3	0.94	0.91
1:AA:109:A:H62	1:AA:324:G:H21	0.92	0.91
2:CA:2810:A:H62	2:CA:2890:G:N2	1.68	0.91
1:AA:740:U:OP1	50:AO:1:SER:N	2.03	0.91
2:CA:2639:A:H62	2:CA:2775:G:N2	1.67	0.91
1:AA:927:G:H1	1:AA:1390:U:H3	1.14	0.90
1:BA:1418:A:H62	1:BA:1482:G:H21	1.18	0.90
2:DA:2352:A:H62	2:DA:2365:G:N2	1.68	0.90
1:AA:454:G:H1	1:AA:479:U:H3	1.18	0.90
1:AA:1422:G:H1	1:AA:1478:U:H3	1.02	0.90
2:CA:1527:G:H21	2:CA:1545:A:H62	1.18	0.90
4:BW:15:G:H22	4:BW:48:C:H42	0.92	0.90
1:AA:410:G:H21	1:AA:432:A:H62	1.19	0.90
2:DA:328:U:H3	2:DA:332:A:H62	1.19	0.90
1:BA:1438:G:H1	1:BA:1463:U:H3	0.99	0.90
2:CA:304:U:H3	2:CA:313:G:H1	1.13	0.90
2:CA:1477:A:H62	2:CA:1514:G:H21	1.19	0.90
1:BA:1028:C:C2'	1:BA:1029:U:O5'	2.19	0.90
2:DA:1422:G:H1	2:DA:1576:U:H3	1.11	0.90
2:DA:2352:A:N6	2:DA:2365:G:H21	1.70	0.90
2:CA:1222:U:H3	2:CA:1227:G:H1	1.19	0.90
4:AW:15:G:H22	4:AW:48:C:N4	1.68	0.89
2:DA:1769:U:H3	2:DA:1983:G:H1	1.18	0.89
1:BA:249:U:H3	1:BA:275:G:H1	1.19	0.89
2:DA:1358:G:H21	2:DA:1373:A:H62	1.13	0.89
2:DA:639:U:H3	2:DA:649:G:H1	1.20	0.89
2:CA:284:U:H3	2:CA:356:G:H1	0.90	0.89
1:AA:1440:U:H3	1:AA:1461:G:H1	0.92	0.89
2:DA:585:G:H21	2:DA:1254:A:H62	1.14	0.89
2:DA:706:A:H62	2:DA:725:G:H21	0.91	0.89
2:DA:2352:A:H62	2:DA:2365:G:H21	0.92	0.89
2:CA:1687:G:H21	2:CA:1701:A:H62	1.13	0.89
2:DA:861:A:H62	2:DA:916:G:H21	0.90	0.89
44:BI:29:ILE:N	44:BI:32:ARG:O	2.05	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BI:32:ARG:HA	44:BI:32:ARG:HE	1.38	0.89
2:DA:694:U:H3	2:DA:768:G:H1	1.18	0.88
2:DA:2202:U:H3	2:DA:2221:G:H1	1.19	0.88
1:AA:836:G:H1	1:AA:850:U:H3	0.92	0.88
1:BA:781:A:H62	1:BA:801:U:H3	1.20	0.88
1:BA:372:C:H42	1:BA:389:A:N6	1.71	0.88
2:DA:2657:A:H62	2:DA:2664:G:H21	0.90	0.88
2:DA:696:G:H1	2:DA:766:U:H3	1.17	0.88
1:AA:376:G:H1	1:AA:387:U:H3	1.19	0.87
1:BA:895:G:H1	1:BA:904:U:H3	1.18	0.87
2:CA:2526:G:H1	2:CA:2537:U:H3	0.88	0.87
1:AA:925:G:H1	1:AA:1391:U:H3	0.87	0.87
2:CA:1527:G:H21	2:CA:1545:A:N6	1.71	0.87
2:DA:2639:A:H62	2:DA:2775:G:H21	0.91	0.87
1:AA:410:G:N2	1:AA:432:A:H62	1.71	0.87
2:CA:535:G:H1	2:CA:558:U:H3	1.19	0.87
2:CA:1664:A:H61	2:CA:1996:C:N4	1.71	0.87
2:DA:535:G:H1	2:DA:558:U:H3	1.18	0.87
2:DA:612:G:H21	2:DA:616:A:H62	1.17	0.87
2:CA:306:U:H3	2:CA:310:A:H62	1.18	0.86
1:BA:447:G:H21	1:BA:487:A:H62	1.21	0.86
17:DN:33:ILE:HG21	17:DN:118:ARG:NH1	1.90	0.86
50:AO:2:LEU:HD13	50:AO:34:GLN:HE22	1.37	0.86
1:AA:201:G:H1	1:AA:216:U:H3	0.86	0.86
2:DA:160:A:H62	2:DA:166:U:H3	1.24	0.86
40:BE:83:PRO:HA	40:BE:95:MET:O	1.76	0.86
21:DR:1:MET:HA	21:DR:42:ALA:O	1.76	0.85
1:AA:109:A:N6	1:AA:324:G:H21	1.73	0.85
1:BA:246:A:H62	1:BA:281:G:H21	0.88	0.85
3:DB:72:G:H21	3:DB:104:A:H62	0.85	0.85
1:AA:1055:A:N6	1:AA:1200:C:H42	1.75	0.85
29:CZ:1:ALA:N	29:CZ:39:ASP:N	2.25	0.85
2:DA:585:G:H21	2:DA:1254:A:N6	1.75	0.84
50:AO:2:LEU:CD1	50:AO:34:GLN:NE2	2.38	0.84
17:DN:117:ASP:C	17:DN:119:SER:H	1.79	0.84
50:AO:3:SER:O	50:AO:6:ALA:N	2.10	0.83
2:DA:2734:A:H62	2:DA:2770:G:H21	1.23	0.83
2:DA:1800:C:H42	2:DA:1817:G:N2	1.76	0.83
1:BA:1156:G:H21	1:BA:1179:A:H61	1.24	0.83
2:DA:2068:U:H3	2:DA:2430:A:N6	1.77	0.83
2:CA:1925:C:H42	2:CA:1929:G:N2	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:33:C:H42	2:CA:447:A:H62	1.25	0.83
1:BA:376:G:H1	1:BA:387:U:H3	0.85	0.83
2:CA:2810:A:N6	2:CA:2890:G:H21	1.76	0.83
1:BA:1028:C:H2'	1:BA:1029:U:O5'	1.77	0.83
2:DA:1468:U:H3	2:DA:1524:G:H1	1.24	0.83
1:AA:322:C:N4	1:AA:329:A:H62	1.76	0.82
1:BA:1351:U:H3	1:BA:1371:G:H1	1.26	0.82
1:BA:1538:C:N4	36:BX:5:G:O6	2.11	0.82
1:AA:322:C:H42	1:AA:329:A:H62	1.27	0.82
1:AA:1260:G:N2	1:AA:1275:A:H62	1.76	0.82
1:BA:925:G:H1	1:BA:1391:U:H3	0.85	0.82
2:DA:285:G:H1	2:DA:355:U:H3	1.27	0.82
2:DA:221:A:H62	2:DA:427:U:H3	1.28	0.82
1:AA:582:C:H42	1:AA:759:A:H62	0.85	0.82
44:AI:10:ARG:HG3	44:AI:105:ARG:NH2	1.94	0.81
2:DA:1035:U:H3	2:DA:1120:G:H1	1.28	0.81
2:DA:1042:G:H1	2:DA:1113:U:H3	1.28	0.81
2:CA:1925:C:H42	2:CA:1929:G:H22	1.27	0.81
2:CA:2472:G:H21	2:CA:2478:A:N6	1.78	0.81
2:DA:291:G:H1	2:DA:349:U:H3	0.85	0.81
2:DA:609:A:N6	2:DA:619:G:H21	1.77	0.81
44:BI:29:ILE:HG23	44:BI:32:ARG:HB2	1.62	0.81
2:DA:2469:A:H62	2:DA:2481:G:N2	1.78	0.81
1:AA:322:C:H42	1:AA:329:A:N6	1.79	0.81
36:AX:28:A:H5"	38:AC:131:ARG:HH22	1.46	0.81
1:BA:180:U:H3	1:BA:195:A:N6	1.76	0.81
2:DA:2637:U:H3	2:DA:2776:A:H62	1.28	0.81
2:DA:585:G:N2	2:DA:1254:A:H62	1.79	0.81
44:BI:29:ILE:O	44:BI:32:ARG:N	2.13	0.80
2:DA:1418:G:H21	2:DA:1580:A:H62	0.85	0.80
2:CA:1687:G:N2	2:CA:1701:A:H62	1.78	0.80
44:AI:29:ILE:HG22	44:AI:32:ARG:O	1.81	0.80
2:DA:2747:G:H21	2:DA:2757:A:H62	0.83	0.80
39:AD:150:LYS:HZ3	39:AD:150:LYS:HA	1.46	0.80
2:DA:1206:G:H1	2:DA:1240:U:H3	1.27	0.80
2:CA:2508:G:H1	2:CA:2580:U:H3	1.30	0.80
2:DA:2140:G:H1	2:DA:2151:U:H3	1.30	0.80
12:DI:92:PRO:O	12:DI:96:LYS:HA	1.82	0.80
2:CA:593:U:H3	2:CA:664:G:H1	0.86	0.80
2:DA:2695:U:H3	2:DA:2714:G:H1	1.30	0.80
1:BA:447:G:N2	1:BA:487:A:H62	1.80	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:1222:U:H3	2:DA:1227:G:H1	1.29	0.79
36:AX:19:U:O4	4:AW:35:A:N6	2.15	0.79
2:CA:839:U:H3	2:CA:939:G:H1	1.31	0.79
9:DG:89:VAL:O	9:DG:159:LYS:HA	1.82	0.79
2:DA:609:A:H62	2:DA:619:G:N2	1.81	0.79
2:DA:408:G:H1	2:DA:419:U:H3	1.29	0.79
1:AA:1506:U:OP2	36:AX:16:U:OP1	1.98	0.79
3:DB:78:A:H62	3:DB:98:G:H21	1.28	0.79
2:CA:607:U:H3	2:CA:621:A:H62	1.31	0.78
1:AA:1260:G:H21	1:AA:1275:A:N6	1.80	0.78
1:AA:834:U:H3	1:AA:852:G:H1	1.32	0.78
2:CA:1718:G:H1	2:CA:1742:U:H3	1.30	0.78
1:AA:410:G:H21	1:AA:432:A:N6	1.82	0.77
44:AI:32:ARG:HA	44:AI:32:ARG:NE	1.99	0.77
2:DA:2469:A:N6	2:DA:2481:G:H21	1.83	0.77
2:CA:572:A:H61	2:CA:2029:G:H21	1.32	0.77
2:CA:696:G:H1	2:CA:766:U:H3	1.31	0.77
1:BA:1157:A:H61	1:BA:1178:G:N2	1.83	0.77
10:DH:97:ARG:NH2	10:DH:112:LYS:HB2	1.99	0.77
2:CA:2472:G:N2	2:CA:2478:A:H62	1.82	0.77
11:C5:26:VAL:O	11:C5:82:ILE:HA	1.85	0.77
4:AW:50:G:H22	4:AW:64:U:H3	1.33	0.77
1:AA:323:U:H3	1:AA:327:A:H62	1.32	0.76
1:BA:112:G:H1	1:BA:315:A:H61	1.34	0.76
1:BA:1260:G:H21	1:BA:1275:A:H62	1.32	0.76
2:CA:2290:G:N1	2:CA:2343:U:O2	2.18	0.76
1:AA:1539:C:C2	36:AX:5:G:N2	2.54	0.76
44:BI:32:ARG:HA	44:BI:32:ARG:NE	2.01	0.76
2:DA:1529:G:H1	2:DA:1542:U:H3	1.34	0.76
1:AA:1347:G:C8	44:AI:108:ARG:HB3	2.21	0.76
1:AA:1357:A:H61	1:AA:1365:G:H1	1.34	0.76
1:AA:1438:G:H1	1:AA:1463:U:H3	1.34	0.76
21:CR:1:MET:HA	21:CR:42:ALA:O	1.85	0.76
2:DA:612:G:N2	2:DA:616:A:H62	1.84	0.76
2:CA:1925:C:N4	2:CA:1929:G:H22	1.84	0.75
2:DA:1800:C:N4	2:DA:1817:G:H22	1.84	0.75
2:CA:1527:G:N2	2:CA:1545:A:H62	1.84	0.75
2:CA:1478:G:H22	2:CA:1513:U:H3	1.33	0.75
1:BA:1444:U:H3	1:BA:1458:G:H1	1.33	0.75
1:AA:150:U:H3	1:AA:171:A:N6	1.84	0.75
2:CA:1800:C:H42	2:CA:1817:G:N2	1.83	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:666:G:H1	1:BA:740:U:H3	1.35	0.75
44:BI:29:ILE:HG22	44:BI:32:ARG:O	1.87	0.75
2:CA:1687:G:H21	2:CA:1701:A:N6	1.84	0.75
2:CA:1800:C:H42	2:CA:1817:G:H22	1.32	0.74
1:BA:1418:A:N6	1:BA:1482:G:H21	1.85	0.74
2:DA:2204:G:H1	2:DA:2220:U:H3	1.32	0.74
2:CA:1107:G:H5'	11:C5:57:ASN:HD22	1.51	0.74
40:AE:106:ALA:H	40:AE:111:ARG:HH21	1.33	0.74
2:CA:675:A:H62	2:CA:803:U:H3	1.36	0.74
44:AI:21:LYS:HB2	44:AI:61:ASP:HB2	1.69	0.74
1:AA:8:A:H62	39:AD:204:SER:HB2	1.52	0.73
2:DA:1800:C:H42	2:DA:1817:G:H22	1.36	0.73
10:DH:97:ARG:HA	10:DH:97:ARG:HE	1.53	0.73
13:CJ:125:TYR:HH	13:CJ:132:HIS:HE2	1.36	0.73
4:AY:22:G:N7	4:AY:46:G:N2	2.33	0.73
39:AD:90:LEU:HD13	39:AD:194:ILE:HD12	1.69	0.73
2:DA:2685:G:H1	2:DA:2724:U:H3	1.35	0.73
1:BA:1156:G:H21	1:BA:1179:A:N6	1.85	0.73
10:DH:97:ARG:HA	10:DH:97:ARG:NE	2.04	0.73
1:BA:1418:A:H62	1:BA:1482:G:N2	1.86	0.72
17:DN:33:ILE:CD1	17:DN:118:ARG:NH1	2.52	0.72
4:BV:50:G:H1	4:BV:64:U:H3	1.37	0.72
1:BA:927:G:H1	1:BA:1390:U:H3	1.35	0.71
30:D0:11:GLU:HA	30:D0:25:ARG:HA	1.72	0.71
40:AE:96:GLN:HB3	40:AE:123:LEU:HB2	1.71	0.71
1:AA:694:A:H5"	46:AK:54:SER:HB3	1.72	0.71
1:BA:888:G:H21	1:BA:909:A:H62	0.80	0.71
2:DA:2052:A:N6	58:DA:3206:HOH:O	2.23	0.71
1:AA:6:G:H1	40:AE:101:GLY:HA3	1.54	0.71
2:CA:328:U:H3	2:CA:332:A:H62	1.36	0.71
2:CA:1862:G:H1	2:CA:1880:U:H3	1.39	0.71
37:BB:187:ASP:H	37:BB:190:SER:HB2	1.56	0.71
2:CA:1477:A:H62	2:CA:1514:G:N2	1.89	0.71
2:DA:2334:U:H4'	18:DO:13:ARG:HE	1.56	0.71
2:CA:2085:U:H3	2:CA:2234:G:H1	1.39	0.70
15:CL:29:LYS:HG2	15:CL:30:THR:HG23	1.73	0.70
2:DA:160:A:N6	2:DA:166:U:H3	1.88	0.70
2:CA:1529:G:H1	2:CA:1542:U:H3	1.37	0.70
29:CZ:1:ALA:HB2	29:CZ:39:ASP:O	1.91	0.70
1:AA:258:G:H1	1:AA:268:U:H3	1.39	0.70
2:CA:1800:C:N4	2:CA:1817:G:H22	1.88	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:2648:G:H1	2:CA:2672:U:H3	1.39	0.70
1:BA:1179:A:H4'	44:BI:105:ARG:H	1.56	0.70
1:AA:1500:A:H5"	1:AA:1508:A:H5"	1.73	0.70
2:CA:2639:A:N6	2:CA:2775:G:H21	1.85	0.70
2:CA:1252:G:H1	20:CQ:36:GLN:HE21	1.39	0.70
37:BB:165:ALA:O	37:BB:169:HIS:HB3	1.91	0.70
2:CA:2475:C:H42	2:CA:2529:G:H22	1.39	0.69
45:AJ:27:GLU:O	45:AJ:31:ARG:HB2	1.91	0.69
2:DA:609:A:N6	2:DA:619:G:N2	2.38	0.69
2:CA:1394:U:H4'	2:CA:1603:A:H4'	1.73	0.69
44:AI:29:ILE:O	44:AI:30:ASN:C	2.28	0.69
1:BA:1157:A:N6	1:BA:1178:G:N2	2.39	0.69
11:C5:61:ARG:O	11:C5:65:GLU:HB2	1.93	0.69
44:AI:31:GLN:HA	44:AI:31:GLN:HE21	1.56	0.69
1:BA:763:G:N2	58:BA:1705:HOH:O	2.25	0.69
2:CA:475:C:O2	2:CA:479:A:N6	2.25	0.69
39:AD:150:LYS:HA	39:AD:150:LYS:NZ	2.07	0.69
40:AE:83:PRO:HA	40:AE:95:MET:O	1.90	0.69
2:DA:1358:G:N2	2:DA:1373:A:H62	1.87	0.69
2:DA:2508:G:H1	2:DA:2580:U:H3	1.41	0.69
4:BV:36:C:H42	36:BX:21:G:H1	1.39	0.69
17:CN:22:ARG:HG3	17:CN:70:THR:HA	1.74	0.69
36:AX:20:A:N6	4:AW:35:A:C6	2.61	0.69
1:BA:1160:G:H1	1:BA:1176:A:H61	1.41	0.69
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.58	0.69
2:CA:2068:U:H3	2:CA:2430:A:H62	1.38	0.69
3:CB:22:U:H3	3:CB:61:G:H1	1.40	0.68
1:BA:1250:A:H4'	44:BI:68:GLY:HA2	1.73	0.68
45:AJ:10:LEU:HB2	45:AJ:72:ARG:HB2	1.75	0.68
4:BW:8:U:H3	4:BW:14:A:H62	1.39	0.68
4:AV:50:G:H1	4:AV:64:U:H3	1.39	0.68
17:CN:94:TYR:C	17:CN:116:VAL:CG2	2.59	0.68
2:CA:78:U:H3	2:CA:108:G:H1	1.41	0.68
44:AI:109:GLN:HA	44:AI:109:GLN:HE21	1.59	0.68
5:CC:143:VAL:HB	5:CC:153:LEU:HB2	1.75	0.68
1:BA:258:G:H1	1:BA:268:U:H3	1.41	0.68
2:DA:2734:A:H62	2:DA:2770:G:N2	1.91	0.68
29:CZ:1:ALA:H3	29:CZ:39:ASP:N	1.90	0.67
2:CA:2364:C:OP1	26:CW:55:ARG:NH1	2.27	0.67
49:AN:69:ARG:HG2	49:AN:71:HIS:H	1.59	0.67
55:AT:34:VAL:HG21	55:AT:53:MET:HG2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:898:G:O2'	58:BA:1702:HOH:O	2.12	0.67
2:DA:2102:G:H1	2:DA:2187:U:H3	1.39	0.67
2:DA:2472:G:H21	2:DA:2478:A:H62	1.40	0.67
1:BA:585:G:N1	1:BA:757:U:N3	2.41	0.67
2:DA:593:U:H3	2:DA:664:G:H1	1.43	0.67
2:DA:1696:G:N2	2:DA:1977:A:O2'	2.28	0.67
2:DA:1932:A:H62	2:DA:1968:G:H21	1.40	0.67
1:AA:215:C:O2	1:AA:465:A:N6	2.27	0.67
2:CA:1471:G:N1	58:CA:3219:HOH:O	2.28	0.67
44:BI:29:ILE:O	44:BI:30:ASN:C	2.31	0.67
2:DA:818:G:H21	2:DA:1189:A:H62	1.42	0.67
1:AA:1506:U:P	36:AX:16:U:OP1	2.52	0.67
44:AI:23:GLY:H	44:AI:61:ASP:H	1.43	0.67
50:AO:2:LEU:CD1	50:AO:34:GLN:CD	2.64	0.67
1:BA:948:C:O2'	58:BA:1701:HOH:O	2.12	0.67
1:AA:1347:G:H8	44:AI:108:ARG:HB3	1.60	0.67
29:CZ:1:ALA:CB	29:CZ:39:ASP:O	2.43	0.67
36:AX:18:G:O6	4:AW:37:A:N1	2.27	0.67
50:AO:2:LEU:N	50:AO:2:LEU:HD12	2.10	0.67
2:CA:2349:G:H5"	34:C4:44:ARG:HH22	1.59	0.67
2:DA:1450:G:N2	2:DA:1452:G:O6	2.26	0.66
1:AA:150:U:N3	1:AA:171:A:N6	2.42	0.66
1:AA:372:C:H42	1:AA:389:A:H62	1.43	0.66
1:AA:951:G:OP2	48:AM:100:ARG:NH2	2.28	0.66
2:CA:814:C:H1'	2:CA:1225:G:H21	1.60	0.66
2:DA:1354:A:H62	2:DA:1377:G:N2	1.93	0.66
39:BD:61:ARG:HH21	39:BD:67:LEU:HA	1.59	0.66
1:AA:1006:G:N2	1:AA:1023:U:O2	2.28	0.66
2:CA:572:A:H61	2:CA:2029:G:N2	1.92	0.66
2:CA:962:G:H21	2:CA:2250:G:H22	1.43	0.66
37:AB:82:ALA:O	37:AB:88:GLN:NE2	2.27	0.66
51:BP:7:ALA:O	51:BP:17:TYR:HA	1.96	0.66
39:AD:150:LYS:HA	39:AD:150:LYS:CE	2.26	0.66
44:AI:25:GLY:H	44:AI:58:GLU:HA	1.61	0.66
1:BA:19:A:OP2	40:BE:131:ASN:ND2	2.29	0.66
46:BK:21:HIS:O	46:BK:31:VAL:HA	1.96	0.66
2:CA:2032:G:N2	6:CD:151:THR:OG1	2.29	0.66
2:CA:2526:G:O2'	35:C6:1:MET:N	2.28	0.66
22:CS:73:LYS:HB2	22:CS:106:VAL:HB	1.77	0.66
48:BM:3:ILE:HG22	48:BM:56:ARG:HE	1.61	0.66
2:CA:713:G:N7	50:AO:88:ARG:NH2	2.39	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:1664:A:N6	2:CA:1996:C:N4	2.44	0.66
26:CW:11:ARG:N	26:CW:11:ARG:HD2	2.11	0.66
52:AQ:18:LYS:HE3	52:AQ:49:ASN:H	1.61	0.66
5:DC:144:GLU:HB2	5:DC:187:CYS:HB3	1.75	0.66
2:CA:1268:A:H62	2:CA:2012:G:H21	1.40	0.66
3:CB:78:A:H62	3:CB:98:G:H21	1.41	0.66
2:DA:950:G:H1	2:DA:967:U:H3	1.42	0.66
44:BI:29:ILE:O	44:BI:32:ARG:HB2	1.96	0.66
1:BA:605:U:H3	1:BA:633:G:H1	1.42	0.66
2:CA:1607:C:N4	2:CA:1622:G:OP2	2.29	0.65
4:AY:50:G:H22	4:AY:64:U:H3	1.44	0.65
34:C4:14:LYS:HB3	34:C4:22:LYS:HE2	1.78	0.65
1:BA:447:G:H21	1:BA:487:A:N6	1.93	0.65
1:BA:1128:C:O2'	44:BI:17:ARG:NH1	2.30	0.65
2:CA:775:G:N7	58:CA:3225:HOH:O	2.28	0.65
2:CA:994:C:OP1	20:CQ:52:ARG:NH2	2.29	0.65
2:CA:1482:G:H1'	2:CA:1509:A:H61	1.61	0.65
1:AA:1512:U:H3	1:AA:1523:G:H1	1.43	0.65
3:CB:30:C:H1'	3:CB:57:A:H61	1.60	0.65
2:DA:1036:G:H1	2:DA:1119:U:H3	0.77	0.65
48:BM:2:ARG:NH2	48:BM:49:GLU:OE2	2.29	0.65
11:C5:91:ALA:H	11:C5:94:ARG:HD3	1.60	0.65
39:BD:48:SER:O	39:BD:51:GLY:N	2.30	0.65
3:CB:37:C:O2	18:CO:100:HIS:NE2	2.29	0.65
1:BA:1157:A:N6	1:BA:1178:G:H21	1.94	0.65
29:CZ:7:THR:HA	29:CZ:33:HIS:O	1.97	0.65
1:AA:514:C:H2'	1:AA:515:G:H8	1.61	0.65
1:AA:766:A:N6	1:AA:813:U:C2	2.65	0.65
1:AA:437:U:OP1	39:AD:151:GLN:OE1	2.15	0.65
2:CA:1363:C:O2'	2:CA:1809:A:N3	2.30	0.65
1:BA:814:A:HO2'	1:BA:1510:C:HO2'	1.45	0.65
1:AA:766:A:N6	1:AA:813:U:N3	2.45	0.65
2:CA:600:G:H1	2:CA:657:U:H3	1.45	0.65
43:AH:28:SER:HB2	43:AH:58:LEU:HB2	1.79	0.65
2:DA:2047:C:H2'	2:DA:2048:G:H8	1.61	0.65
1:AA:1129:C:N3	1:AA:1144:G:N2	2.44	0.64
2:CA:1390:U:H3	2:CA:1395:A:H62	1.44	0.64
2:CA:1419:A:O2'	2:CA:1421:G:N7	2.30	0.64
3:DB:30:C:H1'	3:DB:57:A:H61	1.61	0.64
2:CA:516:C:OP1	31:C1:9:ARG:NH1	2.29	0.64
17:CN:93:GLY:O	17:CN:116:VAL:CG2	2.42	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1308:U:H5"	48:BM:96:VAL:HG22	1.78	0.64
1:BA:1343:G:H4'	44:BI:123:ARG:HB3	1.80	0.64
2:DA:2139:U:O2	2:DA:2152:G:N2	2.27	0.64
1:BA:1156:G:N2	1:BA:1179:A:H61	1.92	0.64
2:DA:1363:C:O2'	2:DA:1809:A:N3	2.29	0.64
1:AA:723:U:C4	36:AX:7:A:O2'	2.49	0.64
2:CA:1753:G:H5"	19:CP:92:ARG:HD3	1.80	0.64
1:BA:481:G:O2'	1:BA:483:C:N4	2.30	0.64
5:CC:122:ALA:O	5:CC:127:ASN:ND2	2.29	0.64
1:BA:1422:G:H1	1:BA:1478:U:H3	1.45	0.64
2:DA:1040:A:H61	2:DA:1115:G:H1	1.46	0.64
1:BA:1512:U:H3	1:BA:1523:G:H1	1.44	0.64
2:DA:572:A:H61	2:DA:2029:G:H21	1.45	0.64
2:DA:612:G:H21	2:DA:616:A:N6	1.92	0.64
1:BA:153:C:N3	1:BA:169:C:N4	2.46	0.64
21:DR:3:ALA:HA	21:DR:40:MET:O	1.97	0.64
2:CA:1181:U:H2'	2:CA:1182:G:H8	1.62	0.64
2:CA:2415:G:N2	58:CA:3239:HOH:O	2.31	0.64
2:CA:2824:C:OP2	2:CA:2825:G:N2	2.31	0.64
6:CD:46:ARG:HH12	6:CD:86:GLU:H	1.45	0.64
44:AI:31:GLN:HA	44:AI:31:GLN:NE2	2.12	0.64
1:BA:20:U:O2'	1:BA:573:A:N6	2.30	0.64
2:CA:848:C:H2'	2:CA:849:A:H8	1.63	0.64
19:CP:88:ARG:HB3	19:CP:112:ARG:HD3	1.80	0.64
1:AA:671:G:O2'	41:AF:79:ARG:NH2	2.31	0.64
2:CA:2289:G:N2	2:CA:2344:U:O2	2.30	0.64
2:CA:2298:A:OP1	8:CF:70:ARG:NH2	2.31	0.64
24:CU:3:LYS:O	24:CU:93:ARG:NH2	2.31	0.64
5:DC:122:ALA:O	5:DC:127:ASN:ND2	2.31	0.64
4:BW:34:U:OP2	44:BI:129:ARG:NH1	2.31	0.64
2:CA:195:A:N6	2:CA:198:C:OP2	2.32	0.63
1:BA:683:G:N2	46:BK:38:GLY:O	2.31	0.63
2:DA:2683:C:OP1	19:DP:50:ARG:NH2	2.30	0.63
2:DA:2873:A:N6	58:DA:3210:HOH:O	2.31	0.63
1:AA:148:G:H1	1:AA:174:A:H61	1.46	0.63
1:AA:934:C:H42	1:AA:938:A:H61	1.47	0.63
2:CA:2478:A:O2'	2:CA:2536:G:N2	2.31	0.63
23:CT:38:ALA:O	23:CT:81:LYS:NZ	2.32	0.63
42:AG:138:GLU:HA	42:AG:141:HIS:HB3	1.80	0.63
1:AA:358:U:H2'	1:AA:359:G:H8	1.61	0.63
14:CK:102:PRO:HB3	14:CK:121:GLU:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:DD:51:THR:HG21	6:DD:68:PHE:HE1	1.63	0.63
44:BI:29:ILE:HG23	44:BI:32:ARG:CB	2.28	0.63
4:AY:60:C:H5'	4:AY:61:C:H5	1.63	0.63
15:CL:74:THR:HG22	15:CL:107:PHE:HB2	1.81	0.63
7:CE:21:ARG:N	7:CE:110:SER:HG	1.97	0.63
48:AM:15:VAL:HG23	48:AM:16:ILE:HD12	1.80	0.63
1:BA:1106:G:O2'	38:BC:169:ARG:NH1	2.27	0.63
2:CA:1521:G:N3	58:CA:3219:HOH:O	2.30	0.63
10:CH:126:GLY:H	10:CH:146:VAL:HB	1.64	0.63
1:BA:900:A:N6	58:BA:1716:HOH:O	2.31	0.63
2:DA:2045:C:O2	31:D1:18:HIS:NE2	2.31	0.63
2:DA:2060:A:N7	7:DE:69:ARG:NH2	2.47	0.63
1:BA:237:G:H4'	52:BQ:26:ARG:HH22	1.63	0.63
1:BA:1445:U:H3	1:BA:1457:G:H1	0.79	0.63
3:DB:77:U:H3	3:DB:99:A:H62	1.46	0.63
2:CA:572:A:N6	2:CA:2029:G:H21	1.97	0.63
2:CA:1060:U:H4'	2:CA:1061:U:H5'	1.81	0.63
1:AA:1445:U:H3	1:AA:1457:G:H1	1.45	0.63
2:CA:1326:U:H2'	2:CA:1327:A:H8	1.64	0.63
2:CA:377:G:H1	2:CA:397:U:H3	1.46	0.62
2:CA:609:A:H62	2:CA:619:G:H21	1.45	0.62
41:AF:6:ILE:HB	41:AF:62:MET:HB2	1.79	0.62
1:BA:261:U:OP2	55:BT:73:ARG:NH2	2.31	0.62
1:BA:1106:G:HO2'	38:BC:169:ARG:HH12	1.47	0.62
1:BA:1500:A:H5"	1:BA:1508:A:H5"	1.79	0.62
2:CA:249:C:O2	34:C4:11:LYS:NZ	2.32	0.62
2:CA:954:G:H1	2:CA:963:U:H3	1.47	0.62
2:CA:1666:G:N3	14:CK:3:GLN:NE2	2.47	0.62
1:BA:146:G:N2	1:BA:177:G:N7	2.47	0.62
1:AA:544:G:OP1	39:AD:55:ARG:NH2	2.33	0.62
2:CA:1860:G:H1	2:CA:1882:U:H3	1.45	0.62
1:BA:1260:G:N2	1:BA:1275:A:H62	1.97	0.62
2:DA:2320:U:O2'	2:DA:2322:A:N6	2.32	0.62
3:DB:73:A:H62	3:DB:103:U:H3	1.46	0.62
2:CA:1824:G:OP2	5:CC:52:HIS:NE2	2.32	0.62
1:BA:1357:A:N6	1:BA:1365:G:H1	1.91	0.62
41:BF:38:ARG:HH11	41:BF:97:THR:HA	1.63	0.62
2:CA:563:A:OP2	21:CR:79:ARG:NH2	2.31	0.62
1:BA:1236:A:H4'	1:BA:1304:G:H4'	1.81	0.62
2:DA:475:C:O2	2:DA:479:A:N6	2.31	0.62
2:CA:2343:U:HO2'	2:CA:2373:G:HO2'	1.48	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CD:46:ARG:HH12	6:CD:86:GLU:N	1.97	0.62
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.65	0.62
2:DA:1086:A:H5"	2:DA:1087:G:H5'	1.82	0.62
2:DA:1550:C:H5'	2:DA:1740:G:H22	1.64	0.62
16:DM:17:ASN:O	16:DM:38:ARG:NH1	2.32	0.62
1:AA:593:U:H3	1:AA:646:G:H1	1.47	0.62
40:AE:104:ILE:HD11	40:AE:114:LEU:HD23	1.81	0.62
52:AQ:7:LEU:O	52:AQ:59:GLU:HA	1.99	0.62
22:DS:13:SER:HB3	22:DS:16:LYS:HE2	1.81	0.62
2:CA:197:A:N6	2:CA:2430:A:O2'	2.33	0.62
1:BA:740:U:H2'	1:BA:741:G:H8	1.65	0.62
9:DG:15:ASP:HB3	9:DG:26:LYS:HB3	1.80	0.62
10:DH:50:ARG:O	10:DH:54:LEU:HB2	1.99	0.62
43:BH:24:VAL:O	43:BH:59:GLU:HA	2.00	0.62
52:BQ:26:ARG:HG3	52:BQ:39:ARG:HB3	1.82	0.62
2:CA:2848:G:O2'	2:CA:2867:G:N2	2.33	0.61
44:AI:109:GLN:HA	44:AI:109:GLN:NE2	2.15	0.61
2:DA:529:A:H62	2:DA:2041:U:H3	1.48	0.61
30:D0:33:ASN:HB3	48:BM:2:ARG:NH1	2.16	0.61
2:DA:2102:G:N2	2:DA:2187:U:O2	2.31	0.61
9:DG:153:PRO:HA	9:DG:160:GLY:HA3	1.82	0.61
2:CA:2863:C:H2'	2:CA:2864:G:H8	1.63	0.61
1:BA:112:G:H21	1:BA:354:G:H5'	1.64	0.61
1:AA:417:G:N1	1:AA:426:U:N3	2.46	0.61
2:CA:33:C:N4	2:CA:447:A:H62	1.96	0.61
2:CA:1608:A:H62	2:CA:1621:U:H3	1.49	0.61
39:AD:146:GLU:HA	39:AD:149:LYS:HE3	1.82	0.61
1:BA:1071:C:H2'	1:BA:1072:G:H8	1.66	0.61
1:AA:401:C:OP1	39:AD:73:ASN:ND2	2.32	0.61
1:AA:1291:U:O2'	44:AI:40:ARG:NH2	2.34	0.61
1:BA:945:G:N2	1:BA:1334:G:O2'	2.33	0.61
2:DA:1253:A:OP1	20:DQ:32:ARG:NH1	2.32	0.61
4:BV:4:U:H3	4:BV:69:A:H61	1.49	0.61
37:BB:165:ALA:HB3	37:BB:190:SER:HB3	1.82	0.61
16:CM:20:LEU:HD23	25:CV:81:PRO:HG2	1.82	0.61
1:BA:927:G:N2	1:BA:1390:U:O2	2.30	0.61
6:DD:14:ILE:HG13	6:DD:178:VAL:HG11	1.83	0.61
2:DA:1354:A:H62	2:DA:1377:G:H21	1.47	0.61
30:C0:20:ASN:ND2	30:C0:37:CYS:SG	2.72	0.61
2:DA:1206:G:O6	2:DA:1240:U:O4	2.19	0.61
8:DF:69:ALA:HB3	8:DF:81:GLY:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BW:8:U:O4	4:BW:14:A:N7	2.34	0.61
2:CA:895:U:OP2	58:CA:3201:HOH:O	2.16	0.61
2:CA:2627:G:N2	2:CA:2777:G:OP2	2.31	0.61
2:DA:2821:A:H5"	6:DD:115:GLY:H	1.65	0.61
55:AT:4:LYS:HG3	55:AT:6:ALA:H	1.64	0.61
2:DA:674:G:H5"	7:DE:71:GLY:HA3	1.82	0.61
4:AV:44:G:N3	4:AV:45:G:N1	2.49	0.60
1:BA:975:A:N6	45:BJ:50:THR:O	2.33	0.60
51:AP:76:LYS:HD3	51:AP:79:ASN:HD21	1.67	0.60
1:BA:693:G:C4	36:BX:15:A:O4'	2.54	0.60
2:DA:2523:G:HO2'	2:DA:2764:A:HO2'	1.48	0.60
8:DF:139:GLU:HB2	8:DF:140:ILE:HD12	1.82	0.60
17:DN:77:ALA:O	17:DN:81:ASN:HB2	2.01	0.60
40:BE:77:ASN:HB3	40:BE:79:THR:HG22	1.81	0.60
45:BJ:10:LEU:HA	45:BJ:98:VAL:HG12	1.82	0.60
1:AA:1493:A:C2	36:AX:22:U:H1'	2.36	0.60
2:CA:1062:G:H2'	2:CA:1063:G:H8	1.65	0.60
1:BA:157:U:H3	1:BA:164:G:H1	1.48	0.60
11:C5:27:VAL:HB	11:C5:110:ALA:HB3	1.83	0.60
17:CN:95:THR:N	17:CN:116:VAL:HG23	2.17	0.60
44:AI:11:ARG:HD2	44:AI:106:ASP:HB3	1.84	0.60
1:BA:201:G:H22	1:BA:468:A:H62	1.50	0.60
1:BA:406:G:H21	39:BD:115:GLN:HE22	1.49	0.60
8:DF:138:PRO:HB3	30:D0:32:LEU:HD13	1.83	0.60
2:CA:1032:A:N1	2:CA:1122:G:O6	2.35	0.60
1:BA:67:C:N3	1:BA:103:U:O4	2.34	0.60
1:AA:372:C:N4	1:AA:390:U:O2	2.35	0.60
1:AA:1415:G:H1	1:AA:1485:U:H3	1.49	0.60
2:CA:499:U:O4	2:CA:503:A:N7	2.35	0.60
8:CF:147:ARG:HH11	8:CF:149:ARG:HG2	1.67	0.60
2:DA:1438:U:H2'	2:DA:1439:A:H8	1.66	0.60
2:CA:1636:U:H2'	2:CA:1637:A:H8	1.67	0.60
2:DA:1162:G:H4'	21:DR:24:LYS:HB3	1.83	0.60
45:BJ:10:LEU:HB2	45:BJ:72:ARG:HB2	1.84	0.60
1:AA:913:A:OP1	47:AL:42:LYS:NZ	2.34	0.60
4:AV:54:U:H3	4:AV:58:A:H62	1.48	0.60
30:C0:35:ASP:HB2	48:AM:2:ARG:HH22	1.67	0.60
37:AB:69:VAL:HB	37:AB:162:VAL:HA	1.84	0.60
2:DA:1358:G:H21	2:DA:1373:A:N6	1.94	0.60
15:DL:74:THR:HG22	15:DL:107:PHE:HB2	1.84	0.60
22:DS:73:LYS:HB2	22:DS:106:VAL:HB	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:28:SER:HB2	43:BH:58:LEU:HB2	1.82	0.60
1:BA:401:C:O2'	1:BA:621:A:N3	2.33	0.60
2:DA:1394:U:H4'	2:DA:1603:A:H4'	1.83	0.60
6:DD:102:ALA:HA	6:DD:180:VAL:HG21	1.84	0.60
45:BJ:15:HIS:HA	45:BJ:18:ILE:HG22	1.84	0.60
2:CA:1214:A:H62	2:CA:1235:G:H21	1.48	0.59
2:CA:1270:C:H5"	2:CA:1271:G:H5'	1.83	0.59
2:CA:2680:U:OP2	6:CD:116:LYS:NZ	2.35	0.59
30:D0:20:ASN:ND2	30:D0:37:CYS:SG	2.75	0.59
44:BI:15:ALA:HB3	44:BI:67:LYS:HE3	1.82	0.59
2:CA:1365:A:O5'	27:CX:27:ARG:NH2	2.35	0.59
1:BA:689:C:OP2	46:BK:52:ARG:NH1	2.35	0.59
2:DA:468:G:N7	33:D3:39:ARG:NH2	2.48	0.59
2:DA:1326:U:H2'	2:DA:1327:A:H8	1.66	0.59
1:AA:766:A:N7	1:AA:813:U:O4	2.34	0.59
1:AA:1191:A:OP1	38:AC:4:LYS:NZ	2.35	0.59
39:AD:32:LYS:HE2	39:AD:35:GLN:HG2	1.84	0.59
10:DH:116:ARG:HB2	10:DH:133:GLN:HE21	1.67	0.59
1:AA:235:C:H2'	1:AA:236:A:H8	1.68	0.59
2:CA:2081:U:H3	2:CA:2239:G:H1	1.50	0.59
5:CC:257:ARG:NH1	5:CC:263:ASP:OD1	2.35	0.59
8:CF:57:ALA:HB2	8:CF:64:PRO:HD3	1.84	0.59
2:DA:2573:C:N4	4:BV:75:C:O2'	2.35	0.59
3:DB:37:C:O2	18:DO:100:HIS:NE2	2.32	0.59
2:CA:1817:G:OP1	5:CC:86:ARG:NH2	2.35	0.59
18:CO:102:ARG:NH2	58:CO:201:HOH:O	2.34	0.59
1:AA:538:G:H5"	47:AL:110:LYS:HB2	1.84	0.59
2:CA:1601:G:OP1	23:CT:64:LYS:NZ	2.35	0.59
2:CA:2647:U:H2'	2:CA:2648:G:H8	1.67	0.59
7:CE:170:ARG:NH2	7:CE:176:ASP:OD1	2.35	0.59
8:CF:97:GLU:OE2	30:C0:25:ARG:NH1	2.34	0.59
39:AD:150:LYS:HZ3	39:AD:150:LYS:CA	2.16	0.59
1:BA:1029:U:O2'	1:BA:1033:G:C2	2.51	0.59
2:DA:707:G:H1	2:DA:724:U:H3	1.50	0.59
13:DJ:77:HIS:HA	13:DJ:83:GLY:O	2.03	0.59
42:BG:26:VAL:O	42:BG:30:MET:HB2	2.02	0.59
46:BK:30:ILE:HG22	46:BK:45:THR:HG22	1.85	0.59
1:AA:135:C:N3	51:AP:1:MET:N	2.50	0.59
1:AA:150:U:O4	1:AA:171:A:N7	2.35	0.59
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.66	0.59
1:BA:322:C:H42	1:BA:329:A:H62	1.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:624:C:H1'	51:BP:14:ARG:HH12	1.67	0.59
2:DA:328:U:O4	2:DA:332:A:N7	2.36	0.59
2:DA:400:G:N7	27:DX:56:ARG:NH1	2.50	0.59
37:BB:182:VAL:O	37:BB:197:PHE:HB2	2.02	0.59
1:AA:958:A:N6	54:AS:76:THR:O	2.35	0.59
1:AA:1112:C:H42	38:AC:177:THR:HA	1.68	0.59
2:CA:547:A:O2'	2:CA:548:G:N2	2.35	0.59
2:CA:1019:U:H3	2:CA:1142:A:H62	1.50	0.59
2:CA:1064:C:H5'	12:CI:88:GLY:HA3	1.85	0.59
2:CA:2102:G:N1	2:CA:2187:U:O2	2.34	0.59
1:BA:300:A:O2'	1:BA:564:C:N4	2.36	0.59
1:BA:578:C:O2'	1:BA:728:A:N3	2.32	0.59
2:DA:460:A:H62	2:DA:469:G:H21	1.48	0.59
2:DA:1047:G:N2	2:DA:1110:G:O2'	2.36	0.59
2:DA:1326:U:HO2'	2:DA:2010:G:HO2'	1.50	0.59
17:DN:22:ARG:HG3	17:DN:70:THR:HA	1.84	0.59
42:AG:149:ALA:HB3	46:AK:55:ARG:HH21	1.66	0.59
8:DF:97:GLU:OE2	8:DF:101:ARG:NH1	2.34	0.59
10:DH:114:GLU:HA	10:DH:133:GLN:HB2	1.85	0.59
44:BI:122:ARG:NH1	44:BI:123:ARG:O	2.36	0.59
2:CA:629:G:N3	2:CA:639:U:O2'	2.34	0.59
3:CB:76:G:OP1	25:CV:9:ARG:NH2	2.36	0.59
50:AO:25:GLU:HG3	50:AO:80:LEU:HD22	1.85	0.59
2:DA:906:U:O2'	16:DM:66:ARG:NH2	2.36	0.59
2:DA:2133:G:O2'	2:DA:2134:A:N7	2.34	0.59
5:DC:259:ASN:ND2	5:DC:262:THR:OG1	2.36	0.59
6:DD:136:ASN:ND2	6:DD:139:SER:O	2.36	0.59
22:DS:72:THR:HG21	22:DS:108:SER:HB3	1.85	0.59
1:AA:672:U:H2'	1:AA:673:A:H8	1.68	0.58
2:CA:2232:C:OP2	27:CX:26:ARG:NH2	2.35	0.58
2:CA:2355:G:O2'	26:CW:24:LYS:NZ	2.36	0.58
2:CA:2849:U:OP1	19:CP:92:ARG:NH2	2.36	0.58
39:AD:150:LYS:HA	39:AD:150:LYS:HE2	1.85	0.58
1:BA:782:A:H62	1:BA:800:G:H21	1.50	0.58
2:DA:1721:G:O2'	2:DA:1739:A:N6	2.36	0.58
5:DC:106:PRO:HA	5:DC:194:VAL:HA	1.85	0.58
2:CA:859:G:O2'	2:CA:916:G:O6	2.19	0.58
4:AV:65:C:H2'	4:AV:66:A:H8	1.68	0.58
11:C5:99:PHE:HA	11:C5:102:ALA:HB3	1.85	0.58
1:BA:361:G:N2	58:BA:1727:HOH:O	2.35	0.58
1:BA:362:G:N2	1:BA:365:U:OP2	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:644:U:H4'	43:BH:83:ARG:HH22	1.67	0.58
1:BA:1464:U:H2'	1:BA:1465:A:H8	1.68	0.58
1:AA:770:C:O2'	1:AA:899:C:N3	2.34	0.58
2:CA:1081:U:OP1	12:CI:126:ARG:NH2	2.36	0.58
10:CH:28:ASN:N	10:CH:28:ASN:OD1	2.36	0.58
42:AG:71:THR:HG22	42:AG:72:VAL:HG13	1.85	0.58
42:AG:110:ARG:O	42:AG:118:ARG:NH2	2.36	0.58
53:AR:29:LYS:HA	53:AR:32:ILE:HG12	1.85	0.58
2:DA:1088:A:N6	12:DI:130:GLY:O	2.36	0.58
13:DJ:125:TYR:OH	13:DJ:132:HIS:NE2	2.35	0.58
16:DM:13:HIS:O	16:DM:71:LYS:NZ	2.37	0.58
37:BB:23:ASN:ND2	37:BB:190:SER:O	2.36	0.58
1:AA:62:U:H3	1:AA:105:G:H1	1.50	0.58
1:AA:843:U:OP1	1:AA:844:G:N2	2.37	0.58
1:AA:1480:A:N6	58:AA:1728:HOH:O	2.36	0.58
2:DA:160:A:N3	2:DA:2208:C:O2'	2.35	0.58
2:DA:453:A:N3	2:DA:457:A:O2'	2.37	0.58
23:DT:69:ARG:HB3	23:DT:74:ILE:HG22	1.86	0.58
1:AA:3:A:HO2'	1:AA:612:C:HO2'	1.51	0.58
1:AA:1075:U:OP1	37:AB:177:ASN:ND2	2.36	0.58
2:CA:619:G:OP2	2:CA:620:G:N2	2.36	0.58
2:CA:990:A:N1	21:CR:78:ARG:NH1	2.52	0.58
1:BA:1364:U:O4	58:BA:1701:HOH:O	2.15	0.58
2:DA:1315:C:O2'	2:DA:1392:A:N3	2.32	0.58
2:DA:2199:A:OP1	27:DX:36:ARG:NH1	2.35	0.58
1:AA:806:C:H2'	1:AA:807:A:H8	1.69	0.58
11:C5:23:LEU:HD13	11:C5:89:PRO:HD3	1.84	0.58
1:AA:1368:A:OP1	45:AJ:64:GLN:NE2	2.37	0.58
2:CA:1248:G:OP1	20:CQ:1:ALA:N	2.34	0.58
2:CA:1251:C:OP2	20:CQ:5:ARG:NH2	2.36	0.58
1:BA:1103:C:H5"	37:BB:96:LEU:HD13	1.85	0.58
1:BA:1149:C:H2'	1:BA:1150:A:H8	1.68	0.58
1:BA:1425:U:H3	1:BA:1475:G:H1	1.50	0.58
5:DC:143:VAL:HB	5:DC:153:LEU:HB2	1.86	0.58
16:DM:66:ARG:NH1	58:DM:201:HOH:O	2.36	0.58
42:BG:112:ASP:O	42:BG:118:ARG:NH2	2.37	0.58
2:CA:684:G:N1	58:CA:3225:HOH:O	2.30	0.58
3:DB:29:A:O2'	3:DB:58:A:N1	2.37	0.58
18:DO:7:ARG:NH1	18:DO:95:SER:O	2.37	0.58
18:DO:94:ARG:NH2	18:DO:97:PHE:O	2.36	0.58
1:AA:372:C:N4	1:AA:389:A:H62	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:527:C:N4	2:CA:2779:U:OP2	2.35	0.58
30:C0:11:GLU:HA	30:C0:25:ARG:HA	1.86	0.58
1:BA:1130:A:O2'	44:BI:4:GLN:NE2	2.36	0.58
2:DA:1201:U:H2'	2:DA:1202:G:H8	1.69	0.58
2:DA:1248:G:OP1	20:DQ:1:ALA:N	2.36	0.58
2:DA:2068:U:O4	2:DA:2430:A:N7	2.37	0.58
2:DA:2252:G:H1	4:BW:74:C:H42	1.50	0.58
12:DI:83:ALA:HB1	12:DI:85:ILE:HG13	1.86	0.58
1:AA:936:C:H2'	1:AA:937:A:H8	1.69	0.58
2:CA:978:G:HO2'	2:CA:1002:G:HO2'	1.52	0.58
1:BA:197:A:O2'	1:BA:220:G:N2	2.37	0.58
1:BA:1028:C:O2'	1:BA:1029:U:O5'	2.22	0.58
2:DA:160:A:N7	2:DA:166:U:O4	2.37	0.58
2:DA:629:G:N3	2:DA:639:U:O2'	2.35	0.58
2:DA:2291:U:OP1	2:DA:2380:C:O2'	2.22	0.58
18:DO:71:ALA:HB1	18:DO:106:LEU:HB2	1.84	0.58
1:AA:1124:G:O2'	1:AA:1145:A:N6	2.37	0.57
1:AA:1209:C:O2'	1:AA:1214:C:N4	2.34	0.57
2:CA:2743:U:OP2	2:CA:2755:C:N4	2.36	0.57
2:CA:379:G:H1	2:CA:395:U:H3	1.52	0.57
2:CA:2028:U:O4	2:CA:2033:A:N7	2.37	0.57
2:CA:2351:G:H21	2:CA:2366:A:H62	1.53	0.57
18:CO:7:ARG:HA	18:CO:10:ARG:HE	1.69	0.57
52:AQ:21:VAL:O	58:AQ:2501:HOH:O	2.17	0.57
1:BA:269:C:H2'	1:BA:270:A:H8	1.69	0.57
2:DA:1863:G:N2	2:DA:1880:U:O2	2.37	0.57
1:AA:501:C:OP1	58:AA:1701:HOH:O	2.17	0.57
2:CA:95:A:H4'	28:CY:39:GLN:HA	1.86	0.57
2:CA:2229:U:H2'	2:CA:2230:G:H8	1.70	0.57
39:AD:61:ARG:HH21	39:AD:67:LEU:HA	1.69	0.57
1:BA:380:G:N2	1:BA:383:A:OP2	2.36	0.57
1:BA:464:U:N3	1:BA:467:U:OP2	2.35	0.57
1:BA:770:C:H2'	1:BA:771:G:H8	1.69	0.57
1:BA:974:A:OP1	49:BN:69:ARG:NH2	2.37	0.57
2:DA:1102:C:H2'	2:DA:1103:A:H8	1.69	0.57
2:DA:1682:G:OP2	2:DA:1699:G:N2	2.35	0.57
10:DH:97:ARG:HE	10:DH:97:ARG:CA	2.15	0.57
28:DY:57:LEU:HA	28:DY:60:LYS:HB2	1.87	0.57
48:BM:97:ARG:HB2	48:BM:99:GLN:HE22	1.67	0.57
2:CA:621:A:OP2	15:CL:99:ASN:ND2	2.37	0.57
2:CA:1094:U:N3	2:CA:1097:U:OP2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:2857:G:N2	2:CA:2860:A:OP2	2.37	0.57
4:AV:19:G:OP1	4:AV:60:C:N4	2.37	0.57
39:AD:10:LEU:HB3	39:AD:62:ARG:HD3	1.85	0.57
40:AE:91:SER:HA	40:AE:128:GLY:HA3	1.84	0.57
1:BA:107:G:OP1	1:BA:325:A:N6	2.37	0.57
1:BA:859:G:H2'	1:BA:860:A:H8	1.69	0.57
1:BA:1218:C:H2'	1:BA:1219:A:H8	1.68	0.57
1:BA:1321:U:H3	54:BS:35:ARG:HH12	1.50	0.57
2:DA:2618:G:H21	6:DD:155:VAL:HG21	1.68	0.57
2:DA:2861:U:H2'	2:DA:2862:G:H8	1.68	0.57
1:AA:1307:U:O4	1:AA:1331:G:N2	2.38	0.57
2:CA:53:A:H62	2:CA:117:G:H21	1.52	0.57
2:CA:388:G:O5'	4:AY:76:A:N6	2.36	0.57
37:AB:116:LEU:O	37:AB:120:SER:HB2	2.04	0.57
1:BA:458:U:H3	1:BA:474:G:H1	1.53	0.57
2:DA:256:A:N6	58:DA:3281:HOH:O	2.35	0.57
2:DA:819:A:OP2	2:DA:1187:G:N2	2.36	0.57
2:DA:2500:U:O2'	2:DA:2504:U:OP1	2.21	0.57
53:BR:72:ARG:NH1	58:BR:101:HOH:O	2.31	0.57
1:AA:579:A:H5'	1:AA:728:A:H1'	1.86	0.57
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.37	0.57
2:CA:1105:U:H2'	2:CA:1106:G:H8	1.69	0.57
9:CG:163:TYR:HB2	9:CG:166:GLU:HG2	1.86	0.57
40:AE:15:ILE:HB	40:AE:35:LEU:HD23	1.86	0.57
1:BA:112:G:H1	1:BA:315:A:N6	2.01	0.57
1:BA:1268:G:N2	1:BA:1327:C:O4'	2.38	0.57
2:DA:102:U:O4	28:DY:1:MET:N	2.35	0.57
2:DA:563:A:OP2	21:DR:79:ARG:NH2	2.38	0.57
13:DJ:56:VAL:HB	13:DJ:124:VAL:HG12	1.86	0.57
2:CA:116:C:O2'	2:CA:126:A:N3	2.31	0.57
2:CA:560:C:O2'	20:CQ:47:ARG:NH2	2.38	0.57
2:CA:1653:G:OP2	17:CN:2:ARG:NH1	2.37	0.57
2:CA:2655:G:N2	2:CA:2665:A:OP2	2.37	0.57
4:AY:18:G:N2	4:AY:58:A:OP2	2.32	0.57
1:BA:358:U:H2'	1:BA:359:G:H8	1.69	0.57
2:DA:377:G:N2	2:DA:397:U:O2	2.30	0.57
2:DA:992:C:OP1	20:DQ:46:TYR:OH	2.22	0.57
2:DA:1231:U:H2'	2:DA:1232:G:H8	1.69	0.57
37:BB:161:PHE:HA	37:BB:183:PHE:O	2.04	0.57
44:BI:19:PHE:HB2	44:BI:63:TYR:HB3	1.87	0.57
3:CB:9:G:OP2	18:CO:15:ARG:NH2	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AV:9:A:N7	4:AV:46:G:N2	2.53	0.57
4:AY:49:G:H1	4:AY:65:C:H42	1.52	0.57
36:AX:26:A:H1'	38:AC:162:ILE:HG12	1.86	0.57
36:AX:31:A:OP1	38:AC:135:LYS:NZ	2.27	0.57
1:BA:1396:A:O2'	40:BE:28:ARG:NH2	2.37	0.57
1:AA:979:C:O2	49:AN:59:ARG:NH1	2.37	0.57
2:CA:411:G:OP2	2:CA:2406:A:O2'	2.21	0.57
2:CA:1476:U:H3	2:CA:1515:A:H62	1.52	0.57
17:CN:79:LEU:HB3	17:CN:83:LEU:HD12	1.86	0.57
45:AJ:8:ILE:HA	45:AJ:100:ILE:HG22	1.85	0.57
1:BA:490:C:H2'	1:BA:491:G:H8	1.70	0.57
1:BA:552:U:H2'	1:BA:553:A:H8	1.69	0.57
2:DA:2368:C:H2'	2:DA:2369:A:H8	1.70	0.57
2:DA:2554:U:O4	4:BV:74:C:N4	2.37	0.57
27:DX:5:GLN:O	27:DX:73:ARG:NH1	2.38	0.57
2:CA:160:A:N3	2:CA:2208:C:O2'	2.35	0.57
2:CA:242:G:N2	2:CA:255:A:OP2	2.38	0.57
25:CV:83:LYS:O	58:CV:101:HOH:O	2.17	0.57
37:AB:161:PHE:HA	37:AB:183:PHE:O	2.05	0.57
1:BA:28:A:O2'	1:BA:296:U:OP1	2.23	0.57
2:DA:112:U:H5'	28:DY:58:ASN:HD21	1.69	0.57
2:DA:1745:A:H2'	2:DA:1746:A:H8	1.70	0.57
2:DA:1798:U:H5"	5:DC:257:ARG:HB2	1.87	0.57
2:DA:2848:G:O2'	2:DA:2867:G:N2	2.38	0.57
30:D0:33:ASN:HB3	48:BM:2:ARG:HH12	1.70	0.57
39:BD:187:ARG:NH2	39:BD:194:ILE:O	2.37	0.57
41:BF:79:ARG:NH2	41:BF:84:VAL:O	2.38	0.57
5:CC:66:PHE:HB3	5:CC:151:GLY:HA3	1.87	0.56
55:AT:24:ARG:NH2	58:AT:102:HOH:O	2.37	0.56
1:BA:437:U:O2'	39:BD:119:HIS:ND1	2.38	0.56
2:DA:527:C:N4	2:DA:2779:U:OP2	2.38	0.56
2:DA:903:C:H2'	2:DA:904:G:H8	1.70	0.56
2:DA:1024:G:O2'	2:DA:1144:A:O2'	2.23	0.56
2:DA:2316:G:H2'	2:DA:2317:A:H8	1.70	0.56
45:AJ:7:ARG:HB2	45:AJ:101:SER:O	2.04	0.56
1:BA:1157:A:C6	1:BA:1178:G:N2	2.72	0.56
49:BN:12:ARG:HG2	49:BN:54:ASP:HB3	1.87	0.56
2:CA:971:G:OP2	2:CA:974:G:N2	2.39	0.56
2:CA:1248:G:OP1	7:CE:44:ARG:NH2	2.39	0.56
2:CA:1972:G:OP2	5:CC:237:ARG:NH1	2.38	0.56
2:CA:2316:G:H2'	2:CA:2317:A:H8	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:2477:U:O2	35:C6:4:ARG:NH1	2.37	0.56
9:CG:98:LYS:HE2	9:CG:103:ASN:HB2	1.87	0.56
35:C6:19:ARG:HD2	35:C6:24:ARG:HD2	1.87	0.56
37:AB:100:LEU:HD12	37:AB:174:GLU:HB2	1.86	0.56
1:BA:405:U:OP2	39:BD:2:ARG:NH1	2.38	0.56
1:BA:521:G:HO2'	1:BA:536:C:HO2'	1.54	0.56
1:BA:877:G:O2'	43:BH:3:GLN:NE2	2.37	0.56
1:BA:993:G:O2'	1:BA:994:A:N7	2.38	0.56
1:BA:1537:U:O3'	53:BR:42:ARG:NH2	2.38	0.56
2:DA:918:A:N3	3:DB:80:U:O2'	2.37	0.56
2:DA:978:G:HO2'	2:DA:1002:G:HO2'	1.54	0.56
2:DA:1263:U:O4	22:DS:95:ARG:NH1	2.30	0.56
2:DA:1466:U:HO2'	2:DA:1546:G:HO2'	1.52	0.56
12:DI:101:SER:HA	12:DI:140:GLU:HB3	1.87	0.56
13:DJ:125:TYR:HH	13:DJ:132:HIS:HE2	1.52	0.56
39:BD:53:GLN:NE2	39:BD:201:GLU:OE1	2.38	0.56
16:CM:47:GLU:OE2	16:CM:50:ARG:NH1	2.35	0.56
42:AG:3:ARG:HG3	42:AG:4:ARG:HG2	1.87	0.56
1:BA:79:G:H1	1:BA:90:C:H42	1.53	0.56
1:BA:781:A:N7	1:BA:801:U:O4	2.38	0.56
2:DA:1716:U:H3	2:DA:1744:A:H62	1.54	0.56
2:DA:2229:U:H2'	2:DA:2230:G:H8	1.69	0.56
1:AA:676:A:H1'	46:AK:116:PRO:HB3	1.88	0.56
1:AA:1522:U:H5"	46:AK:127:ARG:HH22	1.71	0.56
2:CA:665:U:H2'	2:CA:666:A:H8	1.68	0.56
1:BA:618:C:N4	1:BA:621:A:OP2	2.39	0.56
1:BA:1148:U:H5"	44:BI:8:THR:HG23	1.88	0.56
2:DA:372:G:N2	2:DA:401:A:OP2	2.39	0.56
2:DA:475:C:N3	2:DA:479:A:N7	2.54	0.56
2:DA:704:G:H21	2:DA:727:A:H62	1.53	0.56
2:DA:1386:C:O2'	2:DA:1469:A:N3	2.36	0.56
2:DA:2093:G:H4'	10:DH:25:TYR:HB2	1.88	0.56
2:DA:2743:U:OP2	2:DA:2755:C:N4	2.38	0.56
7:DE:147:LEU:HB3	7:DE:186:VAL:HG22	1.87	0.56
10:DH:122:LEU:HD12	10:DH:128:HIS:HB2	1.88	0.56
2:CA:1001:A:H62	2:CA:1154:G:H21	1.52	0.56
2:CA:2676:C:O2	2:CA:2732:G:N2	2.38	0.56
13:CJ:13:ARG:NH1	13:CJ:49:ASP:O	2.39	0.56
1:BA:544:G:OP1	39:BD:55:ARG:NH2	2.38	0.56
1:BA:1077:G:H21	1:BA:1079:G:H8	1.52	0.56
1:BA:1124:G:H2'	1:BA:1145:A:H62	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:1266:G:O2'	2:DA:2012:G:O6	2.23	0.56
2:DA:2658:C:OP1	9:DG:157:LYS:NZ	2.38	0.56
2:DA:2882:A:OP1	17:DN:96:ARG:NH2	2.38	0.56
1:AA:1484:C:HO2'	2:CA:1960:A:HO2'	1.53	0.56
2:CA:598:U:H2'	2:CA:599:A:H8	1.70	0.56
8:CF:62:GLN:NE2	8:CF:89:THR:O	2.38	0.56
1:BA:683:G:N2	1:BA:707:U:O2	2.38	0.56
2:DA:807:U:OP1	2:DA:830:G:N2	2.38	0.56
2:DA:1478:G:H1	2:DA:1513:U:H3	1.54	0.56
2:DA:2081:U:H2'	2:DA:2082:A:H8	1.71	0.56
8:DF:5:ASP:HA	8:DF:8:LYS:HG2	1.87	0.56
2:CA:552:U:H2'	2:CA:553:G:H8	1.71	0.56
2:CA:1813:G:N2	5:CC:50:THR:OG1	2.39	0.56
5:CC:259:ASN:ND2	5:CC:262:THR:OG1	2.38	0.56
36:AX:18:G:O6	4:AW:37:A:C6	2.59	0.56
1:BA:12:U:H3	1:BA:22:G:H1	1.54	0.56
1:BA:1029:U:O2	1:BA:1029:U:H2'	2.04	0.56
2:DA:1415:U:H3	2:DA:1587:G:H1	1.53	0.56
4:BV:65:C:H2'	4:BV:66:A:H8	1.70	0.56
1:AA:1220:G:H5"	54:AS:36:ARG:HH12	1.71	0.56
2:CA:309:A:N3	2:CA:329:G:O2'	2.39	0.56
2:CA:1800:C:N3	2:CA:1817:G:N1	2.53	0.56
27:CX:5:GLN:O	27:CX:73:ARG:NH1	2.39	0.56
47:AL:23:LEU:HG	47:AL:24:GLU:HG3	1.87	0.56
1:BA:1498:U:H2'	36:BX:19:U:OP1	2.05	0.56
2:DA:1035:U:O4	2:DA:1120:G:O6	2.24	0.56
3:DB:102:G:N2	58:DB:304:HOH:O	2.39	0.56
4:BV:50:G:O6	4:BV:64:U:O4	2.24	0.56
5:DC:166:ARG:HA	5:DC:171:VAL:HG12	1.88	0.56
10:DH:5:LEU:HD12	10:DH:16:GLY:H	1.71	0.56
42:BG:110:ARG:HB3	42:BG:118:ARG:HB2	1.88	0.56
47:BL:110:LYS:O	47:BL:113:ARG:NH1	2.39	0.56
1:AA:392:C:H2'	1:AA:393:A:H8	1.71	0.56
1:AA:950:U:H3'	48:AM:100:ARG:HH22	1.71	0.56
2:CA:1080:A:H1'	12:CI:127:SER:HA	1.86	0.56
2:CA:2708:G:H1'	17:CN:71:ARG:HH21	1.71	0.56
15:CL:70:LYS:HD3	15:CL:73:ILE:HD11	1.88	0.56
1:BA:201:G:H21	1:BA:469:C:H1'	1.70	0.56
1:BA:222:C:H2'	1:BA:223:A:H8	1.71	0.56
1:BA:354:G:O2'	1:BA:389:A:OP1	2.24	0.56
1:BA:855:U:OP2	1:BA:871:U:N3	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:DC:106:PRO:HG2	5:DC:109:LEU:HB2	1.88	0.56
44:BI:32:ARG:HE	44:BI:32:ARG:CA	2.16	0.56
2:CA:397:U:H5"	27:CX:31:ASN:HB2	1.87	0.55
41:AF:38:ARG:NH1	41:AF:98:GLU:O	2.39	0.55
52:AQ:14:ASP:HB2	52:AQ:54:ILE:HG23	1.87	0.55
1:BA:15:G:H1	1:BA:920:U:H3	1.52	0.55
1:BA:859:G:OP2	1:BA:869:G:N1	2.36	0.55
2:DA:2347:C:HO2'	32:D2:20:TYR:HH	1.52	0.55
44:BI:17:ARG:O	44:BI:64:ILE:HA	2.06	0.55
2:CA:328:U:O4	2:CA:332:A:N7	2.39	0.55
2:CA:861:A:H62	2:CA:916:G:H21	1.55	0.55
2:CA:1796:U:H2'	2:CA:1797:G:H8	1.72	0.55
2:CA:2296:U:OP2	18:CO:9:ARG:NH2	2.39	0.55
2:CA:2590:A:H5"	5:CC:237:ARG:HE	1.72	0.55
9:CG:8:VAL:HB	9:CG:49:LEU:HD12	1.88	0.55
11:C5:61:ARG:HA	11:C5:64:VAL:HB	1.87	0.55
17:CN:73:ASN:HA	17:CN:76:VAL:HG12	1.87	0.55
46:AK:48:GLY:O	46:AK:68:ARG:NH1	2.39	0.55
1:BA:1260:G:H21	1:BA:1275:A:N6	2.01	0.55
46:BK:59:PRO:HD3	46:BK:90:PRO:HB2	1.89	0.55
1:AA:1440:U:O4	1:AA:1461:G:O6	2.25	0.55
1:BA:1255:G:O2'	1:BA:1258:G:O2'	2.25	0.55
2:DA:2024:G:O2'	6:DD:154:LYS:NZ	2.39	0.55
4:BW:50:G:H1	4:BW:64:U:H3	1.53	0.55
4:BW:50:G:H22	4:BW:64:U:H3	1.54	0.55
54:BS:30:LEU:HB2	54:BS:48:ILE:HG22	1.87	0.55
52:AQ:60:ILE:HD11	52:AQ:72:TRP:HB3	1.88	0.55
1:BA:249:U:O4	1:BA:275:G:O6	2.25	0.55
1:BA:362:G:OP1	47:BL:57:THR:OG1	2.25	0.55
2:DA:2848:G:OP1	19:DP:95:LYS:NZ	2.39	0.55
45:BJ:8:ILE:HA	45:BJ:100:ILE:HG22	1.89	0.55
1:AA:993:G:O2'	1:AA:994:A:N7	2.40	0.55
2:CA:781:A:OP1	5:CC:216:ARG:NH2	2.39	0.55
13:CJ:17:VAL:HG23	13:CJ:137:PRO:HB2	1.88	0.55
1:BA:1305:G:HO2'	1:BA:1306:A:H8	1.54	0.55
2:DA:1029:A:N6	58:DA:3279:HOH:O	2.39	0.55
2:DA:2863:C:H2'	2:DA:2864:G:H8	1.71	0.55
4:BV:36:C:N4	36:BX:21:G:H1	2.04	0.55
15:DL:61:LEU:O	34:D4:12:ARG:NE	2.38	0.55
44:BI:29:ILE:HG22	44:BI:32:ARG:C	2.27	0.55
2:CA:832:U:H2'	2:CA:833:A:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:1477:A:N6	2:CA:1514:G:H21	1.96	0.55
2:CA:1816:C:N4	5:CC:34:GLU:OE2	2.39	0.55
6:CD:131:ASP:O	6:CD:136:ASN:ND2	2.36	0.55
17:CN:94:TYR:O	17:CN:116:VAL:HG23	2.03	0.55
4:AW:1:G:C8	4:AW:1:G:C5'	2.85	0.55
39:AD:68:GLU:OE2	39:AD:203:TYR:OH	2.25	0.55
50:AO:2:LEU:CD1	50:AO:2:LEU:H	2.19	0.55
2:DA:1307:A:OP2	2:DA:1606:C:N4	2.40	0.55
2:DA:2620:C:O2'	6:DD:124:ARG:NH1	2.38	0.55
2:DA:2846:G:H5'	19:DP:52:ARG:HH12	1.72	0.55
1:AA:181:A:N6	1:AA:195:A:OP2	2.39	0.55
1:AA:779:C:O2'	46:AK:121:ARG:NH1	2.40	0.55
1:AA:1425:U:H2'	1:AA:1426:G:H8	1.71	0.55
2:CA:284:U:O2	2:CA:356:G:N2	2.28	0.55
2:CA:687:C:H42	2:CA:787:C:H4'	1.71	0.55
4:AW:15:G:N1	4:AW:48:C:N3	2.45	0.55
42:AG:56:SER:HB3	42:AG:59:GLU:HG2	1.89	0.55
51:AP:20:VAL:HG23	51:AP:35:ARG:HA	1.88	0.55
1:BA:406:G:O3'	39:BD:2:ARG:NH2	2.38	0.55
1:BA:1338:G:H21	4:BW:41:A:H1'	1.71	0.55
34:D4:5:THR:HG23	34:D4:62:PRO:HD2	1.89	0.55
39:BD:68:GLU:OE2	39:BD:203:TYR:OH	2.24	0.55
1:AA:19:A:OP1	40:AE:134:ASN:ND2	2.40	0.55
1:AA:713:G:H2'	1:AA:714:G:C8	2.42	0.55
2:CA:1682:G:OP2	2:CA:1699:G:N2	2.37	0.55
2:CA:1700:A:H3'	2:CA:1701:A:H8	1.71	0.55
2:CA:2780:G:OP2	13:CJ:120:ARG:NE	2.40	0.55
45:AJ:63:ASP:OD2	49:AN:85:ARG:NH1	2.40	0.55
1:BA:563:A:OP2	47:BL:11:ARG:NH2	2.40	0.55
2:DA:99:U:H5"	2:DA:100:U:H5'	1.88	0.55
2:DA:261:G:HO2'	2:DA:610:C:HO2'	1.54	0.55
2:DA:2307:G:H21	2:DA:2312:U:H3	1.54	0.55
2:DA:2813:A:H2'	2:DA:2814:A:H8	1.71	0.55
22:DS:82:MET:HB2	22:DS:98:LYS:HB2	1.89	0.55
35:D6:3:VAL:HG12	35:D6:36:ARG:HB3	1.87	0.55
38:BC:58:GLU:HB2	38:BC:65:ARG:HB3	1.89	0.55
45:BJ:46:LYS:HA	45:BJ:67:ILE:O	2.05	0.55
2:CA:935:C:H2'	2:CA:936:A:H8	1.72	0.55
1:BA:600:A:H5"	43:BH:88:LYS:HE3	1.89	0.55
1:BA:692:U:OP1	46:BK:126:ARG:NH2	2.35	0.55
1:BA:1147:C:O2	44:BI:17:ARG:NH2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:188:G:O2'	2:DA:1365:A:N6	2.40	0.55
2:DA:796:C:OP1	7:DE:57:LYS:NZ	2.36	0.55
2:DA:1817:G:OP1	5:DC:86:ARG:NH2	2.40	0.55
2:DA:2405:G:O2'	2:DA:2411:A:N6	2.40	0.55
40:BE:113:VAL:HG13	40:BE:114:LEU:HD22	1.89	0.55
43:BH:102:VAL:HG12	43:BH:125:ILE:HD13	1.89	0.55
1:AA:969:A:OP2	45:AJ:58:ASN:ND2	2.40	0.55
1:AA:1425:U:H3	1:AA:1475:G:H1	1.54	0.55
2:CA:903:C:H2'	2:CA:904:G:H8	1.72	0.55
2:CA:1266:G:O2'	2:CA:2012:G:O6	2.25	0.55
39:AD:130:ASN:HB3	39:AD:131:ILE:HD12	1.89	0.55
40:AE:79:THR:HB	40:AE:121:ASN:HD21	1.72	0.55
50:AO:2:LEU:HD12	50:AO:2:LEU:H	1.71	0.55
2:DA:2351:G:O2'	2:DA:2366:A:N6	2.40	0.55
14:DK:77:ILE:HG12	19:DP:71:ARG:HG3	1.89	0.55
17:DN:117:ASP:C	17:DN:119:SER:N	2.47	0.55
42:BG:105:GLU:OE1	42:BG:136:LYS:NZ	2.40	0.55
49:BN:12:ARG:HB3	49:BN:60:GLN:HE21	1.72	0.55
1:AA:8:A:N6	39:AD:201:GLU:O	2.32	0.54
1:AA:864:A:H4'	40:AE:89:THR:HG23	1.89	0.54
2:CA:306:U:O4	2:CA:310:A:N7	2.40	0.54
1:BA:1126:U:O4	45:BJ:9:ARG:NH1	2.36	0.54
1:BA:1498:U:O2	1:BA:1499:A:N6	2.37	0.54
1:AA:67:C:H42	1:AA:102:G:H22	1.55	0.54
1:AA:1106:G:O2'	38:AC:169:ARG:NH2	2.40	0.54
2:CA:33:C:H42	2:CA:447:A:N6	2.02	0.54
2:CA:158:U:O4	2:CA:168:G:O6	2.24	0.54
2:CA:2122:U:H2'	2:CA:2123:G:C8	2.42	0.54
2:CA:2500:U:O2'	2:CA:2504:U:OP1	2.21	0.54
6:CD:33:ARG:NH2	6:CD:74:GLU:O	2.40	0.54
22:CS:9:HIS:O	22:CS:11:ARG:NH1	2.40	0.54
47:AL:103:CYS:SG	47:AL:104:SER:N	2.80	0.54
1:BA:458:U:H2'	1:BA:459:A:H8	1.73	0.54
1:BA:1311:A:H62	54:BS:2:ARG:HH21	1.54	0.54
1:BA:1541:U:OP1	37:BB:21:TYR:OH	2.12	0.54
1:AA:1186:G:H2'	1:AA:1187:G:H8	1.73	0.54
2:CA:641:U:O2'	2:CA:2350:C:OP1	2.25	0.54
2:CA:1965:C:H5"	2:CA:1966:A:H2'	1.89	0.54
44:AI:11:ARG:CD	44:AI:106:ASP:HB3	2.38	0.54
2:DA:1354:A:N6	2:DA:1377:G:H21	2.04	0.54
41:BF:47:LEU:HD12	41:BF:55:HIS:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:593:U:O4	2:CA:664:G:O6	2.26	0.54
2:CA:707:G:O6	2:CA:724:U:O4	2.26	0.54
2:CA:2515:C:H2'	2:CA:2516:A:H8	1.71	0.54
9:CG:6:ALA:O	9:CG:68:ARG:NE	2.41	0.54
15:CL:130:GLY:N	58:CL:203:HOH:O	2.37	0.54
1:BA:806:C:H2'	1:BA:807:A:H8	1.72	0.54
1:BA:1467:C:H2'	1:BA:1468:A:H8	1.71	0.54
2:DA:263:G:H21	2:DA:430:A:H2	1.54	0.54
2:DA:2637:U:O4	2:DA:2776:A:N7	2.39	0.54
3:DB:8:C:O2'	18:DO:25:ARG:NH1	2.41	0.54
1:AA:201:G:O6	1:AA:216:U:O4	2.25	0.54
1:AA:814:A:HO2'	1:AA:1510:C:HO2'	1.54	0.54
2:CA:15:G:O6	2:CA:525:U:O4	2.26	0.54
2:CA:375:G:O6	2:CA:399:U:O4	2.26	0.54
2:CA:767:U:H2'	2:CA:768:G:H8	1.72	0.54
38:AC:20:SER:OG	38:AC:40:ARG:NH2	2.40	0.54
41:AF:41:ASP:OD1	41:AF:58:HIS:NE2	2.39	0.54
2:DA:1549:A:O2'	2:DA:1740:G:N2	2.35	0.54
1:AA:1351:U:H3	1:AA:1371:G:H1	1.56	0.54
2:CA:329:G:H1	24:CU:16:LYS:HE2	1.73	0.54
32:C2:36:LYS:HG2	32:C2:47:ILE:HG13	1.89	0.54
43:AH:24:VAL:HB	43:AH:60:LEU:HB2	1.89	0.54
1:BA:742:G:H2'	1:BA:743:A:H8	1.72	0.54
1:BA:895:G:N2	1:BA:904:U:O2	2.38	0.54
1:BA:1343:G:N2	1:BA:1349:A:O2'	2.41	0.54
3:DB:77:U:OP1	25:DV:21:ARG:NH1	2.41	0.54
1:AA:1070:U:O3'	40:AE:53:ARG:NH2	2.41	0.54
2:CA:2384:U:OP2	26:CW:55:ARG:NH2	2.31	0.54
17:CN:12:ARG:O	17:CN:17:ARG:NH2	2.40	0.54
1:BA:235:C:H2'	1:BA:236:A:H8	1.72	0.54
2:DA:6:A:N3	13:DJ:135:GLN:NE2	2.55	0.54
2:DA:328:U:H3	2:DA:332:A:N6	1.98	0.54
2:DA:1158:C:H5"	29:DZ:30:ARG:HD3	1.89	0.54
20:DQ:27:ARG:HD3	20:DQ:33:VAL:HG12	1.90	0.54
14:CK:35:VAL:HG11	14:CK:106:GLU:HB2	1.90	0.54
37:AB:116:LEU:O	37:AB:120:SER:CB	2.56	0.54
1:BA:1237:C:HO2'	1:BA:1300:G:H1	1.53	0.54
1:BA:1538:C:C2	36:BX:5:G:N2	2.66	0.54
2:DA:1155:A:O3'	20:DQ:54:ARG:NH2	2.40	0.54
2:DA:1631:G:N2	2:DA:1634:A:OP2	2.41	0.54
10:DH:59:ALA:HA	10:DH:62:LEU:HG	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:DM:47:GLU:OE1	16:DM:50:ARG:NH1	2.40	0.54
1:AA:170:U:H2'	1:AA:171:A:H8	1.73	0.54
2:CA:585:G:H21	2:CA:1254:A:H62	1.56	0.54
9:CG:23:ILE:HD13	9:CG:71:LEU:HD21	1.88	0.54
10:CH:7:ASP:HB2	10:CH:35:LYS:HA	1.89	0.54
21:CR:14:VAL:HG21	21:CR:98:ILE:HG13	1.89	0.54
33:C3:24:THR:HG23	33:C3:27:GLY:H	1.72	0.54
45:AJ:33:GLY:HA2	45:AJ:80:THR:HG21	1.90	0.54
1:BA:122:G:N2	58:BA:1714:HOH:O	2.39	0.54
2:DA:1999:C:O2	2:DA:2687:U:O2'	2.23	0.54
15:DL:96:LYS:HE3	15:DL:103:ILE:HA	1.89	0.54
1:AA:269:C:H2'	1:AA:270:A:C8	2.43	0.54
1:AA:587:G:OP1	43:AH:83:ARG:NH2	2.41	0.54
1:AA:1116:U:O2	1:AA:1184:G:N2	2.40	0.54
2:CA:1218:G:H1	2:CA:1231:U:H3	1.54	0.54
2:CA:1789:A:OP2	5:CC:220:ARG:NH1	2.40	0.54
5:CC:106:PRO:HA	5:CC:194:VAL:HA	1.89	0.54
31:C1:38:LEU:HB2	31:C1:41:HIS:HB2	1.90	0.54
41:AF:38:ARG:HD3	41:AF:97:THR:HA	1.90	0.54
1:BA:246:A:N6	1:BA:281:G:N2	2.36	0.54
1:BA:574:A:HO2'	1:BA:882:C:HO2'	1.54	0.54
2:DA:748:G:OP1	22:DS:88:ARG:NH1	2.39	0.54
2:DA:1797:G:OP2	5:DC:270:ARG:NH2	2.39	0.54
2:DA:1852:U:O2	2:DA:1890:A:N6	2.40	0.54
13:DJ:120:ARG:O	13:DJ:123:LYS:NZ	2.41	0.54
55:BT:65:LEU:HD12	55:BT:66:ILE:HB	1.89	0.54
1:AA:376:G:O6	1:AA:387:U:O4	2.26	0.53
1:AA:810:C:H2'	1:AA:811:C:H6	1.73	0.53
1:AA:1417:G:H21	1:AA:1483:A:H62	1.56	0.53
4:AY:19:G:O4'	4:AY:57:G:N2	2.41	0.53
5:CC:131:MET:HA	5:CC:134:ILE:HD12	1.90	0.53
37:AB:32:GLY:HA2	37:AB:38:HIS:HA	1.89	0.53
38:AC:9:GLY:HA3	49:AN:89:MET:HA	1.89	0.53
1:BA:1349:A:OP2	44:BI:119:LYS:NZ	2.41	0.53
1:BA:1475:G:OP1	58:BA:1703:HOH:O	2.18	0.53
2:DA:663:G:H5"	15:DL:17:LYS:HD3	1.88	0.53
2:CA:1789:A:H4'	5:CC:217:PRO:HB3	1.91	0.53
2:CA:1808:A:H3'	2:CA:1809:A:H8	1.73	0.53
2:CA:2122:U:H2'	2:CA:2123:G:H8	1.73	0.53
2:CA:2539:C:H5'	35:C6:3:VAL:HG21	1.90	0.53
35:C6:2:LYS:NZ	35:C6:32:LYS:O	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AE:132:PRO:HA	40:AE:135:VAL:HG22	1.90	0.53
41:AF:86:ARG:NH1	53:AR:63:TYR:O	2.36	0.53
1:BA:675:A:H1'	46:BK:117:HIS:CD2	2.43	0.53
1:BA:1189:U:HO2'	38:BC:176:HIS:HD1	1.55	0.53
2:DA:1141:U:O2	2:DA:1142:A:N6	2.42	0.53
2:DA:2081:U:H3	2:DA:2239:G:H1	1.56	0.53
9:DG:85:LYS:HA	9:DG:130:ILE:O	2.08	0.53
48:BM:82:LEU:HD21	54:BS:65:MET:HG2	1.88	0.53
1:AA:197:A:N6	1:AA:220:G:O2'	2.40	0.53
1:AA:397:A:N7	1:AA:547:A:O2'	2.39	0.53
1:AA:740:U:P	50:AO:1:SER:H1	2.26	0.53
2:CA:1491:G:N2	58:CA:3356:HOH:O	2.40	0.53
2:CA:1667:G:N2	2:CA:1992:G:OP2	2.36	0.53
45:AJ:25:ILE:HD11	45:AJ:87:LEU:HG	1.90	0.53
1:BA:410:G:OP1	39:BD:25:ARG:NH1	2.41	0.53
1:BA:1005:A:N6	1:BA:1024:G:O2'	2.41	0.53
2:DA:1813:G:N2	5:DC:50:THR:OG1	2.36	0.53
5:DC:257:ARG:NH2	5:DC:262:THR:OG1	2.41	0.53
24:DU:85:ARG:NH1	24:DU:99:SER:OG	2.39	0.53
38:BC:11:ARG:NH2	38:BC:177:THR:O	2.41	0.53
41:BF:47:LEU:HB2	41:BF:55:HIS:HB3	1.90	0.53
51:BP:21:VAL:HG12	51:BP:33:ILE:HD12	1.90	0.53
2:CA:184:C:H2'	2:CA:185:G:H8	1.72	0.53
18:CO:7:ARG:NH1	18:CO:95:SER:O	2.41	0.53
4:AW:58:A:O2'	4:AW:60:C:OP2	2.25	0.53
1:BA:1032:G:H2'	1:BA:1033:G:H4'	1.89	0.53
2:DA:4:U:H2'	2:DA:5:A:H8	1.74	0.53
2:DA:263:G:O2'	2:DA:429:A:N3	2.35	0.53
2:DA:964:C:O2'	2:DA:2273:A:N3	2.39	0.53
2:DA:1668:A:H62	2:DA:1991:U:H3	1.57	0.53
2:DA:1869:G:N2	2:DA:1871:A:OP2	2.41	0.53
38:BC:49:LYS:HD2	38:BC:72:ARG:HH12	1.73	0.53
1:AA:150:U:H2'	1:AA:151:A:H8	1.73	0.53
2:CA:2023:C:H2'	2:CA:2024:G:H8	1.74	0.53
9:CG:106:LEU:O	9:CG:151:ARG:NH2	2.42	0.53
29:CZ:1:ALA:C	29:CZ:3:THR:H	2.11	0.53
36:AX:20:A:N6	4:AW:35:A:N6	2.57	0.53
43:AH:24:VAL:O	43:AH:59:GLU:HA	2.08	0.53
1:BA:8:A:N6	39:BD:201:GLU:O	2.37	0.53
1:BA:682:G:H2'	1:BA:683:G:H8	1.74	0.53
1:BA:1404:C:H42	1:BA:1497:G:H1	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:79:C:O2'	2:DA:346:A:N3	2.37	0.53
2:DA:1270:C:H5"	2:DA:1271:G:H5'	1.91	0.53
2:DA:1283:G:H22	2:DA:1286:A:H5'	1.74	0.53
2:DA:2386:A:O3'	26:DW:55:ARG:NH1	2.42	0.53
47:BL:37:TYR:HB2	47:BL:51:VAL:HG13	1.90	0.53
48:BM:86:ARG:NH1	58:BM:201:HOH:O	2.40	0.53
1:AA:122:G:H1	1:AA:239:U:H3	1.55	0.53
1:AA:840:C:H5"	37:BB:58:LYS:HD3	1.91	0.53
1:AA:1396:A:O2'	40:AE:28:ARG:NH2	2.42	0.53
2:CA:750:A:OP1	2:CA:1615:C:N4	2.42	0.53
38:AC:10:ILE:HD13	49:AN:98:LYS:HD3	1.89	0.53
1:BA:1086:U:O2'	1:BA:1087:G:O4'	2.27	0.53
1:BA:1438:G:O6	1:BA:1463:U:O4	2.26	0.53
2:DA:244:A:OP2	34:D4:7:ARG:NH2	2.39	0.53
2:DA:537:G:H21	2:DA:556:A:H62	1.57	0.53
2:DA:1227:G:OP2	20:DQ:15:LYS:NZ	2.42	0.53
2:DA:1529:G:O6	2:DA:1542:U:O4	2.27	0.53
2:DA:1789:A:OP2	5:DC:220:ARG:NH1	2.42	0.53
7:DE:111:GLU:HG2	15:DL:2:ARG:HH21	1.73	0.53
39:BD:101:VAL:HG13	39:BD:106:PHE:HB2	1.91	0.53
39:BD:102:TYR:O	39:BD:164:ARG:NH2	2.41	0.53
1:AA:309:A:H2'	1:AA:310:G:H8	1.73	0.53
1:AA:1002:G:H2'	1:AA:1003:G:H8	1.74	0.53
1:AA:1536:C:C2	36:AX:9:A:N6	2.70	0.53
6:CD:46:ARG:NH1	6:CD:86:GLU:H	2.07	0.53
8:CF:101:ARG:NH1	30:C0:25:ARG:O	2.40	0.53
4:AW:62:C:H2'	4:AW:63:G:H8	1.74	0.53
1:BA:582:C:OP2	1:BA:758:C:N4	2.42	0.53
1:BA:1218:C:H2'	1:BA:1219:A:C8	2.42	0.53
2:DA:221:A:N7	2:DA:427:U:O4	2.42	0.53
2:DA:917:A:H5"	2:DA:2268:A:H61	1.73	0.53
2:DA:1800:C:N3	2:DA:1817:G:N1	2.54	0.53
2:DA:2077:A:N1	58:DA:3256:HOH:O	2.33	0.53
1:AA:925:G:O6	1:AA:1391:U:O4	2.26	0.53
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.74	0.53
1:AA:1305:G:N2	58:AA:1762:HOH:O	2.42	0.53
3:CB:51:G:OP1	18:CO:63:LYS:NZ	2.39	0.53
6:CD:121:THR:HG21	6:CD:143:PRO:HB3	1.90	0.53
23:CT:8:LEU:O	28:CY:29:ARG:NH1	2.42	0.53
48:AM:100:ARG:HG2	48:AM:102:LYS:H	1.73	0.53
1:BA:404:G:OP2	39:BD:114:ARG:NH2	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:925:G:O6	1:BA:1391:U:O4	2.27	0.53
2:DA:165:A:N6	58:DA:3233:HOH:O	2.41	0.53
2:DA:1036:G:O6	2:DA:1119:U:O4	2.26	0.53
24:DU:85:ARG:NH2	24:DU:101:THR:OG1	2.41	0.53
38:BC:64:ILE:HG22	38:BC:99:ALA:HA	1.91	0.53
41:BF:2:ARG:HE	41:BF:68:GLN:HB3	1.74	0.53
54:BS:10:ILE:HG22	54:BS:38:THR:H	1.73	0.53
2:CA:444:C:OP2	7:CE:44:ARG:NH2	2.42	0.53
2:CA:1063:G:O2'	12:CI:89:SER:N	2.41	0.53
2:CA:1980:G:O2'	2:CA:1982:U:OP2	2.25	0.53
23:CT:35:ALA:HB3	23:CT:38:ALA:HB2	1.90	0.53
55:AT:65:LEU:HD12	55:AT:66:ILE:HB	1.91	0.53
2:DA:1995:U:H3'	2:DA:1996:C:H2'	1.91	0.53
2:DA:2136:G:O6	2:DA:2155:U:O4	2.27	0.53
9:DG:83:THR:HA	9:DG:132:LEU:O	2.09	0.53
16:DM:10:ARG:NH1	4:BW:63:G:O2'	2.39	0.53
1:AA:562:U:O2	47:AL:12:ALA:N	2.41	0.53
46:AK:83:VAL:HB	46:AK:109:ILE:HA	1.91	0.53
44:BI:25:GLY:H	44:BI:58:GLU:HA	1.74	0.53
1:AA:890:G:O2'	1:AA:906:A:N6	2.43	0.52
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.74	0.52
2:CA:59:U:H3	2:CA:68:G:H1	1.56	0.52
2:CA:1231:U:H2'	2:CA:1232:G:H8	1.74	0.52
2:CA:1283:G:N1	2:CA:1286:A:OP2	2.40	0.52
2:CA:1590:A:H2'	2:CA:1591:A:H8	1.73	0.52
2:CA:1987:A:H2'	2:CA:1988:G:H8	1.72	0.52
9:CG:97:VAL:HG12	9:CG:99:GLY:H	1.73	0.52
23:CT:2:ILE:HG23	23:CT:7:LEU:HD12	1.90	0.52
24:CU:43:LYS:HE3	24:CU:45:GLN:HB3	1.91	0.52
49:AN:34:ASN:HD22	49:AN:42:TRP:HZ2	1.56	0.52
50:AO:28:VAL:HA	50:AO:31:LEU:HD12	1.90	0.52
1:BA:564:C:OP1	47:BL:11:ARG:NH1	2.42	0.52
1:BA:864:A:H2'	1:BA:865:A:C8	2.44	0.52
2:DA:182:A:N6	58:DA:3253:HOH:O	2.42	0.52
22:DS:62:ASP:N	22:DS:62:ASP:OD1	2.40	0.52
24:DU:93:ARG:HB2	24:DU:102:ILE:HD12	1.91	0.52
41:BF:12:PRO:HG3	41:BF:57:ALA:HA	1.90	0.52
42:BG:147:ASN:HD22	46:BK:55:ARG:HH12	1.57	0.52
44:BI:97:LEU:HG	44:BI:102:PHE:HB2	1.90	0.52
2:CA:1162:G:H21	21:CR:91:GLN:HE22	1.57	0.52
4:AV:21:A:OP2	4:AV:48:C:N4	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:951:G:OP2	48:BM:100:ARG:NH2	2.42	0.52
2:DA:355:U:H2'	2:DA:356:G:H8	1.74	0.52
2:DA:1067:A:H3'	2:DA:1068:G:H8	1.75	0.52
2:DA:2079:U:O2'	27:DX:22:ASN:OD1	2.26	0.52
2:DA:2099:U:O4	2:DA:2190:G:O6	2.27	0.52
10:DH:62:LEU:HB2	10:DH:135:HIS:HE1	1.72	0.52
47:BL:72:ASN:ND2	47:BL:104:SER:OG	2.42	0.52
1:AA:15:G:H1	1:AA:920:U:H3	1.57	0.52
1:AA:778:G:H1	1:AA:804:U:H3	1.55	0.52
1:AA:1357:A:N6	1:AA:1365:G:H1	2.03	0.52
2:CA:200:U:O2	2:CA:386:G:N2	2.43	0.52
2:CA:1102:C:H2'	2:CA:1103:A:H8	1.73	0.52
2:CA:1754:A:O2'	19:CP:102:ARG:NH2	2.36	0.52
2:CA:2194:U:H2'	2:CA:2195:U:H6	1.74	0.52
40:AE:98:ALA:HB2	40:AE:123:LEU:HG	1.90	0.52
1:BA:363:A:N6	47:BL:26:CYS:SG	2.80	0.52
1:BA:666:G:N2	1:BA:740:U:O2	2.37	0.52
1:BA:952:U:H2'	1:BA:953:G:H8	1.74	0.52
1:BA:1445:U:O4	1:BA:1457:G:O6	2.27	0.52
2:DA:1056:G:C2	2:DA:1103:A:N6	2.77	0.52
2:DA:1590:A:H2'	2:DA:1591:A:H8	1.74	0.52
2:DA:2372:U:H2'	2:DA:2373:G:H8	1.74	0.52
2:DA:2475:C:H42	2:DA:2529:G:H22	1.57	0.52
3:DB:75:G:H21	25:DV:88:HIS:CE1	2.27	0.52
5:DC:77:VAL:HG21	5:DC:109:LEU:HD11	1.90	0.52
8:DF:139:GLU:HG3	30:D0:28:VAL:HA	1.90	0.52
1:AA:107:G:H5"	1:AA:108:G:H21	1.75	0.52
1:AA:454:G:O6	1:AA:479:U:O4	2.27	0.52
2:CA:658:U:O2'	7:CE:95:LYS:NZ	2.42	0.52
2:CA:918:A:N3	3:CB:80:U:O2'	2.42	0.52
2:CA:1310:G:H1'	2:CA:1611:C:H5"	1.92	0.52
2:CA:1324:G:N2	2:CA:1647:U:O4	2.42	0.52
2:CA:1496:A:HO2'	2:CA:1577:C:HO2'	1.48	0.52
2:CA:2136:G:O6	2:CA:2155:U:O4	2.27	0.52
13:CJ:3:THR:HG21	20:CQ:60:TRP:HE1	1.74	0.52
6:DD:33:ARG:NH2	6:DD:74:GLU:O	2.42	0.52
38:BC:19:ASN:HD22	49:BN:92:GLU:HG2	1.75	0.52
1:AA:107:G:OP1	1:AA:325:A:N6	2.43	0.52
2:CA:414:C:H1'	2:CA:1864:U:H1'	1.91	0.52
2:CA:1675:C:N3	6:CD:133:THR:OG1	2.41	0.52
2:CA:2081:U:H2'	2:CA:2082:A:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:2340:A:H2'	2:CA:2341:G:H8	1.75	0.52
2:CA:2353:G:O2'	26:CW:33:ALA:O	2.24	0.52
2:DA:111:A:O2'	28:DY:58:ASN:ND2	2.42	0.52
2:DA:375:G:O6	2:DA:399:U:O4	2.28	0.52
2:DA:2780:G:OP2	13:DJ:120:ARG:NE	2.42	0.52
25:DV:51:GLN:HE22	25:DV:79:ARG:HH22	1.56	0.52
1:AA:490:C:H2'	1:AA:491:G:H8	1.74	0.52
1:AA:672:U:O4	1:AA:734:G:O6	2.27	0.52
1:AA:1116:U:O4	1:AA:1184:G:O6	2.28	0.52
1:AA:1403:C:N4	36:AX:20:A:OP1	2.43	0.52
2:CA:57:C:O2'	23:CT:36:LYS:NZ	2.43	0.52
2:CA:254:G:N2	58:CA:3262:HOH:O	2.34	0.52
2:CA:1534:U:H3'	2:CA:1536:C:H41	1.74	0.52
2:CA:1681:G:N2	2:CA:1763:G:OP2	2.40	0.52
2:CA:2092:U:OP2	2:CA:2199:A:O2'	2.28	0.52
9:CG:84:LYS:HD3	9:CG:140:ILE:HD13	1.92	0.52
44:AI:29:ILE:O	44:AI:32:ARG:N	2.43	0.52
45:AJ:11:LYS:HG2	45:AJ:71:LEU:HG	1.92	0.52
48:AM:28:ARG:HH21	48:AM:59:VAL:HA	1.74	0.52
1:BA:672:U:O4	1:BA:734:G:O6	2.27	0.52
1:BA:739:C:O2'	50:BO:41:HIS:ND1	2.43	0.52
1:BA:1408:A:O2'	2:DA:1916:A:N1	2.42	0.52
2:DA:629:G:H1'	2:DA:639:U:H1'	1.91	0.52
2:DA:835:C:H2'	2:DA:836:G:H8	1.75	0.52
2:DA:1527:G:N2	2:DA:1544:A:N7	2.58	0.52
2:DA:2414:G:H2'	2:DA:2415:G:H8	1.74	0.52
2:DA:2851:A:O3'	17:DN:64:ARG:NH2	2.43	0.52
1:AA:180:U:H3	1:AA:195:A:N6	1.89	0.52
1:AA:413:G:N2	1:AA:428:G:O2'	2.39	0.52
1:AA:673:A:O3'	41:AF:86:ARG:NH2	2.43	0.52
1:AA:1005:A:H3'	1:AA:1006:G:H8	1.74	0.52
1:AA:1464:U:H2'	1:AA:1465:A:H8	1.75	0.52
2:CA:2320:U:O2'	2:CA:2322:A:N6	2.38	0.52
12:CI:101:SER:HA	12:CI:140:GLU:HB3	1.91	0.52
41:AF:7:VAL:HA	41:AF:60:VAL:O	2.09	0.52
1:BA:544:G:OP1	39:BD:58:GLN:NE2	2.43	0.52
1:BA:1419:G:H1	1:BA:1481:U:H3	1.56	0.52
2:DA:438:G:H2'	2:DA:439:A:H8	1.75	0.52
2:DA:1251:C:OP2	20:DQ:5:ARG:NH2	2.36	0.52
2:DA:1753:G:H5"	19:DP:92:ARG:HD3	1.91	0.52
9:DG:88:LEU:HG	9:DG:161:VAL:HG22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:15:ILE:HB	40:BE:35:LEU:HD23	1.90	0.52
47:BL:29:LYS:H	47:BL:81:ILE:HG22	1.73	0.52
1:AA:322:C:OP2	1:AA:328:C:N4	2.39	0.52
1:AA:323:U:O4	1:AA:327:A:N7	2.43	0.52
1:AA:417:G:O6	1:AA:426:U:O4	2.27	0.52
1:AA:1494:G:HO2'	2:CA:1912:A:HO2'	1.56	0.52
2:CA:1041:G:H2'	2:CA:1042:G:H8	1.74	0.52
1:BA:948:C:H2'	1:BA:949:A:H8	1.75	0.52
2:DA:411:G:OP2	2:DA:2406:A:O2'	2.23	0.52
2:DA:1138:G:O2'	13:DJ:104:ALA:O	2.28	0.52
2:DA:2722:G:O2'	17:DN:3:HIS:O	2.25	0.52
5:DC:149:LYS:HE2	5:DC:152:GLN:HE22	1.73	0.52
9:DG:108:PHE:HE1	9:DG:151:ARG:HH21	1.58	0.52
18:DO:31:THR:H	18:DO:35:ILE:HG22	1.73	0.52
28:DY:21:LEU:HA	28:DY:25:GLN:HB3	1.92	0.52
33:D3:24:THR:HG23	33:D3:27:GLY:H	1.74	0.52
1:AA:452:A:O2'	1:AA:453:G:O4'	2.27	0.52
1:AA:888:G:H21	1:AA:909:A:H62	1.58	0.52
2:CA:172:A:H2'	2:CA:173:A:C8	2.45	0.52
2:CA:2320:U:HO2'	2:CA:2322:A:H62	1.57	0.52
2:CA:2813:A:H2'	2:CA:2814:A:H8	1.75	0.52
2:CA:2861:U:H2'	2:CA:2862:G:H8	1.74	0.52
20:CQ:65:ASN:HD21	20:CQ:69:ARG:HH11	1.57	0.52
50:AO:2:LEU:CD1	50:AO:2:LEU:N	2.73	0.52
1:BA:67:C:O2'	1:BA:171:A:N3	2.42	0.52
2:DA:1164:C:H2'	2:DA:1165:A:H8	1.73	0.52
4:BV:8:U:O4	4:BV:14:A:N7	2.43	0.52
8:DF:108:PRO:HB3	30:D0:41:HIS:CG	2.44	0.52
23:DT:22:THR:O	23:DT:26:LYS:HB3	2.09	0.52
49:BN:27:LYS:HA	49:BN:31:SER:HB2	1.91	0.52
1:AA:148:G:H1	1:AA:174:A:N6	2.07	0.52
1:AA:535:A:N6	58:AA:1773:HOH:O	2.43	0.52
1:AA:673:A:H2'	1:AA:674:G:C8	2.45	0.52
1:AA:1329:A:H5"	48:AM:24:VAL:HA	1.91	0.52
2:CA:1631:G:N2	2:CA:1634:A:OP2	2.38	0.52
2:CA:2446:G:N2	2:CA:2449:U:O2	2.41	0.52
3:CB:76:G:N3	25:CV:78:GLN:NE2	2.50	0.52
39:AD:14:GLU:OE2	39:AD:55:ARG:NH1	2.43	0.52
44:AI:11:ARG:HH21	44:AI:108:ARG:HH21	1.57	0.52
48:AM:86:ARG:O	48:AM:90:HIS:ND1	2.33	0.52
48:AM:89:ARG:HH22	48:AM:101:THR:HG22	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:198:G:H1	1:BA:219:U:H3	1.57	0.52
1:BA:211:G:O2'	1:BA:212:G:O4'	2.28	0.52
1:BA:1241:G:H2'	1:BA:1242:G:H8	1.74	0.52
2:DA:219:A:N3	2:DA:234:U:O2'	2.37	0.52
2:DA:860:U:H2'	2:DA:861:A:H8	1.74	0.52
17:DN:29:VAL:HB	17:DN:75:ILE:HD12	1.92	0.52
35:D6:19:ARG:HD2	35:D6:24:ARG:HD2	1.91	0.52
40:BE:80:LEU:HD13	40:BE:122:VAL:HG11	1.91	0.52
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.74	0.51
1:AA:1320:C:N3	54:AS:35:ARG:NH1	2.58	0.51
2:CA:195:A:H3'	2:CA:196:A:H4'	1.91	0.51
2:CA:609:A:H62	2:CA:619:G:N2	2.08	0.51
2:CA:1796:U:H2'	2:CA:1797:G:C8	2.45	0.51
2:CA:1860:G:N2	2:CA:1882:U:O2	2.34	0.51
1:BA:392:C:H2'	1:BA:393:A:H8	1.75	0.51
1:BA:892:A:O2'	1:BA:1415:G:O2'	2.28	0.51
2:DA:242:G:N2	2:DA:255:A:OP2	2.40	0.51
2:DA:1040:A:N6	2:DA:1115:G:H1	2.08	0.51
2:DA:2391:G:O2'	2:DA:2424:C:N4	2.42	0.51
12:DI:105:LEU:HD23	12:DI:108:ILE:HD12	1.91	0.51
16:DM:50:ARG:HD3	16:DM:65:ILE:HD11	1.92	0.51
20:DQ:111:LYS:HG2	21:DR:48:LYS:HZ1	1.75	0.51
42:BG:150:PHE:HB3	46:BK:60:PHE:HB3	1.92	0.51
44:BI:12:LYS:HA	44:BI:109:GLN:HE22	1.74	0.51
1:AA:62:U:O2'	1:AA:379:C:O2	2.28	0.51
2:CA:2032:G:O2'	6:CD:150:GLN:NE2	2.43	0.51
2:CA:2636:C:O2'	6:CD:45:TYR:OH	2.27	0.51
2:CA:2787:C:H1'	6:CD:63:PRO:HG3	1.93	0.51
41:AF:36:ILE:HA	41:AF:64:VAL:HG13	1.93	0.51
1:BA:501:C:H2'	1:BA:502:A:C8	2.45	0.51
1:BA:676:A:H5"	46:BK:114:PRO:HB3	1.92	0.51
2:DA:116:C:O2'	2:DA:126:A:N3	2.32	0.51
2:DA:910:A:H62	16:DM:12:MET:HA	1.75	0.51
2:DA:1062:G:H2'	2:DA:1063:G:C8	2.45	0.51
2:DA:1568:G:H4'	5:DC:58:LYS:HD2	1.93	0.51
2:DA:2324:U:H5"	2:DA:2325:G:H5"	1.92	0.51
2:DA:2406:A:H4'	2:DA:2407:A:H5"	1.92	0.51
31:D1:43:THR:OG1	31:D1:47:TYR:N	2.38	0.51
43:BH:72:GLU:N	43:BH:129:ALA:O	2.42	0.51
2:CA:693:A:O2'	2:CA:1353:A:N3	2.43	0.51
7:CE:111:GLU:OE1	7:CE:114:ARG:NH1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CF:120:SER:O	58:CF:201:HOH:O	2.19	0.51
4:AW:40:G:H2'	4:AW:41:A:H8	1.75	0.51
2:DA:309:A:N3	2:DA:329:G:O2'	2.43	0.51
2:DA:471:A:OP1	7:DE:79:ARG:NH1	2.41	0.51
2:DA:910:A:N3	2:DA:2264:C:O2'	2.37	0.51
2:DA:1834:U:H5"	2:DA:1835:G:H5'	1.92	0.51
2:DA:2092:U:OP2	2:DA:2199:A:O2'	2.29	0.51
2:DA:2296:U:OP2	18:DO:9:ARG:NH2	2.43	0.51
4:BV:68:C:H2'	4:BV:69:A:H8	1.75	0.51
7:DE:111:GLU:OE1	7:DE:114:ARG:NH1	2.43	0.51
10:DH:117:LEU:HB2	10:DH:130:VAL:HG23	1.90	0.51
41:BF:5:GLU:HA	41:BF:63:ASN:HA	1.93	0.51
50:BO:27:GLN:HG3	50:BO:65:LEU:HD21	1.93	0.51
1:AA:473:U:H2'	1:AA:474:G:H8	1.74	0.51
1:AA:1075:U:O3'	37:AB:173:LYS:NZ	2.43	0.51
2:CA:210:C:OP1	33:C3:29:GLN:NE2	2.43	0.51
2:CA:1015:U:H2'	2:CA:1016:G:H8	1.75	0.51
2:CA:1223:G:OP1	21:CR:68:ARG:NH2	2.43	0.51
2:CA:1826:G:O2'	2:CA:1971:U:OP2	2.29	0.51
17:CN:94:TYR:CA	17:CN:116:VAL:HG23	2.39	0.51
54:AS:49:ALA:HB1	54:AS:56:HIS:HB3	1.93	0.51
1:BA:694:A:H5"	46:BK:54:SER:HB3	1.92	0.51
1:BA:861:G:O6	1:BA:869:G:N2	2.43	0.51
1:BA:1407:C:H2'	1:BA:1408:A:H8	1.76	0.51
2:DA:29:U:O2	2:DA:1215:G:O2'	2.28	0.51
2:DA:68:G:N2	2:DA:74:A:O4'	2.44	0.51
2:DA:172:A:H2'	2:DA:173:A:H8	1.75	0.51
2:DA:971:G:OP2	2:DA:974:G:N2	2.43	0.51
2:DA:1011:G:OP2	20:DQ:65:ASN:ND2	2.42	0.51
5:DC:257:ARG:NH1	5:DC:263:ASP:OD1	2.38	0.51
14:DK:43:ILE:HD13	14:DK:56:ASP:HB2	1.91	0.51
19:DP:47:ILE:HA	19:DP:96:LEU:HD12	1.92	0.51
38:BC:79:LYS:HB2	38:BC:82:GLU:HB2	1.93	0.51
2:CA:45:G:H5"	2:CA:46:G:H5'	1.93	0.51
2:CA:1268:A:H62	2:CA:2012:G:N2	2.08	0.51
2:CA:2314:A:OP1	8:CF:87:LYS:NZ	2.43	0.51
47:AL:49:ARG:HB3	47:AL:65:TYR:HE1	1.75	0.51
1:BA:296:U:O2'	1:BA:556:C:O2	2.27	0.51
2:DA:311:A:N6	58:DA:3375:HOH:O	2.43	0.51
2:DA:714:U:OP2	50:BO:88:ARG:NH2	2.43	0.51
2:DA:2619:C:OP1	6:DD:157:LYS:NZ	2.34	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:DC:113:ASP:N	58:DC:301:HOH:O	2.39	0.51
24:DU:3:LYS:O	24:DU:93:ARG:NH2	2.42	0.51
24:DU:58:VAL:HG12	24:DU:60:LYS:HG2	1.93	0.51
1:AA:148:G:O2'	1:AA:1446:A:N3	2.41	0.51
1:AA:674:G:H2'	1:AA:675:A:H8	1.74	0.51
1:AA:835:U:OP1	53:AR:52:ARG:NH2	2.40	0.51
1:AA:1002:G:H22	1:AA:1038:C:H42	1.58	0.51
1:AA:1116:U:O2'	44:AI:109:GLN:HG3	2.10	0.51
2:CA:184:C:O2'	2:CA:217:A:N3	2.42	0.51
2:CA:375:G:H1	2:CA:399:U:H3	1.58	0.51
2:CA:2335:A:OP1	18:CO:13:ARG:NH1	2.44	0.51
6:CD:13:ARG:NH1	19:CP:74:GLN:OE1	2.37	0.51
25:CV:4:ILE:HB	25:CV:63:ILE:HG12	1.92	0.51
25:CV:48:MET:O	58:CV:102:HOH:O	2.19	0.51
33:C3:22:MET:O	33:C3:28:ARG:NH1	2.43	0.51
1:BA:696:A:N3	1:BA:786:G:O2'	2.38	0.51
1:BA:1409:C:H2'	1:BA:1410:A:H8	1.76	0.51
2:DA:1042:G:O6	2:DA:1113:U:O4	2.28	0.51
10:DH:3:VAL:HA	10:DH:38:PRO:HA	1.92	0.51
33:D3:12:ARG:NH2	33:D3:44:VAL:O	2.34	0.51
40:BE:155:LYS:HE2	43:BH:42:GLU:HB3	1.92	0.51
1:AA:1330:U:H4'	48:AM:22:TYR:CE1	2.46	0.51
2:CA:1:G:H2'	2:CA:2:G:H8	1.75	0.51
2:CA:229:C:N4	58:CA:3303:HOH:O	2.36	0.51
2:CA:381:G:OP1	27:CX:17:ARG:NH1	2.43	0.51
2:CA:1510:G:H2'	2:CA:1511:G:H8	1.76	0.51
17:CN:11:ASN:ND2	58:CN:302:HOH:O	2.43	0.51
19:CP:32:VAL:HG12	19:CP:34:GLY:H	1.75	0.51
36:AX:18:G:C6	4:AW:37:A:C2	2.98	0.51
2:DA:1166:G:O6	2:DA:1183:U:O4	2.29	0.51
2:DA:2874:C:OP1	17:DN:4:ARG:NH1	2.44	0.51
7:DE:46:GLN:O	7:DE:88:ARG:NH1	2.44	0.51
36:BX:28:A:N6	40:BE:17:VAL:HG12	2.26	0.51
38:BC:125:GLU:O	38:BC:127:ARG:NH1	2.44	0.51
58:BJ:201:HOH:O	49:BN:85:ARG:NH1	2.43	0.51
1:AA:150:U:H3	1:AA:171:A:H62	1.41	0.51
2:CA:431:U:H2'	2:CA:432:A:H8	1.76	0.51
2:CA:1548:A:H2'	2:CA:1549:A:C8	2.46	0.51
2:CA:2055:C:O2	2:CA:2572:A:N6	2.44	0.51
2:CA:2291:U:OP1	2:CA:2380:C:O2'	2.27	0.51
3:CB:114:C:H2'	3:CB:115:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AL:67:GLY:O	47:AL:98:ARG:NH1	2.41	0.51
1:BA:1225:A:OP1	48:BM:101:THR:N	2.41	0.51
2:DA:226:A:H5'	2:DA:257:C:H4'	1.93	0.51
2:DA:239:C:HO2'	2:DA:622:G:HO2'	1.52	0.51
2:DA:600:G:N2	2:DA:605:G:O3'	2.43	0.51
2:DA:729:G:H5'	2:DA:730:A:H5"	1.93	0.51
16:DM:35:ALA:HB2	16:DM:102:LEU:HD11	1.93	0.51
39:BD:74:TYR:OH	39:BD:133:SER:OG	2.28	0.51
1:AA:137:U:O4	1:AA:226:G:O6	2.29	0.51
1:AA:672:U:H2'	1:AA:673:A:C8	2.46	0.51
1:AA:1320:C:O2	54:AS:35:ARG:NH2	2.44	0.51
2:CA:517:C:OP1	31:C1:12:ARG:NH2	2.42	0.51
2:CA:633:A:O2'	2:CA:2404:U:OP1	2.29	0.51
2:CA:932:U:O2'	2:CA:934:U:O4	2.23	0.51
2:CA:2127:G:H1	2:CA:2161:C:H2'	1.75	0.51
2:CA:2899:A:H2'	2:CA:2900:A:H8	1.76	0.51
6:CD:25:THR:HG21	6:CD:193:VAL:HG22	1.92	0.51
10:CH:97:ARG:NE	1:BA:371:A:O3'	2.44	0.51
29:CZ:1:ALA:HB1	29:CZ:2:LYS:HE3	1.92	0.51
47:AL:32:VAL:H	47:AL:54:VAL:HG13	1.76	0.51
1:BA:864:A:O2'	1:BA:1078:U:O4	2.28	0.51
1:BA:1498:U:OP2	36:BX:18:G:O2'	2.28	0.51
2:DA:2258:C:O2'	2:DA:2427:C:OP2	2.29	0.51
7:DE:145:ASP:HA	7:DE:166:LYS:HB3	1.93	0.51
14:DK:71:ARG:NE	14:DK:106:GLU:OE2	2.44	0.51
42:BG:1:PRO:HB3	42:BG:5:VAL:HG12	1.93	0.51
6:CD:105:LYS:HA	6:CD:177:VAL:HG12	1.91	0.51
23:CT:69:ARG:HB3	23:CT:74:ILE:HG22	1.93	0.51
38:AC:40:ARG:HG2	38:AC:55:ILE:HD11	1.92	0.51
40:AE:43:GLY:HA2	40:AE:73:VAL:HB	1.92	0.51
1:BA:1291:U:H2'	1:BA:1292:G:H8	1.76	0.51
1:BA:1348:U:H2'	1:BA:1349:A:H8	1.75	0.51
2:DA:482:A:HO2'	24:DU:44:HIS:HE2	1.56	0.51
2:DA:1638:C:O2	2:DA:2698:U:O2'	2.28	0.51
2:DA:2718:G:O2'	2:DA:2847:U:OP1	2.29	0.51
2:DA:2831:G:N7	6:DD:59:ARG:NH1	2.59	0.51
3:DB:111:U:H2'	3:DB:112:G:H8	1.76	0.51
37:BB:166:ASP:HB2	37:BB:190:SER:HA	1.93	0.51
39:BD:10:LEU:HD22	39:BD:62:ARG:HD3	1.93	0.51
1:AA:656:G:H4'	50:AO:61:GLN:HE22	1.76	0.50
1:AA:674:G:H2'	1:AA:675:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1015:G:H2'	1:AA:1016:A:C8	2.46	0.50
2:CA:1244:A:O2'	7:CE:29:HIS:NE2	2.39	0.50
2:CA:1341:G:OP1	2:CA:1397:U:N3	2.42	0.50
26:CW:11:ARG:N	26:CW:11:ARG:CD	2.73	0.50
30:C0:37:CYS:SG	30:C0:38:SER:N	2.84	0.50
39:AD:36:ALA:HA	39:AD:41:GLY:HA3	1.93	0.50
39:AD:187:ARG:NE	39:AD:196:GLU:OE2	2.41	0.50
54:AS:35:ARG:HG2	54:AS:50:VAL:HG13	1.93	0.50
1:BA:454:G:H2'	1:BA:455:G:H8	1.76	0.50
2:DA:15:G:O6	2:DA:525:U:O4	2.29	0.50
2:DA:349:U:H2'	2:DA:350:G:H8	1.75	0.50
2:DA:832:U:H2'	2:DA:833:A:H8	1.75	0.50
2:DA:2576:G:O2'	2:DA:2579:C:OP2	2.28	0.50
44:BI:19:PHE:O	44:BI:62:LEU:HA	2.11	0.50
1:AA:1150:A:H4'	45:AJ:43:PRO:HB3	1.93	0.50
2:CA:376:G:H2'	2:CA:377:G:H8	1.76	0.50
2:CA:675:A:N7	2:CA:803:U:O4	2.44	0.50
2:CA:1018:U:O2'	2:CA:1120:G:N2	2.44	0.50
2:CA:1073:A:H1'	2:CA:2474:U:H4'	1.93	0.50
2:CA:1295:C:H2'	2:CA:1296:G:H8	1.76	0.50
2:CA:2061:G:N3	2:CA:2063:C:N4	2.59	0.50
2:CA:2123:G:H2'	2:CA:2124:G:C8	2.46	0.50
58:CA:3368:HOH:O	19:CP:92:ARG:NH1	2.44	0.50
9:CG:162:ARG:HB2	9:CG:166:GLU:HG3	1.92	0.50
37:AB:10:LYS:HG2	37:AB:207:ARG:HH21	1.75	0.50
42:AG:14:ASP:OD2	42:AG:17:PHE:N	2.43	0.50
52:AQ:31:PRO:HG2	52:AQ:32:ILE:HD12	1.93	0.50
54:AS:11:ASP:HB2	54:AS:14:LEU:HB3	1.93	0.50
2:DA:1478:G:H22	2:DA:1513:U:H3	1.59	0.50
2:DA:1636:U:H2'	2:DA:1637:A:H8	1.75	0.50
2:DA:2636:C:O2'	6:DD:45:TYR:OH	2.27	0.50
19:DP:88:ARG:HB3	19:DP:112:ARG:HD3	1.92	0.50
39:BD:201:GLU:HG2	40:BE:111:ARG:HH12	1.77	0.50
1:AA:927:G:N2	1:AA:1390:U:O2	2.37	0.50
1:AA:1539:C:N3	1:AA:1540:U:O2'	2.41	0.50
2:CA:558:U:H2'	2:CA:559:G:H8	1.76	0.50
2:CA:742:A:H2'	2:CA:743:A:C8	2.46	0.50
2:CA:1548:A:H2'	2:CA:1549:A:H8	1.77	0.50
2:CA:2831:G:OP2	6:CD:59:ARG:NH1	2.44	0.50
13:CJ:125:TYR:OH	13:CJ:132:HIS:NE2	2.33	0.50
14:CK:43:ILE:HD13	14:CK:56:ASP:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CP:23:ASP:OD1	19:CP:89:GLY:N	2.44	0.50
23:CT:12:ARG:HG3	28:CY:29:ARG:HD2	1.93	0.50
1:BA:41:G:H2'	1:BA:42:G:H8	1.76	0.50
2:DA:575:A:OP2	2:DA:2499:C:O2'	2.24	0.50
2:DA:633:A:O2'	2:DA:2404:U:OP1	2.28	0.50
15:DL:100:ILE:HG23	15:DL:101:ILE:HG23	1.92	0.50
32:D2:10:LEU:HD21	32:D2:33:LEU:HD23	1.92	0.50
32:D2:36:LYS:HG2	32:D2:47:ILE:HG13	1.93	0.50
4:BW:62:C:H2'	4:BW:63:G:H8	1.76	0.50
1:AA:1082:A:OP1	40:AE:22:LYS:NZ	2.39	0.50
2:CA:684:G:O2'	2:CA:788:A:N6	2.44	0.50
2:CA:818:G:H21	2:CA:1189:A:H62	1.60	0.50
2:CA:1024:G:N7	58:CA:3214:HOH:O	2.34	0.50
2:CA:1310:G:O6	2:CA:1605:C:N4	2.44	0.50
2:CA:1716:U:H3	2:CA:1744:A:H62	1.58	0.50
2:CA:2358:A:H61	15:CL:54:GLN:HE22	1.59	0.50
2:CA:2693:G:H2'	2:CA:2694:G:H8	1.76	0.50
46:AK:22:ILE:HG22	46:AK:31:VAL:HG22	1.93	0.50
1:BA:597:G:N2	43:BH:85:TYR:OH	2.45	0.50
2:DA:351:C:H2'	2:DA:352:A:H8	1.77	0.50
2:DA:721:A:H2'	2:DA:722:A:C8	2.46	0.50
2:DA:839:U:O4	2:DA:939:G:O6	2.28	0.50
2:DA:1409:U:H2'	2:DA:1410:G:H8	1.77	0.50
13:DJ:3:THR:HG21	20:DQ:60:TRP:HE1	1.76	0.50
17:DN:33:ILE:HG21	17:DN:118:ARG:CZ	2.42	0.50
1:AA:1537:U:H3	36:AX:6:G:H22	1.59	0.50
2:CA:742:A:H2'	2:CA:743:A:H8	1.77	0.50
2:CA:2839:G:H1	2:CA:2878:U:H3	1.58	0.50
2:CA:2885:G:OP2	31:C1:39:ARG:NH2	2.44	0.50
11:C5:45:GLY:O	11:C5:50:VAL:N	2.41	0.50
17:CN:28:LEU:HD13	17:CN:34:ILE:HG12	1.93	0.50
42:AG:71:THR:O	42:AG:90:VAL:N	2.45	0.50
1:BA:246:A:N6	1:BA:281:G:C2	2.79	0.50
1:BA:1308:U:OP1	48:BM:96:VAL:N	2.44	0.50
1:BA:1397:C:O4'	36:BX:25:U:O4	2.30	0.50
2:DA:1209:U:H2'	2:DA:1210:G:H21	1.77	0.50
2:DA:1223:G:OP2	21:DR:90:ARG:NH1	2.42	0.50
2:DA:1853:A:H2'	2:DA:1854:A:C8	2.46	0.50
2:DA:2472:G:N2	2:DA:2478:A:H62	2.09	0.50
2:DA:2515:C:H2'	2:DA:2516:A:H8	1.77	0.50
2:DA:2768:U:O3'	13:DJ:95:ARG:NH2	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:2850:A:OP2	2:DA:2866:U:N3	2.44	0.50
42:BG:14:ASP:OD2	42:BG:17:PHE:N	2.45	0.50
1:AA:1061:G:H5'	45:AJ:61:ALA:HB2	1.94	0.50
13:CJ:18:VAL:HB	13:CJ:56:VAL:HG22	1.93	0.50
16:CM:74:THR:HG21	16:CM:86:LYS:HE3	1.92	0.50
17:CN:28:LEU:HD23	17:CN:48:VAL:HG21	1.94	0.50
22:CS:59:GLU:HB2	22:CS:66:ILE:HD11	1.93	0.50
2:DA:1153:C:OP1	20:DQ:91:ARG:NH2	2.45	0.50
2:DA:1500:G:N2	58:DA:3381:HOH:O	2.43	0.50
27:DX:67:LEU:HD23	27:DX:70:LEU:HD12	1.94	0.50
38:BC:110:GLU:HG3	38:BC:141:ALA:HA	1.94	0.50
1:AA:376:G:H5"	51:AP:5:ARG:HB2	1.94	0.50
2:CA:613:A:H62	7:CE:173:THR:HG21	1.77	0.50
2:CA:987:C:O2'	2:CA:1000:A:N3	2.36	0.50
2:CA:1326:U:O2'	2:CA:2010:G:O2'	2.26	0.50
2:CA:1420:A:O2'	2:CA:2211:A:N7	2.43	0.50
3:CB:5:U:OP1	3:CB:61:G:O2'	2.23	0.50
4:AV:44:G:O2'	4:AV:46:G:OP2	2.30	0.50
8:CF:109:ARG:NH2	8:CF:135:ILE:O	2.43	0.50
41:AF:5:GLU:HA	41:AF:63:ASN:HA	1.94	0.50
50:AO:3:SER:O	50:AO:5:GLU:N	2.44	0.50
1:BA:518:C:O2	47:BL:46:SER:N	2.42	0.50
1:BA:776:G:N1	1:BA:802:A:OP1	2.45	0.50
1:BA:842:U:O2'	1:BA:844:G:O6	2.23	0.50
1:BA:916:U:H2'	1:BA:917:G:H8	1.76	0.50
2:DA:639:U:O2	2:DA:649:G:N2	2.43	0.50
2:DA:1079:C:C2	12:DI:130:GLY:HA3	2.47	0.50
2:DA:1341:G:H21	23:DT:59:ASN:HD22	1.60	0.50
2:DA:1388:G:HO2'	2:DA:1525:A:HO2'	1.57	0.50
19:DP:8:GLU:HA	19:DP:54:LEU:HD22	1.93	0.50
1:AA:269:C:H2'	1:AA:270:A:H8	1.77	0.50
1:AA:374:A:H5'	1:AA:452:A:H62	1.77	0.50
1:AA:948:C:H2'	1:AA:949:A:H8	1.76	0.50
1:AA:1281:C:OP2	1:AA:1282:C:N4	2.34	0.50
2:CA:2258:C:O2'	2:CA:2427:C:OP2	2.30	0.50
39:AD:128:VAL:HG21	39:AD:145:ARG:HH11	1.77	0.50
40:AE:106:ALA:O	40:AE:111:ARG:NH2	2.44	0.50
54:AS:17:LYS:HA	54:AS:20:LYS:HB2	1.93	0.50
1:BA:280:C:N3	52:BQ:40:THR:N	2.52	0.50
1:BA:537:G:OP1	47:BL:109:ARG:NH2	2.45	0.50
1:BA:762:U:H2'	1:BA:763:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:1953:A:O2'	2:DA:2559:C:O2	2.27	0.50
2:DA:2845:U:O3'	19:DP:52:ARG:NH1	2.44	0.50
19:DP:38:ARG:HE	19:DP:39:LEU:H	1.60	0.50
45:BJ:7:ARG:NH1	45:BJ:75:ASP:OD1	2.44	0.50
50:BO:52:ARG:NH2	58:BO:101:HOH:O	2.44	0.50
1:AA:67:C:H2'	1:AA:68:G:H8	1.76	0.50
1:AA:280:C:N4	52:AQ:40:THR:OG1	2.41	0.50
2:CA:7:G:N2	58:CA:3297:HOH:O	2.44	0.50
2:CA:576:U:H2'	2:CA:577:G:C8	2.47	0.50
2:CA:946:C:H2'	2:CA:947:A:H8	1.77	0.50
2:CA:2087:G:H2'	2:CA:2088:A:H8	1.77	0.50
58:CA:3317:HOH:O	6:CD:62:LYS:N	2.41	0.50
29:CZ:2:LYS:HD3	29:CZ:2:LYS:N	2.25	0.50
37:AB:75:ALA:HA	37:AB:78:ALA:HB3	1.93	0.50
44:AI:11:ARG:NE	44:AI:106:ASP:CB	2.75	0.50
2:DA:593:U:O4	2:DA:664:G:O6	2.29	0.50
2:DA:784:G:O6	2:DA:2072:C:O2'	2.30	0.50
2:DA:2370:G:H1'	32:D2:43:ARG:HH12	1.77	0.50
2:DA:2683:C:O2	14:DK:70:ARG:NH2	2.45	0.50
40:BE:15:ILE:HG12	40:BE:109:ALA:HA	1.94	0.50
42:BG:106:ALA:HB1	42:BG:132:THR:HB	1.94	0.50
1:AA:714:G:H2'	1:AA:715:A:C8	2.46	0.49
2:CA:75:G:O3'	28:CY:48:ARG:NH1	2.45	0.49
2:CA:243:U:OP2	34:C4:7:ARG:NH1	2.45	0.49
2:CA:848:C:H2'	2:CA:849:A:C8	2.46	0.49
2:CA:1178:C:H2'	2:CA:1179:G:C8	2.47	0.49
2:CA:2368:C:H2'	2:CA:2369:A:H8	1.77	0.49
2:CA:2508:G:O6	2:CA:2580:U:O4	2.30	0.49
2:CA:2591:C:H2'	2:CA:2592:G:H8	1.77	0.49
39:AD:187:ARG:NH2	39:AD:194:ILE:O	2.40	0.49
2:DA:197:A:O2'	2:DA:2244:U:OP1	2.30	0.49
2:DA:704:G:O2'	2:DA:726:G:N1	2.41	0.49
2:DA:832:U:H2'	2:DA:833:A:C8	2.47	0.49
2:DA:1322:A:O2'	22:DS:84:ARG:NH1	2.45	0.49
2:DA:1719:G:N1	2:DA:1742:U:N3	2.59	0.49
2:DA:2693:G:H2'	2:DA:2694:G:H8	1.77	0.49
8:DF:134:GLN:NE2	8:DF:147:ARG:O	2.45	0.49
17:DN:28:LEU:HD23	17:DN:48:VAL:HG11	1.93	0.49
43:BH:3:GLN:HE22	43:BH:80:PRO:HG2	1.77	0.49
44:BI:105:ARG:NH1	44:BI:106:ASP:O	2.45	0.49
1:AA:408:A:OP1	39:AD:109:THR:OG1	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:1779:U:OP2	2:CA:1784:A:N6	2.39	0.49
2:CA:1962:C:O2'	2:CA:1964:G:OP2	2.30	0.49
3:CB:44:G:N3	3:CB:47:C:N4	2.50	0.49
37:AB:165:ALA:O	37:AB:169:HIS:HB3	2.12	0.49
1:BA:1235:U:O2'	1:BA:1305:G:OP1	2.31	0.49
1:BA:1305:G:N2	1:BA:1331:G:O2'	2.43	0.49
1:BA:1504:G:OP2	1:BA:1507:A:O2'	2.27	0.49
58:BA:1709:HOH:O	44:BI:4:GLN:NE2	2.44	0.49
2:DA:285:G:N2	2:DA:355:U:O2	2.37	0.49
2:DA:1125:G:H3'	2:DA:1126:A:H2'	1.93	0.49
10:DH:103:VAL:HB	10:DH:110:VAL:HG11	1.94	0.49
25:DV:32:GLY:O	25:DV:93:ARG:NH1	2.41	0.49
31:D1:30:ASP:OD2	31:D1:33:SER:N	2.42	0.49
44:BI:45:MET:HB2	44:BI:48:ARG:HB3	1.93	0.49
44:BI:46:VAL:HG21	44:BI:75:ALA:HB1	1.93	0.49
1:AA:877:G:H2'	1:AA:878:A:H8	1.77	0.49
2:CA:598:U:H2'	2:CA:599:A:C8	2.47	0.49
2:CA:1077:A:O2'	12:CI:93:ASN:ND2	2.46	0.49
8:CF:147:ARG:HB3	8:CF:149:ARG:HG3	1.93	0.49
13:CJ:37:ARG:NH1	13:CJ:44:TYR:OH	2.45	0.49
39:AD:57:LYS:NZ	39:AD:68:GLU:OE1	2.43	0.49
2:DA:1536:C:O2	2:DA:1537:G:N1	2.45	0.49
2:DA:2185:U:N3	2:DA:2186:G:N7	2.59	0.49
38:BC:156:ARG:NH1	38:BC:160:ALA:O	2.45	0.49
1:AA:1375:A:O2'	42:AG:101:ARG:NH2	2.46	0.49
2:CA:1081:U:H4'	12:CI:123:ALA:HB1	1.94	0.49
2:CA:1222:U:O4	2:CA:1227:G:O6	2.29	0.49
2:CA:2837:A:H2'	2:CA:2838:G:H8	1.77	0.49
4:AY:46:G:H3'	4:AY:47:U:H4'	1.94	0.49
37:AB:138:ARG:O	37:AB:142:LYS:HB2	2.12	0.49
40:AE:14:LEU:HA	40:AE:35:LEU:O	2.11	0.49
44:AI:29:ILE:CG2	44:AI:32:ARG:O	2.55	0.49
1:BA:938:A:O3'	42:BG:94:ARG:NH2	2.37	0.49
1:BA:1314:C:H41	54:BS:3:SER:HA	1.77	0.49
1:BA:1342:C:H2'	1:BA:1343:G:C8	2.47	0.49
1:BA:1522:U:H2'	1:BA:1523:G:H8	1.76	0.49
2:DA:259:G:N3	2:DA:621:A:O2'	2.45	0.49
2:DA:438:G:H2'	2:DA:439:A:C8	2.47	0.49
2:DA:807:U:O2'	2:DA:2060:A:N1	2.45	0.49
2:DA:1863:G:H4'	2:DA:2411:A:H4'	1.94	0.49
2:DA:2241:A:H2'	2:DA:2242:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:DH:62:LEU:HB2	10:DH:135:HIS:CE1	2.47	0.49
49:BN:67:THR:OG1	49:BN:80:SER:OG	2.29	0.49
1:AA:21:G:H2'	1:AA:22:G:C8	2.47	0.49
1:AA:454:G:H2'	1:AA:455:G:H8	1.77	0.49
1:AA:518:C:O2'	1:AA:1492:A:N6	2.46	0.49
4:AV:9:A:O2'	4:AV:10:G:N7	2.45	0.49
25:CV:80:HIS:ND1	58:CV:101:HOH:O	2.35	0.49
37:AB:138:ARG:HH11	37:AB:142:LYS:HE2	1.77	0.49
1:BA:958:A:OP1	54:BS:54:ARG:NH1	2.45	0.49
2:DA:684:G:OP1	33:D3:21:ARG:NH1	2.45	0.49
5:DC:132:ARG:O	5:DC:166:ARG:NH1	2.45	0.49
6:DD:1:MET:HB3	6:DD:205:PRO:HG2	1.94	0.49
8:DF:108:PRO:HB3	30:D0:41:HIS:CD2	2.47	0.49
4:BW:44:G:H21	4:BW:45:G:H22	1.61	0.49
38:BC:6:HIS:HD2	38:BC:9:GLY:H	1.60	0.49
39:BD:122:ILE:HG23	39:BD:142:VAL:HG23	1.93	0.49
2:CA:696:G:O6	2:CA:766:U:O4	2.31	0.49
2:CA:1123:C:H2'	2:CA:1124:G:H8	1.77	0.49
2:CA:1309:G:H5"	33:C3:9:VAL:HG23	1.94	0.49
2:CA:1336:A:OP1	23:CT:70:HIS:NE2	2.39	0.49
2:CA:2107:G:H1	2:CA:2182:U:H3	1.60	0.49
10:CH:5:LEU:HB2	10:CH:16:GLY:H	1.78	0.49
38:AC:156:ARG:NH1	38:AC:160:ALA:O	2.45	0.49
1:BA:170:U:H2'	1:BA:171:A:H8	1.78	0.49
1:BA:407:U:H5"	39:BD:111:ALA:HB1	1.93	0.49
1:BA:429:U:OP2	39:BD:12:ARG:NH2	2.44	0.49
2:DA:251:A:H4'	15:DL:47:ARG:HH22	1.77	0.49
2:DA:711:G:O6	2:DA:720:U:O4	2.30	0.49
1:AA:1014:A:H5'	54:AS:13:HIS:CG	2.48	0.49
2:CA:372:G:N2	2:CA:401:A:OP2	2.43	0.49
2:CA:832:U:H2'	2:CA:833:A:C8	2.48	0.49
2:CA:903:C:H2'	2:CA:904:G:C8	2.47	0.49
2:CA:1266:G:OP2	31:C1:16:ARG:NE	2.43	0.49
2:CA:1385:A:O2'	2:CA:1396:U:O2	2.28	0.49
5:CC:234:GLY:O	5:CC:238:ASN:ND2	2.45	0.49
23:CT:6:ARG:NH2	23:CT:37:ASP:O	2.46	0.49
37:AB:169:HIS:HA	37:AB:172:ILE:HD12	1.94	0.49
39:AD:150:LYS:NZ	39:AD:150:LYS:CA	2.73	0.49
1:BA:693:G:C8	36:BX:15:A:H5'	2.46	0.49
2:DA:547:A:O2'	2:DA:548:G:N2	2.45	0.49
2:DA:833:A:H2'	2:DA:834:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:2798:U:H4'	2:DA:2799:A:H5'	1.94	0.49
3:DB:57:A:H8	8:DF:26:GLN:OE1	1.96	0.49
10:DH:76:GLU:HG3	10:DH:143:ILE:HG21	1.95	0.49
18:DO:25:ARG:HA	18:DO:91:SER:HB2	1.95	0.49
4:BW:2:G:H2'	4:BW:3:G:H8	1.77	0.49
43:BH:28:SER:HA	43:BH:32:LYS:HD2	1.94	0.49
2:CA:863:A:O3'	3:CB:100:G:N2	2.45	0.49
1:BA:372:C:N4	1:BA:389:A:N6	2.38	0.49
1:BA:592:G:O6	1:BA:648:A:N6	2.46	0.49
2:DA:511:U:H4'	2:DA:1235:G:H4'	1.95	0.49
3:DB:76:G:H5'	25:DV:9:ARG:HH12	1.78	0.49
6:DD:179:ARG:HD2	6:DD:188:LEU:HD12	1.95	0.49
38:BC:15:VAL:HG23	38:BC:16:LYS:HG2	1.95	0.49
1:AA:96:U:H2'	1:AA:97:G:C8	2.48	0.49
1:AA:1031:C:O4'	1:AA:1032:G:N2	2.46	0.49
1:AA:1345:U:H3	1:AA:1376:U:H3	1.59	0.49
2:CA:1571:A:H2'	2:CA:1572:A:H8	1.78	0.49
2:CA:2428:G:H5"	2:CA:2429:G:H5'	1.95	0.49
10:CH:40:THR:HG23	10:CH:43:ASN:H	1.78	0.49
16:CM:10:ARG:NH1	4:AW:63:G:O2'	2.45	0.49
17:CN:83:LEU:N	58:CN:301:HOH:O	2.42	0.49
1:BA:391:G:OP1	51:BP:8:ARG:NH1	2.46	0.49
1:BA:453:G:O6	1:BA:479:U:N3	2.46	0.49
1:BA:1330:U:H4'	48:BM:22:TYR:CE1	2.48	0.49
2:DA:290:U:H3	2:DA:350:G:H1	1.61	0.49
2:DA:560:C:O2	20:DQ:47:ARG:NH1	2.46	0.49
2:DA:1181:U:H2'	2:DA:1182:G:C8	2.48	0.49
2:DA:1365:A:O5'	27:DX:27:ARG:NH2	2.45	0.49
2:DA:2788:C:O2'	2:DA:2809:A:N3	2.39	0.49
40:BE:64:GLU:OE2	40:BE:68:ARG:NH2	2.45	0.49
46:BK:125:LYS:HG3	46:BK:126:ARG:HG2	1.95	0.49
48:BM:53:ASP:HA	48:BM:56:ARG:HB3	1.95	0.49
1:AA:50:A:H4'	1:AA:51:A:H5'	1.94	0.49
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.45	0.49
2:CA:1062:G:H2'	2:CA:1063:G:C8	2.47	0.49
2:CA:2554:U:H3	4:AV:74:C:H42	1.59	0.49
3:CB:14:U:OP2	3:CB:70:C:O2'	2.31	0.49
45:AJ:10:LEU:HA	45:AJ:98:VAL:HG12	1.95	0.49
53:AR:70:THR:HG23	53:AR:72:ARG:H	1.77	0.49
1:BA:366:A:O2'	1:BA:394:G:N2	2.46	0.49
1:BA:1124:G:N2	1:BA:1125:U:O4	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:298:G:O2'	2:DA:322:A:N1	2.38	0.49
2:DA:574:A:N6	2:DA:2034:U:OP1	2.46	0.49
2:DA:2039:U:H2'	2:DA:2040:G:C8	2.48	0.49
16:DM:121:ALA:HA	16:DM:124:LEU:HD12	1.94	0.49
31:D1:39:ARG:O	31:D1:41:HIS:ND1	2.42	0.49
38:BC:40:ARG:HG2	38:BC:55:ILE:HD11	1.94	0.49
39:BD:169:TRP:N	58:BD:304:HOH:O	2.45	0.49
41:BF:42:TRP:HB2	41:BF:59:TYR:HB2	1.93	0.49
1:AA:262:A:H5'	55:AT:67:HIS:HB2	1.95	0.48
1:AA:895:G:O6	1:AA:904:U:O4	2.30	0.48
1:AA:926:G:H21	1:AA:1505:G:H2'	1.77	0.48
2:CA:329:G:H22	24:CU:16:LYS:HE2	1.78	0.48
2:CA:2574:G:H21	6:CD:147:GLY:HA2	1.78	0.48
3:CB:39:A:O2'	3:CB:46:A:N1	2.45	0.48
14:CK:2:ILE:HB	14:CK:33:ALA:HB3	1.95	0.48
25:CV:51:GLN:OE1	25:CV:57:TYR:OH	2.26	0.48
47:AL:38:THR:HA	47:AL:49:ARG:O	2.13	0.48
1:BA:62:U:O2	1:BA:379:C:O2'	2.31	0.48
2:DA:601:C:O2'	2:DA:605:G:OP1	2.31	0.48
2:DA:854:C:H2'	2:DA:855:G:H8	1.78	0.48
2:DA:911:A:N6	16:DM:11:LYS:O	2.45	0.48
2:DA:1103:A:OP2	2:DA:1104:C:N4	2.35	0.48
2:DA:1288:G:OP2	2:DA:1288:G:N2	2.36	0.48
2:DA:1468:U:O4	2:DA:1524:G:O6	2.31	0.48
2:DA:2144:G:O2'	2:DA:2147:A:N6	2.45	0.48
3:DB:44:G:N3	3:DB:47:C:N4	2.50	0.48
17:DN:8:ARG:NH2	17:DN:43:GLU:OE1	2.46	0.48
25:DV:78:GLN:HB2	25:DV:88:HIS:HB3	1.95	0.48
34:D4:35:LYS:HB3	34:D4:39:ARG:HD3	1.95	0.48
38:BC:14:ILE:HG22	38:BC:15:VAL:HG13	1.94	0.48
39:BD:27:ILE:O	39:BD:29:THR:N	2.46	0.48
40:BE:106:ALA:H	40:BE:111:ARG:HH21	1.60	0.48
44:BI:29:ILE:O	44:BI:32:ARG:CB	2.60	0.48
2:CA:882:G:O6	2:CA:894:U:C4	2.66	0.48
1:BA:919:A:O2'	1:BA:1080:A:N6	2.46	0.48
2:DA:770:G:H2'	2:DA:771:G:H8	1.78	0.48
2:DA:1278:C:H2'	2:DA:1279:G:H8	1.77	0.48
2:DA:1351:C:O2'	2:DA:1571:A:N3	2.39	0.48
2:DA:1932:A:H62	2:DA:1968:G:N2	2.09	0.48
2:DA:2104:C:H3'	2:DA:2186:G:H21	1.77	0.48
2:DA:2691:C:H2'	2:DA:2692:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DV:62:THR:HG22	25:DV:71:LYS:HG2	1.95	0.48
1:AA:319:G:H2'	1:AA:320:A:C8	2.48	0.48
1:AA:811:C:O2'	1:AA:901:A:N6	2.46	0.48
2:CA:172:A:H2'	2:CA:173:A:H8	1.78	0.48
2:CA:721:A:H2'	2:CA:722:A:C8	2.48	0.48
2:CA:1664:A:N6	2:CA:1996:C:H42	2.09	0.48
6:CD:51:THR:HG21	6:CD:68:PHE:HE1	1.78	0.48
16:CM:19:GLY:O	16:CM:38:ARG:NH1	2.35	0.48
25:CV:3:THR:HA	25:CV:62:THR:O	2.13	0.48
1:BA:913:A:OP1	47:BL:42:LYS:NZ	2.47	0.48
2:DA:184:C:H2'	2:DA:185:G:C8	2.48	0.48
2:DA:1150:C:H2'	2:DA:1151:A:H8	1.78	0.48
2:DA:1386:C:H2'	2:DA:1387:A:C8	2.48	0.48
2:DA:2645:G:OP2	2:DA:2645:G:N2	2.36	0.48
5:DC:10:PRO:HA	5:DC:13:ARG:HG2	1.94	0.48
29:DZ:17:PRO:HA	29:DZ:20:LYS:HB2	1.95	0.48
46:BK:34:THR:OG1	46:BK:35:ASP:N	2.46	0.48
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.48	0.48
1:AA:1498:U:C2'	36:AX:19:U:OP1	2.62	0.48
2:CA:253:C:OP2	34:C4:4:LYS:NZ	2.40	0.48
5:CC:139:THR:O	5:CC:192:GLY:N	2.46	0.48
35:C6:36:ARG:HG2	35:C6:37:GLN:H	1.79	0.48
55:AT:4:LYS:NZ	55:AT:5:SER:OG	2.47	0.48
1:BA:157:U:O4	1:BA:164:G:O6	2.31	0.48
1:BA:1108:G:H5"	38:BC:176:HIS:HD2	1.79	0.48
2:DA:1266:G:OP2	31:D1:16:ARG:NE	2.42	0.48
2:DA:1987:A:H2'	2:DA:1988:G:H8	1.79	0.48
2:DA:2250:G:OP1	16:DM:84:LYS:NZ	2.39	0.48
2:DA:2531:A:H61	2:DA:2662:A:H61	1.61	0.48
5:DC:139:THR:O	5:DC:192:GLY:N	2.45	0.48
14:DK:35:VAL:HG22	14:DK:69:VAL:HG12	1.95	0.48
27:DX:32:LEU:HB3	27:DX:49:ARG:HE	1.77	0.48
38:BC:191:THR:OG1	38:BC:194:GLY:N	2.47	0.48
40:BE:54:GLU:HG3	40:BE:56:PRO:HD2	1.93	0.48
1:AA:1187:G:O2'	44:AI:112:ARG:NH1	2.47	0.48
1:AA:1422:G:O6	1:AA:1478:U:O4	2.31	0.48
2:CA:291:G:O6	2:CA:349:U:O4	2.32	0.48
2:CA:651:G:H5'	34:C4:18:LYS:HG2	1.95	0.48
2:CA:1084:A:H2'	2:CA:1085:A:C8	2.49	0.48
2:CA:2366:A:H4'	26:CW:62:LYS:HE2	1.95	0.48
2:CA:2722:G:O2'	17:CN:3:HIS:O	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CD:179:ARG:HB2	6:CD:188:LEU:HD12	1.95	0.48
8:CF:128:SER:HA	8:CF:153:ILE:O	2.13	0.48
26:CW:41:ARG:O	26:CW:57:HIS:ND1	2.46	0.48
39:AD:171:GLU:HB2	39:AD:180:THR:H	1.78	0.48
44:AI:32:ARG:NH1	44:AI:36:GLN:OE1	2.47	0.48
1:BA:927:G:H2'	1:BA:928:G:H8	1.77	0.48
4:BV:18:G:H1'	4:BV:57:G:H22	1.79	0.48
37:BB:67:LEU:H	37:BB:89:PHE:HB2	1.77	0.48
1:AA:477:C:H2'	1:AA:478:A:C4	2.48	0.48
1:AA:814:A:O2'	1:AA:1510:C:O2'	2.25	0.48
1:AA:975:A:N6	45:AJ:50:THR:O	2.46	0.48
2:CA:481:G:O2'	2:CA:507:A:N1	2.45	0.48
5:CC:10:PRO:HA	5:CC:13:ARG:HG2	1.94	0.48
55:AT:27:MET:HG3	55:AT:57:VAL:HG22	1.95	0.48
1:BA:674:G:H2'	1:BA:675:A:H8	1.79	0.48
1:BA:1400:C:O4'	36:BX:20:A:C6	2.66	0.48
2:DA:195:A:H3'	2:DA:196:A:H4'	1.94	0.48
2:DA:372:G:N2	58:DA:3433:HOH:O	2.46	0.48
2:DA:1125:G:N3	58:DA:3279:HOH:O	2.35	0.48
2:DA:1667:G:O2'	58:DA:3201:HOH:O	2.20	0.48
2:DA:2695:U:O4	2:DA:2714:G:O6	2.30	0.48
3:DB:25:U:O2	3:DB:117:G:O2'	2.32	0.48
1:AA:312:C:H2'	1:AA:313:A:C8	2.49	0.48
1:AA:413:G:O3'	1:AA:428:G:N2	2.46	0.48
1:AA:718:A:H2	53:AR:37:LYS:HE3	1.79	0.48
1:AA:1060:U:O2'	58:AA:1702:HOH:O	2.20	0.48
2:CA:83:A:N6	2:CA:101:A:N7	2.60	0.48
2:CA:741:U:H2'	2:CA:742:A:H8	1.78	0.48
2:CA:820:A:N3	2:CA:943:A:O2'	2.47	0.48
2:CA:1704:C:H2'	2:CA:1705:A:C8	2.48	0.48
2:CA:2123:G:H2'	2:CA:2124:G:H8	1.79	0.48
2:CA:2278:A:H5"	26:CW:12:ASN:ND2	2.28	0.48
2:CA:2581:G:OP2	2:CA:2581:G:N2	2.42	0.48
24:CU:85:ARG:NH1	24:CU:99:SER:HG	2.12	0.48
29:CZ:8:GLN:HB2	29:CZ:28:LEU:HD13	1.95	0.48
39:AD:114:ARG:HG3	39:AD:132:ALA:HB2	1.95	0.48
45:AJ:22:THR:HG21	45:AJ:72:ARG:HE	1.78	0.48
45:AJ:29:ALA:O	45:AJ:33:GLY:HA3	2.13	0.48
46:AK:96:ILE:HA	46:AK:99:LEU:HB2	1.95	0.48
2:DA:503:A:N6	58:DA:3322:HOH:O	2.39	0.48
2:DA:535:G:N2	2:DA:558:U:O2	2.35	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:558:U:H2'	2:DA:559:G:H8	1.79	0.48
2:DA:998:C:OP2	20:DQ:57:ARG:NH2	2.47	0.48
2:DA:1803:A:H62	2:DA:1814:G:N2	2.12	0.48
2:DA:1830:C:H2'	2:DA:1831:G:H8	1.79	0.48
7:DE:146:VAL:HG12	7:DE:185:LYS:HB2	1.95	0.48
14:DK:108:ARG:HH12	19:DP:33:GLU:HG3	1.79	0.48
24:DU:84:PHE:HE1	24:DU:93:ARG:HG2	1.78	0.48
1:AA:974:A:H4'	1:AA:975:A:H3'	1.95	0.48
1:AA:1374:A:O2'	42:AG:27:ASN:O	2.31	0.48
2:CA:177:G:OP2	2:CA:177:G:N2	2.34	0.48
2:CA:863:A:O2'	3:CB:100:G:N3	2.45	0.48
2:CA:2002:G:OP2	17:CN:9:GLN:NE2	2.47	0.48
2:CA:2192:U:H2'	2:CA:2193:G:H8	1.79	0.48
3:CB:9:G:O6	3:CB:111:U:O4	2.32	0.48
23:CT:1:MET:HG2	23:CT:2:ILE:HG13	1.95	0.48
29:CZ:1:ALA:H2	29:CZ:39:ASP:N	1.89	0.48
39:AD:6:PRO:HB2	39:AD:9:LYS:HD3	1.94	0.48
44:AI:32:ARG:HE	44:AI:32:ARG:CA	2.16	0.48
1:BA:62:U:O2'	1:BA:379:C:O2	2.28	0.48
1:BA:1224:U:O2'	1:BA:1322:C:OP1	2.28	0.48
2:DA:1716:U:H2'	2:DA:1717:A:H8	1.77	0.48
2:DA:1769:U:O2	2:DA:1983:G:N2	2.42	0.48
3:DB:8:C:H5"	18:DO:15:ARG:HH22	1.78	0.48
4:BV:53:G:O3'	16:DM:55:ARG:NH1	2.47	0.48
16:DM:19:GLY:O	16:DM:38:ARG:NH1	2.40	0.48
44:BI:23:GLY:H	44:BI:60:LEU:HA	1.78	0.48
1:AA:458:U:H2'	1:AA:459:A:C8	2.48	0.48
2:CA:465:G:N1	58:CA:3281:HOH:O	2.35	0.48
2:CA:1165:A:H2'	2:CA:1166:G:H8	1.78	0.48
2:CA:1995:U:H3'	2:CA:1996:C:H2'	1.95	0.48
23:CT:47:VAL:O	58:CT:101:HOH:O	2.20	0.48
32:C2:10:LEU:O	32:C2:19:PHE:HA	2.13	0.48
1:BA:376:G:O6	1:BA:387:U:O4	2.32	0.48
1:BA:1106:G:HO2'	38:BC:169:ARG:NH1	2.07	0.48
1:BA:1458:G:H2'	1:BA:1459:G:H8	1.79	0.48
2:DA:84:A:H62	2:DA:101:A:H2	1.61	0.48
2:DA:578:G:OP1	2:DA:1255:U:O2'	2.32	0.48
2:DA:1316:U:H2'	2:DA:1317:G:H8	1.78	0.48
12:DI:102:ARG:NH2	12:DI:141:ASP:O	2.46	0.48
29:DZ:11:SER:OG	29:DZ:12:ALA:N	2.46	0.48
30:D0:14:ALA:HA	30:D0:32:LEU:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BK:22:ILE:HD11	46:BK:85:VAL:HG22	1.96	0.48
1:AA:493:A:H2'	1:AA:494:G:C4	2.48	0.48
2:CA:124:G:N7	33:C3:19:ARG:NH1	2.61	0.48
7:CE:176:ASP:OD1	7:CE:179:SER:OG	2.24	0.48
17:CN:117:ASP:OD1	17:CN:117:ASP:N	2.27	0.48
25:CV:83:LYS:N	58:CV:101:HOH:O	2.47	0.48
39:AD:162:GLU:HA	39:AD:166:LYS:HE3	1.96	0.48
43:AH:46:GLU:N	58:AH:201:HOH:O	2.38	0.48
53:AR:41:SER:HB3	53:AR:51:GLN:HG2	1.95	0.48
1:BA:1288:A:H2'	1:BA:1289:A:C8	2.49	0.48
2:DA:172:A:H2'	2:DA:173:A:C8	2.49	0.48
2:DA:210:C:OP1	33:D3:29:GLN:NE2	2.47	0.48
2:DA:329:G:H1	24:DU:16:LYS:HG3	1.79	0.48
2:DA:494:G:H4'	22:DS:6:LYS:HG3	1.96	0.48
2:DA:2043:C:OP1	2:DA:2777:G:O2'	2.28	0.48
2:DA:2351:G:O6	34:D4:41:ARG:NH1	2.46	0.48
8:DF:101:ARG:CZ	30:D0:26:SER:HA	2.44	0.48
37:BB:66:ILE:HG13	37:BB:88:GLN:HA	1.96	0.48
1:AA:84:U:O4	1:AA:88:U:O2'	2.31	0.47
1:AA:376:G:O3'	51:AP:5:ARG:NH1	2.45	0.47
1:AA:514:C:H2'	1:AA:515:G:C8	2.47	0.47
1:AA:1539:C:C1'	36:AX:5:G:H22	2.27	0.47
2:CA:575:A:OP2	2:CA:2499:C:O2'	2.29	0.47
28:CY:24:GLU:H	28:CY:27:ASN:HD22	1.62	0.47
45:AJ:52:LEU:HD23	45:AJ:62:ARG:HG2	1.95	0.47
1:BA:230:G:OP1	51:BP:31:ARG:NH2	2.47	0.47
1:BA:1203:C:H5"	49:BN:1:ALA:HB2	1.95	0.47
2:DA:468:G:H5"	7:DE:55:SER:HB3	1.94	0.47
2:DA:704:G:N2	2:DA:727:A:H62	2.10	0.47
2:DA:742:A:H2'	2:DA:743:A:H8	1.79	0.47
2:DA:1106:G:H2'	2:DA:1107:G:H8	1.79	0.47
14:DK:25:LEU:HD21	14:DK:40:LYS:HG2	1.96	0.47
39:BD:49:ASP:OD2	39:BD:53:GLN:NE2	2.47	0.47
43:BH:49:LYS:HB2	43:BH:59:GLU:HB3	1.95	0.47
44:BI:20:ILE:HG12	44:BI:60:LEU:HD13	1.96	0.47
52:BQ:18:LYS:HE3	52:BQ:49:ASN:H	1.78	0.47
1:AA:67:C:H2'	1:AA:68:G:C8	2.49	0.47
1:AA:575:G:H4'	1:AA:576:C:H5"	1.95	0.47
2:CA:2202:U:O4	2:CA:2221:G:O6	2.32	0.47
44:AI:10:ARG:O	44:AI:105:ARG:NH2	2.46	0.47
44:AI:11:ARG:CD	44:AI:106:ASP:CB	2.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AK:92:ARG:NH1	46:AK:111:ASP:OD1	2.39	0.47
1:BA:579:A:H5'	1:BA:728:A:H1'	1.95	0.47
1:BA:1032:G:N2	1:BA:1033:G:H1'	2.29	0.47
2:DA:1796:U:H2'	2:DA:1797:G:H8	1.78	0.47
2:DA:1969:A:O2'	2:DA:1972:G:N3	2.35	0.47
2:DA:2495:G:H5"	16:DM:81:ARG:HD3	1.96	0.47
2:DA:2628:C:O2'	2:DA:2782:G:OP1	2.29	0.47
17:DN:40:LYS:O	17:DN:44:LEU:HB2	2.14	0.47
39:BD:57:LYS:NZ	39:BD:68:GLU:OE1	2.46	0.47
39:BD:144:ILE:HD12	39:BD:177:MET:HB3	1.95	0.47
1:AA:424:G:H2'	1:AA:425:G:H8	1.79	0.47
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.79	0.47
2:CA:277:G:N2	2:CA:360:U:O4	2.47	0.47
2:CA:291:G:H1	2:CA:349:U:H3	1.62	0.47
2:CA:460:A:H62	2:CA:469:G:H21	1.61	0.47
2:CA:1799:G:O3'	5:CC:181:ARG:NH2	2.47	0.47
7:CE:97:ASN:ND2	7:CE:100:MET:SD	2.78	0.47
15:CL:81:ASP:OD1	15:CL:81:ASP:N	2.46	0.47
54:AS:14:LEU:HD13	54:AS:32:THR:HG21	1.95	0.47
2:DA:413:C:N4	58:DA:3432:HOH:O	2.46	0.47
2:DA:970:U:O2	2:DA:984:A:O2'	2.32	0.47
2:DA:1215:G:O6	2:DA:1234:U:O4	2.33	0.47
2:DA:1972:G:H2'	2:DA:1973:G:H8	1.78	0.47
2:DA:2355:G:O2'	26:DW:24:LYS:NZ	2.47	0.47
2:DA:2883:A:OP1	31:D1:48:TYR:OH	2.32	0.47
1:AA:1067:A:N1	1:AA:1108:G:O2'	2.41	0.47
2:CA:741:U:H2'	2:CA:742:A:C8	2.49	0.47
2:CA:813:U:O2'	2:CA:1225:G:O2'	2.27	0.47
2:CA:882:G:N1	2:CA:894:U:N3	2.63	0.47
2:CA:1422:G:O6	2:CA:1576:U:O4	2.32	0.47
2:CA:2091:C:O2	27:CX:33:HIS:NE2	2.48	0.47
2:CA:2788:C:O2'	2:CA:2809:A:N3	2.35	0.47
2:CA:2850:A:OP2	2:CA:2866:U:N3	2.48	0.47
38:AC:58:GLU:HB3	38:AC:65:ARG:HB3	1.97	0.47
50:AO:2:LEU:HD11	50:AO:34:GLN:CD	2.35	0.47
1:BA:108:G:H5'	1:BA:109:A:H5"	1.96	0.47
1:BA:693:G:C5	36:BX:15:A:O4'	2.67	0.47
2:DA:414:C:H2'	2:DA:415:A:C8	2.50	0.47
2:DA:481:G:O2'	2:DA:507:A:N1	2.39	0.47
2:DA:2032:G:N2	6:DD:151:THR:OG1	2.47	0.47
2:DA:2032:G:O2'	6:DD:150:GLN:NE2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:168:THR:HG21	39:BD:183:ARG:HH21	1.78	0.47
1:AA:126:G:H1	1:AA:235:C:H42	1.62	0.47
1:AA:662:U:H2'	1:AA:663:A:C8	2.49	0.47
2:CA:1178:C:H2'	2:CA:1179:G:H8	1.79	0.47
2:CA:1779:U:H5"	2:CA:1780:A:H5"	1.96	0.47
2:CA:1936:A:OP2	2:CA:1962:C:N4	2.47	0.47
2:CA:2245:U:H5"	2:CA:2246:G:H5'	1.95	0.47
2:CA:2632:A:HO2'	2:CA:2811:G:HO2'	1.61	0.47
58:CA:3321:HOH:O	22:CS:95:ARG:NH1	2.47	0.47
1:BA:642:A:N3	43:BH:104:SER:OG	2.43	0.47
1:BA:1030:U:O2	1:BA:1030:U:O2'	2.30	0.47
2:DA:582:A:H2'	2:DA:583:G:H8	1.79	0.47
2:DA:1248:G:OP1	7:DE:44:ARG:NH2	2.47	0.47
2:DA:1704:C:H2'	2:DA:1705:A:C8	2.50	0.47
30:D0:28:VAL:HG12	30:D0:30:HIS:HB3	1.97	0.47
55:BT:34:VAL:HG11	55:BT:78:LEU:HD13	1.97	0.47
1:AA:533:A:O2'	1:AA:535:A:OP1	2.32	0.47
1:AA:1179:A:H4'	44:AI:104:THR:HA	1.97	0.47
2:CA:351:C:H2'	2:CA:352:A:H8	1.78	0.47
2:CA:582:A:H2'	2:CA:583:G:H8	1.79	0.47
2:CA:833:A:H2'	2:CA:834:G:H8	1.80	0.47
2:CA:882:G:O6	2:CA:894:U:O4	2.32	0.47
2:CA:927:A:O2'	29:CZ:38:GLU:OE2	2.31	0.47
2:CA:2899:A:H2'	2:CA:2900:A:C8	2.49	0.47
47:AL:34:THR:N	47:AL:53:ARG:O	2.48	0.47
53:AR:22:TYR:HA	53:AR:57:ALA:HB1	1.97	0.47
1:BA:56:U:H2'	1:BA:57:G:C8	2.49	0.47
1:BA:161:A:H2'	1:BA:162:A:C8	2.50	0.47
1:BA:269:C:H2'	1:BA:270:A:C8	2.50	0.47
1:BA:683:G:O6	1:BA:707:U:O4	2.33	0.47
1:BA:1513:A:H2'	1:BA:1514:G:C8	2.50	0.47
2:DA:247:G:HO2'	2:DA:386:G:H1	1.61	0.47
2:DA:309:A:H4'	24:DU:15:GLY:HA2	1.97	0.47
2:DA:775:G:N2	2:DA:793:A:O3'	2.48	0.47
14:DK:78:ARG:NH1	19:DP:70:GLU:OE1	2.46	0.47
33:D3:41:ARG:HG3	33:D3:44:VAL:HG22	1.97	0.47
38:BC:152:GLU:HG3	38:BC:167:TRP:HB3	1.97	0.47
42:BG:14:ASP:HB3	42:BG:19:SER:H	1.79	0.47
48:BM:89:ARG:HD3	48:BM:96:VAL:HG12	1.95	0.47
50:BO:86:LEU:HD12	50:BO:87:ARG:HB2	1.97	0.47
1:AA:616:G:H2'	1:AA:617:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:789:U:N3	1:AA:792:A:OP2	2.39	0.47
2:CA:4:U:H2'	2:CA:5:A:C8	2.50	0.47
2:CA:328:U:O2	24:CU:67:SER:OG	2.26	0.47
2:CA:718:A:N6	58:CA:3475:HOH:O	2.47	0.47
2:CA:1011:G:OP2	20:CQ:69:ARG:NH1	2.48	0.47
2:CA:1153:C:H5'	20:CQ:75:TYR:HE2	1.80	0.47
2:CA:1521:G:H1'	58:CA:3219:HOH:O	2.14	0.47
3:CB:43:C:H4'	8:CF:94:ARG:HH21	1.80	0.47
5:CC:257:ARG:NH2	5:CC:262:THR:OG1	2.42	0.47
10:CH:8:LYS:H	10:CH:8:LYS:HD2	1.79	0.47
11:C5:30:SER:HB3	11:C5:81:LEU:HD22	1.97	0.47
15:CL:63:LYS:HD2	34:C4:11:LYS:HD3	1.97	0.47
15:CL:79:LEU:HB3	15:CL:116:VAL:HB	1.95	0.47
48:AM:17:ALA:O	48:AM:20:SER:OG	2.29	0.47
50:AO:3:SER:O	50:AO:4:THR:C	2.52	0.47
1:BA:62:U:H1'	1:BA:379:C:H1'	1.96	0.47
1:BA:77:A:H2'	1:BA:78:A:H8	1.79	0.47
1:BA:979:C:O2'	1:BA:1220:G:OP2	2.26	0.47
1:BA:1028:C:O2'	1:BA:1029:U:P	2.72	0.47
2:DA:383:C:N3	2:DA:392:U:O4	2.47	0.47
2:DA:1295:C:H2'	2:DA:1296:G:H8	1.80	0.47
2:DA:1341:G:OP1	2:DA:1397:U:N3	2.42	0.47
2:DA:2070:A:H2'	2:DA:2071:A:H8	1.80	0.47
2:DA:2241:A:H2'	2:DA:2242:G:C8	2.49	0.47
2:DA:2525:G:HO2'	2:DA:2742:G:HO2'	1.63	0.47
2:DA:2739:U:H2'	2:DA:2740:A:H8	1.79	0.47
3:DB:14:U:OP2	3:DB:70:C:O2'	2.31	0.47
4:BV:8:U:H3	4:BV:14:A:H62	1.61	0.47
14:DK:13:ASN:ND2	14:DK:97:THR:OG1	2.43	0.47
25:DV:9:ARG:HD3	25:DV:39:ALA:HB1	1.97	0.47
26:DW:49:ALA:HB3	26:DW:81:SER:HB2	1.96	0.47
35:D6:25:VAL:HB	35:D6:35:GLN:HB2	1.97	0.47
37:BB:91:VAL:HG11	37:BB:95:TRP:HD1	1.78	0.47
47:BL:21:PRO:HD2	47:BL:93:ARG:HH21	1.79	0.47
47:BL:67:GLY:O	47:BL:98:ARG:NH1	2.39	0.47
49:BN:64:CYS:SG	49:BN:65:ARG:N	2.88	0.47
1:AA:1118:U:H5'	44:AI:105:ARG:HG2	1.97	0.47
2:CA:385:C:O2'	2:CA:388:G:N2	2.45	0.47
2:CA:1798:U:OP2	5:CC:270:ARG:NH2	2.48	0.47
8:CF:112:ASP:OD2	48:AM:69:ARG:NE	2.48	0.47
10:CH:27:ARG:NH1	27:CX:55:MET:SD	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CO:39:VAL:HB	18:CO:49:VAL:HB	1.97	0.47
34:C4:24:LYS:HE3	34:C4:28:LEU:HD23	1.97	0.47
1:BA:1030:U:C6	1:BA:1030:U:P	3.07	0.47
2:DA:1159:U:H2'	2:DA:1160:G:H8	1.78	0.47
2:DA:1243:C:O2'	15:DL:6:LEU:O	2.32	0.47
2:DA:1668:A:N1	58:DA:3291:HOH:O	2.36	0.47
5:DC:144:GLU:HG2	5:DC:151:GLY:H	1.80	0.47
1:AA:147:G:H2'	1:AA:148:G:C8	2.49	0.47
1:AA:473:U:H2'	1:AA:474:G:C8	2.50	0.47
1:AA:877:G:H2'	1:AA:878:A:C8	2.49	0.47
1:AA:1221:G:OP1	54:AS:35:ARG:NH1	2.48	0.47
58:AA:1761:HOH:O	50:AO:57:ARG:NH1	2.43	0.47
2:CA:2370:G:O2'	32:C2:43:ARG:NH1	2.48	0.47
5:CC:68:ARG:NH1	5:CC:128:THR:OG1	2.48	0.47
8:CF:56:LEU:HD23	8:CF:59:ILE:HD12	1.97	0.47
10:CH:1:MET:N	10:CH:21:VAL:O	2.48	0.47
52:AQ:19:SER:HB2	52:AQ:70:LYS:HZ1	1.80	0.47
1:BA:553:A:H5"	47:BL:20:VAL:HG21	1.97	0.47
1:BA:981:U:O2'	49:BN:61:ARG:NH1	2.48	0.47
2:DA:381:G:OP1	27:DX:17:ARG:NH1	2.48	0.47
2:DA:480:A:H4'	24:DU:43:LYS:HB2	1.97	0.47
2:DA:543:G:N2	58:DA:3428:HOH:O	2.46	0.47
2:DA:748:G:OP2	22:DS:88:ARG:NE	2.43	0.47
2:DA:2055:C:N4	2:DA:2499:C:O2	2.48	0.47
2:DA:2233:U:H2'	2:DA:2234:G:H8	1.80	0.47
2:DA:2506:U:O2'	4:BV:76:A:O2'	2.30	0.47
3:DB:8:C:H42	3:DB:112:G:H1	1.63	0.47
4:BV:49:G:H2'	4:BV:50:G:H8	1.79	0.47
10:DH:65:ALA:HB1	10:DH:134:VAL:HG12	1.97	0.47
39:BD:7:LYS:HB3	39:BD:20:LEU:HD13	1.97	0.47
1:AA:34:C:H2'	1:AA:35:G:H8	1.80	0.47
1:AA:1492:A:N3	36:AX:22:U:O2'	2.42	0.47
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.80	0.47
2:CA:177:G:H3'	2:CA:178:G:H8	1.80	0.47
2:CA:1214:A:H62	2:CA:1235:G:N2	2.11	0.47
2:CA:1356:G:O6	2:CA:1375:U:O4	2.33	0.47
2:CA:2646:C:OP2	2:CA:2732:G:O2'	2.33	0.47
2:CA:2648:G:O6	2:CA:2672:U:O4	2.33	0.47
3:CB:2:G:O6	3:CB:119:A:N6	2.48	0.47
3:CB:27:C:OP1	18:CO:34:HIS:NE2	2.43	0.47
38:AC:10:ILE:HG23	38:AC:11:ARG:HD2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AF:9:MET:HB2	41:AF:85:ILE:HG13	1.96	0.47
1:BA:41:G:H2'	1:BA:42:G:C8	2.50	0.47
1:BA:501:C:H2'	1:BA:502:A:H8	1.80	0.47
1:BA:675:A:H2'	1:BA:676:A:H8	1.80	0.47
1:BA:1115:U:H5'	45:BJ:68:ARG:HH22	1.79	0.47
1:BA:1367:C:OP1	45:BJ:62:ARG:NH1	2.48	0.47
2:DA:581:C:H2'	2:DA:582:A:C8	2.50	0.47
2:DA:1640:A:H2'	2:DA:1641:A:H8	1.80	0.47
2:DA:1857:G:N2	2:DA:1884:G:N3	2.63	0.47
2:DA:2140:G:N2	2:DA:2151:U:O2	2.41	0.47
1:AA:398:U:H2'	1:AA:399:G:H8	1.79	0.46
1:AA:677:U:O2	1:AA:777:A:O2'	2.32	0.46
2:CA:607:U:O4	2:CA:621:A:N7	2.48	0.46
2:CA:763:G:O2'	58:CA:3203:HOH:O	2.21	0.46
2:CA:1469:A:H2'	2:CA:1470:A:H8	1.79	0.46
2:CA:1571:A:H2'	2:CA:1572:A:C8	2.50	0.46
2:CA:1798:U:O2'	2:CA:1802:A:N3	2.48	0.46
2:CA:1853:A:N7	2:CA:1889:A:N6	2.63	0.46
2:CA:2334:U:O2'	18:CO:13:ARG:NH2	2.47	0.46
4:AV:4:U:H2'	4:AV:5:G:H8	1.79	0.46
5:CC:160:TYR:HB3	5:CC:193:GLU:HG2	1.97	0.46
42:AG:108:ARG:O	42:AG:118:ARG:NH2	2.47	0.46
45:AJ:12:ALA:HB2	45:AJ:96:VAL:HG22	1.97	0.46
45:AJ:40:ILE:HD12	45:AJ:73:LEU:HB3	1.96	0.46
1:BA:1372:U:OP2	44:BI:12:LYS:NZ	2.40	0.46
2:DA:4:U:H2'	2:DA:5:A:C8	2.50	0.46
2:DA:65:U:O2'	2:DA:456:C:N3	2.43	0.46
2:DA:2329:U:H2'	2:DA:2330:G:C8	2.50	0.46
38:BC:19:ASN:ND2	49:BN:90:ARG:O	2.49	0.46
47:BL:23:LEU:HG	47:BL:24:GLU:HG3	1.96	0.46
49:BN:69:ARG:HH11	49:BN:82:ILE:HD11	1.80	0.46
1:AA:324:G:N1	1:AA:327:A:OP2	2.43	0.46
2:CA:406:G:H2'	2:CA:407:G:H8	1.80	0.46
2:CA:537:G:H21	2:CA:556:A:H62	1.62	0.46
2:CA:1315:C:O2'	2:CA:1392:A:N3	2.48	0.46
2:CA:2087:G:H2'	2:CA:2088:A:C8	2.50	0.46
4:AV:54:U:O4	4:AV:58:A:N7	2.48	0.46
6:CD:46:ARG:NH1	6:CD:86:GLU:N	2.63	0.46
38:AC:85:GLU:HA	38:AC:88:ARG:HG2	1.97	0.46
43:AH:4:ASP:OD2	43:AH:7:ALA:N	2.41	0.46
44:AI:112:ARG:NH1	49:AN:101:TRP:OXT	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:709:U:H2'	1:BA:710:G:H8	1.80	0.46
1:BA:1116:U:H3	1:BA:1184:G:H1	1.64	0.46
2:DA:572:A:H61	2:DA:2029:G:N2	2.12	0.46
2:DA:694:U:O4	2:DA:768:G:O6	2.33	0.46
2:DA:1666:G:N3	14:DK:3:GLN:NE2	2.62	0.46
2:DA:2602:A:N6	4:BW:76:A:O2'	2.42	0.46
14:DK:24:VAL:HG13	14:DK:33:ALA:HB2	1.98	0.46
44:BI:111:GLU:OE2	44:BI:114:LYS:NZ	2.43	0.46
47:BL:42:LYS:HG2	47:BL:43:LYS:H	1.80	0.46
1:AA:164:G:H2'	1:AA:165:G:C8	2.50	0.46
1:AA:1001:C:H42	1:AA:1039:G:H22	1.63	0.46
1:AA:1220:G:H2'	1:AA:1221:G:C8	2.50	0.46
2:CA:495:G:N3	22:CS:61:ASN:ND2	2.60	0.46
2:CA:662:G:H1'	15:CL:14:LYS:HD3	1.97	0.46
2:CA:729:G:OP1	5:CC:9:SER:OG	2.32	0.46
2:CA:1072:C:O2'	2:CA:1094:U:O4	2.33	0.46
9:CG:93:TYR:OH	9:CG:151:ARG:NH1	2.47	0.46
47:AL:113:ARG:HB2	47:AL:118:VAL:HB	1.97	0.46
1:BA:262:A:H2'	1:BA:263:A:C8	2.51	0.46
1:BA:950:U:H3'	48:BM:100:ARG:HH22	1.80	0.46
9:DG:163:TYR:HB2	9:DG:166:GLU:HG2	1.97	0.46
15:DL:60:ARG:HG3	15:DL:61:LEU:HD12	1.98	0.46
38:BC:7:PRO:HG3	38:BC:175:LEU:HD11	1.96	0.46
48:BM:89:ARG:NE	48:BM:95:PRO:O	2.47	0.46
1:AA:25:C:H2'	1:AA:26:A:H8	1.80	0.46
1:AA:230:G:OP1	51:AP:31:ARG:NH2	2.49	0.46
1:AA:715:A:H2'	1:AA:716:A:C8	2.50	0.46
1:AA:740:U:P	50:AO:1:SER:N	2.88	0.46
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.46	0.46
1:AA:1228:C:H5"	48:AM:106:ARG:HH22	1.80	0.46
1:AA:1395:C:HO2'	1:AA:1401:G:HO2'	1.62	0.46
2:CA:635:C:O2'	2:CA:639:U:OP1	2.34	0.46
31:C1:37:HIS:ND1	31:C1:38:LEU:O	2.48	0.46
39:AD:150:LYS:NZ	39:AD:150:LYS:CB	2.78	0.46
40:AE:113:VAL:HG21	40:AE:140:ILE:HD11	1.98	0.46
1:BA:980:C:H5"	1:BA:981:U:H5	1.80	0.46
1:BA:1160:G:H1	1:BA:1176:A:N6	2.11	0.46
1:BA:1360:A:OP2	49:BN:75:ARG:NH2	2.47	0.46
2:DA:1056:G:N2	2:DA:1103:A:N6	2.64	0.46
2:DA:1434:A:H2'	2:DA:1435:G:H8	1.80	0.46
2:DA:2070:A:H2'	2:DA:2071:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:8:MET:HB3	37:BB:42:LEU:HD11	1.97	0.46
48:BM:63:VAL:HG11	48:BM:67:ASP:HB2	1.95	0.46
1:AA:406:G:O2'	39:AD:2:ARG:NH2	2.48	0.46
1:AA:927:G:H2'	1:AA:928:G:H8	1.78	0.46
2:CA:748:G:OP2	22:CS:88:ARG:NE	2.45	0.46
2:CA:1482:G:H2'	2:CA:1483:G:H8	1.81	0.46
26:CW:37:ILE:HD11	26:CW:61:ALA:HB2	1.97	0.46
38:AC:56:VAL:HB	38:AC:67:THR:HB	1.98	0.46
39:AD:150:LYS:HZ2	39:AD:150:LYS:HB3	1.81	0.46
50:AO:2:LEU:HD11	50:AO:34:GLN:HA	1.97	0.46
1:BA:255:G:O6	1:BA:266:G:O6	2.33	0.46
1:BA:715:A:H2'	1:BA:716:A:C8	2.50	0.46
1:BA:781:A:O2'	1:BA:1522:U:O2	2.33	0.46
1:BA:1231:G:O2'	44:BI:127:SER:OG	2.24	0.46
1:BA:1323:G:H2'	1:BA:1324:A:C8	2.51	0.46
2:DA:807:U:H2'	2:DA:808:G:H8	1.80	0.46
2:DA:1422:G:H2'	2:DA:1423:G:H8	1.80	0.46
2:DA:1770:G:O2'	2:DA:1938:A:OP1	2.28	0.46
2:DA:2282:G:N2	2:DA:2425:A:N7	2.63	0.46
37:BB:27:LYS:HA	37:BB:30:ILE:HD12	1.98	0.46
37:BB:81:ASP:OD1	37:BB:82:ALA:N	2.48	0.46
47:BL:31:GLY:O	47:BL:78:VAL:HA	2.15	0.46
1:AA:694:A:O2'	4:AY:37:A:N3	2.48	0.46
1:AA:768:A:N3	1:AA:1512:U:O2'	2.48	0.46
2:CA:2303:G:O2'	8:CF:120:SER:O	2.30	0.46
2:CA:2340:A:H2'	2:CA:2341:G:C8	2.51	0.46
2:CA:2676:C:H2'	2:CA:2677:G:H8	1.81	0.46
3:CB:70:C:H2'	3:CB:71:C:H6	1.81	0.46
13:CJ:56:VAL:HB	13:CJ:124:VAL:HG12	1.97	0.46
15:CL:94:THR:HA	15:CL:97:ALA:HB3	1.97	0.46
17:CN:95:THR:N	17:CN:116:VAL:CG2	2.79	0.46
1:BA:551:U:O2'	47:BL:82:ARG:NH1	2.47	0.46
1:BA:600:A:H2'	1:BA:601:G:C8	2.51	0.46
1:BA:643:C:H5"	43:BH:31:LEU:HD11	1.96	0.46
2:DA:742:A:H2'	2:DA:743:A:C8	2.51	0.46
2:DA:1589:U:H2'	2:DA:1590:A:C8	2.51	0.46
2:DA:1799:G:OP2	5:DC:269:ARG:NH2	2.41	0.46
2:DA:2748:A:H5'	9:DG:3:VAL:HG21	1.98	0.46
5:DC:5:CYS:SG	5:DC:12:ARG:NH2	2.89	0.46
5:DC:106:PRO:HD2	5:DC:109:LEU:HD22	1.96	0.46
4:BW:15:G:N1	4:BW:48:C:N3	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:130:LYS:HA	37:BB:133:ALA:HB3	1.98	0.46
38:BC:157:LEU:HD22	38:BC:164:ARG:HE	1.81	0.46
43:BH:60:LEU:O	58:BH:201:HOH:O	2.21	0.46
45:BJ:12:ALA:HB2	45:BJ:96:VAL:HG13	1.96	0.46
1:AA:510:A:HO2'	1:AA:542:G:HO2'	1.62	0.46
1:AA:625:U:H2'	1:AA:626:G:H8	1.80	0.46
2:CA:1143:A:OP1	13:CJ:27:ARG:NH2	2.40	0.46
2:CA:1173:U:O2'	2:CA:1176:U:O4	2.34	0.46
2:CA:2039:U:H2'	2:CA:2040:G:C8	2.50	0.46
10:CH:8:LYS:HB3	10:CH:15:LEU:HD12	1.97	0.46
46:AK:22:ILE:HD11	46:AK:85:VAL:HG22	1.97	0.46
1:BA:114:U:H2'	1:BA:115:G:C8	2.51	0.46
1:BA:203:G:N2	1:BA:204:G:O6	2.43	0.46
1:BA:714:G:H2'	1:BA:715:A:C8	2.51	0.46
2:DA:5:A:H2'	2:DA:6:A:H8	1.81	0.46
2:DA:182:A:H2	2:DA:433:C:H1'	1.81	0.46
2:DA:328:U:O2	24:DU:67:SER:OG	2.32	0.46
2:DA:2692:G:N2	2:DA:2848:G:OP1	2.46	0.46
1:AA:164:G:H2'	1:AA:165:G:H8	1.81	0.46
1:AA:586:C:O2'	43:AH:3:GLN:OE1	2.31	0.46
1:AA:1175:G:H2'	1:AA:1176:A:H8	1.81	0.46
2:CA:1969:A:O2'	2:CA:1972:G:N3	2.37	0.46
13:CJ:34:ARG:HG3	13:CJ:39:LYS:HB2	1.98	0.46
38:AC:9:GLY:HA2	38:AC:12:LEU:HD21	1.98	0.46
1:BA:73:C:O2	1:BA:73:C:H2'	2.16	0.46
1:BA:138:G:H2'	1:BA:139:A:C8	2.51	0.46
2:DA:463:G:O2'	2:DA:465:G:O6	2.30	0.46
2:DA:1036:G:N2	2:DA:1119:U:O2	2.34	0.46
2:DA:1140:C:H5'	13:DJ:26:GLY:HA3	1.97	0.46
2:DA:2804:U:H2'	2:DA:2805:C:H6	1.81	0.46
5:DC:244:VAL:HG12	5:DC:250:GLN:HA	1.97	0.46
36:BX:26:A:C2	38:BC:162:ILE:HD11	2.50	0.46
1:AA:160:A:N7	1:AA:343:U:O2'	2.49	0.46
1:AA:543:U:H2'	1:AA:544:G:H8	1.81	0.46
1:AA:684:U:O2'	46:AK:40:ALA:N	2.49	0.46
2:CA:358:U:H2'	2:CA:359:G:H8	1.80	0.46
2:CA:1440:U:H2'	2:CA:1441:G:C8	2.51	0.46
4:AY:15:G:H1	4:AY:21:A:H1'	1.80	0.46
24:CU:84:PHE:HE1	24:CU:93:ARG:HG2	1.81	0.46
1:BA:21:G:H2'	1:BA:22:G:H8	1.81	0.46
1:BA:401:C:H2'	1:BA:402:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:973:G:O3'	49:BN:81:ARG:NH2	2.49	0.46
1:BA:1221:G:OP1	54:BS:35:ARG:NH1	2.49	0.46
2:DA:521:U:H2'	2:DA:522:A:H8	1.80	0.46
2:DA:851:C:O2'	29:DZ:42:ALA:O	2.31	0.46
2:DA:1059:G:N2	12:DI:127:SER:OG	2.49	0.46
2:DA:1069:A:H4'	2:DA:1070:A:C8	2.51	0.46
2:DA:1125:G:OP2	2:DA:1126:A:O2'	2.34	0.46
2:DA:1130:U:C2	2:DA:2025:C:H5"	2.51	0.46
2:DA:1630:A:N1	2:DA:1637:A:N6	2.63	0.46
2:DA:2131:U:H5'	2:DA:2132:U:H5"	1.98	0.46
39:BD:104:MET:HG2	39:BD:170:LEU:HD13	1.98	0.46
1:AA:1002:G:H2'	1:AA:1003:G:C8	2.51	0.46
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.52	0.46
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.80	0.46
2:CA:571:U:O2'	2:CA:573:U:O5'	2.33	0.46
2:CA:665:U:H2'	2:CA:666:A:C8	2.51	0.46
2:CA:2285:C:OP2	32:C2:5:ARG:NH1	2.46	0.46
25:CV:52:ALA:N	58:CV:102:HOH:O	2.32	0.46
41:AF:3:HIS:ND1	41:AF:65:GLU:HB3	2.31	0.46
48:AM:91:ARG:HG3	48:AM:92:ARG:HG3	1.97	0.46
1:BA:947:G:O3'	48:BM:107:THR:OG1	2.32	0.46
1:BA:1377:A:H5'	1:BA:1378:C:H5'	1.98	0.46
2:DA:15:G:N2	2:DA:525:U:O2	2.38	0.46
2:DA:414:C:H1'	2:DA:1864:U:H1'	1.97	0.46
2:DA:570:G:N2	2:DA:2030:A:O4'	2.48	0.46
2:DA:720:U:H2'	2:DA:721:A:C8	2.51	0.46
2:DA:1161:C:H2'	2:DA:1162:G:H8	1.80	0.46
2:DA:1164:C:H2'	2:DA:1165:A:C8	2.49	0.46
2:DA:1306:C:H2'	2:DA:1307:A:H8	1.81	0.46
2:DA:1566:A:O5'	5:DC:213:ARG:NH2	2.48	0.46
14:DK:5:GLN:N	14:DK:21:CYS:O	2.49	0.46
39:BD:10:LEU:HD13	39:BD:62:ARG:HB3	1.98	0.46
44:BI:29:ILE:CG2	44:BI:32:ARG:O	2.60	0.46
45:BJ:12:ALA:HB3	45:BJ:18:ILE:HD12	1.98	0.46
51:BP:12:LYS:NZ	58:BP:102:HOH:O	2.49	0.46
55:BT:14:GLU:OE2	55:BT:17:ARG:NH2	2.45	0.46
1:AA:745:G:OP1	1:AA:851:G:O2'	2.31	0.45
1:AA:837:U:H2'	1:AA:838:G:C8	2.51	0.45
2:CA:494:G:N2	22:CS:57:ASN:OD1	2.49	0.45
2:CA:968:C:H2'	2:CA:969:G:H8	1.80	0.45
2:CA:1287:A:O4'	17:CN:103:ARG:NH1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CF:62:GLN:HE21	8:CF:88:VAL:HG13	1.80	0.45
45:AJ:52:LEU:O	49:AN:81:ARG:NH1	2.49	0.45
46:AK:34:THR:OG1	46:AK:35:ASP:N	2.49	0.45
1:BA:600:A:H2'	1:BA:601:G:H8	1.81	0.45
1:BA:1013:G:OP1	54:BS:20:LYS:NZ	2.49	0.45
1:BA:1058:G:OP1	38:BC:199:LYS:NZ	2.47	0.45
2:DA:216:A:H62	2:DA:431:U:H3	1.64	0.45
2:DA:1531:C:H42	2:DA:1540:G:H1	1.65	0.45
48:BM:85:TYR:CZ	48:BM:89:ARG:HD2	2.51	0.45
1:AA:25:C:H2'	1:AA:26:A:C8	2.51	0.45
1:AA:372:C:H42	1:AA:389:A:N6	2.12	0.45
1:AA:416:G:H2'	1:AA:417:G:H8	1.82	0.45
1:AA:434:U:H2'	1:AA:435:A:C8	2.51	0.45
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.51	0.45
2:CA:2070:A:H2'	2:CA:2071:A:H8	1.81	0.45
2:CA:2313:C:O4'	8:CF:36:ASN:ND2	2.49	0.45
10:CH:104:THR:HG22	10:CH:109:GLU:HA	1.97	0.45
15:CL:90:VAL:HG13	15:CL:95:LEU:HD11	1.98	0.45
18:CO:7:ARG:NH1	18:CO:95:SER:OG	2.45	0.45
23:CT:3:ARG:HB3	23:CT:6:ARG:HB3	1.97	0.45
36:AX:12:A:H2'	36:AX:13:A:H8	1.81	0.45
1:BA:427:U:H3'	1:BA:428:G:H2'	1.96	0.45
1:BA:429:U:H5'	39:BD:8:LEU:HD21	1.97	0.45
2:DA:321:U:O2'	2:DA:340:A:N3	2.42	0.45
2:DA:1258:U:H2'	2:DA:1259:G:C8	2.51	0.45
2:DA:1383:A:N3	2:DA:1405:U:O2'	2.43	0.45
9:DG:27:GLY:HA3	9:DG:78:VAL:HB	1.98	0.45
9:DG:67:ALA:HA	9:DG:70:LEU:HD12	1.97	0.45
39:BD:14:GLU:OE2	39:BD:55:ARG:NH1	2.49	0.45
47:BL:86:VAL:HG12	47:BL:88:ASP:H	1.81	0.45
48:BM:56:ARG:HA	48:BM:59:VAL:HG12	1.99	0.45
1:AA:360:G:H2'	1:AA:361:G:C8	2.52	0.45
1:AA:490:C:H2'	1:AA:491:G:C8	2.49	0.45
2:CA:601:C:O2'	2:CA:605:G:OP1	2.33	0.45
2:CA:1469:A:H2'	2:CA:1470:A:C8	2.51	0.45
2:CA:1529:G:O6	2:CA:1542:U:O4	2.34	0.45
2:CA:2591:C:H2'	2:CA:2592:G:C8	2.52	0.45
3:CB:78:A:H62	3:CB:98:G:N2	2.10	0.45
3:CB:95:U:H2'	3:CB:96:G:H8	1.81	0.45
11:C5:44:ALA:HA	11:C5:47:GLU:HB3	1.99	0.45
41:AF:3:HIS:HB2	41:AF:92:THR:HG23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:AL:47:ALA:HB3	47:AL:49:ARG:HE	1.81	0.45
1:BA:410:G:H21	1:BA:432:A:H62	1.64	0.45
2:DA:659:G:H21	7:DE:30:GLN:HE22	1.64	0.45
2:DA:1112:G:O2'	9:DG:2:ARG:NH1	2.45	0.45
2:DA:1889:A:N3	2:DA:2086:U:O2'	2.33	0.45
2:DA:2680:U:OP2	6:DD:116:LYS:NZ	2.49	0.45
3:DB:49:C:OP2	18:DO:30:ARG:NH2	2.42	0.45
44:BI:30:ASN:OD1	44:BI:65:THR:HA	2.16	0.45
48:BM:15:VAL:HG23	48:BM:16:ILE:HD12	1.98	0.45
1:AA:417:G:N2	1:AA:426:U:O2	2.47	0.45
2:CA:155:A:H2'	2:CA:156:A:C8	2.51	0.45
2:CA:1123:C:H2'	2:CA:1124:G:C8	2.52	0.45
2:CA:2099:U:O4	2:CA:2190:G:O6	2.33	0.45
2:CA:2818:U:O2'	2:CA:2836:U:O2'	2.34	0.45
13:CJ:12:LYS:O	13:CJ:41:LYS:NZ	2.50	0.45
22:CS:28:LYS:HG2	22:CS:70:LYS:HG3	1.98	0.45
37:AB:71:THR:HG23	37:AB:94:ARG:HA	1.99	0.45
37:AB:215:ALA:HA	37:AB:218:ALA:HB3	1.99	0.45
1:BA:34:C:H2'	1:BA:35:G:H8	1.81	0.45
1:BA:150:U:H2'	1:BA:151:A:H8	1.82	0.45
1:BA:382:A:H2'	1:BA:383:A:C8	2.51	0.45
1:BA:538:G:H5"	47:BL:110:LYS:HB2	1.99	0.45
1:BA:599:C:H2'	1:BA:600:A:H8	1.82	0.45
1:BA:836:G:N1	1:BA:851:G:N7	2.64	0.45
1:BA:1040:U:H2'	1:BA:1041:G:H8	1.80	0.45
2:DA:222:A:H61	2:DA:232:G:H1'	1.80	0.45
2:DA:375:G:H2'	2:DA:376:G:H8	1.81	0.45
2:DA:576:U:H2'	2:DA:577:G:C8	2.52	0.45
2:DA:598:U:H2'	2:DA:599:A:C8	2.52	0.45
2:DA:665:U:H2'	2:DA:666:A:H8	1.81	0.45
2:DA:696:G:O6	2:DA:766:U:O4	2.35	0.45
2:DA:1071:G:O6	2:DA:1072:C:N4	2.50	0.45
2:DA:2314:A:H2'	2:DA:2315:G:H8	1.81	0.45
13:DJ:32:LEU:HD22	13:DJ:54:ILE:HG21	1.99	0.45
44:BI:91:GLU:OE2	44:BI:94:ARG:NH1	2.49	0.45
51:BP:79:ASN:O	51:BP:82:ALA:N	2.49	0.45
53:BR:32:ILE:HG22	53:BR:38:ILE:HA	1.99	0.45
1:AA:182:A:N6	58:AA:1812:HOH:O	2.49	0.45
1:AA:475:C:H2'	1:AA:476:U:C6	2.52	0.45
2:CA:72:U:OP2	28:CY:54:LYS:NZ	2.49	0.45
2:CA:568:U:N3	2:CA:571:U:OP2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:861:A:N3	3:CB:79:G:O2'	2.48	0.45
2:CA:1638:C:O2	2:CA:2698:U:O2'	2.34	0.45
2:CA:1999:C:O2	2:CA:2687:U:O2'	2.31	0.45
2:CA:2718:G:O2'	2:CA:2847:U:OP1	2.27	0.45
2:CA:2728:U:HO2'	2:CA:2729:G:H8	1.64	0.45
35:C6:2:LYS:HG3	35:C6:35:GLN:HG2	1.98	0.45
4:AW:65:C:H2'	4:AW:66:A:H8	1.81	0.45
38:AC:148:GLY:HA2	38:AC:171:GLY:HA3	1.97	0.45
44:AI:40:ARG:O	44:AI:44:ARG:NH2	2.49	0.45
1:BA:437:U:H3	1:BA:495:A:H62	1.65	0.45
2:DA:771:G:H1'	2:DA:1354:A:H2	1.80	0.45
2:DA:1769:U:O4	2:DA:1983:G:O6	2.34	0.45
2:DA:2074:U:O2'	2:DA:2597:G:O2'	2.33	0.45
2:DA:2417:C:H4'	34:D4:44:ARG:HH21	1.81	0.45
8:DF:33:ILE:HA	8:DF:154:THR:O	2.16	0.45
16:DM:31:PHE:HD1	16:DM:130:PHE:HZ	1.64	0.45
23:DT:69:ARG:NH1	23:DT:71:GLY:O	2.50	0.45
38:BC:85:GLU:OE1	38:BC:89:LYS:NZ	2.50	0.45
1:AA:739:C:HO2'	50:AO:41:HIS:CE1	2.33	0.45
1:AA:859:G:H2'	1:AA:860:A:C8	2.52	0.45
1:AA:940:C:H2'	1:AA:941:G:C8	2.51	0.45
2:CA:143:C:H2'	2:CA:144:A:H8	1.82	0.45
2:CA:2526:G:O6	2:CA:2537:U:O4	2.34	0.45
2:CA:2730:C:O2'	6:CD:173:GLN:O	2.31	0.45
6:CD:110:THR:HG21	6:CD:169:ARG:HE	1.82	0.45
1:BA:322:C:N4	1:BA:329:A:H62	2.13	0.45
1:BA:585:G:C2	1:BA:757:U:O2	2.70	0.45
1:BA:701:U:O2	1:BA:703:G:N1	2.50	0.45
1:BA:1150:A:N3	45:BJ:41:PRO:HG3	2.31	0.45
1:BA:1289:A:H3'	1:BA:1290:G:H8	1.80	0.45
2:DA:216:A:H2'	2:DA:217:A:H8	1.81	0.45
2:DA:1470:A:H62	2:DA:1521:G:N2	2.15	0.45
2:DA:1604:C:H2'	2:DA:1605:C:H6	1.82	0.45
2:DA:1848:A:H2'	2:DA:1849:G:H8	1.82	0.45
2:DA:1965:C:H5"	2:DA:1966:A:H2'	1.98	0.45
21:DR:35:PHE:HB2	21:DR:59:ILE:HB	1.99	0.45
54:BS:43:MET:HA	54:BS:46:LEU:HD12	1.99	0.45
1:AA:312:C:H2'	1:AA:313:A:H8	1.81	0.45
2:CA:1089:A:H2	2:CA:1090:A:H62	1.64	0.45
2:CA:1326:U:H2'	2:CA:1327:A:C8	2.49	0.45
7:CE:77:ILE:HG23	7:CE:78:TRP:HE3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AE:154:ALA:N	58:AE:205:HOH:O	2.49	0.45
45:AJ:7:ARG:O	45:AJ:100:ILE:HA	2.16	0.45
1:BA:164:G:H2'	1:BA:165:G:H8	1.82	0.45
1:BA:396:C:O2'	1:BA:398:U:OP1	2.32	0.45
2:DA:5:A:H2'	2:DA:6:A:C8	2.52	0.45
2:DA:282:A:H2'	2:DA:283:G:C8	2.52	0.45
2:DA:296:U:H2'	2:DA:297:G:H8	1.82	0.45
2:DA:1370:C:H2'	2:DA:1371:G:C8	2.52	0.45
2:DA:1501:G:H2'	2:DA:1502:A:H8	1.82	0.45
2:DA:1518:C:H2'	2:DA:1519:G:H8	1.81	0.45
2:DA:2217:G:H2'	2:DA:2218:G:H8	1.82	0.45
2:DA:2356:U:O4	2:DA:2361:G:O6	2.34	0.45
44:BI:115:VAL:HG21	45:BJ:62:ARG:HB2	1.99	0.45
51:BP:72:ALA:HA	51:BP:75:ILE:HD12	1.98	0.45
1:AA:836:G:O6	1:AA:850:U:O4	2.35	0.45
1:AA:1220:G:OP1	54:AS:36:ARG:NH2	2.49	0.45
2:CA:833:A:H2'	2:CA:834:G:C8	2.51	0.45
2:CA:1341:G:P	2:CA:1397:U:H3	2.40	0.45
2:CA:1590:A:H2'	2:CA:1591:A:C8	2.50	0.45
8:CF:104:THR:HB	8:CF:105:ILE:HG23	1.98	0.45
9:CG:63:GLN:O	9:CG:66:THR:OG1	2.33	0.45
18:CO:62:LEU:HD21	18:CO:70:ALA:HB2	1.99	0.45
35:C6:25:VAL:O	35:C6:34:LYS:HA	2.16	0.45
37:AB:14:HIS:HA	37:AB:40:ILE:HB	1.99	0.45
1:BA:537:G:N2	58:BA:1752:HOH:O	2.42	0.45
1:BA:563:A:O2'	1:BA:566:G:O2'	2.34	0.45
1:BA:599:C:H2'	1:BA:600:A:C8	2.51	0.45
1:BA:881:G:OP1	47:BL:8:ARG:NH1	2.48	0.45
1:BA:950:U:O2	1:BA:1231:G:N2	2.35	0.45
1:BA:1030:U:C6	1:BA:1030:U:OP1	2.70	0.45
1:BA:1030:U:H5"	1:BA:1031:C:H1'	1.97	0.45
2:DA:2399:G:H2'	2:DA:2400:G:H8	1.81	0.45
2:DA:2514:U:H2'	2:DA:2515:C:C6	2.51	0.45
48:BM:1:ALA:HB3	48:BM:8:ILE:HA	1.99	0.45
1:AA:447:G:O2'	1:AA:487:A:N6	2.50	0.45
1:AA:600:A:H2'	1:AA:601:G:C8	2.52	0.45
1:AA:632:U:O2'	43:AH:87:ARG:NH2	2.45	0.45
1:AA:728:A:H2'	1:AA:729:A:H8	1.82	0.45
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.30	0.45
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.51	0.45
2:CA:65:U:O2'	2:CA:456:C:N3	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:612:G:H21	2:CA:616:A:H62	1.65	0.45
15:CL:40:SER:OG	15:CL:41:ARG:NH2	2.50	0.45
26:CW:40:GLN:NE2	26:CW:45:PHE:O	2.40	0.45
1:BA:235:C:H2'	1:BA:236:A:C8	2.51	0.45
1:BA:674:G:H21	46:BK:117:HIS:HD2	1.64	0.45
1:BA:927:G:H2'	1:BA:928:G:C8	2.52	0.45
1:BA:946:A:H2'	1:BA:947:G:H8	1.82	0.45
1:BA:1011:C:H2'	1:BA:1012:A:H8	1.82	0.45
1:BA:1391:U:H2'	1:BA:1392:G:C8	2.52	0.45
1:BA:1513:A:H2'	1:BA:1514:G:H8	1.82	0.45
2:DA:305:C:H2'	2:DA:306:U:C6	2.52	0.45
2:DA:1548:A:H2'	2:DA:1549:A:C8	2.51	0.45
2:DA:2315:G:H2'	2:DA:2316:G:H8	1.82	0.45
7:DE:176:ASP:OD1	7:DE:176:ASP:N	2.49	0.45
47:BL:13:ARG:NE	47:BL:14:LYS:O	2.43	0.45
47:BL:28:GLN:HB3	47:BL:80:LEU:HD11	1.97	0.45
47:BL:103:CYS:SG	47:BL:104:SER:N	2.89	0.45
48:BM:67:ASP:OD1	48:BM:70:ARG:NH1	2.49	0.45
50:BO:52:ARG:HG3	50:BO:55:LEU:HD23	1.98	0.45
1:AA:331:G:O2'	55:AT:2:ASN:ND2	2.49	0.45
1:AA:363:A:N6	47:AL:26:CYS:SG	2.88	0.45
1:AA:724:G:H2'	1:AA:725:G:H8	1.82	0.45
1:AA:1157:A:C2	1:AA:1178:G:N2	2.75	0.45
2:CA:1867:G:O6	2:CA:1875:G:N2	2.49	0.45
2:CA:1923:U:OP1	4:AW:24:G:O2'	2.35	0.45
2:CA:2345:G:O6	2:CA:2371:G:N2	2.42	0.45
30:C0:14:ALA:HA	30:C0:32:LEU:HB3	1.99	0.45
45:AJ:8:ILE:HB	45:AJ:74:VAL:HB	1.99	0.45
1:BA:202:G:H22	1:BA:216:U:H3	1.64	0.45
1:BA:664:G:H22	1:BA:741:G:H1	1.64	0.45
1:BA:1090:U:H3	1:BA:1096:C:N4	2.15	0.45
1:BA:1329:A:H5"	48:BM:25:GLY:N	2.32	0.45
2:DA:1073:A:H3'	2:DA:1074:G:C8	2.52	0.45
2:DA:1127:A:H61	2:DA:2488:G:H21	1.65	0.45
2:DA:1223:G:OP1	21:DR:68:ARG:NH2	2.49	0.45
2:DA:2087:G:H2'	2:DA:2088:A:H8	1.82	0.45
2:DA:2364:C:OP1	26:DW:55:ARG:NH2	2.39	0.45
2:DA:2564:A:OP1	2:DA:2648:G:O2'	2.26	0.45
2:DA:2813:A:H2'	2:DA:2814:A:C8	2.51	0.45
3:DB:63:C:H2'	3:DB:64:G:C8	2.52	0.45
7:DE:25:GLU:OE2	15:DL:7:SER:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:DE:117:ARG:HH12	15:DL:2:ARG:HB2	1.81	0.45
8:DF:113:PHE:HZ	8:DF:175:PRO:HG2	1.82	0.45
1:AA:131:A:HO2'	1:AA:262:A:HO2'	1.64	0.44
1:AA:137:U:C4	1:AA:226:G:O6	2.69	0.44
2:CA:2330:G:O3'	26:CW:44:LYS:NZ	2.44	0.44
11:C5:52:MET:HA	11:C5:83:ALA:HA	1.99	0.44
17:CN:118:ARG:O	17:CN:118:ARG:HD3	2.18	0.44
37:AB:195:VAL:HG12	37:AB:197:PHE:H	1.82	0.44
1:BA:111:G:HO2'	1:BA:389:A:HO2'	1.56	0.44
1:BA:148:G:O2'	1:BA:1446:A:N3	2.39	0.44
1:BA:1016:A:O2'	1:BA:1217:C:O2'	2.33	0.44
1:BA:1540:U:H2'	1:BA:1541:U:H5'	1.99	0.44
2:DA:78:U:O4	2:DA:108:G:O6	2.35	0.44
2:DA:571:U:O2'	2:DA:573:U:O5'	2.34	0.44
2:DA:658:U:H2'	2:DA:659:G:H8	1.82	0.44
2:DA:857:G:H5'	26:DW:69:PHE:HD2	1.82	0.44
2:DA:1600:C:H2'	2:DA:1601:G:H8	1.82	0.44
2:DA:1863:G:N1	2:DA:1880:U:N3	2.57	0.44
2:DA:2356:U:C4	2:DA:2361:G:O6	2.70	0.44
10:DH:135:HIS:HB3	10:DH:138:VAL:HB	1.99	0.44
26:DW:37:ILE:HG22	26:DW:38:VAL:HG23	1.99	0.44
30:D0:11:GLU:HB2	30:D0:25:ARG:HG2	1.98	0.44
30:D0:37:CYS:SG	30:D0:38:SER:N	2.89	0.44
45:BJ:10:LEU:O	45:BJ:71:LEU:HA	2.17	0.44
52:BQ:58:VAL:HG23	52:BQ:77:VAL:HG22	2.00	0.44
1:AA:521:G:HO2'	1:AA:536:C:HO2'	1.63	0.44
1:AA:757:U:OP1	1:AA:822:U:O2'	2.34	0.44
2:CA:324:A:OP2	2:CA:1205:A:N6	2.50	0.44
2:CA:1079:C:N4	2:CA:1088:A:O4'	2.49	0.44
2:CA:2658:C:OP1	9:CG:157:LYS:NZ	2.48	0.44
2:CA:2813:A:H2'	2:CA:2814:A:C8	2.51	0.44
9:CG:23:ILE:O	9:CG:33:THR:HA	2.17	0.44
15:CL:61:LEU:HB2	34:C4:12:ARG:HD3	1.99	0.44
18:CO:33:ARG:HG2	18:CO:34:HIS:CD2	2.51	0.44
2:DA:45:G:H5"	2:DA:46:G:H5'	1.98	0.44
2:DA:668:A:H2'	2:DA:670:A:H62	1.82	0.44
2:DA:968:C:H2'	2:DA:969:G:C8	2.52	0.44
2:DA:1184:U:OP2	29:DZ:30:ARG:NH2	2.49	0.44
2:DA:2081:U:H2'	2:DA:2082:A:C8	2.50	0.44
2:DA:2368:C:H2'	2:DA:2369:A:C8	2.50	0.44
7:DE:108:ILE:HD11	7:DE:181:ILE:HG13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:41:G:H2'	1:AA:42:G:H8	1.83	0.44
1:AA:1238:A:N6	1:AA:1239:A:N7	2.65	0.44
1:AA:1458:G:H5'	55:AT:26:MET:HB3	1.99	0.44
2:CA:958:U:OP2	16:CM:14:LYS:NZ	2.40	0.44
2:CA:2327:A:H2'	2:CA:2328:A:C8	2.52	0.44
4:AV:41:A:H2'	4:AV:42:G:H8	1.82	0.44
5:CC:209:ALA:HA	5:CC:212:TRP:CE2	2.53	0.44
18:CO:71:ALA:HB1	18:CO:106:LEU:HD12	2.00	0.44
26:CW:37:ILE:HG22	26:CW:38:VAL:HG23	1.99	0.44
42:AG:107:ALA:O	42:AG:118:ARG:NE	2.48	0.44
1:BA:203:G:N2	1:BA:215:C:N3	2.64	0.44
1:BA:424:G:H2'	1:BA:425:G:H8	1.82	0.44
2:DA:2303:G:H4'	8:DF:120:SER:HA	1.99	0.44
36:BX:23:A:H4'	47:BL:44:PRO:HA	1.98	0.44
1:AA:587:G:N2	1:AA:754:C:OP2	2.37	0.44
1:AA:1407:C:H2'	1:AA:1408:A:H8	1.83	0.44
2:CA:370:G:O2'	2:CA:424:G:OP1	2.31	0.44
2:CA:968:C:H2'	2:CA:969:G:C8	2.52	0.44
2:CA:1289:C:H2'	2:CA:1290:C:H6	1.82	0.44
2:CA:2092:U:H4'	10:CH:24:GLY:HA3	2.00	0.44
24:CU:44:HIS:HB3	24:CU:57:ILE:HG12	2.00	0.44
24:CU:93:ARG:HB2	24:CU:102:ILE:HD12	1.99	0.44
36:AX:18:G:N1	4:AW:37:A:C2	2.86	0.44
48:AM:2:ARG:H	48:AM:2:ARG:HG2	1.32	0.44
1:BA:1060:U:H2'	1:BA:1061:G:C8	2.52	0.44
1:BA:1432:G:HO2'	1:BA:1433:A:H8	1.65	0.44
2:DA:517:C:OP1	31:D1:12:ARG:NH2	2.46	0.44
2:DA:954:G:O6	2:DA:963:U:O4	2.35	0.44
2:DA:2836:U:H2'	2:DA:2837:A:C8	2.52	0.44
44:BI:18:VAL:HA	44:BI:64:ILE:HG22	1.99	0.44
44:BI:40:ARG:O	44:BI:44:ARG:NH2	2.48	0.44
1:AA:108:G:H5'	1:AA:109:A:H5"	1.98	0.44
1:AA:744:C:H2'	1:AA:745:G:H8	1.82	0.44
1:AA:1377:A:H2'	42:AG:1:PRO:HG2	1.99	0.44
2:CA:642:U:N3	2:CA:645:C:OP2	2.37	0.44
2:CA:777:G:O2'	5:CC:47:ARG:NH2	2.51	0.44
2:CA:2883:A:OP1	31:C1:48:TYR:OH	2.28	0.44
7:CE:181:ILE:HG12	15:CL:2:ARG:HH12	1.82	0.44
14:CK:88:ASN:ND2	14:CK:91:SER:OG	2.51	0.44
17:CN:99:LYS:HB3	31:C1:41:HIS:CD2	2.53	0.44
1:BA:816:A:OP1	1:BA:1526:G:O2'	2.29	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:913:A:OP2	47:BL:87:LYS:NZ	2.37	0.44
1:BA:1189:U:O2'	38:BC:176:HIS:ND1	2.47	0.44
1:BA:1464:U:H2'	1:BA:1465:A:C8	2.50	0.44
2:DA:291:G:O6	2:DA:349:U:O4	2.35	0.44
2:DA:808:G:OP2	15:DL:36:LYS:NZ	2.44	0.44
2:DA:2559:C:H2'	2:DA:2560:A:H8	1.82	0.44
2:DA:2855:C:H2'	2:DA:2856:A:H8	1.83	0.44
5:DC:161:VAL:HG11	5:DC:173:LEU:HD23	1.99	0.44
9:DG:53:PRO:HG3	9:DG:61:TRP:CE2	2.52	0.44
37:BB:65:LYS:HE2	37:BB:156:LEU:O	2.18	0.44
1:AA:501:C:H2'	1:AA:502:A:C8	2.53	0.44
1:AA:1075:U:H2'	1:AA:1076:U:H6	1.83	0.44
2:CA:1808:A:H3'	2:CA:1809:A:C8	2.52	0.44
2:CA:2313:C:H2'	2:CA:2314:A:H8	1.82	0.44
19:CP:47:ILE:HA	19:CP:96:LEU:HD12	1.99	0.44
38:AC:63:SER:HA	38:AC:98:PRO:HG2	2.00	0.44
38:AC:113:ALA:HB1	38:AC:200:VAL:HG13	2.00	0.44
1:BA:78:A:H2'	1:BA:79:G:H8	1.83	0.44
1:BA:744:C:H2'	1:BA:745:G:H8	1.82	0.44
1:BA:1412:C:H2'	1:BA:1413:A:C8	2.53	0.44
2:DA:1130:U:N3	2:DA:2025:C:OP1	2.41	0.44
2:DA:1219:U:H2'	2:DA:1220:G:H8	1.83	0.44
2:DA:2316:G:H2'	2:DA:2317:A:C8	2.51	0.44
9:DG:87:GLN:HB3	9:DG:129:GLU:HG2	2.00	0.44
38:BC:19:ASN:O	38:BC:56:VAL:HA	2.18	0.44
44:BI:48:ARG:NH1	44:BI:52:GLU:OE2	2.50	0.44
45:BJ:57:VAL:HG22	45:BJ:58:ASN:H	1.82	0.44
47:BL:33:CYS:H	47:BL:54:VAL:HG13	1.82	0.44
1:AA:366:A:O2'	1:AA:394:G:N2	2.51	0.44
1:AA:1041:G:H2'	1:AA:1042:A:H8	1.83	0.44
2:CA:807:U:H2'	2:CA:808:G:H8	1.83	0.44
2:CA:2246:G:H2'	2:CA:2247:A:H8	1.83	0.44
5:CC:106:PRO:HG2	5:CC:109:LEU:HB2	1.99	0.44
17:CN:54:LEU:HD23	17:CN:66:ALA:HB2	2.00	0.44
54:AS:45:GLY:N	58:AS:101:HOH:O	2.50	0.44
1:BA:335:C:H2'	1:BA:336:A:H8	1.82	0.44
1:BA:606:G:N2	1:BA:632:U:OP1	2.43	0.44
1:BA:1270:G:H2'	1:BA:1271:A:H8	1.82	0.44
2:DA:503:A:H4'	2:DA:504:A:H3'	2.00	0.44
2:DA:882:G:O6	2:DA:894:U:O2	2.35	0.44
2:DA:1622:G:H2'	2:DA:1623:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:1653:G:O6	17:DN:11:ASN:N	2.42	0.44
2:DA:1704:C:H2'	2:DA:1705:A:H8	1.83	0.44
2:DA:1796:U:H2'	2:DA:1797:G:C8	2.53	0.44
2:DA:2192:U:H2'	2:DA:2193:G:C8	2.53	0.44
2:DA:2290:G:H22	2:DA:2343:U:H1'	1.82	0.44
1:AA:113:G:H1'	1:AA:354:G:H5'	1.98	0.44
1:AA:142:G:N2	1:AA:222:C:N3	2.66	0.44
1:AA:782:A:OP1	1:AA:1514:G:N2	2.51	0.44
1:AA:789:U:O2'	1:AA:791:G:N7	2.35	0.44
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.83	0.44
1:AA:1354:U:H2'	1:AA:1355:G:H8	1.82	0.44
2:CA:79:C:O2'	2:CA:346:A:N3	2.42	0.44
2:CA:674:G:H5"	7:CE:71:GLY:HA3	2.00	0.44
2:CA:2158:A:H1'	2:CA:2159:G:C8	2.53	0.44
2:CA:2398:U:H2'	2:CA:2399:G:H8	1.83	0.44
5:CC:132:ARG:NH2	5:CC:186:ASP:OD1	2.51	0.44
24:CU:27:VAL:HB	24:CU:33:VAL:HG12	1.99	0.44
39:AD:100:VAL:HG21	39:AD:136:VAL:HG21	2.00	0.44
45:AJ:29:ALA:HB1	45:AJ:36:VAL:HG21	2.00	0.44
1:BA:189:A:H2'	1:BA:190:A:C8	2.53	0.44
1:BA:237:G:H2'	1:BA:238:A:C8	2.53	0.44
1:BA:254:G:O3'	52:BQ:70:LYS:NZ	2.45	0.44
1:BA:667:G:H2'	1:BA:668:G:H8	1.83	0.44
1:BA:1069:C:O2'	1:BA:1192:C:O2	2.36	0.44
1:BA:1118:U:OP1	44:BI:105:ARG:NE	2.44	0.44
1:BA:1323:G:H2'	1:BA:1324:A:H8	1.83	0.44
1:BA:1355:G:H2'	1:BA:1356:G:H8	1.83	0.44
2:DA:250:G:OP1	15:DL:59:ARG:NH1	2.51	0.44
2:DA:1068:G:H1	2:DA:1073:A:N6	2.15	0.44
2:DA:1353:A:H2'	2:DA:1354:A:H8	1.82	0.44
2:DA:1463:C:H2'	2:DA:1464:G:C8	2.53	0.44
2:DA:2278:A:N6	26:DW:14:ARG:O	2.51	0.44
2:DA:2548:U:O2'	14:DK:4:GLU:OE1	2.35	0.44
44:BI:31:GLN:OE1	44:BI:31:GLN:HA	2.18	0.44
47:BL:98:ARG:NH2	47:BL:105:GLY:O	2.51	0.44
1:AA:938:A:O2'	42:AG:94:ARG:NH1	2.50	0.44
1:AA:1001:C:H42	1:AA:1039:G:H1	1.66	0.44
1:AA:1225:A:OP1	48:AM:101:THR:N	2.37	0.44
2:CA:18:U:H2'	2:CA:19:A:H8	1.83	0.44
2:CA:1567:G:H3'	5:CC:84:PRO:HG3	2.00	0.44
2:CA:1709:U:H2'	2:CA:1710:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:1987:A:H2'	2:CA:1988:G:C8	2.52	0.44
2:CA:2192:U:H2'	2:CA:2193:G:C8	2.53	0.44
2:CA:2771:C:O2'	6:CD:173:GLN:NE2	2.43	0.44
18:CO:27:VAL:HA	18:CO:93:ASP:HB3	2.00	0.44
1:BA:464:U:H2'	1:BA:465:A:H3'	2.00	0.44
1:BA:1251:A:N3	1:BA:1369:C:O2'	2.46	0.44
1:BA:1484:C:HO2'	2:DA:1960:A:HO2'	1.62	0.44
2:DA:987:C:O2'	2:DA:1000:A:N3	2.39	0.44
2:DA:1166:G:N2	2:DA:1183:U:O2	2.42	0.44
2:DA:1218:G:O6	2:DA:1231:U:O4	2.35	0.44
2:DA:2683:C:O2'	19:DP:74:GLN:NE2	2.51	0.44
2:DA:2735:G:O6	2:DA:2769:U:O4	2.36	0.44
7:DE:147:LEU:HB2	7:DE:183:PHE:HD2	1.83	0.44
19:DP:63:ILE:HA	19:DP:68:GLY:HA2	1.98	0.44
25:DV:77:VAL:HG23	25:DV:89:ILE:HG12	2.00	0.44
44:BI:29:ILE:CG2	44:BI:32:ARG:C	2.86	0.44
46:BK:22:ILE:HG22	46:BK:31:VAL:HG22	2.00	0.44
48:BM:84:CYS:SG	48:BM:87:GLY:N	2.85	0.44
48:BM:95:PRO:HD3	48:BM:108:ARG:HB3	1.99	0.44
1:AA:619:U:H3	39:AD:130:ASN:HB3	1.81	0.43
1:AA:1245:C:H2'	1:AA:1246:A:C8	2.53	0.43
2:CA:155:A:H2'	2:CA:156:A:H8	1.82	0.43
2:CA:438:G:H2'	2:CA:439:A:C8	2.52	0.43
2:CA:2002:G:OP1	17:CN:17:ARG:NH2	2.39	0.43
2:CA:2074:U:O2'	2:CA:2597:G:O2'	2.29	0.43
2:CA:2420:C:N4	58:CA:3250:HOH:O	2.51	0.43
3:CB:66:A:H61	3:CB:107:G:H2'	1.83	0.43
5:CC:144:GLU:HB2	5:CC:187:CYS:HB3	1.99	0.43
47:AL:72:ASN:ND2	47:AL:104:SER:OG	2.47	0.43
1:BA:14:U:N3	1:BA:17:U:OP2	2.51	0.43
1:BA:25:C:H2'	1:BA:26:A:C8	2.53	0.43
1:BA:105:G:N2	1:BA:379:C:O3'	2.51	0.43
1:BA:222:C:H2'	1:BA:223:A:C8	2.52	0.43
1:BA:299:G:H2'	1:BA:300:A:C8	2.53	0.43
2:DA:31:C:H4'	2:DA:1238:G:H4'	2.00	0.43
2:DA:581:C:H2'	2:DA:582:A:H8	1.83	0.43
2:DA:589:U:H2'	2:DA:590:A:C8	2.53	0.43
2:DA:833:A:H2'	2:DA:834:G:H8	1.82	0.43
2:DA:1056:G:H21	2:DA:1103:A:N6	2.15	0.43
2:DA:1427:A:H5"	2:DA:1559:U:H3	1.82	0.43
2:DA:1930:G:H22	2:DA:1968:G:H2'	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:DF:104:THR:HG21	30:D0:22:MET:SD	2.58	0.43
12:DI:78:LEU:HD22	12:DI:108:ILE:HD13	2.00	0.43
20:DQ:16:ILE:HG13	20:DQ:31:TYR:HE1	1.83	0.43
49:BN:69:ARG:HH22	49:BN:81:ARG:HH21	1.66	0.43
51:BP:51:ARG:NH1	51:BP:52:LEU:O	2.51	0.43
1:AA:194:C:OP1	55:AT:59:ARG:NH2	2.51	0.43
1:AA:773:G:O6	1:AA:807:A:N6	2.51	0.43
2:CA:1788:C:OP1	5:CC:220:ARG:NH2	2.37	0.43
6:CD:121:THR:HB	6:CD:127:PHE:CD2	2.53	0.43
11:C5:57:ASN:ND2	11:C5:80:THR:H	2.17	0.43
14:CK:5:GLN:N	14:CK:21:CYS:O	2.51	0.43
17:CN:94:TYR:CA	17:CN:116:VAL:CG2	2.95	0.43
32:C2:10:LEU:HD21	32:C2:33:LEU:HD23	1.98	0.43
39:AD:117:VAL:HG11	39:AD:132:ALA:HA	1.99	0.43
1:BA:64:G:H4'	1:BA:65:A:H3'	2.00	0.43
1:BA:1112:C:O2	38:BC:179:ARG:N	2.51	0.43
2:DA:395:U:O2'	2:DA:396:G:N7	2.44	0.43
2:DA:691:C:O2'	5:DC:42:ARG:NH1	2.51	0.43
2:DA:858:G:H3'	2:DA:859:G:C8	2.53	0.43
2:DA:1274:A:OP1	2:DA:1646:C:N4	2.51	0.43
2:DA:1795:C:O2	5:DC:252:LYS:NZ	2.48	0.43
10:DH:7:ASP:HA	10:DH:15:LEU:HD23	2.00	0.43
10:DH:94:ILE:HD13	10:DH:122:LEU:HD23	1.99	0.43
18:DO:63:LYS:HD3	18:DO:64:TYR:HB2	2.01	0.43
32:D2:10:LEU:O	32:D2:19:PHE:HA	2.18	0.43
39:BD:12:ARG:NE	39:BD:31:CYS:O	2.51	0.43
45:BJ:52:LEU:HA	45:BJ:62:ARG:HG2	2.00	0.43
1:AA:49:U:H3	1:AA:362:G:H1'	1.83	0.43
1:AA:102:G:H2'	1:AA:103:U:H6	1.83	0.43
1:AA:153:C:H42	1:AA:169:C:H42	1.66	0.43
1:AA:801:U:H2'	1:AA:802:A:H8	1.83	0.43
2:CA:2443:C:H2'	2:CA:2444:G:H8	1.83	0.43
13:CJ:32:LEU:HD22	13:CJ:54:ILE:HG21	2.00	0.43
20:CQ:44:TYR:HD1	20:CQ:47:ARG:HH11	1.65	0.43
41:AF:77:THR:HA	41:AF:80:PHE:HB3	2.01	0.43
46:AK:12:ARG:HB3	46:AK:13:LYS:H	1.53	0.43
2:DA:1258:U:H2'	2:DA:1259:G:H8	1.83	0.43
2:DA:1409:U:H2'	2:DA:1410:G:C8	2.53	0.43
2:DA:1432:G:H2'	2:DA:1433:A:C8	2.52	0.43
5:DC:68:ARG:NH1	5:DC:128:THR:OG1	2.51	0.43
7:DE:77:ILE:HG23	7:DE:78:TRP:HE3	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:DP:28:LYS:HB3	19:DP:39:LEU:HD21	2.00	0.43
27:DX:1:SER:N	58:DX:102:HOH:O	2.51	0.43
43:BH:51:GLU:HB3	43:BH:57:GLU:HB2	2.00	0.43
1:AA:708:C:OP1	46:AK:21:HIS:NE2	2.51	0.43
1:AA:1004:A:H5'	1:AA:1024:G:H22	1.83	0.43
2:CA:151:C:H2'	2:CA:152:A:C8	2.53	0.43
2:CA:304:U:O2	2:CA:313:G:N2	2.43	0.43
2:CA:721:A:H2'	2:CA:722:A:H8	1.82	0.43
2:CA:1001:A:H62	2:CA:1154:G:N2	2.14	0.43
2:CA:1364:G:OP2	27:CX:1:SER:N	2.35	0.43
2:CA:1409:U:H2'	2:CA:1410:G:H8	1.82	0.43
2:CA:1527:G:N2	2:CA:1545:A:N6	2.48	0.43
2:CA:2695:U:O4	2:CA:2714:G:O6	2.36	0.43
4:AV:22:G:H2'	4:AV:23:A:H8	1.83	0.43
7:CE:29:HIS:HD2	15:CL:6:LEU:HB3	1.84	0.43
8:CF:134:GLN:NE2	8:CF:147:ARG:O	2.51	0.43
47:AL:29:LYS:H	47:AL:81:ILE:HG22	1.84	0.43
1:BA:84:U:O2'	1:BA:86:G:OP1	2.32	0.43
1:BA:545:C:O2'	1:BA:549:C:OP1	2.36	0.43
1:BA:1124:G:O2'	1:BA:1127:G:O6	2.37	0.43
2:DA:767:U:H2'	2:DA:768:G:C8	2.54	0.43
2:DA:1233:C:N4	58:DA:3520:HOH:O	2.51	0.43
2:DA:1385:A:O2'	2:DA:1396:U:O2	2.36	0.43
2:DA:1980:G:O2'	2:DA:1982:U:OP2	2.22	0.43
2:DA:2508:G:H2'	2:DA:2509:G:H8	1.83	0.43
5:DC:209:ALA:HA	5:DC:212:TRP:CE2	2.52	0.43
6:DD:49:GLN:HE21	6:DD:79:LEU:HB3	1.83	0.43
15:DL:90:VAL:HG13	15:DL:95:LEU:HD21	1.99	0.43
39:BD:87:GLU:HG2	39:BD:187:ARG:HD3	2.01	0.43
1:AA:463:U:H3	1:AA:469:C:H42	1.66	0.43
1:AA:680:C:H2'	1:AA:681:A:H8	1.83	0.43
1:AA:736:C:H2'	1:AA:737:C:C6	2.53	0.43
1:AA:895:G:N2	1:AA:904:U:O2	2.40	0.43
2:CA:145:C:H2'	2:CA:146:A:H8	1.84	0.43
2:CA:286:U:H2'	2:CA:287:G:C8	2.54	0.43
2:CA:355:U:H2'	2:CA:356:G:C8	2.52	0.43
2:CA:1710:G:H2'	2:CA:1711:A:C8	2.53	0.43
2:CA:2540:C:O2'	2:CA:2740:A:N3	2.41	0.43
4:AV:41:A:H2'	4:AV:42:G:C8	2.54	0.43
7:CE:58:LYS:NZ	7:CE:70:SER:O	2.45	0.43
39:AD:10:LEU:HD22	39:AD:62:ARG:HE	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:AM:7:ASN:HD22	48:AM:21:ILE:HG13	1.82	0.43
1:BA:1368:A:H4'	49:BN:101:TRP:HZ2	1.84	0.43
2:DA:1864:U:OP1	2:DA:2410:G:O2'	2.32	0.43
2:DA:1936:A:H2	2:DA:1943:U:H3	1.66	0.43
2:DA:2229:U:H2'	2:DA:2230:G:C8	2.52	0.43
2:DA:2824:C:H3'	2:DA:2825:G:H21	1.83	0.43
2:DA:2836:U:H2'	2:DA:2837:A:H8	1.82	0.43
37:BB:163:ILE:HD11	37:BB:209:VAL:HG11	2.00	0.43
1:AA:126:G:OP1	1:AA:605:U:O2'	2.32	0.43
1:AA:193:C:H2'	1:AA:194:C:C6	2.53	0.43
1:AA:452:A:HO2'	1:AA:453:G:H8	1.66	0.43
1:AA:458:U:H2'	1:AA:459:A:H8	1.84	0.43
1:AA:552:U:O2'	47:AL:82:ARG:O	2.34	0.43
1:AA:736:C:H2'	1:AA:737:C:H6	1.84	0.43
1:AA:1493:A:H2	36:AX:22:U:H1'	1.81	0.43
1:AA:1530:G:H2'	1:AA:1531:A:H8	1.84	0.43
2:CA:306:U:H3	2:CA:310:A:N6	1.98	0.43
2:CA:662:G:H4'	15:CL:16:GLY:HA2	2.00	0.43
2:CA:2199:A:H62	2:CA:2224:G:H21	1.66	0.43
2:CA:2246:G:H2'	2:CA:2247:A:C8	2.53	0.43
2:CA:2683:C:H4'	6:CD:13:ARG:NH1	2.33	0.43
5:CC:173:LEU:O	5:CC:180:MET:HA	2.18	0.43
39:AD:204:SER:HB3	40:AE:105:ILE:HG22	2.00	0.43
51:AP:72:ALA:HA	51:AP:75:ILE:HD12	1.99	0.43
1:BA:924:C:H2'	1:BA:925:G:C8	2.53	0.43
2:DA:335:C:O2	24:DU:67:SER:OG	2.25	0.43
2:DA:414:C:H2'	2:DA:415:A:H8	1.84	0.43
3:DB:33:G:H2'	3:DB:34:A:C8	2.52	0.43
4:BV:13:C:H2'	4:BV:14:A:C8	2.53	0.43
8:DF:130:GLY:HA2	8:DF:152:ASP:HA	2.01	0.43
14:DK:9:ASN:OD1	14:DK:18:ARG:NH1	2.49	0.43
19:DP:24:THR:HB	19:DP:87:ARG:HB3	1.99	0.43
28:DY:17:GLU:HB2	28:DY:53:VAL:HG11	2.01	0.43
38:BC:28:GLU:O	38:BC:32:ASN:HB2	2.18	0.43
40:BE:131:ASN:HA	40:BE:132:PRO:HD3	1.80	0.43
41:BF:70:VAL:O	41:BF:74:LEU:HB2	2.19	0.43
1:AA:398:U:H2'	1:AA:399:G:C8	2.54	0.43
1:AA:401:C:O2'	1:AA:621:A:N3	2.48	0.43
1:AA:404:G:OP1	39:AD:2:ARG:NH1	2.51	0.43
1:AA:680:C:H2'	1:AA:681:A:C8	2.54	0.43
2:CA:1499:C:H2'	2:CA:1500:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CS:52:GLU:HA	22:CS:55:ILE:HD12	1.99	0.43
29:CZ:8:GLN:O	29:CZ:32:GLY:N	2.47	0.43
44:AI:31:GLN:HE21	44:AI:31:GLN:CA	2.21	0.43
1:BA:262:A:H4'	55:BT:69:ASN:HB2	2.01	0.43
1:BA:746:A:H2'	1:BA:747:A:H8	1.84	0.43
1:BA:957:U:HO2'	54:BS:78:THR:HG1	1.61	0.43
1:BA:1149:C:H2'	1:BA:1150:A:C8	2.51	0.43
2:DA:372:G:O2'	2:DA:400:G:O6	2.27	0.43
2:DA:560:C:H1'	20:DQ:47:ARG:HH22	1.84	0.43
2:DA:741:U:H2'	2:DA:742:A:C8	2.54	0.43
2:DA:1059:G:N1	2:DA:1080:A:C6	2.87	0.43
2:DA:1422:G:H2'	2:DA:1423:G:C8	2.54	0.43
2:DA:1590:A:H2'	2:DA:1591:A:C8	2.53	0.43
2:DA:2304:G:H4'	8:DF:129:MET:HA	2.00	0.43
3:DB:42:C:H5	8:DF:65:LEU:HD22	1.83	0.43
39:BD:25:ARG:NE	39:BD:28:ASP:OD2	2.42	0.43
48:BM:1:ALA:HB3	48:BM:9:PRO:HD2	2.00	0.43
2:CA:427:U:HO2'	2:CA:428:A:H8	1.66	0.43
2:CA:1701:A:OP1	2:CA:1763:G:N1	2.37	0.43
2:CA:2060:A:H62	7:CE:69:ARG:HH22	1.67	0.43
2:CA:2120:G:H2'	2:CA:2121:G:C8	2.54	0.43
10:CH:94:ILE:HD11	10:CH:122:LEU:HB2	2.00	0.43
14:CK:78:ARG:NH1	19:CP:70:GLU:OE1	2.51	0.43
39:AD:77:GLU:OE2	39:AD:80:ARG:NH1	2.52	0.43
1:BA:461:A:H2'	1:BA:462:G:H8	1.84	0.43
1:BA:1143:G:H2'	1:BA:1144:G:C4	2.54	0.43
1:BA:1538:C:N3	36:BX:5:G:C2	2.82	0.43
2:DA:639:U:O4	2:DA:649:G:O6	2.37	0.43
2:DA:1013:C:H2'	2:DA:1014:A:H8	1.83	0.43
2:DA:1176:U:H2'	2:DA:1177:G:C8	2.53	0.43
2:DA:1687:G:H21	2:DA:1701:A:H62	1.67	0.43
2:DA:2008:C:H2'	2:DA:2009:A:H8	1.84	0.43
2:DA:2202:U:O2	2:DA:2221:G:N2	2.35	0.43
2:DA:2327:A:H2'	2:DA:2328:A:C8	2.54	0.43
3:DB:111:U:H2'	3:DB:112:G:C8	2.52	0.43
16:DM:63:ILE:HA	16:DM:104:GLU:O	2.19	0.43
29:DZ:8:GLN:NE2	29:DZ:10:ARG:O	2.44	0.43
43:BH:51:GLU:O	43:BH:57:GLU:HB2	2.19	0.43
1:AA:538:G:H2'	1:AA:539:A:C8	2.54	0.43
1:AA:944:G:H21	1:AA:1339:A:H62	1.67	0.43
2:CA:52:A:OP2	2:CA:117:G:N1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:214:G:H2'	2:CA:215:G:C8	2.54	0.43
2:CA:2432:A:N6	4:AY:76:A:OP2	2.51	0.43
2:CA:2683:C:O2	14:CK:70:ARG:NH2	2.52	0.43
2:CA:2707:U:H2'	2:CA:2708:G:C8	2.54	0.43
17:CN:13:ASN:OD1	17:CN:13:ASN:N	2.52	0.43
25:CV:30:ILE:HG12	25:CV:91:PHE:HB2	2.01	0.43
36:AX:22:U:H2'	36:AX:23:A:H8	1.83	0.43
38:AC:20:SER:HB3	38:AC:22:TRP:CZ3	2.54	0.43
53:AR:36:GLY:O	53:AR:62:ARG:NH2	2.52	0.43
1:BA:843:U:H5'	1:BA:844:G:C2	2.54	0.43
1:BA:1507:A:H2'	1:BA:1508:A:C8	2.54	0.43
2:DA:239:C:H1'	2:DA:621:A:H2	1.83	0.43
2:DA:1219:U:H2'	2:DA:1220:G:C8	2.53	0.43
2:DA:1803:A:H2	2:DA:1823:G:H1'	1.83	0.43
2:DA:2331:G:O2'	26:DW:43:THR:OG1	2.31	0.43
2:DA:2847:U:O2	2:DA:2869:G:O6	2.37	0.43
4:BV:72:C:H2'	4:BV:73:A:H4'	2.01	0.43
7:DE:148:ILE:HB	7:DE:169:VAL:HG22	2.01	0.43
13:DJ:73:VAL:HG22	13:DJ:88:THR:HG22	2.00	0.43
15:DL:128:THR:HG23	15:DL:131:ALA:H	1.84	0.43
16:DM:35:ALA:HA	16:DM:128:THR:HG22	2.01	0.43
35:D6:30:GLU:HG3	35:D6:32:LYS:H	1.84	0.43
38:BC:181:ASP:HB3	38:BC:205:GLY:H	1.84	0.43
1:AA:370:C:H2'	1:AA:371:A:C8	2.54	0.43
1:AA:1291:U:H2'	1:AA:1292:G:C8	2.54	0.43
1:AA:1409:C:H2'	1:AA:1410:A:C8	2.52	0.43
1:AA:1458:G:H2'	1:AA:1459:G:C8	2.54	0.43
2:CA:63:A:H2'	2:CA:64:A:C8	2.54	0.43
2:CA:414:C:H2'	2:CA:415:A:H8	1.84	0.43
2:CA:784:G:H5"	5:CC:225:ASN:ND2	2.34	0.43
2:CA:910:A:H2'	2:CA:911:A:C8	2.54	0.43
2:CA:2047:C:H2'	2:CA:2048:G:H8	1.84	0.43
2:CA:2339:C:H2'	2:CA:2340:A:C8	2.54	0.43
2:CA:2377:A:H2'	2:CA:2378:A:C8	2.54	0.43
2:CA:2898:U:H2'	2:CA:2899:A:H8	1.84	0.43
8:CF:146:ASP:OD1	8:CF:149:ARG:NH2	2.50	0.43
10:CH:26:ALA:HA	10:CH:30:LEU:HB2	2.01	0.43
15:CL:76:GLU:HB2	15:CL:111:ILE:HD13	1.99	0.43
17:CN:120:GLU:OE1	17:CN:120:GLU:N	2.52	0.43
26:CW:18:ALA:O	26:CW:20:ARG:NH1	2.45	0.43
44:AI:11:ARG:HA	44:AI:105:ARG:HH12	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AJ:12:ALA:HB3	45:AJ:18:ILE:HD12	2.00	0.43
47:AL:109:ARG:NE	47:AL:111:GLN:O	2.50	0.43
48:AM:84:CYS:SG	48:AM:87:GLY:N	2.83	0.43
1:BA:634:C:H2'	1:BA:635:A:H8	1.84	0.43
1:BA:693:G:C6	36:BX:15:A:H1'	2.54	0.43
1:BA:1038:C:H2'	1:BA:1039:G:H8	1.83	0.43
2:DA:1316:U:H2'	2:DA:1317:G:C8	2.54	0.43
2:DA:2647:U:H2'	2:DA:2648:G:H8	1.83	0.43
2:DA:2734:A:N6	2:DA:2770:G:H21	2.02	0.43
5:DC:81:GLU:OE1	5:DC:102:TYR:OH	2.30	0.43
5:DC:209:ALA:HB1	5:DC:213:ARG:HH12	1.84	0.43
14:DK:74:GLY:O	19:DP:74:GLN:NE2	2.52	0.43
17:DN:79:LEU:HA	17:DN:83:LEU:HB2	2.01	0.43
19:DP:21:PRO:HD3	19:DP:49:ILE:HD12	2.01	0.43
21:DR:4:VAL:HA	21:DR:12:HIS:O	2.19	0.43
28:DY:2:LYS:O	28:DY:6:LEU:HB2	2.19	0.43
30:D0:46:GLY:CA	58:D0:201:HOH:O	2.15	0.43
34:D4:22:LYS:HE2	34:D4:46:LYS:HB2	1.99	0.43
38:BC:19:ASN:HB2	49:BN:92:GLU:H	1.84	0.43
38:BC:57:ILE:HG23	38:BC:64:ILE:HD11	2.00	0.43
40:BE:31:SER:OG	40:BE:52:ALA:O	2.32	0.43
44:BI:16:ALA:HA	44:BI:66:VAL:HA	2.01	0.43
1:AA:369:G:OP2	1:AA:388:G:N1	2.37	0.42
1:AA:460:A:H2'	1:AA:461:A:H8	1.84	0.42
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.54	0.42
1:AA:1347:G:N2	1:AA:1374:A:OP2	2.51	0.42
2:CA:143:C:H2'	2:CA:144:A:C8	2.54	0.42
2:CA:184:C:H2'	2:CA:185:G:C8	2.52	0.42
2:CA:1297:C:H2'	2:CA:1298:C:H6	1.84	0.42
2:CA:1678:A:H1'	2:CA:1991:U:H1'	2.01	0.42
2:CA:1689:A:H2'	2:CA:1690:A:C8	2.54	0.42
22:CS:62:ASP:OD1	22:CS:62:ASP:N	2.52	0.42
49:AN:30:ILE:HG22	49:AN:45:VAL:HG21	2.01	0.42
2:DA:18:U:H2'	2:DA:19:A:H8	1.84	0.42
2:DA:922:C:H1'	26:DW:26:PHE:HD2	1.84	0.42
2:DA:1190:G:OP1	15:DL:30:THR:OG1	2.36	0.42
2:DA:1359:A:N6	2:DA:1360:G:N3	2.67	0.42
2:DA:2215:C:H2'	2:DA:2216:G:H8	1.84	0.42
2:DA:2339:C:H2'	2:DA:2340:A:C8	2.54	0.42
2:DA:2688:G:N1	2:DA:2720:U:OP2	2.41	0.42
5:DC:92:LEU:HD11	5:DC:100:ARG:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:DD:33:ARG:HA	6:DD:94:GLN:O	2.18	0.42
8:DF:105:ILE:O	8:DF:109:ARG:NE	2.50	0.42
24:DU:80:ASP:OD2	24:DU:97:SER:OG	2.36	0.42
1:AA:599:C:H4'	43:AH:121:GLY:HA3	2.01	0.42
1:AA:702:A:H2	2:CA:1846:G:H21	1.68	0.42
2:CA:1219:U:H2'	2:CA:1220:G:H8	1.83	0.42
2:CA:1383:A:H2'	2:CA:1384:A:C8	2.55	0.42
2:CA:1666:G:H1'	14:CK:3:GLN:HE21	1.85	0.42
2:CA:1689:A:H2'	2:CA:1690:A:H8	1.83	0.42
3:CB:5:U:H2'	3:CB:6:G:H8	1.84	0.42
8:CF:109:ARG:NH1	8:CF:136:ILE:O	2.52	0.42
48:AM:56:ARG:HA	48:AM:59:VAL:HG12	2.00	0.42
52:AQ:11:VAL:HG22	52:AQ:22:VAL:HG22	2.02	0.42
1:BA:21:G:H2'	1:BA:22:G:C8	2.54	0.42
1:BA:358:U:H2'	1:BA:359:G:C8	2.51	0.42
1:BA:370:C:H2'	1:BA:371:A:H8	1.84	0.42
1:BA:634:C:H2'	1:BA:635:A:C8	2.54	0.42
1:BA:1080:A:H4'	40:BE:20:VAL:HG11	2.01	0.42
1:BA:1151:A:HO2'	1:BA:1152:A:H8	1.64	0.42
1:BA:1458:G:H2'	1:BA:1459:G:C8	2.54	0.42
2:DA:1803:A:N6	2:DA:1814:G:H21	2.17	0.42
38:BC:121:THR:HG23	38:BC:189:ALA:HA	2.01	0.42
39:BD:164:ARG:HG2	39:BD:165:GLU:H	1.84	0.42
44:BI:50:PRO:HG2	44:BI:51:LEU:HG	2.01	0.42
51:BP:34:GLU:OE2	51:BP:60:TRP:NE1	2.49	0.42
1:AA:21:G:H21	1:AA:914:A:H62	1.66	0.42
1:AA:724:G:H2'	1:AA:725:G:C8	2.55	0.42
1:AA:736:C:OP1	53:AR:60:ARG:NH2	2.43	0.42
1:AA:924:C:H2'	1:AA:925:G:C8	2.54	0.42
1:AA:959:A:N6	1:AA:1221:G:O2'	2.52	0.42
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.84	0.42
2:CA:475:C:N3	2:CA:479:A:N7	2.68	0.42
2:CA:948:C:O2	2:CA:984:A:O2'	2.26	0.42
2:CA:1057:A:H1'	11:C5:35:VAL:HG11	2.01	0.42
2:CA:1654:A:O2'	6:CD:118:PHE:O	2.27	0.42
2:CA:1927:A:H2'	2:CA:1928:A:C8	2.54	0.42
2:CA:1939:U:OP1	2:CA:2604:U:O2'	2.31	0.42
18:CO:31:THR:O	58:CO:201:HOH:O	2.21	0.42
1:BA:1243:C:H2'	1:BA:1244:G:C8	2.54	0.42
2:DA:23:G:H2'	2:DA:24:G:H8	1.84	0.42
2:DA:271:G:N1	2:DA:367:G:N7	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:1820:U:C4	5:DC:158:GLY:HA3	2.54	0.42
2:DA:1820:U:H3	5:DC:197:ALA:HA	1.84	0.42
2:DA:2023:C:H2'	2:DA:2024:G:H8	1.84	0.42
2:DA:2333:A:OP1	26:DW:77:ARG:NH1	2.41	0.42
3:DB:49:C:H2'	3:DB:50:A:H8	1.84	0.42
37:BB:116:LEU:HG	37:BB:140:LEU:HG	2.01	0.42
41:BF:30:THR:HA	41:BF:34:GLY:H	1.85	0.42
1:AA:358:U:H2'	1:AA:359:G:C8	2.47	0.42
1:AA:435:A:O2'	39:AD:153:ARG:NH2	2.52	0.42
1:AA:1111:A:H2'	1:AA:1112:C:C6	2.54	0.42
2:CA:238:C:O2'	2:CA:608:A:N3	2.47	0.42
2:CA:2804:U:H2'	2:CA:2805:C:H6	1.83	0.42
7:CE:149:ILE:HG22	7:CE:188:MET:HA	2.01	0.42
37:AB:213:LEU:HA	37:AB:216:VAL:HB	2.00	0.42
55:AT:34:VAL:HG11	55:AT:78:LEU:HD13	2.01	0.42
1:BA:237:G:H4'	52:BQ:26:ARG:NH2	2.33	0.42
1:BA:1112:C:H1'	38:BC:179:ARG:HG3	2.02	0.42
1:BA:1302:C:H5'	48:BM:16:ILE:HG12	2.02	0.42
2:DA:589:U:H2'	2:DA:590:A:H8	1.84	0.42
2:DA:1612:C:H4'	33:D3:5:PHE:HD2	1.84	0.42
2:DA:2433:A:N6	58:DA:3562:HOH:O	2.53	0.42
2:DA:2540:C:O2'	2:DA:2740:A:N3	2.43	0.42
58:DA:3245:HOH:O	16:DM:16:ARG:NH1	2.52	0.42
43:BH:46:GLU:HB2	43:BH:61:THR:HB	2.01	0.42
49:BN:74:LEU:HD23	49:BN:76:LYS:H	1.83	0.42
1:AA:424:G:H2'	1:AA:425:G:C8	2.55	0.42
1:AA:543:U:H2'	1:AA:544:G:C8	2.54	0.42
1:AA:1245:C:H2'	1:AA:1246:A:H8	1.84	0.42
1:AA:1250:A:H4'	44:AI:68:GLY:HA2	2.01	0.42
2:CA:18:U:H2'	2:CA:19:A:C8	2.54	0.42
2:CA:355:U:H2'	2:CA:356:G:H8	1.83	0.42
2:CA:373:U:OP2	27:CX:53:LYS:NZ	2.42	0.42
2:CA:495:G:N2	22:CS:61:ASN:OD1	2.37	0.42
2:CA:704:G:O2'	2:CA:726:G:N2	2.41	0.42
2:CA:793:A:OP2	2:CA:2071:A:O2'	2.31	0.42
2:CA:1386:C:H2'	2:CA:1387:A:C8	2.55	0.42
3:CB:80:U:H2'	3:CB:81:G:H8	1.84	0.42
4:AV:53:G:H5"	16:CM:55:ARG:HH12	1.84	0.42
5:CC:2:VAL:HG12	5:CC:18:VAL:HG22	2.01	0.42
5:CC:59:GLN:HG2	5:CC:84:PRO:HB2	2.01	0.42
6:CD:13:ARG:HD2	6:CD:15:PHE:CZ	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CF:40:GLY:N	58:CF:203:HOH:O	2.51	0.42
15:CL:55:MET:HA	15:CL:56:PRO:HD3	1.87	0.42
25:CV:31:TYR:HE1	25:CV:90:ASP:HB3	1.85	0.42
4:AW:62:C:H2'	4:AW:63:G:C8	2.53	0.42
37:AB:139:GLU:HA	37:AB:142:LYS:HE3	2.02	0.42
38:AC:181:ASP:HB3	38:AC:205:GLY:H	1.84	0.42
44:AI:106:ASP:OD1	44:AI:107:ALA:N	2.52	0.42
46:AK:95:THR:N	58:AK:204:HOH:O	2.52	0.42
1:BA:823:C:H2'	1:BA:824:G:C8	2.55	0.42
1:BA:864:A:H4'	40:BE:89:THR:HG23	2.01	0.42
2:DA:414:C:O2	2:DA:1864:U:O2'	2.32	0.42
2:DA:558:U:H2'	2:DA:559:G:C8	2.53	0.42
2:DA:770:G:H2'	2:DA:771:G:C8	2.55	0.42
2:DA:1326:U:H2'	2:DA:1327:A:C8	2.51	0.42
2:DA:1964:G:O2'	2:DA:1967:C:OP1	2.37	0.42
2:DA:2200:C:H2'	2:DA:2201:G:H8	1.83	0.42
7:DE:62:GLN:HG3	7:DE:63:LYS:HG3	2.00	0.42
14:DK:63:VAL:HB	14:DK:103:VAL:HG12	2.00	0.42
20:DQ:89:ILE:HG12	21:DR:39:LEU:HD23	2.01	0.42
37:BB:46:VAL:HG13	37:BB:50:ASN:HD22	1.84	0.42
49:BN:25:GLU:HA	49:BN:28:ALA:HB3	2.00	0.42
52:BQ:23:ALA:HA	52:BQ:42:LYS:HA	2.00	0.42
1:AA:198:G:N7	1:AA:220:G:N1	2.68	0.42
1:AA:1067:A:N6	1:AA:1109:C:H5'	2.35	0.42
1:AA:1162:C:N4	58:AA:1839:HOH:O	2.53	0.42
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.54	0.42
1:AA:1300:G:H1'	1:AA:1303:C:H42	1.85	0.42
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.54	0.42
2:CA:190:A:N7	2:CA:206:U:O4	2.52	0.42
2:CA:408:G:O6	2:CA:419:U:O4	2.37	0.42
2:CA:926:G:H2'	2:CA:927:A:H8	1.85	0.42
2:CA:1256:G:H1'	7:CE:77:ILE:HD11	2.02	0.42
2:CA:2267:A:H5"	2:CA:2268:A:H5'	2.01	0.42
20:CQ:27:ARG:HD3	20:CQ:33:VAL:HG12	2.01	0.42
4:AW:60:C:H5'	4:AW:61:C:H5	1.84	0.42
47:AL:41:PRO:HG3	47:AL:46:SER:HA	2.01	0.42
1:BA:693:G:N9	36:BX:15:A:O4'	2.52	0.42
1:BA:999:C:H2'	1:BA:1000:A:H8	1.83	0.42
2:DA:939:G:H2'	2:DA:940:G:C8	2.54	0.42
2:DA:1579:A:H2'	2:DA:1580:A:C8	2.55	0.42
2:DA:2443:C:H2'	2:DA:2444:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:2544:G:H2'	2:DA:2545:G:C8	2.55	0.42
2:DA:2737:G:H2'	2:DA:2738:A:C8	2.54	0.42
3:DB:38:C:H2'	3:DB:39:A:C8	2.55	0.42
35:D6:25:VAL:O	35:D6:34:LYS:HA	2.20	0.42
51:BP:4:ILE:HG12	51:BP:21:VAL:HG22	2.01	0.42
1:AA:150:U:C2	1:AA:171:A:N6	2.87	0.42
1:AA:180:U:C2	1:AA:195:A:N6	2.85	0.42
1:AA:195:A:OP1	55:AT:59:ARG:NH1	2.53	0.42
1:AA:375:U:H4'	51:AP:6:LEU:HD22	2.01	0.42
1:AA:1113:C:H4'	38:AC:14:ILE:HD12	2.02	0.42
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.54	0.42
1:AA:1308:U:OP1	48:AM:96:VAL:N	2.50	0.42
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.55	0.42
2:CA:720:U:H2'	2:CA:721:A:H8	1.85	0.42
2:CA:1803:A:H2	2:CA:1823:G:H1'	1.84	0.42
2:CA:2220:U:H2'	2:CA:2221:G:H8	1.84	0.42
2:CA:2324:U:H3	2:CA:2331:G:H1	1.68	0.42
3:CB:7:G:H1'	18:CO:38:GLN:HE22	1.84	0.42
8:CF:39:VAL:HG11	8:CF:49:LEU:HD13	2.02	0.42
13:CJ:35:ARG:HB2	13:CJ:54:ILE:HD11	2.02	0.42
21:CR:24:LYS:HA	21:CR:94:THR:HG23	2.00	0.42
43:AH:102:VAL:HG12	43:AH:125:ILE:HD13	2.00	0.42
1:BA:34:C:H2'	1:BA:35:G:C8	2.54	0.42
1:BA:683:G:N3	46:BK:39:ASN:ND2	2.67	0.42
1:BA:720:C:N4	58:BA:1815:HOH:O	2.50	0.42
1:BA:1249:C:O2'	44:BI:74:GLN:NE2	2.53	0.42
1:BA:1320:C:N3	54:BS:35:ARG:NH2	2.68	0.42
2:DA:1755:A:H5'	19:DP:102:ARG:HH22	1.84	0.42
2:DA:2291:U:H2'	2:DA:2292:U:C6	2.55	0.42
2:DA:2698:U:H2'	2:DA:2699:C:C6	2.54	0.42
3:DB:76:G:OP1	25:DV:9:ARG:NH2	2.51	0.42
3:DB:116:G:H2'	3:DB:117:G:H8	1.84	0.42
10:DH:4:ILE:HD12	10:DH:18:GLN:HA	2.01	0.42
15:DL:58:TYR:O	34:D4:12:ARG:NH2	2.52	0.42
19:DP:91:VAL:HG21	19:DP:96:LEU:HD21	2.00	0.42
31:D1:54:ILE:H	31:D1:54:ILE:HD12	1.84	0.42
35:D6:10:LEU:HD12	35:D6:33:HIS:HA	2.02	0.42
38:BC:10:ILE:HG23	38:BC:11:ARG:HD2	2.00	0.42
40:BE:156:ARG:HG2	40:BE:157:GLY:H	1.85	0.42
45:BJ:6:ILE:HB	45:BJ:76:ILE:O	2.19	0.42
46:BK:23:HIS:HB3	46:BK:30:ILE:HG13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:48:G:N2	2:CA:177:G:OP2	2.51	0.42
2:CA:630:G:N2	2:CA:633:A:OP2	2.39	0.42
2:CA:1820:U:C2	5:CC:200:MET:HG3	2.54	0.42
2:CA:2194:U:H2'	2:CA:2195:U:C6	2.52	0.42
2:CA:2837:A:H2'	2:CA:2838:G:C8	2.54	0.42
3:CB:9:G:H2'	3:CB:10:G:H8	1.85	0.42
14:CK:76:VAL:HG12	19:CP:72:VAL:HG22	2.02	0.42
18:CO:8:ILE:O	18:CO:12:THR:OG1	2.32	0.42
21:CR:5:PHE:HE2	21:CR:7:SER:HB2	1.85	0.42
42:AG:110:ARG:NE	42:AG:112:ASP:OD2	2.39	0.42
46:AK:61:ALA:HA	46:AK:64:VAL:HG12	2.02	0.42
48:AM:14:ALA:HA	48:AM:17:ALA:HB3	2.01	0.42
1:BA:10:A:H2'	1:BA:11:G:H8	1.85	0.42
1:BA:1130:A:H61	1:BA:1144:G:N2	2.18	0.42
1:BA:1392:G:N2	1:BA:1502:A:N3	2.67	0.42
2:DA:665:U:H2'	2:DA:666:A:C8	2.55	0.42
2:DA:721:A:H2'	2:DA:722:A:H8	1.85	0.42
2:DA:1438:U:H2'	2:DA:1439:A:C8	2.51	0.42
2:DA:1500:G:N2	5:DC:97:ASP:O	2.35	0.42
8:DF:28:PRO:HB2	8:DF:168:LEU:HD13	2.01	0.42
30:D0:27:THR:O	30:D0:27:THR:OG1	2.32	0.42
34:D4:24:LYS:HA	34:D4:46:LYS:HG3	2.00	0.42
38:BC:147:LYS:H	38:BC:147:LYS:HD2	1.85	0.42
42:BG:110:ARG:HD3	42:BG:118:ARG:HA	2.02	0.42
48:BM:66:GLY:O	48:BM:70:ARG:NH1	2.53	0.42
1:AA:984:C:H2'	1:AA:985:C:C6	2.54	0.42
1:AA:1338:G:N2	4:AW:41:A:N3	2.68	0.42
1:AA:1394:A:N6	1:AA:1500:A:O2'	2.51	0.42
2:CA:558:U:H2'	2:CA:559:G:C8	2.53	0.42
2:CA:887:U:O2'	2:CA:889:C:N4	2.35	0.42
2:CA:1069:A:N6	2:CA:1074:G:N3	2.68	0.42
2:CA:1693:U:O2'	5:CC:13:ARG:NH2	2.53	0.42
2:CA:1709:U:H2'	2:CA:1710:G:H8	1.85	0.42
5:CC:91:ALA:O	5:CC:102:TYR:HA	2.20	0.42
5:CC:132:ARG:HB3	5:CC:185:ALA:HB1	2.02	0.42
15:CL:58:TYR:O	34:C4:12:ARG:NH2	2.53	0.42
36:AX:18:G:O2'	36:AX:19:U:O4'	2.38	0.42
39:AD:144:ILE:HD12	39:AD:177:MET:HB3	2.01	0.42
42:AG:14:ASP:HB3	42:AG:19:SER:H	1.85	0.42
1:BA:321:A:H2'	1:BA:322:C:H6	1.84	0.42
2:DA:624:C:O2'	2:DA:657:U:OP1	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:807:U:H2'	2:DA:808:G:C8	2.54	0.42
2:DA:924:G:H2'	2:DA:925:A:H8	1.85	0.42
2:DA:1102:C:H2'	2:DA:1103:A:C8	2.53	0.42
2:DA:1550:C:H2'	2:DA:1551:A:H8	1.85	0.42
2:DA:2087:G:H2'	2:DA:2088:A:C8	2.54	0.42
2:DA:2438:U:O2'	2:DA:2440:C:OP1	2.33	0.42
2:DA:2804:U:H2'	2:DA:2805:C:C6	2.55	0.42
7:DE:58:LYS:HA	7:DE:59:PRO:HD3	1.94	0.42
18:DO:39:VAL:HG21	18:DO:49:VAL:HB	2.01	0.42
24:DU:28:LEU:HB2	24:DU:32:LYS:HB2	2.01	0.42
28:DY:42:LEU:HD23	28:DY:45:GLN:HE21	1.85	0.42
35:D6:1:MET:HB3	35:D6:34:LYS:HD2	2.00	0.42
35:D6:27:CYS:SG	35:D6:28:SER:N	2.93	0.42
37:BB:112:ARG:HH22	37:BB:136:ARG:HH21	1.68	0.42
40:BE:96:GLN:HB3	40:BE:123:LEU:HD12	2.01	0.42
52:BQ:47:ASP:HB3	52:BQ:74:LEU:HD21	2.01	0.42
1:AA:403:C:H2'	1:AA:404:G:H8	1.84	0.42
1:AA:618:C:N4	1:AA:621:A:OP2	2.52	0.42
1:AA:859:G:H2'	1:AA:860:A:H8	1.85	0.42
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.54	0.42
1:AA:1291:U:H2'	1:AA:1292:G:H8	1.85	0.42
2:CA:364:C:H2'	2:CA:365:U:C6	2.55	0.42
2:CA:438:G:H2'	2:CA:439:A:H8	1.84	0.42
2:CA:640:C:H2'	2:CA:641:U:H6	1.85	0.42
2:CA:1778:U:H3	2:CA:1785:A:H62	1.66	0.42
2:CA:2291:U:H2'	2:CA:2292:U:C6	2.54	0.42
58:CA:3296:HOH:O	5:CC:234:GLY:N	2.53	0.42
10:CH:2:GLN:NE2	10:CH:18:GLN:OE1	2.52	0.42
29:CZ:11:SER:OG	29:CZ:12:ALA:N	2.52	0.42
32:C2:49:LYS:HG2	32:C2:50:GLU:H	1.85	0.42
39:AD:59:LYS:NZ	58:AD:304:HOH:O	2.53	0.42
44:AI:10:ARG:C	44:AI:105:ARG:NH2	2.74	0.42
48:AM:78:ARG:NH2	54:AS:64:GLU:O	2.49	0.42
1:BA:15:G:O6	1:BA:920:U:O4	2.38	0.42
1:BA:67:C:O2	1:BA:103:U:N3	2.49	0.42
1:BA:1059:C:N4	58:BA:1756:HOH:O	2.53	0.42
1:BA:1405:G:O2'	1:BA:1518:A:O2'	2.36	0.42
2:DA:351:C:H2'	2:DA:352:A:C8	2.53	0.42
2:DA:403:U:H4'	2:DA:406:G:H1'	2.00	0.42
2:DA:632:A:H5"	15:DL:68:SER:HB2	2.01	0.42
2:DA:647:G:N2	2:DA:2350:C:O3'	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:1296:G:OP1	2:DA:2709:G:O2'	2.29	0.42
2:DA:2360:G:N3	15:DL:60:ARG:NH2	2.68	0.42
2:DA:2849:U:N3	2:DA:2867:G:N3	2.67	0.42
9:DG:21:GLN:NE2	9:DG:37:ASN:O	2.52	0.42
10:DH:125:THR:HA	10:DH:146:VAL:HB	2.00	0.42
37:BB:166:ASP:O	37:BB:169:HIS:ND1	2.45	0.42
1:AA:31:G:H1	1:AA:48:C:H5"	1.86	0.41
1:AA:413:G:H4'	1:AA:414:A:H5"	2.02	0.41
1:AA:711:G:H2'	1:AA:712:A:H8	1.85	0.41
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.55	0.41
1:AA:1415:G:H2'	1:AA:1416:G:H8	1.85	0.41
2:CA:27:G:O2'	2:CA:512:G:N2	2.50	0.41
2:CA:242:G:N2	58:CA:3483:HOH:O	2.47	0.41
2:CA:269:C:H2'	2:CA:270:A:H8	1.85	0.41
2:CA:1070:A:C5	2:CA:1097:U:H4'	2.55	0.41
2:CA:1183:U:H2'	2:CA:1184:U:C6	2.55	0.41
2:CA:1432:G:H2'	2:CA:1433:A:C8	2.54	0.41
2:CA:2428:G:N2	15:CL:54:GLN:HE21	2.18	0.41
2:CA:2737:G:H2'	2:CA:2738:A:C8	2.55	0.41
10:CH:41:LYS:HD3	10:CH:44:ILE:HD11	2.01	0.41
11:C5:45:GLY:HA2	11:C5:50:VAL:HB	2.02	0.41
40:AE:113:VAL:HA	40:AE:116:VAL:HG22	2.02	0.41
46:AK:112:VAL:HG12	53:AR:72:ARG:HD3	2.01	0.41
52:AQ:47:ASP:HB3	52:AQ:74:LEU:HD21	2.01	0.41
1:BA:363:A:H2'	1:BA:364:A:C8	2.54	0.41
1:BA:969:A:O2'	1:BA:970:C:O4'	2.30	0.41
1:BA:1356:G:H2'	1:BA:1357:A:H8	1.83	0.41
2:DA:151:C:H2'	2:DA:152:A:C8	2.56	0.41
2:DA:228:C:N4	2:DA:417:C:O2'	2.53	0.41
2:DA:1792:G:O6	2:DA:1827:U:O4	2.38	0.41
2:DA:2047:C:H2'	2:DA:2048:G:C8	2.49	0.41
2:DA:2313:C:H2'	2:DA:2314:A:C8	2.55	0.41
2:DA:2416:C:OP1	34:D4:24:LYS:NZ	2.44	0.41
2:DA:2861:U:H2'	2:DA:2862:G:C8	2.53	0.41
6:DD:33:ARG:HH22	6:DD:74:GLU:HB3	1.85	0.41
6:DD:124:ARG:NH1	6:DD:161:MET:O	2.53	0.41
12:DI:99:LYS:HB3	12:DI:138:VAL:HB	2.02	0.41
29:DZ:23:LEU:HD23	29:DZ:26:LEU:HD12	2.01	0.41
32:D2:5:ARG:NH2	32:D2:23:THR:O	2.53	0.41
38:BC:162:ILE:H	38:BC:162:ILE:HG13	1.74	0.41
1:AA:501:C:OP1	47:AL:113:ARG:NH2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1322:C:H6	1:AA:1322:C:H2'	1.66	0.41
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.54	0.41
2:CA:145:C:H2'	2:CA:146:A:C8	2.55	0.41
2:CA:197:A:O2'	2:CA:2244:U:OP1	2.31	0.41
2:CA:574:A:N6	2:CA:2034:U:OP1	2.53	0.41
20:CQ:109:VAL:HG12	20:CQ:113:LYS:HE3	2.01	0.41
37:AB:166:ASP:O	37:AB:169:HIS:ND1	2.46	0.41
38:AC:58:GLU:HG2	38:AC:65:ARG:HE	1.85	0.41
41:AF:56:LYS:NZ	39:BD:189:ASP:OD1	2.52	0.41
1:BA:80:A:N1	1:BA:90:C:N4	2.67	0.41
1:BA:899:C:H2'	1:BA:900:A:C8	2.55	0.41
1:BA:1395:C:O2'	1:BA:1401:G:O2'	2.38	0.41
1:BA:1478:U:H2'	1:BA:1479:C:C6	2.56	0.41
2:DA:2008:C:H2'	2:DA:2009:A:C8	2.55	0.41
2:DA:2685:G:H2'	2:DA:2686:G:C8	2.55	0.41
3:DB:73:A:N7	3:DB:103:U:O4	2.53	0.41
8:DF:43:ILE:H	8:DF:43:ILE:HG13	1.72	0.41
13:DJ:35:ARG:HB2	13:DJ:54:ILE:HD11	2.01	0.41
46:BK:96:ILE:H	46:BK:96:ILE:HG13	1.67	0.41
1:AA:335:C:H2'	1:AA:336:A:H8	1.86	0.41
1:AA:1004:A:C8	1:AA:1025:U:H1'	2.55	0.41
1:AA:1369:C:H2'	1:AA:1370:G:H8	1.85	0.41
2:CA:1019:U:H3	2:CA:1142:A:N6	2.18	0.41
2:CA:1666:G:OP1	14:CK:82:ASN:ND2	2.52	0.41
3:CB:114:C:H2'	3:CB:115:A:H8	1.84	0.41
40:AE:88:HIS:CG	40:AE:89:THR:H	2.38	0.41
1:BA:619:U:H4'	39:BD:127:ARG:HH21	1.85	0.41
1:BA:675:A:H2'	1:BA:676:A:C8	2.55	0.41
1:BA:853:C:H2'	1:BA:854:U:C6	2.55	0.41
1:BA:859:G:H2'	1:BA:860:A:C8	2.52	0.41
1:BA:1222:G:OP1	54:BS:77:ARG:NH1	2.53	0.41
2:DA:639:U:H2'	2:DA:640:C:C6	2.55	0.41
2:DA:672:C:H2'	2:DA:673:C:C6	2.55	0.41
2:DA:814:C:H1'	2:DA:1225:G:H21	1.85	0.41
2:DA:821:A:H5'	2:DA:822:G:H8	1.84	0.41
2:DA:1278:C:H2'	2:DA:1279:G:C8	2.54	0.41
2:DA:1571:A:H2'	2:DA:1572:A:C8	2.55	0.41
2:DA:1799:G:O2'	5:DC:181:ARG:NH2	2.52	0.41
4:BV:8:U:N3	4:BV:15:G:O6	2.53	0.41
20:DQ:14:LYS:HE3	20:DQ:14:LYS:HB3	1.92	0.41
21:DR:78:ARG:HD3	21:DR:78:ARG:HA	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:BW:22:G:H2'	4:BW:23:A:H8	1.84	0.41
47:BL:34:THR:N	47:BL:53:ARG:O	2.52	0.41
1:AA:137:U:H3	1:AA:226:G:H1	1.67	0.41
1:AA:309:A:H2'	1:AA:310:G:C8	2.54	0.41
1:AA:451:A:N7	1:AA:481:G:N1	2.67	0.41
1:AA:644:U:H2'	1:AA:645:G:H8	1.84	0.41
1:AA:735:C:H5'	53:AR:59:LYS:HD3	2.02	0.41
1:AA:740:U:H2'	1:AA:741:G:H8	1.85	0.41
1:AA:834:U:O2	1:AA:852:G:N2	2.36	0.41
1:AA:1427:C:H2'	1:AA:1428:A:C8	2.54	0.41
2:CA:659:G:O2'	7:CE:95:LYS:O	2.35	0.41
2:CA:974:G:N2	58:CA:3608:HOH:O	2.53	0.41
2:CA:1131:G:O2'	2:CA:2025:C:O2'	2.28	0.41
4:AW:23:A:H2'	4:AW:24:G:H8	1.85	0.41
38:AC:24:ALA:HB3	38:AC:29:PHE:HD1	1.86	0.41
43:AH:105:THR:OG1	43:AH:108:GLY:O	2.29	0.41
1:BA:537:G:H5"	47:BL:109:ARG:CZ	2.49	0.41
1:BA:952:U:H2'	1:BA:953:G:C8	2.53	0.41
1:BA:1418:A:H2	2:DA:1948:G:H21	1.68	0.41
2:DA:151:C:H2'	2:DA:152:A:H8	1.85	0.41
2:DA:285:G:H2'	2:DA:286:U:C6	2.55	0.41
2:DA:577:G:O2'	2:DA:1254:A:OP1	2.38	0.41
2:DA:929:U:H4'	29:DZ:37:ARG:HH21	1.85	0.41
2:DA:1021:A:O2'	2:DA:1123:C:OP1	2.35	0.41
2:DA:1190:G:H5"	15:DL:32:GLY:HA2	2.02	0.41
2:DA:1222:U:O2	2:DA:1227:G:N2	2.42	0.41
2:DA:1909:C:H2'	2:DA:1910:G:C8	2.55	0.41
2:DA:2010:G:H5"	22:DS:42:LYS:HB2	2.01	0.41
2:DA:2391:G:H22	2:DA:2424:C:H2'	1.85	0.41
2:DA:2699:C:H2'	2:DA:2700:A:C8	2.55	0.41
5:DC:107:LYS:N	5:DC:193:GLU:O	2.50	0.41
7:DE:105:LEU:HA	7:DE:108:ILE:HG22	2.01	0.41
9:DG:147:LEU:HA	9:DG:150:TYR:HD2	1.84	0.41
18:DO:72:ALA:HA	18:DO:109:ALA:HB2	2.03	0.41
26:DW:23:VAL:HG22	26:DW:38:VAL:HG22	2.02	0.41
35:D6:3:VAL:HB	35:D6:37:GLN:HE21	1.86	0.41
1:AA:170:U:H2'	1:AA:171:A:C8	2.55	0.41
1:AA:966:G:H2'	1:AA:967:C:C6	2.55	0.41
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.56	0.41
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.56	0.41
1:AA:1279:G:O2'	1:AA:1282:C:N4	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:806:C:OP2	15:CL:41:ARG:NH1	2.54	0.41
15:CL:100:ILE:HG23	15:CL:101:ILE:HG23	2.02	0.41
17:CN:77:ALA:O	17:CN:81:ASN:ND2	2.52	0.41
19:CP:25:VAL:O	19:CP:43:GLU:HA	2.20	0.41
4:AW:48:C:H2'	4:AW:59:U:H4'	2.03	0.41
42:AG:72:VAL:HA	42:AG:90:VAL:HB	2.01	0.41
44:AI:11:ARG:HA	44:AI:105:ARG:NH1	2.35	0.41
47:AL:35:ARG:HD3	47:AL:37:TYR:CZ	2.56	0.41
53:AR:41:SER:O	53:AR:46:THR:OG1	2.27	0.41
1:BA:397:A:N7	1:BA:547:A:O2'	2.54	0.41
1:BA:667:G:H2'	1:BA:668:G:C8	2.55	0.41
1:BA:1040:U:H2'	1:BA:1041:G:C8	2.55	0.41
1:BA:1403:C:N4	36:BX:20:A:OP1	2.54	0.41
2:DA:477:A:H2'	2:DA:478:A:C8	2.55	0.41
2:DA:959:A:H2'	2:DA:960:A:C8	2.55	0.41
2:DA:1386:C:H2'	2:DA:1387:A:H8	1.86	0.41
2:DA:1550:C:H2'	2:DA:1551:A:C8	2.55	0.41
2:DA:1792:G:N2	2:DA:1827:U:O2	2.36	0.41
2:DA:1869:G:O2'	2:DA:1871:A:N6	2.53	0.41
2:DA:1990:C:N4	58:DA:3201:HOH:O	2.54	0.41
2:DA:2370:G:O2'	32:D2:43:ARG:NH2	2.54	0.41
2:DA:2538:C:H2'	2:DA:2539:C:H6	1.85	0.41
2:DA:2649:C:H2'	2:DA:2650:U:H6	1.86	0.41
4:BV:68:C:H2'	4:BV:69:A:C8	2.55	0.41
19:DP:64:SER:OG	19:DP:67:GLU:O	2.28	0.41
1:AA:578:C:H2'	1:AA:579:A:H8	1.86	0.41
1:AA:635:A:H2'	1:AA:636:U:H6	1.86	0.41
1:AA:692:U:OP2	46:AK:27:ASN:ND2	2.53	0.41
1:AA:932:C:H2'	1:AA:933:G:C8	2.56	0.41
1:AA:1075:U:H2'	1:AA:1076:U:C6	2.55	0.41
1:AA:1522:U:OP1	46:AK:127:ARG:NH1	2.53	0.41
2:CA:607:U:H3	2:CA:621:A:N6	2.08	0.41
2:CA:807:U:H2'	2:CA:808:G:C8	2.55	0.41
2:CA:1958:C:H2'	2:CA:1959:G:H8	1.86	0.41
3:CB:5:U:H2'	3:CB:6:G:C8	2.55	0.41
3:CB:49:C:H2'	3:CB:50:A:C8	2.56	0.41
8:CF:101:ARG:HH11	30:C0:26:SER:HA	1.85	0.41
9:CG:88:LEU:HD23	9:CG:93:TYR:HB3	2.03	0.41
36:AX:12:A:H2'	36:AX:13:A:C8	2.55	0.41
1:BA:24:U:H2'	1:BA:25:C:H6	1.85	0.41
1:BA:110:C:O2'	51:BP:25:ARG:O	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:769:G:H21	1:BA:900:A:H61	1.68	0.41
2:DA:376:G:H2'	2:DA:377:G:H8	1.85	0.41
2:DA:821:A:H5'	2:DA:822:G:C8	2.56	0.41
2:DA:1806:C:O2	5:DC:43:ASN:ND2	2.53	0.41
2:DA:2468:A:H2'	2:DA:2476:A:C6	2.56	0.41
2:DA:2756:U:H1'	2:DA:2757:A:H5"	2.02	0.41
20:DQ:43:GLN:HE21	21:DR:77:PHE:HB3	1.85	0.41
24:DU:77:GLY:N	58:DU:206:HOH:O	2.52	0.41
26:DW:43:THR:HG22	26:DW:57:HIS:CD2	2.56	0.41
42:BG:148:LYS:HB2	42:BG:150:PHE:HE1	1.86	0.41
46:BK:61:ALA:HA	46:BK:64:VAL:HG12	2.03	0.41
48:BM:2:ARG:HH11	48:BM:2:ARG:HD3	1.56	0.41
1:AA:613:C:OP1	39:AD:80:ARG:NE	2.40	0.41
1:AA:672:U:H5'	41:AF:79:ARG:HH22	1.85	0.41
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.56	0.41
2:CA:24:G:O2'	22:CS:78:GLU:O	2.36	0.41
2:CA:351:C:H2'	2:CA:352:A:C8	2.55	0.41
2:CA:720:U:H2'	2:CA:721:A:C8	2.56	0.41
2:CA:946:C:H2'	2:CA:947:A:C8	2.56	0.41
2:CA:1086:A:H5"	2:CA:1087:G:H5'	2.02	0.41
2:CA:1357:C:H2'	2:CA:1358:G:O4'	2.21	0.41
2:CA:1683:U:H2'	2:CA:1684:G:H8	1.85	0.41
2:CA:2649:C:H2'	2:CA:2650:U:H6	1.85	0.41
3:CB:91:C:H2'	3:CB:92:C:H6	1.86	0.41
5:CC:242:HIS:HA	5:CC:243:PRO:HD3	1.93	0.41
19:CP:24:THR:HB	19:CP:87:ARG:HB3	2.02	0.41
42:AG:56:SER:OG	42:AG:57:GLU:N	2.53	0.41
1:BA:5:U:H4'	1:BA:6:G:C4	2.55	0.41
1:BA:181:A:N6	1:BA:195:A:OP2	2.53	0.41
1:BA:321:A:H2'	1:BA:322:C:C6	2.56	0.41
1:BA:737:C:H2'	1:BA:738:C:C6	2.56	0.41
1:BA:795:C:O2'	46:BK:127:ARG:O	2.30	0.41
1:BA:1030:U:O2	1:BA:1030:U:C2'	2.69	0.41
1:BA:1182:G:H5'	1:BA:1184:G:H5"	2.03	0.41
1:BA:1320:C:H42	54:BS:35:ARG:CZ	2.33	0.41
1:BA:1498:U:O2'	36:BX:19:U:OP1	2.36	0.41
2:DA:1028:A:N3	2:DA:2486:C:O2'	2.38	0.41
2:DA:1102:C:H1'	35:D6:12:ARG:HH12	1.86	0.41
2:DA:1592:C:H2'	2:DA:1593:A:C8	2.55	0.41
2:DA:1780:A:H3'	2:DA:1781:U:H2'	2.02	0.41
2:DA:1794:A:O2'	2:DA:1900:A:O2'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:2245:U:H5"	2:DA:2246:G:H5'	2.01	0.41
2:DA:2315:G:H2'	2:DA:2316:G:C8	2.55	0.41
2:DA:2691:C:H2'	2:DA:2692:G:C8	2.55	0.41
12:DI:130:GLY:HA2	12:DI:133:ARG:HG2	2.02	0.41
21:DR:59:ILE:HA	21:DR:100:GLY:O	2.21	0.41
27:DX:32:LEU:HD23	27:DX:49:ARG:HG2	2.03	0.41
39:BD:100:VAL:HG21	39:BD:136:VAL:HG21	2.03	0.41
50:BO:9:LYS:NZ	50:BO:13:GLU:OE2	2.46	0.41
1:AA:718:A:C8	46:AK:117:HIS:HB3	2.56	0.41
1:AA:954:G:H2'	1:AA:955:U:C6	2.55	0.41
1:AA:1029:U:H1'	1:AA:1033:G:C2	2.56	0.41
1:AA:1268:G:H21	1:AA:1326:U:H1'	1.85	0.41
1:AA:1492:A:C2	36:AX:22:U:O2'	2.69	0.41
2:CA:304:U:O4	2:CA:313:G:O6	2.39	0.41
2:CA:851:C:H2'	2:CA:852:U:C6	2.55	0.41
2:CA:1406:U:H2'	2:CA:1407:G:H8	1.86	0.41
2:CA:2006:C:O2'	2:CA:2823:A:N3	2.53	0.41
2:CA:2060:A:H3'	7:CE:63:LYS:HZ1	1.86	0.41
2:CA:2068:U:O4	2:CA:2430:A:N7	2.53	0.41
2:CA:2204:G:O2'	5:CC:147:PRO:O	2.33	0.41
2:CA:2487:G:H2'	2:CA:2488:G:H8	1.86	0.41
6:CD:49:GLN:HE21	6:CD:79:LEU:HB3	1.85	0.41
25:CV:32:GLY:O	25:CV:93:ARG:NH1	2.44	0.41
25:CV:36:ALA:O	25:CV:93:ARG:NH2	2.54	0.41
39:AD:27:ILE:HD12	39:AD:33:ILE:HG21	2.02	0.41
45:AJ:57:VAL:HG22	45:AJ:58:ASN:H	1.84	0.41
1:BA:373:A:H61	1:BA:391:G:H1'	1.85	0.41
1:BA:475:C:H2'	1:BA:476:U:C6	2.56	0.41
1:BA:674:G:H2'	1:BA:675:A:C8	2.56	0.41
1:BA:887:G:H21	1:BA:1489:G:H4'	1.86	0.41
1:BA:1203:C:H2'	1:BA:1204:A:C8	2.56	0.41
1:BA:1409:C:H2'	1:BA:1410:A:C8	2.55	0.41
2:DA:18:U:H2'	2:DA:19:A:C8	2.56	0.41
2:DA:562:U:O2	2:DA:2035:G:O2'	2.32	0.41
2:DA:629:G:O2'	2:DA:639:U:O2	2.39	0.41
2:DA:687:C:H5"	33:D3:2:LYS:HE2	2.02	0.41
2:DA:1547:C:H2'	2:DA:1548:A:C8	2.56	0.41
2:DA:1571:A:H2'	2:DA:1572:A:H8	1.84	0.41
2:DA:2096:C:H2'	2:DA:2097:A:C8	2.56	0.41
2:DA:2807:U:N3	2:DA:2892:G:N1	2.69	0.41
5:DC:124:LYS:HG2	5:DC:127:ASN:ND2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DV:61:LEU:O	25:DV:71:LYS:HA	2.20	0.41
28:DY:4:LYS:NZ	28:DY:5:GLU:OE2	2.54	0.41
31:D1:39:ARG:HG3	31:D1:40:HIS:ND1	2.36	0.41
41:BF:3:HIS:HB2	41:BF:92:THR:HG23	2.03	0.41
41:BF:41:ASP:OD1	41:BF:58:HIS:NE2	2.53	0.41
1:AA:599:C:H2'	1:AA:600:A:H8	1.86	0.41
1:AA:781:A:OP2	1:AA:800:G:N2	2.44	0.41
1:AA:1354:U:H2'	1:AA:1355:G:C8	2.55	0.41
1:AA:1439:G:OP2	55:AT:32:LYS:NZ	2.44	0.41
2:CA:151:C:H2'	2:CA:152:A:H8	1.84	0.41
2:CA:250:G:O5'	15:CL:59:ARG:NH1	2.54	0.41
2:CA:406:G:H2'	2:CA:407:G:C8	2.56	0.41
2:CA:813:U:H2'	2:CA:814:C:H6	1.86	0.41
2:CA:1181:U:H2'	2:CA:1182:G:C8	2.48	0.41
2:CA:1264:A:OP1	31:C1:15:ARG:NH1	2.48	0.41
2:CA:1316:U:H2'	2:CA:1317:G:H8	1.85	0.41
2:CA:1364:G:P	27:CX:49:ARG:HH12	2.44	0.41
2:CA:1942:C:OP2	2:CA:1943:U:O2'	2.28	0.41
2:CA:2070:A:H2'	2:CA:2071:A:C8	2.56	0.41
2:CA:2841:C:H2'	2:CA:2842:G:C8	2.55	0.41
2:CA:2841:C:H2'	2:CA:2842:G:H8	1.86	0.41
5:CC:130:PRO:HA	5:CC:188:ARG:HA	2.03	0.41
7:CE:125:SER:O	7:CE:137:LYS:NZ	2.54	0.41
8:CF:42:ALA:HB2	8:CF:48:LEU:HD23	2.03	0.41
10:CH:122:LEU:N	58:CH:201:HOH:O	2.53	0.41
14:CK:99:ILE:HG21	14:CK:119:ALA:HB2	2.03	0.41
17:CN:98:LEU:O	17:CN:111:ALA:HA	2.21	0.41
18:CO:50:ALA:O	18:CO:81:ARG:NH2	2.54	0.41
25:CV:57:TYR:OH	25:CV:79:ARG:NH2	2.54	0.41
32:C2:5:ARG:NH2	32:C2:23:THR:O	2.53	0.41
37:AB:207:ARG:O	37:AB:210:THR:OG1	2.34	0.41
51:AP:2:VAL:HG23	51:AP:65:ALA:HA	2.03	0.41
1:BA:35:G:N2	47:BL:114:SER:OG	2.51	0.41
1:BA:389:A:C5	1:BA:390:U:H1'	2.55	0.41
1:BA:501:C:H1'	1:BA:549:C:H1'	2.03	0.41
1:BA:591:U:H2'	1:BA:592:G:C8	2.56	0.41
1:BA:672:U:O2	1:BA:734:G:N2	2.41	0.41
1:BA:729:A:H2'	1:BA:730:G:H8	1.85	0.41
1:BA:762:U:H2'	1:BA:763:G:C8	2.54	0.41
1:BA:1041:G:N2	58:BA:1852:HOH:O	2.54	0.41
1:BA:1055:A:H62	1:BA:1200:C:N4	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1246:A:H2'	1:BA:1247:U:O4'	2.21	0.41
2:DA:296:U:H2'	2:DA:297:G:C8	2.54	0.41
2:DA:572:A:N6	2:DA:2029:G:H21	2.13	0.41
2:DA:582:A:H2'	2:DA:583:G:C8	2.55	0.41
2:DA:598:U:H2'	2:DA:599:A:H8	1.85	0.41
2:DA:839:U:H1'	2:DA:1191:G:H1'	2.03	0.41
2:DA:881:G:O6	2:DA:897:C:N4	2.54	0.41
2:DA:1214:A:H62	2:DA:1235:G:H21	1.69	0.41
2:DA:1231:U:H2'	2:DA:1232:G:C8	2.52	0.41
2:DA:1244:A:O2'	7:DE:29:HIS:NE2	2.47	0.41
2:DA:1244:A:H4'	15:DL:8:PRO:HD3	2.03	0.41
2:DA:1470:A:N6	2:DA:1521:G:H21	2.17	0.41
2:DA:1701:A:OP1	2:DA:1763:G:N1	2.31	0.41
2:DA:2416:C:H2'	2:DA:2417:C:C6	2.56	0.41
2:DA:2417:C:H2'	2:DA:2418:A:H8	1.86	0.41
2:DA:2591:C:H2'	2:DA:2592:G:H8	1.85	0.41
2:DA:2602:A:H2'	4:BW:74:C:H5'	2.02	0.41
5:DC:66:PHE:HB3	5:DC:151:GLY:HA3	2.01	0.41
6:DD:97:SER:OG	6:DD:98:VAL:N	2.54	0.41
10:DH:119:ASN:HA	10:DH:120:GLY:HA2	1.79	0.41
26:DW:65:GLY:HA2	26:DW:85:GLU:HG3	2.03	0.41
4:BW:44:G:H21	4:BW:45:G:N2	2.18	0.41
39:BD:62:ARG:NH2	58:BD:309:HOH:O	2.53	0.41
41:BF:51:ILE:H	41:BF:51:ILE:HG13	1.68	0.41
43:BH:22:ALA:O	43:BH:61:THR:HA	2.20	0.41
43:BH:113:ARG:NH2	58:BH:204:HOH:O	2.54	0.41
45:BJ:40:ILE:HB	45:BJ:73:LEU:HB3	2.03	0.41
47:BL:106:VAL:H	47:BL:118:VAL:HG22	1.85	0.41
48:BM:2:ARG:NH2	48:BM:56:ARG:HH12	2.19	0.41
52:BQ:30:HIS:HB2	52:BQ:37:ILE:HD11	2.01	0.41
1:AA:3:A:N3	1:AA:613:C:H1'	2.36	0.41
1:AA:127:G:O2'	52:AQ:5:ARG:NH1	2.39	0.41
1:AA:200:G:N1	1:AA:218:U:O4	2.54	0.41
1:AA:318:G:HO2'	1:AA:1468:A:HO2'	1.68	0.41
1:AA:335:C:H1'	1:AA:1433:A:H2	1.85	0.41
2:CA:1142:A:H4'	13:CJ:27:ARG:HH21	1.86	0.41
2:CA:1146:C:H2'	2:CA:1147:A:C8	2.56	0.41
2:CA:1437:C:O2'	2:CA:1516:G:O2'	2.25	0.41
2:CA:1463:C:H2'	2:CA:1464:G:H8	1.85	0.41
2:CA:1690:A:H62	2:CA:1697:G:H21	1.68	0.41
2:CA:1996:C:OP2	14:CK:31:ARG:NH2	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CA:2815:C:H2'	2:CA:2816:G:H8	1.86	0.41
2:CA:2831:G:N2	2:CA:2884:U:OP2	2.53	0.41
5:CC:165:ALA:HB3	5:CC:172:THR:HB	2.02	0.41
17:CN:90:ARG:CZ	17:CN:116:VAL:HG11	2.51	0.41
19:CP:28:LYS:HB3	19:CP:39:LEU:HD21	2.02	0.41
4:AW:15:G:N2	4:AW:48:C:N4	2.41	0.41
41:AF:46:GLN:HA	41:AF:56:LYS:HG2	2.02	0.41
44:AI:11:ARG:HH21	44:AI:108:ARG:NH2	2.19	0.41
49:AN:63:ARG:NH1	49:AN:70:PRO:HD3	2.35	0.41
50:AO:66:LEU:O	58:AO:101:HOH:O	2.22	0.41
54:AS:11:ASP:O	54:AS:15:LEU:HB2	2.20	0.41
1:BA:123:U:OP1	1:BA:311:C:O2'	2.35	0.41
1:BA:249:U:O2	1:BA:252:U:O2'	2.36	0.41
1:BA:458:U:H2'	1:BA:459:A:C8	2.54	0.41
1:BA:712:A:H2'	1:BA:713:G:C8	2.56	0.41
1:BA:1454:G:H2'	1:BA:1455:G:C8	2.56	0.41
1:BA:1512:U:H2'	1:BA:1513:A:C8	2.56	0.41
2:DA:160:A:N6	2:DA:166:U:N3	2.51	0.41
2:DA:300:A:O5'	24:DU:81:ARG:NH1	2.41	0.41
2:DA:371:A:N6	2:DA:402:A:OP2	2.44	0.41
2:DA:538:A:H5"	13:DJ:7:LYS:HE3	2.03	0.41
2:DA:607:U:H2'	2:DA:608:A:H8	1.86	0.41
2:DA:1254:A:H5"	2:DA:1255:U:H5'	2.02	0.41
2:DA:1627:G:H2'	2:DA:1628:G:H8	1.86	0.41
2:DA:1765:U:H2'	2:DA:1766:G:H8	1.85	0.41
2:DA:1803:A:N6	2:DA:1814:G:N2	2.69	0.41
2:DA:1810:A:N6	58:DA:3604:HOH:O	2.54	0.41
2:DA:2365:G:H4'	26:DW:60:PHE:CE1	2.56	0.41
2:DA:2655:G:H4'	58:DA:3307:HOH:O	2.20	0.41
12:DI:109:ALA:HA	12:DI:112:LYS:HB2	2.03	0.41
15:DL:75:ALA:HB2	15:DL:105:ILE:HG21	2.03	0.41
36:BX:15:A:H2'	36:BX:16:U:C6	2.56	0.41
1:AA:363:A:H2'	1:AA:364:A:C8	2.56	0.40
1:AA:1177:G:OP2	44:AI:98:ARG:NE	2.53	0.40
2:CA:770:G:H2'	2:CA:771:G:H8	1.86	0.40
2:CA:1501:G:H4'	5:CC:94:LEU:HD21	2.03	0.40
2:CA:1857:G:O2'	2:CA:1884:G:N2	2.48	0.40
2:CA:2101:A:H61	2:CA:2189:U:H3	1.69	0.40
2:CA:2647:U:H2'	2:CA:2648:G:C8	2.51	0.40
3:CB:18:G:N2	58:CB:314:HOH:O	2.53	0.40
3:CB:43:C:O2	8:CF:91:ARG:NH2	2.47	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AV:22:G:H2'	4:AV:23:A:C8	2.56	0.40
18:CO:27:VAL:HG21	18:CO:40:ILE:HD12	2.03	0.40
21:CR:48:LYS:H	21:CR:48:LYS:HD2	1.85	0.40
38:AC:40:ARG:NH1	49:AN:92:GLU:OE2	2.54	0.40
38:AC:156:ARG:HB3	38:AC:193:TYR:CE2	2.57	0.40
45:AJ:44:THR:HG22	45:AJ:46:LYS:HB3	2.02	0.40
46:AK:92:ARG:NH1	58:AK:205:HOH:O	2.54	0.40
52:AQ:67:SER:OG	52:AQ:69:THR:O	2.39	0.40
1:BA:57:G:N2	58:BA:1849:HOH:O	2.54	0.40
1:BA:71:A:C4	1:BA:72:A:C8	3.09	0.40
1:BA:1311:A:N6	54:BS:2:ARG:HE	2.19	0.40
1:BA:1498:U:C2'	36:BX:19:U:OP1	2.68	0.40
2:DA:20:C:H2'	2:DA:21:A:H8	1.86	0.40
2:DA:171:U:H2'	2:DA:172:A:C8	2.56	0.40
2:DA:205:G:HO2'	2:DA:206:U:P	2.44	0.40
2:DA:302:C:H2'	2:DA:303:G:H8	1.86	0.40
2:DA:958:U:OP2	16:DM:14:LYS:NZ	2.37	0.40
2:DA:1428:C:C5	2:DA:1569:A:H5"	2.57	0.40
2:DA:1604:C:H2'	2:DA:1605:C:C6	2.56	0.40
2:DA:2329:U:H2'	2:DA:2330:G:H8	1.86	0.40
2:DA:2820:A:C6	6:DD:197:THR:HB	2.55	0.40
21:DR:48:LYS:NZ	21:DR:49:ILE:O	2.47	0.40
37:BB:93:HIS:CE1	37:BB:145:ASN:HB2	2.56	0.40
46:BK:86:LYS:HA	46:BK:113:THR:HG22	2.03	0.40
48:BM:85:TYR:N	54:BS:72:GLU:O	2.54	0.40
53:BR:62:ARG:NE	53:BR:68:PRO:O	2.54	0.40
1:AA:254:G:O3'	52:AQ:70:LYS:NZ	2.51	0.40
1:AA:947:G:O3'	48:AM:107:THR:OG1	2.34	0.40
1:AA:973:G:O6	1:AA:974:A:N6	2.54	0.40
1:AA:1203:C:OP1	49:AN:1:ALA:N	2.44	0.40
2:CA:120:U:H4'	2:CA:121:G:H5"	2.02	0.40
2:CA:302:C:H2'	2:CA:303:G:H8	1.86	0.40
2:CA:401:A:H2'	2:CA:402:A:C8	2.56	0.40
2:CA:467:G:OP2	33:C3:34:ARG:NH1	2.49	0.40
2:CA:690:G:O2'	5:CC:216:ARG:NH1	2.54	0.40
2:CA:998:C:P	20:CQ:91:ARG:HH22	2.44	0.40
2:CA:1463:C:H2'	2:CA:1464:G:C8	2.56	0.40
2:CA:2594:C:H2'	2:CA:2595:G:C8	2.56	0.40
2:CA:2699:C:H2'	2:CA:2700:A:H8	1.86	0.40
4:AV:23:A:H2'	4:AV:24:G:C8	2.56	0.40
40:AE:52:ALA:HB3	40:AE:58:ALA:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AF:47:LEU:HD22	53:AR:65:SER:HB3	2.03	0.40
53:AR:56:ARG:HH21	53:AR:60:ARG:NH2	2.19	0.40
55:AT:12:GLN:HA	55:AT:15:LYS:HD3	2.02	0.40
1:BA:196:A:N3	1:BA:222:C:H1'	2.36	0.40
1:BA:259:G:OP2	55:BT:77:ASN:ND2	2.54	0.40
1:BA:647:C:H2'	1:BA:648:A:H8	1.86	0.40
1:BA:718:A:H2	53:BR:37:LYS:HE2	1.87	0.40
1:BA:821:G:H2'	1:BA:822:U:H6	1.86	0.40
1:BA:919:A:HO2'	1:BA:1080:A:N6	2.19	0.40
1:BA:922:G:H2'	1:BA:923:A:C8	2.55	0.40
1:BA:925:G:N2	1:BA:1391:U:O2	2.37	0.40
2:DA:36:G:N2	2:DA:450:G:O2'	2.53	0.40
2:DA:652:U:OP1	2:DA:654:A:N6	2.51	0.40
2:DA:729:G:OP1	5:DC:9:SER:OG	2.37	0.40
2:DA:2215:C:H2'	2:DA:2216:G:C8	2.57	0.40
2:DA:2563:U:O2'	2:DA:2565:A:N7	2.51	0.40
2:DA:2855:C:H2'	2:DA:2856:A:C8	2.56	0.40
15:DL:81:ASP:OD1	15:DL:81:ASP:N	2.54	0.40
20:DQ:93:ILE:HG21	21:DR:4:VAL:HG11	2.03	0.40
1:AA:709:U:H2'	1:AA:710:G:C8	2.57	0.40
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.55	0.40
1:AA:1485:U:H2'	1:AA:1486:G:H8	1.87	0.40
2:CA:577:G:H2'	2:CA:578:G:C8	2.56	0.40
2:CA:671:C:H2'	2:CA:672:C:C6	2.56	0.40
2:CA:692:C:P	5:CC:55:GLY:H	2.44	0.40
2:CA:1060:U:H3	2:CA:1088:A:H8	1.70	0.40
2:CA:1133:A:H4'	2:CA:1134:A:H5"	2.03	0.40
2:CA:1296:G:OP1	2:CA:2709:G:O2'	2.35	0.40
2:CA:2037:A:H2'	2:CA:2038:G:C8	2.56	0.40
2:CA:2698:U:H2'	2:CA:2699:C:C6	2.56	0.40
8:CF:139:GLU:HG3	30:C0:28:VAL:HA	2.03	0.40
1:BA:22:G:H2'	1:BA:23:C:C6	2.56	0.40
2:DA:145:C:H2'	2:DA:146:A:C8	2.56	0.40
2:DA:572:A:OP2	21:DR:80:ARG:NH2	2.52	0.40
2:DA:854:C:H2'	2:DA:855:G:C8	2.55	0.40
2:DA:1281:G:H2'	2:DA:1282:U:C6	2.57	0.40
2:DA:1434:A:H2'	2:DA:1435:G:C8	2.57	0.40
2:DA:1469:A:H2'	2:DA:1470:A:C8	2.57	0.40
2:DA:1576:U:H2'	2:DA:1577:C:C6	2.57	0.40
2:DA:1983:G:H4'	2:DA:2606:C:H4'	2.03	0.40
2:DA:2093:G:H2'	2:DA:2094:A:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DA:2646:C:OP2	2:DA:2732:G:O2'	2.40	0.40
3:DB:115:A:H2'	3:DB:116:G:H8	1.87	0.40
5:DC:36:ASN:HB2	5:DC:61:TYR:HB2	2.03	0.40
8:DF:94:ARG:HA	8:DF:97:GLU:HB3	2.02	0.40
20:DQ:101:ASP:OD2	21:DR:2:TYR:OH	2.31	0.40
35:D6:15:LYS:O	35:D6:25:VAL:HA	2.21	0.40
4:BW:55:U:N3	4:BW:58:A:OP2	2.49	0.40
38:BC:40:ARG:NH1	58:BC:304:HOH:O	2.47	0.40
42:BG:24:LYS:HA	42:BG:27:ASN:HD22	1.86	0.40
48:BM:49:GLU:HA	48:BM:52:ILE:HD12	2.03	0.40
55:BT:4:LYS:HD3	55:BT:6:ALA:H	1.87	0.40
1:AA:126:G:H22	1:AA:235:C:H42	1.68	0.40
1:AA:302:G:H2'	1:AA:303:A:H8	1.86	0.40
1:AA:692:U:OP1	46:AK:126:ARG:NH2	2.37	0.40
1:AA:783:C:H2'	1:AA:784:A:H8	1.86	0.40
1:AA:1089:G:H1	1:AA:1096:C:H42	1.69	0.40
1:AA:1192:C:P	38:AC:4:LYS:HZ1	2.44	0.40
1:AA:1220:G:H5"	54:AS:36:ARG:HH22	1.87	0.40
2:CA:138:U:O4	2:CA:142:A:N6	2.54	0.40
2:CA:160:A:H62	2:CA:166:U:H3	1.70	0.40
2:CA:414:C:H2'	2:CA:415:A:C8	2.55	0.40
2:CA:1415:U:O4	2:CA:1587:G:O6	2.40	0.40
2:CA:2626:C:H2'	2:CA:2627:G:C8	2.56	0.40
2:CA:2836:U:H2'	2:CA:2837:A:C8	2.55	0.40
4:AY:72:C:H2'	4:AY:73:A:C8	2.57	0.40
6:CD:55:LYS:HE2	6:CD:77:ARG:HA	2.02	0.40
7:CE:147:LEU:HB2	7:CE:183:PHE:HD2	1.86	0.40
9:CG:10:VAL:HA	9:CG:11:PRO:HD3	1.90	0.40
11:C5:4:ASN:HB3	11:C5:7:ASP:H	1.86	0.40
39:AD:55:ARG:HH22	39:AD:62:ARG:HH12	1.68	0.40
39:AD:150:LYS:NZ	39:AD:150:LYS:HB3	2.36	0.40
42:AG:34:LYS:HB3	42:AG:37:THR:HG22	2.03	0.40
1:BA:686:U:H1'	46:BK:43:TRP:HZ2	1.86	0.40
1:BA:1228:C:P	48:BM:106:ARG:HH12	2.44	0.40
2:DA:1146:C:H2'	2:DA:1147:A:H8	1.87	0.40
2:DA:2204:G:O6	2:DA:2220:U:O4	2.39	0.40
2:DA:2359:C:H2'	2:DA:2360:G:C8	2.57	0.40
2:DA:2443:C:H2'	2:DA:2444:G:H8	1.86	0.40
2:DA:2621:G:P	6:DD:124:ARG:HH22	2.44	0.40
2:DA:2771:C:O2'	6:DD:173:GLN:NE2	2.30	0.40
5:DC:72:GLY:HA2	5:DC:116:GLN:HE21	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:DP:48:ALA:HB3	19:DP:59:THR:HB	2.03	0.40
23:DT:61:LEU:HG	23:DT:82:LYS:HB3	2.03	0.40
30:D0:41:HIS:CD2	30:D0:42:PRO:HD2	2.56	0.40
36:BX:28:A:C6	40:BE:17:VAL:HG12	2.56	0.40
37:BB:95:TRP:HZ3	37:BB:170:ILE:HB	1.86	0.40
38:BC:113:ALA:HB1	38:BC:200:VAL:HG13	2.02	0.40
42:BG:112:ASP:N	42:BG:112:ASP:OD1	2.55	0.40
47:BL:49:ARG:HH12	47:BL:88:ASP:HB3	1.86	0.40
1:AA:459:A:H2'	1:AA:460:A:C8	2.57	0.40
1:AA:474:G:H2'	1:AA:475:C:C6	2.57	0.40
1:AA:770:C:H2'	1:AA:771:G:H8	1.87	0.40
1:AA:982:U:H4'	1:AA:983:A:H5'	2.04	0.40
1:AA:1186:G:H2'	1:AA:1187:G:C8	2.54	0.40
1:AA:1479:C:H2'	1:AA:1480:A:C8	2.56	0.40
2:CA:855:G:N2	26:CW:27:GLY:O	2.42	0.40
2:CA:1187:G:H5"	21:CR:83:TYR:CZ	2.56	0.40
2:CA:1258:U:H2'	2:CA:1259:G:C8	2.57	0.40
2:CA:1550:C:H2'	2:CA:1551:A:H8	1.86	0.40
2:CA:1759:A:HO2'	2:CA:2714:G:HO2'	1.69	0.40
2:CA:1825:U:H2'	2:CA:1826:G:C8	2.57	0.40
2:CA:2064:C:H2'	2:CA:2065:C:C6	2.57	0.40
11:C5:28:ALA:HA	11:C5:108:VAL:HG13	2.03	0.40
4:AW:23:A:H2'	4:AW:24:G:C8	2.57	0.40
38:AC:162:ILE:H	38:AC:162:ILE:HG13	1.67	0.40
44:AI:83:THR:HA	44:AI:86:LEU:HD12	2.03	0.40
45:AJ:19:ASP:HA	45:AJ:22:THR:HG22	2.02	0.40
47:AL:42:LYS:HG2	47:AL:43:LYS:HD3	2.03	0.40
53:AR:41:SER:HA	53:AR:46:THR:HG21	2.04	0.40
1:BA:370:C:H2'	1:BA:371:A:C8	2.57	0.40
1:BA:891:U:H2'	1:BA:892:A:H8	1.87	0.40
1:BA:1298:U:H3	42:BG:113:LYS:HG3	1.87	0.40
1:BA:1355:G:H2'	1:BA:1356:G:C8	2.57	0.40
1:BA:1386:G:H2'	1:BA:1387:G:H8	1.86	0.40
1:BA:1445:U:O2	1:BA:1457:G:N2	2.32	0.40
2:DA:980:A:N3	2:DA:2037:A:O2'	2.40	0.40
2:DA:1059:G:O6	2:DA:1080:A:N6	2.55	0.40
2:DA:1181:U:H2'	2:DA:1182:G:H8	1.84	0.40
2:DA:1270:C:O2'	2:DA:1648:U:OP2	2.38	0.40
2:DA:2118:U:H3	2:DA:2143:C:HO2'	1.69	0.40
2:DA:2594:C:H2'	2:DA:2595:G:C8	2.56	0.40
3:DB:7:G:OP1	18:DO:4:LYS:NZ	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:DF:34:THR:HG22	8:DF:89:THR:HA	2.03	0.40
22:DS:28:LYS:HG2	22:DS:70:LYS:HG3	2.02	0.40
25:DV:21:ARG:HH21	25:DV:87:GLN:HB3	1.86	0.40
27:DX:3:VAL:HG13	27:DX:8:GLY:HA2	2.04	0.40
52:BQ:11:VAL:HG22	52:BQ:22:VAL:HG22	2.03	0.40

All (12) 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)
18:CO:111:ARG:NH1	21:DR:31:GLU:OE1[3_445]	1.60	0.60
29:CZ:5:LYS:NZ	31:C1:34:GLY:O[4_445]	1.69	0.51
39:AD:164:ARG:CD	41:BF:14:GLN:OE1[4_455]	1.79	0.41
1:AA:368:U:N3	10:DH:97:ARG:NH1[4_455]	1.88	0.32
39:AD:25:ARG:O	41:BF:13:ASP:OD2[4_455]	1.93	0.27
1:AA:368:U:C4	10:DH:97:ARG:NH1[4_455]	1.94	0.26
6:CD:85:ALA:O	2:DA:2902:C:N4[2_454]	1.96	0.24
6:CD:87:GLY:N	2:DA:1:G:O6[2_454]	1.97	0.23
18:CO:111:ARG:CZ	21:DR:31:GLU:OE1[3_445]	1.98	0.22
15:CL:136:GLU:O	2:DA:1148:U:O2'[3_445]	2.12	0.08
1:AA:368:U:OP2	10:DH:112:LYS:NZ[4_455]	2.16	0.04
39:AD:191:SER:OG	41:BF:16:GLU:CG[4_455]	2.16	0.04

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
5	CC	269/271 (99%)	240 (89%)	29 (11%)	0	100 100
5	DC	269/271 (99%)	249 (93%)	20 (7%)	0	100 100
6	CD	207/209 (99%)	192 (93%)	13 (6%)	2 (1%)	15 52
6	DD	207/209 (99%)	195 (94%)	11 (5%)	1 (0%)	29 66

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	CE	179/181 (99%)	172 (96%)	7 (4%)	0	100	100
7	DE	178/181 (98%)	169 (95%)	9 (5%)	0	100	100
8	CF	175/177 (99%)	150 (86%)	25 (14%)	0	100	100
8	DF	175/177 (99%)	152 (87%)	23 (13%)	0	100	100
9	CG	174/176 (99%)	163 (94%)	11 (6%)	0	100	100
9	DG	174/176 (99%)	162 (93%)	12 (7%)	0	100	100
10	CH	147/149 (99%)	120 (82%)	26 (18%)	1 (1%)	22	60
10	DH	147/149 (99%)	118 (80%)	29 (20%)	0	100	100
11	C5	107/109 (98%)	91 (85%)	16 (15%)	0	100	100
12	CI	69/72 (96%)	65 (94%)	4 (6%)	0	100	100
12	DI	70/72 (97%)	59 (84%)	11 (16%)	0	100	100
13	CJ	140/142 (99%)	130 (93%)	10 (7%)	0	100	100
13	DJ	140/142 (99%)	133 (95%)	7 (5%)	0	100	100
14	CK	120/122 (98%)	105 (88%)	15 (12%)	0	100	100
14	DK	120/122 (98%)	104 (87%)	16 (13%)	0	100	100
15	CL	141/143 (99%)	122 (86%)	19 (14%)	0	100	100
15	DL	141/143 (99%)	127 (90%)	14 (10%)	0	100	100
16	CM	133/136 (98%)	127 (96%)	4 (3%)	2 (2%)	10	45
16	DM	134/136 (98%)	125 (93%)	9 (7%)	0	100	100
17	CN	119/121 (98%)	108 (91%)	11 (9%)	0	100	100
17	DN	119/121 (98%)	107 (90%)	10 (8%)	2 (2%)	9	42
18	CO	114/116 (98%)	105 (92%)	9 (8%)	0	100	100
18	DO	114/116 (98%)	100 (88%)	13 (11%)	1 (1%)	17	54
19	CP	112/114 (98%)	105 (94%)	7 (6%)	0	100	100
19	DP	112/114 (98%)	104 (93%)	8 (7%)	0	100	100
20	CQ	115/117 (98%)	113 (98%)	2 (2%)	0	100	100
20	DQ	115/117 (98%)	113 (98%)	2 (2%)	0	100	100
21	CR	101/103 (98%)	91 (90%)	10 (10%)	0	100	100
21	DR	101/103 (98%)	90 (89%)	11 (11%)	0	100	100
22	CS	108/110 (98%)	101 (94%)	7 (6%)	0	100	100
22	DS	108/110 (98%)	101 (94%)	7 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
23	CT	91/93 (98%)	84 (92%)	6 (7%)	1 (1%)	14 50
23	DT	91/93 (98%)	82 (90%)	9 (10%)	0	100 100
24	CU	100/102 (98%)	86 (86%)	14 (14%)	0	100 100
24	DU	100/102 (98%)	85 (85%)	14 (14%)	1 (1%)	15 52
25	CV	92/94 (98%)	90 (98%)	2 (2%)	0	100 100
25	DV	92/94 (98%)	90 (98%)	2 (2%)	0	100 100
26	CW	73/75 (97%)	68 (93%)	5 (7%)	0	100 100
26	DW	73/75 (97%)	64 (88%)	9 (12%)	0	100 100
27	CX	75/77 (97%)	69 (92%)	6 (8%)	0	100 100
27	DX	75/77 (97%)	73 (97%)	2 (3%)	0	100 100
28	CY	59/63 (94%)	52 (88%)	7 (12%)	0	100 100
28	DY	61/63 (97%)	54 (88%)	6 (10%)	1 (2%)	9 44
29	CZ	56/58 (97%)	53 (95%)	2 (4%)	1 (2%)	8 41
29	DZ	56/58 (97%)	53 (95%)	3 (5%)	0	100 100
30	C0	37/39 (95%)	33 (89%)	4 (11%)	0	100 100
30	D0	37/39 (95%)	33 (89%)	4 (11%)	0	100 100
31	C1	54/56 (96%)	50 (93%)	4 (7%)	0	100 100
31	D1	54/56 (96%)	48 (89%)	6 (11%)	0	100 100
32	C2	48/50 (96%)	43 (90%)	5 (10%)	0	100 100
32	D2	48/50 (96%)	43 (90%)	5 (10%)	0	100 100
33	C3	44/46 (96%)	40 (91%)	4 (9%)	0	100 100
33	D3	44/46 (96%)	39 (89%)	5 (11%)	0	100 100
34	C4	59/62 (95%)	52 (88%)	6 (10%)	1 (2%)	9 42
34	D4	60/62 (97%)	51 (85%)	8 (13%)	1 (2%)	9 42
35	C6	36/38 (95%)	35 (97%)	1 (3%)	0	100 100
35	D6	36/38 (95%)	35 (97%)	1 (3%)	0	100 100
37	AB	223/225 (99%)	198 (89%)	25 (11%)	0	100 100
37	BB	223/225 (99%)	186 (83%)	37 (17%)	0	100 100
38	AC	204/206 (99%)	174 (85%)	30 (15%)	0	100 100
38	BC	204/206 (99%)	186 (91%)	18 (9%)	0	100 100
39	AD	203/205 (99%)	179 (88%)	24 (12%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
39	BD	203/205 (99%)	174 (86%)	27 (13%)	2 (1%)	15 52
40	AE	148/150 (99%)	117 (79%)	31 (21%)	0	100 100
40	BE	148/150 (99%)	122 (82%)	26 (18%)	0	100 100
41	AF	98/100 (98%)	80 (82%)	17 (17%)	1 (1%)	15 52
41	BF	98/100 (98%)	79 (81%)	18 (18%)	1 (1%)	15 52
42	AG	131/179 (73%)	117 (89%)	14 (11%)	0	100 100
42	BG	128/179 (72%)	117 (91%)	11 (9%)	0	100 100
43	AH	126/129 (98%)	119 (94%)	7 (6%)	0	100 100
43	BH	127/129 (98%)	118 (93%)	9 (7%)	0	100 100
44	AI	122/130 (94%)	107 (88%)	15 (12%)	0	100 100
44	BI	125/130 (96%)	104 (83%)	21 (17%)	0	100 100
45	AJ	96/98 (98%)	85 (88%)	11 (12%)	0	100 100
45	BJ	96/98 (98%)	80 (83%)	15 (16%)	1 (1%)	15 52
46	AK	114/117 (97%)	101 (89%)	13 (11%)	0	100 100
46	BK	115/117 (98%)	99 (86%)	16 (14%)	0	100 100
47	AL	121/123 (98%)	104 (86%)	16 (13%)	1 (1%)	19 57
47	BL	121/123 (98%)	104 (86%)	17 (14%)	0	100 100
48	AM	112/114 (98%)	104 (93%)	8 (7%)	0	100 100
48	BM	112/114 (98%)	102 (91%)	10 (9%)	0	100 100
49	AN	92/101 (91%)	80 (87%)	12 (13%)	0	100 100
49	BN	92/101 (91%)	77 (84%)	15 (16%)	0	100 100
50	AO	86/89 (97%)	79 (92%)	6 (7%)	1 (1%)	13 49
50	BO	86/89 (97%)	78 (91%)	8 (9%)	0	100 100
51	AP	80/82 (98%)	71 (89%)	8 (10%)	1 (1%)	12 47
51	BP	80/82 (98%)	68 (85%)	11 (14%)	1 (1%)	12 47
52	AQ	78/80 (98%)	64 (82%)	12 (15%)	2 (3%)	5 34
52	BQ	78/80 (98%)	63 (81%)	15 (19%)	0	100 100
53	AR	53/55 (96%)	49 (92%)	4 (8%)	0	100 100
53	BR	53/55 (96%)	49 (92%)	4 (8%)	0	100 100
54	AS	77/79 (98%)	65 (84%)	12 (16%)	0	100 100
54	BS	77/79 (98%)	68 (88%)	9 (12%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
55	AT	83/85 (98%)	78 (94%)	5 (6%)	0	100 100
55	BT	83/85 (98%)	75 (90%)	8 (10%)	0	100 100
All	All	11101/11427 (97%)	9933 (90%)	1142 (10%)	26 (0%)	47 79

All (26) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
23	CT	3	ARG
41	AF	55	HIS
52	AQ	70	LYS
17	DN	118	ARG
39	BD	28	ASP
17	DN	119	SER
28	DY	23	ARG
39	BD	27	ILE
41	BF	55	HIS
51	BP	79	ASN
6	CD	86	GLU
6	CD	152	PRO
29	CZ	2	LYS
50	AO	4	THR
51	AP	79	ASN
6	DD	152	PRO
34	D4	31	ILE
45	BJ	58	ASN
52	AQ	69	THR
16	CM	70	ASP
34	C4	31	ILE
24	DU	98	ASN
10	CH	118	PRO
18	DO	114	GLY
47	AL	106	VAL
16	CM	69	PRO

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
5	CC	216/216 (100%)	214 (99%)	2 (1%)	78 87
5	DC	216/216 (100%)	213 (99%)	3 (1%)	67 80
6	CD	164/164 (100%)	163 (99%)	1 (1%)	86 91
6	DD	164/164 (100%)	163 (99%)	1 (1%)	86 91
7	CE	148/148 (100%)	147 (99%)	1 (1%)	84 90
7	DE	147/148 (99%)	145 (99%)	2 (1%)	67 80
8	CF	148/148 (100%)	148 (100%)	0	100 100
8	DF	148/148 (100%)	147 (99%)	1 (1%)	84 90
9	CG	137/137 (100%)	136 (99%)	1 (1%)	84 90
9	DG	137/137 (100%)	136 (99%)	1 (1%)	84 90
10	CH	114/114 (100%)	110 (96%)	4 (4%)	36 61
10	DH	114/114 (100%)	113 (99%)	1 (1%)	78 87
11	C5	83/83 (100%)	81 (98%)	2 (2%)	49 69
12	CI	53/54 (98%)	50 (94%)	3 (6%)	20 49
12	DI	54/54 (100%)	54 (100%)	0	100 100
13	CJ	116/116 (100%)	115 (99%)	1 (1%)	78 87
13	DJ	116/116 (100%)	114 (98%)	2 (2%)	60 78
14	CK	103/103 (100%)	103 (100%)	0	100 100
14	DK	103/103 (100%)	101 (98%)	2 (2%)	57 75
15	CL	102/102 (100%)	99 (97%)	3 (3%)	42 64
15	DL	102/102 (100%)	100 (98%)	2 (2%)	55 73
16	CM	108/109 (99%)	108 (100%)	0	100 100
16	DM	109/109 (100%)	108 (99%)	1 (1%)	78 87
17	CN	101/101 (100%)	100 (99%)	1 (1%)	76 85
17	DN	101/101 (100%)	101 (100%)	0	100 100
18	CO	86/86 (100%)	84 (98%)	2 (2%)	50 70
18	DO	86/86 (100%)	84 (98%)	2 (2%)	50 70
19	CP	99/99 (100%)	99 (100%)	0	100 100
19	DP	99/99 (100%)	98 (99%)	1 (1%)	76 85
20	CQ	89/89 (100%)	89 (100%)	0	100 100
20	DQ	89/89 (100%)	89 (100%)	0	100 100
21	CR	84/84 (100%)	83 (99%)	1 (1%)	71 83

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	DR	84/84 (100%)	84 (100%)	0	100	100
22	CS	93/93 (100%)	92 (99%)	1 (1%)	73	84
22	DS	93/93 (100%)	92 (99%)	1 (1%)	73	84
23	CT	80/80 (100%)	78 (98%)	2 (2%)	47	68
23	DT	80/80 (100%)	79 (99%)	1 (1%)	69	81
24	CU	83/83 (100%)	83 (100%)	0	100	100
24	DU	83/83 (100%)	83 (100%)	0	100	100
25	CV	78/78 (100%)	78 (100%)	0	100	100
25	DV	78/78 (100%)	77 (99%)	1 (1%)	69	81
26	CW	57/57 (100%)	56 (98%)	1 (2%)	59	77
26	DW	57/57 (100%)	57 (100%)	0	100	100
27	CX	67/67 (100%)	66 (98%)	1 (2%)	65	79
27	DX	67/67 (100%)	66 (98%)	1 (2%)	65	79
28	CY	55/55 (100%)	55 (100%)	0	100	100
28	DY	55/55 (100%)	55 (100%)	0	100	100
29	CZ	48/48 (100%)	47 (98%)	1 (2%)	53	72
29	DZ	48/48 (100%)	48 (100%)	0	100	100
30	C0	35/35 (100%)	35 (100%)	0	100	100
30	D0	35/35 (100%)	34 (97%)	1 (3%)	42	64
31	C1	47/47 (100%)	47 (100%)	0	100	100
31	D1	47/47 (100%)	47 (100%)	0	100	100
32	C2	45/45 (100%)	44 (98%)	1 (2%)	52	71
32	D2	45/45 (100%)	44 (98%)	1 (2%)	52	71
33	C3	38/38 (100%)	37 (97%)	1 (3%)	46	67
33	D3	38/38 (100%)	37 (97%)	1 (3%)	46	67
34	C4	49/50 (98%)	49 (100%)	0	100	100
34	D4	50/50 (100%)	49 (98%)	1 (2%)	55	73
35	C6	34/34 (100%)	34 (100%)	0	100	100
35	D6	34/34 (100%)	34 (100%)	0	100	100
37	AB	186/186 (100%)	185 (100%)	1 (0%)	88	93
37	BB	186/186 (100%)	182 (98%)	4 (2%)	52	71

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	AC	170/170 (100%)	169 (99%)	1 (1%)	86	91
38	BC	170/170 (100%)	165 (97%)	5 (3%)	42	64
39	AD	172/172 (100%)	168 (98%)	4 (2%)	50	70
39	BD	172/172 (100%)	167 (97%)	5 (3%)	42	64
40	AE	113/113 (100%)	111 (98%)	2 (2%)	59	77
40	BE	113/113 (100%)	109 (96%)	4 (4%)	36	61
41	AF	87/87 (100%)	86 (99%)	1 (1%)	73	84
41	BF	87/87 (100%)	86 (99%)	1 (1%)	73	84
42	AG	110/147 (75%)	110 (100%)	0	100	100
42	BG	107/147 (73%)	107 (100%)	0	100	100
43	AH	104/104 (100%)	103 (99%)	1 (1%)	76	85
43	BH	104/104 (100%)	104 (100%)	0	100	100
44	AI	102/107 (95%)	100 (98%)	2 (2%)	55	73
44	BI	105/107 (98%)	102 (97%)	3 (3%)	42	64
45	AJ	86/86 (100%)	85 (99%)	1 (1%)	71	83
45	BJ	86/86 (100%)	85 (99%)	1 (1%)	71	83
46	AK	89/90 (99%)	87 (98%)	2 (2%)	52	71
46	BK	90/90 (100%)	85 (94%)	5 (6%)	21	49
47	AL	103/103 (100%)	102 (99%)	1 (1%)	76	85
47	BL	103/103 (100%)	102 (99%)	1 (1%)	76	85
48	AM	92/92 (100%)	91 (99%)	1 (1%)	73	84
48	BM	92/92 (100%)	92 (100%)	0	100	100
49	AN	79/84 (94%)	79 (100%)	0	100	100
49	BN	79/84 (94%)	79 (100%)	0	100	100
50	AO	76/77 (99%)	74 (97%)	2 (3%)	46	67
50	BO	76/77 (99%)	73 (96%)	3 (4%)	32	58
51	AP	65/65 (100%)	64 (98%)	1 (2%)	65	79
51	BP	65/65 (100%)	65 (100%)	0	100	100
52	AQ	74/74 (100%)	73 (99%)	1 (1%)	67	80
52	BQ	74/74 (100%)	72 (97%)	2 (3%)	44	66
53	AR	48/48 (100%)	47 (98%)	1 (2%)	53	72

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
53	BR	48/48 (100%)	48 (100%)	0	100	100
54	AS	70/70 (100%)	70 (100%)	0	100	100
54	BS	70/70 (100%)	69 (99%)	1 (1%)	67	80
55	AT	65/65 (100%)	64 (98%)	1 (2%)	65	79
55	BT	65/65 (100%)	64 (98%)	1 (2%)	65	79
All	All	9222/9323 (99%)	9106 (99%)	116 (1%)	69	81

All (116) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	CC	79	ARG
5	CC	196	ASN
6	CD	33	ARG
7	CE	163	ASN
9	CG	68	ARG
10	CH	8	LYS
10	CH	50	ARG
10	CH	83	LYS
10	CH	123	ARG
11	C5	61	ARG
11	C5	105	LYS
12	CI	71	LYS
12	CI	124	MET
12	CI	126	ARG
13	CJ	123	LYS
15	CL	47	ARG
15	CL	48	ARG
15	CL	94	THR
17	CN	117	ASP
18	CO	88	LYS
18	CO	111	ARG
21	CR	48	LYS
22	CS	110	ARG
23	CT	1	MET
23	CT	69	ARG
26	CW	11	ARG
27	CX	26	ARG
29	CZ	30	ARG
32	C2	27	ARG
33	C3	41	ARG

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Mol	Chain	Res	Type
37	AB	224	ARG
38	AC	169	ARG
39	AD	25	ARG
39	AD	99	ASN
39	AD	150	LYS
39	AD	153	ARG
40	AE	19	ARG
40	AE	77	ASN
41	AF	93	LYS
43	AH	2	MET
44	AI	67	LYS
44	AI	112	ARG
45	AJ	46	LYS
46	AK	12	ARG
46	AK	36	ARG
47	AL	43	LYS
48	AM	78	ARG
50	AO	46	LYS
50	AO	57	ARG
51	AP	35	ARG
52	AQ	61	ARG
53	AR	56	ARG
55	AT	53	MET
5	DC	132	ARG
5	DC	196	ASN
5	DC	270	ARG
6	DD	33	ARG
7	DE	49	ARG
7	DE	163	ASN
8	DF	46	LYS
9	DG	68	ARG
10	DH	119	ASN
13	DJ	1	MET
13	DJ	111	LYS
14	DK	49	ARG
14	DK	53	LYS
15	DL	47	ARG
15	DL	94	THR
16	DM	136	MET
18	DO	30	ARG
18	DO	68	LYS
19	DP	95	LYS

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Mol	Chain	Res	Type
22	DS	27	LYS
23	DT	69	ARG
25	DV	49	ASN
27	DX	26	ARG
30	D0	27	THR
32	D2	27	ARG
33	D3	41	ARG
34	D4	18	LYS
37	BB	5	MET
37	BB	65	LYS
37	BB	99	MET
37	BB	102	ASN
38	BC	8	ASN
38	BC	49	LYS
38	BC	107	ARG
38	BC	147	LYS
38	BC	172	ARG
39	BD	46	ARG
39	BD	99	ASN
39	BD	155	LYS
39	BD	176	LYS
39	BD	190	LEU
40	BE	10	LEU
40	BE	42	ASN
40	BE	77	ASN
40	BE	125	LYS
41	BF	51	ILE
44	BI	67	LYS
44	BI	87	MET
44	BI	112	ARG
45	BJ	59	LYS
46	BK	12	ARG
46	BK	74	LYS
46	BK	100	ASN
46	BK	121	ARG
46	BK	127	ARG
47	BL	11	ARG
50	BO	46	LYS
50	BO	53	ARG
50	BO	88	ARG
52	BQ	26	ARG
52	BQ	61	ARG

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Mol	Chain	Res	Type
54	BS	62	THR
55	BT	53	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (92) such sidechains are listed below:

Mol	Chain	Res	Type
5	CC	196	ASN
5	CC	225	ASN
5	CC	259	ASN
6	CD	150	GLN
6	CD	173	GLN
7	CE	163	ASN
10	CH	2	GLN
10	CH	18	GLN
11	C5	57	ASN
12	CI	93	ASN
13	CJ	40	HIS
14	CK	3	GLN
15	CL	54	GLN
17	CN	62	ASN
18	CO	38	GLN
18	CO	98	GLN
20	CQ	36	GLN
21	CR	66	HIS
21	CR	82	HIS
21	CR	91	GLN
28	CY	27	ASN
30	C0	20	ASN
31	C1	41	HIS
32	C2	44	GLN
37	AB	88	GLN
38	AC	185	ASN
39	AD	70	GLN
39	AD	139	ASN
39	AD	151	GLN
40	AE	77	ASN
42	AG	27	ASN
44	AI	31	GLN
44	AI	109	GLN
45	AJ	58	ASN
49	AN	34	ASN
50	AO	61	GLN

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Mol	Chain	Res	Type
51	AP	79	ASN
55	AT	20	ASN
5	DC	89	ASN
5	DC	116	GLN
5	DC	152	GLN
5	DC	196	ASN
5	DC	225	ASN
5	DC	259	ASN
6	DD	150	GLN
7	DE	163	ASN
9	DG	19	ASN
10	DH	119	ASN
10	DH	133	GLN
10	DH	135	HIS
13	DJ	40	HIS
13	DJ	135	GLN
15	DL	104	GLN
17	DN	3	HIS
17	DN	62	ASN
19	DP	74	GLN
20	DQ	43	GLN
21	DR	66	HIS
21	DR	82	HIS
23	DT	59	ASN
23	DT	70	HIS
25	DV	75	GLN
25	DV	88	HIS
26	DW	57	HIS
28	DY	15	ASN
28	DY	25	GLN
28	DY	58	ASN
30	D0	20	ASN
30	D0	41	HIS
37	BB	23	ASN
37	BB	102	ASN
38	BC	6	HIS
38	BC	8	ASN
39	BD	99	ASN
39	BD	115	GLN
39	BD	130	ASN
40	BE	42	ASN
40	BE	76	ASN

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Mol	Chain	Res	Type
40	BE	77	ASN
41	BF	17	GLN
41	BF	37	HIS
41	BF	55	HIS
42	BG	147	ASN
43	BH	3	GLN
44	BI	74	GLN
45	BJ	56	HIS
45	BJ	58	ASN
46	BK	39	ASN
46	BK	100	ASN
47	BL	72	ASN
55	BT	20	ASN
55	BT	77	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1536/1541 (99%)	390 (25%)	7 (0%)
1	BA	1536/1541 (99%)	356 (23%)	11 (0%)
2	CA	2862/2904 (98%)	585 (20%)	18 (0%)
2	DA	2856/2904 (98%)	636 (22%)	16 (0%)
3	CB	117/118 (99%)	23 (19%)	0
3	DB	117/118 (99%)	18 (15%)	0
36	AX	29/46 (63%)	2 (6%)	2 (6%)
36	BX	29/46 (63%)	1 (3%)	0
4	AV	75/76 (98%)	21 (28%)	0
4	AW	76/76 (100%)	17 (22%)	2 (2%)
4	AY	75/76 (98%)	32 (42%)	0
4	BV	75/76 (98%)	17 (22%)	0
4	BW	75/76 (98%)	15 (20%)	0
All	All	9458/9598 (98%)	2113 (22%)	56 (0%)

All (2113) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	2	A
1	AA	3	A
1	AA	4	U
1	AA	5	U
1	AA	6	G

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Mol	Chain	Res	Type
1	AA	7	A
1	AA	9	G
1	AA	13	U
1	AA	22	G
1	AA	31	G
1	AA	32	A
1	AA	38	G
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	65	A
1	AA	66	A
1	AA	68	G
1	AA	69	G
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	91	U
1	AA	92	U
1	AA	94	G
1	AA	95	C
1	AA	96	U
1	AA	97	G
1	AA	108	G
1	AA	112	G
1	AA	116	A
1	AA	119	A
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	130	A
1	AA	131	A
1	AA	134	G

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Mol	Chain	Res	Type
1	AA	136	C
1	AA	137	U
1	AA	144	G
1	AA	146	G
1	AA	151	A
1	AA	156	C
1	AA	157	U
1	AA	159	G
1	AA	160	A
1	AA	171	A
1	AA	173	U
1	AA	174	A
1	AA	177	G
1	AA	178	C
1	AA	182	A
1	AA	183	C
1	AA	192	A
1	AA	197	A
1	AA	198	G
1	AA	203	G
1	AA	204	G
1	AA	206	C
1	AA	211	G
1	AA	212	G
1	AA	214	C
1	AA	219	U
1	AA	226	G
1	AA	233	C
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	259	G
1	AA	262	A
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	279	A
1	AA	281	G
1	AA	289	G
1	AA	306	A

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Mol	Chain	Res	Type
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	348	G
1	AA	350	G
1	AA	351	G
1	AA	352	C
1	AA	354	G
1	AA	363	A
1	AA	366	A
1	AA	367	U
1	AA	372	C
1	AA	377	G
1	AA	380	G
1	AA	385	C
1	AA	386	C
1	AA	388	G
1	AA	390	U
1	AA	398	U
1	AA	399	G
1	AA	403	C
1	AA	406	G
1	AA	408	A
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	423	G
1	AA	424	G
1	AA	425	G
1	AA	428	G
1	AA	429	U
1	AA	436	C
1	AA	439	U
1	AA	446	G
1	AA	447	G

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Mol	Chain	Res	Type
1	AA	448	A
1	AA	451	A
1	AA	452	A
1	AA	453	G
1	AA	457	G
1	AA	458	U
1	AA	462	G
1	AA	467	U
1	AA	468	A
1	AA	469	C
1	AA	474	G
1	AA	477	C
1	AA	478	A
1	AA	479	U
1	AA	480	U
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	486	U
1	AA	495	A
1	AA	496	A
1	AA	497	G
1	AA	499	A
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	517	G
1	AA	518	C
1	AA	521	G
1	AA	524	G
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	535	A
1	AA	547	A
1	AA	559	A
1	AA	564	C
1	AA	567	G
1	AA	572	A
1	AA	573	A

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Mol	Chain	Res	Type
1	AA	575	G
1	AA	576	C
1	AA	577	G
1	AA	596	A
1	AA	619	U
1	AA	633	G
1	AA	634	C
1	AA	639	G
1	AA	650	G
1	AA	655	A
1	AA	661	G
1	AA	665	A
1	AA	687	A
1	AA	688	G
1	AA	702	A
1	AA	703	G
1	AA	717	U
1	AA	718	A
1	AA	721	G
1	AA	722	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	742	G
1	AA	747	A
1	AA	748	G
1	AA	755	G
1	AA	790	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	813	U
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	821	G
1	AA	827	U
1	AA	828	U
1	AA	829	G
1	AA	841	C

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Mol	Chain	Res	Type
1	AA	842	U
1	AA	843	U
1	AA	844	G
1	AA	845	A
1	AA	846	G
1	AA	851	G
1	AA	864	A
1	AA	870	U
1	AA	874	G
1	AA	889	A
1	AA	891	U
1	AA	899	C
1	AA	914	A
1	AA	922	G
1	AA	927	G
1	AA	931	C
1	AA	934	C
1	AA	935	A
1	AA	942	G
1	AA	958	A
1	AA	960	U
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	979	C
1	AA	981	U
1	AA	982	U
1	AA	983	A
1	AA	989	U
1	AA	993	G
1	AA	1004	A
1	AA	1005	A
1	AA	1009	U
1	AA	1014	A
1	AA	1018	G
1	AA	1020	G
1	AA	1025	U

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Mol	Chain	Res	Type
1	AA	1027	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1033	G
1	AA	1035	A
1	AA	1036	A
1	AA	1037	C
1	AA	1043	G
1	AA	1044	A
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1060	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1073	U
1	AA	1080	A
1	AA	1084	G
1	AA	1085	U
1	AA	1086	U
1	AA	1087	G
1	AA	1089	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1110	A
1	AA	1121	U
1	AA	1122	U
1	AA	1123	U
1	AA	1124	G
1	AA	1125	U
1	AA	1129	C
1	AA	1132	C
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G

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Mol	Chain	Res	Type
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1144	G
1	AA	1145	A
1	AA	1152	A
1	AA	1157	A
1	AA	1159	U
1	AA	1160	G
1	AA	1167	A
1	AA	1168	U
1	AA	1169	A
1	AA	1182	G
1	AA	1183	U
1	AA	1187	G
1	AA	1196	A
1	AA	1197	A
1	AA	1198	G
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1224	U
1	AA	1226	C
1	AA	1227	A
1	AA	1233	G
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1248	A
1	AA	1253	G
1	AA	1254	A
1	AA	1257	A
1	AA	1258	G
1	AA	1260	G
1	AA	1262	C
1	AA	1280	A
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C

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Mol	Chain	Res	Type
1	AA	1295	U
1	AA	1299	A
1	AA	1301	U
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1317	C
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1322	C
1	AA	1328	C
1	AA	1331	G
1	AA	1335	U
1	AA	1336	C
1	AA	1346	A
1	AA	1347	G
1	AA	1359	C
1	AA	1361	G
1	AA	1362	A
1	AA	1363	A
1	AA	1377	A
1	AA	1378	C
1	AA	1379	G
1	AA	1394	A
1	AA	1398	A
1	AA	1399	C
1	AA	1403	C
1	AA	1419	G
1	AA	1422	G
1	AA	1440	U
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A
1	AA	1455	G
1	AA	1480	A
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U

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Mol	Chain	Res	Type
1	AA	1507	A
1	AA	1517	G
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1535	C
1	AA	1540	U
2	CA	10	A
2	CA	14	A
2	CA	15	G
2	CA	23	G
2	CA	34	U
2	CA	39	G
2	CA	42	A
2	CA	46	G
2	CA	50	U
2	CA	51	G
2	CA	56	A
2	CA	58	G
2	CA	61	C
2	CA	63	A
2	CA	71	A
2	CA	74	A
2	CA	75	G
2	CA	84	A
2	CA	91	A
2	CA	101	A
2	CA	102	U
2	CA	110	G
2	CA	118	A
2	CA	119	A
2	CA	120	U
2	CA	138	U
2	CA	139	U
2	CA	140	C
2	CA	142	A
2	CA	149	A
2	CA	162	U
2	CA	181	A
2	CA	186	G
2	CA	196	A
2	CA	199	A

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Mol	Chain	Res	Type
2	CA	204	A
2	CA	205	G
2	CA	213	A
2	CA	215	G
2	CA	216	A
2	CA	221	A
2	CA	222	A
2	CA	223	A
2	CA	224	U
2	CA	225	C
2	CA	226	A
2	CA	227	A
2	CA	228	C
2	CA	241	A
2	CA	248	G
2	CA	250	G
2	CA	255	A
2	CA	264	C
2	CA	265	A
2	CA	266	G
2	CA	276	U
2	CA	277	G
2	CA	278	A
2	CA	281	C
2	CA	302	C
2	CA	311	A
2	CA	323	C
2	CA	329	G
2	CA	330	A
2	CA	331	C
2	CA	349	U
2	CA	361	G
2	CA	362	A
2	CA	367	G
2	CA	371	A
2	CA	372	G
2	CA	375	G
2	CA	386	G
2	CA	387	U
2	CA	389	G
2	CA	396	G
2	CA	399	U

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Mol	Chain	Res	Type
2	CA	405	U
2	CA	406	G
2	CA	411	G
2	CA	412	A
2	CA	422	A
2	CA	424	G
2	CA	435	C
2	CA	454	A
2	CA	455	C
2	CA	457	A
2	CA	458	G
2	CA	464	U
2	CA	467	G
2	CA	473	G
2	CA	480	A
2	CA	481	G
2	CA	489	G
2	CA	490	C
2	CA	491	G
2	CA	504	A
2	CA	505	A
2	CA	508	A
2	CA	509	C
2	CA	518	G
2	CA	527	C
2	CA	529	A
2	CA	530	G
2	CA	531	C
2	CA	532	A
2	CA	545	U
2	CA	546	U
2	CA	547	A
2	CA	548	G
2	CA	549	G
2	CA	550	C
2	CA	562	U
2	CA	563	A
2	CA	568	U
2	CA	572	A
2	CA	573	U
2	CA	575	A
2	CA	586	A

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Mol	Chain	Res	Type
2	CA	588	U
2	CA	603	A
2	CA	613	A
2	CA	614	A
2	CA	615	U
2	CA	616	A
2	CA	622	G
2	CA	627	A
2	CA	637	A
2	CA	645	C
2	CA	646	U
2	CA	647	G
2	CA	653	U
2	CA	654	A
2	CA	655	A
2	CA	677	A
2	CA	686	U
2	CA	695	G
2	CA	711	G
2	CA	717	C
2	CA	730	A
2	CA	747	U
2	CA	748	G
2	CA	764	A
2	CA	765	C
2	CA	775	G
2	CA	776	G
2	CA	782	A
2	CA	783	A
2	CA	784	G
2	CA	785	G
2	CA	792	A
2	CA	800	A
2	CA	805	G
2	CA	811	U
2	CA	812	C
2	CA	819	A
2	CA	827	U
2	CA	828	U
2	CA	830	G
2	CA	831	G
2	CA	845	A

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Mol	Chain	Res	Type
2	CA	858	G
2	CA	859	G
2	CA	869	G
2	CA	878	A
2	CA	883	G
2	CA	884	U
2	CA	885	C
2	CA	886	A
2	CA	887	U
2	CA	888	C
2	CA	889	C
2	CA	890	C
2	CA	891	G
2	CA	892	A
2	CA	893	C
2	CA	894	U
2	CA	895	U
2	CA	896	A
2	CA	899	A
2	CA	901	C
2	CA	907	G
2	CA	910	A
2	CA	911	A
2	CA	914	G
2	CA	915	C
2	CA	931	U
2	CA	932	U
2	CA	941	A
2	CA	945	A
2	CA	946	C
2	CA	961	C
2	CA	962	G
2	CA	973	A
2	CA	974	G
2	CA	983	A
2	CA	995	C
2	CA	996	A
2	CA	1012	U
2	CA	1013	C
2	CA	1017	G
2	CA	1022	G
2	CA	1023	U

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Mol	Chain	Res	Type
2	CA	1024	G
2	CA	1025	G
2	CA	1026	G
2	CA	1033	U
2	CA	1046	A
2	CA	1047	G
2	CA	1057	A
2	CA	1060	U
2	CA	1061	U
2	CA	1062	G
2	CA	1066	U
2	CA	1067	A
2	CA	1068	G
2	CA	1070	A
2	CA	1072	C
2	CA	1073	A
2	CA	1074	G
2	CA	1075	C
2	CA	1077	A
2	CA	1081	U
2	CA	1083	U
2	CA	1088	A
2	CA	1092	C
2	CA	1094	U
2	CA	1111	A
2	CA	1112	G
2	CA	1116	G
2	CA	1119	U
2	CA	1126	A
2	CA	1129	A
2	CA	1130	U
2	CA	1131	G
2	CA	1132	U
2	CA	1133	A
2	CA	1134	A
2	CA	1135	C
2	CA	1136	G
2	CA	1139	G
2	CA	1142	A
2	CA	1143	A
2	CA	1168	G
2	CA	1171	G

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Mol	Chain	Res	Type
2	CA	1172	C
2	CA	1174	U
2	CA	1175	A
2	CA	1176	U
2	CA	1177	G
2	CA	1180	U
2	CA	1186	G
2	CA	1204	A
2	CA	1205	A
2	CA	1212	G
2	CA	1227	G
2	CA	1238	G
2	CA	1240	U
2	CA	1253	A
2	CA	1256	G
2	CA	1262	A
2	CA	1265	A
2	CA	1266	G
2	CA	1272	A
2	CA	1273	U
2	CA	1275	A
2	CA	1289	C
2	CA	1294	U
2	CA	1300	G
2	CA	1301	A
2	CA	1302	A
2	CA	1306	C
2	CA	1312	U
2	CA	1321	A
2	CA	1325	U
2	CA	1329	U
2	CA	1332	G
2	CA	1341	G
2	CA	1344	U
2	CA	1345	C
2	CA	1352	U
2	CA	1365	A
2	CA	1368	G
2	CA	1378	A
2	CA	1379	U
2	CA	1383	A
2	CA	1386	C

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Mol	Chain	Res	Type
2	CA	1387	A
2	CA	1392	A
2	CA	1394	U
2	CA	1395	A
2	CA	1403	A
2	CA	1416	G
2	CA	1419	A
2	CA	1420	A
2	CA	1427	A
2	CA	1428	C
2	CA	1440	U
2	CA	1451	C
2	CA	1452	G
2	CA	1453	A
2	CA	1454	C
2	CA	1455	G
2	CA	1458	U
2	CA	1459	G
2	CA	1461	C
2	CA	1482	G
2	CA	1490	A
2	CA	1493	C
2	CA	1504	A
2	CA	1510	G
2	CA	1515	A
2	CA	1519	G
2	CA	1522	A
2	CA	1523	U
2	CA	1529	G
2	CA	1530	G
2	CA	1532	A
2	CA	1533	C
2	CA	1534	U
2	CA	1535	A
2	CA	1536	C
2	CA	1558	C
2	CA	1559	U
2	CA	1560	G
2	CA	1566	A
2	CA	1569	A
2	CA	1581	G
2	CA	1582	C

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Mol	Chain	Res	Type
2	CA	1583	A
2	CA	1584	U
2	CA	1585	C
2	CA	1611	C
2	CA	1613	G
2	CA	1616	A
2	CA	1627	G
2	CA	1646	C
2	CA	1647	U
2	CA	1648	U
2	CA	1649	G
2	CA	1651	G
2	CA	1660	G
2	CA	1672	A
2	CA	1674	G
2	CA	1676	A
2	CA	1677	A
2	CA	1697	G
2	CA	1698	A
2	CA	1699	G
2	CA	1714	U
2	CA	1715	G
2	CA	1721	G
2	CA	1730	C
2	CA	1732	C
2	CA	1738	G
2	CA	1744	A
2	CA	1764	C
2	CA	1773	A
2	CA	1776	G
2	CA	1780	A
2	CA	1781	U
2	CA	1791	A
2	CA	1799	G
2	CA	1800	C
2	CA	1801	A
2	CA	1802	A
2	CA	1808	A
2	CA	1815	A
2	CA	1816	C
2	CA	1819	A
2	CA	1826	G

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Mol	Chain	Res	Type
2	CA	1828	G
2	CA	1833	C
2	CA	1847	A
2	CA	1867	G
2	CA	1869	G
2	CA	1871	A
2	CA	1872	A
2	CA	1873	G
2	CA	1874	C
2	CA	1896	G
2	CA	1897	G
2	CA	1903	G
2	CA	1906	G
2	CA	1912	A
2	CA	1913	A
2	CA	1914	C
2	CA	1919	A
2	CA	1926	U
2	CA	1927	A
2	CA	1929	G
2	CA	1930	G
2	CA	1931	U
2	CA	1937	A
2	CA	1938	A
2	CA	1941	C
2	CA	1955	U
2	CA	1963	U
2	CA	1966	A
2	CA	1967	C
2	CA	1970	A
2	CA	1971	U
2	CA	1972	G
2	CA	1991	U
2	CA	1992	G
2	CA	1996	C
2	CA	1997	C
2	CA	2022	U
2	CA	2023	C
2	CA	2030	A
2	CA	2031	A
2	CA	2033	A
2	CA	2034	U

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Mol	Chain	Res	Type
2	CA	2043	C
2	CA	2049	G
2	CA	2052	A
2	CA	2055	C
2	CA	2056	G
2	CA	2060	A
2	CA	2061	G
2	CA	2062	A
2	CA	2068	U
2	CA	2069	G
2	CA	2072	C
2	CA	2092	U
2	CA	2093	G
2	CA	2095	A
2	CA	2104	C
2	CA	2107	G
2	CA	2110	G
2	CA	2125	G
2	CA	2126	A
2	CA	2127	G
2	CA	2128	G
2	CA	2137	U
2	CA	2156	G
2	CA	2157	G
2	CA	2158	A
2	CA	2161	C
2	CA	2162	G
2	CA	2182	U
2	CA	2189	U
2	CA	2190	G
2	CA	2194	U
2	CA	2198	A
2	CA	2204	G
2	CA	2210	U
2	CA	2211	A
2	CA	2225	A
2	CA	2226	C
2	CA	2238	G
2	CA	2239	G
2	CA	2250	G
2	CA	2266	A
2	CA	2278	A

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Mol	Chain	Res	Type
2	CA	2283	C
2	CA	2287	A
2	CA	2288	A
2	CA	2297	A
2	CA	2305	U
2	CA	2307	G
2	CA	2309	A
2	CA	2310	C
2	CA	2312	U
2	CA	2321	U
2	CA	2322	A
2	CA	2325	G
2	CA	2327	A
2	CA	2334	U
2	CA	2335	A
2	CA	2344	U
2	CA	2347	C
2	CA	2350	C
2	CA	2353	G
2	CA	2354	C
2	CA	2361	G
2	CA	2383	G
2	CA	2384	U
2	CA	2385	C
2	CA	2391	G
2	CA	2392	A
2	CA	2396	G
2	CA	2402	U
2	CA	2406	A
2	CA	2407	A
2	CA	2411	A
2	CA	2419	U
2	CA	2422	C
2	CA	2423	U
2	CA	2424	C
2	CA	2425	A
2	CA	2426	A
2	CA	2427	C
2	CA	2428	G
2	CA	2429	G
2	CA	2430	A
2	CA	2438	U

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Mol	Chain	Res	Type
2	CA	2439	A
2	CA	2441	U
2	CA	2445	G
2	CA	2448	A
2	CA	2465	C
2	CA	2469	A
2	CA	2476	A
2	CA	2480	C
2	CA	2481	G
2	CA	2491	U
2	CA	2492	U
2	CA	2494	G
2	CA	2502	G
2	CA	2503	A
2	CA	2504	U
2	CA	2505	G
2	CA	2518	A
2	CA	2520	C
2	CA	2529	G
2	CA	2535	G
2	CA	2547	A
2	CA	2553	G
2	CA	2554	U
2	CA	2555	U
2	CA	2562	U
2	CA	2566	A
2	CA	2567	G
2	CA	2572	A
2	CA	2582	G
2	CA	2585	U
2	CA	2586	U
2	CA	2602	A
2	CA	2603	G
2	CA	2605	U
2	CA	2609	U
2	CA	2611	C
2	CA	2613	U
2	CA	2615	U
2	CA	2629	U
2	CA	2636	C
2	CA	2639	A
2	CA	2646	C

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Mol	Chain	Res	Type
2	CA	2654	A
2	CA	2655	G
2	CA	2663	G
2	CA	2673	G
2	CA	2682	A
2	CA	2685	G
2	CA	2689	U
2	CA	2690	U
2	CA	2714	G
2	CA	2716	C
2	CA	2718	G
2	CA	2720	U
2	CA	2726	A
2	CA	2728	U
2	CA	2733	A
2	CA	2742	G
2	CA	2744	G
2	CA	2748	A
2	CA	2751	G
2	CA	2762	C
2	CA	2764	A
2	CA	2765	A
2	CA	2766	A
2	CA	2776	A
2	CA	2778	A
2	CA	2791	G
2	CA	2797	U
2	CA	2798	U
2	CA	2800	A
2	CA	2818	U
2	CA	2820	A
2	CA	2821	A
2	CA	2823	A
2	CA	2825	G
2	CA	2826	A
2	CA	2835	A
2	CA	2849	U
2	CA	2858	C
2	CA	2861	U
2	CA	2867	G
2	CA	2872	A
2	CA	2873	A

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Mol	Chain	Res	Type
2	CA	2879	A
2	CA	2880	C
2	CA	2886	A
2	CA	2887	A
3	CB	9	G
3	CB	13	G
3	CB	15	A
3	CB	16	G
3	CB	17	C
3	CB	24	G
3	CB	25	U
3	CB	31	C
3	CB	35	C
3	CB	41	G
3	CB	44	G
3	CB	51	G
3	CB	53	A
3	CB	56	G
3	CB	57	A
3	CB	59	A
3	CB	66	A
3	CB	88	C
3	CB	89	U
3	CB	90	C
3	CB	99	A
3	CB	105	G
3	CB	109	A
4	AV	8	U
4	AV	9	A
4	AV	14	A
4	AV	17	U
4	AV	18	G
4	AV	19	G
4	AV	20	G
4	AV	21	A
4	AV	22	G
4	AV	35	A
4	AV	44	G
4	AV	45	G
4	AV	46	G
4	AV	48	C
4	AV	59	U

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Mol	Chain	Res	Type
4	AV	60	C
4	AV	61	C
4	AV	72	C
4	AV	73	A
4	AV	74	C
4	AV	76	A
4	AY	3	G
4	AY	6	A
4	AY	8	U
4	AY	13	C
4	AY	17	U
4	AY	18	G
4	AY	19	G
4	AY	20	G
4	AY	21	A
4	AY	22	G
4	AY	28	C
4	AY	34	U
4	AY	35	A
4	AY	37	A
4	AY	43	G
4	AY	44	G
4	AY	45	G
4	AY	46	G
4	AY	47	U
4	AY	48	C
4	AY	52	G
4	AY	56	C
4	AY	57	G
4	AY	58	A
4	AY	59	U
4	AY	60	C
4	AY	61	C
4	AY	63	G
4	AY	70	C
4	AY	74	C
4	AY	75	C
4	AY	76	A
36	AX	26	A
36	AX	32	C
4	AW	3	G
4	AW	8	U

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Mol	Chain	Res	Type
4	AW	16	C
4	AW	17	U
4	AW	18	G
4	AW	19	G
4	AW	20	G
4	AW	21	A
4	AW	22	G
4	AW	26	A
4	AW	47	U
4	AW	52	G
4	AW	59	U
4	AW	60	C
4	AW	61	C
4	AW	74	C
4	AW	76	A
1	BA	4	U
1	BA	5	U
1	BA	7	A
1	BA	8	A
1	BA	9	G
1	BA	31	G
1	BA	32	A
1	BA	38	G
1	BA	39	G
1	BA	47	C
1	BA	48	C
1	BA	50	A
1	BA	51	A
1	BA	66	A
1	BA	68	G
1	BA	70	U
1	BA	71	A
1	BA	75	G
1	BA	81	A
1	BA	82	G
1	BA	83	C
1	BA	84	U
1	BA	85	U
1	BA	86	G
1	BA	89	U
1	BA	90	C
1	BA	92	U

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Mol	Chain	Res	Type
1	BA	93	U
1	BA	94	G
1	BA	95	C
1	BA	97	G
1	BA	108	G
1	BA	116	A
1	BA	118	U
1	BA	120	A
1	BA	121	U
1	BA	122	G
1	BA	127	G
1	BA	130	A
1	BA	131	A
1	BA	134	G
1	BA	137	U
1	BA	149	A
1	BA	152	A
1	BA	154	U
1	BA	155	A
1	BA	157	U
1	BA	159	G
1	BA	163	C
1	BA	170	U
1	BA	180	U
1	BA	182	A
1	BA	197	A
1	BA	209	U
1	BA	210	C
1	BA	211	G
1	BA	212	G
1	BA	226	G
1	BA	231	U
1	BA	243	A
1	BA	245	U
1	BA	247	G
1	BA	251	G
1	BA	262	A
1	BA	263	A
1	BA	265	G
1	BA	266	G
1	BA	267	C
1	BA	279	A

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Mol	Chain	Res	Type
1	BA	289	G
1	BA	306	A
1	BA	328	C
1	BA	329	A
1	BA	332	G
1	BA	344	A
1	BA	345	C
1	BA	346	G
1	BA	347	G
1	BA	348	G
1	BA	350	G
1	BA	352	C
1	BA	353	A
1	BA	356	A
1	BA	367	U
1	BA	372	C
1	BA	373	A
1	BA	378	G
1	BA	384	G
1	BA	388	G
1	BA	390	U
1	BA	397	A
1	BA	398	U
1	BA	403	C
1	BA	406	G
1	BA	411	A
1	BA	412	A
1	BA	413	G
1	BA	421	U
1	BA	423	G
1	BA	424	G
1	BA	428	G
1	BA	429	U
1	BA	436	C
1	BA	439	U
1	BA	451	A
1	BA	453	G
1	BA	463	U
1	BA	465	A
1	BA	467	U
1	BA	468	A
1	BA	469	C

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Mol	Chain	Res	Type
1	BA	478	A
1	BA	479	U
1	BA	480	U
1	BA	481	G
1	BA	482	A
1	BA	484	G
1	BA	486	U
1	BA	495	A
1	BA	496	A
1	BA	497	G
1	BA	499	A
1	BA	508	U
1	BA	509	A
1	BA	511	C
1	BA	517	G
1	BA	518	C
1	BA	524	G
1	BA	527	G
1	BA	531	U
1	BA	532	A
1	BA	533	A
1	BA	547	A
1	BA	550	G
1	BA	559	A
1	BA	560	A
1	BA	562	U
1	BA	565	U
1	BA	566	G
1	BA	567	G
1	BA	572	A
1	BA	573	A
1	BA	576	C
1	BA	577	G
1	BA	588	G
1	BA	596	A
1	BA	607	A
1	BA	633	G
1	BA	639	G
1	BA	652	U
1	BA	665	A
1	BA	673	A
1	BA	687	A

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Mol	Chain	Res	Type
1	BA	701	U
1	BA	702	A
1	BA	703	G
1	BA	717	U
1	BA	718	A
1	BA	721	G
1	BA	722	G
1	BA	723	U
1	BA	724	G
1	BA	731	G
1	BA	748	G
1	BA	755	G
1	BA	777	A
1	BA	793	U
1	BA	794	A
1	BA	796	C
1	BA	799	G
1	BA	809	G
1	BA	813	U
1	BA	814	A
1	BA	815	A
1	BA	817	C
1	BA	819	A
1	BA	821	G
1	BA	827	U
1	BA	828	U
1	BA	829	G
1	BA	836	G
1	BA	838	G
1	BA	841	C
1	BA	842	U
1	BA	843	U
1	BA	844	G
1	BA	846	G
1	BA	849	G
1	BA	851	G
1	BA	854	U
1	BA	870	U
1	BA	876	C
1	BA	889	A
1	BA	891	U
1	BA	900	A

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Mol	Chain	Res	Type
1	BA	913	A
1	BA	914	A
1	BA	926	G
1	BA	927	G
1	BA	931	C
1	BA	934	C
1	BA	939	G
1	BA	942	G
1	BA	959	A
1	BA	960	U
1	BA	965	U
1	BA	968	A
1	BA	969	A
1	BA	971	G
1	BA	974	A
1	BA	975	A
1	BA	976	G
1	BA	981	U
1	BA	982	U
1	BA	983	A
1	BA	989	U
1	BA	992	U
1	BA	993	G
1	BA	994	A
1	BA	996	A
1	BA	1004	A
1	BA	1008	U
1	BA	1009	U
1	BA	1020	G
1	BA	1022	A
1	BA	1025	U
1	BA	1026	G
1	BA	1028	C
1	BA	1029	U
1	BA	1030	U
1	BA	1031	C
1	BA	1032	G
1	BA	1033	G
1	BA	1034	G
1	BA	1036	A
1	BA	1043	G
1	BA	1044	A

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Mol	Chain	Res	Type
1	BA	1053	G
1	BA	1054	C
1	BA	1056	U
1	BA	1061	G
1	BA	1065	U
1	BA	1066	C
1	BA	1086	U
1	BA	1087	G
1	BA	1089	G
1	BA	1094	G
1	BA	1101	A
1	BA	1102	A
1	BA	1124	G
1	BA	1125	U
1	BA	1126	U
1	BA	1127	G
1	BA	1130	A
1	BA	1133	G
1	BA	1135	U
1	BA	1136	C
1	BA	1137	C
1	BA	1138	G
1	BA	1139	G
1	BA	1140	C
1	BA	1141	C
1	BA	1142	G
1	BA	1145	A
1	BA	1148	U
1	BA	1149	C
1	BA	1150	A
1	BA	1151	A
1	BA	1152	A
1	BA	1157	A
1	BA	1159	U
1	BA	1160	G
1	BA	1167	A
1	BA	1168	U
1	BA	1172	C
1	BA	1179	A
1	BA	1180	A
1	BA	1181	G
1	BA	1183	U

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Mol	Chain	Res	Type
1	BA	1184	G
1	BA	1193	G
1	BA	1196	A
1	BA	1197	A
1	BA	1202	U
1	BA	1211	U
1	BA	1213	A
1	BA	1226	C
1	BA	1228	C
1	BA	1229	A
1	BA	1237	C
1	BA	1240	U
1	BA	1241	G
1	BA	1253	G
1	BA	1256	A
1	BA	1258	G
1	BA	1260	G
1	BA	1270	G
1	BA	1280	A
1	BA	1282	C
1	BA	1286	U
1	BA	1287	A
1	BA	1289	A
1	BA	1291	U
1	BA	1293	C
1	BA	1299	A
1	BA	1300	G
1	BA	1302	C
1	BA	1305	G
1	BA	1312	G
1	BA	1317	C
1	BA	1318	A
1	BA	1319	A
1	BA	1322	C
1	BA	1323	G
1	BA	1336	C
1	BA	1338	G
1	BA	1345	U
1	BA	1346	A
1	BA	1347	G
1	BA	1353	G
1	BA	1359	C

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Mol	Chain	Res	Type
1	BA	1362	A
1	BA	1363	A
1	BA	1364	U
1	BA	1377	A
1	BA	1378	C
1	BA	1379	G
1	BA	1394	A
1	BA	1397	C
1	BA	1398	A
1	BA	1419	G
1	BA	1441	A
1	BA	1446	A
1	BA	1453	G
1	BA	1455	G
1	BA	1480	A
1	BA	1487	G
1	BA	1492	A
1	BA	1493	A
1	BA	1494	G
1	BA	1499	A
1	BA	1500	A
1	BA	1503	A
1	BA	1505	G
1	BA	1506	U
1	BA	1507	A
1	BA	1517	G
1	BA	1520	C
1	BA	1529	G
1	BA	1530	G
1	BA	1534	A
1	BA	1535	C
1	BA	1537	U
1	BA	1539	C
1	BA	1540	U
1	BA	1541	U
2	DA	10	A
2	DA	14	A
2	DA	23	G
2	DA	34	U
2	DA	39	G
2	DA	42	A
2	DA	46	G

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Mol	Chain	Res	Type
2	DA	49	A
2	DA	51	G
2	DA	61	C
2	DA	63	A
2	DA	71	A
2	DA	73	A
2	DA	74	A
2	DA	75	G
2	DA	84	A
2	DA	91	A
2	DA	93	G
2	DA	98	G
2	DA	101	A
2	DA	102	U
2	DA	103	A
2	DA	104	A
2	DA	111	A
2	DA	118	A
2	DA	119	A
2	DA	120	U
2	DA	122	G
2	DA	139	U
2	DA	140	C
2	DA	142	A
2	DA	149	A
2	DA	160	A
2	DA	162	U
2	DA	168	G
2	DA	181	A
2	DA	182	A
2	DA	188	G
2	DA	190	A
2	DA	196	A
2	DA	199	A
2	DA	204	A
2	DA	215	G
2	DA	216	A
2	DA	221	A
2	DA	222	A
2	DA	225	C
2	DA	228	C
2	DA	229	C

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Mol	Chain	Res	Type
2	DA	233	A
2	DA	239	C
2	DA	240	C
2	DA	241	A
2	DA	242	G
2	DA	248	G
2	DA	255	A
2	DA	261	G
2	DA	264	C
2	DA	265	A
2	DA	266	G
2	DA	272	A
2	DA	274	C
2	DA	275	C
2	DA	276	U
2	DA	278	A
2	DA	281	C
2	DA	282	A
2	DA	284	U
2	DA	302	C
2	DA	308	G
2	DA	311	A
2	DA	329	G
2	DA	330	A
2	DA	331	C
2	DA	349	U
2	DA	357	C
2	DA	362	A
2	DA	363	G
2	DA	368	A
2	DA	370	G
2	DA	371	A
2	DA	372	G
2	DA	374	A
2	DA	375	G
2	DA	381	G
2	DA	383	C
2	DA	386	G
2	DA	387	U
2	DA	391	A
2	DA	396	G
2	DA	401	A

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Mol	Chain	Res	Type
2	DA	402	A
2	DA	404	A
2	DA	405	U
2	DA	411	G
2	DA	412	A
2	DA	420	C
2	DA	422	A
2	DA	424	G
2	DA	449	A
2	DA	451	U
2	DA	454	A
2	DA	457	A
2	DA	473	G
2	DA	479	A
2	DA	480	A
2	DA	481	G
2	DA	489	G
2	DA	491	G
2	DA	504	A
2	DA	505	A
2	DA	506	G
2	DA	508	A
2	DA	509	C
2	DA	527	C
2	DA	528	A
2	DA	529	A
2	DA	530	G
2	DA	531	C
2	DA	532	A
2	DA	533	G
2	DA	543	G
2	DA	546	U
2	DA	547	A
2	DA	548	G
2	DA	549	G
2	DA	550	C
2	DA	563	A
2	DA	568	U
2	DA	570	G
2	DA	572	A
2	DA	573	U
2	DA	575	A

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Mol	Chain	Res	Type
2	DA	586	A
2	DA	603	A
2	DA	613	A
2	DA	614	A
2	DA	615	U
2	DA	616	A
2	DA	622	G
2	DA	627	A
2	DA	628	G
2	DA	637	A
2	DA	645	C
2	DA	646	U
2	DA	647	G
2	DA	654	A
2	DA	655	A
2	DA	668	A
2	DA	670	A
2	DA	671	C
2	DA	675	A
2	DA	677	A
2	DA	686	U
2	DA	695	G
2	DA	711	G
2	DA	715	A
2	DA	717	C
2	DA	721	A
2	DA	730	A
2	DA	738	G
2	DA	747	U
2	DA	748	G
2	DA	761	A
2	DA	764	A
2	DA	765	C
2	DA	775	G
2	DA	776	G
2	DA	782	A
2	DA	784	G
2	DA	785	G
2	DA	789	A
2	DA	792	A
2	DA	800	A
2	DA	801	G

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Mol	Chain	Res	Type
2	DA	805	G
2	DA	812	C
2	DA	819	A
2	DA	827	U
2	DA	828	U
2	DA	831	G
2	DA	845	A
2	DA	846	U
2	DA	847	U
2	DA	856	G
2	DA	858	G
2	DA	859	G
2	DA	866	A
2	DA	878	A
2	DA	881	G
2	DA	885	C
2	DA	886	A
2	DA	887	U
2	DA	888	C
2	DA	890	C
2	DA	891	G
2	DA	892	A
2	DA	893	C
2	DA	894	U
2	DA	895	U
2	DA	896	A
2	DA	900	A
2	DA	907	G
2	DA	910	A
2	DA	915	C
2	DA	931	U
2	DA	932	U
2	DA	933	A
2	DA	941	A
2	DA	945	A
2	DA	946	C
2	DA	959	A
2	DA	961	C
2	DA	974	G
2	DA	983	A
2	DA	995	C
2	DA	996	A

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Mol	Chain	Res	Type
2	DA	1005	C
2	DA	1008	A
2	DA	1009	A
2	DA	1012	U
2	DA	1013	C
2	DA	1017	G
2	DA	1020	A
2	DA	1022	G
2	DA	1023	U
2	DA	1024	G
2	DA	1025	G
2	DA	1026	G
2	DA	1033	U
2	DA	1034	G
2	DA	1045	C
2	DA	1046	A
2	DA	1047	G
2	DA	1051	G
2	DA	1054	A
2	DA	1057	A
2	DA	1059	G
2	DA	1060	U
2	DA	1061	U
2	DA	1062	G
2	DA	1066	U
2	DA	1067	A
2	DA	1068	G
2	DA	1070	A
2	DA	1071	G
2	DA	1072	C
2	DA	1073	A
2	DA	1074	G
2	DA	1075	C
2	DA	1081	U
2	DA	1083	U
2	DA	1084	A
2	DA	1085	A
2	DA	1088	A
2	DA	1092	C
2	DA	1094	U
2	DA	1104	C
2	DA	1111	A

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Mol	Chain	Res	Type
2	DA	1112	G
2	DA	1113	U
2	DA	1119	U
2	DA	1121	C
2	DA	1126	A
2	DA	1129	A
2	DA	1132	U
2	DA	1133	A
2	DA	1134	A
2	DA	1135	C
2	DA	1136	G
2	DA	1139	G
2	DA	1142	A
2	DA	1143	A
2	DA	1163	G
2	DA	1173	U
2	DA	1174	U
2	DA	1175	A
2	DA	1176	U
2	DA	1179	G
2	DA	1180	U
2	DA	1186	G
2	DA	1204	A
2	DA	1205	A
2	DA	1218	G
2	DA	1236	G
2	DA	1238	G
2	DA	1240	U
2	DA	1247	A
2	DA	1248	G
2	DA	1253	A
2	DA	1255	U
2	DA	1256	G
2	DA	1265	A
2	DA	1266	G
2	DA	1272	A
2	DA	1273	U
2	DA	1275	A
2	DA	1284	A
2	DA	1286	A
2	DA	1294	U
2	DA	1300	G

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Mol	Chain	Res	Type
2	DA	1302	A
2	DA	1306	C
2	DA	1310	G
2	DA	1312	U
2	DA	1313	U
2	DA	1321	A
2	DA	1341	G
2	DA	1342	A
2	DA	1344	U
2	DA	1345	C
2	DA	1352	U
2	DA	1359	A
2	DA	1365	A
2	DA	1368	G
2	DA	1374	G
2	DA	1378	A
2	DA	1379	U
2	DA	1383	A
2	DA	1386	C
2	DA	1387	A
2	DA	1403	A
2	DA	1416	G
2	DA	1417	C
2	DA	1419	A
2	DA	1420	A
2	DA	1428	C
2	DA	1437	C
2	DA	1452	G
2	DA	1460	U
2	DA	1468	U
2	DA	1482	G
2	DA	1490	A
2	DA	1491	G
2	DA	1493	C
2	DA	1497	U
2	DA	1504	A
2	DA	1505	A
2	DA	1509	A
2	DA	1510	G
2	DA	1515	A
2	DA	1522	A
2	DA	1524	G

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Mol	Chain	Res	Type
2	DA	1529	G
2	DA	1530	G
2	DA	1531	C
2	DA	1534	U
2	DA	1535	A
2	DA	1536	C
2	DA	1547	C
2	DA	1554	U
2	DA	1558	C
2	DA	1560	G
2	DA	1566	A
2	DA	1569	A
2	DA	1578	U
2	DA	1581	G
2	DA	1582	C
2	DA	1583	A
2	DA	1585	C
2	DA	1607	C
2	DA	1610	A
2	DA	1611	C
2	DA	1613	G
2	DA	1616	A
2	DA	1626	A
2	DA	1646	C
2	DA	1647	U
2	DA	1648	U
2	DA	1674	G
2	DA	1677	A
2	DA	1681	G
2	DA	1694	C
2	DA	1695	G
2	DA	1697	G
2	DA	1698	A
2	DA	1699	G
2	DA	1713	A
2	DA	1715	G
2	DA	1729	U
2	DA	1730	C
2	DA	1732	C
2	DA	1733	G
2	DA	1734	G
2	DA	1738	G

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Mol	Chain	Res	Type
2	DA	1754	A
2	DA	1757	A
2	DA	1764	C
2	DA	1773	A
2	DA	1776	G
2	DA	1779	U
2	DA	1781	U
2	DA	1782	U
2	DA	1784	A
2	DA	1800	C
2	DA	1802	A
2	DA	1808	A
2	DA	1809	A
2	DA	1815	A
2	DA	1816	C
2	DA	1819	A
2	DA	1825	U
2	DA	1828	G
2	DA	1829	A
2	DA	1833	C
2	DA	1835	G
2	DA	1847	A
2	DA	1854	A
2	DA	1866	A
2	DA	1869	G
2	DA	1870	C
2	DA	1871	A
2	DA	1873	G
2	DA	1874	C
2	DA	1876	A
2	DA	1885	A
2	DA	1889	A
2	DA	1906	G
2	DA	1913	A
2	DA	1914	C
2	DA	1926	U
2	DA	1929	G
2	DA	1930	G
2	DA	1931	U
2	DA	1937	A
2	DA	1938	A
2	DA	1943	U

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Mol	Chain	Res	Type
2	DA	1955	U
2	DA	1963	U
2	DA	1967	C
2	DA	1970	A
2	DA	1972	G
2	DA	1977	A
2	DA	1987	A
2	DA	1991	U
2	DA	1992	G
2	DA	1997	C
2	DA	2022	U
2	DA	2023	C
2	DA	2030	A
2	DA	2031	A
2	DA	2033	A
2	DA	2043	C
2	DA	2049	G
2	DA	2052	A
2	DA	2055	C
2	DA	2056	G
2	DA	2060	A
2	DA	2061	G
2	DA	2062	A
2	DA	2069	G
2	DA	2072	C
2	DA	2092	U
2	DA	2093	G
2	DA	2100	G
2	DA	2101	A
2	DA	2105	U
2	DA	2128	G
2	DA	2129	C
2	DA	2131	U
2	DA	2132	U
2	DA	2133	G
2	DA	2134	A
2	DA	2136	G
2	DA	2145	C
2	DA	2147	A
2	DA	2154	A
2	DA	2157	G
2	DA	2158	A

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Mol	Chain	Res	Type
2	DA	2160	C
2	DA	2162	G
2	DA	2170	A
2	DA	2171	A
2	DA	2172	U
2	DA	2174	C
2	DA	2188	U
2	DA	2189	U
2	DA	2190	G
2	DA	2191	A
2	DA	2198	A
2	DA	2203	U
2	DA	2204	G
2	DA	2209	G
2	DA	2210	U
2	DA	2211	A
2	DA	2212	A
2	DA	2223	G
2	DA	2225	A
2	DA	2226	C
2	DA	2238	G
2	DA	2239	G
2	DA	2243	U
2	DA	2250	G
2	DA	2266	A
2	DA	2267	A
2	DA	2268	A
2	DA	2278	A
2	DA	2279	G
2	DA	2283	C
2	DA	2287	A
2	DA	2288	A
2	DA	2297	A
2	DA	2305	U
2	DA	2307	G
2	DA	2308	G
2	DA	2309	A
2	DA	2310	C
2	DA	2311	A
2	DA	2312	U
2	DA	2317	A
2	DA	2318	G

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Mol	Chain	Res	Type
2	DA	2319	G
2	DA	2320	U
2	DA	2321	U
2	DA	2322	A
2	DA	2325	G
2	DA	2327	A
2	DA	2334	U
2	DA	2335	A
2	DA	2339	C
2	DA	2344	U
2	DA	2347	C
2	DA	2350	C
2	DA	2354	C
2	DA	2357	G
2	DA	2361	G
2	DA	2366	A
2	DA	2383	G
2	DA	2385	C
2	DA	2388	A
2	DA	2402	U
2	DA	2407	A
2	DA	2410	G
2	DA	2423	U
2	DA	2425	A
2	DA	2426	A
2	DA	2428	G
2	DA	2429	G
2	DA	2430	A
2	DA	2435	A
2	DA	2441	U
2	DA	2448	A
2	DA	2469	A
2	DA	2476	A
2	DA	2478	A
2	DA	2481	G
2	DA	2491	U
2	DA	2494	G
2	DA	2502	G
2	DA	2504	U
2	DA	2505	G
2	DA	2506	U
2	DA	2518	A

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Mol	Chain	Res	Type
2	DA	2520	C
2	DA	2525	G
2	DA	2529	G
2	DA	2535	G
2	DA	2547	A
2	DA	2553	G
2	DA	2554	U
2	DA	2555	U
2	DA	2564	A
2	DA	2566	A
2	DA	2567	G
2	DA	2572	A
2	DA	2573	C
2	DA	2574	G
2	DA	2581	G
2	DA	2582	G
2	DA	2583	G
2	DA	2585	U
2	DA	2586	U
2	DA	2596	U
2	DA	2602	A
2	DA	2603	G
2	DA	2605	U
2	DA	2609	U
2	DA	2611	C
2	DA	2613	U
2	DA	2629	U
2	DA	2630	G
2	DA	2636	C
2	DA	2639	A
2	DA	2646	C
2	DA	2654	A
2	DA	2656	U
2	DA	2659	G
2	DA	2660	A
2	DA	2671	G
2	DA	2673	G
2	DA	2689	U
2	DA	2690	U
2	DA	2714	G
2	DA	2716	C
2	DA	2718	G

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Mol	Chain	Res	Type
2	DA	2720	U
2	DA	2726	A
2	DA	2733	A
2	DA	2742	G
2	DA	2744	G
2	DA	2748	A
2	DA	2751	G
2	DA	2752	C
2	DA	2757	A
2	DA	2762	C
2	DA	2765	A
2	DA	2766	A
2	DA	2776	A
2	DA	2778	A
2	DA	2791	G
2	DA	2798	U
2	DA	2799	A
2	DA	2801	G
2	DA	2807	U
2	DA	2811	G
2	DA	2818	U
2	DA	2820	A
2	DA	2832	U
2	DA	2833	U
2	DA	2834	G
2	DA	2835	A
2	DA	2847	U
2	DA	2848	G
2	DA	2849	U
2	DA	2858	C
2	DA	2861	U
2	DA	2866	U
2	DA	2867	G
2	DA	2872	A
2	DA	2873	A
2	DA	2879	A
2	DA	2884	U
2	DA	2887	A
2	DA	2895	G
2	DA	2902	C
2	DA	2903	U
3	DB	6	G

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Mol	Chain	Res	Type
3	DB	13	G
3	DB	15	A
3	DB	16	G
3	DB	24	G
3	DB	27	C
3	DB	35	C
3	DB	37	C
3	DB	41	G
3	DB	42	C
3	DB	44	G
3	DB	54	G
3	DB	69	G
3	DB	88	C
3	DB	89	U
3	DB	90	C
3	DB	99	A
3	DB	109	A
4	BV	9	A
4	BV	10	G
4	BV	11	C
4	BV	17	U
4	BV	18	G
4	BV	19	G
4	BV	20	G
4	BV	21	A
4	BV	36	C
4	BV	46	G
4	BV	47	U
4	BV	48	C
4	BV	52	G
4	BV	61	C
4	BV	73	A
4	BV	74	C
4	BV	76	A
36	BX	32	C
4	BW	8	U
4	BW	17	U
4	BW	18	G
4	BW	19	G
4	BW	20	G
4	BW	21	A
4	BW	22	G

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Mol	Chain	Res	Type
4	BW	37	A
4	BW	45	G
4	BW	47	U
4	BW	48	C
4	BW	58	A
4	BW	61	C
4	BW	69	A
4	BW	75	C

All (56) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	96	U
1	AA	115	G
1	AA	1101	A
1	AA	1139	G
1	AA	1201	A
1	AA	1534	A
2	CA	404	A
2	CA	549	G
2	CA	655	A
2	CA	886	A
2	CA	891	G
2	CA	893	C
2	CA	1173	U
2	CA	1328	A
2	CA	1344	U
2	CA	1378	A
2	CA	1846	G
2	CA	1870	C
2	CA	1913	A
2	CA	2225	A
2	CA	2308	G
2	CA	2326	C
2	CA	2401	U
2	CA	2425	A
36	AX	5	G
36	AX	26	A
4	AW	1	G
4	AW	17	U
1	BA	81	A

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Mol	Chain	Res	Type
1	BA	88	U
1	BA	96	U
1	BA	115	G
1	BA	329	A
1	BA	411	A
1	BA	848	C
1	BA	1028	C
1	BA	1101	A
1	BA	1201	A
1	BA	1534	A
2	DA	60	G
2	DA	138	U
2	DA	404	A
2	DA	549	G
2	DA	890	C
2	DA	892	A
2	DA	893	C
2	DA	1378	A
2	DA	1523	U
2	DA	1869	G
2	DA	1913	A
2	DA	2188	U
2	DA	2189	U
2	DA	2225	A
2	DA	2425	A
2	DA	2756	U

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 449 ligands modelled in this entry, 449 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	DA	9
1	BA	4
1	AA	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	DA	2105:U	O3'	2118:U	P	30.28
1	DA	2185:U	O3'	2186:G	P	7.24
1	DA	2103:C	O3'	2104:C	P	6.01
1	DA	1887:C	O3'	1888:G	P	5.11
1	DA	2140:G	O3'	2141:G	P	3.75
1	DA	2802:G	O3'	2803:G	P	3.74
1	BA	1187:G	O3'	1188:A	P	3.55
1	BA	231:U	O3'	232:G	P	3.53
1	BA	205:A	O3'	206:C	P	3.43
1	AA	1355:G	O3'	1356:G	P	3.30
1	DA	42:A	O3'	43:G	P	3.29
1	BA	996:A	O3'	997:U	P	3.22
1	DA	2378:A	O3'	2379:G	P	3.21
1	DA	1410:G	O3'	1411:U	P	3.14

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	1540/1541 (99%)	-0.27	15 (0%) 82 74	95, 154, 227, 359	2 (0%)
1	BA	1541/1541 (100%)	-0.25	24 (1%) 72 62	110, 157, 208, 259	3 (0%)
2	CA	2867/2904 (98%)	-0.48	28 (0%) 82 74	69, 94, 175, 298	33 (1%)
2	DA	2869/2904 (98%)	-0.33	45 (1%) 72 62	86, 126, 219, 320	26 (0%)
3	CB	118/118 (100%)	-0.68	0 100 100	81, 108, 131, 159	0
3	DB	118/118 (100%)	-0.52	0 100 100	133, 191, 210, 222	0
4	AV	76/76 (100%)	0.18	8 (10%) 6 6	125, 166, 186, 201	0
4	AW	76/76 (100%)	-0.11	2 (2%) 56 46	119, 157, 180, 196	0
4	AY	76/76 (100%)	3.17	47 (61%) 0 0	120, 227, 240, 243	76 (100%)
4	BV	76/76 (100%)	0.10	6 (7%) 12 11	138, 193, 215, 225	0
4	BW	76/76 (100%)	-0.06	3 (3%) 39 31	142, 195, 208, 221	0
5	CC	271/271 (100%)	0.09	9 (3%) 46 37	71, 99, 117, 127	0
5	DC	271/271 (100%)	0.18	14 (5%) 27 24	98, 122, 143, 158	0
6	CD	209/209 (100%)	0.31	12 (5%) 23 20	70, 90, 110, 165	0
6	DD	209/209 (100%)	0.15	4 (1%) 66 58	89, 113, 130, 143	0
7	CE	181/181 (100%)	-0.05	2 (1%) 80 72	68, 95, 111, 133	0
7	DE	180/181 (99%)	0.13	3 (1%) 70 60	92, 128, 142, 151	0
8	CF	177/177 (100%)	-0.01	2 (1%) 80 72	113, 134, 158, 170	0
8	DF	177/177 (100%)	0.90	38 (21%) 0 1	136, 191, 224, 239	0
9	CG	176/176 (100%)	-0.03	3 (1%) 70 60	88, 105, 120, 148	0
9	DG	176/176 (100%)	0.46	15 (8%) 10 9	132, 150, 165, 176	0
10	CH	149/149 (100%)	0.32	9 (6%) 21 17	101, 151, 164, 168	0
10	DH	149/149 (100%)	1.00	29 (19%) 1 1	139, 210, 238, 243	0
11	C5	109/109 (100%)	0.38	12 (11%) 5 5	131, 173, 190, 197	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
12	CI	71/72 (98%)	1.30	18 (25%) 0 0	191, 212, 223, 225	71 (100%)
12	DI	72/72 (100%)	1.62	25 (34%) 0 0	262, 278, 291, 295	0
13	CJ	142/142 (100%)	0.13	0 100 100	68, 86, 104, 121	0
13	DJ	142/142 (100%)	0.23	8 (5%) 24 21	97, 114, 129, 147	0
14	CK	122/122 (100%)	-0.14	1 (0%) 86 79	77, 92, 114, 125	0
14	DK	122/122 (100%)	0.33	7 (5%) 23 20	97, 114, 129, 139	0
15	CL	143/143 (100%)	0.26	8 (5%) 24 21	74, 99, 116, 130	0
15	DL	143/143 (100%)	0.33	7 (4%) 29 25	98, 150, 167, 182	0
16	CM	135/136 (99%)	0.07	0 100 100	78, 94, 113, 127	0
16	DM	136/136 (100%)	0.96	25 (18%) 1 1	117, 138, 151, 164	0
17	CN	121/121 (100%)	-0.07	0 100 100	72, 87, 99, 100	0
17	DN	121/121 (100%)	0.04	3 (2%) 57 47	89, 106, 122, 146	0
18	CO	116/116 (100%)	0.13	3 (2%) 56 46	93, 111, 126, 131	0
18	DO	116/116 (100%)	1.16	29 (25%) 0 0	169, 188, 201, 208	0
19	CP	114/114 (100%)	0.20	6 (5%) 26 23	76, 96, 125, 135	0
19	DP	114/114 (100%)	0.31	4 (3%) 44 35	108, 121, 142, 154	0
20	CQ	117/117 (100%)	-0.27	0 100 100	68, 80, 97, 112	0
20	DQ	117/117 (100%)	-0.38	0 100 100	84, 108, 120, 127	0
21	CR	103/103 (100%)	0.09	0 100 100	70, 94, 109, 119	0
21	DR	103/103 (100%)	-0.03	2 (1%) 66 58	99, 116, 130, 141	0
22	CS	110/110 (100%)	0.44	6 (5%) 25 22	69, 87, 102, 121	0
22	DS	110/110 (100%)	0.51	8 (7%) 15 12	84, 104, 119, 131	0
23	CT	93/93 (100%)	0.47	8 (8%) 10 9	78, 97, 123, 138	0
23	DT	93/93 (100%)	0.32	3 (3%) 47 37	107, 127, 150, 166	0
24	CU	102/102 (100%)	0.14	2 (1%) 65 56	77, 96, 118, 137	0
24	DU	102/102 (100%)	0.71	13 (12%) 3 4	97, 123, 149, 165	0
25	CV	94/94 (100%)	0.16	6 (6%) 19 15	78, 101, 116, 119	0
25	DV	94/94 (100%)	0.14	3 (3%) 47 37	132, 146, 157, 161	0
26	CW	75/75 (100%)	0.33	4 (5%) 26 23	82, 95, 110, 155	0
26	DW	75/75 (100%)	0.83	13 (17%) 1 2	129, 148, 161, 172	0
27	CX	77/77 (100%)	0.25	3 (3%) 39 31	83, 98, 117, 123	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
27	DX	77/77 (100%)	0.70	4 (5%) 27 24	118, 135, 151, 156	0
28	CY	61/63 (96%)	-0.36	0 100 100	94, 109, 122, 145	0
28	DY	63/63 (100%)	0.11	3 (4%) 30 26	118, 133, 150, 154	0
29	CZ	58/58 (100%)	0.53	2 (3%) 45 36	74, 88, 108, 128	0
29	DZ	58/58 (100%)	0.82	5 (8%) 10 9	121, 137, 146, 152	0
30	C0	39/39 (100%)	0.91	6 (15%) 2 2	150, 167, 178, 182	39 (100%)
30	D0	39/39 (100%)	1.43	10 (25%) 0 0	179, 195, 204, 205	39 (100%)
31	C1	56/56 (100%)	-0.23	0 100 100	67, 91, 115, 127	0
31	D1	56/56 (100%)	-0.19	0 100 100	89, 110, 123, 135	0
32	C2	50/50 (100%)	2.64	31 (62%) 0 0	128, 140, 154, 158	0
32	D2	50/50 (100%)	4.10	39 (78%) 0 0	158, 174, 180, 184	50 (100%)
33	C3	46/46 (100%)	0.04	0 100 100	68, 87, 102, 108	0
33	D3	46/46 (100%)	0.16	0 100 100	101, 110, 120, 140	0
34	C4	61/62 (98%)	1.26	12 (19%) 1 1	79, 108, 121, 123	0
34	D4	62/62 (100%)	1.91	24 (38%) 0 0	135, 160, 171, 175	0
35	C6	38/38 (100%)	0.06	0 100 100	88, 103, 122, 149	0
35	D6	38/38 (100%)	1.27	13 (34%) 0 0	126, 137, 150, 178	0
36	AX	30/46 (65%)	2.49	15 (50%) 0 0	123, 203, 227, 257	1 (3%)
36	BX	30/46 (65%)	2.59	17 (56%) 0 0	140, 188, 233, 239	2 (6%)
37	AB	225/225 (100%)	0.54	27 (12%) 4 5	161, 181, 193, 207	0
37	BB	225/225 (100%)	0.31	15 (6%) 17 14	168, 197, 211, 218	0
38	AC	206/206 (100%)	-0.12	3 (1%) 73 64	147, 163, 176, 198	0
38	BC	206/206 (100%)	0.32	20 (9%) 7 7	140, 159, 171, 180	0
39	AD	205/205 (100%)	0.62	25 (12%) 4 5	138, 166, 180, 185	0
39	BD	205/205 (100%)	0.04	4 (1%) 65 56	126, 144, 156, 172	0
40	AE	150/150 (100%)	0.55	17 (11%) 5 5	121, 145, 160, 165	0
40	BE	150/150 (100%)	0.38	10 (6%) 17 14	126, 149, 161, 171	0
41	AF	100/100 (100%)	-0.28	1 (1%) 82 74	113, 136, 153, 159	0
41	BF	100/100 (100%)	0.63	15 (15%) 2 2	145, 158, 171, 178	0
42	AG	135/179 (75%)	0.66	15 (11%) 5 5	149, 173, 188, 200	0
42	BG	132/179 (73%)	0.79	24 (18%) 1 2	169, 196, 215, 225	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
43	AH	128/129 (99%)	0.31	8 (6%) 20 16	135, 146, 164, 171	0
43	BH	129/129 (100%)	0.14	4 (3%) 49 38	141, 154, 164, 172	0
44	AI	124/130 (95%)	1.00	18 (14%) 2 3	146, 178, 189, 200	0
44	BI	127/130 (97%)	0.73	12 (9%) 8 8	161, 193, 206, 210	0
45	AJ	98/98 (100%)	0.85	16 (16%) 1 2	149, 182, 197, 200	0
45	BJ	98/98 (100%)	0.65	12 (12%) 4 5	151, 176, 189, 193	0
46	AK	116/117 (99%)	-0.27	0 100 100	96, 131, 147, 161	0
46	BK	117/117 (100%)	0.61	16 (13%) 3 3	142, 170, 187, 192	0
47	AL	123/123 (100%)	0.91	20 (16%) 1 2	116, 134, 148, 176	0
47	BL	123/123 (100%)	0.48	9 (7%) 15 12	111, 128, 142, 153	0
48	AM	114/114 (100%)	0.36	11 (9%) 8 7	135, 168, 206, 227	0
48	BM	114/114 (100%)	0.32	8 (7%) 16 13	164, 190, 212, 243	0
49	AN	96/101 (95%)	0.69	12 (12%) 3 5	147, 168, 180, 189	0
49	BN	96/101 (95%)	0.38	7 (7%) 15 12	153, 166, 177, 185	0
50	AO	88/89 (98%)	-0.03	0 100 100	112, 131, 150, 159	0
50	BO	88/89 (98%)	0.32	8 (9%) 9 8	135, 153, 167, 172	0
51	AP	82/82 (100%)	1.95	35 (42%) 0 0	147, 169, 179, 195	0
51	BP	82/82 (100%)	1.16	25 (30%) 0 0	122, 148, 174, 189	0
52	AQ	80/80 (100%)	0.61	8 (10%) 7 7	126, 151, 163, 170	0
52	BQ	80/80 (100%)	0.94	16 (20%) 1 1	131, 150, 161, 173	0
53	AR	55/55 (100%)	0.66	4 (7%) 15 12	126, 139, 157, 161	0
53	BR	55/55 (100%)	0.94	8 (14%) 2 3	152, 162, 183, 200	0
54	AS	79/79 (100%)	0.64	8 (10%) 7 7	156, 170, 179, 184	0
54	BS	79/79 (100%)	0.91	16 (20%) 1 1	165, 179, 188, 193	0
55	AT	85/85 (100%)	0.15	3 (3%) 44 35	134, 154, 166, 176	0
55	BT	85/85 (100%)	0.74	5 (5%) 22 18	131, 151, 163, 170	0
All	All	20800/21025 (98%)	0.09	1191 (5%) 23 20	67, 135, 203, 359	342 (1%)

All (1191) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	DA	2153	C	15.4
2	DA	2145	C	11.7

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Mol	Chain	Res	Type	RSRZ
4	AV	76	A	11.0
30	D0	22	MET	10.7
4	AY	17	U	10.7
2	DA	2152	G	10.6
4	AY	1	G	10.1
32	D2	3	GLY	9.9
4	AY	72	C	9.6
2	CA	2110	G	9.4
32	D2	6	GLU	9.4
2	DA	2154	A	9.3
32	D2	22	THR	9.0
32	D2	24	LYS	9.0
4	AV	75	C	9.0
32	D2	10	LEU	8.8
4	AY	37	A	8.6
51	AP	47	GLU	8.6
9	DG	176	LYS	8.5
4	BV	75	C	8.3
4	AY	45	G	8.1
2	DA	2146	C	8.0
44	AI	15	ALA	7.8
2	CA	2178	C	7.7
2	DA	2144	G	7.5
36	BX	11	A	7.5
32	D2	9	LYS	7.5
4	BV	74	C	7.5
2	CA	2120	G	7.4
32	D2	18	HIS	7.3
2	DA	2155	U	7.3
2	CA	2105	U	7.3
36	BX	12	A	7.2
2	DA	2137	U	7.1
36	BX	10	U	7.1
32	D2	4	ILE	7.1
2	DA	2118	U	7.1
4	AY	2	G	6.9
4	AY	73	A	6.8
4	AY	33	U	6.8
2	DA	2148	G	6.8
42	BG	132	THR	6.8
32	D2	21	THR	6.7
18	DO	23	ALA	6.7

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Mol	Chain	Res	Type	RSRZ
32	D2	52	LYS	6.7
51	AP	34	GLU	6.6
2	CA	2107	G	6.6
41	BF	87	SER	6.6
4	AY	36	C	6.6
32	D2	19	PHE	6.6
2	DA	2138	G	6.6
12	CI	114	ALA	6.5
36	AX	4	A	6.5
36	BX	13	A	6.4
43	BH	3	GLN	6.4
37	AB	68	PHE	6.4
37	AB	155	GLY	6.3
4	AY	34	U	6.3
2	DA	2140	G	6.3
36	AX	10	U	6.3
4	BV	76	A	6.2
2	DA	2141	G	6.2
30	C0	19	GLY	6.2
2	CA	2104	C	6.2
44	AI	16	ALA	6.2
34	D4	23	HIS	6.1
2	DA	2142	A	6.1
36	AX	7	A	6.1
19	CP	44	GLY	6.1
47	AL	122	LYS	6.1
51	AP	1	MET	6.1
4	AV	73	A	6.1
44	AI	9	GLY	6.0
12	DI	119	ALA	6.0
32	D2	25	ASN	6.0
42	BG	151	ALA	6.0
26	CW	85	GLU	6.0
4	BW	1	G	6.0
32	D2	8	ILE	6.0
32	D2	34	GLU	5.9
2	DA	1847	A	5.9
32	C2	8	ILE	5.9
18	DO	91	SER	5.9
2	CA	2103	C	5.8
51	AP	22	ALA	5.8
41	BF	9	MET	5.8

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Mol	Chain	Res	Type	RSRZ
41	BF	8	PHE	5.8
36	AX	6	G	5.7
4	AY	20	G	5.7
36	AX	3	A	5.7
39	AD	104	MET	5.6
2	CA	2181	U	5.6
37	BB	18	GLN	5.6
4	AY	32	C	5.6
35	D6	38	GLY	5.6
32	C2	48	TYR	5.6
1	BA	1540	U	5.6
4	AY	71	C	5.6
32	C2	10	LEU	5.6
34	D4	50	SER	5.6
12	DI	94	LYS	5.5
48	AM	95	PRO	5.5
37	AB	154	GLY	5.5
4	AW	1	G	5.5
4	AY	75	C	5.5
34	D4	60	CYS	5.5
32	C2	22	THR	5.4
51	AP	3	THR	5.4
2	CA	2179	C	5.4
1	BA	1541	U	5.4
44	BI	106	ASP	5.4
18	DO	24	THR	5.3
39	AD	94	GLU	5.3
35	D6	5	ALA	5.3
36	BX	9	A	5.3
2	DA	2139	U	5.3
38	BC	168	TYR	5.3
2	DA	2147	A	5.3
18	DO	37	ALA	5.2
4	AY	46	G	5.2
32	D2	50	GLU	5.2
4	AY	35	A	5.2
32	C2	50	GLU	5.2
47	AL	123	ALA	5.2
2	DA	2132	U	5.2
39	AD	99	ASN	5.1
36	AX	13	A	5.1
1	AA	1539	C	5.1

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Mol	Chain	Res	Type	RSRZ
2	CA	2108	A	5.1
51	AP	49	GLY	5.1
2	DA	890	C	5.0
4	AV	74	C	5.0
4	AY	16	C	5.0
10	DH	101	ASP	5.0
52	BQ	41	THR	5.0
8	DF	86	CYS	5.0
32	D2	51	ALA	5.0
43	AH	1	SER	5.0
32	D2	20	TYR	5.0
32	C2	46	VAL	4.9
2	DA	2151	U	4.9
35	D6	6	SER	4.9
1	BA	1538	C	4.9
4	AY	74	C	4.9
9	DG	175	LYS	4.8
36	AX	12	A	4.8
50	BO	1	SER	4.8
51	AP	24	SER	4.8
49	AN	72	GLY	4.8
16	DM	106	ASP	4.8
42	BG	111	GLY	4.8
32	D2	49	LYS	4.8
4	AY	38	A	4.8
18	DO	36	TYR	4.8
12	DI	88	GLY	4.8
10	DH	1	MET	4.8
48	AM	96	VAL	4.8
45	AJ	8	ILE	4.8
4	AY	19	G	4.8
51	AP	21	VAL	4.8
18	DO	96	GLY	4.7
32	D2	23	THR	4.7
4	BV	73	A	4.7
45	AJ	73	LEU	4.7
32	D2	17	GLY	4.7
34	D4	47	ALA	4.7
36	BX	14	A	4.7
52	BQ	59	GLU	4.7
2	CA	2183	A	4.7
16	DM	70	ASP	4.6

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Mol	Chain	Res	Type	RSRZ
1	BA	1539	C	4.6
1	AA	1537	U	4.6
39	AD	100	VAL	4.6
2	CA	2106	U	4.6
44	BI	107	ALA	4.6
51	AP	48	GLU	4.6
51	BP	22	ALA	4.6
47	AL	116	TYR	4.6
32	C2	49	LYS	4.6
42	BG	150	PHE	4.6
36	AX	9	A	4.6
2	CA	2121	G	4.6
9	DG	105	SER	4.6
30	C0	40	CYS	4.5
51	AP	23	ASP	4.5
41	BF	1	MET	4.5
10	DH	113	SER	4.5
46	BK	15	VAL	4.5
16	DM	68	PHE	4.5
46	BK	111	ASP	4.5
32	C2	9	LYS	4.5
36	BX	6	G	4.5
40	AE	124	ALA	4.5
37	BB	24	PRO	4.5
8	DF	67	THR	4.5
32	C2	16	THR	4.5
32	D2	27	ARG	4.5
14	DK	84	CYS	4.4
51	AP	2	VAL	4.4
36	BX	4	A	4.4
32	D2	12	SER	4.4
51	AP	66	THR	4.4
42	BG	149	ALA	4.4
12	DI	87	SER	4.4
32	C2	13	SER	4.4
18	DO	29	HIS	4.4
4	AY	39	G	4.4
12	CI	94	LYS	4.4
8	DF	85	GLY	4.4
12	CI	95	ASP	4.4
4	AY	40	G	4.4
10	DH	149	GLU	4.3

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Mol	Chain	Res	Type	RSRZ
49	BN	21	ALA	4.3
12	CI	77	VAL	4.3
2	DA	2149	U	4.3
47	AL	24	GLU	4.3
12	DI	120	ASP	4.3
2	DA	2143	C	4.3
32	C2	47	ILE	4.3
2	DA	889	C	4.3
44	AI	22	PRO	4.3
37	AB	156	LEU	4.3
26	DW	68	LYS	4.3
32	D2	48	TYR	4.3
48	AM	92	ARG	4.2
10	DH	112	LYS	4.2
36	AX	5	G	4.2
51	BP	34	GLU	4.2
12	DI	118	GLY	4.2
32	C2	21	THR	4.2
1	AA	412	A	4.1
46	BK	17	ASP	4.1
32	D2	35	LEU	4.1
46	BK	16	SER	4.1
2	DA	2156	G	4.1
4	BW	47	U	4.1
16	DM	105	MET	4.1
12	CI	91	LYS	4.1
37	AB	158	ASP	4.1
39	AD	107	GLY	4.1
46	BK	126	ARG	4.1
51	BP	38	PHE	4.1
45	AJ	63	ASP	4.1
2	CA	2180	U	4.1
10	CH	93	SER	4.1
34	C4	53	ASP	4.1
8	DF	84	ILE	4.1
39	AD	18	LEU	4.1
51	AP	46	LYS	4.1
2	CA	2182	U	4.0
52	AQ	8	GLN	4.0
1	BA	387	U	4.0
11	C5	91	ALA	4.0
2	DA	2136	G	4.0

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Mol	Chain	Res	Type	RSRZ
42	AG	73	GLU	4.0
44	BI	61	ASP	4.0
30	D0	48	GLN	4.0
40	AE	27	GLY	4.0
12	CI	115	ASP	4.0
2	CA	2102	G	4.0
43	AH	3	GLN	4.0
10	DH	105	ALA	4.0
8	DF	90	LEU	4.0
18	DO	22	GLY	4.0
39	AD	17	ASP	4.0
55	BT	74	HIS	3.9
50	BO	2	LEU	3.9
34	D4	8	GLY	3.9
35	D6	37	GLN	3.9
12	CI	76	ALA	3.9
1	AA	1538	C	3.9
34	D4	48	MET	3.9
10	DH	115	VAL	3.9
40	AE	46	GLY	3.9
37	AB	65	LYS	3.9
51	BP	3	THR	3.9
32	C2	39	ASP	3.9
12	CI	90	GLY	3.9
8	DF	35	LEU	3.8
12	DI	114	ALA	3.8
36	BX	7	A	3.8
45	BJ	63	ASP	3.8
2	CA	1175	A	3.8
54	BS	38	THR	3.8
39	AD	95	GLY	3.8
2	CA	888	C	3.8
22	DS	77	ASP	3.8
45	AJ	100	ILE	3.8
54	BS	70	LEU	3.8
8	DF	168	LEU	3.8
49	BN	22	LYS	3.8
44	BI	104	THR	3.8
10	DH	106	ALA	3.8
32	C2	51	ALA	3.8
36	AX	11	A	3.8
49	AN	92	GLU	3.8

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Mol	Chain	Res	Type	RSRZ
32	D2	15	GLY	3.7
51	BP	37	GLY	3.7
12	CI	141	ASP	3.7
4	AY	15	G	3.7
13	DJ	54	ILE	3.7
2	CA	2138	G	3.7
32	C2	20	TYR	3.7
26	DW	69	PHE	3.7
51	AP	33	ILE	3.7
47	BL	24	GLU	3.7
1	AA	1540	U	3.7
15	DL	49	GLY	3.7
30	D0	32	LEU	3.7
51	AP	38	PHE	3.7
11	C5	81	LEU	3.7
52	BQ	42	LYS	3.7
48	AM	82	LEU	3.7
1	BA	1534	A	3.7
51	AP	17	TYR	3.6
23	DT	32	LEU	3.6
38	BC	151	VAL	3.6
45	BJ	35	GLN	3.6
42	AG	139	ASP	3.6
42	BG	61	PHE	3.6
8	DF	66	ILE	3.6
8	DF	146	ASP	3.6
34	D4	1	PRO	3.6
34	D4	14	LYS	3.6
54	BS	73	PHE	3.6
41	BF	57	ALA	3.6
39	AD	103	ARG	3.6
40	BE	31	SER	3.6
44	AI	10	ARG	3.6
45	AJ	9	ARG	3.6
51	AP	50	THR	3.6
36	AX	14	A	3.6
24	DU	19	GLY	3.6
50	BO	49	HIS	3.6
53	BR	22	TYR	3.6
2	CA	2109	U	3.6
12	CI	139	VAL	3.6
22	CS	104	THR	3.6

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Mol	Chain	Res	Type	RSRZ
8	DF	33	ILE	3.6
32	D2	16	THR	3.6
29	DZ	28	LEU	3.6
12	CI	93	ASN	3.6
26	DW	25	ARG	3.5
2	CA	2184	A	3.5
39	AD	183	ARG	3.5
45	AJ	71	LEU	3.5
18	DO	52	SER	3.5
30	C0	48	GLN	3.5
2	CA	2154	A	3.5
52	BQ	52	CYS	3.5
34	D4	20	GLY	3.5
37	BB	25	LYS	3.5
47	AL	97	VAL	3.5
44	AI	55	ASP	3.5
4	AY	41	A	3.5
30	D0	24	ILE	3.5
39	AD	139	ASN	3.5
32	C2	19	PHE	3.5
34	D4	12	ARG	3.5
10	DH	102	ALA	3.5
26	DW	70	GLU	3.5
42	BG	91	ARG	3.5
44	BI	96	GLU	3.5
17	DN	112	TYR	3.5
34	D4	27	ASN	3.4
37	AB	81	ASP	3.4
32	C2	12	SER	3.4
37	AB	66	ILE	3.4
23	CT	92	ASN	3.4
7	DE	128	ALA	3.4
44	AI	3	ASN	3.4
4	AY	12	U	3.4
35	D6	7	VAL	3.4
28	DY	24	GLU	3.4
8	DF	156	THR	3.4
32	C2	34	GLU	3.4
37	BB	191	ASP	3.4
53	BR	64	LEU	3.4
26	CW	84	ALA	3.4
26	DW	46	HIS	3.4

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Mol	Chain	Res	Type	RSRZ
40	BE	52	ALA	3.4
40	BE	109	ALA	3.4
41	BF	56	LYS	3.4
12	DI	141	ASP	3.4
44	BI	22	PRO	3.4
12	DI	113	ALA	3.4
2	DA	2134	A	3.4
13	DJ	80	HIS	3.4
38	BC	24	ALA	3.4
42	AG	40	SER	3.4
55	BT	42	ASP	3.4
4	BV	17	U	3.3
4	AY	57	G	3.3
40	AE	38	VAL	3.3
51	AP	8	ARG	3.3
32	C2	35	LEU	3.3
44	AI	106	ASP	3.3
48	BM	90	HIS	3.3
8	DF	34	THR	3.3
29	DZ	8	GLN	3.3
4	AY	18	G	3.3
54	AS	31	ARG	3.3
49	BN	25	GLU	3.3
12	CI	113	ALA	3.3
49	AN	22	LYS	3.3
10	DH	109	GLU	3.3
12	CI	137	LEU	3.3
42	BG	145	GLU	3.3
34	C4	23	HIS	3.3
45	AJ	74	VAL	3.3
18	DO	15	ARG	3.3
14	DK	10	VAL	3.3
16	DM	103	TYR	3.3
4	AY	60	C	3.3
10	CH	94	ILE	3.3
8	DF	87	LYS	3.3
52	BQ	60	ILE	3.3
51	BP	27	ALA	3.3
37	AB	126	ASP	3.3
8	DF	83	PRO	3.3
51	BP	35	ARG	3.3
37	AB	157	PRO	3.2

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Mol	Chain	Res	Type	RSRZ
51	BP	36	VAL	3.2
19	DP	65	ASN	3.2
39	AD	138	PRO	3.2
32	D2	28	THR	3.2
44	AI	122	ARG	3.2
8	DF	31	GLU	3.2
15	DL	32	GLY	3.2
42	AG	17	PHE	3.2
40	AE	26	GLY	3.2
4	AY	31	C	3.2
9	DG	60	GLY	3.2
37	AB	90	PHE	3.2
51	BP	47	GLU	3.2
34	C4	19	GLY	3.2
34	D4	5	THR	3.2
35	D6	2	LYS	3.2
6	CD	147	GLY	3.2
16	DM	37	GLY	3.2
14	DK	102	PRO	3.2
39	AD	1	ALA	3.2
40	AE	109	ALA	3.2
41	BF	4	TYR	3.2
9	CG	176	LYS	3.2
34	D4	9	ALA	3.2
2	DA	2150	C	3.2
42	AG	140	VAL	3.2
22	DS	78	GLU	3.2
38	BC	167	TRP	3.2
4	AY	76	A	3.1
34	D4	53	ASP	3.1
38	BC	166	GLU	3.1
16	DM	117	PHE	3.1
19	DP	24	THR	3.1
29	DZ	29	ARG	3.1
37	BB	21	TYR	3.1
39	AD	105	GLY	3.1
32	D2	11	VAL	3.1
15	DL	31	GLY	3.1
48	BM	40	GLU	3.1
1	AA	211	G	3.1
52	BQ	8	GLN	3.1
11	C5	68	PRO	3.1

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Mol	Chain	Res	Type	RSRZ
9	DG	165	ASP	3.1
37	AB	115	ASP	3.1
55	BT	70	LYS	3.1
4	AV	2	G	3.1
32	C2	36	LYS	3.1
5	DC	102	TYR	3.1
41	BF	59	TYR	3.1
54	BS	37	SER	3.1
30	D0	23	LYS	3.1
47	AL	67	GLY	3.1
14	DK	59	LYS	3.1
44	AI	96	GLU	3.1
52	AQ	70	LYS	3.1
52	BQ	43	LEU	3.1
40	AE	45	VAL	3.1
32	D2	32	LYS	3.1
38	BC	199	LYS	3.1
12	DI	110	GLN	3.0
42	BG	139	ASP	3.0
4	AY	55	U	3.0
26	DW	45	PHE	3.0
42	BG	147	ASN	3.0
14	DK	83	ALA	3.0
34	C4	60	CYS	3.0
41	BF	88	MET	3.0
21	DR	5	PHE	3.0
10	CH	79	THR	3.0
51	BP	81	ALA	3.0
4	AV	1	G	3.0
45	BJ	71	LEU	3.0
27	DX	41	SER	3.0
38	BC	180	ALA	3.0
42	BG	71	THR	3.0
4	BW	76	A	3.0
34	C4	25	HIS	3.0
1	BA	1533	C	3.0
51	AP	39	PHE	3.0
7	DE	169	VAL	3.0
24	DU	59	GLU	3.0
52	BQ	26	ARG	3.0
4	AY	10	G	3.0
40	AE	36	THR	3.0

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Mol	Chain	Res	Type	RSRZ
40	BE	36	THR	3.0
51	AP	32	PHE	3.0
1	AA	101	A	3.0
22	DS	1	MET	3.0
38	BC	25	ASN	3.0
44	BI	63	TYR	3.0
44	AI	125	GLN	3.0
42	BG	131	GLY	3.0
1	BA	211	G	3.0
5	CC	182	LYS	3.0
34	D4	16	THR	3.0
12	DI	107	GLU	3.0
51	AP	67	ILE	3.0
51	AP	31	ARG	3.0
32	D2	26	LYS	3.0
32	C2	45	HIS	3.0
11	C5	80	THR	2.9
5	DC	92	LEU	2.9
52	BQ	27	PHE	2.9
47	BL	16	ALA	2.9
35	D6	4	ARG	2.9
49	AN	7	ALA	2.9
22	CS	75	PHE	2.9
30	D0	45	THR	2.9
32	C2	23	THR	2.9
35	D6	24	ARG	2.9
36	BX	5	G	2.9
45	AJ	65	TYR	2.9
10	CH	128	HIS	2.9
8	DF	108	PRO	2.9
18	DO	11	ALA	2.9
1	AA	902	G	2.9
37	BB	211	LEU	2.9
37	BB	210	THR	2.9
44	BI	66	VAL	2.9
6	CD	1	MET	2.9
37	AB	30	ILE	2.9
38	AC	200	VAL	2.9
24	DU	60	LYS	2.9
37	AB	152	ASP	2.9
15	CL	51	GLU	2.9
19	CP	24	THR	2.9

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Mol	Chain	Res	Type	RSRZ
18	DO	97	PHE	2.9
18	DO	38	GLN	2.9
39	AD	129	VAL	2.9
51	BP	18	GLN	2.9
1	BA	1226	C	2.9
10	DH	114	GLU	2.9
13	DJ	79	GLY	2.9
41	BF	47	LEU	2.9
4	AY	13	C	2.9
51	AP	71	VAL	2.9
6	DD	1	MET	2.9
1	BA	1537	U	2.9
9	DG	51	PHE	2.9
39	AD	184	LYS	2.8
52	AQ	44	HIS	2.8
6	CD	3	GLY	2.8
47	AL	98	ARG	2.8
5	CC	173	LEU	2.8
36	BX	15	A	2.8
32	D2	13	SER	2.8
41	BF	60	VAL	2.8
10	DH	128	HIS	2.8
4	AY	47	U	2.8
5	CC	238	ASN	2.8
2	DA	2129	C	2.8
16	DM	30	SER	2.8
44	AI	36	GLN	2.8
19	CP	43	GLU	2.8
40	AE	47	PHE	2.8
25	CV	41	GLU	2.8
18	DO	114	GLY	2.8
1	BA	377	G	2.8
23	DT	42	GLU	2.8
37	BB	193	ASP	2.8
4	AY	56	C	2.8
12	CI	99	LYS	2.8
34	D4	55	GLY	2.8
18	DO	98	GLN	2.8
50	BO	52	ARG	2.8
15	DL	71	ALA	2.8
34	D4	19	GLY	2.8
2	DA	1536	C	2.8

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Mol	Chain	Res	Type	RSRZ
51	AP	36	VAL	2.8
54	BS	48	ILE	2.8
1	BA	60	A	2.8
36	BX	26	A	2.8
44	BI	21	LYS	2.8
51	AP	37	GLY	2.8
12	DI	95	ASP	2.8
55	AT	66	ILE	2.8
4	AY	22	G	2.8
32	C2	15	GLY	2.8
45	AJ	101	SER	2.8
10	DH	103	VAL	2.8
35	D6	25	VAL	2.8
38	AC	151	VAL	2.8
2	DA	2135	A	2.8
4	AY	21	A	2.8
5	CC	29	PHE	2.8
12	DI	137	LEU	2.8
12	CI	138	VAL	2.7
44	BI	40	ARG	2.7
5	DC	209	ALA	2.7
53	BR	66	LEU	2.7
8	DF	100	GLU	2.7
36	BX	28	A	2.7
47	AL	84	GLY	2.7
29	CZ	11	SER	2.7
2	CA	2137	U	2.7
6	CD	101	PHE	2.7
34	D4	59	ALA	2.7
37	AB	151	LYS	2.7
51	BP	21	VAL	2.7
26	DW	67	VAL	2.7
24	DU	61	GLU	2.7
2	DA	2133	G	2.7
50	BO	3	SER	2.7
51	BP	5	ARG	2.7
54	AS	40	PHE	2.7
8	DF	79	ARG	2.7
12	DI	96	LYS	2.7
25	DV	36	ALA	2.7
39	AD	60	VAL	2.7
45	BJ	10	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
42	BG	135	LYS	2.7
49	BN	94	PRO	2.7
2	CA	2155	U	2.7
19	DP	43	GLU	2.7
32	C2	7	LYS	2.7
51	AP	51	ARG	2.7
36	AX	17	G	2.7
39	AD	135	GLN	2.7
42	AG	145	GLU	2.7
34	D4	35	LYS	2.7
32	C2	44	GLN	2.7
16	DM	36	VAL	2.7
18	DO	90	VAL	2.7
48	AM	93	GLY	2.7
49	AN	21	ALA	2.7
54	AS	39	ILE	2.7
36	BX	27	G	2.7
43	BH	2	MET	2.7
22	CS	103	ILE	2.7
52	BQ	7	LEU	2.7
2	DA	2128	G	2.7
39	AD	93	LEU	2.7
47	BL	49	ARG	2.7
45	AJ	99	GLN	2.7
52	BQ	24	ILE	2.7
51	BP	51	ARG	2.7
51	BP	52	LEU	2.7
49	AN	25	GLU	2.7
4	AY	66	A	2.7
42	AG	8	GLN	2.7
54	BS	68	HIS	2.6
4	AV	71	C	2.6
42	AG	147	ASN	2.6
42	BG	68	VAL	2.6
8	DF	152	ASP	2.6
10	CH	132	PHE	2.6
37	AB	69	VAL	2.6
16	DM	69	PRO	2.6
26	DW	80	ILE	2.6
37	AB	114	LYS	2.6
5	DC	79	ARG	2.6
22	CS	74	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
51	BP	4	ILE	2.6
51	BP	32	PHE	2.6
54	BS	10	ILE	2.6
15	CL	54	GLN	2.6
4	AY	67	U	2.6
43	AH	53	ASP	2.6
2	DA	2319	G	2.6
13	DJ	55	ILE	2.6
5	DC	205	GLY	2.6
40	AE	39	GLY	2.6
2	CA	2177	C	2.6
39	BD	24	VAL	2.6
40	AE	31	SER	2.6
47	BL	17	LYS	2.6
8	DF	154	THR	2.6
18	CO	37	ALA	2.6
37	AB	160	LEU	2.6
51	AP	29	ASN	2.6
38	BC	181	ASP	2.6
42	AG	6	ILE	2.6
2	CA	889	C	2.6
6	CD	148	GLN	2.6
46	BK	14	GLN	2.6
23	CT	42	GLU	2.6
39	BD	183	ARG	2.6
42	AG	4	ARG	2.6
51	BP	7	ALA	2.6
53	BR	73	HIS	2.6
47	AL	92	VAL	2.6
34	D4	22	LYS	2.6
42	BG	138	GLU	2.6
34	C4	27	ASN	2.6
47	AL	46	SER	2.6
8	DF	64	PRO	2.6
38	BC	186	THR	2.6
8	DF	65	LEU	2.6
27	CX	76	LYS	2.6
36	BX	8	A	2.6
4	AY	9	A	2.6
39	BD	135	GLN	2.6
42	AG	149	ALA	2.6
42	BG	70	PRO	2.5

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Mol	Chain	Res	Type	RSRZ
45	BJ	40	ILE	2.5
28	DY	39	GLN	2.5
54	AS	32	THR	2.5
1	BA	1362	A	2.5
29	DZ	12	ALA	2.5
49	BN	20	PHE	2.5
22	DS	2	GLU	2.5
5	CC	181	ARG	2.5
12	DI	98	GLY	2.5
42	BG	133	ALA	2.5
42	BG	146	ALA	2.5
44	BI	108	ARG	2.5
8	DF	32	LYS	2.5
18	DO	39	VAL	2.5
10	DH	148	ALA	2.5
16	DM	64	TRP	2.5
24	CU	17	ASP	2.5
37	AB	148	GLY	2.5
10	DH	89	LYS	2.5
15	CL	58	TYR	2.5
26	DW	79	PHE	2.5
51	BP	29	ASN	2.5
1	BA	206	C	2.5
37	BB	212	TYR	2.5
48	AM	89	ARG	2.5
9	DG	61	TRP	2.5
18	DO	61	GLN	2.5
2	DA	2172	U	2.5
8	CF	77	LYS	2.5
25	CV	6	ALA	2.5
26	DW	72	LYS	2.5
44	AI	99	LYS	2.5
5	DC	152	GLN	2.5
35	D6	35	GLN	2.5
10	DH	19	VAL	2.5
52	BQ	33	TYR	2.5
34	D4	52	GLY	2.5
18	DO	26	LEU	2.5
32	C2	18	HIS	2.5
11	C5	84	TYR	2.5
45	BJ	34	ALA	2.5
48	AM	94	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
45	BJ	65	TYR	2.5
15	CL	49	GLY	2.5
47	AL	85	ARG	2.5
12	DI	122	GLU	2.5
25	CV	66	ASP	2.5
8	DF	153	ILE	2.5
32	D2	30	PRO	2.5
51	AP	35	ARG	2.5
53	BR	44	THR	2.5
6	CD	4	LEU	2.5
12	DI	136	GLY	2.5
39	AD	108	ALA	2.5
54	BS	57	VAL	2.5
8	DF	101	ARG	2.5
24	DU	93	ARG	2.5
46	BK	125	LYS	2.5
4	AY	8	U	2.5
24	CU	1	ALA	2.5
55	BT	41	GLY	2.5
51	BP	16	PHE	2.5
2	DA	2158	A	2.4
4	AV	72	C	2.4
51	AP	40	ASN	2.4
44	AI	65	THR	2.4
46	BK	68	ARG	2.4
42	BG	9	ARG	2.4
48	AM	112	ARG	2.4
54	AS	2	ARG	2.4
32	D2	45	HIS	2.4
40	BE	95	MET	2.4
18	DO	89	ASP	2.4
40	BE	124	ALA	2.4
48	AM	110	GLY	2.4
37	AB	153	MET	2.4
9	DG	135	ALA	2.4
29	CZ	8	GLN	2.4
34	D4	10	ALA	2.4
10	DH	75	LEU	2.4
51	BP	26	ASN	2.4
4	AY	11	C	2.4
26	DW	73	GLY	2.4
48	AM	90	HIS	2.4

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Mol	Chain	Res	Type	RSRZ
18	CO	60	GLU	2.4
49	AN	62	ASN	2.4
53	BR	19	GLU	2.4
10	CH	92	GLY	2.4
40	BE	94	PHE	2.4
55	AT	74	HIS	2.4
18	CO	38	GLN	2.4
40	AE	125	LYS	2.4
39	AD	64	TYR	2.4
41	BF	2	ARG	2.4
29	DZ	57	GLU	2.4
43	BH	73	SER	2.4
5	DC	145	MET	2.4
1	AA	64	G	2.4
16	DM	99	GLY	2.4
47	AL	26	CYS	2.4
52	BQ	3	LYS	2.4
12	DI	93	ASN	2.4
35	D6	1	MET	2.4
1	AA	1226	C	2.4
1	BA	1359	C	2.4
43	AH	24	VAL	2.4
43	AH	59	GLU	2.4
1	BA	108	G	2.4
2	DA	2157	G	2.4
48	BM	41	ASP	2.4
8	DF	36	ASN	2.4
10	DH	20	ASN	2.4
18	DO	28	VAL	2.4
51	AP	19	VAL	2.4
40	AE	94	PHE	2.4
19	CP	62	LYS	2.4
35	D6	8	LYS	2.4
39	AD	96	ARG	2.4
40	AE	16	ALA	2.4
5	DC	217	PRO	2.4
46	BK	76	TYR	2.4
45	BJ	58	ASN	2.4
5	DC	55	GLY	2.4
46	BK	18	GLY	2.4
34	C4	26	ALA	2.4
46	BK	41	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
8	DF	82	TYR	2.4
38	BC	170	GLU	2.4
46	BK	75	GLU	2.4
24	DU	21	ARG	2.4
43	AH	81	GLY	2.4
32	D2	46	VAL	2.4
45	BJ	73	LEU	2.4
38	BC	26	THR	2.4
40	AE	49	TYR	2.4
42	BG	4	ARG	2.3
8	DF	151	LEU	2.3
52	BQ	34	GLY	2.3
8	DF	167	ALA	2.3
1	BA	976	G	2.3
8	CF	78	ILE	2.3
41	BF	36	ILE	2.3
14	DK	17	ARG	2.3
18	DO	102	ARG	2.3
37	BB	20	ARG	2.3
47	BL	35	ARG	2.3
10	DH	88	GLY	2.3
11	C5	26	VAL	2.3
40	BE	125	LYS	2.3
6	CD	10	GLY	2.3
8	DF	96	TRP	2.3
23	CT	5	GLU	2.3
37	BB	204	ASP	2.3
45	BJ	72	ARG	2.3
37	AB	91	VAL	2.3
51	AP	15	PRO	2.3
32	D2	5	ARG	2.3
38	BC	42	TYR	2.3
10	DH	87	GLU	2.3
4	AY	70	C	2.3
5	CC	172	THR	2.3
16	DM	32	GLY	2.3
10	DH	23	ALA	2.3
25	CV	40	ILE	2.3
39	AD	137	SER	2.3
30	C0	47	LYS	2.3
48	BM	31	ALA	2.3
51	BP	1	MET	2.3

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Mol	Chain	Res	Type	RSRZ
5	CC	153	LEU	2.3
8	DF	102	LEU	2.3
34	C4	52	GLY	2.3
6	CD	36	GLN	2.3
9	DG	38	ASP	2.3
54	AS	72	GLU	2.3
2	DA	1130	U	2.3
11	C5	92	ALA	2.3
12	CI	119	ALA	2.3
12	DI	121	ILE	2.3
30	C0	45	THR	2.3
32	D2	39	ASP	2.3
5	DC	144	GLU	2.3
40	BE	48	GLY	2.3
49	AN	71	HIS	2.3
47	BL	81	ILE	2.3
19	CP	70	GLU	2.3
44	AI	83	THR	2.3
1	BA	372	C	2.3
53	AR	39	VAL	2.3
53	AR	67	LEU	2.3
12	DI	125	THR	2.3
15	CL	115	GLU	2.3
8	DF	99	PHE	2.3
2	DA	2131	U	2.3
16	DM	73	ILE	2.3
10	CH	142	VAL	2.3
30	D0	36	VAL	2.3
32	C2	42	VAL	2.3
32	D2	40	PRO	2.3
37	AB	67	LEU	2.3
48	BM	30	LYS	2.3
4	BV	72	C	2.3
8	DF	172	PHE	2.3
10	DH	69	ALA	2.3
22	CS	86	MET	2.3
7	DE	181	ILE	2.3
26	CW	46	HIS	2.3
9	DG	40	VAL	2.3
23	CT	49	LYS	2.3
43	AH	49	LYS	2.3
53	AR	38	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
12	DI	89	SER	2.3
8	DF	95	MET	2.3
39	AD	179	GLY	2.3
42	BG	69	ARG	2.3
42	BG	112	ASP	2.3
42	BG	142	ARG	2.3
14	DK	8	LEU	2.3
15	CL	50	PHE	2.3
47	AL	49	ARG	2.3
49	AN	81	ARG	2.3
22	DS	82	MET	2.3
16	DM	95	LEU	2.3
51	BP	33	ILE	2.3
53	BR	23	LYS	2.3
7	CE	72	SER	2.3
30	D0	25	ARG	2.3
42	AG	146	ALA	2.3
25	CV	91	PHE	2.3
47	AL	28	GLN	2.2
52	AQ	5	ARG	2.2
47	AL	91	GLY	2.2
10	DH	94	ILE	2.2
30	D0	14	ALA	2.2
24	DU	72	PHE	2.2
48	AM	101	THR	2.2
12	CI	87	SER	2.2
46	BK	103	GLY	2.2
45	BJ	74	VAL	2.2
36	BX	18	G	2.2
16	DM	35	ALA	2.2
4	AY	54	U	2.2
42	AG	141	HIS	2.2
54	AS	75	PRO	2.2
54	BS	41	PRO	2.2
45	AJ	66	GLU	2.2
18	DO	87	ILE	2.2
4	AY	59	U	2.2
6	DD	82	PHE	2.2
15	DL	48	ARG	2.2
48	BM	103	THR	2.2
51	AP	65	ALA	2.2
40	BE	47	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
41	BF	37	HIS	2.2
15	CL	52	GLY	2.2
25	CV	42	LEU	2.2
24	DU	1	ALA	2.2
10	DH	96	THR	2.2
23	DT	37	ASP	2.2
27	DX	77	TYR	2.2
32	C2	41	VAL	2.2
10	DH	132	PHE	2.2
32	D2	7	LYS	2.2
47	BL	53	ARG	2.2
2	DA	2546	U	2.2
27	DX	59	ASP	2.2
36	AX	8	A	2.2
5	DC	78	GLU	2.2
2	DA	2174	C	2.2
12	DI	138	VAL	2.2
10	DH	35	LYS	2.2
11	C5	28	ALA	2.2
40	AE	13	LYS	2.2
55	AT	12	GLN	2.2
5	CC	102	TYR	2.2
25	DV	37	PRO	2.2
45	AJ	75	ASP	2.2
19	DP	71	ARG	2.2
24	DU	34	ILE	2.2
47	AL	81	ILE	2.2
26	DW	24	LYS	2.2
41	AF	90	MET	2.2
2	CA	2160	C	2.2
12	DI	97	VAL	2.2
12	DI	115	ASP	2.2
18	DO	103	VAL	2.2
22	DS	102	HIS	2.2
30	D0	31	ASP	2.2
34	C4	54	LEU	2.2
52	AQ	43	LEU	2.2
32	C2	37	LYS	2.2
50	BO	16	ARG	2.2
6	CD	187	LEU	2.2
9	DG	106	LEU	2.2
22	DS	97	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
42	AG	65	LEU	2.2
54	AS	41	PRO	2.2
7	CE	82	GLY	2.2
52	AQ	6	THR	2.2
54	BS	67	GLY	2.2
1	AA	94	G	2.2
1	BA	1361	G	2.2
6	CD	100	LEU	2.2
6	DD	48	ILE	2.2
9	CG	128	THR	2.2
47	AL	96	THR	2.2
1	AA	845	A	2.2
2	DA	1175	A	2.2
10	DH	108	VAL	2.2
13	DJ	57	LEU	2.2
46	BK	73	VAL	2.2
47	AL	93	ARG	2.2
51	AP	20	VAL	2.2
12	CI	129	GLU	2.2
16	DM	85	GLY	2.2
40	AE	15	ILE	2.2
1	BA	376	G	2.2
11	C5	36	ASP	2.2
53	AR	21	ASP	2.2
6	CD	180	VAL	2.2
8	DF	30	VAL	2.2
15	DL	92	LEU	2.2
16	DM	40	ARG	2.2
34	D4	7	ARG	2.2
6	CD	99	GLU	2.2
36	AX	29	U	2.2
34	C4	10	ALA	2.1
34	C4	22	LYS	2.1
36	AX	26	A	2.1
36	BX	3	A	2.1
49	AN	96	LEU	2.1
5	CC	250	GLN	2.1
26	CW	70	GLU	2.1
38	BC	81	GLY	2.1
38	BC	152	GLU	2.1
46	BK	102	ALA	2.1
2	DA	1083	U	2.1

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Mol	Chain	Res	Type	RSRZ
4	AY	7	U	2.1
13	DJ	123	LYS	2.1
44	AI	80	HIS	2.1
54	BS	80	ARG	2.1
5	DC	29	PHE	2.1
15	DL	77	ILE	2.1
50	BO	48	ASP	2.1
52	AQ	9	GLY	2.1
39	BD	184	LYS	2.1
47	AL	80	LEU	2.1
16	DM	17	ASN	2.1
21	DR	7	SER	2.1
49	AN	99	ALA	2.1
8	DF	107	VAL	2.1
43	BH	33	VAL	2.1
23	CT	2	ILE	2.1
2	CA	2158	A	2.1
4	AY	14	A	2.1
16	DM	75	GLU	2.1
37	AB	144	GLU	2.1
42	BG	54	GLY	2.1
18	DO	42	PRO	2.1
51	BP	6	LEU	2.1
42	AG	61	PHE	2.1
22	CS	102	HIS	2.1
16	DM	94	ALA	2.1
37	AB	100	LEU	2.1
52	BQ	23	ALA	2.1
54	BS	59	VAL	2.1
11	C5	82	ILE	2.1
38	BC	203	PHE	2.1
44	BI	27	ILE	2.1
10	DH	83	LYS	2.1
26	DW	48	GLY	2.1
11	C5	27	VAL	2.1
18	DO	51	ALA	2.1
19	CP	61	ARG	2.1
27	DX	55	MET	2.1
35	D6	3	VAL	2.1
37	BB	26	MET	2.1
44	AI	11	ARG	2.1
48	BM	18	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
1	BA	1355	G	2.1
27	CX	75	GLU	2.1
45	AJ	10	LEU	2.1
52	BQ	74	LEU	2.1
37	AB	137	THR	2.1
37	BB	192	PRO	2.1
37	BB	200	PRO	2.1
1	AA	1536	C	2.1
10	CH	109	GLU	2.1
16	DM	84	LYS	2.1
23	CT	75	GLY	2.1
6	DD	209	ALA	2.1
27	CX	6	VAL	2.1
17	DN	3	HIS	2.1
18	DO	92	PHE	2.1
2	DA	1792	G	2.1
34	C4	5	THR	2.1
38	BC	182	ILE	2.1
47	BL	52	CYS	2.1
54	BS	8	PRO	2.1
1	AA	98	A	2.1
1	BA	1531	A	2.1
8	DF	53	ALA	2.1
17	DN	98	LEU	2.1
38	BC	198	VAL	2.1
9	DG	93	TYR	2.1
10	CH	141	LYS	2.1
45	AJ	40	ILE	2.1
9	DG	53	PRO	2.1
16	DM	67	VAL	2.1
28	DY	22	LEU	2.1
49	BN	72	GLY	2.1
55	BT	78	LEU	2.1
1	BA	61	G	2.1
1	BA	1398	A	2.1
51	AP	18	GLN	2.1
5	DC	204	LEU	2.1
44	AI	8	THR	2.1
47	AL	121	PRO	2.1
37	AB	159	ALA	2.1
47	BL	123	ALA	2.1
45	AJ	11	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
13	DJ	35	ARG	2.1
16	DM	74	THR	2.1
32	C2	40	PRO	2.1
49	BN	95	GLY	2.1
2	DA	1729	U	2.1
50	BO	17	ASP	2.1
4	AW	73	A	2.1
52	AQ	81	ALA	2.1
8	DF	155	ILE	2.1
38	AC	132	ARG	2.1
12	DI	139	VAL	2.1
39	AD	201	GLU	2.1
54	BS	74	ALA	2.1
11	C5	108	VAL	2.1
54	BS	30	LEU	2.1
1	AA	1534	A	2.0
2	DA	613	A	2.0
32	D2	37	LYS	2.0
49	AN	80	SER	2.0
38	BC	201	TRP	2.0
24	DU	8	ASP	2.0
51	AP	4	ILE	2.0
9	CG	88	LEU	2.0
18	DO	116	GLN	2.0
38	BC	179	ARG	2.0
22	DS	94	ASP	2.0
43	AH	89	ASP	2.0
16	DM	88	ASN	2.0
24	DU	78	LYS	2.0
46	BK	42	GLY	2.0
54	BS	39	ILE	2.0
32	C2	11	VAL	2.0
34	D4	6	VAL	2.0
45	AJ	36	VAL	2.0
53	BR	54	LEU	2.0
30	C0	10	GLU	2.0
41	BF	16	GLU	2.0
24	DU	25	LYS	2.0
5	DC	162	GLN	2.0
10	DH	70	GLU	2.0
37	AB	124	THR	2.0
23	CT	91	GLN	2.0

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Mol	Chain	Res	Type	RSRZ
9	DG	107	GLY	2.0
9	DG	94	ARG	2.0
15	CL	123	ARG	2.0
18	DO	53	THR	2.0
51	BP	55	ASP	2.0
13	DJ	74	TYR	2.0
14	CK	89	ASN	2.0
24	DU	35	VAL	2.0
25	DV	80	HIS	2.0
45	BJ	12	ALA	2.0
37	BB	68	PHE	2.0
48	BM	104	ASN	2.0
23	CT	4	GLU	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	1640	1/1	0.06	0.66	127,127,127,127	0
56	MG	AA	1642	1/1	0.44	0.34	122,122,122,122	0
56	MG	AA	1610	1/1	0.50	0.30	114,114,114,114	0
56	MG	AA	1644	1/1	0.56	0.57	164,164,164,164	0
56	MG	BA	1628	1/1	0.56	1.70	120,120,120,120	0
56	MG	BA	1618	1/1	0.57	0.19	144,144,144,144	0
56	MG	DA	3097	1/1	0.64	0.33	78,78,78,78	0
57	ZN	D0	101	1/1	0.66	0.10	210,210,210,210	1
57	ZN	C0	101	1/1	0.67	0.10	177,177,177,177	1
56	MG	DA	3090	1/1	0.70	0.26	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	1641	1/1	0.70	0.29	134,134,134,134	0
56	MG	DA	3160	1/1	0.71	0.37	78,78,78,78	0
56	MG	CA	3070	1/1	0.72	0.29	76,76,76,76	0
56	MG	CA	3090	1/1	0.72	0.39	83,83,83,83	0
56	MG	AA	1605	1/1	0.72	0.21	155,155,155,155	1
56	MG	DA	3094	1/1	0.72	0.48	77,77,77,77	0
56	MG	CA	3068	1/1	0.73	0.45	101,101,101,101	0
56	MG	BA	1620	1/1	0.73	1.03	104,104,104,104	0
56	MG	BA	1632	1/1	0.74	0.06	191,191,191,191	0
56	MG	BA	1645	1/1	0.76	0.32	144,144,144,144	0
56	MG	BA	1636	1/1	0.77	0.35	99,99,99,99	0
56	MG	BA	1608	1/1	0.78	0.46	127,127,127,127	0
56	MG	BA	1639	1/1	0.80	0.18	155,155,155,155	1
56	MG	AA	1606	1/1	0.81	0.12	110,110,110,110	0
56	MG	BA	1649	1/1	0.81	0.15	72,72,72,72	0
56	MG	C4	101	1/1	0.82	0.75	73,73,73,73	0
56	MG	BA	1604	1/1	0.82	0.10	147,147,147,147	0
56	MG	CA	3091	1/1	0.83	0.34	98,98,98,98	0
56	MG	DA	3087	1/1	0.83	0.41	104,104,104,104	0
56	MG	AA	1638	1/1	0.84	0.34	55,55,55,55	0
56	MG	BA	1626	1/1	0.85	0.54	114,114,114,114	0
56	MG	BA	1607	1/1	0.85	1.12	87,87,87,87	0
56	MG	AA	1604	1/1	0.85	0.10	182,182,182,182	1
56	MG	AA	1641	1/1	0.85	0.27	171,171,171,171	0
56	MG	AA	1647	1/1	0.85	0.28	105,105,105,105	0
56	MG	CA	3019	1/1	0.86	0.19	78,78,78,78	1
56	MG	AA	1632	1/1	0.86	0.36	151,151,151,151	0
56	MG	AA	1648	1/1	0.86	0.13	149,149,149,149	0
56	MG	BA	1648	1/1	0.86	0.45	109,109,109,109	0
56	MG	DA	3154	1/1	0.87	0.94	68,68,68,68	0
56	MG	BA	1646	1/1	0.87	0.32	81,81,81,81	0
56	MG	DA	3164	1/1	0.87	0.27	60,60,60,60	0
56	MG	DA	3076	1/1	0.87	0.17	76,76,76,76	1
56	MG	DA	3141	1/1	0.87	0.20	151,151,151,151	1
56	MG	DA	3149	1/1	0.88	0.25	68,68,68,68	0
56	MG	CA	3155	1/1	0.88	0.30	81,81,81,81	1
56	MG	BA	1638	1/1	0.88	0.16	154,154,154,154	0
56	MG	DA	3162	1/1	0.88	0.53	77,77,77,77	0
56	MG	DA	3110	1/1	0.88	0.18	108,108,108,108	0
56	MG	DA	3112	1/1	0.88	0.19	101,101,101,101	0
56	MG	DA	3029	1/1	0.88	0.14	72,72,72,72	1
56	MG	AA	1619	1/1	0.89	0.42	124,124,124,124	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	1642	1/1	0.89	0.55	107,107,107,107	0
56	MG	DA	3100	1/1	0.89	0.74	76,76,76,76	0
56	MG	DA	3101	1/1	0.89	0.15	125,125,125,125	1
56	MG	CA	3157	1/1	0.89	0.25	52,52,52,52	0
56	MG	CQ	801	1/1	0.89	0.36	56,56,56,56	0
56	MG	AA	1630	1/1	0.89	0.27	158,158,158,158	0
56	MG	BA	1631	1/1	0.89	0.42	155,155,155,155	0
56	MG	AA	1603	1/1	0.89	0.05	148,148,148,148	1
56	MG	DA	3060	1/1	0.89	0.66	73,73,73,73	1
56	MG	DA	3061	1/1	0.89	0.39	73,73,73,73	0
56	MG	CA	3112	1/1	0.89	0.11	73,73,73,73	1
56	MG	DA	3165	1/1	0.89	1.17	60,60,60,60	0
56	MG	CA	3150	1/1	0.89	0.39	91,91,91,91	0
56	MG	BA	1610	1/1	0.89	0.10	147,147,147,147	0
56	MG	DA	3158	1/1	0.90	0.62	64,64,64,64	0
56	MG	DA	3081	1/1	0.90	0.43	55,55,55,55	0
56	MG	BA	1617	1/1	0.90	0.18	124,124,124,124	0
56	MG	CA	3164	1/1	0.90	0.28	60,60,60,60	0
56	MG	CA	3007	1/1	0.90	0.25	88,88,88,88	0
56	MG	DN	201	1/1	0.90	0.43	84,84,84,84	1
56	MG	DQ	801	1/1	0.90	0.59	60,60,60,60	0
56	MG	BA	1605	1/1	0.90	0.31	104,104,104,104	0
56	MG	BA	1615	1/1	0.90	0.14	115,115,115,115	0
56	MG	BA	1635	1/1	0.91	0.12	141,141,141,141	0
56	MG	DA	3044	1/1	0.91	0.06	125,125,125,125	0
56	MG	DA	3135	1/1	0.91	0.61	92,92,92,92	0
56	MG	AA	1650	1/1	0.91	0.28	86,86,86,86	0
56	MG	BA	1637	1/1	0.91	0.08	150,150,150,150	0
56	MG	CA	3026	1/1	0.91	0.28	70,70,70,70	1
56	MG	CA	3166	1/1	0.91	0.69	60,60,60,60	0
56	MG	DA	3083	1/1	0.91	1.01	73,73,73,73	0
56	MG	CA	3098	1/1	0.91	0.13	98,98,98,98	0
56	MG	CA	3005	1/1	0.91	0.30	90,90,90,90	1
56	MG	CA	3127	1/1	0.91	0.25	42,42,42,42	0
56	MG	CA	3149	1/1	0.91	0.30	95,95,95,95	1
56	MG	AA	1602	1/1	0.91	0.25	177,177,177,177	0
56	MG	CA	3079	1/1	0.91	0.40	64,64,64,64	0
56	MG	DA	3106	1/1	0.91	0.10	90,90,90,90	1
56	MG	DA	3132	1/1	0.92	0.22	105,105,105,105	0
56	MG	DA	3026	1/1	0.92	0.17	102,102,102,102	0
56	MG	CA	3084	1/1	0.92	0.39	85,85,85,85	0
56	MG	DA	3091	1/1	0.92	0.47	132,132,132,132	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3152	1/1	0.92	0.38	103,103,103,103	0
56	MG	DA	3093	1/1	0.92	0.21	76,76,76,76	0
56	MG	BA	1644	1/1	0.92	0.58	78,78,78,78	0
56	MG	DA	3159	1/1	0.92	0.21	95,95,95,95	0
56	MG	DA	3056	1/1	0.92	0.28	84,84,84,84	0
56	MG	DA	3161	1/1	0.92	0.27	92,92,92,92	0
56	MG	CB	202	1/1	0.92	0.19	80,80,80,80	0
56	MG	DA	3163	1/1	0.92	0.38	60,60,60,60	0
56	MG	CA	3087	1/1	0.92	0.27	74,74,74,74	0
56	MG	DA	3103	1/1	0.92	0.09	95,95,95,95	1
56	MG	DB	203	1/1	0.92	0.23	131,131,131,131	0
56	MG	BA	1647	1/1	0.92	0.36	104,104,104,104	0
56	MG	BA	1613	1/1	0.92	0.16	88,88,88,88	0
56	MG	BA	1625	1/1	0.92	0.18	171,171,171,171	0
56	MG	DA	3128	1/1	0.92	0.14	121,121,121,121	1
56	MG	DA	3139	1/1	0.93	0.09	99,99,99,99	0
56	MG	DA	3043	1/1	0.93	0.17	104,104,104,104	0
56	MG	CA	3165	1/1	0.93	0.78	60,60,60,60	0
56	MG	AA	1627	1/1	0.93	0.25	128,128,128,128	0
56	MG	CA	3001	1/1	0.93	0.26	62,62,62,62	1
56	MG	CA	3160	1/1	0.93	0.15	68,68,68,68	0
56	MG	DA	3072	1/1	0.93	0.26	79,79,79,79	0
56	MG	CA	3042	1/1	0.93	0.12	77,77,77,77	1
57	ZN	C6	101	1/1	0.93	0.09	98,98,98,98	0
56	MG	DA	3030	1/1	0.93	0.14	132,132,132,132	1
56	MG	CA	3138	1/1	0.94	0.07	102,102,102,102	0
56	MG	CA	3142	1/1	0.94	0.26	57,57,57,57	0
56	MG	DA	3092	1/1	0.94	0.24	102,102,102,102	0
56	MG	BA	1643	1/1	0.94	0.15	114,114,114,114	1
56	MG	CA	3060	1/1	0.94	0.39	48,48,48,48	0
56	MG	AA	1613	1/1	0.94	0.42	104,104,104,104	0
56	MG	DA	3098	1/1	0.94	0.23	84,84,84,84	0
56	MG	CA	3151	1/1	0.94	0.51	75,75,75,75	0
56	MG	CA	3008	1/1	0.94	0.24	69,69,69,69	0
56	MG	CA	3011	1/1	0.94	0.18	52,52,52,52	0
56	MG	CA	3082	1/1	0.94	0.37	84,84,84,84	0
56	MG	DA	3002	1/1	0.94	0.15	89,89,89,89	0
56	MG	DA	3005	1/1	0.94	0.07	120,120,120,120	0
56	MG	DA	3117	1/1	0.94	0.29	95,95,95,95	0
56	MG	DA	3007	1/1	0.94	0.10	72,72,72,72	0
56	MG	DA	3013	1/1	0.94	0.42	51,51,51,51	0
56	MG	DA	3134	1/1	0.94	0.54	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3017	1/1	0.94	0.34	73,73,73,73	0
56	MG	DA	3018	1/1	0.94	0.50	95,95,95,95	0
56	MG	DA	3140	1/1	0.94	0.21	98,98,98,98	1
56	MG	DA	3020	1/1	0.94	0.14	77,77,77,77	0
56	MG	DA	3023	1/1	0.94	0.17	100,100,100,100	1
56	MG	DA	3150	1/1	0.94	0.18	28,28,28,28	1
56	MG	BA	1621	1/1	0.94	0.24	91,91,91,91	0
56	MG	BA	1623	1/1	0.94	0.15	139,139,139,139	0
56	MG	DA	3155	1/1	0.94	0.23	79,79,79,79	0
56	MG	CA	3162	1/1	0.94	0.60	56,56,56,56	1
56	MG	DA	3037	1/1	0.94	0.73	83,83,83,83	0
56	MG	CA	3015	1/1	0.94	0.34	87,87,87,87	0
56	MG	AA	1634	1/1	0.94	0.13	122,122,122,122	1
56	MG	DA	3049	1/1	0.94	0.27	96,96,96,96	0
56	MG	BA	1629	1/1	0.94	0.17	161,161,161,161	0
56	MG	AA	1629	1/1	0.94	0.98	127,127,127,127	0
56	MG	CA	3030	1/1	0.94	0.09	84,84,84,84	1
56	MG	DA	3166	1/1	0.94	0.12	137,137,137,137	0
56	MG	DA	3069	1/1	0.94	0.16	166,166,166,166	0
56	MG	CA	3040	1/1	0.94	0.25	88,88,88,88	1
56	MG	AA	1609	1/1	0.94	0.52	127,127,127,127	1
56	MG	CA	3113	1/1	0.94	0.32	81,81,81,81	0
56	MG	CA	3046	1/1	0.94	0.13	77,77,77,77	1
56	MG	BA	1606	1/1	0.94	0.34	100,100,100,100	0
56	MG	DA	3131	1/1	0.95	0.45	78,78,78,78	0
56	MG	CA	3062	1/1	0.95	0.17	90,90,90,90	1
56	MG	DA	3133	1/1	0.95	0.34	77,77,77,77	0
56	MG	AA	1631	1/1	0.95	0.20	148,148,148,148	1
56	MG	DA	3071	1/1	0.95	0.17	101,101,101,101	1
56	MG	CA	3021	1/1	0.95	0.17	78,78,78,78	0
56	MG	CA	3023	1/1	0.95	0.10	80,80,80,80	1
56	MG	DA	3078	1/1	0.95	0.10	151,151,151,151	0
56	MG	DA	3145	1/1	0.95	0.18	30,30,30,30	1
56	MG	AA	1614	1/1	0.95	0.25	103,103,103,103	0
56	MG	CA	3153	1/1	0.95	0.66	73,73,73,73	1
56	MG	DA	3151	1/1	0.95	0.50	88,88,88,88	0
56	MG	AA	1611	1/1	0.95	0.25	165,165,165,165	1
56	MG	BA	1612	1/1	0.95	0.47	116,116,116,116	0
56	MG	CA	3031	1/1	0.95	0.16	66,66,66,66	1
56	MG	DA	3025	1/1	0.95	0.51	88,88,88,88	0
56	MG	BA	1640	1/1	0.95	0.12	145,145,145,145	0
56	MG	CA	3159	1/1	0.95	0.15	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3039	1/1	0.95	0.15	62,62,62,62	0
56	MG	AA	1643	1/1	0.95	0.19	85,85,85,85	0
56	MG	CA	3093	1/1	0.95	0.08	100,100,100,100	0
56	MG	AA	1635	1/1	0.95	0.09	133,133,133,133	1
56	MG	DA	3046	1/1	0.95	0.14	111,111,111,111	1
56	MG	DA	3047	1/1	0.95	0.11	122,122,122,122	0
56	MG	DA	3107	1/1	0.95	0.28	112,112,112,112	0
56	MG	CA	3044	1/1	0.95	0.21	86,86,86,86	1
56	MG	DA	3052	1/1	0.95	0.40	54,54,54,54	0
56	MG	AA	1620	1/1	0.95	0.11	160,160,160,160	1
56	MG	DA	3127	1/1	0.95	0.37	43,43,43,43	0
56	MG	AA	1639	1/1	0.95	0.15	137,137,137,137	1
56	MG	DA	3019	1/1	0.96	0.11	102,102,102,102	1
56	MG	DA	3105	1/1	0.96	0.10	92,92,92,92	0
56	MG	CA	3154	1/1	0.96	0.28	78,78,78,78	1
56	MG	AA	1608	1/1	0.96	0.52	106,106,106,106	0
56	MG	DA	3108	1/1	0.96	0.16	97,97,97,97	0
56	MG	BA	1624	1/1	0.96	0.08	119,119,119,119	0
56	MG	CA	3156	1/1	0.96	0.26	84,84,84,84	0
56	MG	AA	1607	1/1	0.96	0.35	98,98,98,98	0
56	MG	DA	3119	1/1	0.96	0.11	92,92,92,92	0
56	MG	DA	3122	1/1	0.96	0.17	103,103,103,103	0
56	MG	DA	3123	1/1	0.96	0.11	120,120,120,120	1
56	MG	BA	1627	1/1	0.96	0.45	132,132,132,132	0
56	MG	CA	3051	1/1	0.96	0.11	82,82,82,82	1
56	MG	CA	3094	1/1	0.96	0.26	74,74,74,74	0
56	MG	AA	1636	1/1	0.96	0.10	104,104,104,104	1
56	MG	CA	3100	1/1	0.96	0.36	66,66,66,66	0
56	MG	CA	3104	1/1	0.96	0.18	85,85,85,85	1
56	MG	AA	1622	1/1	0.96	0.20	92,92,92,92	0
56	MG	DA	3136	1/1	0.96	0.46	78,78,78,78	0
56	MG	DA	3137	1/1	0.96	0.44	68,68,68,68	0
56	MG	DA	3051	1/1	0.96	0.33	99,99,99,99	1
56	MG	CA	3167	1/1	0.96	0.08	102,102,102,102	0
56	MG	AA	1646	1/1	0.96	0.29	132,132,132,132	0
56	MG	CN	201	1/1	0.96	0.12	86,86,86,86	1
56	MG	CN	202	1/1	0.96	0.28	64,64,64,64	0
56	MG	DA	3063	1/1	0.96	0.16	105,105,105,105	0
56	MG	CA	3119	1/1	0.96	0.15	81,81,81,81	1
56	MG	DA	3070	1/1	0.96	0.14	69,69,69,69	0
56	MG	CA	3120	1/1	0.96	0.09	71,71,71,71	1
56	MG	BA	1601	1/1	0.96	0.21	115,115,115,115	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3075	1/1	0.96	0.19	90,90,90,90	0
56	MG	AA	1616	1/1	0.96	0.34	92,92,92,92	0
56	MG	CA	3128	1/1	0.96	0.16	56,56,56,56	0
56	MG	CA	3129	1/1	0.96	0.18	80,80,80,80	0
56	MG	CA	3134	1/1	0.96	0.27	75,75,75,75	0
56	MG	CA	3072	1/1	0.96	0.14	73,73,73,73	1
56	MG	CA	3140	1/1	0.96	0.14	61,61,61,61	0
56	MG	CA	3037	1/1	0.96	0.31	40,40,40,40	0
56	MG	DA	3004	1/1	0.96	0.09	122,122,122,122	0
56	MG	DB	201	1/1	0.96	0.04	204,204,204,204	1
56	MG	CA	3148	1/1	0.96	0.18	98,98,98,98	0
56	MG	CA	3013	1/1	0.96	0.57	55,55,55,55	0
56	MG	AA	1633	1/1	0.96	0.07	108,108,108,108	1
56	MG	DA	3016	1/1	0.96	0.17	90,90,90,90	0
56	MG	CA	3017	1/1	0.96	0.21	64,64,64,64	0
56	MG	CA	3088	1/1	0.96	0.39	83,83,83,83	1
57	ZN	D6	101	1/1	0.96	0.07	128,128,128,128	0
56	MG	DA	3079	1/1	0.97	0.17	144,144,144,144	0
56	MG	CA	3111	1/1	0.97	0.11	74,74,74,74	0
56	MG	AA	1612	1/1	0.97	0.12	128,128,128,128	0
56	MG	CA	3064	1/1	0.97	0.11	70,70,70,70	0
56	MG	DA	3089	1/1	0.97	0.12	115,115,115,115	0
56	MG	AA	1628	1/1	0.97	0.26	143,143,143,143	0
56	MG	CB	203	1/1	0.97	0.17	77,77,77,77	0
56	MG	CC	301	1/1	0.97	0.11	74,74,74,74	0
56	MG	CA	3069	1/1	0.97	0.13	69,69,69,69	0
56	MG	CA	3036	1/1	0.97	0.10	80,80,80,80	1
56	MG	DA	3096	1/1	0.97	0.09	78,78,78,78	1
56	MG	AA	1615	1/1	0.97	0.32	103,103,103,103	0
56	MG	CA	3074	1/1	0.97	0.06	70,70,70,70	0
56	MG	CA	3130	1/1	0.97	0.13	62,62,62,62	1
56	MG	BA	1602	1/1	0.97	0.10	132,132,132,132	0
56	MG	BA	1603	1/1	0.97	0.14	121,121,121,121	0
56	MG	CA	3132	1/1	0.97	0.13	67,67,67,67	0
56	MG	CA	3075	1/1	0.97	0.26	78,78,78,78	1
56	MG	DA	3009	1/1	0.97	0.13	106,106,106,106	0
56	MG	DA	3011	1/1	0.97	0.12	80,80,80,80	0
56	MG	DA	3109	1/1	0.97	0.09	123,123,123,123	0
56	MG	CA	3135	1/1	0.97	0.41	55,55,55,55	0
56	MG	CA	3136	1/1	0.97	0.17	66,66,66,66	0
56	MG	DA	3116	1/1	0.97	0.17	93,93,93,93	1
56	MG	CA	3137	1/1	0.97	0.27	67,67,67,67	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	1609	1/1	0.97	0.18	110,110,110,110	0
56	MG	AA	1621	1/1	0.97	0.14	90,90,90,90	0
56	MG	CA	3018	1/1	0.97	0.08	90,90,90,90	1
56	MG	DA	3125	1/1	0.97	0.11	92,92,92,92	1
56	MG	DA	3021	1/1	0.97	0.12	92,92,92,92	1
56	MG	DA	3022	1/1	0.97	0.14	86,86,86,86	0
56	MG	CA	3141	1/1	0.97	0.24	67,67,67,67	1
56	MG	BA	1614	1/1	0.97	0.10	128,128,128,128	1
56	MG	AA	1601	1/1	0.97	0.18	102,102,102,102	0
56	MG	CA	3143	1/1	0.97	0.29	63,63,63,63	0
56	MG	CA	3144	1/1	0.97	0.25	57,57,57,57	0
56	MG	DA	3035	1/1	0.97	0.18	96,96,96,96	0
56	MG	DA	3036	1/1	0.97	0.31	102,102,102,102	0
56	MG	BA	1619	1/1	0.97	0.04	133,133,133,133	0
56	MG	DA	3039	1/1	0.97	0.11	74,74,74,74	0
56	MG	DA	3042	1/1	0.97	0.14	97,97,97,97	0
56	MG	CA	3145	1/1	0.97	0.21	69,69,69,69	0
56	MG	DA	3146	1/1	0.97	0.16	96,96,96,96	0
56	MG	DA	3147	1/1	0.97	0.14	100,100,100,100	1
56	MG	CA	3147	1/1	0.97	0.18	93,93,93,93	0
56	MG	BA	1622	1/1	0.97	0.30	105,105,105,105	0
56	MG	CA	3006	1/1	0.97	0.09	90,90,90,90	1
56	MG	CA	3045	1/1	0.97	0.06	83,83,83,83	1
56	MG	DA	3050	1/1	0.97	0.24	79,79,79,79	0
56	MG	AA	1645	1/1	0.97	0.15	148,148,148,148	0
56	MG	DA	3156	1/1	0.97	0.12	109,109,109,109	0
56	MG	CA	3047	1/1	0.97	0.12	94,94,94,94	0
56	MG	CA	3050	1/1	0.97	0.27	56,56,56,56	0
56	MG	CA	3025	1/1	0.97	0.11	66,66,66,66	1
56	MG	CA	3055	1/1	0.97	0.12	71,71,71,71	0
56	MG	BA	1630	1/1	0.97	0.13	160,160,160,160	0
56	MG	DA	3065	1/1	0.97	0.12	85,85,85,85	0
56	MG	DA	3066	1/1	0.97	0.37	81,81,81,81	0
56	MG	DA	3067	1/1	0.97	0.33	129,129,129,129	0
56	MG	DA	3068	1/1	0.97	0.46	84,84,84,84	0
56	MG	CA	3058	1/1	0.97	0.15	74,74,74,74	1
56	MG	DB	202	1/1	0.97	0.27	95,95,95,95	0
56	MG	AA	1625	1/1	0.97	0.11	100,100,100,100	1
56	MG	BA	1634	1/1	0.97	0.14	129,129,129,129	0
56	MG	CA	3105	1/1	0.97	0.18	85,85,85,85	1
56	MG	CA	3106	1/1	0.97	0.14	82,82,82,82	0
56	MG	CA	3107	1/1	0.97	0.16	83,83,83,83	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3077	1/1	0.97	0.12	90,90,90,90	0
56	MG	CA	3110	1/1	0.97	0.14	86,86,86,86	1
56	MG	CA	3004	1/1	0.98	0.18	78,78,78,78	0
56	MG	CA	3041	1/1	0.98	0.08	67,67,67,67	1
56	MG	CA	3022	1/1	0.98	0.09	75,75,75,75	1
56	MG	DA	3024	1/1	0.98	0.27	98,98,98,98	0
56	MG	CA	3158	1/1	0.98	0.11	73,73,73,73	0
56	MG	CA	3114	1/1	0.98	0.15	73,73,73,73	1
56	MG	DA	3102	1/1	0.98	0.07	98,98,98,98	1
56	MG	DA	3028	1/1	0.98	0.25	76,76,76,76	0
56	MG	CA	3043	1/1	0.98	0.30	59,59,59,59	0
56	MG	AA	1649	1/1	0.98	0.21	140,140,140,140	0
56	MG	DA	3031	1/1	0.98	0.15	116,116,116,116	0
56	MG	DA	3032	1/1	0.98	0.25	93,93,93,93	0
56	MG	DA	3034	1/1	0.98	0.11	99,99,99,99	0
56	MG	CA	3163	1/1	0.98	0.18	81,81,81,81	1
56	MG	DA	3111	1/1	0.98	0.05	108,108,108,108	1
56	MG	CA	3121	1/1	0.98	0.18	86,86,86,86	1
56	MG	DA	3113	1/1	0.98	0.28	85,85,85,85	0
56	MG	DA	3114	1/1	0.98	0.21	98,98,98,98	1
56	MG	DA	3115	1/1	0.98	0.11	139,139,139,139	0
56	MG	CA	3123	1/1	0.98	0.24	83,83,83,83	1
56	MG	DA	3038	1/1	0.98	0.17	75,75,75,75	1
56	MG	DA	3118	1/1	0.98	0.30	103,103,103,103	0
56	MG	CA	3124	1/1	0.98	0.18	75,75,75,75	1
56	MG	DA	3040	1/1	0.98	0.26	90,90,90,90	1
56	MG	BA	1633	1/1	0.98	0.23	102,102,102,102	0
56	MG	CA	3024	1/1	0.98	0.33	59,59,59,59	0
56	MG	DA	3126	1/1	0.98	0.08	93,93,93,93	0
56	MG	CA	3076	1/1	0.98	0.06	68,68,68,68	0
56	MG	CA	3077	1/1	0.98	0.13	101,101,101,101	0
56	MG	DA	3129	1/1	0.98	0.11	92,92,92,92	1
56	MG	DA	3130	1/1	0.98	0.55	100,100,100,100	0
56	MG	CA	3014	1/1	0.98	0.24	72,72,72,72	1
56	MG	CA	3131	1/1	0.98	0.32	53,53,53,53	0
56	MG	AA	1637	1/1	0.98	0.09	186,186,186,186	0
56	MG	CA	3133	1/1	0.98	0.48	47,47,47,47	0
56	MG	CA	3083	1/1	0.98	0.29	81,81,81,81	1
56	MG	DA	3054	1/1	0.98	0.12	70,70,70,70	0
56	MG	CA	3049	1/1	0.98	0.25	73,73,73,73	0
56	MG	DA	3057	1/1	0.98	0.21	101,101,101,101	0
56	MG	CA	3085	1/1	0.98	0.18	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3028	1/1	0.98	0.20	58,58,58,58	0
56	MG	DA	3143	1/1	0.98	0.09	53,53,53,53	0
56	MG	DA	3144	1/1	0.98	0.23	112,112,112,112	0
56	MG	CA	3016	1/1	0.98	0.80	20,20,20,20	0
56	MG	CA	3053	1/1	0.98	0.16	72,72,72,72	1
56	MG	CA	3054	1/1	0.98	0.38	65,65,65,65	0
56	MG	AA	1624	1/1	0.98	0.20	130,130,130,130	0
56	MG	CA	3056	1/1	0.98	0.11	73,73,73,73	0
56	MG	DA	3001	1/1	0.98	0.15	71,71,71,71	1
56	MG	CA	3096	1/1	0.98	0.19	68,68,68,68	1
56	MG	DA	3153	1/1	0.98	0.12	93,93,93,93	0
56	MG	DA	3003	1/1	0.98	0.04	121,121,121,121	0
56	MG	CA	3035	1/1	0.98	0.36	37,37,37,37	0
56	MG	DA	3073	1/1	0.98	0.22	93,93,93,93	1
56	MG	BA	1611	1/1	0.98	0.49	130,130,130,130	0
56	MG	CA	3146	1/1	0.98	0.34	78,78,78,78	0
56	MG	CA	3059	1/1	0.98	0.10	60,60,60,60	0
56	MG	CA	3101	1/1	0.98	0.09	84,84,84,84	0
56	MG	DA	3012	1/1	0.98	0.07	81,81,81,81	0
56	MG	DA	3080	1/1	0.98	0.18	98,98,98,98	1
56	MG	CA	3002	1/1	0.98	0.17	67,67,67,67	1
56	MG	DA	3082	1/1	0.98	0.34	106,106,106,106	0
56	MG	DA	3014	1/1	0.98	0.08	95,95,95,95	1
56	MG	DA	3084	1/1	0.98	0.37	85,85,85,85	0
56	MG	DA	3085	1/1	0.98	0.14	112,112,112,112	0
56	MG	DA	3086	1/1	0.98	0.11	125,125,125,125	1
56	MG	DA	3015	1/1	0.98	0.46	73,73,73,73	0
56	MG	CA	3061	1/1	0.98	0.17	95,95,95,95	1
56	MG	CA	3010	1/1	0.98	0.21	89,89,89,89	1
56	MG	CA	3152	1/1	0.98	0.28	57,57,57,57	0
56	MG	CA	3020	1/1	0.98	0.16	45,45,45,45	1
56	MG	CA	3065	1/1	0.98	0.10	76,76,76,76	1
56	MG	CA	3139	1/1	0.99	0.14	88,88,88,88	0
56	MG	DA	3048	1/1	0.99	0.12	93,93,93,93	1
56	MG	CA	3099	1/1	0.99	0.09	84,84,84,84	1
56	MG	CA	3071	1/1	0.99	0.10	77,77,77,77	0
56	MG	CA	3052	1/1	0.99	0.17	76,76,76,76	1
56	MG	CA	3102	1/1	0.99	0.23	55,55,55,55	0
56	MG	DA	3053	1/1	0.99	0.06	98,98,98,98	1
56	MG	CA	3073	1/1	0.99	0.22	73,73,73,73	1
56	MG	DA	3055	1/1	0.99	0.15	85,85,85,85	0
56	MG	CA	3038	1/1	0.99	0.18	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3012	1/1	0.99	0.16	67,67,67,67	1
56	MG	DA	3058	1/1	0.99	0.23	83,83,83,83	0
56	MG	DA	3121	1/1	0.99	0.11	100,100,100,100	1
56	MG	DA	3059	1/1	0.99	0.18	94,94,94,94	1
56	MG	DA	3006	1/1	0.99	0.09	114,114,114,114	1
56	MG	DA	3124	1/1	0.99	0.13	104,104,104,104	0
56	MG	CA	3027	1/1	0.99	0.07	74,74,74,74	1
56	MG	DA	3062	1/1	0.99	0.19	95,95,95,95	1
56	MG	DA	3008	1/1	0.99	0.08	103,103,103,103	1
56	MG	DA	3064	1/1	0.99	0.10	95,95,95,95	0
56	MG	CA	3108	1/1	0.99	0.15	71,71,71,71	0
56	MG	DA	3010	1/1	0.99	0.12	97,97,97,97	0
56	MG	CA	3109	1/1	0.99	0.09	90,90,90,90	1
56	MG	BA	1616	1/1	0.99	0.16	136,136,136,136	0
56	MG	AA	1623	1/1	0.99	0.06	104,104,104,104	1
56	MG	CA	3078	1/1	0.99	0.11	102,102,102,102	1
56	MG	CA	3057	1/1	0.99	0.05	78,78,78,78	1
56	MG	CA	3080	1/1	0.99	0.10	62,62,62,62	1
56	MG	CA	3081	1/1	0.99	0.12	73,73,73,73	1
56	MG	DA	3138	1/1	0.99	0.59	58,58,58,58	0
56	MG	DA	3074	1/1	0.99	0.22	92,92,92,92	0
56	MG	CA	3116	1/1	0.99	0.06	83,83,83,83	1
56	MG	CA	3117	1/1	0.99	0.33	49,49,49,49	0
56	MG	DA	3142	1/1	0.99	0.14	100,100,100,100	0
56	MG	CA	3118	1/1	0.99	0.23	82,82,82,82	1
56	MG	CA	3029	1/1	0.99	0.23	57,57,57,57	1
56	MG	AA	1617	1/1	0.99	0.21	107,107,107,107	0
56	MG	CA	3003	1/1	0.99	0.19	82,82,82,82	0
56	MG	CA	3161	1/1	0.99	0.07	97,97,97,97	0
56	MG	DA	3148	1/1	0.99	0.12	88,88,88,88	0
56	MG	CA	3122	1/1	0.99	0.18	77,77,77,77	1
56	MG	CA	3032	1/1	0.99	0.17	79,79,79,79	0
56	MG	DA	3027	1/1	0.99	0.19	92,92,92,92	0
56	MG	CA	3086	1/1	0.99	0.14	93,93,93,93	1
56	MG	CA	3125	1/1	0.99	0.05	82,82,82,82	1
56	MG	CA	3126	1/1	0.99	0.26	67,67,67,67	0
56	MG	DA	3088	1/1	0.99	0.38	88,88,88,88	1
56	MG	CA	3033	1/1	0.99	0.18	65,65,65,65	0
56	MG	DA	3157	1/1	0.99	0.48	83,83,83,83	0
56	MG	CB	201	1/1	0.99	0.16	113,113,113,113	1
56	MG	DA	3033	1/1	0.99	0.12	104,104,104,104	0
56	MG	CA	3034	1/1	0.99	0.13	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3089	1/1	0.99	0.14	92,92,92,92	1
56	MG	CA	3048	1/1	0.99	0.14	80,80,80,80	1
56	MG	DA	3095	1/1	0.99	0.08	76,76,76,76	0
56	MG	CA	3066	1/1	0.99	0.15	80,80,80,80	1
56	MG	CA	3092	1/1	0.99	0.10	85,85,85,85	0
56	MG	CA	3067	1/1	0.99	0.12	68,68,68,68	1
56	MG	DA	3099	1/1	0.99	0.19	114,114,114,114	1
56	MG	CA	3009	1/1	0.99	0.12	69,69,69,69	0
56	MG	DA	3041	1/1	0.99	0.14	100,100,100,100	0
56	MG	CA	3095	1/1	0.99	0.08	86,86,86,86	1
56	MG	AA	1618	1/1	0.99	0.11	106,106,106,106	1
56	MG	DA	3104	1/1	0.99	0.21	101,101,101,101	0
56	MG	CA	3097	1/1	0.99	0.21	67,67,67,67	1
56	MG	DA	3045	1/1	0.99	0.18	102,102,102,102	0
56	MG	AA	1626	1/1	0.99	0.25	107,107,107,107	0
56	MG	DA	3120	1/1	1.00	0.12	98,98,98,98	0
56	MG	CA	3103	1/1	1.00	0.20	80,80,80,80	1
56	MG	CA	3063	1/1	1.00	0.09	94,94,94,94	1
56	MG	CA	3115	1/1	1.00	0.13	70,70,70,70	1

6.5 Other polymers (i)

There are no such residues in this entry.